Processing heat with a THE SIGNIFICANT DIFFERENCE

eltherm •



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A contribution to sustainability and climate protection: The eltherm fleet operation was rated carbon-neutral in 2018. To achieve this objective, 143 t $\rm CO_2$ emissions were compensated by supporting global climate protection projects.

Understanding the Challenge.
Developing Optimised Solutions.
Implementing them for You.

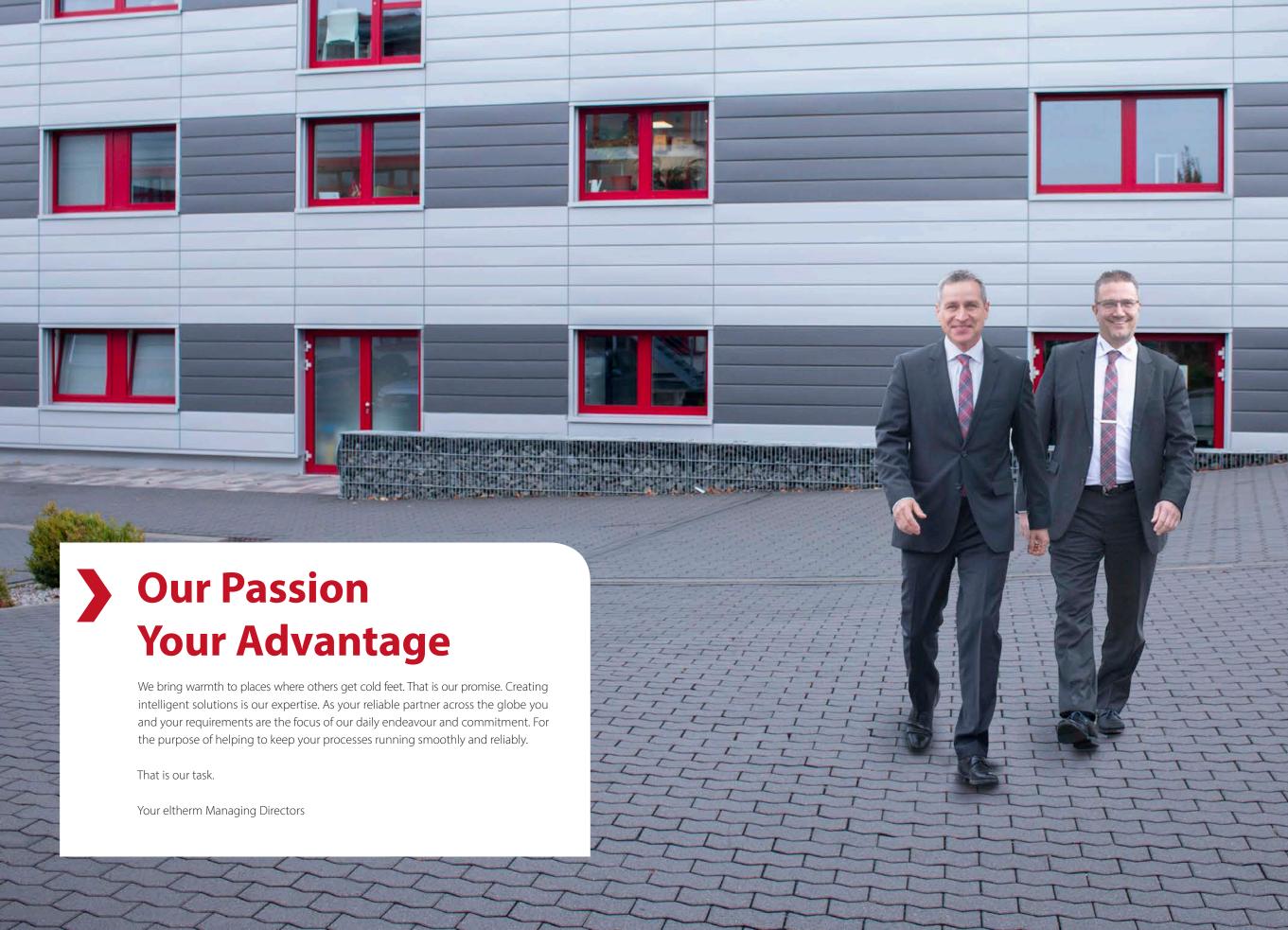
The eltherm eQ stands for:

> Expertise

Intelligent Solutions

> Quality

> Reliability







From Process to Product

Founded in 1991 in Burbach, Germany, eltherm has developed into a global engineering solution provider with its own production facilities and a single source supplier for electrical heat tracing products and systems "made in Germany". In 2019 this was extended to include "made in Canada". The company has attained worldwide recognition as a turn-key partner for engineering, design, installation and commissioning of electrical heat tracing for complex industrial plants and facilities.

eltherm is part of the publicly listed INDUS Holding AG. In 2018, a staff force of 10,000 generated annual revenues of € 1.710 billion.

