

A young child with light hair, wearing a white t-shirt and blue overalls, is smiling and holding a white wind turbine toy. The background is a blurred field of dry grass under a clear sky.

VAC[®]
VACUUMSCHMELZE

A STATEMENT FOR SUSTAINABILITY

Vacuumschmelze GmbH & Co. KG

WELCOME MESSAGE



Dr. Erik Eschen
CEO of VAC

“VAC is world’s leading manufacturer of high-end, specialized magnetic materials and solutions. Our technologies play a key role in an increasingly electrified world and support multiple global megatrends like e-mobility, e-flight, smart manufacturing. Sustainability drives our daily business, and we are excited to share more details specific to this important topic.”

WHO WE ARE

We passionately advance the technologies of today and tomorrow. As a reliable partner, we work with our customers to develop application solutions that make it possible to meet constantly increasing requirements. We push technical boundaries with groundbreaking solutions. The use of our materials as well as our refined solutions and their special magnetic properties are the key to making our customers' systems smaller, lighter, more efficient and, last but not least, safer. Thereby we contribute significantly to the saving of resources and the protection of our environment.

VAC FACTS



100
Years of Experience



4.300+
Employees



1000+
Customer Locations



170+
Alloys



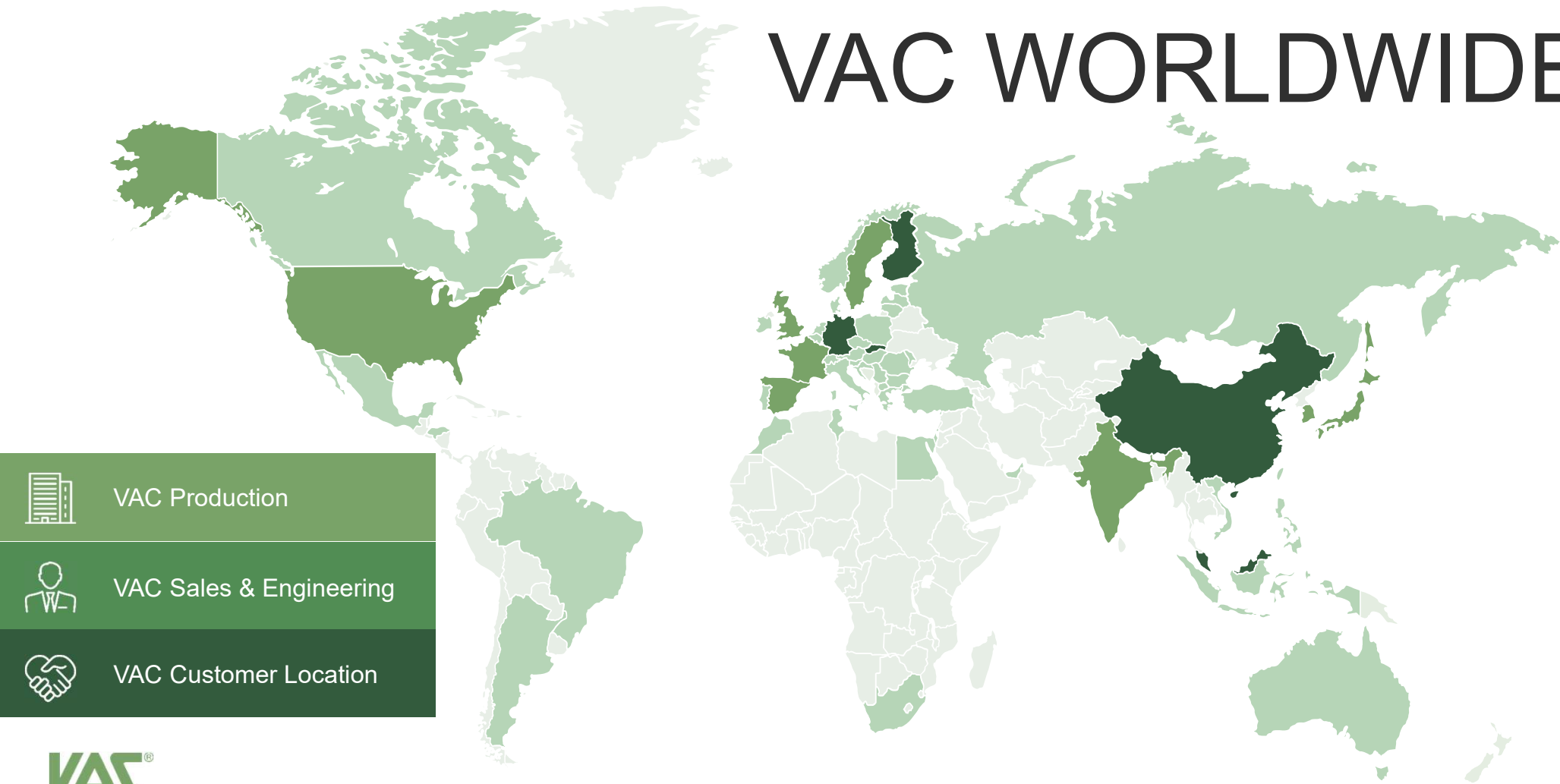
500+
Active Patents



>75%
Customized Solutions



VAC WORLDWIDE



VAC Production



VAC Sales & Engineering



VAC Customer Location



OUR MISSION



With in-depth material know-how and almost a decade of experience we bring our products in various applications that effect our every-day life significantly.



Together with our customers we develop application solutions that meet constantly increasing requirements of performance and sustainability.



We push technical boundaries with groundbreaking solutions and make our customers' systems smaller, lighter, more efficient and safer.



We contribute significantly to the saving of resources and the protection of our environment.



1913

The VAC founder Dr. Wilhelm Rohn developed a process for melting metals in a vacuum and was thereby able to significantly reduce the use of rare and expensive materials like platinum and rhodium.



1923

W. C. Heraeus GmbH decided to spin off its base metal smelting and processing department headed by Dr. Rohn as an independent company from the parent company.



