

THE TRAFOTEK WORLD OF

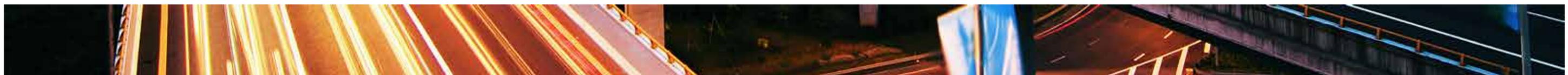
# BETTER ENERGY



As the world around us continues developing, there is no end in sight for the growth in demand for energy. Finding sustainable, economically and environmentally sound solutions to address these demands will be a key factor for everyone. All industry shares the concerns regarding rising energy prices as well as depleting fossil fuel resources and global warming caused by growing levels of emissions.

The growing populations, industrialization and urbanization of rapidly developing countries are among major contributors to the growing demand for energy. For us to be able to meet growing demands while ensuring a low carbon energy future, major investments will be necessary into energy production infrastructure and the achievement of environmentally sustainable operations.

It is of vital importance that the role of renewable energy is increased as a part of the energy mix. Today however, the first move in the right direction is to concentrate on improving energy efficiency across the board and reducing environmental impact through widespread adoption of cutting-edge technologies and best practices geared towards better energy.





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**TRAFOTEK** is more than familiar with the energy facts we are all facing. We are working actively together with our customers towards a sustainable energy future through smart electrification. The focus of our activities is to improve power quality, promote electrical energy efficiency and the exploitation of renewable energies. We design and manufacture inductive product solutions for high-quality energy generation as well as for the reliable and efficient use of energy.

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### RENEWABLE ENERGY

A clear transition towards a low carbon economy has already started. The share of energy coming from renewable sources and processes, especially wind and solar, has more than tripled in the past ten years. As the production processes for renewable energy become more economical this trend will continue. Over the next five years, renewable energy will represent the largest single source of electricity growth. Affordable wind and solar PV will dominate new power capacity investments.

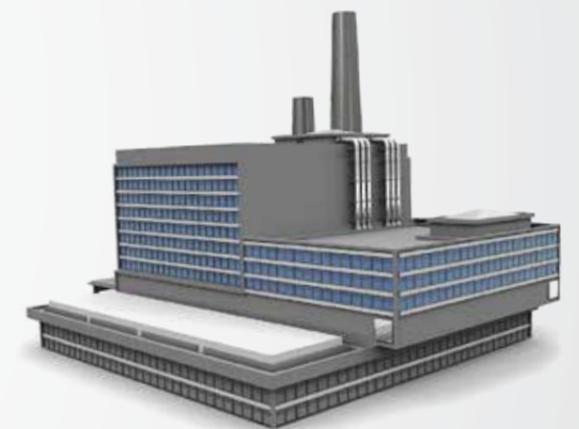
Trafotek is part of the global movement towards sustainable energy systems. We provide reactors and filters, which are needed for the reliable and efficient power conversion of renewable energy into electricity. Our products are in operation in wind and solar power plants worldwide.



### MARINE AND OIL & GAS

Rising living standards and industrialization are increasing the demand for marine bulk transportation. Also the quest for oil and gas is placing demands on special vessels and drilling rigs as production rates from mature fields are declining pushing drilling operations to more remote locations and harsh environments. All these industrial operations out at sea are governed by the same pressures to provide reliable and environmentally sound performance and increase energy efficiency of operations.

With 30 years of experience in the marine sector, Trafotek offers proven solutions for self-sufficient energy production and distribution on the open sea. Transformers for reliable propulsion systems are one of the core areas of our expertise.



### PROCESS INDUSTRIES

Industry accounts for around one third of the global energy demand. Overall, industrial energy demands will continue to grow, especially as emerging economies are investing in infrastructure and basic industries. Rising energy costs, restricted access to energy, increasing pressure on return on investment and intensifying regulation are drivers, which force industries to improve their energy efficiency and productivity. The focus is on investing in technologies that have the largest savings potential, industrial motors and their automation and control systems.

Trafotek is specialized in providing high power reactors and filters for industrial drives. Our knowhow in this field is based on long and close co-operation with global industry leaders.



