

Laboratory Furnaces

STANDARD FEATURES

- Maximum Operating Temperature : 1200°C / 1400°C / 1600°C / 1800 °C.
- High density Alumina / Quartz ceramic tubes.
- High accurate test results under uniform temperatures.
- Multiple zone heating as per application of customer.
- Display : 7 segment LED display.
- Accuracy : $\pm 1^{\circ}\text{C}$.
- Advanced Refractory interior, used in combination with energy efficient low thermal mass insulation.
- Over temperature limiter with adjustable cutout temperature for thermal protection class 2 in accordance with EN 60519-2 as temperature limiter to protect the furnace and load.
- Thermocouple break protection that help preventing thermocouple failure run away.
- Power control through Solid state relay or Thyristor unit that provides low noise operation.
- Outstanding temperature uniformity inside chamber.
- Easy maintenance and operation.
- NABL certified thermocouple

TUBE FURNACE-TF



Tubular furnaces are designed for sample testing under gas/vacuum atmosphere they are available in customize size and options with water-cooled flange. Maximum design temperature of the furnace is up to 1800°C.

The various applications include ageing, annealing, brazing, calcination, catalyst research, CIM, coating, CVD, degassing, drying, hardening, MIM, mini-plants, pyrolysis, sintering, soldering, sublimation, synthesis, tempering, test fuel cells, thermocouple calibration. Tempens is ISO and CE certified Laboratory & Industrial furnace manufacturers and suppliers. Tempens has wide range of tubular furnaces with different tube sizes and Temperature range up to 1800 °C.

TECHNICAL SPECIFICATION

CONSTRUCTION

- Powder coated 2 mm thick Mild Steel cabinet / 304 Grade Stainless Steel (Optional).
- Vacuum formed ultra-high purity alumina low thermal mass insulation with pre sintered fiber insulation board for maximum energy saving design.
- Double shell case with cooling fan to keep low surface temperature and electric components safe.

TEMPERATURE CONTROL

- Electronic/ Automatic Control.
- Temperature sensing through N/R/B type sensor.
- NABL certified thermocouple.
- Equipped with thermocouples break protection that help prevent thermocouple failure run away.
- Thyristorized power control

OPTIONAL FEATURES

- Programmable PID controller with RS-232/ RS-485/ Ethernet & Data Logging software.
- Provision for vacuum/ gas purging application (Ar, N₂, H₂, O₂, CO₂, etc.) with water cooled flanges.
- Available in standard sizes and as per customer requirements.

MODEL	OPERATING TEMP. (°C)	CERAMIC TUBE* ØID X HOT ZONE LENGTH (mm)	kW	HEATING ELEMENT	CONTROLLING THERMO-COUPLE
TF 1200	1200	Ø50 x 200* & Ø80 x 250*	2.8	FeCrAl	N
TF 1400	1400		3.5	SiC	R
TF 1600	1600		4	MoSi ₂	B
TF 1800	1800		4	MoSi ₂	B

ACCESSORIES

- Hand Gloves.
- Heating Element.
- Crucible.
- Tongs.
- SS Flanges.
- Vacuum pump.
- Gas purging accessories.