Wire Wound Tube Furnace - CTF 12 / TZF 12

General Information

The CTF single zone and TZF 3-zone wire wound tube furnaces use a wire element that is wound directly onto a fixed diameter integral ceramic work tube.

This simple and economical design of both the CTF and TZF provides a tube furnace that can be used without the need to purchase an additional work tube.

However, should vacuum or a modified atmosphere be required, it is necessary to use a separate additional slide-in work tube in order to provide the required length needed to fit end seals. Similarly, in some circumstances a work tube that has different physical or chemical properties to the fixed work tube may be required.

The TZF 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 for temperature and compensate for the loss of heat from the tube furnace ends. The use of an additional slide-in work tube protects the integral work tube for the TZF and heating element.

Standard features

- 1200°C maximum operating temperature
- Carbolite Gero 301 controller, with single ramp to set-point & process timer
- 65 mm, 75 mm or 100 mm work tube inner diameters (CTF)
- 38 mm, 65 mm, 75 mm or 100 mm work tube inner diameters (TZF)
- 450, 550, 700, 850 or 900 mm heated length (varies with model)
- Integral wirewound work tube
- Delayed start / process timer function as standard (CTF)
- Horizontal configuration mounted on control module
- TZF provides a longer uniform zone than can be achieved in the CTF single zone tube furnace

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
- Over-temperature protection (recommended to protect valuable contents & for unattended operation)
- 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 for furnaces with tube inner diameters of 60 mm and above
- Insulation plugs & radiation shields to prevent heat loss & improve uniformity
- Retransmission of setpoint control configuration to facilitate programmed cooling (TFZ)
- Alternative mounting options are available
- Optionally configured for 2 phase electrical supply

Wire Wound Tube Furnace - CTF 12 / TZF 12

Technical Specifications

CTF 12/65/550	
Max temp (°C)	1200
Number of heated zones	Single Zone
Dimensions: Fixed tube inner diameter (mm)	65
Dimensions: Heated length (mm)	550
Heat-up time (mins)	45
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	530 x 625 x 360
Dimensions: Furnace body length (mm)	600
Uniform length ±5°C (mm)	230
Max power (W)	2000
Holding power (W)	600
Thermocouple type	N
Weight (kg)	25

CTF 12/75/700	
Max temp (°C)	1200
Number of heated zones	Single Zone
Dimensions: Fixed tube inner diameter (mm)	75
Dimensions: Heated length (mm)	700
Heat-up time (mins)	45
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	530 x 775 x 360
Dimensions: Furnace body length (mm)	750
Uniform length ±5°C (mm)	265
Max power (W)	3000
Holding power (W)	800
Thermocouple type	N
Weight (kg)	28

Wire Wound Tube Furnace - CTF 12 / TZF 12

CTF 12/100/900	
Max temp (°C)	1200
Number of heated zones	Single Zone
Dimensions: Fixed tube inner diameter (mm)	100
Dimensions: Heated length (mm)	900
Heat-up time (mins)	90
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	530 x 975 x 360
Dimensions: Furnace body length (mm)	950
Uniform length ±5°C (mm)	455
Max power (W)	4500
Holding power (W)	1000
Thermocouple type	N
Weight (kg)	35

TZF 12/38/400	
Max temp (°C)	1200
Number of heated zones	Three Zone
Dimensions: Fixed tube inner diameter (mm)	38
Dimensions: Heated length (mm)	400
Heat-up time (mins)	25
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	430 x 450 x 375
Dimensions: Furnace body length (mm)	450
Uniform length ±5°C (mm)	305
Max power (W)	1300
Holding power (W)	300
Thermocouple type	N
Weight (kg)	20

Wire Wound Tube Furnace - CTF 12 / TZF 12

TZF 12/38/850	
Max temp (°C)	1200
Number of heated zones	Three Zone
Dimensions: Fixed tube inner diameter (mm)	38
Dimensions: Heated length (mm)	850
Heat-up time (mins)	--
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	430 x 900 x 375
Dimensions: Furnace body length (mm)	900
Uniform length ±5°C (mm)	--
Max power (W)	2850
Holding power (W)	--
Thermocouple type	N
Weight (kg)	27

TZF 12/65/550	
Max temp (°C)	1200
Number of heated zones	Three Zone
Dimensions: Fixed tube inner diameter (mm)	65
Dimensions: Heated length (mm)	550
Heat-up time (mins)	45
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	530 x 625 x 360
Dimensions: Furnace body length (mm)	600
Uniform length ±5°C (mm)	390
Max power (W)	2000
Holding power (W)	600
Thermocouple type	N
Weight (kg)	38

Wire Wound Tube Furnace - CTF 12 / TZF 12

TZF 12/75/700	
Max temp (°C)	1200
Number of heated zones	Three Zone
Dimensions: Fixed tube inner diameter (mm)	75
Dimensions: Heated length (mm)	700
Heat-up time (mins)	75
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	530 x 775 x 360
Dimensions: Furnace body length (mm)	750
Uniform length ±5°C (mm)	540
Max power (W)	2755
Holding power (W)	800
Thermocouple type	N
Weight (kg)	46

TZF 12/100/900	
Max temp (°C)	1200
Number of heated zones	Three Zone
Dimensions: Fixed tube inner diameter (mm)	100
Dimensions: Heated length (mm)	900
Heat-up time (mins)	1100
Max continuous operating temp (°C)	1100
Dimensions: External H x W x D (mm)	530 x 975 x 360
Dimensions: Furnace body length (mm)	950
Uniform length ±5°C (mm)	754
Max power (W)	4150
Holding power (W)	1000
Thermocouple type	N
Weight (kg)	54

Please note:

- Heat up rate when using an optional ceramic work tube must be limited to 5 °C/min
- Heat up rate is measured to 100°C below max, using an empty tube & insulation plugs
- Uniform length ±5°C (mm): Uniform temperature lengths are measured with insulation plugs fitted
- Maximum power and heat up times based on a 240V supply
- Holding power is measured at continuous operating temperature