High-Temperature Tube Furnaces for Horizontal or Vertical Operation up to 1800 °C

The high-temperature tube furnaces are available in either horizontal (type RHTH) or vertical (type RHTV) designs. High-quality insulation materials made of vacuum-formed fiber plates enable energy-saving operation due to low heat storage and heat conductivity. By using different gas supply systems, operations can be performed under non-flammable or flammable process gases or under vacuum.



Tube furnace RHTV 50/150/17 with stand and gas supply system 2

Standard Equipment

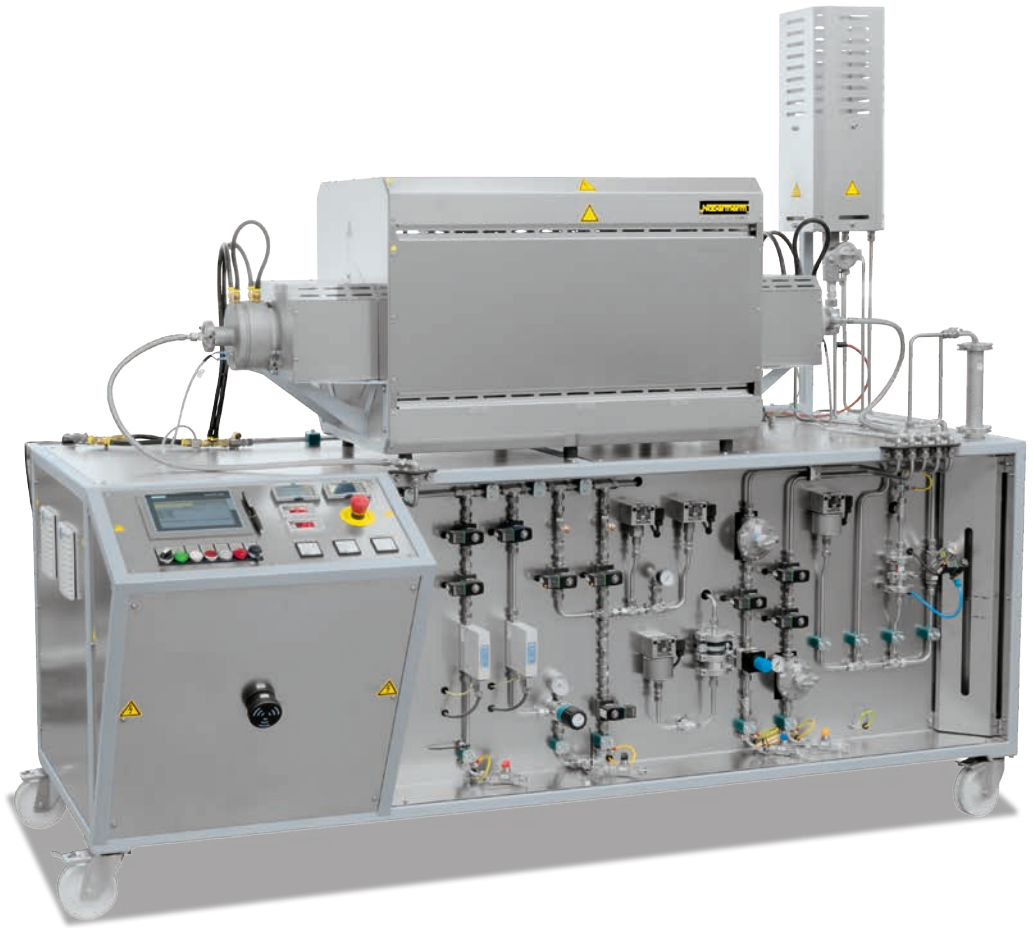
- Tmax 1600 °C, 1700 °C, or 1800 °C
- Single-zoned design
- Insulation with vacuum-formed ceramic fiber plates
- Tube furnaces RHTV with frame for vertical operation
- Type B thermocouple
- Ceramic working tube C 799 including two fiber plugs for operation under air see page 32
- Hanging and easy to change $MoSi_2$ heating elements
- Power unit with low-voltage transformer and thyristor
- Over-temperature limiter with adjustable cutout temperature as temperature limiter to protect the furnace and load
- Switchgear and control unit separate from furnace in separate floor standing cabinet
- Controller with touch operation P570 (50 programs with each 40 segments), alternative controllers see page 84



RHTH 80/300/18 tube furnace with water-cooled flanges and charge control

Additional Equipment

- Charge control with temperature measurement in the working tube see page 38
- Three-zone control for optimization of temperature uniformity (only horizontal tube furnaces RHTH) see page 38
- Alternative working tubes see page 32
- Gas supply system 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



RHTH 120/600/18 with gas supply system 4 for operation with hydrogen

Model Horizontal design	Tmax[1]	Outer dimensions[3] in mm			Max. outer tube Ø	Heated length	Length constant temperature[1] +/– 5 K in mm		Tube length	Connected load[5]	Electrical	Weight
	in °C	W[2]	D	H	in mm	in mm	single zoned	three zoned	in mm	in kW	connection*	in kg
RHTH 50/150/..	1600 or	530	480	640	50	150	50	70	380	5.8	3-phase[4]	70
RHTH 80/300/..	1700 or	680	550	640	80	300	100	150	530	9.4	3-phase[4]	90
RHTH 120/600/..	1800	980	550	640	120	600	200	300	830	14.8	3-phase[4]	110

Model Vertical design	Tmax[1]	Outer dimensions[3] in mm			Max. outer tube Ø	Heated length	Length constant temperature[1] +/– 5 K	Tube length	Connected load[5]	Electrical	Weight
	in °C	W	D	H[2]	in mm	in mm	in mm	in mm	in kW	connection*	in kg
RHTV 50/150/..	1600 or	610	700	1130	50	150	30	380	5.8	3-phase[4]	70
RHTV 80/300/..	1700 or	680	700	1280	80	300	80	530	10.7	3-phase[4]	90
RHTV 120/600/..	1800	680	700	1580	120	600	170	830	19.4	3-phase[4]	110

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

*Please see page 84 for more information about supply voltage

[2]Without tube

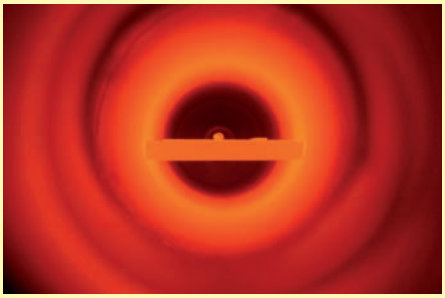
[3]External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.

[4]Heating only between two phases

[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.



Tube furnace RHTH 120/600/17



Sintering under hydrogen in a tube furnace of RHTH product line



Example of over-temperature limiter