**WE FOCUS ON THE ESSENTIALS.** This means having the best product design capabilities enabling optimized product solutions for each customer application, as well as world-class production based on competitive sourcing and global manufacturing footprint. Everything from the products and components we produce to the service and support we provide revolves around the idea of better energy.

Trafotek is committed to the highest ethical and professional standards and promotes openness, honesty and continuous dialogue with its stakeholders. Our way of doing business is responsible, transparent and ambitious. What we promise, we deliver – with a professional attitude, pride and precision.

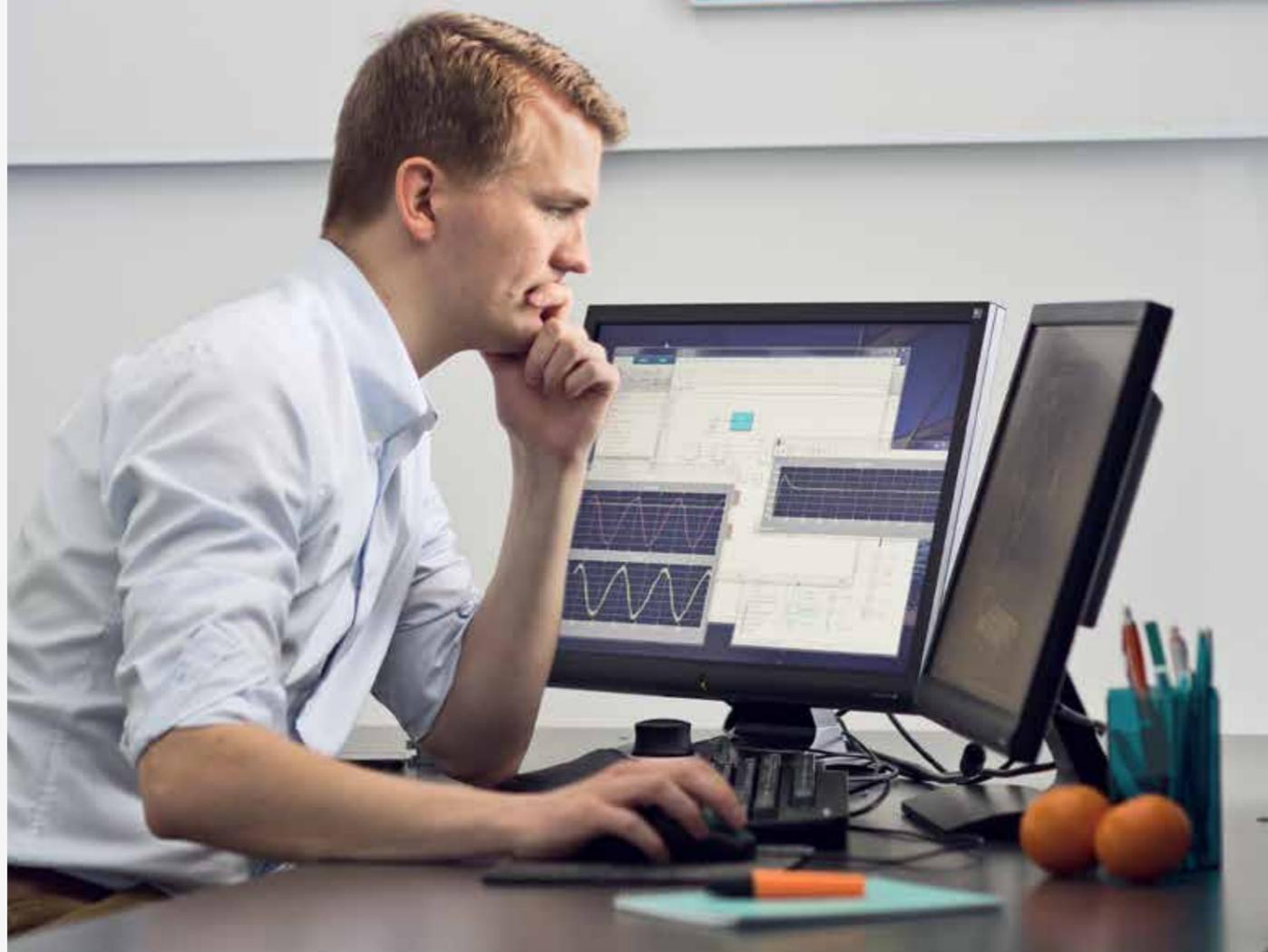
We understand, that our future business success is ensured by mastering relevant technologies and investing in R&D capabilities, by efficient production and materials management and by the high quality of the products. We have to be highly productive and responsive both as individuals and as an organization and ensure that our performance creates added value for each of our customers.

