



HB – Top Hat Furnaces

The HB furnace range has an automatically operated vertically moving hood for heat treatment in air.

The moving hood design allows samples to be accessed from three sides. The HB can be equipped with CrFeAl heating wires up to 1300°C or with MoSi₂ heating elements for temperatures up to 1800°C

The HB hood furnaces are available with usable volumes of 80 to 514 litres with the inner space being rectangular in design and the base plate having a convenient height of 750 mm. The hood moves up and down automatically to load and unload the sample.

All debinding applications require the use of an optional afterburner. The afterburner is driven by propane gas and compressed air to burn any evaporating binder. Carbolite Gero specializes in custom designed furnaces and can also create a customised version of the HB to accommodate specific heat treatment needs. It is possible to equip a gas circulating system to improve temperature uniformity. Several sample thermocouples can be inserted into the furnace chamber to monitor and test the temperature profile. Through the use of a serial interface, the thermocouple data is logged at predefined intervals for evaluation. The furnace is operated manually with a Eurotherm controller. Other controllers are available upon request.



HB 13/240

Standard features

- 1300°C, 1600°C, 1700°C & 1800°C maximum operating temperatures
- Carbolite Gero 3216CC controller with single ramp to set point and process timer
- From 80 to 514 litre capacities
- FeCrAl wire heating elements for temperatures below 1300°C
- High quality molybdenum disilicide heating elements for temperatures above 1600°C
- Advanced refractory interior, used in combination with energy efficient low thermal mass insulation

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 (see pages 106 – 111). Please note that special controllers may be needed for this model
- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- Other sizes on request
- Gas inlet for operation under modified atmosphere (not gas tight)
- Afterburner for debinding applications

Technical data

CGN Model	Max. temp. [°C]	Uniformity between 800°C and T _{max} [°C] (DIN 17052)	Max. heat-up rate [°C/min]	Cooling time [h]	Dimensions: Usable chamber H x W x D [mm]	Dimensions: External H x W x D [mm]	Volume [l]	Max. power [kW]
HB_/80	1300, 1600, 1700, 1800	±5	5, 10, 10, 10	12, 14, 14, 14	500 x 400 x 400	2200 x 1200 x 1200	80	18, 45, 50, 60
HB_/160	1300, 1600, 1700, 1800	±5	5, 10, 10, 10	14, 14, 14, 14	500 x 800 x 400	2200 x 1800 x 1200	160	30, 80, 85, 90
HB_/240	1300, 1600, 1700, 1800	-	-	14	500 x 1200 x 400	2200 x 2200 x 1200	240	63, 65, 69, 75
HB_/430	1300, 1600, 1700, 1800	-	-	-	600 x 1200 x 600	2500 x 2200 x 1500	430	-
HB_/514	1300, 1600, 1700, 1800	-	-	-	780 x 1200 x 550	2700 x 2200 x 1400	514	-

i Please note:
- Maximum continuous operating temperature is 100°C below maximum temperature