

## GHA – Modular Horizontal Tube Furnaces

**The GHA 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.**

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. This information can be found on pages 92-93.

The use of a separate work tube has the advantage of protecting the heating elements from damage or contamination.



GHA 12/300

### Standard features

- 1200 °C maximum operating temperature
- Accepts work tubes with outer diameters up to 170 mm
- Heated lengths of 300, 450, 600, 750, 900, 1050 or 1200 mm
- Long life, rapid heating, resistance wire elements mounted in rigid, vacuum formed insulation modules
- Carbolite 301 digital PID controller with single ramp to setpoint, digital display and process timer
- Horizontal configuration
- Furnace mounted directly on top of controller base unit

### 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
- Insulation plugs & radiation shields to prevent heat loss & improve uniformity
- Modified atmosphere and vacuum assemblies are available (see page 95)
- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- 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)

## 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: External H x W x D (mm)	Dimensions: Furnace body length (mm)	Uniform length $\pm 5^{\circ}\text{C}$ (mm)	Max power (W)	Thermo-couple type	Weight (kg)
<b>GHA 12/300</b>	1200	90	1100	170	300	500	900	670 x 526 x 468	480	201	2300	N	35
<b>GHA 12/450</b>	1200	97	1100	170	450	650	1050	670 x 676 x 468	630	262	3100	N	37
<b>GHA 12/600</b>	1200	92	1100	170	600	800	1200	670 x 826 x 468	780	414	3900	N	40
<b>GHA 12/750</b>	1200	97	1100	170	750	950	1350	670 x 976 x 468	930	448	4600	N	51
<b>GHA 12/900</b>	1200	-	1100	170	900	1100	1500	670 x 1126 x 468	1080	-	5400	N	55
<b>GHA 12/1050</b>	1200	83	1100	170	1050	1250	1650	670 x 1276 x 468	1230	696	6200	N	85
<b>GHA 12/1200</b>	1200	-	1100	170	1200	1400	1800	670 x 1426 x 468	1380	-	7000	N	90



**Please note:**

- Heat up time is measured to 100°C below max, using an empty tube & insulation plugs
- Uniform length measured with insulation plugs fitted



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