OhmEx
Industrielle Elektrowaerme GmbH

OhmEx – Your partner for customised electric heating solutions

We heat up your process.

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When industrial processes require heat, OhmEx supplies the right energy. Since 2006, we have been developing and manufacturing robust yet highly precise electrical heating systems in Grosswallstadt – individually tailored to your requirements.

From the initial idea to commissioning, we provide everything from a single source: consulting, engineering, manufacturing, switchgear, documentation and service. Whether flow heaters, air heaters, process heating systems or complete Power2Heat modules – our solutions deliver where reliability, efficiency and safety count. We implement projects for energy suppliers, the chemical, food, oil and gas industries and plant manufacturers worldwide.

Our ISO 9001 and ISO 14001 certifications guarantee the highest quality and processing standards – even in potentially explosive areas in accordance with ATEX. In addition, we can supply your systems in accordance with EN, ASME, IEC, UL, CSA and other regulations. As the official distributor for European Countries, we represent the British company EXHEAT Industrial Ltd. and are expanding our range to include internationally proven and standardised heating systems for potentially explosive applications.

This ensures that you always have the optimal product in your processes. Our experienced team of engineers and technicians creates systems that are precisely tailored to your process. We think ahead and communicate proactively – so that you can make optimal use of your energy.

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INDUSTRIAL APPLICATIONS

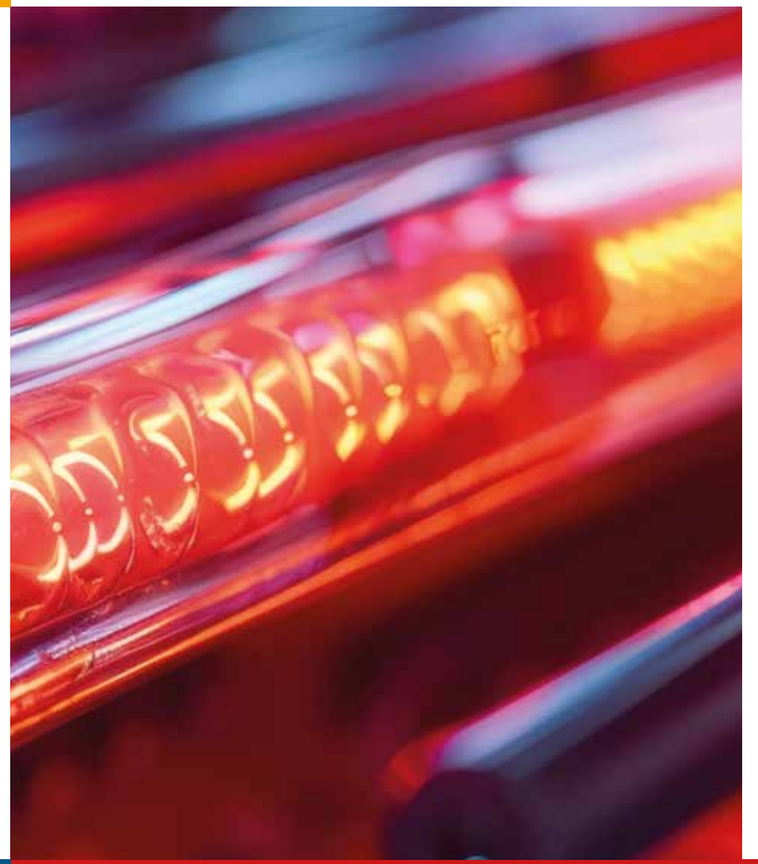
Wherever heat is needed in a controlled and reliable manner, electric heaters are the key technology in modern processes. Whether in industrial plants, power stations or supply systems, they combine efficiency, safety and flexibility at the highest level. We are partners to leading companies in the following industries.

- Oil & gas processing
- Storage & processing of combustible materials
- Petrochemicals
- Chemicals
- Pharmaceutical industry
- Marine
- Energy generation
- Environmental technology
- Power stations
- Electrical systems, generators
- Iron & steel production
- Dryer and furnace construction
- Building services engineering

AREAS OF APPLICATION

From liquid to gaseous media – our electric heaters cover a wide range of applications.
They provide reliable heat in energy generation, the process industry, supply engineering and many other areas where precision and efficiency are crucial.

