Split-Type Tube Furnaces for Horizontal and Vertical Operation up to 1300 °C

The tube furnaces of series RS .. can be used for horizontal and with optional frame for vertical operation. The split-type design makes it easy to change the working tube. It allows for a comfortable exchange of various working tubes (e.g. working tubes made of different materials).

Using a wide range of accessories, these professional tube furnaces can be optimally tailored for your process. By adding different gas supply packages, you can work in a protective gas atmosphere, with gases or in a vacuum. In addition to the convenient standard controllers, modern PLC controls can also be used to control the process.



Tube furnace RS 50/250/13

Standard Equipment

- Tmax 1100 °C or 1300 °C
- Heated length from 250 mm to 1000 mm
- Maximum outer tube diameter up to 170 mm
- Single-zoned design
- Tabletop model, mounted horizontally on an external switchboard including controller
- 2 m connecting cable in a protective metal conduit
- Split-type design for simple insertion of the working tube (opening temperature < 180 °C)
- Ceramic working tube C 530 including two fiber plugs for operation under air see page 32
- Thermocouple type N (1100 °C) or type S (1300 °C)
- Heating elements on support tubes provide for free radiation see page 38
- Controller with touch operation C550 (10 programs with each 20 segments), alternative controllers see page 84



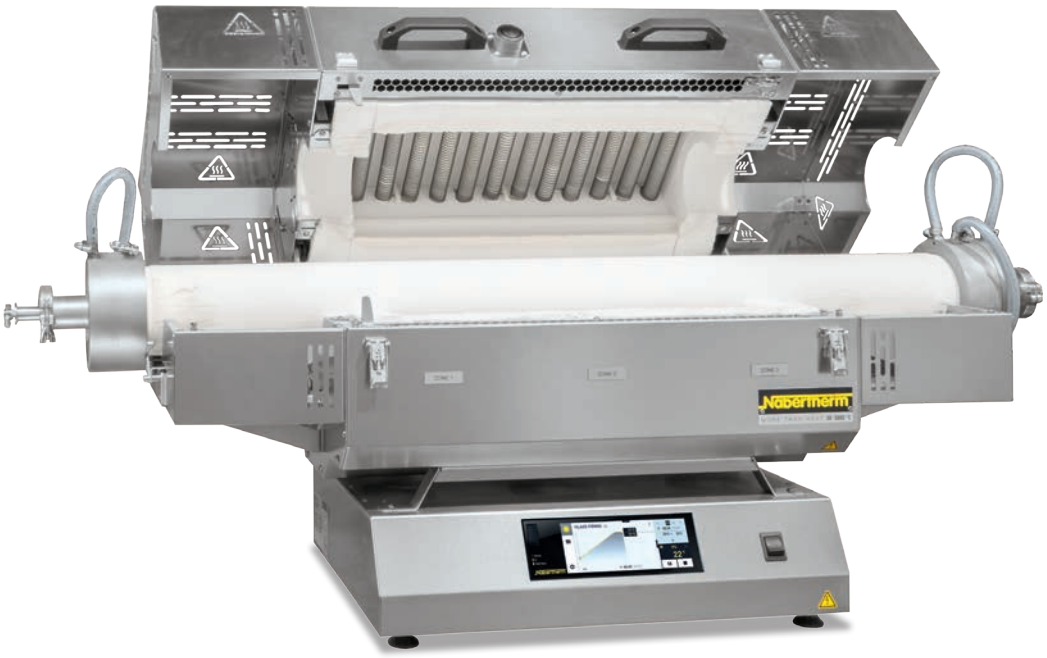
Tube furnace RS 50/250/13 incl. frame for vertical operation and APM working tube with vacuum flanges and removable switchgear

Additional Equipment

- Frame for converting the furnace to vertical operation
- Tube adapter shells for the use of tubes with different diameters
- Charge control with temperature measurement in the working tube see page 38
- Three-zone control for optimization of temperature uniformity see page 38
- Alternative working tubes see chart page 32
- Gas supply systems 1,15 or 2 for non-flammable process gas operation see page 34
- Gas supply system 4 for hydrogen operation see page 36
- Vacuum package to evacuate the working tube see page 37



Frame for converting the furnace to vertical operation



Tube furnace RS 170/750/11 with removable switchgear

Model	Tmax[1]	Outer dimensions[2] closed, lying on the switchgear (RS-horizontal) in mm			Outer dimensions switchgear in mm			Max. outer tube Ø	Heated length	Length constant temperature[1] +/– 5 K in mm		Connected load[5]	Electrical connection*	Weight
	in °C	W[3]	D	H	W	D	H	in mm	in mm	single zoned	three zoned	in kW		in kg
RS 50/250/11	1100	600	470	515	600	450	218	50	250	80	-	2,0	1-phase	36
RS 120/500/11	1100	670	515	590	600	450	218	120	500	170	250	6,7	3-phase[4]	56
RS 170/750/11	1100	920	550	640	600	450	218	170	750	250	375	10,7	3-phase[4]	84
RS 170/1000/11	1100	1170	550	640	600	450	218	170	1000	330	500	13,8	3-phase[4]	97
RS 50/250/13	1300	600	470	515	600	450	218	50	250	80	-	2,0	1-phase	37
RS 120/500/13	1300	670	515	590	600	450	218	120	500	170	250	6,7	3-phase[4]	56
RS 170/750/13	1300	920	550	640	600	450	218	170	750	250	375	12,1	3-phase[4]	85
RS 170/1000/13	1300	1170	550	640	600	450	218	170	1000	330	500	13,8	3-phase[4]	98

[1]Values outside the tube. Difference to temperature inside the tube up to + 50 K

*Please see page 84 for more information about supply

[2]External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.

[3]Without tube

[4]At 3-phase execution an N conductor ist required (3/N/PE)

[5]The connected load refers to the standard furnace and may increase for a furnace with additional equipment. For furnaces with connection options for multi-range voltages, the connected load applies to the highest permissible connected voltage.



Removable switchgear including controller



Tube adapter shells for the use of tubes with different diameters



Turbomolecular pump with upstream pump (similar to picture)