



**Thermo Scientific Furnaces**

**Consistent performance**  
at a high degree

**Thermo**  
SCIENTIFIC

# Thermo Scientific Furnaces

Furnaces in laboratory and industrial settings are used every day for a wide variety of simple and technical applications. **Deliver consistent results with a furnace you can depend on to attain your daily goals.** Choose from a wide offering to accommodate your applications needs, which may include:



- Ashing
- Research, for example material science (ceramic, metal, glass), environmental, agriculture, food, chemistry
- Metal treatment
- Water treatment
- Electronics
- Pottery

Designed with safety in mind, Thermo Scientific™ furnaces offer temperature ranges from 1100°C to 1700°C, temperature control options to meet your application needs, and light gauge overbend\* (LGO) heating elements designed to keep samples safe while maintaining reliable temperature uniformity.

\*LGO only available in Lindberg Blue M Models only

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# Temperature consistency and sample safety

for your laboratory and industrial applications.

For over 55 years, we have offered a variety of feature-rich furnaces to an array of industries and verticals to accommodate ordinary and technical tasks alike. Three types of furnaces are available.

## ▶ Box Furnaces

Typically used for processing larger samples or to easily place and access samples. We offer a versatile selection of small, medium and large box furnaces suitable for a variety of industrial and laboratory applications. Advanced engineering and specialized construction techniques include variable density insulation, double shell cabinets, long-life heating elements and side-swing doors (vertical or horizontal) or swing down doors.



Lindberg/Blue M Heavy-Duty 1200 C box furnace (BF51442C)



Thermolyne Benchtop Muffle Furnace (F48025-60)



## ▶ Tube Furnaces

Tube furnaces are typically used for processing small samples or heating in an inert atmosphere. The single and three-zoned construction is designed to create precise temperature control.

Three-zone control enables the user to select a different temperature in each zone (e.g. for gas applications or material experiments). Some models offer split-hinge design, which easily allows you to change the tube.

## ▶ Crucible Furnaces

Crucible furnaces are round, top-loading furnaces, well-suited for general purpose applications. They are designed for processing samples in small crucibles – to create safe, efficient, high temperature performance for melting, sintering, annealing and heat treatment applications.

### Crucible Furnaces

Lindberg/Blue M Mini-Mite Furnace  
(TF55030A-1)



Lindberg/Blue M Crucible Furnace  
(CF56622C)



# Choose a temperature controller that fits your needs

Utilize our furnace's controllers and programmers for rigorous industrial, scientific and laboratory research and production applications.

Various control options are offered for our three main furnace product families:

- Thermo Scientific™ Thermolyne™ furnaces
- Thermo Scientific™ Lindberg/Blue M™ furnaces
- Thermo Scientific™ furnaces

**Control sophistication** ranges from single set point to more versatile microprocessor-based systems with temperature ramping, programming and communications options. The choice for each product provides the best solution for your application.

**Integral controllers** available in three product families are self-contained and mounted in the main control panel of the furnace, saving space and allowing easy access with quick plug-in maintenance. All of our Thermolyne and Thermo Scientific product lines come with integral controls, as many of the Lindberg/Blue M models.

**Independent controllers** (available for select models) can be positioned adjacent to or remote from the furnace, allowing the operator to use the furnace in fume hoods or containment areas. The controls can also be placed or grouped for easy monitoring and control. Select models of our Lindberg/Blue M.

**Adjustable over-temperature protection** provides additional peace of mind to the user. This safety feature overrides the main controller and shuts off the furnace's power if high limit is reached. It is available on many controls, standard or as an option.

We only use reliable, high-quality controls from the specialized manufacturers Eurotherm™ and Yokogawa.™

## Thermo Scientific Thermolyne Furnace controllers

with PID microprocessor technology

### A1: Digital single setpoint control

- Dual display shows actual temperature and setpoint, no mechanical over-temperature protection relay included

### B1: Digital single setpoint control with a single ramp to setpoint and a dwell

- Dual display shows actual temperature and setpoint; mechanical over-temperature protection relay is included

### C1: Digital programmable control with one stored program of 8 segments

- Mechanical over-temperature protection relay is included
- Dual display shows actual temperature and setpoint

### D1: Digital programmable control with 4 stored programs, 16 segments per program, and RS-232 communications interface

- Mechanical over-temperature protection relay is included
- Dual display shows actual temperature and setpoint
- RS232 communications interface provides two-way communications between furnace and remote computer (cable, software, computer are not included)

**Note:** Thermo Fisher Scientific does not provide any software/software support. Suggested suppliers are:

- Eurotherm™ (itools software) - visit [www.eurotherm.co.uk/products/temperature-controller-programmers/config-software/eurotherm-itools](http://www.eurotherm.co.uk/products/temperature-controller-programmers/config-software/eurotherm-itools)
- Specview™ (itools software) - visit [www.specview.com](http://www.specview.com)



## Thermo Scientific Lindberg/ Blue M Furnace Controllers

with PID microprocessor technology

### A: Digital, single setpoint control

- Single segment, single setpoint, one ramp to setpoint

### B: Digital single-program, multiple-segment programmable control

- Single program with 16 segments for ramp (up and down) and dwell (timed hold) temperature control
- Simultaneous LED display of actual temperature vs setpoint
- Super Control (Fuzzy Logic) suppresses overshooting of temperature
- Customer initiated auto-tune function will adjust and update the PID parameters to the optimum settings for new temperature setpoints

### C: Digital multiple-program, multiple-segment programmable control

- Up to 30 programs and up to 300 segments for ramp (up and down) and dwell (timed hold) temperature control. Maximum of 99 segments per program.
- Program patterns can be based on either time or rate
- Large 5-digit LED display of actual temperature
- LCD display provides trend recording function, graphic prompts, configurable display data
- RS485 digital communications port available as an option on select models (add "COM" to model number before last letter, as shown in note under spec table).

### D: Over-temperature control (OTC) – available as an option on most models:

- Adjustable digital over-temperature control, protects furnace and load in the event of primary control circuit failure available on selected models with "B" suffix designation; see spec table
- Overrides main controller and shuts off power to furnace if high limit is reached
- Manual re-set required for safety
- Operates via magnetic contacts through signal from independent thermocouple

### RS485 digital communications port

available as an option on select models with programmable control:

- Provides two-way communications between furnace and remote computer (note: cable, software, computer is not included)
- Allows remote monitoring and control of furnace equipment
- Ability to connect up to 30 furnaces to one personal computer
- 9-pin connection ports

### Ordering Instructions:

- Add "COM" to model number before last letter, as shown in note under spec table.
- Twenty-five foot cable and RS-232 converter for connection of furnace/control console RS-485 port to personal computer serial port. Required for first unit connection: Accessory No 7043
- Cable to connect multiple (2+) furnaces, ovens or other equipment with Yokogawa communications capabilities to first

furnace with Yokogawa RS-485 communication port (Accessory No. 7044)

- Note that Thermo Fisher Scientific is not providing any software / software support. Suggested suppliers:
  - >>Eurotherm (e.g. itools software) - please go to [www.eurotherm.co.uk/products/temperature-controller-programmers/config-software/eurotherm-itools](http://www.eurotherm.co.uk/products/temperature-controller-programmers/config-software/eurotherm-itools)
  - >>Specview software – please go to [www.specview.com](http://www.specview.com)

## Thermo Scientific Box Furnace Controllers

provide a choice of electronic and microprocessor technology:

### A2: Electronic single setpoint control Digicon

### C2: Programmable digital control

- Thermicon P: free programming of up to 9 program steps
- Set-actual-value indicator; integrated timer for activating and deactivating heating (max. 99 hrs 59 min. per program step).

Additional choices available, by model:

- Upper limit-cut out for peace of mind
- 24-hour timer for automatic heat-up/shut-down
- Exhaust fan
- Adjustable air supply for incinerating processes



## Thermo Scientific Thermolyne Small Benchtop Muffle Furnaces

Fast heatup and outstanding energy efficiency



**Available in two capacities that reach a maximum temperature of 1100°C**

- Digital single setpoint temperature control to 1100°C
- Dual display shows actual temperature and setpoint
- Ceramic fiber insulation designed to permit faster heatup, reducing energy consumption
- Embedded heating elements on top and both sides designed to improve temperature uniformity
- Drop-down door doubles as a shelf for loading and unloading

- Door safety switch stops power to heating elements when door is opened
- Thermocouple break protection cuts power to heating elements, preventing failure runaway condition
- 0.95cm (0.38in.) diameter port in chamber rear for monitoring temperatures with independent measuring devices

### Temperature controller options

- Control A1
- See page 6 for control details

### APPLICATIONS

- Heat treatment of small steel parts
- Conducting gravimetric analysis
- Determination of volatile and suspended solids

| Cat. No.             | Capacity            | Temp. Range    | Temp. Stability (Uniformity)           | Interior D x W x H                        | Exterior L x W x H                      | Electrical                  | Shipping Weight    | Plug Type |
|----------------------|---------------------|----------------|--|---|---|-----------------------------|--------------------|-----------|
| <b>FB1315M</b>       | 1.3L (0.04 cu. ft.) | 100° to 1100°C | ±0.3°C at 1000°C<br>(±7.8°C at 1000°C) | 13 x 10.3 x 9.8cm<br>(5 x 4 x 3.8in.)     | 33 x 23 x 36cm<br>(13 x 9 x 14in.)      | 120V 50/60Hz<br>1060w;8.9A  | 9kg<br>(20 lb.)    |           |
| <b>FB1318M</b>       | 1.3L (0.04 cu. ft.) | 100° to 1100°C | ±0.3°C at 1000°C<br>(±7.8°C at 1000°C) | 13 x 10.3 x 9.8cm<br>(5 x 4 x 3.8in.)     | 33 x 23 x 36cm<br>(13 x 9 x 14in.)      | 208V 50/60Hz<br>1060w;5.1A  | 9kg<br>(20 lb.)    |           |
| <b>FB1310M</b>       | 1.3L (0.04 cu. ft.) | 100° to 1100°C | ±0.3°C at 1000°C<br>(±7.8°C at 1000°C) | 13 x 10.3 x 9.8cm<br>(5 x 4 x 3.8in.)     | 33 x 23 x 36cm<br>(13 x 9 x 14in.)      | 240V 50/60Hz<br>1060w;4.4A  | 9kg<br>(20 lb.)    |           |
| <b>FB1314M</b>       | 1.3L (0.04 cu. ft.) | 100° to 1100°C | ±0.3°C at 1000°C<br>(±7.8°C at 1000°C) | 13 x 10.3 x 9.8cm<br>(5 x 4 x 3.8in.)     | 33 x 23 x 36cm<br>(13 x 9 x 14in.)      | 100V 50/60Hz<br>1060w;10.6A | 9kg<br>(20 lb.)    |           |
| <b>FB1310M-33CN</b>  | 1.3L (0.04 cu. ft.) | 100° to 1100°C | ±0.3°C at 1000°C<br>(±7.8°C at 1000°C) | 13 x 10.3 x 9.8cm<br>(5 x 4 x 3.8in.)     | 33 x 23 x 36cm<br>(13 x 9 x 14in.)      | 240V 50/60Hz<br>1060w;4.4A  | 9kg<br>(20 lb.)    | 10A       |
| <b>FB1310M-33CH</b>  | 1.3L (0.04 cu. ft.) | 100° to 1100°C | ±0.3°C at 1000°C<br>(±7.8°C at 1000°C) | 13 x 10.3 x 9.8cm<br>(5 x 4 x 3.8in.)     | 33 x 23 x 36cm<br>(13 x 9 x 14in.)      | 240V 50/60Hz<br>1060w;4.4A  | 9kg<br>(20 lb.)    |           |
| <b>FB1310M-33UK</b>  | 1.3L (0.04 cu. ft.) | 100° to 1100°C | ±0.3°C at 1000°C<br>(±7.8°C at 1000°C) | 13 x 10.3 x 9.8cm<br>(5 x 4 x 3.8in.)     | 33 x 23 x 36cm<br>(13 x 9 x 14in.)      | 240V 50/60Hz<br>1060w;4.4A  | 9kg<br>(20 lb.)    |           |
| <b>FB1415M</b>       | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 120V 50/60Hz<br>1450w;12.0A | 12.7kg<br>(28 lb.) |           |
| <b>FB1418M</b>       | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 208V 50/60Hz<br>1520w;7.3A  | 12.7kg<br>(28 lb.) |           |
| <b>FB1410M</b>       | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 240V 50/60Hz<br>1520w;6.3A  | 12.7kg<br>(28 lb.) |           |
| <b>FB1410M-33</b>    | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 240V 50/60Hz<br>1520w;6.3A  | 12.7kg<br>(28 lb.) |           |
| <b>FB1410M-33CN</b>  | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 240V 50/60Hz<br>1520w;6.3A  | 12.7kg<br>(28 lb.) | 10A       |
| <b>FB1410M-33-CH</b> | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 240V 50/60Hz<br>1520w;6.3A  | 12.7kg<br>(28 lb.) |           |
| <b>FB1410M-33-UK</b> | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 240V 50/60Hz<br>1520w;6.3A  | 12.7kg<br>(28 lb.) |           |
| <b>FB1414M</b>       | 2.1L (0.07 cu. ft.) | 100° to 1100°C | ±0.5°C at 1000°C<br>(±5.0°C at 1000°C) | 15.2 x 12.7 x 10.8cm<br>(6 x 5 x 4.25in.) | 40 x 25 x 37cm<br>(15.8 x 10 x 14.5in.) | 100V 50/60Hz<br>1450w;14.5A | 12.7kg<br>(28 lb.) |           |

