



# MUFFLE FURNACE

## LMF-E Series

## Muffle Furnace LMF-E Series

LMF-E series models of Muffle Furnace are microprocessor controlled furnaces with molded ceramic fibre insulation ensuring minimum heat loss. They are accurate, reliable and efficiently designed for minimal space requirement in the laboratory and are equipped with instantaneous energy consumption indicator, calculator for average working temperature, total working hour counter and descriptive error indicator. With abrasion resistant body, heating elements Fe-Cr-Al embedded into bricks, S type thermocouple, they are ideal for maximum and continuous working temperature of 1300°C.

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### Features

- ❑ PID controller
- ❑ LCD display that shows current and target temperature
- ❑ Optimum insulation properties
- ❑ 2, 4, 8 and 16 step heating programs available
- ❑ Fe-Cr-Al heating element embedded in brick walls
- ❑ Accurate measurement and control of temperature using K and S type thermocouple
- ❑ Second thermocouple for different adjustable purposes
- ❑ Durable inside lining made of light insulating bricks
- ❑ Dual shell housing for low outer surface temperature
- ❑ Steel sheet housing material
- ❑ Insulating fire brick as inner and front face insulation material
- ❑ Ceramic fibre board as door insulation material
- ❑ Quartz tube used to protect heating element
- ❑ Provision of audio warning as the step changes and at the end of the program
- ❑ Provision of automatic power cut-off to the heating elements and alert if the control unit/control card is over heated.
- ❑ Instantaneous energy consumption indicator
- ❑ Calculator for average working temperature
- ❑ Descriptive error indicator
- ❑ User friendly menu

## Applications

They are used for applications such as: Fusing glass, Creating enamel coatings, Ceramics, Soldering, Brazing, Rubbers & Polymers. They are also used for metallurgical applications, for ash content determination and in research centers and medical laboratories to determine the volatile & non-combustible proportion of the sample.

## Specifications

Model No.	LMF-E10	LMF-E11	LMF-E12	LMF-E13
Max. Temperature	1300°C			
Capacity	5 L			
Heating Program	2 step	4 step	8 step	16 step
Thermal Rate	3-20°C			
Heating element	Fe-Cr-Al			
Program Memories	2	4	6	5
Thermocouple Type	S Type			
Heating Element Placement	Embedded into brick walls			
Inner Insulation Material	Insulating Fire Brick			
Front Face Insulation Material	Insulating Fire Brick			
Door Insulation Material	Ceramic Fibre Board			
Housing Material	Steel Sheet			
Housing Coating	Epoxy powder coating			
Chimney	Standard			
Element Heating Element Protection	Quartz Tube			
Lockable Door Handle	Sideways			
Temperature Control Accuracy	±1°C (can vary at low temperatures)			
Measurement Accuracy	±1°C			
Inner Volume Temperature Homogeneity	±10°C			
Max. Current	10 A			
Power	2.250 W			

Inner Chamber Dimension (W x H x D)	150 x 150 x 225 mm
Product Outer Dimension (W x H x D)	446 x 618 x 620 mm
Gross Dimension ( W x H x D)	506 x 780 x 678 mm
Net Weight	49 kg
Gross weight	63 kg

Model No.	LMF-E20	LMF-E21	LMF-E22	LMF-E23
Max. Temperature	1300°C			
Capacity	7 L			
Heating Program	2 step	4 step	8 step	16 step
Thermal Rate	3-20°C			
Heating element	Fe-Cr-Al			
Program Memories	2	4	6	5
Thermocouple Type	S Type			
Heating Element Placement	Embedded into brick walls			
Inner Insulation Material	Insulating Fire Brick			
Front Face Insulation Material	Insulating Fire Brick			
Door Insulation Material	Ceramic Fibre Board			
Housing Material	Steel Sheet			
Housing Coating	Epoxy powder coating			
Chimney	Standard			
Element Heating Element Protection	Quartz Tube			
Lockable Door Handle	Sidewards			
Temperature Control Accuracy	±1°C (can vary at low temperatures)			
Measurement Accuracy	±1°C			
Inner Volume Temperature Homogeneity	±10°C			
Max. Current	16 A			
Power	3.500 W			



