

EHA, EHC, EVA, EVC – Compact Tube Furnaces

The compact EHA, EHC horizontal and EVA, EVC vertical compact 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 EHA and EVA are single zone furnaces and the EHC and EVC are three zone furnaces.

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 e.g. for use with modified atmosphere or vacuum; this information can be found on pages 112–113.

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



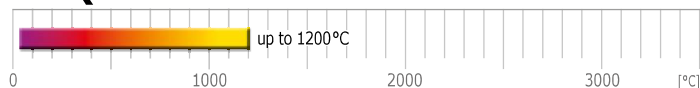
EHA 12/150 with CC-T1 temperature programmer

Standard features

- 1200°C maximum operating temperature
- Carbolite Gero 301 digital PID controller with single ramp to setpoint and process timer
- Heated lengths, single zone 150, 300, 450 or 600 mm (EHA, EVA)
- Heated lengths, 3-zone 450 and 600 mm (EHC, EVC)
- Accepts work tubes with outer diameters up to 60 mm
- Wire elements in high quality vacuum formed insulation ensure fast heat up, excellent temperature uniformity and short cool down times
- Horizontal configuration (EHA, EHC)
- Vertical configuration (can also be used horizontally – EVA, EVC)
- Control module with 2 metre conduit to furnace (EVA, EVC)
- Outer mesh guard ensures operator safety

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)
- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- A range of additional work tubes (pages 112–113), end seals (page 116) and work tube packages (pages 114–115) is available for use with modified atmosphere and/or vacuum
- Vacuum packages with a choice of rotary vane pump or turbomolecular pump are available (page 118)
- Angle adjustment option allows horizontal and multi-angle configuration (EVA, EVC)
- Wide choice of tube diameters and materials is available. See pages 112–113 for tube materials and dimensions
- Insulation plugs and radiation shields to prevent heat loss and improve uniformity



EHA, EHC, EVA, EVC – Compact Tube Furnaces



EVA 12/300
 Angle adjustment option allows horizontal and multi-angle configurations

Technical data

Model	Max. temp. [°C]	Heat up time [mins]	Dimensions: Max. outer ø accessory tube [mm]	Dimensions: Heated length [mm]	Recommended tube length		Dimensions: External H x W x D [mm]	Uniform length ± 5°C [mm]	Max. power [W]	Thermocouple Type	Weight [kg]
					for use in air [mm]	for use with modified atmosphere [mm]					

Single Zone Horizontal Compact Tube Furnaces EHA

EHA 12/150B	1200	46	60	150	300	600	560 x 370 x 390	80	750	N	15
EHA 12/300B	1200	34	60	300	450	750	560 x 465 x 390	185	1480	N	17
EHA 12/450B	1200	44	60	450	600	900	560 x 615 x 390	300	2000	N	19
EHA 12/600B	1200	45	60	600	750	1050	560 x 765 x 390	460	2520	N	23

3-Zone Horizontal Compact Tube Furnaces EHC

EHC 12/450B	1200	55	60	450	600	900	560 x 615 x 390	335	2000	N	20
EHC 12/600B	1200	55	60	600	750	1050	560 x 765 x 390	470	2520	N	25

Single Zone Vertical Compact Tube Furnaces EVA

EVA 12/150B	1200	–	60	150	300	600	710 x 545 x 545	75	750	N	20
EVA 12/300B	1200	58	60	300	450	750	1040 x 545 x 545	180	1480	N	27
EVA 12/450B	1200	52	60	450	600	900	1040 x 545 x 545	250	2000	N	29
EVA 12/600B	1200	49	60	600	750	1050	1160 x 545 x 545	370	2520	N	33

3-Zone Vertical Compact Tube Furnaces EVC

EVC 12/450B	1200	58	60	450	600	900	1040 x 545 x 545	338	2000	N	30
EVC 12/600B	1200	58	60	600	750	1050	1160 x 545 x 545	455	2520	N	35

i Please note:

- Heat up rate when using an optional ceramic work tube must be limited to 5°C/min
- Heat up time is measured to 100°C below maximum, using an empty work tube and insulation plugs
- Holding power is measured at continuous operating temperature

- Maximum continuous operating temperature is 100°C below maximum temperature
- Dimensions excluding control box (225 x 370 x 390 mm)