

## MUFFLE FURNACE 1400 °C



### APPLICATIONS

- Material sintering (ceramics, glass, metal oxides)
- Ash content determination in coal, coke, food & polymers
- Heat treatment of metals and alloys
- Research & development in labs and institutes
- Thermal decomposition & loss on ignition (LOI)
- Firing and sintering of advanced ceramics.
- Calcination of raw ceramic powders.
- Melting and testing of glass samples.
- Phase transformation studies.
- Catalyst activation and regeneration.
- Oxidation/reduction experiments
- Soil and biomass analysis.

### KEY FEATURES

- **Maximum Temperature:** 1400 °C
- **Working Temperature Range:** Up to 1350 °C (continuous), 1400 °C (intermittent)
- **Step-down transformer based design** reduces incoming high line voltage to a safer, controlled voltage for the heating elements.
- **Double-walled construction** with high-grade insulation ceramic fiber/zirconia wool to minimize heat loss.
- **MS duly powder-coated outer body** for durability and resistance to corrosion
- **Heating Elements:** Silicon carbide rods
- **Uniform Temperature:** Optimized placement of elements ensures uniform chamber heating.
- **Temperature Control:**
  - Digital PID temperature controller
  - Programmable temperature profile
- **Temperature Accuracy:** ±1 °C
- **Door Type:** Front-opening with ceramic fiber insulation
- **Power Supply:** 230V AC (Single Phase) or 440V AC (Three Phase), 50/60Hz
- **Safety Features:**
  - Over-temperature protection
  - Automatic cut-off for door opening
  - Fuse & thermal safety interlocks

## TECHNICAL MATRIX

Model no	PTE-MF 503 A	PTE-MF 503 B	PTE-MF 503 C	PTE-MF 503 D	PTE-MF 503 E	PTE-MF 503 F	PTE-MF 503 G
<b>MOC</b>	CRCA Body	CRCA Body	CRCA Body	CRCA Body	CRCA Body	CRCA Body	CRCA Body
<b>Inner Chamber</b>	Ceramic Refractory	Ceramic Refractory	Ceramic Refractory	Ceramic Refractory	Ceramic Refractory	Ceramic Refractory	Ceramic Refractory
<b>Chamber Size WxHxD</b>	4"x4"x9"	5"x5"x10"	6"x6"x12"	8"x8"x12"	9"x9"x12"	9"x9"x18"	12"x12"x12"
<b>Max. Temp. (°C)</b>	1400	1400	1400	1400	1400	1400	1400
<b>Power Load</b>	2-2.5 KW	3-3.5 KW	4-4.5KW	6KW	6 KW	9 KW	12 KW
<b>Heating Element</b>	Silicon Carbide	Silicon Carbide	Silicon Carbide	Silicon Carbide	Silicon Carbide	Silicon Carbide	Silicon Carbide
<b>Supply Volts</b>	Single Phase 220	Single Phase 220	Single Phase 220	Single Phase 220	3 Phase 440	3 Phase 440	3 Phase 440
<b>Temp. Controller</b>	Microprocessor Based PID controller						
<b>Temp. Sensitivity</b>	±2°C						
<b>Insulation</b>	Ceramic Fiber						

## OPTIONAL ADD ONS

- Programmable Temperature Controller
- Close chamber / Open Element Chamber
- Data Logging & Software Interface
- Exhaust Port / Gas Inlet
- Cooling Fans
- Alarm Systems
- Digital Timer
- Door Safety Interlock