- Compressors / oil preheating / compressed air
- Joule Thompson / hydraulics
- Space heating / tank heating systems
- Combustible substances such as petrol / oils / combustible gases / crude oil / molten salts
- Gases / nitrogen / chemicals
- Washing & drinking water / machine oil / seawater
- Power plant technology / steam superheating / barrier steam / anti-icing / anti-condensation heaters/ heat retention / feed water
- District heating / heat storage / salt storage / solid storage
- Catalytic afterburning / biodiesel production / air
- Heat transfer media / water-glycol mixtures / pickling agents / fully desalinated, demineralised water
- Recirculating air heating systems / continuous furnaces
- Heating / air conditioning / ventilation
- Power-to-heat (P2H) systems



VALUE-ADDED AREAS

Our services cover the entire process, from feasibility consulting and budget definition to technical planning with designs, 3D construction and calculations, right through to complete manufacturing including mechanical and electrical work, welding, switchgear construction and the necessary approvals. Finally, documentation, commissioning and training of operating personnel ensure the smooth completion of the project.

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CUSTOMER BENEFITS

Those who choose OhmEx are choosing quality, precision and partnership-based cooperation. Our customers benefit from solutions that are not only technically impressive, but also create real added value in daily operations. We focus on your advantages – from planning to the reliable operation of your system. OhmEx – your partner for precision and reliability.

Advantages of electric process heaters

Electrical energy
- ✔ Process heat is immediately available
- ✔ Precise power and temperature control
- ✔ High efficiency (98%)
- ✔ Environmentally friendly

Operation
- ✔ High operational reliability especially during continuous operation
- ✔ Long service life

Maintenance
- ✔ Good accessibility for maintenance/cleaning
- ✔ Low maintenance costs
- ✔ Robust construction

Design
- ✔ Compact design, low space requirement
- ✔ Large selection of usable materials of construction

Installation
- ✔ Low installation costs
- ✔ Simple assembly
- ✔ Indoor and outdoor installation

"For us, the customer is the focus. Every electric heater is customised – optimally designed for maximum service life and robustly constructed. We rely on proactive cooperation as partners: transparent, reliable and always with the aim of creating the best solution for your process."

General director Matthias Volz

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AREAS OF BUSINESS

OhmEx develops and supplies electric process heaters and associated switchgears that efficiently heat liquids and gases using electrical energy. These systems replace conventional heating with fossil fuels or steam and are designed for temperatures up to 600 °C and pressures up to 200 bar. They can be used in both safe areas and potentially explosive atmospheres (ATEX, IECEx).
Typical applications can be found in the oil and gas industry, chemicals, petrochemicals, pharmaceuticals, food, energy production, mechanical engineering, marine, environmental technology, thermal plant engineering and the balancing energy market. Areas of application include heating processes with media such as water, steam, hydraulic oil, thermal oil, molten salts, hydrogen, nitrogen, natural gas, air and many others.

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1

Power-to-Heat

Transfer of surplus electricity into heat

2

Electrical process heaters

for safe and potentially explosive areas

3

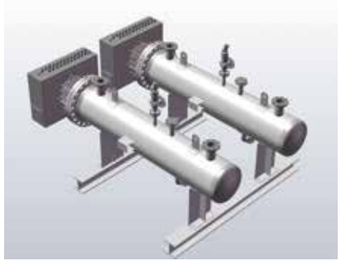
Standardised radiators and immersion heaters

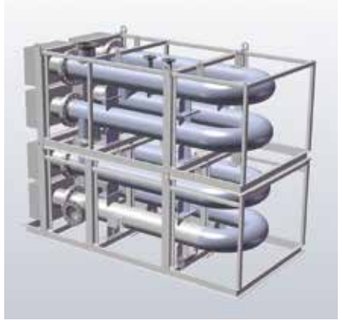
for applications in potentially explosive areas

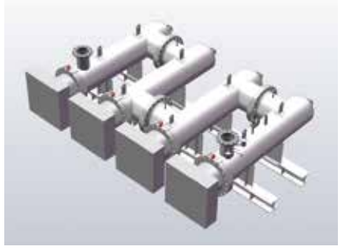
1

POWER-TO-HEAT

Our modern P2H systems can easily achieve outputs in the megawatt range. Whether air heaters, process heaters or immersion flange heaters – the right technology is available for every application.
This enables companies to make optimum use of surplus electricity, reduce energy costs and at the same time make a significant contribution to climate-friendly process heat. The interfaces can be customised to suit specific customer requirements.



