

Compact Tube Furnaces



RD 30/200/11



Over-temperature limiter

The RD tube furnaces convince with their unbeatable price-performance ratio, very compact outer dimensions and their low weight. These all-rounders are equipped with a working tube which also serves as support for the heating wires. Thus, the working tube is part of the furnace heating which has the advantage that the furnaces achieve very high heat-up rates. The tube furnaces can be supplied for 1100 °C or 1300 °C.

Both models are designed for horizontal application. If the customer requires protective gas atmosphere, a separate working tube incl. gas supply system 1, e.g. made of quartz glass, must be inserted in the working tube.

- Tmax 1100 °C or 1300 °C
- Dual shell housing made of sheets of textured stainless steel
- Only fiber materials are used which are not classified as carcinogenic according to TRGS 905, class 1 or 2
- Inner diameter of the tube: 30 mm, heated length: 200 mm
- Working tube made of C 530 material including two fiber plugs as standard
- Thermocouple type K (1100 °C) or type S (1300 °C)
- Solid state relays provide for low-noise operation of the heating
- Heating wires wound directly around the working tube resulting in very fast heat-up rates
- Defined application within the constraints of the operating instructions
- Controls description see page 72

Additional equipment

- Over-temperature limiter with adjustable cutout temperature for thermal protection class 2 in accordance with EN 60519-2 as temperature limiter to protect the furnace and load
- Gas supply system for non-flammable protective or reactive gas

Model	Tmax °C ¹	Outer dimensions ³ in mm			Inner tube Ø in mm	Heated length in mm	Length constant temperature +/- 5 K in mm ¹	Connected load kW	Minutes to Tmax ²	Electrical connection [*]	Weight in kg
		W	D	H							
RD 30/200/11	1100	350	200	350	30	200	65	1.5	20	1-phase	12
RD 30/200/13	1300	350	200	350	30	200	65	1.5	25	1-phase	12

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

²If connected at 230 V 1/N/PE resp. 400 V 3/N/PE

^{*}Please see page 73 for more information about supply voltage

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



Tube furnace R 170/1000/13



Tube furnace R 50/250/13 with gas supply system 2

These compact tube furnaces with integrated control systems can be used universally for many processes. Equipped with a standard working tube of C 530 ceramic and two fiber plugs, these tube furnaces have an unbeatable price/performance ratio.

- Tmax 1200 °C or 1300 °C
- Single-zoned design as standard
- Dual shell housing made of sheets of textured stainless steel
- Only fiber materials are used which are not classified as carcinogenic according to TRGS 905, class 1 or 2
- Outer tube diameter of 50 mm to 170 mm, heated length from 250 mm to 1000 mm
- Working tube of C 530 ceramic including two fiber plugs as standard equipment
- Tmax 1200 °C: Type N thermocouple
- Tmax 1300 °C: Type S thermocouple
- Solid state relays provide for lownoise operation
- Standard working tube see chart on page 51
- Defined application within the constraints of the operating instructions
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Controls description see page 72

Additional equipment

- Over-temperature limiter with adjustable cutout temperature for thermal protection class 2 in accordance with EN 60519-2 as temperature limiter to protect the furnace and load
- Charge control with temperature measurement in the working tube and in the furnace chamber outside the tube see page 54
- Three-zoned design (heated length from 500 mm)
- Working tubes see chart on page 51
- Please see page 52 for additional equipment
- Gas supply systems for protective gas or vacuum operation see page 52
- Process control and documentation via VCD software package for monitoring, documentation and control see page 75

Model	Tmax °C ¹	Outer dimensions ⁴ in mm			Outer tube Ø in mm	Heated length in mm	Length constant temperature +/- 5 K in mm ¹		Tube length in mm	Connected load kW	Electrical connection*	Weight in kg
		W ²	D	H			single-zoned	three-zoned				
R 50/250/12	1200	434	340	508	50	250	80	-	450	1.6	1-phase	22
R 50/500/12	1200	670	340	508	50	500	170	250	700	2.3 ³	1-phase	34
R 120/500/12	1200	670	410	578	120	500	170	250	700	6.5	3-phase	44
R 170/750/12	1200	920	460	628	170	750	250	375	1070	10.0	3-phase	74
R 170/1000/12	1200	1170	460	628	170	1000	330	500	1400	11.5	3-phase	89
R 50/250/13	1300	434	340	508	50	250	80	-	450	1.6	1-phase	22
R 50/500/13	1300	670	340	508	50	500	170	250	700	2.3 ³	1-phase	34
R 120/500/13	1300	670	410	578	120	500	170	250	700	6.5	3-phase	44
R 170/750/13	1300	920	460	628	170	750	250	375	1070	10.0	3-phase	74
R 170/1000/13	1300	1170	460	628	170	1000	330	500	1400	11.5	3-phase	89

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

²Without tube

³Only valid for single-zone version

*Please see page 73 for more information about supply voltage

⁴External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.