

Laboratory Tube Furnaces

HORIZONTAL – VERTICAL - MULTI-ZONE - CONTROLLED ATMOSPHERE - CUSTOM DESIGNED UNITS

Tube furnaces enable a closely controlled, heated environment to be created for small scale test-work. The work-tube may be oriented horizontally, vertically or be fully adjustable to any angle. Work-tubes range in size from less than 25mm to over 150mm diameter and may be made from a number of ceramic materials, depending on the requirements.

Maximum operating temperatures can be as low as 200°C or as high as 1800°C(3272°F).

For some test-work, tube furnaces have one, two, three or more heated and controlled zones.

For a controlled atmosphere within the worktube, tube-end caps and an atmosphere gas control system is added.



Technical specifications

Heating Elements

Wire - Kanthal A1 for temperatures up to 1199°C.
 or Silicon Carbide - For fast heating or temperatures up to 1600°C
 or Molybdenum Disilicide - KS 1800 or 1900°C . Molybdenum Disilicide for temperatures above 1600°C.

Thermocouple

Type 'K', 'N', 'R', 'B' or '20/40' dependant on the specified operating temperature.

Construction

Typically, double skin, steel or stainless steel casing containing insulation, elements and tube-supports. Horizontal tube furnace module mounted above control module. Control module separate when vertical or movable tube is specified. Other configurations available on request.

Temperature Controller

Tempron AYT set-point or AYP digital programmable controllers (1 pattern of 16 steps) .

TFKS furnaces are fitted with Yokogawa model UP550 or other programmable controllers as standard. Many others available on request.

Overtemperature Protection

Std. Nil for TFWW & TFSC furnaces. Monitory control using a limit controller and discrete thermocouple for TFKS furnaces.
 Opt. Monitory control for TFWW & TFSC.

Some models listed below:

Model	Hot Zone \varnothing x L (mm)	Max Temp. (°C)	Work Tube	Electrical	Power (Kw)
TFWW32/2001A	32 x 200	1199/1050°C Continuous	Al/Si ceramic	240v 10A	1.4
TFWW40/2001A	40 x 200	1199/1050°C Continuous	Al/Si ceramic	240v 10A	1.8
TFWW55/2001A	55 x 200	1199/1050°C Continuous	Al/Si ceramic	240v 10A	2.4
TFWW70/2001A	70 x 200	1199/1050°C Continuous	Al/Si ceramic	240v 15A	3.6
TFSC60/2006BV	60 x 200	1600/1550°C Continuous	Al/Si ceramic	2x240v 20v	9.6
TFKS70/2007EVM	70 x 200	1700/1650°C Continuous	Alumina ceramic	240v 40A	9.6