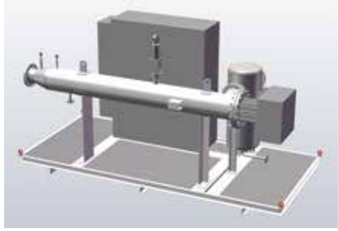


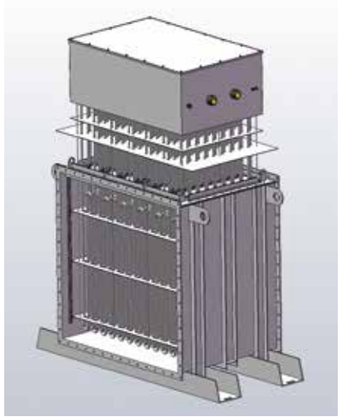


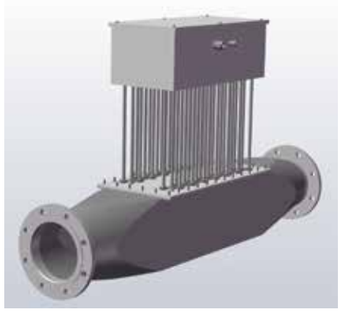
2

ELECTRIC PROCESS HEATERS

We offer exceptionally versatile solutions for process heating applications in almost all industrial sectors. Thanks to their wide temperature and pressure range, they are ideal for heating a wide variety of media, from gaseous flows such as air, nitrogen, natural gas, hydrogen or other process gases to liquid media such as water, salt, oils or chemicals.
With our air heaters, With our air heaters, electric flow heaters and immersion flange heaters, individual requirements can be precisely mapped and reliably met. Electric heaters thus enable a clean, efficient and adaptable heat supply for a wide variety of industrial processes.







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3

SPACE AND IMMERSION HEATERS

Standard electric heaters for explosion-proof areas from Exheat Industrial Ltd. offer safe, reliable and standard-compliant heat generation in demanding industrial environments. They are specially designed for use in ATEX and IECEx classified zones, among others, and guarantee maximum operational safety even under critical conditions. Thanks to their robust materials, these heaters enable a stable and efficient process heat supply. With a range of designs and connection options, the devices can be flexibly integrated into existing systems – ideal for chemical, oil & gas, energy production and all applications where safety and reliability are top priorities.

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AREA OF APPLICATION: BALANCING ENERGY MARKET

The use of electric heaters in the balancing energy market opens up new opportunities for flexible and economical industrial heat generation. As a controllable electrical load, electric heaters can be used to absorb additional electricity in a targeted manner, thereby providing negative control energy – especially in the event of grid bottlenecks or surpluses from renewable energies.
Thanks to their fast response times, high controllability and coupling to thermal storage systems, they are ideal for stabilising the electricity grid. This makes electric heaters an important factor in the transition to renewable energies. Thanks to their fast response times, high controllability and coupling to thermal storage systems, they are ideally suited for this purpose and also help to stabilise the power grid. This makes electric heaters an important component in an increasingly renewable and flexible energy system.

APPLICATION AREA: DECARBONISED PROCESS HEAT

Electric heaters offer a future-proof and emission-free alternative to fossil fuel burners and enable the gradual or complete decarbonisation of industrial and process heat. Thanks to their precise controllability, high energy efficiency and easy integration into existing systems, they are suitable both as a complete replacement for gas or oil burners and as a flexible addition to hybrid heating systems. Electric heaters thus help companies to reduce CO_2 emissions and cushion volatile energy prices while meeting the requirements of modern energy and sustainability strategies.

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OhmEx Industrielle Elektrowaerme GmbH
Luetzeltaler Straße 1
DE – 63868 Grosswallstadt
Telephone: +49 (0) 6022 / 70690-70
E-mail: vertrieb@ohmex.de

www.ohmex.de