



## **DIGIQUAL SYSTEMS Muffle Furnace Programmable PID Controller Owner's Manual**

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**MUFFLE FURNACE – 1100°C**

Digitule systems is an Laboratory Furnace manufacturer, supplier and exporter in India, Chennai. We manufacture high temperature Furnaces like Laboratory Muffle Furnace, High Temperature Muffle Furnace 1100°C, Pit Type Furnace, High Temperature Box Furnace, Horizontal Tubular Furnace , Vertical Tubular Furnace, Split Type Tubular furnace (Horizontal and Vertical) and Industrial Box furnace for wide range of laboratory and industrial applications.

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## TECHNICAL SPECIFICATION

### CONSTRUCTION

- Grooved Muffle furnace is Double walled chamber inner made of 4 nos. of siliminite refractory slabs and outer made of cold rolled mild steel sheets finished in powder coating.
- Insulation by Ceramic fibre blankets to minimize radiation heat loss. Double walled insulated door mounted on heavy-duty hinges is provided with effective locking arrangements.
- For High Temperature Muffle furnace Heating elements will be Kanthal A1 coils suspended in the grooves of the refractory.
- The temperature inside is maintained at any desired level within the operating range by a Digital Automatic Temperature Indicator-cum- controller working in conjunction with a Cr/Al thermocouple housed in the hot zone.

### STANDARD FEATURES

- Maximum Temperature :1100°C
- Operating Temperature: 1050°C
- High accurate test results under uniform temperatures.
- Multiple zone heating as per application of customer.
- SiC/Kanthal A1 Heating Elements Used
- 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

### TEMPERATURE CONTROL

- Pilot Indicating Lights.

- 16 Segment Prog PID Temp Controller.
- HRC Fuse units(L&T)
- Thyristor Power Control Device.
- Voltmeter (AE) , Ammeter (AE)
- Circuit Breaker
- Main Isolating Switch
- Step Down Transformer

## 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.

Inner Chamber size	Power Rating kw
125 × 125 × 200 mm	6.0 Kw
150 × 150 × 300mm	6.0 Kw
200 × 200 × 300 mm	8.0 Kw 3 phase
300 × 300 × 300 mm	9.0 Kw 3 phase

## ACCESSORIES

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



- Digiqua -

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## Documents / Resources



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Muffle Furnace Programmable PID Controller, Muffle Furnace, Programmable PID Controller, PI  
D Controller, Controller