### Hearth Plates

| Cat. No.      | For Use With                |
|---------------|-----------------------------|
| <b>PH44X1</b> | FB1300 Small Muffle Furnace |
| <b>PH48X1</b> | FB1400 Small Muffle Furnace |

**Ordering Information:** Replacement heating elements and thermocouples available separately

**Includes:** Thermocouple, line cord, and hearth plate to protect bottom of unit

**Warranty:** 1 year (parts and labor)

**Certifications:** -33 units are CE marked, all other units are CSA approved



# Thermo Scientific Thermolyne Industrial Benchtop Muffle Furnaces

Rugged design with multiple safety features and choice of two temperature control options








- Reaches 1200°C maximum temperature
- Heavy-duty firebrick insulation designed to surround the opening for added durability
- Adjustable alarm or over-temperature protection (OTP) setting can be used to protect the furnace or loaded chamber from excessive heat
- Thermocouple break protection cuts power to the heating elements, preventing a thermocouple failure runaway condition
- Counter-weighted door swings upward, directing heat away from operator
- Four individual embedded elements in special refractory cement permit excellent heat distribution in the chamber
- Door safety switch protects operator by removing power to the heating elements upon opening the door
- Rear-mounted 0.38in. (0.95cm) diameter port for monitoring chamber temperatures with independent measuring devices
- LED display simultaneously shows both setpoint and actual furnace temperatures in either °C or °F

### Temperature controller options

- Control B1, C1
- See page 6 for control details

### APPLICATIONS

- Heat treatment
- Melting
- Gravimetric analysis

| Cat. No.          | Capacity            | Temp. Range   | Interior D x W x H                    | Exterior L x W x H                       | Control | Electrical                | Shipping Weight | Plug Type   |
|-------------------|---------------------|---------------|---------------------------------------|--|---------|---------------------------|-----------------|---|
| <b>FD1535M</b>    | 2.2L (0.08 cu. ft.) | 100° to1200°C | 22.8 x 10.1 x 9.5cm (9 x 4 x 3.75in.) | 45.7 x 27.9 x 41.9cm (18 x 11 x 16.5in.) | B1      | 120V 50/60Hz, 18.6A 2230w | 23.5kg (52 lb.) | no plug, no cable, requires hardwiring  |
| <b>FD1530MCN</b>  | 2.2L (0.08 cu. ft.) | 100° to1200°C | 22.8 x 10.1 x 9.5cm (9 x 4 x 3.75in.) | 45.7 x 27.9 x 41.9cm (18 x 11 x 16.5in.) | B1      | 240V 50/60Hz, 9.3A 2230w  | 23.5kg (52 lb.) |  16A |
| <b>FD1530M</b>    | 2.2L (0.08 cu. ft.) | 100° to1200°C | 22.8 x 10.1 x 9.5cm (9 x 4 x 3.75in.) | 45.7 x 27.9 x 41.9cm (18 x 11 x 16.5in.) | B1      | 240V 50/60Hz, 9.3A 2230w  | 23.5kg (52 lb.) |      |
| <b>FD1530M-33</b> | 2.2L (0.08 cu. ft.) | 100° to1200°C | 22.8 x 10.1 x 9.5cm (9 x 4 x 3.75in.) | 45.7 x 27.9 x 41.9cm (18 x 11 x 16.5in.) | B1      | 240V 50/60Hz, 6.5A 1560w  | 23.5kg (52 lb.) |      |
| <b>FD1545M</b>    | 2.2L (0.08 cu. ft.) | 100° to1200°C | 22.8 x 10.1 x 9.5cm (9 x 4 x 3.75in.) | 45.7 x 27.9 x 41.9cm (18 x 11 x 16.5in.) | C1      | 120V 50/60Hz, 18.6A 2230w | 23.5kg (52 lb.) | no plug, no cable, requires hardwiring  |
| <b>FD1540M*</b>   | 2.2L (0.08 cu. ft.) | 100° to1200°C | 22.8 x 10.1 x 9.5cm (9 x 4 x 3.75in.) | 45.7 x 27.9 x 41.9cm (18 x 11 x 16.5in.) | C1      | 240V 50/60Hz, 9.3A 2230w  | 23.5kg (52 lb.) |      |
| <b>FD1540M-33</b> | 2.2L (0.08 cu. ft.) | 100° to1200°C | 22.8 x 10.1 x 9.5cm (9 x 4 x 3.75in.) | 45.7 x 27.9 x 41.9cm (18 x 11 x 16.5in.) | C1      | 240V 50/60Hz, 6.5A 1560w  | 12.7kg (28 lb.) |      |

### Hearth Trays

| Cat. No.    | D x W x H                               |
|-------------|---|
| <b>PHX1</b> | 8.2 x 10.1 x 1.27cm (3.25 x 4 x 0.5in.) |
| <b>PHX2</b> | 20.3 x 9.6 x 1.9cm (8 x 3.8 x 0.75in.)  |

**Includes:** Furnace, Platinel® II thermocouple and a ceramic hearth tray (Cat No. PHX2) to protect the bottom heating element  
**Warranty:** 1 year (parts and labor)  
**Certifications:** All units cUL, UL listed

## Thermo Scientific Thermolyne Benchtop Muffle Furnaces

Reduce energy consumption and increase heatup time

### APPLICATIONS

General laboratory use including:

- Gravimetric analysis
- Ashing of organic and inorganic samples
- Sintering
- Quantitative analysis
- Heat treating

- Reaches a 1200°C maximum temperature
- Available in two capacities for added flexibility
- Built-in vent port removes contaminants and moisture to extend the life of the heating element and furnace ; also ideal for ashing applications
- For added protection, the door safety switch stops power to heating elements when door opens
- Thermocouple break protection cuts power to heating elements, preventing a thermocouple failure runaway condition
- Two open coil heating elements on chamber sides assure fast heat-up with minimum temperature gradient
- Thermal-efficient ceramic insulation surrounds chamber for maximum energy efficiency
- 0.312in. dia. port for monitoring chamber temperatures with independent measuring device at rear of chamber

#### F47900, F48000 models

- F47900 models have 2L (0.07 cu.ft.) chamber capacity, F48000 models have 5L (0.2 cu.ft.) chamber capacity

#### Temperature controller options

- Controls A1, B1, C1, D1
- See page 6 for control details



### Accessories





























| Cat. No.        | Description   | For Use With                                     |
|-----------------|---|--|
| <b>PH479X1</b>  | Hearth Tray, 15.2 x 14.3 x 0.95cm                       | F47900 Muffle Furnace                            |
| <b>SH480X1</b>  | Ceramic Shelf, 17.4 x 17.3 x 1.2cm                      | F48000 Muffle Furnace                            |
| <b>PH480X1</b>  | Hearth Tray, 25.4 x 19.3 x 0.95cm                       | F48000 Muffle Furnace                            |
| <b>AY408X1A</b> | Stainless Steel Exhaust Tubing Kit, 2.5in. ID x 60in. L | Atmosphere Controlled Ashing and Muffle Furnaces |

**Includes:** Power cord and one hearth tray, F48000 models also include a ceramic shelf (SH480X1)

**Warranty\*:** 1 year (parts and labor)































**Certifications:** CSA approved, CE marked as indicated

## Thermo Scientific Thermolyne Benchtop Muffle Furnaces

| Cat. No.               | Capacity             | Temp. Range                        | Interior D x W x H                 | Exterior L x W x H                          | Control | Electrical                  | Shipping Weight    | Plug Type   |
|------------------------|----------------------|------------------------------------|------------------------------------|---|---------|-----------------------------|--------------------|---|
| <b>F47910‡</b>         | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | A1      | 240V 50/60Hz<br>1000w 4.2 A | 18.5kg<br>(41 lb.) |      |
| <b>F47910-33†</b>      | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | A1      | 240V 50/60Hz<br>1000w 4.2 A | 18.5kg<br>(41 lb.) |      |
| <b>F47910-33CN†</b>    | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | A1      | 240V 50/60Hz<br>1000w 4.2 A | 18.5kg<br>(41 lb.) |  10A |
| <b>F47910-33-CH†</b>   | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | A1      | 240V 50/60Hz<br>1000w 4.2 A | 18.5kg<br>(41 lb.) |      |
| <b>F47910-33-UK†</b>   | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | A1      | 240V 50/60Hz<br>1000w 4.2 A | 18.5kg<br>(41 lb.) |      |
| <b>F47914</b>          | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | A1      | 100V 50/60Hz 750W<br>7.5A   | 18.5kg<br>(41 lb.) |      |
| <b>F47915‡</b>         | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | A1      | 120V 50/60Hz<br>1000w 8.3A  | 18.5kg<br>(41 lb.) |      |
| <b>F47920‡</b>         | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | B1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |      |
| <b>F47920-33†</b>      | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | B1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |      |
| <b>F47920-33CN†</b>    | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | B1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |  10A |
| <b>F47920-33-CH†</b>   | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | B1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |      |
| <b>F47920-33-UK†</b>   | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | B1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |      |
| <b>F47924</b>          | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | B1      | 100V 50/60Hz<br>750w 7.5A   | 18.5kg<br>(41 lb.) |     |
| <b>F47925</b>          | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | B1      | 120V 50/60Hz 1000w<br>8.3A  | 18.5kg<br>(41 lb.) |    |
| <b>F47920-80</b>       | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | C1      | 240V 50/60Hz 1000w<br>4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47920-33-80†</b>   | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | C1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47920-33-80CN</b>  | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | C1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47920-33-80-CH</b> | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | C1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47920-33-80-UK</b> | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | C1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47924-80</b>       | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | C1      | 100V 50/60Hz<br>750w 7.5A   | 18.5kg<br>(41 lb.) |    |
| <b>F47925-80</b>       | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | C1      | 120V 50/60Hz 1000w<br>8.3A  | 18.5kg<br>(41 lb.) |    |
| <b>F47950‡</b>         | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | D1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47950-33†</b>      | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | D1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47950-33CN</b>     | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | D1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47950-33-CH</b>    | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | D1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47950-33-UK</b>    | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | D1      | 240V 50/60Hz<br>1000w 4.2A  | 18.5kg<br>(41 lb.) |    |
| <b>F47954</b>          | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | D1      | 100V 50/60Hz 750w<br>7.5A   | 18.5kg<br>(41 lb.) |    |
| <b>F47955</b>          | 2L<br>(0.07 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 15 x 13.7 x 10cm<br>(6 x 5 x 4in.) | 39 x 28.5 x 47cm<br>(15.5 x 11.3 x 18.5in.) | D1      | 120V 50/60Hz 1000w<br>8.3A  | 18.5kg<br>(41 lb.) |    |

† CE marked; ‡ CSA listed

## Thermo Scientific Thermolyne Benchtop Muffle Furnaces

| Cat. No.               | Capacity              | Temp. Range                        | Interior D x W x H                | Exterior L x W x H                        | Control | Electrical                  | Shipping Weight    | Plug Type   |
|------------------------|-----------------------|------------------------------------|-----------------------------------|---|---------|-----------------------------|--------------------|---|
| <b>F48010‡</b>         | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | A1      | 240V 50/60Hz<br>1800w 7.5A  | 27.2kg<br>(60 lb.) |      |
| <b>F48010-33†</b>      | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | A1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |      |
| <b>F48010-33CN†</b>    | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | A1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |  10A |
| <b>F48010-33-CH†</b>   | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | A1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |      |
| <b>F48010-33-UK†</b>   | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | A1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |      |
| <b>F48015-60‡</b>      | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | A1      | 120V 50/60Hz<br>1800w 15A   | 27.2kg<br>(60 lb.) |      |
| <b>F48018‡</b>         | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | A1      | 208V 50/60Hz<br>1560w 7.5A  | 27.2kg<br>(60 lb.) |      |
| <b>F48020 -DB‡</b>     | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 240V 50/60Hz<br>1800w 7.5A  | 18.5kg<br>(41 lb.) |      |
| <b>F48020-33†</b>      | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |      |
| <b>F48020-33-80CN</b>  | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |  10A |
| <b>F48020-33CN†</b>    | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |  10A |
| <b>F48020-33-CH†</b>   | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |      |
| <b>F48020-33-UK†</b>   | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 240V 50/60Hz<br>1560w 6.5A  | 27.2kg<br>(60 lb.) |     |
| <b>F48028‡</b>         | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 208V 50/60Hz 1560W<br>7.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48025-60‡</b>      | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 19cm<br>(19.5 x 13.3 x 19in.)   | B1      | 120V 50/60Hz<br>1800w 15.0A | 27.2kg<br>(60 lb.) |    |
| <b>F48020-80</b>       | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 240V 50/60Hz 1800w<br>7.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48024-80</b>       | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 100V 50/60Hz 1450W<br>14.5A | 18.5kg<br>(41 lb.) |    |
| <b>F48020-33-80†</b>   | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48020-33-80CN</b>  | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48020-33-80-CH</b> | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48020-33-80-UK</b> | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48025-60-80‡</b>   | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 120V 50/60Hz<br>1800w 15.0A | 27.2kg<br>(60 lb.) |    |
| <b>F48028-80</b>       | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | C1      | 208V 50/60Hz<br>1560w 7.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48050-33†</b>      | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | D1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48050-33CN</b>     | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | D1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48050-33-CH</b>    | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | D1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48050-33-UK</b>    | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | D1      | 240V 50/60Hz<br>1800w 6.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48050‡</b>         | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | D1      | 240V 50/60Hz<br>1800w 7.5A  | 27.2kg<br>(60 lb.) |    |
| <b>F48055-60‡</b>      | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | D1      | 120V 50/60Hz<br>1800w 15.0A | 27.2kg<br>(60 lb.) |    |
| <b>F48058‡</b>         | 5.8L<br>(0.2 cu. ft.) | 100° to 1200°C<br>(212° to 2192°F) | 25 x 18 x 13cm<br>(10 x 7 x 5in.) | 50 x 34 x 48.3cm<br>(19.5 x 13.3 x 19in.) | D1      | 208V 50/60Hz<br>1560w 7.5A  | 27.2kg<br>(60 lb.) |    |

