

Duct Air Heater

heatsystems duct air heaters are designed for the direct heating of gaseous media. The area of application is the heating of non-flammable, gaseous media and vapours.

Special areas of application are ventilation and air condition systems as well as drying systems and process technology.

heatsystems duct air heaters can be used at overpressures up to 10 mbar.

heatsystems electric process heaters (see chapter 2) are used at higher pressure.

Usual materials for heatsystems duct air heaters

Duct

Stainless steel

Connection housing

Stainless steel

Steel, powder-coated

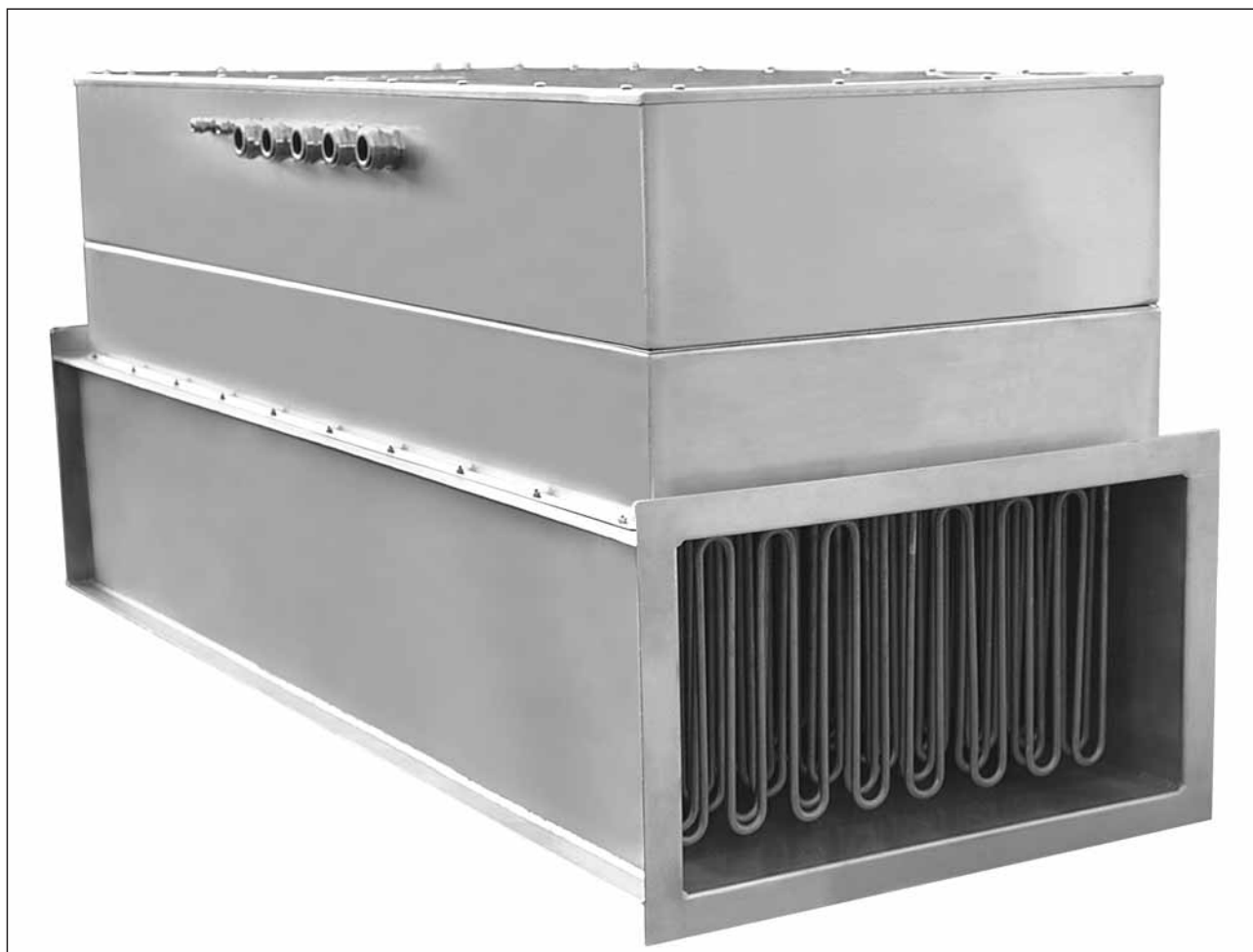
Heating element

Stainless steel AISI 309 (1.4828)

heatsystems duct air heaters consist of the following components:

Design and construction

Computer-aided design of the surface load of the heating surfaces ensures optimum design and load. Optimisation based on the flow velocity in the duct, the maximum permissible pressure loss and the maximum permissible surface temperature on the heating element.



