

Gradient Tube Furnace - EZS-3G

General Information

This compact split tube furnace is specifically design to provide a temperature gradient along the length of the heated zones. They 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 three independent zone EZS-3G 12/600B split tube furnace comprises 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-3G furnace includes 75 mm long unheated zone barriers between the three 150 mm heated zones. Each heated zone has its own temperature 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. The use of a separate work tube has the advantage of protecting the heating elements from damage or contamination.

Note: The temperature gradient achievable is influenced by work tube diameter. Larger gradients will be achieved with smaller diameter work tubes because heat transfer between zones will be less.

Standard features

- 1200 °C maximum operating temperature
- Each zone has a Carbolite Gero 3216CC digital PID controller with single ramp to setpoint, digital display and process timer
- Overall heated length of 600 mm divided into three 150 mm heated zones with two 75 mm unheated zone barriers
- Accepts work tubes with outer diameters up to 60 mm
- Wire elements in high quality vacuum formed insulation ensure fast heat up, excellent temperature control and short cool down times
- Furnace splits into two halves and accommodates tubes or samples fixed into a test rig
- Model EZS-3G is a horizontal split configuration
- 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
- Dual overtemperature protection (recommended to protect valuable contents & for unattended operation)



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- A range of additional work tubes, end seals and work tube packages is available for use with modified atmosphere and/or vacuum
- Vacuum packages with a choice of rotary vane pump or turbomolecular pump are available
- Wide choice of tube diameters and materials is available
- Insulation plugs and radiation shields to prevent heat loss

Technical Specifications

EZS-3G 12/600B

Max temp (°C)	1200
Heat-up time (mins)	55
Dimensions: Max outer diameter accessory tube (mm)	60
Overall heated length (mm)	600
Tube length for use in air (mm)	750
Tube length for use with modified atmosphere (mm)	1050
Dimensions: External Furnace H x W x D (mm)	560 x 765 x 390
Max power (W)	2000
Thermocouple type	N
Weight (kg)	20