

EST, EZS, EVT, EVZ – Compact Split Tube Furnaces

These compact universal split 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 single zone EST and EVT and 3-zone EZS and EVZ split tube furnaces comprise a furnace body which is hinged and split into two halves along its length. This makes exchange of work tubes easier and also enables the furnace to be used with reactors or work tubes where end flanges would make insertion into a non-split furnace difficult.

The 3-zone EZS and EVZ furnaces provide excellent uniformity resulting from division of the heated length into 3-zones with its own controller and thermocouple. This range of tube furnaces does not include an integral work tube which must be selected as an additional item. The work tube length is dependent on the application, for example, 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.



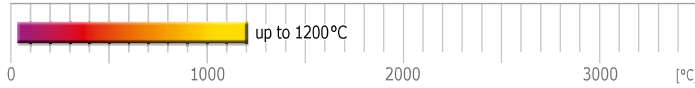
EST 12/300 with CC-T1 temperature programmer

Standard features

- 1200 °C maximum operating temperature
- Carbolite Gero 301 digital PID controller with single ramp to setpoint, digital display and process timer
- Heated lengths, single zone 150, 300, 450 or 600 mm (EST, EVT)
- Heated lengths, 3-zone 450 or 600 mm (EZS, EVZ)
- 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
- Furnace splits into two halves and accommodates tubes or samples fixed into a test rig
- Models: EST, EZS: Horizontal split configuration
- Models: EVT, EVZ: Vertical split configuration
- Models: EST, EVT: Single zone
- Models: EZS, EVZ: 3-zone
- 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)
- 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



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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 Split Tube Furnaces EST

EST 12/150B	1200	46	60	150	300	600	560 x 370 x 390	80	750	N	16
EST 12/300B	1200	34	60	300	450	750	560 x 465 x 390	185	1480	N	18
EST 12/450B	1200	44	60	450	600	900	560 x 615 x 390	300	2000	N	20
EST 12/600B	1200	45	60	600	750	1050	560 x 765 x 390	460	2520	N	24

3-Zone Horizontal Compact Split Tube Furnaces EZS

EZS 12/450B	1200	55	60	450	600	900	560 x 615 x 390	335	2000	N	21
EZS 12/600B	1200	55	60	600	750	1050	560 x 765 x 390	470	2520	N	26

Single Zone Vertical Compact Split Tube Furnaces EVT

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

3-Zone Vertical Compact Split Tube Furnaces EVZ

EVZ 12/450B	1200	58	60	450	900	1040 x 545 x 545	338	2000	N	31
EVZ 12/600B	1200	58	60	600	1050	1160 x 545 x 545	455	2520	N	36

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)