† CE marked; ‡ CSA listed



## Thermo Scientific Thermolyne Premium Large Muffle Furnaces

### Robust design and choice of four temperature controllers



- Spacious 14L (0.5 cu.ft.) capacity that reaches a maximum of 1200°C
- Four heating elements are located on the chamber top, bottom and sides, designed for enhanced temperature uniformity
- Built-in vent port removes undesirable contaminants and moisture to extend the life of the element and unit
- Rear of the chamber incorporates a 0.312 in. diameter port for monitoring chamber temperatures with independent measuring devices
- Optional stainless-steel shelf doubles load capacity (maximum temperature of 900°C)
- Door safety switch stops power to heating elements when door opens
- Thermocouple break protection cuts power to the heating elements, preventing a thermocouple failure runaway condition
- Furnaces with B1, C1, and D1 control also use a mechanical over-temperature protection relay

### Temperature controller options

- A1, B1, C1, D1
- See page 6 for control details

### APPLICATIONS

Ideal for industrial applications including:

- Ashing organic and inorganic samples
- Gravimetric analysis

| Cat. No.     | Capacity            | Temp. Range                        | Temp. Stability/<br>Uniformity at<br>1000°C | Interior<br>D x W x H                  | Exterior<br>L x W x H                       | Control | Electrical                  | Shipping<br>Weight  | Plug Type                                 |
|--------------|---------------------|------------------------------------|---|--|---|---------|-----------------------------|---------------------|---|
| F6018        | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±0.3°C<br>±2.2°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | A1      | 208V 50/60Hz<br>11.2A 2325w | 60.8kg<br>(134 lb.) |   |
| F6010        | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±0.3°C<br>±2.2°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | A1      | 240V 50/60Hz<br>12.9A 3095w | 60.8kg<br>(134 lb.) |   |
| F6010CN      | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±0.3°C<br>±2.2°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | A1      | 240V 50/60Hz<br>12.9A 3095w | 60.8kg<br>(134 lb.) |   |
| F6028C       | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | B1      | 208V 50/60Hz<br>19.2A 4000w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6020C       | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | B1      | 240V 50/60Hz<br>18.3A 4400w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6020C-33    | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | B1      | 240V 50/60Hz<br>18.3A 4400w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6028C-80    | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | C1      | 208V 50/60Hz<br>19.2A 4000w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6020C-80    | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | C1      | 240V 50/60Hz<br>18.3A 4400w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6020C-33-80 | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | C1      | 240V 50/60Hz<br>18.3A 4400w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6038CM      | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | D1      | 208V 50/60Hz<br>19.3A 4000w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6030CM      | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | D1      | 240V 50/60Hz<br>18.3A 4400w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |
| F6030CM-33   | 14L<br>(0.5 cu.ft.) | 100° to 1200°C<br>(212° to 2192°F) | ±1.5°C<br>±4.5°C                            | 25 x 33 x 18cm<br>(10 x 12.8 x 6.8in.) | 51 x 48.5 x 53.3cm<br>(20.1 x 19.1 x 21in.) | D1      | 240V 50/60Hz<br>18.3A 4400w | 60.8kg<br>(134 lb.) | no plug, no cable,<br>requires hardwiring |

### Accessories

| Cat. No. | Description   |
|----------|---|
| SH408X1  | Stainless-steel Shelf (requires 4 shelf pegs)                               |
| JSX16    | Shelf Pegs (4 required) for stainless-steel shelf                           |
| PH177X1  | Hearth Tray, 22.9 x 27.3 x 1.9cm (one per chamber floor)                    |
| PHX1     | Hearth Tray, 8.2 x 10.1 x 1.27cm (up to 9 per chamber floor in 3x3 pattern) |

**Includes:** Models F6010 and F6018 include a cord and plug set  
**Required Accessories:** All models except F6010 and F6018 require hardwiring  
**Warranty:** 1 year (parts and labor)  
**Certifications:** All units CSA approved, -33 units also CE marked

## Thermo Scientific Thermolyne Largest Tabletop Muffle Furnaces

Large chamber for spacious samples or high sample volumes



- Triple the work area using two supplied accessory refractory shelves with optional hearth tray
- Advanced LED digital-set/digital-display temperature controller is microprocessor-controlled
- LED display simultaneously shows both setpoint and actual furnace temperatures in °C or °F
- User-selectable over-temperature protection
- Open thermocouple protection
- Chamber has five shelf positions, two shelves supplied

### Safety and design features

- Heating elements are on chamber top, bottom and sides for enhanced temperature uniformity
- Built-in vent port removes undesirable contaminants and moisture to extend the life of the element and unit
- Rear of chamber incorporates a 0.25in. diameter port for monitoring chamber temperatures with independent measuring devices
- Critical electronic components and heating elements are protected by a 35A circuit breaker
- Door safety switch stops power to the heating elements when door opens

### Choice of temperature controllers

- Controls B1, C1, D1
- See page 6 for control details

### APPLICATIONS

- Gravimetric analysis
- Sintering
- Quantitative analysis
- Heat treatment

| Cat. No.             | Capacity          | Temp. Range    | Temp. Stability and Uniformity | Interior D x W x H               | Exterior L x W x H                           | Control | Electrical                  | Shipping Weight   | Plug Type                              |
|----------------------|-------------------|----------------|--------------------------------|----------------------------------|--|---------|-----------------------------|-------------------|--|
| <b>F30428C</b>       | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | B1      | 208V 50/60Hz<br>26.4A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30420C</b>       | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | B1      | 240V 50/60Hz<br>22.9A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30420C-33</b>    | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | B1      | 240V 50/60Hz<br>22.9A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30428C-80</b>    | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | C1      | 208V 50/60Hz<br>26.4A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30420C-80</b>    | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | C1      | 240V 50/60Hz<br>22.9A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30420C-33-80</b> | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | C1      | 240V 50/60Hz<br>22.9A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30438CM</b>      | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | D1      | 208V 50/60Hz<br>26.4A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30430CM</b>      | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | D1      | 240V 50/60Hz<br>22.9A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |
| <b>F30430CM-33</b>   | 45L (1.6 cu. ft.) | 100° to 1093°C | ±1.2°C at 1000°C<br>±3.45°C    | 36 x 36 x 36cm (14 x 14 x 14in.) | 64.7 x 54.6 x 74.9cm (25.5 x 21.5 x 29.5in.) | D1      | 208V 50/60Hz<br>22.9A 5500w | 117.9kg (260 lb.) | no plug, no cable, requires hardwiring |

### Hearth Trays

| Cat. No.        | Description                         | D x W x H                                   |
|-----------------|-------------------------------------|---|
| <b>PH146X1</b>  | Hearth Tray                         | 17.1 x 14.9 x 1.9cm (6.75 x 5.9 x 0.75in.)  |
| <b>SH412X1</b>  | Shelf - max weight 11.3 kg (25 lbs) | 35.2 x 25.4 x 1.27cm (13.87 x 10 x 0.56in.) |
| <b>AY408X1A</b> | Exhaust Tubing Kit                  | —   |

**Warranty\***: 1 year (parts and labor)

**Certifications**: All units CSA approved, -33 units also CE marked

Includes: two accessory refractory shelves; all models require hardwiring.

# Thermo Scientific Thermolyne Atmosphere Controlled Ashing Furnaces

Ideal for coal and coke ashing procedures



- Reaches 975°C with the standard stainless-steel manifold and 1093°C with the optional inconel manifold
- Adjustable gas flowmeter/valve (0-80L/min.) on front for easy access when adjusting the airflow rate
- Stainless-steel manifold at rear chamber prewarms incoming gases, provides a maximum temperature gradient of only  $\pm 3^{\circ}\text{C}$  at 750°C
- Chamber rear has a 0.25in. diameter port for monitoring chamber temperatures with independent measuring devices
- Includes hose barb (in back of chamber) for inert gas line with tubing 0.64cm (0.25in.) I.D. and 0.96cm (0.375in.) O.D

### Type F6000

- Includes two dual-purpose stainless-steel trays and one handle. Each tray can accommodate 24 (30mL) porcelain crucibles or 38 (10mL) quartz crucibles

### Type F6000-80 programmable models

- Meets ASTM® D3174 specifications: 3 to 4 air exchanges per min.
- Typical settings can be programmed: Model F6000 with C1 or C1 control meets ASTM D3174 specifications: 3 to 4 air exchanges per minute -Heating rate of 8°C/minute to 500°C, 6°C/minute, from 500° to 750°C, Hold at 750°C for two hours, then turn off automatically.

### Choice of temperature controllers

- Controls B1, C1, D1
- See page 6 for control details

| Cat. No.          | Capacity         | Max. Temp. | Holds   | Interior D x W x H                  | Exterior L x W x H                    | Control | Electrical        | Plug Type                              |
|-------------------|------------------|------------|---|-------------------------------------|---------------------------------------|---------|-------------------|--|
| F6020C-33-60†     | 14L (0.5 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 25 x 33 x 18cm (10 x 12.8 x 6.8in.) | 51 x 49 x 53cm (20 x 19.1 x 21in.)    | B1      | 240V, 18.3A 4400w | no plug, no cable, requires hardwiring |
| F6028C-60†        | 14L (0.5 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 25 x 33 x 18cm (10 x 12.8 x 6.8in.) | 51 x 49 x 53cm (20 x 19.1 x 21in.)    | B1      | 208V, 19.2A 4000w | no plug, no cable, requires hardwiring |
| F6020C-33-60-80†  | 14L (0.5 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 25 x 33 x 18cm (10 x 12.8 x 6.8in.) | 51 x 49 x 53cm (20 x 19.1 x 21in.)    | C1      | 240V, 18.3A 4400w | no plug, no cable, requires hardwiring |
| F6028C-60-80      | 14L (0.5 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 25 x 33 x 18cm (10 x 12.8 x 6.8in.) | 51 x 49 x 53cm (20 x 19.1 x 21in.)    | C1      | 208V, 19.2A 4000w | no plug, no cable, requires hardwiring |
| F6030CM-33-60†    | 14L (0.5 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 25 x 33 x 18cm (10 x 12.8 x 6.8in.) | 51 x 49 x 53cm (20 x 19.1 x 21in.)    | D1      | 240V, 18.3A 4400w | no plug, no cable, requires hardwiring |
| F30420C-60-80†    | 45L (1.6 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 36 x 36 x 36cm (14 x 14 x 14in.)    | 65 x 55 x 75cm (25.5x 21.5 x 29.5in.) | C1      | 240V, 22.9A 5500w | no plug, no cable, requires hardwiring |
| F30420C-33-60-80† | 45L (1.6 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 36 x 36 x 36cm (14 x 14 x 14in.)    | 65 x 55 x 75cm (25.5x 21.5 x 29.5in.) | C1      | 240V, 22.9A 5500w | no plug, no cable, requires hardwiring |
| F30428C-60-80†    | 45L (1.6 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 36 x 36 x 36cm (14 x 14 x 14in.)    | 65 x 55 x 75cm (25.5x 21.5 x 29.5in.) | C1      | 208V, 23.4A 5500w | no plug, no cable, requires hardwiring |
| F30430CM-60†      | 45L (1.6 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 36 x 36 x 36cm (14 x 14 x 14in.)    | 65 x 55 x 75cm (25.5x 21.5 x 29.5in.) | D1      | 240V, 22.9A 5500w | no plug, no cable, requires hardwiring |
| F30430CM-33-60†   | 45L (1.6 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 36 x 36 x 36cm (14 x 14 x 14in.)    | 65 x 55 x 75cm (25.5x 21.5 x 29.5in.) | D1      | 240V, 22.9A 5500w | no plug, no cable, requires hardwiring |
| F30438CM-60†      | 45L (1.6 cu.ft.) | 975°C      | 24 (30mL) porcelain or 38 (10mL) quartz crucibles | 36 x 36 x 36cm (14 x 14 x 14in.)    | 65 x 55 x 75cm (25.5x 21.5 x 29.5in.) | D1      | 208V, 23.4A 5500w | no plug, no cable, requires hardwiring |

† CSA approved. ‡ CE marked.

### Hearth Trays

| Cat. No.   | Description                    | For Use with   |
|------------|--------------------------------|--|
| TY408X2A   | Crucible Trays                 | Atmosphere Controlled Ashing Furnace   |
| SH408X1    | Stainless-Steel Shelf          | F6000-60 Atmosphere Controlled Ashing Furnace; Premium Large Muffle Furnaces |
| HN408X2A S | Shelf Handle                   | Atmosphere Controlled Ashing Furnaces  |
| SH412X1    | Refractory Shelf for F30400-60 | F30400-60 Atmosphere Controlled Ashing Furnaces                              |
| AY408X1    | Inconel Manifold               | F6000 Furnace  |
| AY408X1A   | Exhaust Tubing Kit             | Atmosphere Controlled Ashing and Muffle Furnaces                             |
| AY718X1    | Inconel Manifold               | F30400 Furnace   |

### APPLICATIONS

- Coal and coke ashing procedures

**Warranty**†: 1 year (parts and labor)  
**Certifications**: CSA certified, CE marked as indicated  
 Required power cord and hardwiring not included.

