

Gas Supply Systems/Vacuum Operation for Tube Furnaces



Gas supply system 1:
Fiber plugs with protective gas connection,
suitable for many laboratory applications

When equipped with various equipment packages, the tube furnace product lines can be adapted for operation with nonflammable or flammable gasses or for vacuum operation.

Gas Supply System 1 for non-flammable protective or reactive gases Not gastight, no vacuum operation

This package represents a basic version sufficient for many applications, for operation with non-flammable protective or reactive gasses. The standard working tube made of ceramic C 530 delivered with the furnace can still be used.

- Available for tube furnaces RD, R, RT, RSH and RSV
- Standard working tube can be used
- 2 plugs made of porous, non-classified ceramic fiber incl. protective gas connections
- Gas supply system for nonflammable protective gas (Ar, N₂, forming gas, others on request) with shutoff valve and flow meter with control valve, piped and ready to connect. One gas intake pressure at 300 mbar to be provided by customer.

Additional equipment

- Extension of gas supply system with a second or third nonflammable type of gas
- Bottle pressure regulator for use with bottled gas
- Automatic switching on/off by means of the program segments of the controller, only possible with control systems which include programmable extra functions



Water-cooled stainless steel flange

Gas Supply System 2 for non-flammable protective or reactive gases/vacuum operation

For increased atmospheric purity requirements in the working tube, we recommend this gas supply system. The system can also be equipped for vacuum operation.

- Available for tube furnaces R, RSH, RSV, RSRB, RSRC, RHTC, RHTH, RHTV
- Gas supply system for nonflammable protective gas (Ar, N₂, forming gas, others on request) with shutoff valve and flow meter with control valve, piped and ready to connect. One gas intake pressure at 300 mbar to be provided by customer.
- Additional equipment for static tube furnaces:
 - Longer, gas tight working tube of ceramic C 610 for furnaces to 1300 °C or of C 799 for temperatures above 1300 °C
 - 2 vacuum-tight, water-cooled stainless steel flanges with fittings on the outlet side (cooling water supply with NW9 hose connector to be provided by the customer)
 - Mounting system on furnace for the flanges
- Additional equipment for RSRC models (continuous operation): charging system
- Additional Equipment for RSRB models: gas-tight rotarylead-outs on gas inlet and outlet, gas cooler and gas outlet valve

Additional equipment

- Extension of gas supply system with a second or third nonflammable type of gas
- Bottle pressure regulator for use with bottled gas
- Automatic switching on/off by means of the program segments of the controller, only possible with control systems which include programmable extra functions
- Gas-supply programmable via mass-flow controllers (only in combination with PLC-controls)
- Process tubes made of different materials
- Quick-locks for watercooled flanges
- Cooling unit for closed loop water circuit
- Window for charge observation in combination with gas tight flanges

* Country-specific guidelines with respect to the possible gas mixing ration have to be considered



Gas supply system for non-flammable protective or reactive gas with shutoff valve and flow meter with regulator valve, piped and ready to connect



Observation window as additional equipment for gas tight flanges