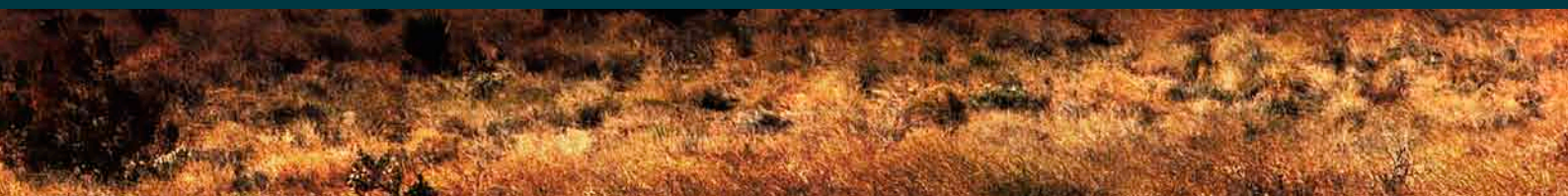




RENEWABLE ENERGY **SOLUTIONS**





TRAFOTEK is part of the global movement towards renewable energy. Our products are used by customers developing the next generation of wind generators and photovoltaic solutions. We are totally committed to our customers' pursuit of innovation and quality in the quest to make renewable energy a real option for all of us.

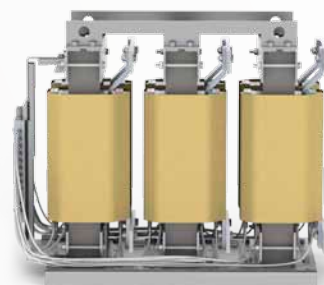




WIND AND SOLAR GENERATION represent two of today's most exciting renewable energy solutions, widely recognized as key methods by which the planet will be able to meet its future energy needs without imperiling the environment. As Western countries switch from fossil fuels to renewables at an increasing speed, countries such as China and India are announcing their own huge investments in renewables. In 2010, for the first time, more new wind power capacity was installed in developing countries and emerging economies

than in the traditional wind markets of the OECD. China alone is planning for a wind power generation capacity of 180 GW by 2020. The prospects for solar energy are also bright, as the maturing technology continues to reduce production costs. Already there are installations in more than 100 countries, and global production is increasing more rapidly than for any other power generation method. Bringing expertise, drive, and passion in all of its activities, Trafotek is committed to better energy.





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15000
WIND TURBINES

around the globe are equipped
with Trafotek products designed
for the renewable energy industry.

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FACT.

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TRAFOTEK offers far more than just a range of standard stock products. We work closely together with our customers to provide a high level of customization. We ensure that every product is suited to its environment and will meet the specific needs of the task it is designed to perform.

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GROWING & DEVELOPING IN LINE WITH THE INDUSTRY

THE EXCELLENT FIELD RELIABILITY and high efficiency of Trafotek's products have resulted in a long and impressive list of references and successful installations. Already more than 24 000 Trafotek product designs have been created, and some 15 000 products are used in wind turbines around the world.

CONTINUOUS R&D and high-quality customer service are considered by Trafotek to be essential components of our total product offering. To serve our customers best in the fast-growing market, we have to ensure that our production capacity and delivery times stay in pace with customer needs as well. Our multiple factory locations around the world allow us to provide the needed capacity as well as shorter transportation times. We are an ambitious and dependable partner that is growing alongside its customers as the industry expands.