> Portfolio Focus

We provide a comprehensive range of electrical heat tracing products, systems and solutions from A to Z. Your One-Stop-Shop.

> Customer Focus

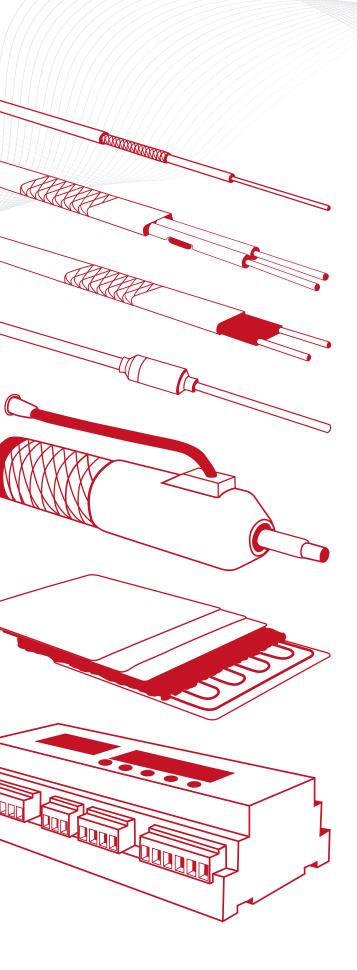
Our focus on the benefits to our clients sets us apart from competitors. We understand and solve our clients' needs with technological passion.

> Technical Focus

We specialise in electrical heat tracing. That is our core competence and inspiration.

> Global Focus

We are a global engineering company with our own production facilities, serving international markets and projects from 14 locations on 5 continents – and with a staff force of 270.





Your One-Stop-Shop from A to Z

> Serial Resistance Trace Heaters

for freeze prevention and process temperatures in industrial plants and facilities.

> Parallel Resistance Trace Heaters

Parallel trace heaters with constant wattage output and a single end power input.

> Self-Regulating Parallel Trace Heaters

for freeze prevention and temperature maintenance in industry and building & construction. Applications up to 250 °C.

> Mineral-Insulated Trace Heaters

exclusively manufactured and finished from Alloy 825 or high-quality stainless steel. The unique "Clean Laser Seal" Technology (CLS) guarantees a homogenous, 100% stable system and reliable function up to 700 $^{\circ}$ C.

> Heated Analytic, Pressure and Loading Systems

for reliable and safe transport of pressurised or non-pressurised fluids and gases without temperature loss, up to 450 °C.

Heating Mats and Jackets

custom-engineered and tailor-made, for heating valves, pumps, drums, barrels, hobbocks and flange covers, up to 900 °C.

Power and Control Panels

including temperature sensors, display and operating devices, monitoring and controls plus accessories for reliable, safe functioning.

Accessories

for safe and effective assembly and operation of complete heat tracing systems in facilities from small to large.

The Chocolate Thing

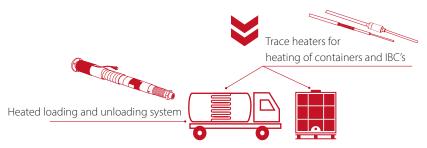
Chocolate is one of the most temperature-sensitive foods of all. It requires an exact, constant temperature between 40 °C and 45 °C to stay fluid. This also preserves its unique consistency and taste.

Below or above this range, the quality of chocolate is compromised drastically. A sophisticated electrical heat tracing solution keeps this temperature range along a complex process path including production, forming and transport.



Factory 1

Pipelines, fittings, pumps and tanks heated with trace heaters and heating jackets, Flexible connections with heated pressure systems