MORE THAN  
**18000**

Trafotek liquid cooled reactors  
have been produced and delivered  
to customers around the world.

**FACT.**

 TRAFOTEK



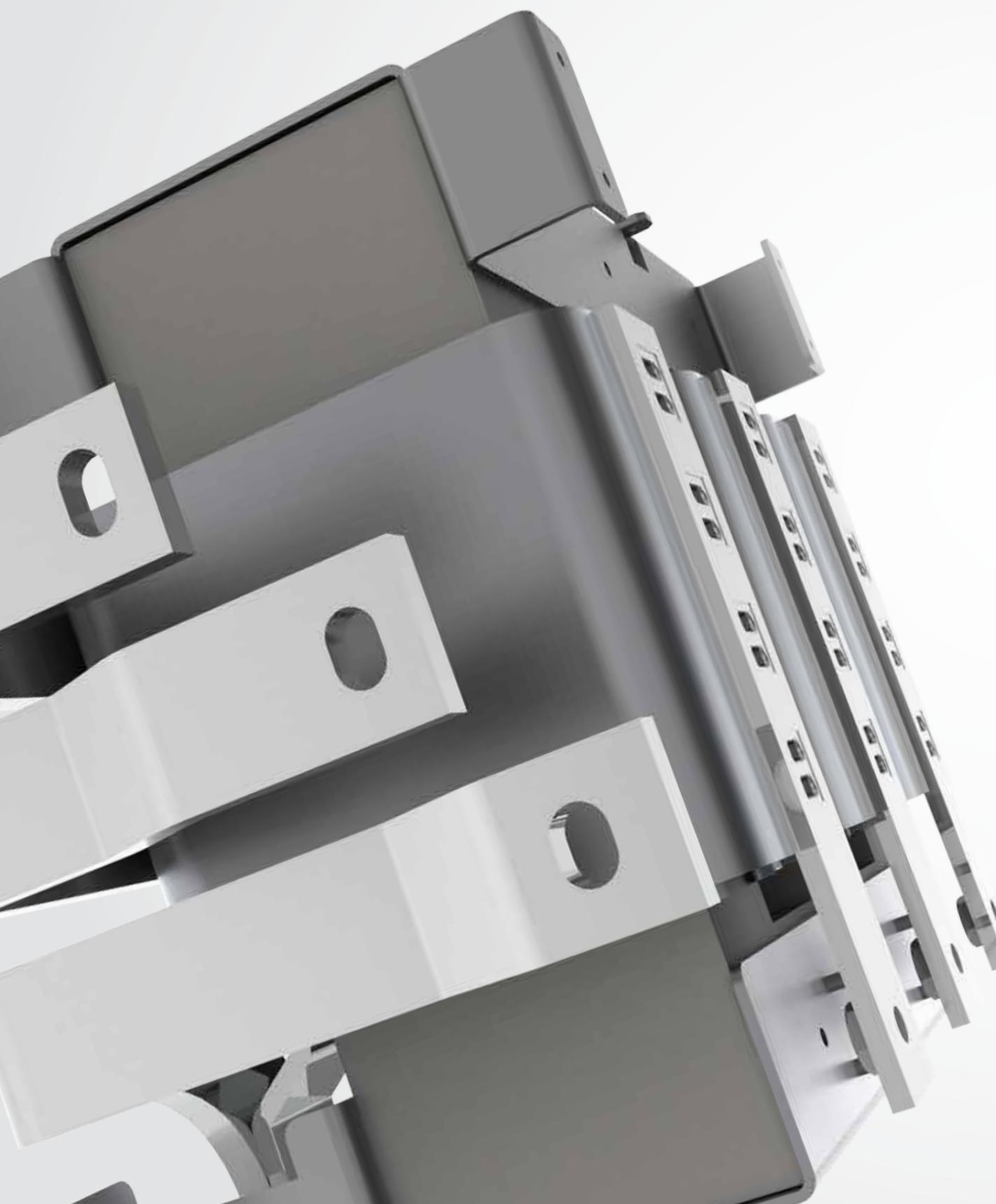
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An understanding of each customer's business, industry-specific requirements and the end-use environment where the product solution will be placed are vital. With our 30 years of experience in the design of power electronics and proven competence in electro-thermal simulation and dimensioning ensure that we are competent to deliver the right solution the first time. Our pioneering position in the field of technology is based on innovative liquid-cooled solutions and demanding transformer designs.  
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#### THE PRODUCT IS THE SOLUTION