# Thermo Scientific M104 Muffle Furnaces

Excellent protection against sample contamination with abrasion-resistant ceramic annealing chamber



- Designed for minimum space requirements and can be set up under a laboratory fume hood
- Environmentally friendly and economical – asbestos-free insulation minimizes energy consumption and keeps exterior temperature low
- Easy handling and loading via tilting door that also protects users from hot inside surface
- Reaches rated temperature of 1000°C in 110 min.\*
- Working volume of 3.5L
- Standard model equipped with electronic controller, digital display and upper limit cut-out; deluxe models available with electronic or programmable controller, timer and exhaust fan
- M104G models feature glazed annealing muffle for use in analytical processes requiring extreme purity

### Choice of temperature controllers

- Controls A2, C2
- See page 6 for control details

### APPLICATIONS

- Materials testing
- Ashing
- Annealing
- Chemical analysis

| Cat. No.                    | Capacity            | Max. Temp. | Temp. Uniformity | Chamber Dimensions (D x W x H)     | Exterior Dimensions (D x W x H)         | Control  | Heat Output | Electrical          | Shipping Weight  | Plug Type |
|-----------------------------|---------------------|------------|------------------|------------------------------------|---|--|-------------|---------------------|------------------|-----------|
| <b>M104 Muffle Furnace</b>  |                     |            |                  |                                    |   |  |             |                     |                  |           |
| 50040485                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with upper limit cut-out                                    | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50040486                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with upper limit cut-out and 24-hour timer                  | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50040487                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with upper limit cut-out and 24-hour time                   | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50040488                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | C2 with upper limit cut-out                                    | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50040489                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | C2 with upper limit cut-out and exhaust fan                    | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50049820                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with adjustable fresh air supply for incinerating processes | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50040903                    | 3.5L (0.12cu. ft.)  | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2   | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| <b>M104G Muffle Furnace</b> |                     |            |                  |                                    |   |  |             |                     |                  |           |
| 50047438                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with upper limit cut-out and 24-hour timer                  | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50047439                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with 24-hour timer and exhaust fan                          | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50051429                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with adjustable fresh air supply                            | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50047440                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | C2   | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50047441                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | C2 with exhaust fan  | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |
| 50057773                    | 3.5L (0.12 cu. ft.) | 1000°C     | ± 10°K           | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | C2 with adjustable fresh air supply for incinerating processes | 2.5kW       | 230V 50/60Hz, 1040W | 51kg (112.4 lb.) | ☉         |

\* Measured at ambient temperature of 23°C, with no load

**Ordering Alerts:** Not available in North America

**Certifications:** CE

**Warranty:** 2 years (parts and labor)

See page 18 for available accessories



## Thermo Scientific K114 Chamber Furnaces

Ideal for use in crowded laboratories and for routine high temperature laboratory applications.



- Short heating and recovery times – Annealing chambers are made of ceramic fiber for rapid heat-up and recovery times.
- Outstanding temperature distribution and control ensure efficient operation.

### Choice of temperature controllers

- Controls A2, C2
- See page 6 for control details

### APPLICATIONS

- Incineration
- Ashing
- Baking
- Annealing
- Analytical processes

| Cat. No. | Capacity            | Max. Temp. | Temp. Uniformity | Chamber Dimensions (D x W x H)     | Exterior Dimensions (D x W x H)         | Control  | Heat Output | Electrical         | Shipping Weight  | Plug Type |
|----------|---------------------|------------|------------------|------------------------------------|---|--|-------------|--------------------|------------------|-----------|
| 50040491 | 3.5L (0.12 cu. ft.) | 1100°C     | ± 6°K            | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with upper limit cut-out                                    | 1.7kW       | 230V 50/60Hz, 690W | 79.4kg (175 lb.) |           |
| 50040492 | 3.5L (0.12 cu. ft.) | 1100°C     | ± 6°K            | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with upper limit cut-out and 24-hr timer                    | 1.7kW       | 230V 50/60Hz, 690W | 79.4kg (175 lb.) |           |
| 50049812 | 3.5L (0.12 cu. ft.) | 1100°C     | ± 6°K            | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with adjustable fresh air supply for incinerating processes | 1.7kW       | 230V 50/60Hz, 690W | 79.4kg (175 lb.) |           |
| 50040902 | 3.5L (0.12 cu. ft.) | 1100°C     | ± 6°K            | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2   | 1.7kW       | 230V 50/60Hz, 690W | 79.4kg (175 lb.) |           |
| 50047063 | 3.5L (0.12 cu. ft.) | 1100°C     | ± 6°K            | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | A2 with exhaust fan  | 1.7kW       | 230V 50/60Hz, 690W | 79.4kg (175 lb.) |           |
| 50040493 | 3.5L (0.12 cu. ft.) | 1100°C     | ± 6°K            | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | C2 with upper limit cut-out                                    | 1.7kW       | 230V 50/60Hz, 690W | 79.4kg (175 lb.) |           |
| 50051059 | 3.5L (0.12 cu. ft.) | 1100°C     | ± 6°K            | 16 x 17 x 13cm (6.3 x 6.7 x 5.1in) | 57 x 45.6 x 64.6cm (22.4 x 18 x 25.4in) | C2 with exhaust fan  | 1.7kW       | 230V 50/60Hz, 690W | 79.4kg (175 lb.) |           |

\* Measured at ambient temperature of 23°C, with no load

**Ordering Alerts:** Not available in North America.

**Certifications:** CE

**Warranty:** 2 years (parts and labor)

See page 18 for available accessories

## Thermo Scientific M110 Muffle Furnaces

Even heat distribution and economical operation in a small footprint



- Outstanding insulation and heating element arrangement give even heat distribution with minimal fluctuation
- Two-shell design with air pocket between annealing box and outside walls
- Requires only 0.41 sq m of bench space
- Rugged and flexible – for all types of lab applications, including heating of metals and drying at high temperatures
- Multiple layers of high-quality, asbestos-free ceramic fiber insulation
- Heating elements safely positioned in grooved blocks on side walls of the work space, covered with ceramic plates
- Hinged door designed with parallel forced guidance system – hot surface always faces away from user when door is open
- Adjustable upper limit cut-out protects samples and equipment
- Reaches 1100°C in 100 min.\*

### Choice of temperature controllers

- Controls A2, C2
- See page 6 for control details

### APPLICATIONS

- Incineration and annealing processes
- Test baking
- Heat treatment of metals
- Material testing

| Cat. No. | Capacity          | Max. Temp. | Temp. Uniformity | Chamber Dimensions (D x W x H)      | Exterior Dimensions (D x W x H)           | Control   | Heat Output | Electrical         | Shipping Weight | Plug Type |
|----------|-------------------|------------|------------------|-------------------------------------|---|---|-------------|--------------------|-----------------|-----------|
| 51010272 | 9L (0.32 cu. ft.) | 1100°C     | ±7°K             | 30 x 20 x 15cm (11.8 x 7.9 x 5.9in) | 72 x 57.6 x 75.2cm (28.4 x 22.7 x 29.6in) | A2 with upper limit cut-out                               | 2.9kW       | 230V 50/60Hz 1400W | 78kg (172 lb.)  |           |
| 50057440 | 9L (0.32 cu. ft.) | 1100°C     | ±7°K             | 30 x 20 x 15cm (11.8 x 7.9 x 5.9in) | 72 x 57.6 x 75.2cm (28.4 x 22.7 x 29.6in) | A2 with upper limit cut-out and 24-hr. timer              | 2.9kW       | 230V 50/60Hz 1400W | 78kg (172 lb.)  |           |
| 50056360 | 9L (0.32 cu. ft.) | 1100°C     | ±7°K             | 30 x 20 x 15cm (11.8 x 7.9 x 5.9in) | 72 x 57.6 x 75.2cm (28.4 x 22.7 x 29.6in) | A2 with upper limit cut-out, 24-hr. timer and exhaust fan | 2.9kW       | 230V 50/60Hz 1400W | 78kg (172 lb.)  |           |
| 51000802 | 9L (0.32 cu. ft.) | 1100°C     | ±7°K             | 30 x 20 x 15cm (11.8 x 7.9 x 5.9in) | 72 x 57.6 x 75.2cm (28.4 x 22.7 x 29.6in) | C2 with upper limit cut-out                               | 2.9kW       | 230V 50/60Hz 1400W | 78kg (172 lb.)  |           |
| 51000808 | 9L (0.32 cu. ft.) | 1100°C     | ±7°K             | 30 x 20 x 15cm (11.8 x 7.9 x 5.9in) | 72 x 57.6 x 75.2cm (28.4 x 22.7 x 29.6in) | C2 with upper limit cut-out, exhaust fan and flue         | 2.9kW       | 230V 50/60Hz 1400W | 78kg (172 lb.)  |           |

\* Measured at ambient temperature of 23°C, with no load

### Accessories M104, 114, M110 Muffle Furnaces

| Cat. No.                  | Description   | For Use With                                 |
|---------------------------|---|--|
| 50040537                  | Exhaust Flue  | K114 Chamber Furnace and M104 Muffle Furnace |
| 50040950                  | Tray  | K114 Chamber Furnace and M104 Muffle Furnace |
| 50006394                  | Exhaust Flue  | M110 Muffle Furnace                          |
| 50006408                  | Tray  | M110 Muffle Furnace                          |
| Factory-Installed Options |   |  |
| 50044447                  | Calibration Certificate for 900°C at Center of Work Space |  |
| 50044188                  | Calibration, Additional Measuring Point                   |  |

**Ordering Alerts:** Not available in North America.

**Certifications:** CE

**Warranty:** 2 years (parts and labor)

## Our Lindberg/Blue M Furnaces

We offer a wide range of chamber, tube and crucible furnaces. Choices include high temperatures up to 1700°C, and larger chamber requirements, up to 55L (2 cu.ft.) to accommodate even more special applications. The range is focused on industrial labs.

## Unique Moldatherm® Insulation

The patented Moldatherm ceramic fiber insulation composite has rapid heat-up and cool-down properties that allow a quick turn-around for more productive furnace use.

## LGO™ Heating Element

The patented LGO (light gauge overbend) heating element, a standard component on many Lindberg/Blue M box and tube furnaces, delivers exceptional energy release, fast heat-up and recovery, reduced thermal process cycle time, and cost savings through quicker throughput and energy efficiency. LGO heating elements on single and three-zone tube furnaces offer radial and linear temperature uniformity with exceptional reliability.

A choice of high-end PID (proportional, integral, derivative) based microprocessor controls address specific application requirements with Lindberg/Blue M Furnaces.



## Thermo Scientific Lindberg/Blue M Moldatherm Box Furnaces

Versatile selection of chamber box furnaces in several popular chamber sizes to meet a variety of demanding industrial and laboratory applications



Model BF51794C-1 with standard left hand door

### Controller choices, all with over-temperature protection

- A, B temperature control
- See page 7 for control details

- Unique insulation and heating element composites minimize outer surface temperatures while maintaining uniform heat distribution within the chamber
- Advanced engineering and specialized construction techniques include variable density insulation, double shell cabinets, long-life heating elements and horizontal side swing doors
- Selectable self-tuning feature sets control parameters for the thermal process
- PID control prevents temperature overshoot
- Main power ON/OFF switch on control panel
- Controlled heat-up rate eliminates thermal shock to materials
- Quick heat-up and cool-down rates
- Adjustable high-limit over-temperature protection
- Simultaneous LED display of actual temperature vs. setpoint (°C or °F)
- **Advanced construction**
- Advanced double wall minimizes exterior surface temperatures for operator safety and energy efficiency
- Side-hinge door for convenient operation and full chamber access
- Long-life Type K thermocouple
- Air vent (1 in. dia., top) and air inlet (0.375 in. dia., rear) for inert atmosphere exchange; (Note: door is not gas-tight)
- Removable and replaceable Moldatherm hearth plate supports load and prevents damage due to spillage
- Energy efficient Moldatherm insulation with embedded heating elements
- Safety door switch to interrupt power to heating element when door is opened; protects heating element and minimizes exposure to end-user

