LABTRON

MUFFLE FURNACE

LMF-B Series

www.labtron.com info@labtron.com

MUFFLE FURNACE

Muffle Furnace LMF-B series

LMF-B series models of Muffle Furnace are microprocessor controlled furnaces with steel sheet housing material, that are efficiently designed for minimal space requirement in the laboratory. With heating elements such as Fe-Cr-Al embedded into bricks, K and S type thermocouple and optimum insulation properties, they are ideal for maximum or continuous working temperature of 1100^{0}C. They are accurate in measuring and controlling the temperature and are equipped with instantaneous energy consumption indicator, calculator for average working temperature and descriptive error indicator.

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

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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-B10	LMF-B11	LMF-B12	LMF-B13
Max. Temperature	1100°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	K 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 Homogenity	±10°C			
Max. Current	9 A			
Power	2.000 W			
Inner Chamber Dimension (W x H x D)	150 x 150 x 225 mm			

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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	43 kg
Gross weight	57 kg

Model No.	LMF-B20	LMF-B21	LMF-B22	LMF-B23
Max. Temperature	1100°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	K 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 Homogenity	±10°C			
Max. Current	11 A			
Power	2.600 W			

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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	48 kg
Gross weight	63 kg

Model No.	LMF-B30	LMF-B31	LMF-B32	LMF-B33
Max. Temperature	1100°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	K 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 Homogenity	±10°C			
Max. Current	13 A			

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Power	3.000 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	50 kg
Gross weight	67 kg

Model No.	LMF-B40	LMF-B41	LMF-B42	LMF-B43
Max. Temperature	1100°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	K 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 Homogenity	±10°C			

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Max. Current	2 x 9 A
Power	4.200 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)	606 x 950 x 728 mm
Net Weight	65 kg
Gross weight	85 kg

Model No.	LMF-B50	LMF-B51	LMF-B52	LMF-B53
Max. Temperature	1100°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	K 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			

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Inner Volume Temperature Homogenity	±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-B60	LMF-B61	LMF-B62	LMF-B63
Max. Temperature	1100°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	K 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)			

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Measurement Accuracy	±1°C
Inner Volume Temperature Homogenity	±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-B70	LMF-B71	LMF-B72	LMF-B73
Max. Temperature	1100°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	K 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			

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Temperature Control Accuracy	±1°C (can vary at low temperatures)
Measurement Accuracy	±1°C
Inner Volume Temperature Homogenity	±10°C
Max. Current	3 x 21 A
Power	14.000 W
Inner Chamber Dimension (W x H x D)	400 x 300 x 495 mm
Product Outer Dimension (W x H x D)	756 x 833 x 990 mm
Gross Dimension (W x H x D)	816x 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