We continuously engage in R&D to make sure that we recognize, develop and bring to market new technologies that are relevant and commercially viable. We are pioneers in bringing out innovative cooling systems which help to achieve the desired product size, weight and thermal impact on the environment.

Our designs are based on flexible standardized structures, resulting in short turn-around times and optimal electrical performance and product cost. The smart modular approach to product design also makes our operations flexible. We are able to manufacture highly customized solutions efficiently for customers around the world.





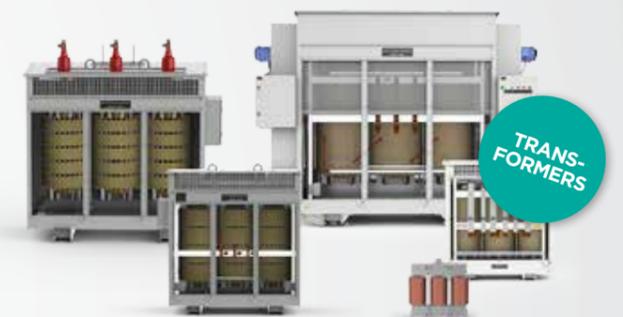
TRAFOTEK produces a comprehensive range of filter, reactor and transformer solutions for a wide range of customers in various industries. Our products are always scaled and optimized to customer specifications, built to deliver high standards of reliability and designed for continuous operations. We offer a variety of options from core, winding and insulation materials to surface treatments and cooling methods.

### TRANSFORMERS

Transformers are needed for the transmission, distribution and utilization of electric power. Transformers come in a wide array of sizes and are based on different technologies.

Trafotek specializes in dry-type transformers for marine, offshore and industrial applications. With our superior simulation competence Trafotek transformers are always optimized for reliability, performance and cost.

- » Cast resin and VPI technology
- » Low and medium voltage solutions
- » For drives, excitation, distribution, isolation and control

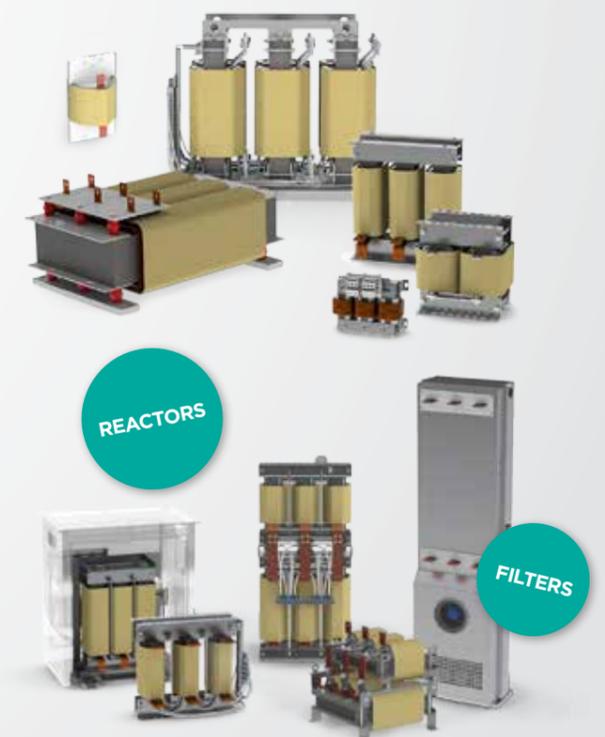


### REACTORS AND FILTERS

Reactors and filters are passive electrical components that provide inductance to the electrical circuit. Alone or in conjunction with other power electronic components, they work to eliminate harmful harmonics.

Trafotek is the global market leader in high power reactors and filters for solar and wind energy applications and frequency converters. We have extensive experience in liquid cooled products.

