

# TZF High Temperature Three Zone Horizontal Tube Furnaces

## Standard features

- ✓ 1800°C maximum operating temperature
- ✓ Accepts worktubes with outer diameters of up to 90mm
- ✓ Heated lengths of 600 or 610mm
- ✓ Includes end-zone controller using "back to back" control configuration
- ✓ Carbolite 301 controller with simple ramp to set points facility (TZF 15 & TZF 16)
- ✓ 8 segment programmable temperature control (TZF 17 & TZF 18)
- ✓ Overtemperature protection (TZF 17 & TZF 18)
- ✓ Delayed start / process timer function as standard



TZF 15/610

## Options

*specify these at time of order*

- ✦ Non-permeable inner worktubes to contain modified atmosphere
- ✦ Impervious inner worktubes to protect against chemical attack or damage from thermal shock
- ✦ Over-temperature protection (recommended to protect valuable contents & for unattended operation) (TZF 15 & TZF 16)
- ✦ Insulation plugs & radiation shields to prevent heat loss & improve uniformity
- ✦ Control module with 2 metre conduit to furnace cradle
- ✦ Gas injection & vacuum compatible tube end seal assemblies
- ✦ 2 phase, 3 phase or 'universal' power supply, depending upon model
- ✦ 20 segment programmer
- ✦ RS232 communications & graphical recorders
- ✦ 'Retransmission of Setpoint' control configuration to facilitate programmed cooling

Range of silicon carbide & molybdenum disilicide heated three zone furnaces supplied with 'Back to Back' controls as standard. Where programmed cooling rates are required or the option of vertical orientation is chosen then 'Retransmission of Setpoint' control should be requested at time of order.

*Requires but does not include an appropriate accessory worktube up to 90mm outer diameter.*

**Note:** 1700°C or 1800°C furnaces have case configuration similar to the CTF series.

Model	Max temp (°C)	Heat-up time (mins)	Dimensions				External H x W x D (mm)	Max power (W)	T/C type	W't (kg)	Power supply required per phase	
			Max o/d accessory tube (mm)	Tube* / Worktube length (mm)								Holding power (W)
				Heated*	For work in air	**For modified atmosphere work						
<b>TZF 15/610</b>	1500	75	90	610	900	1650	660 x 1130 x 445	8000 4000	R	44	<i>a1=60A, h3=22A, e3=38A</i>	
<b>TZF 16/610</b>	1600	–	90	610	900	1500	660 x 1130 x 445	9150 4500	R	181	<i>c1=62A, h3=25A, e3=40A</i>	
<b>TZF 17/600</b>	1700	150	90	600	1200	1500	880 x 1020 x 630	9000 3800	B	280	<i>a1=46A, b1=48A, h3=28A, e3=34A,</i>	
<b>TZF 18/600</b>	1800	150	90	600	1200	1500	645 x 1020 x 630	9300	2‡	280	<i>a1=40A, b3=30A, e3=28A, h3=24A</i>	

*a1*=Single 200-240V, *b1*=200-208V, *c1*= Single 220-240V, *d3*=200-220V 3 phase delta, *e3*=230-240V 3 phase delta, *h3*=380-415V 3 phase + N



Continuous operating temperature is 100°C below maximum temperature.

Uniform length measured with end plugs fitted.

‡A Carbolite proprietary thermocouple design.



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)1245 600560**

**Fax: +44 (0)1245 600030**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.