Duct air heater, capacity 187.5 kW.

Duct Air Heater

Vessel/duct

Consisting of housing and fastening flanges. Built-in support plates for stabilizing the heating elements if necessary.

Optional: Transitions to round air ducts or flanges. Plug-in modules for installation in existing ducts.

Heating element

Highly compressed U or W-shaped bent tubular heating elements. Material tinder resistant, even at high operating temperatures. Commonly used diameters of the tubular heating elements are 8.5 or 16 mm. The optimum suitable heating element is determined depending on the duct size and the flow velocity. Duct air heaters with built-in high-density cartridge heaters are often used as blocked air heating in power stations.




Connection housing

Connection terminals for the electrical connection as well as any temperature controllers or temperature limiters as resistance sensors or thermocouple for electronic evaluation are built-in. The distance between the vessel and the connection housing is chosen so that the temperature in the connection housing does not destroy the material of the installed parts. Cable screw connections of the appropriate size and protection type are included in delivery. Electrical protection type of the connection housing according to IP 54. Higher degrees of protection up to IP 65 are available on request.

Temperature controllers and limiters

Temperature controllers and/or temperature limiters (effective on the medium) are installed in the connection housing on request. Optional: overheating protection (effective on the surface of the heating element). These elements can be designed both electromechanically and for electronic evaluation (Pt 100, thermocouple).

Other options

-  plug-in module for existing ducts
-  with blower
-  with temperature controlling limiting and control cabinet



Capacity 90 kW / transitions to DN 200.



Plug-in module to DN 200.

Air Heater



Duct air heater with built-in temperature control and display. Capacity 4 kW. For installation in an air duct. Equipped with customised connecting flanges.



Electric process heater for heating 90 percent SO₂ gas with 10 % steam.

Vessel of stainless steel AISI 904L (1.4539).

Heating surface of stainless steel Hastelloy C-278 (2.4819).

Capacity 200 kW.

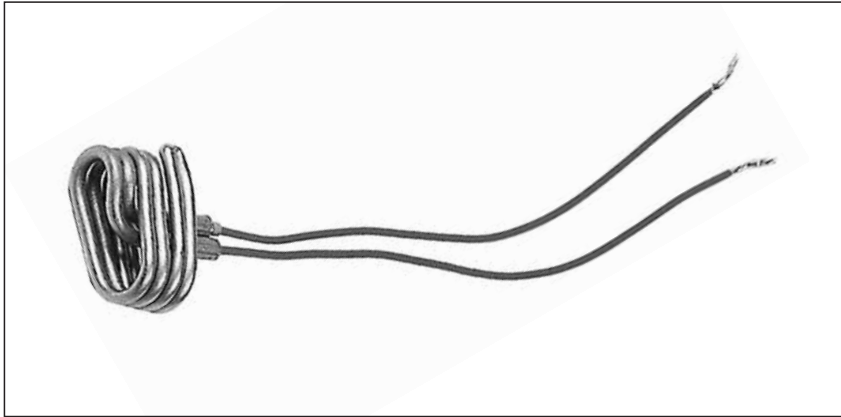
Pressure 3.5 bar.

Temperature 300 °C.

Diameter 460 mm.

Length approx. 3,000 mm.

Air Heater



*Micro spiral heating element. Figure scale 1:1. Application in medical sector.
Capacity 50 Watt. Voltage 24 Volt.*

Process Heating Duct

heatsystems has developed a special process heating duct for the cable industry. Heating ducts are used specially for tempering PTFE-insulation onto the voltage bearing part of the cable. They are manufactured modularly. Each module is 1,250 mm high. Six modules can be arranged one on top of the other, for example, to achieve a flow length of 7,500 mm.

To ensure an exact temperature control, a separate regulator should be provided for every module.

Appropriate switch cabinets also belong to **heatsystems** delivery program.

Product features:

- working temperature up to 500 °C
- capacity for any modul 10 kW
- high efficient thermal insulation



Process heating duct in standard version.



Stackable due to modular design.



Appropriate control technology.