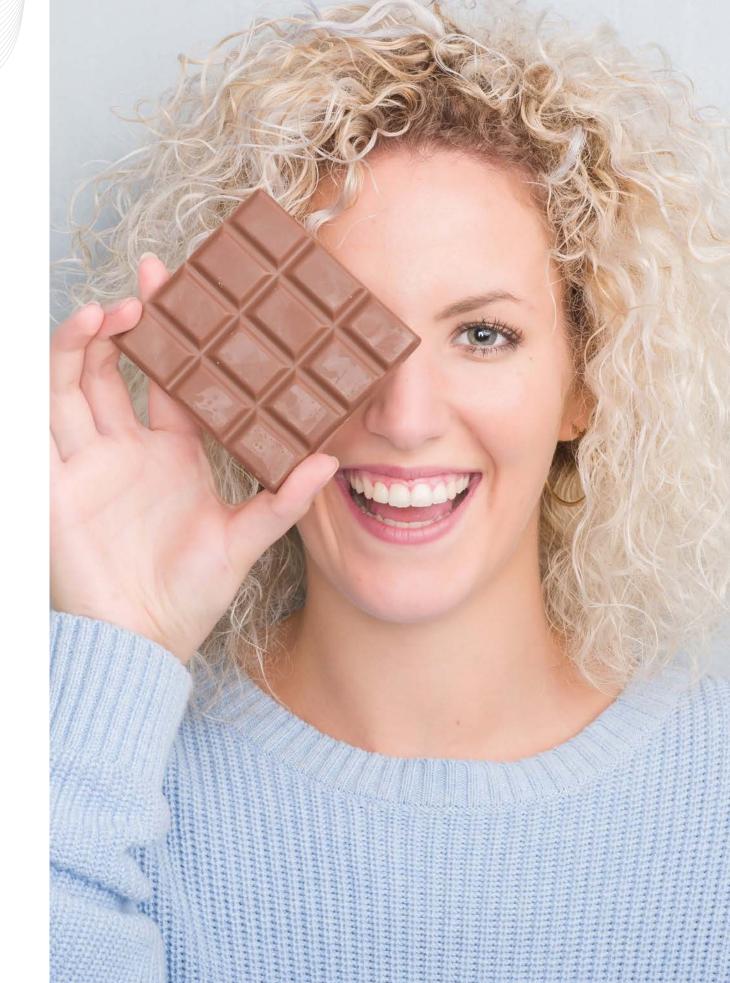






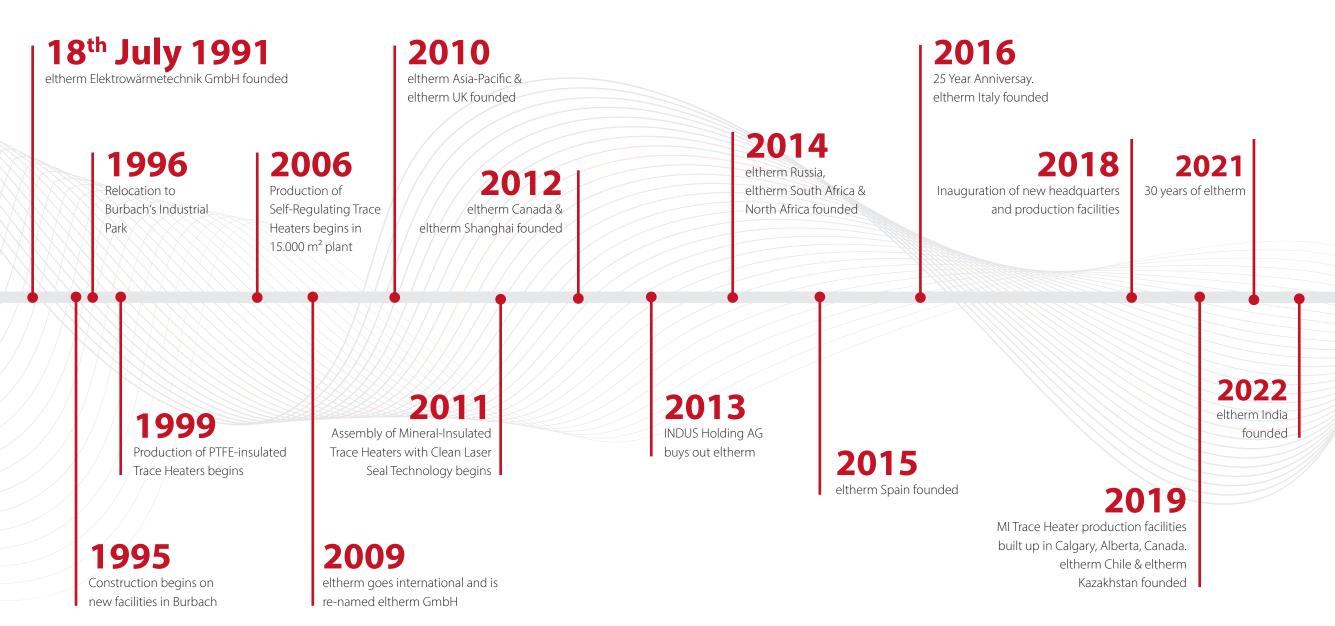
Filling and finishing with heated transport systems







From Then to Now The eltherm Story



In-House Development and own Production

Our full electrical heat tracing product portfolio is manufactured according to state-of-the-art industrial technology in our own facilities in Germany and Canada. High-tech production includes the revolutionary "Clean Laser Seal" technology which achieves an unsurpassed level of reliability and precision in the mineral-insulated trace heater system. Another eltherm speciality is custom-engineered and tailor-made production of heating mats and jackets for valves, pumps, hobbocks and flange covers. The same applies to individually designed flexible heated transport and pressure systems.

