

Laboratory Furnaces

STANDARD FEATURES

- Maximum Operating Temperature : 400°C / 1600°C / 1800°C.
- High accurate test results under uniform temperatures.
- 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.

HIGH TEMPERATURE FURNACE



High-temperature furnaces are another type of laboratory furnace capable of reaching higher temperatures from 1400 °C and maximum up to 1800 °C. A high temperature furnace typically consists of heating elements located on both sides of the heating chamber to ensure good thermal uniformity. Process applications for a high-temperature furnace include sintering of high-temperature materials, glass melting, and high-temperature testing of ceramics, fusion and firing processes, and powder metallurgy processes.

High-temperature furnaces are insulated with ceramic fiber material. Furnaces with ceramic fiber insulation achieve significantly shorter heating up times because of the low thermal mass.

Tempsens is ISO and CE certified Laboratory & Industrial furnace manufacturers and suppliers. Tempsens provide range general purpose High-Temperature Furnace in three temperature ranges i.e. 1400°C, 1600°C & 1800°C.

TECHNICAL SPECIFICATION

CONSTRUCTION

- Powder coated 1.6 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.
- Door limit switch for cutting power to heating element while door is in open condition.

TEMPERATURE CONTROL

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

DOOR OPERATION

- Parallel motion swing door/ mechanical linkage.
- Push down lever mechanism for locking the gate.

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.).
- Available in standard sizes and as per customer requirements.

MODEL	OPERATING TEMP(°C)	INSIDE DIMENSIONS (WxDxH) (mm)	Volume (Liters)	kW	HEATING ELEMENT	CONTROLLING THERMO-COUPLE
HTF 1400	1400	170 x 270 x 150	6.9	4	Silicon Carbide	R
HTF 1600	1600	170 x 270 x 150	6.9	4	Molybdenum Disilicide	B
HTF 1600 G	1600	175 x 340 x 200	12	5	Molybdenum Disilicide (with Vacuum)	B
HTF 1800	1800	150 x 240 x 110	4	4	Molybdenum Disilicide	B
HTF 1800 G	1800	150 x 330 x 180	9	5	Molybdenum Disilicide (with Vacuum)	B

ACCESSORIES

- Hand Gloves.
- Heating Element.
- Crucible.
- Tongs.