



Muffle Furnace

LMF-I Series

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LMF-I series models of muffle furnace are microprocessor controlled furnaces that are uniquely designed with optimum heat insulation properties and are ideal for ashing of food, plastic and other organic materials. With heating elements MoSi₂ vertically aligned next to the side walls, S and B type thermocouple, dual sheet housing for low outer surface temperature, they are perfect for continuous and maximum working temperature of 1600°C. Having user friendly menu in 4 line display for easy operation and current limit control for safe operation, they are designed for minimal space requirement in the laboratory and are equipped with instantaneous energy consumption indicator, total working hour counter, control unit overheating sensor etc.

Features

- ✓ PID controller
- ✓ LCD display that shows current and target temperature
- ✓ Optimum insulation properties
- ✓ 4, 8, 16 step heating program available
- ✓ MoSi₂ heating elements vertically aligned next to the side walls
- ✓ Accurate temperature measurement and control using S and B type thermocouple
- ✓ Unique electronic design and software
- ✓ Durable inside lining made of high quality light insulating bricks and ceramic fibre board
- ✓ Dual shell housing for low outer surface temperature
- ✓ Current limit control for safe operation
- ✓ Provision of sound warning as the step changes and at the end of the program
- ✓ Equipped with step indicator
- ✓ Instantaneous energy consumption indicator
- ✓ Step indicator
- ✓ Total working hour counter
- ✓ Descriptive error indicator
- ✓ Control unit over heating sensor door sensor
- ✓ Open door sensor
- ✓ Provision of automatic power cutoff to the heating element if the control unit/ control card is over heated.
- ✓ User friendly operating 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-II0	LMF-III	LMF-II2
Max. Temperature	1600°C		
Capacity	1 L		
Heating Program	4 step	8 step	16 step
Thermal Rate	3-20°C		
Heating element	MoSi ₂ (Molybdenum disilicide)		
Program Memories	4	6	5
Thermocouple Type	S Type		
Display	4 x 20" LCD		
Heating Element Placement	Vertically aligned next to the side walls		
Inner Insulation Material	Ceramic Fibre Board		
Front Face Insulation Material	Insulating Fire Brick		
Door Insulation Material	Ceramic Fibre Board		
Housing Material	Steel Sheet		
Housing Coating	Epoxy powder coating		
Chimney	Standard without fan		
Lockable Door Handle	Sideways		
Temperature Control Accuracy	±1°C (can vary at low temperatures)		
Measurement Accuracy	±1°C		
Inner Volume Temperature Homogeneity	±10°C		
Auto Start at Certain Date	Yes	Yes	Yes
Show Remaining Waiting Time	Yes	Yes	Yes
Skip the Waiting Step	Yes	Yes	Yes

Burst Heating Mode	Yes	Yes	Yes
Max. Current	16 A		
Power	1.900 W		
Inner Chamber Dimension (W x H x D)	100 x 125 x 106 mm		
Product Outer Dimension (W x H x D)	432 x 826 x 530 mm		
Gross Dimension (W x H x D)	492 x 886 x 690 mm		
Net Weight	73 kg		
Gross weight	90 kg		

Model No.	LMF-I20	LMF-I21	LMF-I22
Max. Temperature	1600°C		
Capacity	3 L		
Heating Program	4 step	8 step	16 step
Thermal Rate	3-20°C		
Heating element	MoSi ₂ (Molybdenum disilicide)		
Program Memories	4	6	5
Thermocouple Type	S Type		
Display	4 x 20" LCD		
Heating Element Placement	Vertically aligned next to the side walls		
Inner Insulation Material	Ceramic Fibre Board		
Front Face Insulation Material	Insulating Fire Brick		
Door Insulation Material	Ceramic Fibre Board		
Housing Material	Steel Sheet		
Housing Coating	Epoxy powder coating		
Chimney	Standard without fan		
Lockable Door Handle	Sideways		
Temperature Control Accuracy	±1°C (can vary at low temperatures)		
Measurement Accuracy	±1°C		
Inner Volume Temperature Homogeneity	±10°C		

