

# Electrical gas preheaters



**ELMESS**  
THERMO SYSTEM TECHNIK



- Elektrische Industrieheizkörper • Erhitzer
- Regel- und Steuergeräte
- Electric heaters • Control devices





## Electrical gas preheaters

Ex II 2 G Ex II 2 D

**Heat** - for all gases up to 650°C  
**And safety** - for operation in EX hazardous areas and for high pressure up to 500 bar.  
**Our solution - tailored exactly to your need!**

### Typical applications:

- Gas pressure reduction stations
- Seal gas and fuel gas heaters

### Gas preheaters as flow heaters

The gas is being heated up directly inside a vessel by the electrical heating inset. The temperature monitoring to the protection of the heater and compliance with the temperature class be carried out by means of temperature sensors, adjusted to the heating elements, and electro-mechanical switches or electronic monitoring equipment.

The pressure vessel is designed and manufactured according to European Pressure Equipment Directive, ASME code or other international standards. The full documentation including all material and test certificates is part of the supply.



### Explosion protection:

Explosion protected gas preheaters are suitable for operation in hazardous areas of category II 2 G or 2D (zone 1 or 21). They are supplied with EC type examination certificate according to ATEX directive 94/9/EC. GOST and IECEx certificates are available on project basis.



### DVGW approval (German Technical and Scientific Association for Gas and Water)

### Materials:

Tube coil or vessel and flanges made of carbon steel, stainless steel 321, 316 or special materials according to customer's requirements. Heater shell and connection box made of carbon steel or stainless steel.



### Advantages of ELMESS gas preheaters:

- designed according to customer's individual requirements
- safe and reliable operation
- simple installation
- low service requirement
- long lifetime

Special design with inline process connections:

Due to a special, double-walled design, the heat loss is reduced. Inlet and outlet nozzles are on the same level.

## Electrical gas preheaters

Ex II 2 G Ex II 2 D

### Block type gas preheaters

The medium is heated up indirectly inside a tube coil. The tube coil and the electrical heating inset are cast in an aluminium block which serves as heat transfer medium. The block is protected by a shell made of carbon or stainless steel.

The tube coil, being the only pressure bearing part, is designed and manufactured according to European Pressure Equipment Directive, ASME code or other international standards.

All technical data, dimensions, process connections (1"-2"), mounting position and electrical power are designed according to customer's individual requirements.

### Vaporizers and heaters for industrial gases

Vaporizing of liquid gas inside the tube coil with following super heating in one heater.

Preheaters are also suitable for heating up of industrial gases, process gases, pressurized air or liquids.

### Power and temperature control

If you need a simple on/off switching cabinet or a comfortable thyristor control panel with cascade loop, ELMESS-Thermosystemtechnik will offer you the appropriate control system for your heating function.



### Additional equipment

- Electronic thermal cut-out type eB\*6\*\*\* with ATEX approval
- EX thermostat type QTREK



### EX control gas preheater

Preheater for heating up small amounts of gas, e.g. control gas. Compact block heater with tube bundle and self regulating heating inset, 200W, up to 20 Nm/h

## Special advantages of ELMESS block type gas preheaters

- Applications with high operating pressure up to 500 bar, due to special tube coil design
- Operating temperature up to 400°C
- safe and simple temperature monitoring and control
- good temperature control at small distance between medium and maximum admissible temperatures.
- application with aggressive media

Inline heater design with inlet and outlet on one level





# Heat.

## And safety.

*There is quality in the detail.* ELMESS' high-quality and durable industrial heating systems are put to a large variety of uses, for example on oilrigs to ensure that work can be carried out smoothly and safely.

### **Each individual product of ELMESS is unique**

- Ex immersion heaters with flange and thread connection
- Flow heaters for fluids or gas including documentation according to PED or ASME
- Gas preheaters or vaporizers: Block type heater with a tube coil cast in an aluminium block, for reliable and safe operation also with high pressures
- Air heaters
- Ex air blower heaters for wall mounting or compact type
- Ex space heaters and finned tube heaters
- Ex temperature regulators and thermostats
- Ex level switches

### **Challenge us**

Send us your specific enquiry. We will make you an offer tailored to your requirements.  
Also available on the Internet under [www.elmess.de](http://www.elmess.de)