CARBOLITE®
a VERDER company



SPLIT TUBE FURNACE UP TO 1700 °C

HTRV-A

www.carbolite.com/products/tube-furnace-range/split-tube-furnaces/htrv-a/

HTRV-A

SPLIT TUBE FURNACE UP TO 1700 °C

The HTRV-A split tube furnaces have a maximum operating temperature of 1700 °C.

The split heating module allows either easy positioning of the work tube or positioning around reactors which have fixed end flanges. The split design may also allow faster cooling of samples. The control thermocouple is fitted in the centre of the heating zone. Cooling channels are engineered into the housing to aid with convection cooling of the outer case.

The two furnace chamber halves consist of high grade insulation plates with vertically hanging $MoSi_2$ heating elements. A safety switch protects the operator by switching off the heating elements once the furnace is opened.

The tube furnace is supplied without a stand, allowing customers to build them into their own equipment. Optional 'L' stands are available allowing the furnaces to be self supporting.



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APPLICATION EXAMPLES

annealing, carbonisation, crystal growth, debinding, degassing, drying, hardening, metal injection moulding (MIM), pyrolyses, rapid prototyping, sintering, sublimation, synthesis, tempering

HTRV-A

STANDARD FEATURES

- 1600 and 1700 °C maximum operating temperatures
- Programmable EPC3016P1 controller
- Over-temperature protection
- Designed for vertical use
- Accepts work tubes with outer diameters up to 100 mm for use with modified atmosphere
- Heated lengths of 120, 250, 500 or 700 mm
- High grade type B thermocouple
- Low thermal mass ceramic fibre insulation
- Vertically hanging high quality MoSi2 heating elements
- Supplied with separate control box and 3 m cable, plug and socket
- Ethernet communications

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OPTIONS

Specify these at time of order.

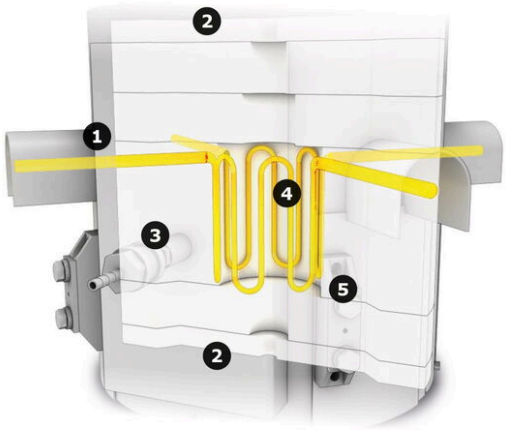
- A range of sophisticated digital controllers, multisegment programmers and data loggers with digital communication options is available – **MORE INFORMATION ABOUT CONTROLLERS →** www.carbolite.com/products/control-options/
- A range of additional work tubes is available in a variety of materials
- Insulation plugs & radiation shields to prevent heat loss & improve uniformity
- Modified atmosphere and vacuum assemblies are available – **MORE INFORMATION →** www.carbolite.com/products/modified-atmosphere/work-tube-packages/
- Vacuum packages with a choice of rotary vane pump or turbomolecular pump are available
- Longer heated lengths
- 'L' stand for convenient usage
- Oxygen sensor for inert gas packages
- 6 m long cable between furnace body and control box with plug and socket

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TECHNICAL DETAILS

VIEW INSIDE THE HTRV-A SPLIT TUBE FURNACE

- **1 |** Outer case
- **2 |** Ceramic fibre end insulation
- **3 |** Ceramic fibre case insulation
- **4 |** Heating elements
- **5 |** Ceramic fibre inner insulation



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EXAMPLES



HTRV-A 17/70/250 with optional stand and work tube package



HTRV-A 17/70/250 with inert gas package



HTRV-A 17/100/700 with optional stand

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TECHNICAL DATA

70 MM MAX OUTER DIAMETER ACCESSORY TUBE

Specification	__/70/120	__/70/250	__/70/500
Max temp (°C)	1600	1600, 1700	1600, 1700
Max outer diameter accessory tube (mm)	70	70	70
Heated length (mm)	120	250	500
Dimensions: External H × W × D (mm)	700 × 700 × 890*	800 × 600 × 890*	1050 × 700 × 890*
Furnace weight (kg)	65	75	120
Tube length for use in air (mm)	470	600	850
Tube length for use with modified atmosphere (mm)	910	1040	1290
Control module dimensions H × W × D (mm)	850 × 550 × 700	850 × 550 × 700	850 × 550 × 700
Control module weight (kg)	60	90	90
Uniform length ±5°C (mm)	50	125	250
Power (W)	4800	6000	8000

70 MM AND 100 MM MAX OUTER DIAMETER ACCESSORY TUBES

Specification	__/70/700	__/100/500	__/100/700
Max temp (°C)	1600, 1700	1600, 1700	1600, 1700
Max outer diameter accessory tube (mm)	70	100	100
Heated length (mm)	700	500	700
Dimensions: External H × W × D (mm)	1250 × 800 × 990*	1050 × 800 × 990*	1250 × 800 × 990*
Furnace weight (kg)	170	140	170
Tube length for use in air (mm)	1050	850	1050
Tube length for use with modified atmosphere (mm)	1490	1290	1490
Control module dimensions H × W × D (mm)	850 × 550 × 700	850 × 550 × 700	850 × 550 × 700
Control module weight (kg)	120	120	120
Uniform length ±5°C (mm)	–	–	–
Power (W)	19000	13000	19000

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