High temperature chamber furnace up to 1800°C - HTF

General Information

The HTF industrial furnace range has maximum operating temperatures of 1600 °C, 1700 °C, or 1800 °C. All models are heated by molybdenum disilicide elements.

The HTF industrial furnace is available in usable volumes of 64, 128, 165, 250, 332 and 514 litres. Independent over-temperature protection is fitted as standard for unattended operation.

Heat treatment is only possible in air. An additional gas supply, with hand valve and rotameter, can be supplied, which results in a slight modification of the atmosphere that will only suppress the Oxygen level as the system is not sealed. As a result, the HTF is ideal for sintering ceramics and oxide ceramics.

If debinding is required before sintering, Carbolite Gero offers a debinding package for the HTF. The debinding package consists of an inlet for preheated air, several gas inlets, and an afterburner. The preheated air is symmetrically purged at several gas inlets into the furnace, which improves temperature uniformity at low temperatures and sample envelopment by the incoming air. All gaseous by-products generated during the debinding process are combusted in an afterburner that is driven by propane gas and compressed air. On completion of debinding, the furnace temperature will increase to begin the sintering process.

Standard features

- 1600 °C, 1700 °C & 1800 °C maximum operating temperatures
- From 64 to 514 litre capacities
- Programmable 3216P1 controller
- Over-temperature protection
- High quality molybdenum disilicide heating elements
- Advanced refractory interior, used in combination with energy efficient low thermal mass insulation
- Side hinged door

Options (specify these at time of order)

- A range of sophisticated digital controllers, multi-segment programmers and data loggers is available. These can be fitted with RS232, RS485 or Ethernet communications
- Debinding in air with the debinding package
- Gas supply with manually adjustable flow meter
- Modification of the atmosphere in the furnace chamber can be achieved but oxygen cannot be removed completely because it is not gas tight
- Vertical lift door keeps heated surface away from the user

Technical Specifications

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HTF__/64	
Max temp (°C)	1600, 1700, 1800
Volume (l)	64
Max. heat-up rate (°C/min)	10
Cooling time (h)	12
Dimensions: Internal H x W x D (mm)	400 x 400 x 400
Dimensions: External H x W x D (mm)	2000 x 1000 x 1200
Max power (W)	16000

HTF__/128	
Max temp (°C)	1600, 1700, 1800
Volume (l)	128
Max. heat-up rate (°C/min)	10
Cooling time (h)	12
Dimensions: Internal H x W x D (mm)	400 x 400 x 800
Dimensions: External H x W x D (mm)	2000 x 1000 x 1500
Max power (W)	40000

HTF__/165	
Max temp (°C)	1600, 1700, 1800
Volume (l)	165
Max. heat-up rate (°C/min)	10
Cooling time (h)	13
Dimensions: Internal H x W x D (mm)	550 x 550 x 550
Dimensions: External H x W x D (mm)	2450 x 1400 x 1400 (door open)
Max power (W)	40000

HTF__/250	
Max temp (°C)	1600, 1700, 1800
Volume (l)	250
Max. heat-up rate (°C/min)	10
Cooling time (h)	14
Dimensions: Internal H x W x D (mm)	500 x 500 x 1000
Dimensions: External H x W x D (mm)	2000 x 1000 x 1500
Max power (W)	--

High temperature chamber furnace up to 1800°C - HTF

HTF__/332	
Max temp (°C)	1600, 1700, 1800
Volume (l)	332
Max. heat-up rate (°C/min)	--
Cooling time (h)	--
Dimensions: Internal H x W x D (mm)	550 x 550 x 1100
Dimensions: External H x W x D (mm)	2100 x 1100 x 1400
Max power (W)	--

HTF__/514	
Max temp (°C)	1600, 1700, 1800
Volume (l)	514
Max. heat-up rate (°C/min)	--
Cooling time (h)	--
Dimensions: Internal H x W x D (mm)	780 x 550 x 1200
Dimensions: External H x W x D (mm)	1400 x 1100 x 1700
Max power (W)	--

Please note:

- Maximum continuous operating temperature is 100 °C below maximum temperature