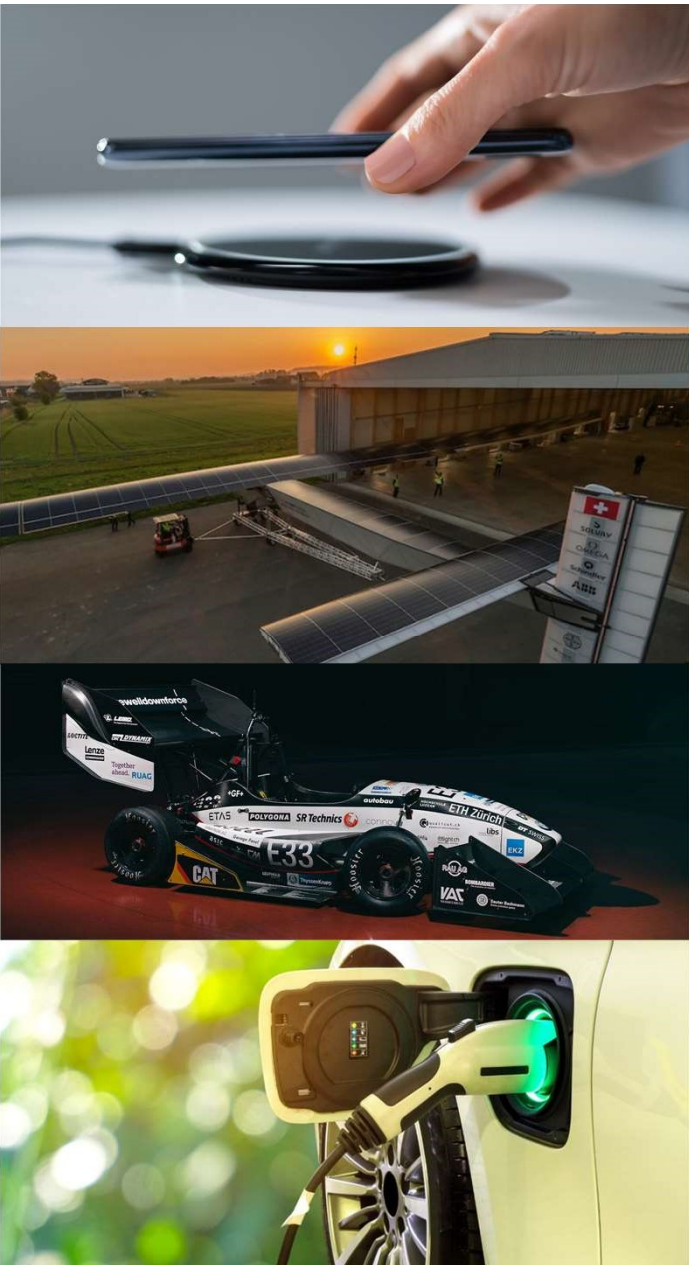
1930

The newly founded VAC already holds 84 patents for Germany and 101 foreign industrial property rights.



1948

VAC's soft magnetic special materials are among the essential components of many devices used in modern electrical engineering and electronics.



2014

VAC products significantly improve the performance of wireless charging technology for mobile phones, tablets and wearables.



2015 - 2016

The solar driven airplane Solar Impulse 2 rounds the world without the consumption of fuel using VAC technology.



2016

The Swiss Formula Student Team uses VAC technology to set the Guinness World Record in accelerating an electric vehicle from 0-100 km/h in 1,513 seconds.



2017 - 2023

Today VAC's technology plays a significant role in both EV charging infrastructure, and optimizing electric vehicle powertrains, as well as other mission critical in-vehicle applications



Automotive & E-Mobility



Aerospace & E-Flight

OUR MARKETS



Clean Energy

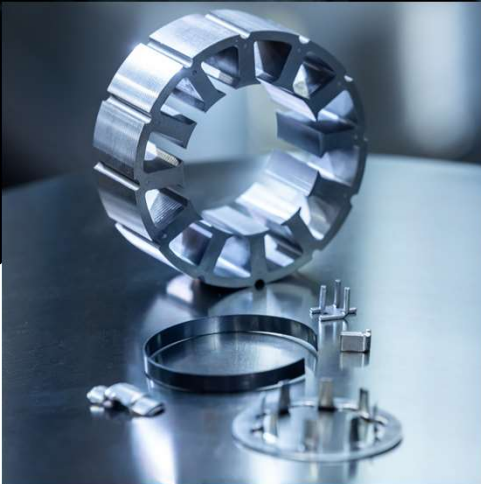


Industrial Automation



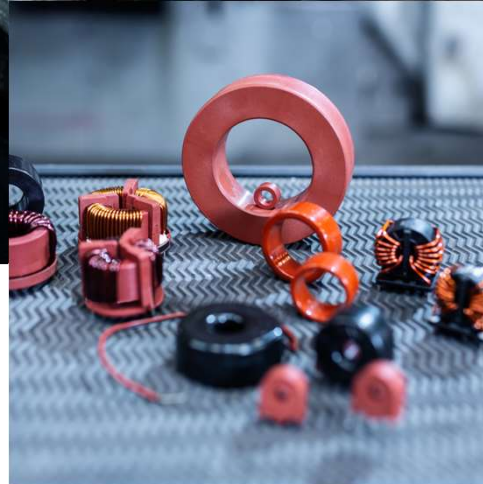
Sustainable VAC products can be found in multiple other markets as well!