We supply electrical heat tracing solutions all around the world. We supervise their installation and commissioning on site. We support you in all your maintenance and repair requirements.

Your advantage is a single source – from A to Z.

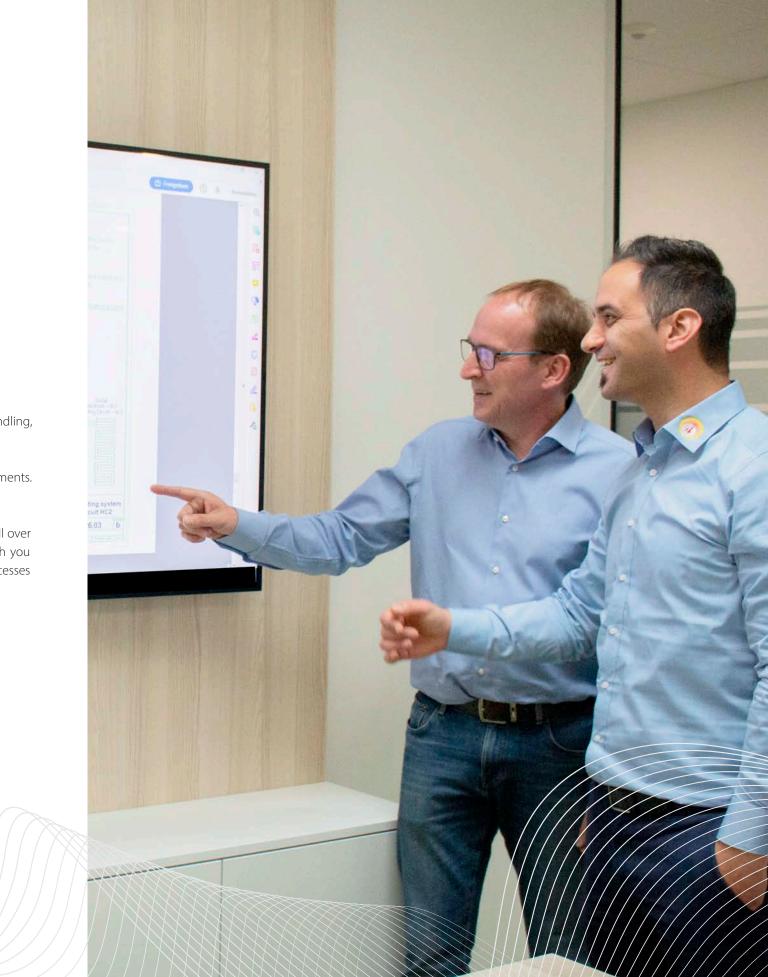


Engineering your Advantage

We develop complete solutions for processes in production, storage, handling, and transport.

Our engineers are committed to understanding your exact technical requirements. Their pride is to develop the best possible heat tracing solution.

Your advantage is: having eltherm know-how and expertise on your side. All over the world. Regardless of the application you need or the industry in which you work. Preventing condensation, maintaining flowability and keeping processes running smoothly is the engineering pledge.







Sugar trickles smoothly

- > Sugar clumps when it gets moist.
- > We ensure that foods flow and sprinkle like they should.

Sugar is a part of our everyday life. A cup of steaming hot coffee sweetened to taste gets us going in the morning. As simple as this may sound, sugar is a very sensitive foodstuff during storage, transport and processing. Whenever sugar is exposed to moisture, it forfeits its quality and clumps.

In order to prevent any condensation from disrupting the process, sugar silos, pipes, vessels and valves need to be heated to maintain a temperature above dew point.

Keeping sugar flowable – that is our task.





Capturing the Sun



- > Plug-in to Power.
- > We make it possible and change the world a bit for the better.

In Arabian, Noor means "light". It is also the name for the world's largest ever solar power stations in Morocco and the United Arab Emirates. Thousands upon thousands of heliostats and parabolic troughs catch the sun's power. Molten salts are employed to store that energy. They, in turn, must be heated to 550 °C and prevented from solidifying (this happens at 240 °C!) during the cold desert nights. We achieve that using Mineral-Insulated Trace Heaters controlled by a sophisticated power and monitoring system for the entire plant.