- » Vacuum impregnated
- » LV and MV solutions
- » For most diverse applications
- » Line reactors, output reactors, DC-link reactors, blocking reactors, trimmed filter reactors, LCL filters, sini filters, dU/dt filters



# BETTER ENERGY

Where it's needed.



Our clientele comprises of industry leaders in their own sectors. Our products, just as our customers, can be found all around the globe, on every continent and far away at sea. From Oceania to North America, from South America to Asia, our products are in everyday use maintaining industrial production and power generation as well as driving marine transportation.

We have been helping our customers to produce better energy since 1983. Our technical expertise, accountability and genuine willingness to grow, both mentally and operationally have been the cornerstones of our successful and long-term customer relationships. We are a partner who won't leave you until the job is successfully completed.

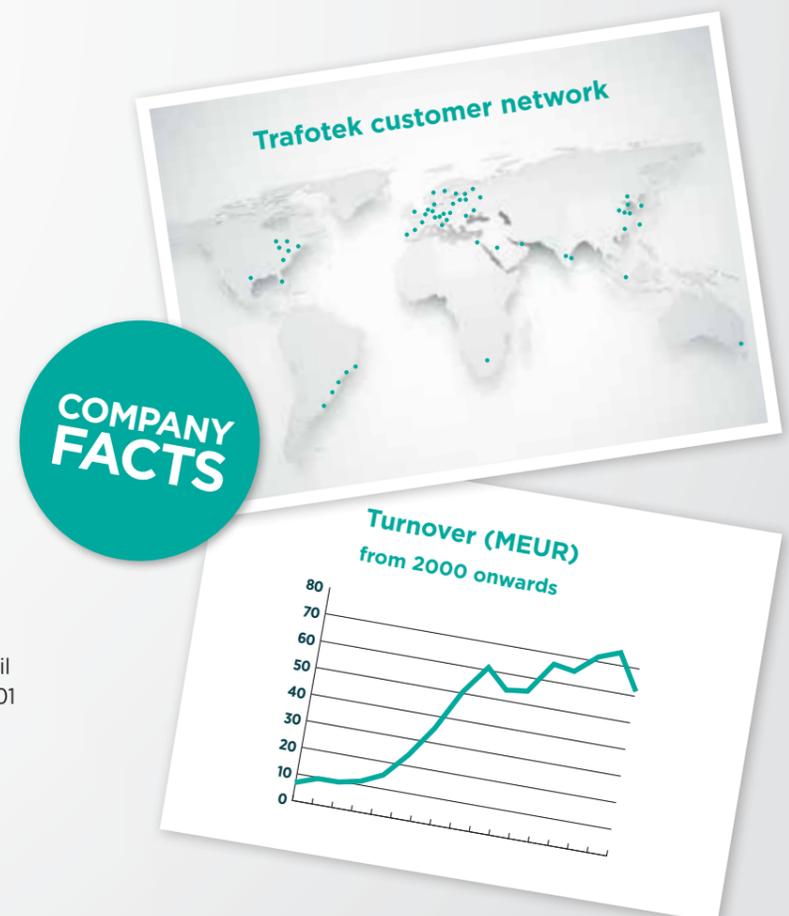
To ensure needed production capacity, timely deliveries and necessary proximity to our customers, we have decisively expanded our global presence. We have four production facilities in three continents. Trafotek products are manufactured in Finland, Estonia, China and Brazil.



TRAFOTEK is an independent manufacturer of inductive components for enhanced power quality, improved energy efficiency and exploitation of renewable energies. We have extensive worldwide references from the power electronics and ship building industries worldwide, with over 30,000 different transformer, reactor and filter designs created to date. Trafotek is known for its proven technology and industry expertise, reliable and optimized products and genuine strive towards the continuous development of global operations.

#### TRAFOTEK OY

- » **FOUNDED:** 1983
- » **HQ:** Kaarina, Finland
- » **PEOPLE:** Over 480 employees around the world
- » **CUSTOMERS:** Renewable energy, marine, oil & gas and a wide variety of process industries
- » **TECHNOLOGY:** Inductive components like electrical filters, reactors and transformers
- » **PRODUCTION SITES:** Finland, Estonia, China, Brazil
- » **CERTIFICATIONS:** ISO9001, ISO14001, OHSAS18001





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