LAURI HENTTINEN, AREA SALES MANAGER >





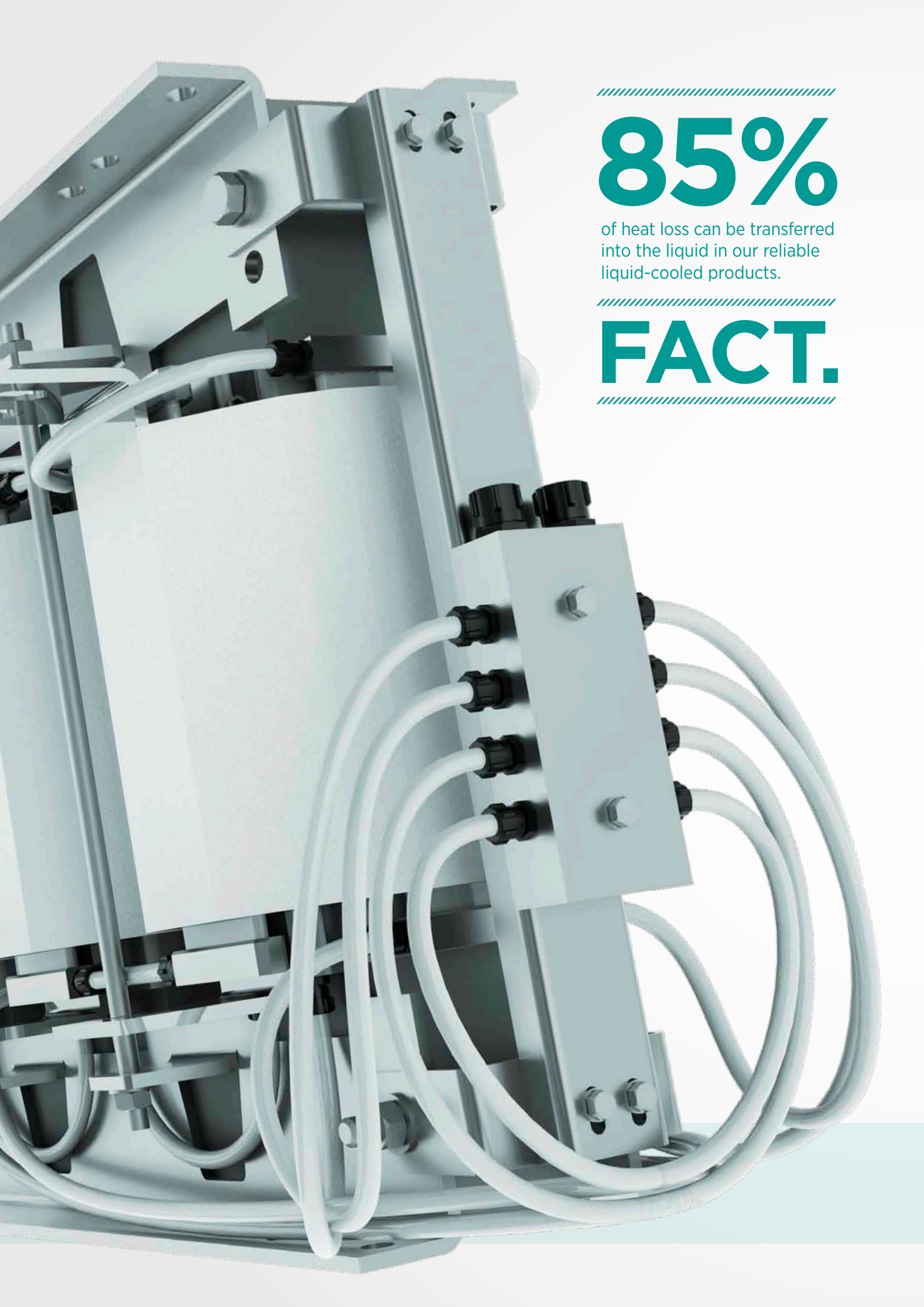
TRAFOTEK designs, manufactures and delivers LCL filters and transformers for solar energy installations. One of the key requirements for both products is minimal power loss. These requirements are met through innovative design and careful choice of materials.





