The RSRC rotary tube furnaces are particularly suitable for processes where continuously running batch material is heated for a short time.

The rotary tube furnace is positioned slightly inclined heated-up to the target temperature. The material is then continuously supplied at the upper end of the tube. It passes through the heated area of the tube and falls on the lower end out of the tube. The time of heat treatment results from the inclination angle, the rotational speed and the length of the working tube, as well as from the flow properties of the batch material.

Equipped with the optional closed loading system for 5 liter charge material incl. receptacle, the rotary tube furnace can also be used for processes under protective gas or vacuum.

Depending on process, charge and required maximum temperature, different working tubes made of quartz glass, ceramics or metal to be used. This rotary tube furnace is therefore highly adaptable for different processes.

Additional equipment
- Three-zone control for the optimization of temperature uniformity
- Temperature display unit in the working tube with measurement by means of an additional thermocouple
- Charge control by means of an additional thermocouple in the working tube
- Different gassing systems with good flushing of the charge with process gas in counterflow (only in combination with feeding system below)
- Check valve at gas outlet avoids intrusion of false air
- Vacuum design, up to 10⁻³ mbar depending on the applied pump
- Charging system for continuous material transport, consisting of:
  - Stainless steel funnel incl. electric vibration generator to optimize the material feeding into the working tube
  - Electrically driven screw-conveyor at the inlet of the working tube with 10, 20 or 40 mm pitch and adjustable speed between 0.26 and 6 revolutions per minute, different gear transmissions for other speeds on request
  - Collecting bottle made of laboratory glass at the outlet of the working tube
- Suitable for operation in gas atmosphere or vacuum

- Working tubes made of different materials
- Quartz glass batch reactors, Tmax 1100 °C
- Higher temperatures up to 1600 °C available on request
- Digital display unit for the tilting angle of the furnace
- Electric linear drive for the adjustment of the tilting angle
- PLC controls for temperature control and the control of connected aggregates such as gearshift and speed of the screw-conveyor, speed of the working tube, switching of the vibration generator, etc.
- Process control and documentation via VCD software package or Nabertherm Control Center (NCC) for monitoring, documentation and control
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**Model** | **Tmax** | **Outer dimensions in mm** | **Max. outer tube Ø in mm** | **Heated length in mm** | **Temperature const. Temperature eff. +/− 5 K in mm²** | **Tube length in mm** | **Connected load kW** | **Electrical connection** | **Weight in kg** |
---|---|---|---|---|---|---|---|---|---|
RSRC 80-500/11 | 1100 | 3055 | 1040 | 1650 | 80 | 500 | 170 | 250 | 1540 | 3.7 | 1-phase | 555 |
RSRC 80-750/11 | 1100 | 3055 | 1040 | 1650 | 80 | 500 | 170 | 250 | 1540 | 4.9 | 3-phase | 585 |
RSRC 120-500/11 | 1100 | 3055 | 1040 | 1715 | 110 | 500 | 170 | 250 | 1540 | 5.1 | 3-phase | 600 |
RSRC 120-750/11 | 1100 | 3055 | 1040 | 1715 | 110 | 500 | 170 | 250 | 1540 | 5.7 | 3-phase | 655 |
RSRC 120-500/13 | 1100 | 3055 | 1040 | 1715 | 110 | 500 | 170 | 250 | 1540 | 6.6 | 3-phase | 600 |
RSRC 120-750/13 | 1100 | 3055 | 1040 | 1715 | 110 | 500 | 170 | 250 | 1540 | 6.6 | 3-phase | 555 |
RSRC 120-1000/13 | 1100 | 3055 | 1040 | 1715 | 110 | 500 | 170 | 250 | 1540 | 8.1 | 3-phase | 600 |
RSRC 120-1000/11 | 1100 | 3055 | 1040 | 1715 | 110 | 500 | 170 | 250 | 1540 | 9.3 | 3-phase | 600 |

1 Heating only between two phases.
2 Heating only between phase 1 and neutral.
3 Values outside the tube. Temperature inside the tube up to +30 K.