Inner Chamber Dimension (W x H x D)	180 x 160 x 260 mm
Product Outer Dimension (W x H x D)	476 x 628 x 655 mm
Gross Dimension (W x H x D)	536 x 815 x 688 mm
Net Weight	56 kg
Gross weight	71 kg

Model No.	LMF-E30	LMF-E31	LMF-E32	LMF-E33
Max. Temperature	1300°C			
Capacity	10 L			
Heating Program	2 step	4 step	8 step	16 step
Thermal Rate	3-20°C			
Heating element	Fe-Cr-Al			
Program Memories	2	4	6	5
Thermocouple Type	S Type			
Heating Element Placement	Embedded into brick walls			
Inner Insulation Material	Insulating Fire Brick			
Front Face Insulation Material	Insulating Fire Brick			
Door Insulation Material	Ceramic Fibre Board			
Housing Material	Steel Sheet			
Housing Coating	Epoxy powder coating			
Chimney	Standard			
Element Heating Element Protection	Quartz Tube			
Lockable Door Handle	Sideways			
Temperature Control Accuracy	±1°C (can vary at low temperatures)			
Measurement Accuracy	±1°C			
Inner Volume Temperature Homogeneity	±10°C			
Max. Current	16 A			

Power	3.500 W
Inner Chamber Dimension (W x H x D)	200 x 180 x 300 mm
Product Outer Dimension (W x H x D)	496 x 648 x 695 mm
Gross Dimension ( W x H x D)	556 x 855 x 708 mm
Net Weight	60 kg
Gross weight	77 kg

Model No.	LMF-E40	LMF-E41	LMF-E42	LMF-E43
Max. Temperature	1300°C			
Capacity	20 L			
Heating Program	2 step	4 step	8 step	16 step
Thermal Rate	3-20°C			
Heating element	Fe-Cr-Al			
Program Memories	2	4	6	5
Thermocouple Type	S Type			
Heating Element Placement	Embedded into brick walls			
Inner Insulation Material	Insulating Fire Brick			
Front Face Insulation Material	Insulating Fire Brick			
Door Insulation Material	Ceramic Fibre Board			
Housing Material	Steel Sheet			
Housing Coating	Epoxy powder coating			
Chimney	Standard			
Element Heating Element Protection	Quartz Tube			
Lockable Door Handle	Sideways			
Temperature Control Accuracy	±1°C (can vary at low temperatures)			
Measurement Accuracy	±1°C			
Inner Volume Temperature Homogeneity	±10°C			

Max. Current	2 x 10 A
Power	4.500 W
Inner Chamber Dimension (W x H x D)	250 x 200 x 395 mm
Product Outer Dimension (W x H x D)	546 x 668 x 790 mm
Gross Dimension ( W x H x D)	605 x 950 x 708 mm
Net Weight	81 kg
Gross weight	101 kg

Model No.	LMF-E50	LMF-E51	LMF-E52	LMF-E53
Max. Temperature	1300°C			
Capacity	40 L			
Heating Program	2 step	4 step	8 step	16 step
Thermal Rate	3-20°C			
Heating element	Fe-Cr-Al			
Program Memories	2	4	6	5
Thermocouple Type	S Type			
Heating Element Placement	Embedded into brick walls			
Inner Insulation Material	Insulating Fire Brick			
Front Face Insulation Material	Insulating Fire Brick			
Door Insulation Material	Ceramic Fibre Board			
Housing Material	Steel Sheet			
Housing Coating	Epoxy powder coating			
Chimney	Standard			
Element Heating Element Protection	Quartz Tube			
Lockable Door Handle	Sideways			
Temperature Control Accuracy	±1°C (can vary at low temperatures)			
Measurement Accuracy	±1°C			