IN SOLAR APPLICATIONS energy efficiency is of paramount importance. Thus we spare no effort in getting the most out of every ray of sunlight. This entails a continuous search for improved technologies and newly developed, ultra-efficient materials. The optimized dimensioning and cooling of our products not only saves space, but also secures reliable operation in extreme weather conditions, including high temperature environments. Hectic schedules are another

typical feature of the solar business. We are ready to meet the most challenging of delivery schedules at all times, both in product development in cooperation with our customers, as well as in our in-house manufacturing. The scale of our current solar projects is well illustrated by a recent installation in the Czech Republic, where our products help produce 150 MW of power into the national grid. More than 110 hectares of panel surface is needed to produce this amount of energy.



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85%

of heat loss can be transferred
into the liquid in our reliable
liquid-cooled products.

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FACT.

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TRAFOTEK produces a comprehensive range of filter, reactor and transformer solutions for the renewable energy industry. Variations of all products can be designed and manufactured to your specifications. The scaled and customized end products represent the optimal solution to the challenges that they face.

THE OPTIMIZED DIMENSIONING of our products enables us to deliver efficient and economical solutions that save space and function reliably under varying conditions. Our F and H class insulations ensure that our products can withstand high temperatures. The use of standard components also makes our production fast and efficient. We provide our customers with a wide range of options regarding materials and surface treatments. Our material

offering ranges from aluminum and copper wire to foiling and a variety of different grades of core materials. We also offer a multi-aircap core solution. Our vacuum pressure impregnation helps eliminate air bubbles and creates a solid and silent structure. Trafotek also has extensive experience and a strong understanding of different cooling systems from direct and indirect liquid cooling to airforced cooling.

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FILTERS

Trafotek's know-how in the field of filters is based on long experience. Our filters help produce an even output of energy from your renewable energy production plant. They help achieve a higher overall quality of energy that is fed into the grid with no spikes or deviations. Our products are durable, reliable and always scaled to perfectly fit your process.

LCL FILTERS // du/dt FILTERS // SINE FILTERS

REACTORS

Reactors are coils with an air or iron core operating as inductive reactance. Reactors are used to restrict current, generate idle power, filter out harmonic waves etc. With a strong background in coiled and foiled products, Trafotek produces high quality single and three phase reactors.