| Cat. No.       | Capacity             | Temp. Range    | Interior Dimensions (D x W x H)        | Exterior Dimensions (L x W x H)          | Control | Electrical                   | Shipping Weight | Plug Type                              |
|----------------|----------------------|----------------|--|--|---------|------------------------------|-----------------|--|
| BF51748A-1     | 1.99L (0.07 cu. ft.) | 100° to 1100°C | 20.3 x 10.2 x 10.2cm (4 x 8 x 4in.)    | 50.8 x 38.1 x 44.4cm (20 x 15 x 17.5in.) | A/OTP   | 120V 50/60Hz 1800w;15A       | 25kg (55 lb.)   |  |
| BF51748C-1**   | 1.99L (0.07 cu. ft.) | 100° to 1100°C | 20.3 x 10.2 x 10.2cm (4 x 8 x 4in.)    | 50.8 x 38.1 x 44.4cm (20 x 15 x 17.5in.) | A/OTP   | 208/240V 50/60Hz 1800w;7.5A  | 25kg (55 lb.)   |  |
| BF51848A-1     | 1.99L (0.07 cu. ft.) | 100° to 1100°C | 20.3 x 10.2 x 10.2cm (4 x 8 x 4in.)    | 50.8 x 38.1 x 44.4cm (20x 15 x 17.5in.)  | B/OTP   | 120V 50/60Hz 1800w;15A       | 25kg (55 lb.)   |  |
| BF51848C-1     | 1.99L (0.07 cu. ft.) | 100° to 1100°C | 20.3 x 10.2 x 10.2cm (4 x 8 x 4in.)    | 50.8 x 38.1 x 44.4cm (20 x 15 x 17.5in.) | B/OTP   | 208/240V 50/60Hz 1800w;7.5A  | 25kg (55 lb.)   |  |
| BF51848KC-1    | 1.99L (0.07 cu. ft.) | 100° to 1100°C | 20.3 x 10.2 x 10.2cm (4 x 8 x 4in.)    | 50.8 x 38.1 x 44.4cm (20 x 15 x 17.5in.) | B/OTP   | 208/240V 50/60Hz 1800w;7.5A  | 25kg (55 lb.)   |  |
| BF51766A-1     | 5.3L (0.19 cu. ft.)  | 100° to 1100°C | 22.9 x 15.2 x 15.2cm (9 x 6 x 6in.)    | 53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.) | A/OTP   | 120V 50/60Hz 1800w;15A       | 50kg (110 lb.)  |  |
| BF51766C-1     | 5.3L (0.19 cu. ft.)  | 100° to 1100°C | 22.9 x 15.2 x 15.2cm (9 x 6 x 6in.)    | 53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.) | A/OTP   | 208/240V 50/60Hz 1800w;7.5A  | 50kg (110 lb.)  |  |
| BF51766KC-1    | 5.3L (0.19 cu. ft.)  | 100° to 1100°C | 22.9 x 15.2 x 15.2cm (9 x 6 x 6in.)    | 53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.) | A/OTP   | 208/240V 50/60Hz 1800w;7.5A  | 50kg (110 lb.)  |  |
| BF51866A-1     | 5.3L (0.19 cu. ft.)  | 100° to 1100°C | 22.9 x 15.2 x 15.2cm (9 x 6 x 6in.)    | 53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.) | B/OTP   | 120V 50/60Hz 1800w;15A       | 50kg (110 lb.)  |  |
| BF51866C-1     | 5.3L (0.19 cu. ft.)  | 100° to 1100°C | 22.9 x 15.2 x 15.2cm (9 x 6 x 6in.)    | 53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.) | B/OTP   | 208/240V 50/60Hz 1800w;7.5A  | 50kg (110 lb.)  |  |
| BF51866KC-1    | 5.3L (0.19 cu. ft.)  | 100° to 1100°C | 22.9 x 15.2 x 15.2cm (9 x 6 x 6in.)    | 53.3 x 43.1 x 54.6cm (21 x 17 x 21.5in.) | B/OTP   | 208/240V 50/60Hz 1800w;7.5A  | 50kg (110 lb.)  |  |
| BF51794C-1     | 18.4L (0.65 cu. ft.) | 100° to 1100°C | 35.6 x 22.9 x 22.9cm (14 x 9 x 9in.)   | 65.4 x 53.3 x 66cm (25.75 x 21 x 26in.)  | A/OTP   | 208/240V 50/60Hz 3500w;14.6A | 59kg (130 lb.)  |  |
| BF51894C-1     | 18.4L (0.65 cu. ft.) | 100° to 1100°C | 35.6 x 22.9 x 22.9cm (14 x 9 x 9in.)   | 65.4 x 53.3 x 66cm (25.75 x 21 x 26in.)  | B/OTP   | 208/240V 50/60Hz 3500w;14.6A | 59kg (130 lb.)  |  |
| BF51728C-1**   | 42.5L (1.5 cu. ft.)  | 100° to 1100°C | 45.7 x 30.5 x 30.5cm (18 x 12 x 12in.) | 76.2 x 60.9 x 71.1cm (30 x 24 x 28in.)   | A/OTP   | 208/240V 50/60Hz 5600w;23.3A | 84kg (185 lb.)  | no plug, no cable, requires hardwiring |
| BF51728RHDC-1* | 42.5L (1.5 cu. ft.)  | 100° to 1100°C | 45.7 x 30.5 x 30.5cm (18 x 12 x 12in.) | 76.2 x 60.9 x 71.1cm (30 x 24 x 28in.)   | A/OTP   | 208/240V 50/60Hz 5600w;23.3A | 84kg (185 lb.)  | no plug, no cable, requires hardwiring |
| BF51828C-1     | 42.5L (1.5 cu. ft.)  | 100° to 1100°C | 45.7 x 30.5 x 30.5cm (18 x 12 x 12in.) | 76.2 x 60.9 x 71.1cm (30 x 24 x 28in.)   | B/OTP   | 208/240V 50/60Hz;23.3A       | 84kg (185 lb.)  | no plug, no cable, requires hardwiring |
| BF51828RHDC-1* | 42.5L (1.5 cu. ft.)  | 100° to 1100°C | 45.7 x 30.5 x 30.5cm (18 x 12 x 12in.) | 76.2 x 60.9 x 71.1cm (30 x 24 x 28in.)   | B/OTP   | 208/240V 50/60Hz;23.3A       | 84kg (185 lb.)  | no plug, no cable, requires hardwiring |

To add RS-485 Digital Communications Port to Furnace model, add "COM" to model number before last letter in cat. no. – e.g., BF51748COMA-1

\* "RHD" designates right hand door - compared to regular model with left hand door

\*\* No digital communications port option available

Warranty: 1 year (parts and labor); Certifications: UL



## Thermo Scientific Lindberg/Blue M LGO 1200°C Box Furnaces

**Latest technical advances in heating elements, insulation and temperature control, all integrated into a self-contained cabinet**

- Feature exclusive LGO heating elements and Moldatherm insulation for efficient and economical transfer of heat to chamber, with low exterior temperatures
- Variable heat-up rate eliminates thermal shock to materials with quick heat-up and cool-down rates
- Air vent (1 in. dia., top) and air inlet (0.375 in. dia., rear) for inert atmosphere exchange; (Note: door is not gas-tight)
- Self-tuning, digital instrumentation for precise temperature setpoint and display
- Platinel II thermocouple for long-term stability
- 0.6 cu.ft. models feature vertical lift door; 2 cu.ft. models feature horizontal side swing door, hot side facing away from operator for protection

### Microprocessor control

- Microprocessor-based self-tuning PID control provides optimum thermal process, prevents overshoot
- Control panel designed for easy access and maintenance
- Main power ON/OFF switch on control panel
- Adjustable high-limit over-temperature protection
- Simultaneous LED display of actual temperature vs. setpoint in °C or °F

- Safety door switch interrupts power to heating element when door is opened; protects heating elements and minimizes exposure to end-user
- Removable shelves for versatility
- Moldatherm hearthplate supports load and prevents damage due to spillage

### Flowmeter option (FM)

- Available on selected models with “FM” designation (see chart)
- Gas flowmeter, adjustable, located on front control panel
- Adjustable flow rate, range 1.0 to 10.0 cu.ft./hr standard
- Suitable for inert gas or air flow to chamber
- Allows fresh air exchange for ashing applications
- Not suitable for combustible or volatile gases
- Note: *Use with inert atmosphere will exhibit some leakage.*

### Controller choices, all with over-temperature protection

- A, B, C, choice of overtemperature control (OTC), flow meter option (FM) on select models
- See page 7 for control details

### APPLICATIONS

- Drying
- Ashing
- Annealing
- Enameling
- Tempering
- Heat treatment
- Melting



Model BF51842C-1 with horizontal side swing door

## Thermo Scientific Lindberg/Blue M LGO Box Furnaces

| Cat. No.                          | Capacity               | Temp. Range    | Interior Dimensions (D x W x H)           | Exterior Dimensions (L x W x H)           | Control  | Electrical                       | Shipping Weight | Plug Type                                 |
|-----------------------------------|------------------------|----------------|---|---|----------|----------------------------------|-----------------|---|
| <b>Vertical Lift Door</b>         |                        |                |   |   |          |                                  |                 |   |
| <b>BF51731C-1</b>                 | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | A        | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51731BC-1**</b>              | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | A/OTC    | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51732C-1</b>                 | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | B        | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51732BC-1</b>                | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | B/OTC    | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51732PC-1</b>                | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | C        | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51732PBC-1</b>               | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | C/OTC    | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51732PFMC-1</b>              | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | C/FM     | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51732PBFMC-1</b>             | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | C/OTC/FM | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>BF51732PBFMCOMC1*</b>          | 16.4L<br>(0.6 cu. ft.) | 100° to 1200°C | 27.9 x 33.0 x 17.8cm<br>(11 x 12 x 11in.) | 58.4 x 61 x 68.6cm<br>(23 x 24 x 27in.)   | C/OTC/FM | 208/240V 50/60Hz<br>4500w;16-19A | 75kg            | no plug, no cable,<br>requires hardwiring |
| <b>Horizontal Side Swing Door</b> |                        |                |   |   |          |                                  |                 |   |
| <b>BF51841C-1**</b>               | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | A        | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51841BC-1**</b>              | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | A/OTC    | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51842C-1</b>                 | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | B        | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51842BC-1</b>                | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | B/OTC    | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51842PC-1</b>                | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | C        | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51842PBC-1</b>               | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | C/OTC    | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51842PFMC-1</b>              | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | C/FM     | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51842PBFMC-1</b>             | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | C/OTC/FM | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |
| <b>BF51842PBFMCOMC1*</b>          | 55.3L<br>(2.0 cu. ft.) | 100° to 1200°C | 38.1 x 38.1 x 38.1cm<br>(15 x 15 x 15in.) | 71.1 x 73.7 x 83.8cm<br>(28 x 29 x 33in.) | C/OTC/FM | 208/240V 50/60Hz<br>5800w;25A    | 127kg           | no plug, no cable,<br>requires hardwiring |

\* Contains flowmeter option and RS485 communications port

\*\* No digital communications port option available

A, B, C: see details of control options, previous page

OTC: Over-temperature Control

FM: Flowmeter option

To add RS-485 Digital Communications Port to furnace model, add "COM" to model number before last letter in cat.no. - e.g., BF51731COMC-1

**Ordering Information:** Required power cord and hardwiring not included.

**Includes:** One two-part shelf (0.6 cu. ft. models have one shelf position at center position; 2.0 cu. ft. models have three shelf positions)

**Warranty:** 1 year (parts and labor)

## Thermo Scientific Lindberg/Blue M Heavy-Duty 1200°C Box Furnaces

Unique internal construction and outer shell design that reduces external surface temperatures without compromising interior temperature uniformity



- Features individual heating elements at chamber top, bottom and sides for uniform heat distribution
- Unique Moldatherm ceramic fiber insulation to allow rapid heatup, recovery and cooldown rates. Swing-down door provides convenient loading platform
- Helically coiled, high-temperature alloy wire elements for extended service life
- High-temperature insulation in vestibule and floating plug door to minimize heat loss and improve temperature control
- Spring-loaded door holds door securely shut; door rests in horizontal position when open
- Sight glass for convenient observation of heated load during operation
- Refractory plate heating unit
- Long-life Platinel II thermocouple with 10ft. compensated lead wire and polarized plug
- Rugged, heavy-duty Inconel® hearth plate supports load and protects the furnace from damage due to spillage (Model BF51542C)
- Heating element imbedded in Moldatherm insulation (Model BF51542C)

### Control consoles for 1200°C box furnace:

- Control choices: A, B, choice of over temperature control (OTC) on select models – see page 6-7 for details
- Control console is fully wired and includes a solid-state power module, ON/OFF circuit breaker and thermocouple input jack
- Designed for operation on 208, or 240V 50/60Hz, single-phase line
- Required power cord, hardwiring and interconnecting wiring are not included

### APPLICATIONS

- Ashing
- Alloying
- Fusion
- Sintering
- Ignitions
- Heat-treatment

| Cat. No.        | Capacity           | Temp. Range    | Interior Dimensions (D x W x H)             | Exterior Dimensions (L x W x H)          | Description                                  | Electrical                  | Shipping Weight | Plug Type                             |
|-----------------|--------------------|----------------|---|--|--|-----------------------------|-----------------|---------------------------------------|
| <b>BF51442C</b> | 9L (0.32 cu. ft.)  | 100° to 1200°C | 35.6 x 19.5 x 13.3cm (14 x 7.5 x 5.25in.)   | 50.8 x 50.8 x 62.2cm (20 x 20 x 24.5in.) | With refractory plate heating element        | 208/240V 50/60 Hz 4800w;21A | 66kg (145 lb.)  | no plug, no cable, require hardwiring |
| <b>BF51542C</b> | 23L (0.81 cu. ft.) | 100° to 1200°C | 36.8 x 26.7 x 24.1cm (14.5 x 10.5 x 9.5in.) | 78.7 x 71.1 x 72.4cm (31 x 28 x 28.5in.) | With Moldatherm Heating Element (Four Sides) | 208/240V 50/60 Hz 6200w;26A | 152kg (335 lb.) | no plug, no cable, require hardwiring |

**Ordering Information:** Choice of controllers available, including 1200°C digital single-program/multiple-segment programmable controller and over-temperature control

**Required Accessories:** Independent control console CC58114C. Required power cord and hardwiring not included.

**Warranty:** 1 year (parts and labor)

See page 7 for details on controllers

| Cat. No.             | Control | Electrical           |
|----------------------|---------|----------------------|
| <b>CC58114C-1</b>    | A       | 208/240V 50/60Hz 30A |
| <b>CC58114PC-1</b>   | B       | 208/240V 50/60Hz 30A |
| <b>CC58114BC-1*</b>  | A, OTC  | 208/240V 50/60Hz 30A |
| <b>CC58114PBC-1*</b> | B, OTC  | 208/240V 50/60Hz 30A |

\* Please note: connected furnace requires 2nd thermocouple for OTC (installed when ordered together)

To add RS-485 Digital Communications Port to Furnace model, add "COM" to model number before last letter in cat. no. – e.g., CC58114COMC-1