OUR PRODUCTS



Soft Magnetic Materials

Highly efficient soft magnetic materials enable advanced and sustainable developments



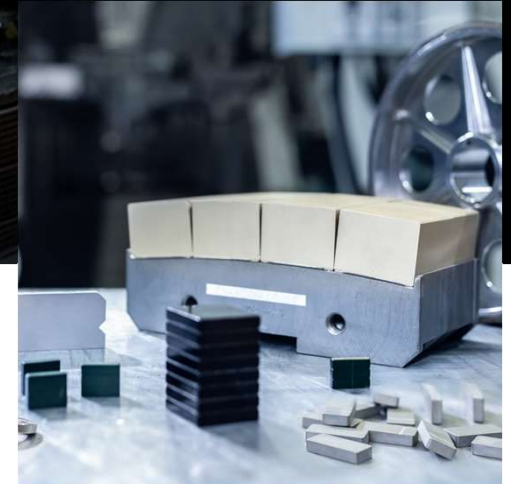
Cores & Components

VAC cores & components support the safe development of an highly electrified world



Current Sensors

Current sensors make sure that energy generation from sustainable sources is safe



Permanent Magnets

High-performance permanent magnets support e-mobility and efficient industrial drives

SUSTAINABLE DEVELOPMENTS



Charging e-vehicles must be fast and safe. VAC ensures the safety of the charging process.



VAC supported the development of a sustainable transportation system of the future - the Hyperloop.



VAC has developed advanced materials that significantly improve the efficiency of electric motors to enable electric aviation.

TRANSPORTATION

SUSTAINABLE DEVELOPMENTS



VAC offers complete suite of high precision Closed-loop, Open-loop, and Differential sensors, which optimize current consumption, and reduce energy waste across multiple energy, automotive, and industrial applications



Electrical safety is one of VAC's main applications and becomes more important every day.



More and more energy is generated from renewable sources. VAC technology makes sure this energy is generated safe and efficient.

ENERGY

SUSTAINABLE DEVELOPMENTS



Magentocaloric cooling technology from VAC can generate cold without using harmful cooling fluids.



VAC products play an important role in the fight against COVID and help to save lives all over the world.



For medical applications with highest requirements, sophisticated magnet systems are used. VAC offers highest material and manufacturing competence.

MEDICAL SOLUTIONS &
ADVANCED TECHNOLOGIES

OUR GOALS



HEALTHY & SAFE WORKPLACE

Continuous improvement of occupational safety, personal safety awareness and process and plant safety.



ZERO EMISSIONS

Reduction of all emissions like waste, material discharge, noise, waste heat and efficient use of materials, auxiliary materials and energy.



SUSTAINABLE SUPPLY CHAIN

Building of a green supply chain from raw material to the final installation of the product. Involve suppliers, partners and customers in this process.



FAIRNESS & DIVERSITY

Fair and respectful treatment of all people around the world regardless of origin, skin color or personal opinions.

EHS TEAM



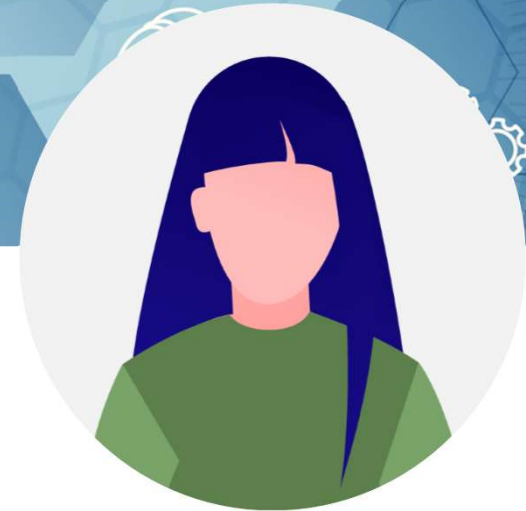
SASCHA FUCHS

Head of EHS



PATRICIA BORGWARTH

EHS Manager



VANESSA WINTER

Safety Engineer

CERTIFICATIONS



Quality:

DIN EN ISO 9001

IATF 16949

EN 9100



Environment:

DIN EN ISO 14001



Energy Management:

DIN EN ISO 50001



Occupational Health and Safety:

DIN ISO 45001 (Not certified by external organizations)



SAFETY

The safety of our employees, customers and partners has highest priority for VAC. Multiple measures and countless activities contribute to better results in terms of safety in all VAC locations every year.