BLOCKING REACTORS // TRIMMED FILTER REACTORS // LINE REACTORS // SMOOTHING REACTORS // OUTPUT REACTORS // DC REACTORS

TRANSFORMERS

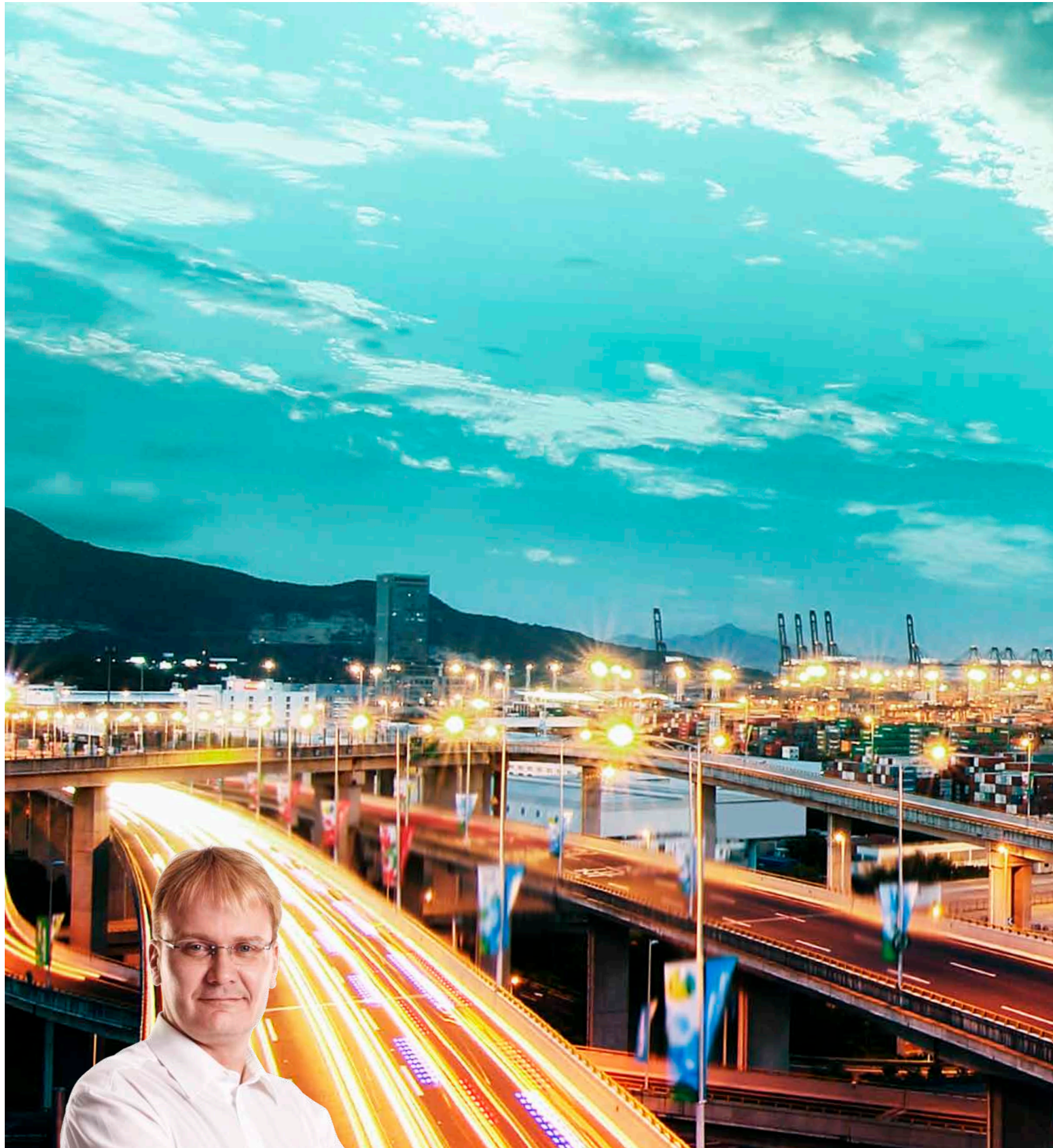
Transformers are simple electrical devices working on alternating current. Their main task is to transform voltage and adjust it to the needs of electrical energy transfer. Trafotek's transformers for AC drives reliably transform the produced energy into the desired current.

DISTRIBUTION TRANSFORMERS // ISOLATION TRANSFORMERS



LIQUID COOLING enables the effective and compact transfer of heat losses from electrical premises. With up to 85% of heat loss transferring into the liquid, only approximately 15% of heat is transferred into the surrounding air. Our liquid-cooled solutions can withstand high pressures and also have a small fire load.

The appropriate cooling systems are always chosen and produced according to the customer's desired production materials, whether they are copper or aluminum. With over 20 years of experience in designing and producing liquid-cooled products for our customers, you can rely on us to deliver the best possible solution for your needs.



TRAFOTEK has a long history as a trusted supplier of innovative and customized filter, reactor and transformer solutions to its customers in all parts of the world.

– PERTTI ARVONEN, PRESIDENT & CEO





BETTER ENERGY

OUR CUSTOMERS ARE FOUND IN VARIOUS INDUSTRIES AND ON EVERY CONTINENT. 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. Trafotek's innovative filters, transformers and reactors are designed for continuous duty without maintenance. Whether they

are intended for power generation or for use in any of their many other industrial applications, our products are total solutions tailored individually for each customer's need. With production facilities today in Finland, Estonia and China, Trafotek is steadily extending its global presence. Wherever you are in the world, Trafotek is ready to serve you and work with you towards the shared objective of better energy.



THE SUN AND WIND

produce enough energy
every day to meet all
the world's electricity
needs for more than a year.

FACT.



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