**Ordering Information:** Required power cord and hardwiring not included.



## Thermo Scientific Lindberg/Blue M 1500°C Box Furnace, Independent Control

Offers independent control for remote use or installation in containment areas



- Chamber volume: 5.9L (0.2 cu.ft.)
- Rugged firebrick insulation for stability
- Silicon carbide heating elements fo maximize heat transfer
- Insulating door plug and swing-down door for convenience and safety
- Independent control console: please order separately
  - > Microprocessor-based PID control
  - > Simultaneous LED display of actual and setpoint temperatures in either °C or °F
  - > Optional adjustable digital over-temperature control (OTC) protects furnace and load in the event of primary control circuit failure

### Controller choices

- A, B choice of over-temperature protection, on select models
- Please order control separately (see page 25)

### APPLICATIONS

- Annealing
- Melting
- Heat treatment
- Brazing
- Alloying

| Cat. No.        | Capacity          | Temperature Range | Control  | Interior Dimensions                    | Exterior Dimensions                    | Electrical                    | Shipping Weight  | Plug Type                              |
|-----------------|-------------------|-------------------|--|--|--|-------------------------------|------------------|--|
| <b>BF51333C</b> | 5.9L (0.2 cu. ft) | 500 to 1500°C     | Independent control: choose from table (see page 25) | 30.4 x 15.2 x 12.7 cm (12 x 6 x 5 in.) | 73.7 x 63.5 x 66 cm (29 x 25 x 26 in.) | 208/540V, 50/60Hz, 5900W; 25A | 200 kg (440 lbs) | no plug, no cable, requires hardwiring |

**Ordering Information:** Required power cord and hardwiring not included.



## Thermo Scientific Lindberg/Blue M 1500°C Box Furnace Controllers

Temperature accuracy and other options for over-temperature control and multiple segment configuration



### Control consoles for 1500°C box furnace

- Control choices: A, B, choice of over-temperature control (OTC)
- See page 7 for details

### 1500°C digital, single setpoint controller

- Control console is fully wired and includes a solid-state power module, ON/OFF circuit breaker and thermocouple input jack
- Microprocessor-based PID control (proportional, integral, derivative), single segment, single setpoint, one ramp to setpoint
- Simultaneous LED display of actual temperature vs. setpoint in °C or °F
- Designed for operation on 208, or 240V 50/60Hz, single-phase line

### Over-temperature Control on selected control consoles with “B” suffix designation

- Adjustable digital control is factory installed
- Protects furnace and load in the event of primary control circuit failure
- Overrides main controller and shuts off power to furnace if high limit is reached
- Must be manually reset for safety
- Operates via magnetic contacts through a signal from an independent thermocouple

### NOT AVAILABLE IN EUROPE

| Cat. No.                | Control  | Electrical            |
|-------------------------|--|-----------------------|
| <b>CC58125C-1</b>       | A  | 208/240V 50/60Hz; 60A |
| <b>CC58125PC-1</b>      | B  | 208/240V 50/60Hz; 60A |
| <b>CC58125BC-1*</b>     | A, with OTC  | 208/240V 50/60Hz; 60A |
| <b>CC58125PBC-1*</b>    | B, with OTC  | 208/240V 50/60Hz; 60A |
| <b>CC58125PBCOMC-1*</b> | B, with OTC, with RS-485 digital communications port | 208/240V 50/60Hz; 60A |

\* Please note: connected furnace requires 2nd thermocouple for OTC (installed when ordered together)

**Ordering Information:** Required power cord and hardwiring not included.

See page 7 for details on controllers

# Thermo Scientific Lindberg/Blue M Multipurpose 1500°C Box Furnaces

Multipurpose furnaces feature integral control to 1500°C



BF51422PBC Box furnace with vertical lift door

- Double-wall construction with Moldatherm insulation for rapid heatup and cooldown, energy efficiency and cooler exterior surface temperatures
- Adjustable high-limit over-temperature protection
- Microprocessor-based PID control
- Choice of two controllers: single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control or multiple program with up to 300 segments
- Optional adjustable digital over-temperature control (OTC) protects furnace and load in the event of primary control circuit failure
- Simultaneous LED display of actual and setpoint temperatures in either °C or °F
- Silicon carbide heating elements for long-life, safety and reliable service with maximum energy savings
- Safety door switch interrupts power to heating elements when door is opened; protects elements and minimizes exposure to operator
- Moldatherm hearth plate supports load and protects interior from spillage and mishandling
- Type “R” thermocouple is integrated into chamber back wall
- 6L models with vertical lift door, 25L models with side swing door

### Control choices

- B,C choice of over-temperature protection on select models
- See page 7 for details on controllers

## APPLICATIONS

- Annealing
- Melting
- Heat treatment
- Brazing
- Alloying

| Cat. No.                          | Capacity           | Temperature Range | Controller                           | Interior Dimensions (D x W x H)         | Exterior Dimensions (L x W x H)        | Electrical                    | Plug Type                              |
|-----------------------------------|--------------------|-------------------|--------------------------------------|---|--|-------------------------------|--|
| <b>Vertical Lift Door</b>         |                    |                   |                                      |   |  |                               |  |
| <b>BF51433C-1</b>                 | 6L (0.21 cu. ft.)  | 500 to 1500°C     | B                                    | 30.5 x 15.2 x 12.7cm (12 x 6 x 5in.)    | 73.7 x 63.5 x 66cm (29 x 25 x 26in.)   | 208/240V 50/60Hz 6400w; 27A   | no plug, no cable, requires hardwiring |
| <b>BF51433BC-1</b>                | 6L (0.21 cu. ft.)  | 500 to 1500°C     | B, with OTC                          | 30.5 x 15.2 x 12.7cm (12 x 6 x 5in.)    | 73.7 x 63.5 x 66cm (29 x 25 x 26in.)   | 208/240V 50/60Hz 6400w; 27A   | no plug, no cable, requires hardwiring |
| <b>BF51433PC-1</b>                | 6L (0.21 cu. ft.)  | 500 to 1500°C     | C                                    | 30.5 x 15.2 x 12.7cm (12 x 6 x 5in.)    | 73.7 x 63.5 x 66cm (29 x 25 x 26in.)   | 208/240V 50/60Hz 6400w; 27A   | no plug, no cable, requires hardwiring |
| <b>BF51433PBC-1</b>               | 6L (0.21 cu. ft.)  | 500 to 1500°C     | C, with OTC                          | 30.5 x 15.2 x 12.7cm (12 x 6 x 5in.)    | 73.7 x 63.5 x 66cm (29 x 25 x 26in.)   | 208/240V 50/60Hz 6400w; 27A   | no plug, no cable, requires hardwiring |
| <b>BF51433COMC-1</b>              | 6L (0.21 cu. ft.)  | 500 to 1500°C     | B, with RS485 data interface         | 30.5 x 15.2 x 12.7cm (12 x 6 x 5in.)    | 73.7 x 63.5 x 66cm (29 x 25 x 26in.)   | 208/240V 50/60Hz 6400w; 27A   | no plug, no cable, requires hardwiring |
| <b>BF51433PBCOMC-1</b>            | 6L (0.21 cu. ft.)  | 500 to 1500°C     | C, with OTC and RS485 data interface | 30.5 x 15.2 x 12.7cm (12 x 6 x 5in.)    | 73.7 x 63.5 x 66cm (29 x 25 x 26in.)   | 208/240V 50/60Hz 6400w; 27A   | no plug, no cable, requires hardwiring |
| <b>Horizontal Side Swing Door</b> |                    |                   |                                      |   |  |                               |  |
| <b>BF51643C-1</b>                 | 25L (0.88 cu. ft.) | 500 to 1500°C     | C                                    | 39.4 x 27.9 x 22.9cm (15.5 x 11 x 9in.) | 76.2 x 71.1 x 78.7cm (30 x 28 x 31in.) | 208/240V 50/60Hz 14800w; 62A  | no plug, no cable, requires hardwiring |
| <b>BF51643BC-1</b>                | 25L (0.88 cu. ft.) | 500 to 1500°C     | C, with OTC                          | 39.4 x 27.9 x 22.9cm (15.5 x 11 x 9in.) | 76.2 x 71.1 x 78.7cm (30 x 28 x 31in.) | 1 208/240V 50/60Hz 4800w; 62A | no plug, no cable, requires hardwiring |

**Ordering information:** Required power cord and hardwiring are not included.  
**Warranty:** 1 year (parts and labor)

# Thermo Scientific Lindberg/Blue M 1700°C Box Furnaces, Large Chamber, Integral Control

Designed for efficient, high-temperature use with minimal maintenance



## APPLICATIONS

- Ashing
- Alloying
- Fusion
- Sintering
- Ignitions

- Fast heatup to high temperatures, unique door design and control sophistication ranging from solid-state, single setpoint to more versatile microprocessor-based systems with programming and communications options
- Designed for efficient high-temperature use with minimal maintenance
- Choice of single setpoint or programmable control
- Side swing door provides full and easy access to chamber, protects user from heat surge
- Atmosphere port, 0.375 in. diameter, for fresh air or inert gas inlet (located at back wall, bottom; door is not gas-tight)
- Solid-state power module with ammeter, circuit breaker, transformer and front panel indicator lights for “Ready Element” and “Main Power Applied”
- Safety power disconnect switch cuts power to heating elements when door is opened
- Moldatherm high-temperature ceramic fiber insulation with advanced graded design for fast heat-up and resistance to thermal shock
- Moldatherm hearth plate supports load and protects chamber from spills or mishandling
- High-volume cooling fans move air between inner and outer chamber to reduce exterior shell temperatures and improve energy efficiency and operator safety
- Long-life type “B” thermocouples for accurate high-temperature measurement
- Removable panels for easy access to replaceable heating elements and thermocouples

## Smart heating elements

- Molybdenum disilicide elements with unique right-angle bend and sidewall mounting reduce maintenance usually associated with element termination and mounting
- Designed for easy replacement without matching resistance values
- Fast heat-up and recovery with excellent uniformity and energy efficiency
- Increased resistance to thermal shock, ideal for rapid cycling over extended periods

## Control choices

- A, C, choice of over-temperature protection on select models
- See page 7 for details

| Cat. No.              | Capacity            | Temp. Range   | Interior Dimensions (D x W x H)         | Exterior Dimensions (L x W x H)        | Controller              | Electrical                  | Shipping Weight | Plug Type                              |
|-----------------------|---------------------|---------------|---|--|-------------------------|-----------------------------|-----------------|--|
| <b>BF51634PC-1</b>    | 17L (0.6 cu. ft.)   | 500 to 1700°C | 26.7 x 27.9 x 22.9cm (10.5 x 11 x 9in.) | 61 x 71.1 x 78.7cm (24 x 28 x 31in.)   | C                       | 208/240V 50/60Hz 5900w; 23A | 159kg (350 lb.) | no plug, no cable, requires hardwiring |
| <b>BF51634PCOMC-1</b> | 17L (0.6 cu. ft.)   | 500 to 1700°C | 26.7 x 27.9 x 22.9cm (10.5 x 11 x 9in.) | 61 x 71.1 x 78.7cm (24 x 28 x 31in.)   | C, with RS845 interface | 208/240V 50/60Hz 5900w; 23A | 159kg (350 lb.) | no plug, no cable, requires hardwiring |
| <b>BF51664C-1</b>     | 25.5L (0.9 cu. ft.) | 500 to 1700°C | 39.4 x 27.9 x 22.9cm (15.5 x 11 x 9in.) | 76.2 x 71.1 x 78.7cm (30 x 28 x 31in.) | A                       | 208/240V 50/60Hz 7100w; 30A | 168kg (370 lb.) | no plug, no cable, requires hardwiring |
| <b>BF51664PC-1</b>    | 25.5L (0.9 cu. ft.) | 500 to 1700°C | 39.4 x 27.9 x 22.9cm (15.5 x 11 x 9in.) | 76.2 x 71.1 x 78.7cm (30 x 28 x 31in.) | C                       | 208/240V 50/60Hz 7100w; 30A | 168kg (370 lb.) | no plug, no cable, requires hardwiring |
| <b>BF51664PCOMC-1</b> | 25.5L (0.9 cu. ft.) | 500 to 1700°C | 39.4 x 27.9 x 22.9cm (15.5 x 11 x 9in.) | 76.2 x 71.1 x 78.7cm (30 x 28 x 31in.) | C, with RS845 interface | 208/240V 50/60Hz 7100w; 30A | 168kg (370 lb.) | no plug, no cable, requires hardwiring |

For OTC specify Option B before last letter in cat. no. when ordering, e.g., BF51634PBC-1, or BF51634PBCOMC-1

**Ordering Information:** Required power cord and hardwiring not included

**Warranty:** 1 year (parts and labor)

# Thermo Scientific Lindberg/Blue M 1700°C Box Furnaces Independent Control

Designed for applications which require extremely rapid heat-up rates, with 3500 watt models reaching 1700°C in as little as 15 minutes



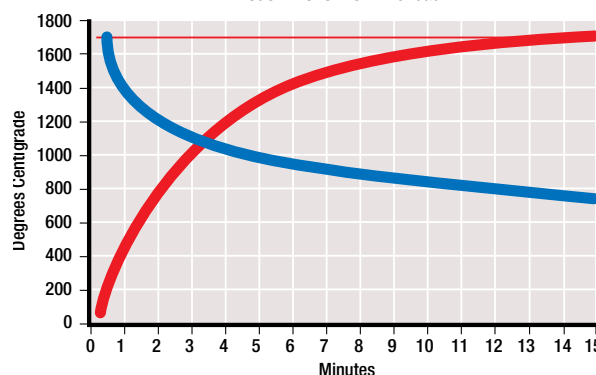
- Available in two popular chamber sizes (see chart)
- Double shell design for lower external cabinet temperature with energy savings
- Moldatherm high temperature ceramic fiber insulation with advanced graded design for fast heat-up and resistance to thermal shock
- Removable panels for easy access to replaceable heating elements and thermocouples
- Moldatherm hearthplate supports load and protects chamber from spills or mishandling
- High volume cooling fans move air between inner and outer chamber to reduce exterior shell temperatures and improve energy efficiency and operator safety
- Long-life type “B” thermocouples with 10' compensated lead wire and polarized plug for accurate high temperature measurement

### Smart heating elements

- Molybdenum disilicide elements with unique right angle bend and sidewall mounting reduce maintenance usually associated with element termination and mounting
- Designed for easy replacement without matching resistance values – Fast heat-up and recovery with excellent uniformity and energy efficiency
- Increased resistance to thermal shock, ideal for rapid cycling over extended periods

### Heat-Up/Cool-Down

Model BF51314C— No load



■ Heat-Up ■ Cool-Down

42% holding power @ 1700 °C

Chamber uniformity @1700°C ±3% °C nominal.