WORK ACCIDENTS

With less than 10 workplace accidents in 2022, we are getting closer and closer to our goal of a safe workplace.



IMPROVEMENTS

With more than 550 Near-Miss-Reports per year we keep improving our safety continuously.



HEALTH & SAFETY

VAC has robust medical teams on staff ensuring our employees have access to latest medical information, and medical care



EMISSIONS

VAC products contribute to lower emissions in multiple markets and applications. We continuously improve our processes to make sure that also the production of this products has minimal carbon footprint.



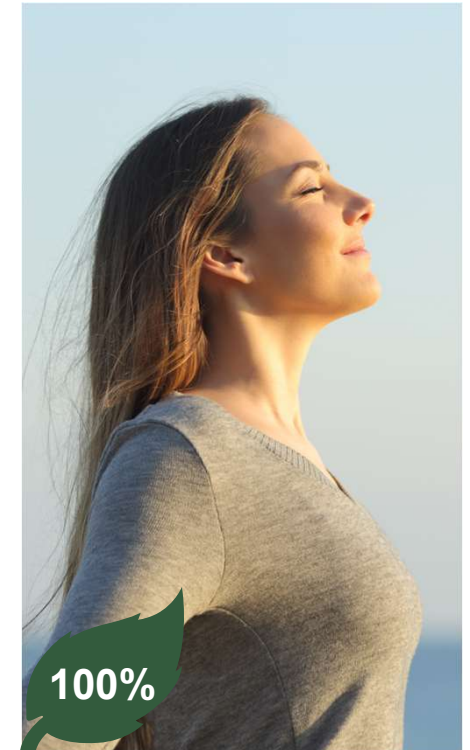
WASTE

99% of our waste can be recycled and reused.



WASTE WATER

100% of our wastewater is treated and complies with the required national limits.



EXHAUST AIR

100% of our exhaust air is purified by modern filtration systems.

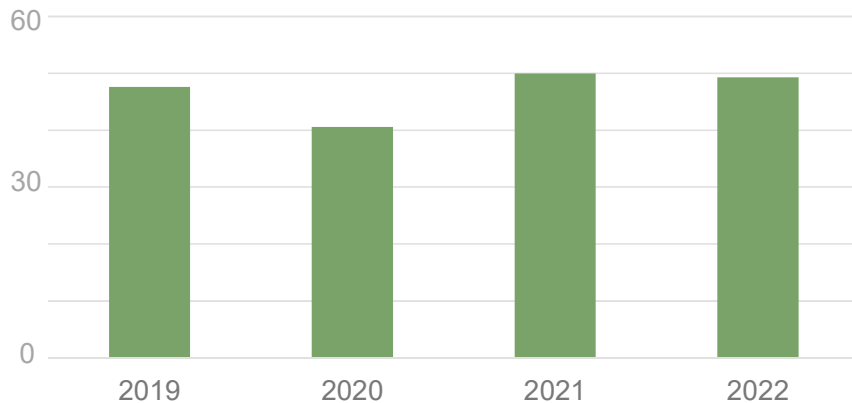


ELECTRICITY

Electricity is the main driver of VACs production. For this reason we have a high focus on an optimal use of this valuable resource. With multiple projects in different areas of the our plants we managed make our production more efficient.



Electricity Consumption*
(in Million kWh)



