

Rotary Reactor Tube Furnace - HTR

General Information

The HTR rotating furnaces combine in a laboratory scale unit many of the advantages of a fluidised bed reactor with those of a rotary kiln.

The sample is simultaneously heated and mixed under a controlled atmosphere. This overcomes the longer reaction times required in standard chamber or tube furnaces.



Standard features

- 1100°C maximum operating temperature
- Developed in partnership with the Imperial College of Science & Technology, London
- Carbolite Gero 301 controller, with single ramp to set-point & process timer
- Heating is provided by long life, rapid heating, resistance wire elements mounted in rigid, half cylindrical vacuum formed insulation modules
- Quartz reaction vessel included as standard
- The fluted internal surface of the reactor ensures good mixing as the variable speed electric drive system oscillates the reactor tube through 315°.
- A positive break safety interlock switch cuts power to the elements when the heating chamber is open
- Gas enters the reactor through a flexible silicon rubber tube
- A 30 mm flow meter calibrated for nitrogen is provided
- A single seal gasket directs the reactor exhaust into a removable stainless steel exhaust box from where a gas outlet allows piping to an extraction system

Options (specify these at time of order)

- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- Single or multiple flow meters calibrated for different gases
- Hydrogen detectors & gas safety system
- A range of sophisticated digital controllers, multi-segment programmers and data loggers is available. These can be fitted with RS232, RS485 or Ethernet communications
- Optional inconel reactor

Technical Specifications

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HTR 11/75

Max temp (°C)	1100
Max continuous operating temp (°C)	1000
Heat-up time (mins)	11
Cooling time with lid open (mins)	15
Dimensions: Reaction chamber dimensions (mm)	75 x 100
Dimensions: Reaction chamber capacity (ml)	50
Dimensions: Oscillation frequency per min	1 to 8
Dimensions: Rotation in each direction	315°
Dimensions: External H x W x D (mm) lid open	480 x 1140 x 550
Dimensions: External H x W x D (mm) lid down	800 x 1140 x 680
Max power (W)	1500
Holding power (W)	400
Thermocouple type	K
Weight (kg)	40

HTR 11/150

Max temp (°C)	1100
Max continuous operating temp (°C)	1000
Heat-up time (mins)	21
Cooling time with lid open (mins)	15
Dimensions: Reaction chamber dimensions (mm)	150 x 200
Dimensions: Reaction chamber capacity (ml)	700
Dimensions: Oscillation frequency per min	1 to 8
Dimensions: Rotation in each direction	315°
Dimensions: External H x W x D (mm) lid open	540 x 1300 x 900
Dimensions: External H x W x D (mm) lid down	950 x 1300 x 900
Max power (W)	3000
Holding power (W)	1000
Thermocouple type	K
Weight (kg)	95

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Please note:

- Holding power is measured at continuous operating temperature



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.