Model BF51314C Heat-Up/Cool-Down, No Load.

### APPLICATIONS

- Sintering
- Melting
- Ashing
- Metals and ceramic composites
- Bonding

| Cat. No.        | Capacity           | Temp. Range   | Control                              | Interior Dimensions (D x W x H)            | Exterior Dimensions (L x W x H)              | Electrical                      | Shipping Weight  | Plug Type                              |
|-----------------|--------------------|---------------|--------------------------------------|--|--|---------------------------------|------------------|--|
| <b>BF51314C</b> | 2.5L (0.09 cu. ft) | 500 to 1700°C | Independent, choose from table below | 12.7 x 15.2 x 12.7 cm (5 x 6 x 5 in.)      | 40.6 x 40.6 x 35.6 cm (16 x 16 x 14 in.)     | 208/540V, 50/60Hz, 3500W; 14.6A | 39 kg (85 lbs)   | no plug, no cable, requires hardwiring |
| <b>BF51524C</b> | 9L (0.3 cu. ft)    | 500 to 1700°C | Independent, choose from table below | 25.4 x 21.6 x 16.5 cm (10 x 8.5 x 6.5 in.) | 49.5 x 49.5 x 40 cm (19.5 x 19.5 x 15.8 in.) | 208/540V, 50/60Hz, 5000W; 50A   | 115 kg ( 53 lbs) | no plug, no cable, requires hardwiring |

Ordering information: Control ordered separately for this product. See below and page 7 for details on controllers.

| Cat. No.                | Controller                                      | For Use with | Exterior Dimensions (L x W x H)          | Electrical             |
|-------------------------|---|--------------|--|------------------------|
| <b>CC59246PCOMC-1</b>   | C, with RS-485 Digital Communications Port      | BF51314C     | 38.1 x 53.3 x 25.4 cm (15 x 21 x 10 in.) | 208/240V, 50/60Hz; 30A |
| <b>CC59246PBCOMC-1*</b> | C, OTC with RS-485 Digital Communications Port  | BF51314C     |  |                        |
| <b>CC59256PCOMC-1</b>   | C, with RS-485 Digital Communications Port      | BF51524C     |  |                        |
| <b>CC59256PBCOMC-1*</b> | C, OTC, with RS-485 Digital Communications Port | BF51524C     |  |                        |

\* Please note: connected furnace requires 2nd thermocouple for OTC (installed when ordered together)

Ordering Information: Required power cord and hardwiring not included.



# Thermo Scientific Lindberg/Blue M Mini-Mite Tube Furnaces

Compact, single tube furnace insulated with Moldatherm for quick heatup and cooldown



- Microprocessor-based self-tuning PID control provides optimal thermal processes without overshoot
- Single segment, single setpoint, one ramp to setpoint
- Adjustable high-limit over-temperature protection
- Simultaneous LED display of temperature and setpoint in °C or °F
- Split-hinge design simplifies loading and unloading
- Safety switch disconnects power when furnace is opened
- Type K long-life thermocouple

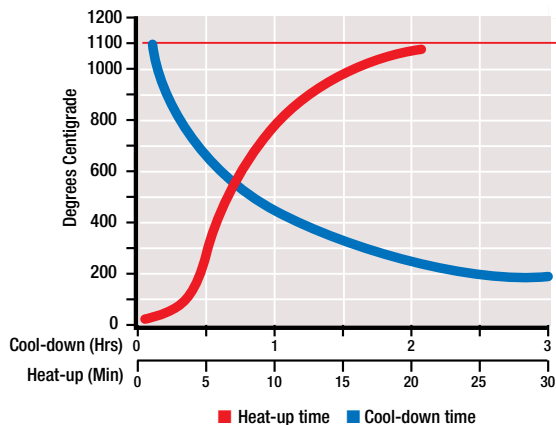
### Control options

- A, B, all models include adjustable high limit over-temperature protection
- See page 7 for details

### APPLICATIONS

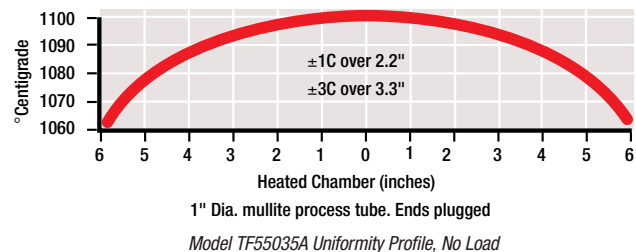
- Pyrolysis
- Thermal Expansion
- Calibration
- Sintering
- Viscosity Testing

### HEAT-UP/COOL-DOWN



Heat and cool rates measured in center 1"OD process tube. Ends of tube plugged with ceramic fiber.

Model TF55035A Heat-Up/Cool-Down



Actual performance may vary depending on load, chamber size, sample placement, ambient temperature and environmental conditions.

| Cat. No.   | Temperature Range | Heating Zone   | Outside Dia. [Tube] | Overall L x W x H                | Control | Electrical                  | Shipping Weight | Plug Type |
|------------|-------------------|----------------|---------------------|----------------------------------|---------|-----------------------------|-----------------|-----------|
| TF55030A-1 | 100° to 1100°C    | 30.5cm (12in.) | 25.4cm (1in.)       | 28 x 41 x 38cm (11 x 16 x 15in.) | A, OTC  | 120V 50/60Hz 800w; 6.8A     | 16kg (35 lb.)   |           |
| TF55030C-1 | 100° to 1100°C    | 30.5cm (12in.) | 25.4cm (1in.)       | 28 x 41 x 38cm (11 x 16 x 15in.) | A, OTC  | 208/240V 50/60Hz 800w; 3.3A | 16kg (35 lb.)   |           |
| TF55035A-1 | 100° to 1100°C    | 30.5cm (12in.) | 25.4cm (1in.)       | 28 x 41 x 38cm (11 x 16 x 15in.) | B, OTC  | 120V 50/60Hz 800w; 6.8A     | 16kg (35 lb.)   |           |
| TF55035C-1 | 100° to 1100°C    | 30.5cm (12in.) | 25.4cm (1in.)       | 28 x 41 x 38cm (11 x 16 x 15in.) | B, OTC  | 208/240V 50/60Hz 800w; 3.3A | 16kg (35 lb.)   |           |

To add RS-485 Digital Communications Port to Furnace model, add "COM" before last letter in cat. no. - e.g., TF55030COMA-1  
 208-240V units are available with cord and plug for China: please add "K" before last letter in cat.no. - e.g., TF55030KC-1 (note: no RS-485 port available for this version)

**Ordering information:** Process tubes not included and required. Purchase separately.

**Includes:** 9ft. (3m) power cord

**Warranty:** 1 year (parts and labor)

# Thermo Scientific Lindberg/Blue M 1100°C Tube Furnaces

Three-zone 1100°C tube furnaces feature Moldatherm ceramic fiber insulation with optimum power consumption

## APPLICATIONS

- Gravimetric analysis
- Sintering
- Quantitative analysis
- Heat treatment



- Ideal for a variety of process tubes including alumina, mullite, quartz and metallic
- Double-shell construction and variable density insulation combine to enhance performance over conventional furnaces
- Durable, high-strength hardware and a variety of control systems offer both convenience and versatility over a range of sophistication

## Performance features

- Three-zone control allows independent temperature control of each zone with programmability
- Excellent temperature uniformity
- Fast heat-up and cool-down and quick recovery

## Design features

- Flexible design – can be used for a variety of applications
- Innovative use of venting and insulating air spaces create lower exterior surface temperatures
- Long-life Type K thermocouple
- Accepts an array of tube adapters; largest specified tube size supplied (set of two)
- RS485 digital communications port available as an option; allows controller to be connected to a PC for remote monitoring and control

## Control details

- B – three programmable controllers, one for each zone
- See page 7 for details

| Cat. No.           | Temperature Range               | Heated Length  | Heated Zone                  | Process Tube Diameter | Exterior L x W x H                     | Power Consumption              | Shipping Weight | Plug Type                              |
|--------------------|---------------------------------|----------------|------------------------------|-----------------------|--|--------------------------------|-----------------|--|
| <b>STF55346C-1</b> | 100° to 1100°C (212° to 2012°F) | 61cm (24in.)   | 15.2/30.4/15.2cm (6/12/6in.) | 2.5–7.5cm (1–3in.)    | 43.2 x 88.9 x 53.3cm (17 x 35 x 21in.) | 208/240V, 50/60Hz 3800w; 16A   | 102kg (225 lb.) | no plug, no cable, requires hardwiring |
| <b>STF55666C-1</b> | 100° to 1100°C (212° to 2012°F) | 91.4cm (36in.) | 22.3/45.7/22.3cm (9/18/9in.) | 7.5–15.2cm (3–6in.)   | 55.9 x 137.2 x 66cm (22 x 54 x 16in.)  | 208/240V, 50/60Hz 11,000w; 46A | 115kg (255 lb.) | no plug, no cable, requires hardwiring |

To add RS-485 Digital Communications Port to furnace model, add "COM" before last letter in cat. no. - e.g., STF55346COMC-1

### Ordering information:

Required process tube not included. For information on process tubes contact your process tube supplier.

**Includes** one set of two tube adapters:

59545 (STF55346C-2), 59558TA (STF55666C-1)

**Required Accessories:** Power cord and hardwiring

**Warranty\*:** 1 year (parts and labor)

## Tube Adapters

| Cat. No.       | Description           | For Use With              |
|----------------|-----------------------|---------------------------|
| <b>59541</b>   | 1in. Adapter          | STF55346C -1 Tube Furnace |
| <b>59543</b>   | 2in. Adapter          | STF55346C -1 Tube Furnace |
| <b>59545</b>   | 3in. Adapter          | STF55346C -1 Tube Furnace |
| <b>59555</b>   | 3in. Adapter          | STF55666C -1 Tube Furnace |
| <b>59556</b>   | 4in. Adapter          | STF55666C -1 Tube Furnace |
| <b>59557</b>   | 5in. Adapter          | STF55666C -1 Tube Furnace |
| <b>59558TA</b> | 6in. Adapter          | STF55666C -1 Tube Furnace |
| <b>59549</b>   | Blank (solid) Adapter | STF55346C -1 Tube Furnace |
| <b>59559TA</b> | Blank (Solid) Adapter | STF55666C -1 Tube Furnace |

Note: Tube adapters sold individually (not as sets)

# Thermo Scientific Lindberg/Blue M 1200°C Split-Hinge Tube Furnaces & Controllers

For ease of observation and operation and configurable for horizontal or vertical use



## APPLICATIONS

- Annealing
- Crystal growing
- Calibration
- Heat treatment

- Moldatherm LGO™ heating element modules for excellent radial and linear temperature uniformity and fast heatup and cooldown
- Long-life, energy-efficient elements require little or no maintenance
- Unique cabinet design achieves lower exterior surface temperature
- Heat-reflecting element support assembly creates two highly effective insulating air spaces
- Compact cabinet with high temperature-resistant painted finish
- Accepts interchangeable Moldatherm tube adapters
- Long-life Platinel II thermocouple(s) with 10ft. compensated lead wire and polarized plug

## Three zone models

- Three independent power circuits (zones) with independent thermocouples for control references
- Full adjustment of each zone over entire operating range to 1200°C
- Center zone uniformity achieved and operating length maximized through adjustable profiling of end zones by independent controller
- Temperature uniformity achieved with independent setpoint of end zones higher or lower than center