ANNUAL SAVINGS

- Conversion of compressed air station 2022: 245.000 kWh

ADDITIONAL PROJECTS

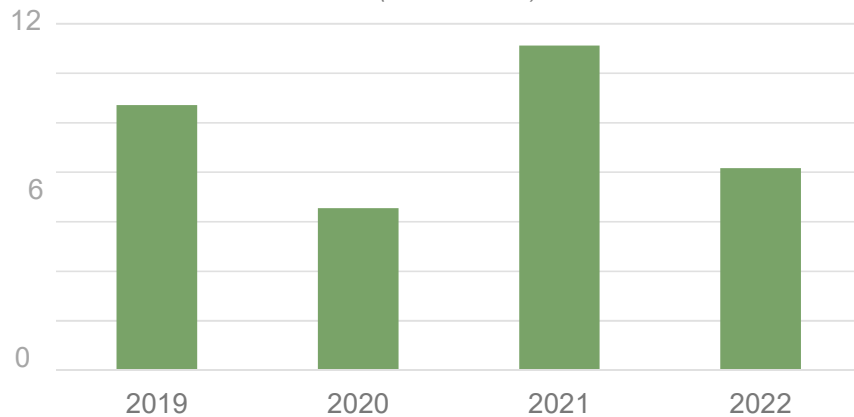
VAC was certified in 2022 for the location in Germany with the DIN EN ISO 50001 standard, in which an annual improvement in energy-related performance is assessed and must be presented with projects. We were already able to prove this in our next monitoring audit.

NATURAL GAS

Natural gas is one of the fossil fuels, and we are endeavoring to save natural gas in all possible areas or to replace it completely.



Natural Gas Consumption*
(in Million kWh)



ANNUAL SAVINGS

- Rotary furnaces in the year 2022: 200.000 m³
- small implementation measure 2022: 16.000 m³

ADDITIONAL PROJECTS

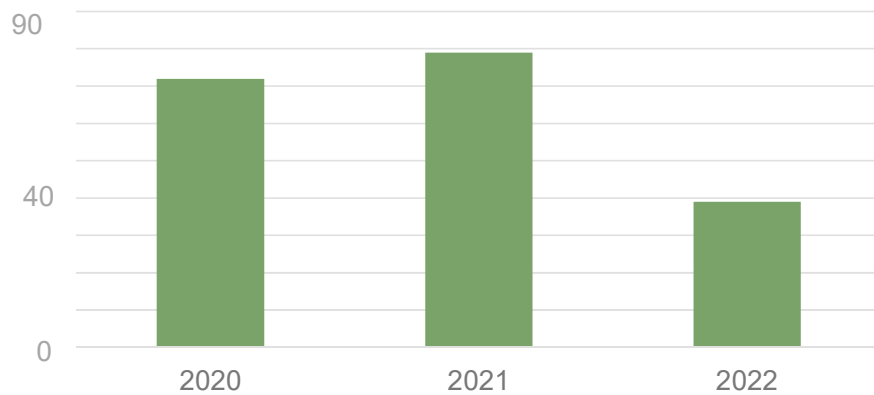
Since 2008 VAC is connected to the remote heating network of Hanau and is using no more natural gas for heating of the main production plant in Hanau. At our other location in Hanau, we are working on providing alternatives to natural gas.

GREENHOUS GASES

Greenhouse gasses is produced along the entire value chain of the product.. Our aim is to reduce our energy consumption or replace it with green energy.