Auto Start at Certain Date	Yes	Yes	Yes
Show Remaining Waiting Time	Yes	Yes	Yes
Skip the Waiting Step	Yes	Yes	Yes
Burst Heating Mode	Yes	Yes	Yes
Max. Current	16 A		
Power	3.780 W		
Inner Chamber Dimension (W x H x D)	115 x 150 x 175 mm		
Product Outer Dimension (W x H x D)	467 x 920 x 634 mm		
Gross Dimension (W x H x D)	527 x 980 x 794 mm		
Net Weight	96 kg		
Gross weight	116 kg		

Model No.	LMF-I30	LMF-I31	LMF-I22
Max. Temperature	1600°C		
Capacity	3 L		
Heating Program	4 step	8 step	16 step
Thermal Rate	3-20°C		
Heating element	MoSi ₂ (Molybdenum disilicide)		
Program Memories	4	6	5
Thermocouple Type	S Type		
Display	4 x 20" LCD		
Heating Element Placement	Vertically aligned next to the side walls		
Inner Insulation Material	Ceramic Fibre Board		
Front Face Insulation Material	Insulating Fire Brick		
Door Insulation Material	Ceramic Fibre Board		
Housing Material	Steel Sheet		
Housing Coating	Epoxy powder coating		
Chimney	Standard without fan		

Lockable Door Handle	Sidewards		
Temperature Control Accuracy	±1°C (can vary at low temperatures)		
Measurement Accuracy	±1°C		
Inner Volume Temperature Homogeneity	±10°C		
Auto Start at Certain Date	Yes	Yes	Yes
Show Remaining Waiting Time	Yes	Yes	Yes
Skip the Waiting Step	Yes	Yes	Yes
Burst Heating Mode	Yes	Yes	Yes
Max. Current	2 x 20 A		
Power	8.200 W		
Inner Chamber Dimension (W x H x D)	150 x 185 x 220 mm		
Product Outer Dimension (W x H x D)	502 x 955 x 634 mm		
Gross Dimension (W x H x D)	562 x 1015 x 839 mm		
Net Weight	110 kg		
Gross weight	133 kg		

Model No.	LMF-I40	LMF-I41	LMF-I42
Max. Temperature	1600°C		
Capacity	9 L		
Heating Program	4 step	8 step	16 step
Thermal Rate	3-20°C		
Heating element	MoSi ₂ (Molybdenum disilicide)		
Program Memories	4	6	5
Thermocouple Type	S Type		
Display	4 x 20" LCD		
Heating Element Placement	Vertically aligned next to the side walls		
Inner Insulation Material	Ceramic Fibre Board		
Front Face Insulation Material	Insulating Fire Brick		

Door Insulation Material	Ceramic Fibre Board		
Housing Material	Steel Sheet		
Housing Coating	Epoxy powder coating		
Chimney	Standard without fan		
Lockable Door Handle	Sidewards		
Temperature Control Accuracy	±1°C (can vary at low temperatures)		
Measurement Accuracy	±1°C		
Inner Volume Temperature Homogeneity	±10°C		
Auto Start at Certain Date	Yes	Yes	Yes
Show Remaining Waiting Time	Yes	Yes	Yes
Skip the Waiting Step	Yes	Yes	Yes
Burst Heating Mode	Yes	Yes	Yes
Max. Current	2 x 22 A		
Power	8.200 W		
Inner Chamber Dimension (W x H x D)	170 x 205 x 260 mm		
Product Outer Dimension (W x H x D)	522 x 975 x 869 mm		
Net Weight	136 kg		
Gross weight	162 kg		

Model No.	LMF-I50	LMF-I51	LMF-I52
Max. Temperature	1600°C		
Capacity	16 L		
Heating Program	4 step	8 step	16 step
Thermal Rate	3-20°C		
Heating element	MoSi ₂ (Molybdenum disilicide)		
Program Memories	4	6	5
Thermocouple Type	S Type		
Display	4 x 20" LCD		

