

## GHC – Modular Horizontal 3-Zone Tube Furnaces

The GHC tube furnaces use free radiating wire elements embedded within the insulation of the furnace body. The benefit of this design is its flexibility; with the use of tube adapters the same furnace can be used with a variety of tube diameters.

The heated length is divided into 3-zones. An extended uniform zone in the mid-section of the work tube is achieved with the use of end zone controllers which track the centre zone temperature and compensate for the loss of heat from the tube ends.

This range of tube furnaces does not include an integral work tube and one must be selected as an additional item. The work tube length is dependent on the application eg for use with modified atmosphere or vacuum and this information can be found on pages 92-93.



- 1200°C maximum operating temperature
- Provides a longer uniform zone than can be achieved in a single zone tube furnace
- Heated lengths of 450, 600, 750, 900, 1050, or 1200 mm
- Accepts work tubes with outer diameter up to 170 mm
- End zone control is via back to back thermocouples
- Horizontal configuration with furnace mounted onto control module
- Carbolite 301 PID controller with single ramp to setpoint & process timer
- End zones 150 mm long



## Options (specify these at time of order)

- Wide choice of tube diameters and materials is available: eg quartz, ceramic, metal. See pages 92-93 for tube materials and dimensions
- End zones 300 mm long
- Insulation plugs & radiation shields to prevent heat loss & improve uniformity
- Modified atmosphere and vacuum assemblies are available (see page 95)
- 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 88-91)
- 'Retransmission of Setpoint' control configuration to facilitate programmed cooling
- Alternative mounting options are available (see page 39)

## Technical data

Model	Max temp (°C)	Heat- up time (mins)	Max continuous operating temp (°C)	Dimensions: Max outer diameter accessory tube (mm)	Dimensions: Heated length (mm)	Tube length for use in air (mm)	Tube length for use with modified atmosphere (mm)		Dimensions: Furnace body length (mm)	Uniform length ±5°C (mm)	Max power (W)	Holding power (W)	Ther- mo- couple type	Weight (kg)
GHC 12/450	1200	98	1100	170	450	650	1050	672 x 676 x 468	630	300	3100	1500	N	37
GHC 12/600	1200	64	1100	170	600	800	1200	672 x 827 x 468	780	440	3900	1800	N	40
GHC 12/750	1200	74	1100	170	750	950	1350	672 x 976 x 468	930	500	4600	2200	N	51
GHC 12/900	1200	79	1100	170	900	1100	1500	672 x 1126 x 468	1080	640	5400	2800	N	55
GHC 12/1050	1200	100	1100	170	1050	1250	1650	672 x 1276 x 468	1230	880	6200	2850	N	85
GHC 12/1200	1200	-	1100	170	1200	1400	1800	672 x 1426 x 468	1380	-	7000	3100	N	90

- Please note:
  - Heat up rate is measured to 100  $^{\rm o}{\rm C}$  below max, using an empty tube & insulation plugs
  - Holding power is measured at continuous operating temperature
  - Uniform length measured with insulation plugs fitted  $% \left( 1\right) =\left( 1\right) \left( 1\right$



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