Inner Volume Temperature Homogeneity	±10°C
Max. Current	3 x 11 A
Power	7.500 W
Inner Chamber Dimension (W x H x D)	300 x 300 x 445 mm
Product Outer Dimension (W x H x D)	630 x 785 x 840 mm
Gross Dimension ( W x H x D)	690 x 1000 x 845 mm
Net Weight	112 kg
Gross weight	136 kg

Model No.	LMF-E60	LMF-E61	LMF-E62	LMF-E63
Max. Temperature	1300°C			
Capacity	60 L			
Heating Program	2 step	4 step	8 step	16 step
Thermal Rate	3-20°C			
Heating element	Fe-Cr-Al			
Program Memories	2	4	6	5
Thermocouple Type	S Type			
Heating Element Placement	Embedded into brick walls			
Inner Insulation Material	Insulating Fire Brick			
Front Face Insulation Material	Insulating Fire Brick			
Door Insulation Material	Ceramic Fibre Board			
Housing Material	Steel Sheet			
Housing Coating	Epoxy powder coating			
Chimney	Standard			
Element Heating Element Protection	Quartz Tube			
Lockable Door Handle	Sideways			
Temperature Control Accuracy	±1°C (can vary at low temperatures)			

Measurement Accuracy	±1°C
Inner Volume Temperature Homogeneity	±10°C
Max. Current	3 x 15 A
Power	10.200 W
Inner Chamber Dimension (W x H x D)	400 x 300 x 495 mm
Product Outer Dimension (W x H x D)	730 x 785 x 890 mm
Gross Dimension ( W x H x D)	790 x 1050 x 845 mm
Net Weight	133 kg
Gross weight	160 kg

Model No.	LMF-E70	LMF-E71	LMF-E72	LMF-E73
Max. Temperature	1300°C			
Capacity	100 L			
Heating Program	2 step	4 step	8 step	16 step
Thermal Rate	3-20°C			
Heating element	Fe-Cr-Al			
Program Memories	2	4	6	5
Thermocouple Type	S Type			
Heating Element Placement	Embedded into brick walls			
Inner Insulation Material	Insulating Fire Brick			
Front Face Insulation Material	Insulating Fire Brick			
Door Insulation Material	Ceramic Fibre Board			
Housing Material	Steel Sheet			
Housing Coating	Epoxy powder coating			
Chimney	Standard			
Element Heating Element Protection	Quartz Tube			
Lockable Door Handle	Sideways			

Temperature Control Accuracy	±1°C (can vary at low temperatures)
Measurement Accuracy	±1°C
Inner Volume Temperature Homogeneity	±10°C
Max. Current	3 x 15 A
Power	10.200 W
Inner Chamber Dimension (W x H x D)	460 x 365 x 595 mm
Product Outer Dimension (W x H x D)	730 x 785 x 890 mm
Gross Dimension ( W x H x D)	816 x 1150 x 893 mm
Net Weight	160 kg
Gross weight	190 kg

### Optional Features

- ▣ Over Temperature Limiter
- ▣ Lift-up Door
- ▣ Stainless Steel body
- ▣ Gas Supply Connection
- ▣ Open Door Sensor
- ▣ Second Thermocouple
- ▣ Observation Hole
- ▣ PC Connection
- ▣ 110 V Power Supply

### Spare Parts

- ▣ Inner Module: Changing inner module renews your furnace close to a brand new furnace
- ▣ Door Insulation: With sheet metal holder vessel
- ▣ Control Card: Easy-to-replace, pre-programmed
- ▣ Power Card: Easy-to-replace
- ▣ Display: 4 x 20 LCD display
- ▣ Cooling Fan: 80 x 80 x 20/ 220 V fan
- ▣ Chimney Fan: 40 x 40 x 10/ 5V fan

## Optional Accessories

Sr. No.	Accessory
1	High Temperature Gloves
2	Tongs
3	Alumina Crucibles
4	Metal Crucibles
5	Alumina Combustion Boats
6	Ceramic pipes
7	Extra Thermocouples