Heating Element Placement	Vertically aligned next to the side walls		
Inner Insulation Material	Ceramic Fibre Board		
Front Face Insulation Material	Insulating Fire Brick		
Door Insulation Material	Ceramic Fibre Board		
Housing Material	Steel Sheet		
Housing Coating	Epoxy powder coating		
Chimney	Standard without fan		
Lockable Door Handle	Sideways		
Temperature Control Accuracy	±1°C (can vary at low temperatures)		
Measurement Accuracy	±1°C		
Inner Volume Temperature Homogeneity	±10°C		
Auto Start at Certain Date	Yes	Yes	Yes
Show Remaining Waiting Time	Yes	Yes	Yes
Skip the Waiting Step	Yes	Yes	Yes
Burst Heating Mode	Yes	Yes	Yes
Max. Current	3 x 24 A		
Power	8.600 W		
Inner Chamber Dimension (W x H x D)	200 x 255 x 315 mm		
Product Outer Dimension (W x H x D)	532 x 981 x 889 mm		
Gross Dimension (W x H x D)	592 x 1041 x 1049 mm		
Net Weight	150 kg		
Gross weight	180 kg		

Model No.	LMF-160	LMF-161	LMF-162
Max. Temperature	1600°C		
Capacity	30 L		
Heating Program	4 step	8 step	16 step
Thermal Rate	3-20°C		
Heating element	MoSi ₂ (Molybdenum disilicide)		
Program Memories	4	6	5
Thermocouple Type	S Type		
Display	4 x 20" LCD		
Heating Element Placement	Vertically aligned next to the side walls		
Inner Insulation Material	Ceramic Fibre Board		
Front Face Insulation Material	Insulating Fire Brick		
Door Insulation Material	Ceramic Fibre Board		
Housing Material	Steel Sheet		
Housing Coating	Epoxy powder coating		
Chimney	Standard without fan		
Lockable Door Handle	Sideways		
Temperature Control Accuracy	±1°C (can vary at low temperatures)		
Measurement Accuracy	±1°C		
Inner Volume Temperature Homogeneity	±10°C		
Auto Start at Certain Date	Yes	Yes	Yes
Show Remaining Waiting Time	Yes	Yes	Yes
Skip the Waiting Step	Yes	Yes	Yes
Burst Heating Mode	Yes	Yes	Yes
Max. Current	3 x 30 A		
Power	10.700 W		
Inner Chamber Dimension (W x H x D)	250 x 310 x 390 mm		
Product Outer Dimension (W x H x D)	582 x 310 x 390 mm		
Gross Dimension (W x H x D)	642 x 1096 x 1049 mm		

Net Weight	170 kg
Gross weight	204 kg

Model No.	LMF-170	LMF-171	LMF-172
Max. Temperature	1600°C		
Capacity	60 L		
Heating Program	4 step	8 step	16 step
Thermal Rate	3-20°C		
Heating element	MoSi ₂ (Molybdenum disilicide)		
Program Memories	4	6	5
Thermocouple Type	S Type		
Display	4 x 20" LCD		
Heating Element Placement	Vertically aligned next to the side walls		
Inner Insulation Material	Ceramic Fibre Board		
Front Face Insulation Material	Insulating Fire Brick		
Door Insulation Material	Ceramic Fibre Board		
Housing Material	Steel Sheet		
Housing Coating	Epoxy powder coating		
Chimney	Standard without fan		
Lockable Door Handle	Sideways		
Temperature Control Accuracy	±1°C (can vary at low temperatures)		
Measurement Accuracy	±1°C		
Inner Volume Temperature Homogeneity	±10°C		
Auto Start at Certain Date	Yes	Yes	Yes
Show Remaining Waiting Time	Yes	Yes	Yes
Skip the Waiting Step	Yes	Yes	Yes
Burst Heating Mode	Yes	Yes	Yes
Max. Current	3 x 41 A		

Power	14.700 W
Inner Chamber Dimension (W x H x D)	320 x 420 x 450 mm
Product Outer Dimension (W x H x D)	652 x 1146 x 1024 mm
Gross Dimension (W x H x D)	712 x 1026 x 1184 mm
Net Weight	185 kg
Gross weight	224 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 Suppl

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

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