KPI for Scope1 and Scope 2



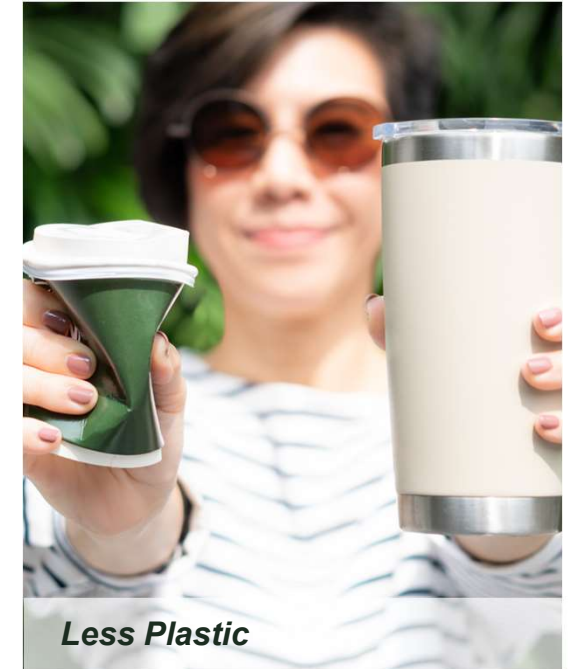
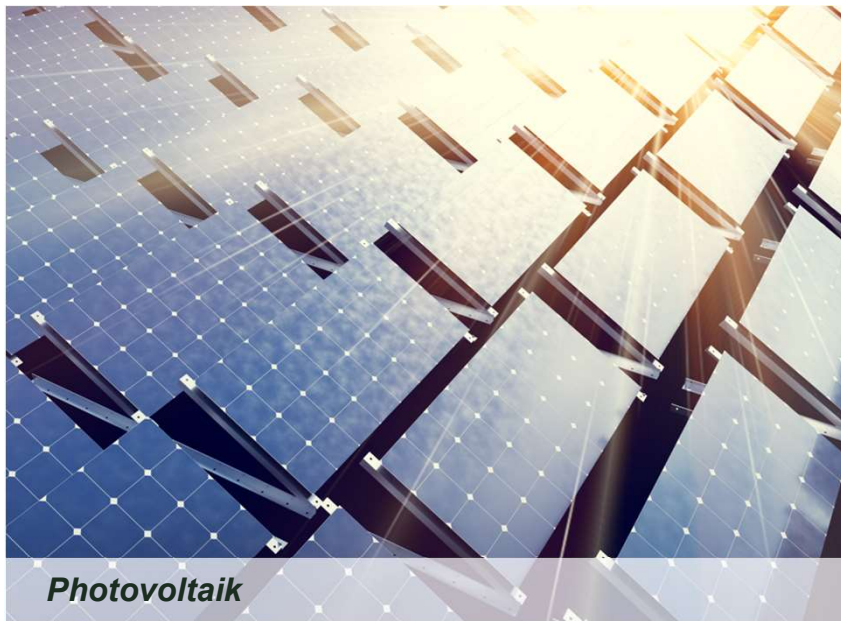
ANNUAL SAVINGS

- Conversion of compressed air station 2022: 83 t CO₂/a
- 100% green electricity at one location in 2022
- Due to savings in Scope 1/2, we can reduce our KPI by 50 % in 2022 to 2021.

ADDITIONAL PROJECTS

VAC will commit to implement the measures to achieve the SBTI targets and join the EcoVadis platform.

FUTURE PROJECTS

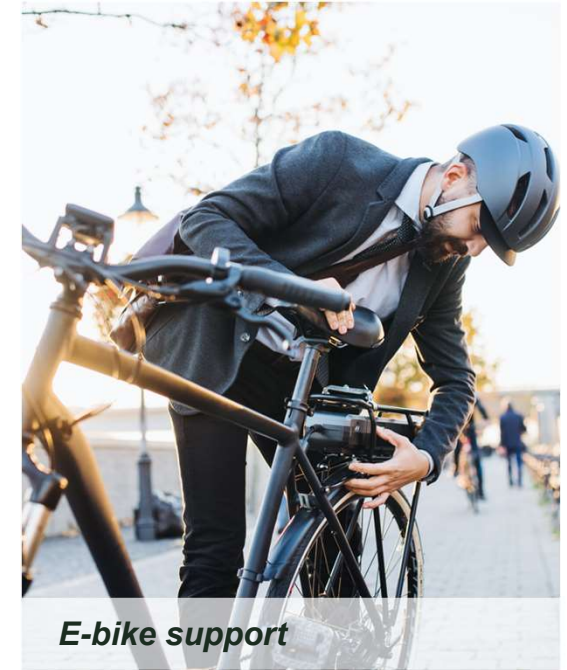


Waste & Energy

In the future, VAC will increasingly switch to alternative energies in those areas where this is possible. Valuable resources will be saved by recycling magnets and other production materials. By introducing reusable systems for food and drinks, a lot of waste is avoided in canteen, offices and in production.



FUTURE PROJECTS



Support E-Mobility

The future of electric driving is the future of transportation, which is why VAC sees internal transportation as a major component of future considerations. VAC is certainly aware of its external image and will join the EcoVadis platform in 2024.





CONTACT US

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