Capturing and saving the sun's power – that is our task.





Keep Together what Belongs Together

- > Adhesives outdo welding, making cars and life lighter and safer.
- > We help high-tech processes to work smoothly and fluently.

Adhesives technology has overtaken classic production techniques thanks to huge advances in quality and reliability. This applies to automobile chassis, windscreens, windows, flooring and furniture. Adhesives stick to the point and keep together firmly what must stick together. This makes many products lighter and safer. To make this work, adhesives must remain flowable in the pipelines to the glue robot and its dispensing nozzle, during transport and in the storage vessel. Our electrical heat tracing solutions using flexible transport lines and heating jackets do just that.

Bringing adhesives to the sticking point – that is our task.





Firm Ground for Agile Moves

- > Mobility needs good roads. All over the world.
- > We keep bitumen flowable and road construction flowing.

A homogenous asphalt road surface is achieved using two main components: a stony aggregate and bitumen. Bitumen can only be transported, unloaded, pumped and applied at high temperatures. During renovation roadworks, the old tarmac is milled off and recycled on site while a new asphalt surface is put in place – a fully mobile operation. In order to keep the bitumen flowable, we heat containers, pipes, unloading arms and dispensing nozzles. This ensures that the proverbial firm ground under our feet is put in place quickly, so traffic can move freely and without obstruction.

Contributing to firm ground for agility and mobility – that is our task.





Setting Course on Track

- > Arriving on time and safely, even in freezing cold.
- **>** We protect tracks from freezing and keep switch points switchable.

Freeze prevention is essential for smooth, safe railway traffic, wherever winters are cold. If switch points can be set and the tracks are kept free from ice and snow, trains remain on track and on time. A reliable, energy efficient electrical trace heating system with intelligent monitoring control achieves just that. Rather than wait in the cold, commuters reach their destination punctually. And the train service arrives as it should.

Ensuring that trains remain on course and on track – that is our task.







Keeping feet cozy and warm

- > Clever storage for natural gas and safe power supply.
- > We protect tank foundations from cracking and heaving.

Liquefied natural gas (LNG) refers to gas which has been cooled to -160 °C and has become fluid in the process. Compared to its gaseous state, LNG occupies a mere 1/600 in volume and is thus much easier to store and transport. At such low temperatures, the concrete foundations of LNG gas tanks are subjected to severe temperature differences. This can lead to cracking and heaving – a serious safety risk. Our electrical heat tracing solution (freeze prevention) inside the foundation prevents this and thus contributes to safe power supply.

Keeping the foundation of gas tanks safe and warm – that is our task.







We make sure that your turnkey EHT solution is professionally assembled on site and is ready to go into operation on time. We also ensure reliable functioning and smooth operation.



Maintenance, Repair, Operation

We make sure that your processes run smoothly. We check safe function of the EHT system and conduct maintenance and repair – wherever and whenever. This saves you costly down times.



Training and Support

For us, a contract fulfilled means commitment to after sales service. We support and advise you in all technical matters. Benefit from our know-how through our practical training for your teams.



Information and Customer Service

We make sure you remain up to date on any new application and innovative solution. We keep you posted on new products and systems and keep you informed ahead of new developments.



At Your Service At Your Service eltherm globally

We serve international markets from our group headquarters in Burbach, Germany and from 14 locations on 5 continents. Partners and customers in industry and construction, EPC's and fleet operators in intercontinental logistics benefit from our expertise right where they need us.

At your service – globally. That is our task.

Calgary, Canada

Burlington, Canada

Korolev, Russia

Burbach, Germany

Milano, Italy

Barcelona, Spain 3

Casablanca, Morocco

Newbury, UK 🧿

Astana, Kazakhstan

Delhi, India 🧿

Shanghai, China

Johannesburg, South Africa



80.000 Football Fans

enjoy their French fries in the stadium while the hot fat used to make them is disposed of without clogging up waste lines.

of chocolate are consumed by every Norwegian. To make it, we keep it well tempered.

5 Continents 14 Locations

270 Staff Members

work for eltherm all over the world. And for you and your heat tracing challenges.

2.777 Football Fields

is the ground space covered by the solar power plant NOOR in Morocco. Electrical heat tracing performs vital functions there.

10 Young Adults

are trainees and students with eltherm in 8 professions – a committed investment in and for the future.

40.000 km Heat Tracers

spanning the circumference of the globe in the course of a decade are used in a wide range of industries.

14 Million Tons

of adhesives are used globally every year. They need to be heated to a specific temperature to keep them flowable.