## Control consoles

- Fully wired, control choices: A, B, select models with adjustable over-temperature control and/or RS485 data port
- See page 32 for details

| Cat. No.           | Controller (Please order separately) | Temperature Range | Heated Zone    | Exterior L x W x H                      | Tube O.D.                    | Electrical                   | Shipping Weight | Plug Type                              |
|--------------------|--------------------------------------|-------------------|----------------|---|------------------------------|------------------------------|-----------------|--|
| <b>Single Zone</b> |                                      |                   |                |   |                              |                              |                 |  |
| HTF55122A          | Independent CC58114A                 | 100° to 1200°C    | 30.5cm (12in.) | 33.0 x 53.3 x 30.5cm (13 x 21 x 12in.)  | 1.9 to 2.54cm (0.75 to 1in.) | 120V 50/60Hz 1300w; 11A      | 28kg (60 lb.)   | no plug, no cable, requires hardwiring |
| HTF55322A          | Independent CC58114A                 | 100° to 1200°C    | 30.5cm (12in.) | 43.2 x 58.4 x 40.6cm (17 x 23 x 16in.)  | 2.54 to 7.62cm (1 to 3in.)   | 120V 50/60Hz 2670w; 23A      | 55kg (120 lb.)  | no plug, no cable, requires hardwiring |
| HTF55322C          | Independent CC58114C                 | 100° to 1200°C    | 30.5cm (12in.) | 43.2 x 58.4 x 40.6cm (17 x 23 x 16in.)  | 2.54 to 7.62cm (1 to 3in.)   | 208/240V 50/60Hz 2670w; 12A  | 55kg (120 lb.)  | no plug, no cable, requires hardwiring |
| HTF55342C          | Independent CC58114C                 | 100° to 1200°C    | 61.0cm (24in.) | 43.2 x 88.9 x 40.6cm (17 x 35 x 16in.)  | 2.54 to 7.62cm (1 to 3in.)   | 208/240V 50/60Hz 5400w; 23A  | 80kg (175 lb.)  | no plug, no cable, requires hardwiring |
| <b>Three Zone</b>  |                                      |                   |                |   |                              |                              |                 |  |
| HTF55347C          | Independent CC58434C                 | 100° to 1200°C    | 61.0cm (24in.) | 43.2 x 88.9 x 40.6cm (17 x 35 x 16in.)  | 2.54 to 7.62cm (1 to 3in.)   | 208/240V 50/60Hz 5100w; 22A  | 89kg (195 lb.)  | no plug, no cable, requires hardwiring |
| HTF55667C          | Independent CC58434C                 | 100° to 1200°C    | 91.4cm (36in.) | 53.3 x 124.5 x 50.8cm (21 x 49 x 20in.) | 76.2 to 15.24cm (3 to 6in.)  | 208/240V 50/60Hz 11200w; 47A | 141kg (310 lb.) | no plug, no cable, requires hardwiring |

**Tube adapters prevent heat loss and improve temperature uniformity within the furnace chamber by insulating the end vestibules.**

One set of (2) included with furnace:

- Model HTF55122A, (2) 1" dia. adapters; Models HTF55322A/C, (2) 2" dia. adapters;
- Model HTF55342C, (2) 3" dia. adapters
- Model HTF55347C, (2) 3" dia. adapters
- Model HTF55667C, (2) 3" dia. adapters

Required process tube not included. For information on process tubes contact your process tube supplier.

**Ordering information:** Independent digital temperature control module (ordered separately) is available in standard or programmable options (see next page).

**Warranty:** 1 year (parts and labor)

## Accessories

| Cat. No. | Description           | For Use with   |
|----------|-----------------------|--|
| 59510    | 0.75in. Adapter       | HTF55122 Tube Furnace  |
| 59511    | 1in. Adapter          | HTF55122 Tube Furnace  |
| 59521    | 1in. Adapter          | HTF55322, HTF55342, HTF55347 Tube Furnaces   |
| 59522    | 1.5in. Adapter        | HTF55322, HTF55342, HTF55347 Tube Furnaces   |
| 59523    | 2in. Adapter          | HTF55322, HTF55342, HTF55347 Tube Furnaces   |
| 59524    | 2.5in. Adapter        | HTF55322, HTF55342, HTF55347 Tube Furnaces   |
| 59525    | 3in. Adapter          | HTF55322, HTF55342, HTF55347 Tube Furnaces   |
| 59535TA  | 3in. Adapter          | HTF55667 Tube Furnace  |
| 59536TA  | 4in. Adapter          | HTF55667 Tube Furnace  |
| 59537TA  | 5in. Adapter          | HTF55667 Tube Furnace  |
| 59538TA  | 6in. Adapter          | HTF55667 Tube Furnace  |
| 59539TA  | Blank (solid) Adapter | HTF55667 Tube Furnace  |
| 59519    | Blank (solid) Adapter | HTF55122 Tube Furnace  |
| 59529    | Blank (solid) Adapter | HTF55322, HTF55342, HTF55347 Tube Furnaces   |
| VFS551   | Floor Stand, vertical | HTF55112A -1 Tube Furnace  |
| VFS553   | Floor Stand, vertical | HTF55322A -1, HTF55322C, HTF55342C -1, HTF55667C -1 and HTF55347C -1 Tube Furnaces |
| VFS556   | Floor Stand, vertical | HTF55667C -1 Tube Furnace  |

Note: Tube adapters sold individually (not as sets).

See next page for details on controllers

## Thermo Scientific Controllers for Lindberg/Blue M 1200°C Tube Furnaces

Temperature accuracy and options for over-temperature control and multiple segment configuration



Three-zone control

### Control console

- Fully wired with advanced microprocessor based digital control, solid state power module, ON/ OFF circuit breaker and thermocouple input jacks for each zone

### Control options

- A,B
- For three zone control, there is a choice of:
  - > 3 x single setpoint
  - > 3 x programmable, single program, multiple segment
  - > center zone programmable and end zones single setpoint, which mimic the programmed profile of the center zone controller but allow an offset up to 100°C (+/-50°C). Offset is digitally displayed.
- See page 7 for details

| Cat. No.      | Description  | For Use with           | Electrical            |
|---------------|--|------------------------|-----------------------|
| CC58114A-1    | Single zone, A   | HTF55122A<br>HTF55322A | 120V 50/60Hz; 30A     |
| CC58114C-1*   | Single zone, A   | HTF55122C<br>HTF55342C | 208/240V 50/60Hz; 30A |
| CC58114BA-1*  | Single zone, A, OTC  | HTF55122A<br>HTF55322A | 120V 50/60Hz; 30A     |
| CC58114PA-1   | Single zone, B   | HTF55122A<br>HTF55322A | 120V 50/60Hz; 30A     |
| CC58114PBA-1  | Single zone, B, OTC  | HTF55122A<br>HTF55322A | 120V 50/60Hz; 30A     |
| CC58114BC-1*  | Single zone, A, OTC  | HTF55122C<br>HTF55342C | 208/240V 50/60Hz; 30A |
| CC58114PBC-1  | Single zone, B, OTC  | HTF55122C<br>HTF55342C | 208/240V 50/60Hz; 30A |
| CC58114PC-1   | Single zone, B   | HTF55122C<br>HTF55342C | 208/240V 50/60Hz; 30A |
| CC58434C-1    | Three-zone; Center zone: A, End zones: A   | HTF55347C<br>HTF55667C | 208/240V 50/60Hz; 70A |
| CC58434BC-1   | Three-zone; Center zone: A, End zones: A; OTC  | HTF55347C<br>HTF55667C | 208/240V 50/60Hz; 70A |
| CC58434PC-1   | Three-zone; Center zone: B, End zones: A mimic programmed profile from center zone, but allow offset of up to 100°C (+/-50°C)      | HTF55347C<br>HTF55667C | 208/240V 50/60Hz; 70A |
| CC58434PBC-1  | Three-zone; Center zone: B, End zones: A mimic programmed profile from center zone, but allow offset of up to 100°C (+/-50°C); OTC | HTF55347C<br>HTF55667C | 208/240V 50/60Hz; 70A |
| CC584343PBC-1 | Three-zone; Center zone: B, End zones: B; OTC  | HTF55347C<br>HTF55667C | 208/240V 50/60Hz; 70A |
| CC584343PC-1  | Three-zone; Center zone: B, End zones: B   | HTF55347C<br>HTF55667C | 208/240V 50/60Hz; 70A |

\* Not available with RS-585 port

To add RS-485 Digital Communications Port to Furnace model, add "COM" before last letter in cat. no. – e.g., CC58114COMA-1

**Ordering information:** Required power cord, hardwiring and interconnecting wiring are not included. For information on process tubes contact your process tube supplier.

**Warranty:** 1 year (parts and labor)



# Thermo Scientific Lindberg/Blue M 1500°C General-Purpose Tube Furnaces

**Integral temperature control designed for a range of applications which require processing flexibility with fast heatup and recovery**



- Energy-efficient Moldatherm insulation increases temperature uniformity, improves energy efficiency and helps to maintain low exterior cabinet temperatures during operation
- Accommodate 1in., 2in. and 3in. O.D. process tubes (customer supplied)
- Silicon carbide heating elements positioned above and below tube works with Type "R" thermocouple to stabilize temperature
- Integral microprocessor-based PID programmable control (proportional, integral, derivative) prevents overshoot
- Adjustable high limit over-temperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- Temperature display in °C or °F

### Control options

- B, C
- Optional Over Temperature Control (OTC) available on Multi Program/Multi Segment model (C)
- See page 7 for details

### APPLICATIONS

- Heat treatment
- Sintering
- Annealing
- Atmosphere processing
- Melting
- Fusing

| Cat. No.             | Control | Temperature Range | Heated Zone    | Exterior L x W x H                     | Tube O.D.                  | Electrical                      | Shipping Weight | Plug Type                              |
|----------------------|---------|-------------------|----------------|--|----------------------------|---------------------------------|-----------------|--|
| <b>STF55433C-1</b>   | B       | 500° to 1500°C    | 30.5cm (12in.) | 48.3 x 58.4 x 43.2cm (19 x 23 x 17in.) | 2.54 to 7.62cm (1 to 3in.) | 208/240V<br>50/60Hz 6000w; 25A  | 123kg (270 lb.) | no plug, no cable, requires hardwiring |
| <b>STF55433PC-1</b>  | C       | 500° to 1500°C    | 30.5cm (12in.) | 48.3 x 58.4 x 43.2cm (19 x 23 x 17in.) | 2.54 to 7.62cm (1 to 3in.) | 208/240V<br>50/60Hz; 6000w; 25A | 123kg (270 lb.) | no plug, no cable, requires hardwiring |
| <b>STF55433PBC-1</b> | C, OTC  | 500° to 1500°C    | 30.5cm (12in.) | 48.3 x 58.4 x 43.2cm (19x23x17in.)     | 2.54 to 7.62cm (1 to 3in.) | 208/240V<br>50/60Hz; 6000w; 25A | 123kg (270 lb.) | no plug, no cable, requires hardwiring |

To add RS-485 Digital Communications Port to Furnace model, add "COM" before last letter in cat.no. – e.g., STF55433COMC-1

### Accessories — Tube Adapters

| Cat. No.             | Description  | For Use with                             |
|----------------------|--------------|--|
| <b>7100-2444-070</b> | 2.5cm (1in.) | STF55433C-1, STF55433PC-1, STF55433PBC-1 |
| <b>7100-2444-068</b> | 5cm (2in.)   | STF55433C-1, STF55433PC-1, STF55433PBC-1 |
| <b>7100-2444-069</b> | 7.6cm (3in.) | STF55433C-1, STF55433PC-1, STF55433PBC-1 |

Note: Tube adapters sold individually (not as sets).

**Ordering information:** Required power cord, hardwiring and interconnecting wiring are not included. For information on process tubes contact your process tube supplier  
**Includes:** 1 set of two 2" tube adapters  
**Warranty:** 1 year (parts and labor)

# Thermo Scientific Lindberg/Blue M 1700°C Tube Furnaces

## Rapid heat-up, recovery and cooldown



Model STF54434C with Controller CC59256PCOMC

High temperature tube furnaces achieve excellent temperature uniformity at 1700°C with rapid heat-up, recovery and cool-down. The independent digital temperature control (ordered separately) has multiple programmable segments useful for a wide range of applications.

- Feature heating elements with unique right-angle bend and sidewall mounting to deliver exceptional energy release, reduced thermal process cycle time, and cost savings through quicker throughput and energy efficiency
- Moldatherm graduated-density insulation provides safety, performance and outstanding radial and linear temperature uniformity with resistance to thermal shock
- Heating elements tolerate rapid cycling over extended periods; elements are easily replaceable without the need to match resistance values
- Type "B" thermocouples assure accurate temperature measurement and long thermocouple life; 10 ft. compensated lead wire with polarized plug included
- Moldatherm graduated density insulation adds to safety and performance by forming enhanced insulation protection between the high-temperature chamber and exterior cabinet surface
- Double shell construction and convection cooling design reduces exterior surface temperature
- Removable louvered panels provide easier access to heating elements and thermocouple
- Temperature range: 500°C to 1700°C

### APPLICATIONS

- Heat treatment
- Atmosphere processing
- Sintering
- Crystal growing
- Annealing

### Control options

- C : order independent control separately, (see below)
- Adjustable over-temperature control and/or RS845 data port available on select models
- See page 7 for details on controllers

| Cat. No.         | Temp. Range and Control    | Heated Zone    | Exterior L x W x H                     | Tube O.D.    | Electrical                       | Shipping Weight | Plug Type                              |
|------------------|----------------------------|----------------|--|--------------|----------------------------------|-----------------|--|
| <b>STF54434C</b> | 500° to 1700°C Independent | 30.5cm (12in.) | 40.6 x 55.9 x 48.3cm (16 x 22 x 19in.) | 7.6cm (3in.) | 208/240V, 50/60Hz 5000w; 50A     | 43kg (95 lb.)   | no plug, no cable, requires hardwiring |
| <b>STF54454C</b> | 500° to 1700°C Independent | 61.0cm (24in.) | 40.6 x 86.4 x 48.3cm (16 x 34 x 19in.) | 7.6cm (3in.) | 208/240V, 50/60Hz 10,000w; 41.7A | 75kg (165 lb.)  | no plug, no cable, requires hardwiring |

| Cat. No.                | Control (please order separately) | Electrical             | For Use with |
|-------------------------|-----------------------------------|------------------------|--------------|
| <b>CC59256PCOMC-1</b>   | C, RS485 data port                | 208/240V 50/60 Hz; 30A | STF54434C    |
| <b>CC59256PBCOMC-1</b>  | C, OTC, RS485 data port           | 208/240V 50/60 Hz; 30A | STF54434C    |
| <b>CC59256PCM2CTC-1</b> | C, RS485 data port                | 208/240V 50/60 Hz; 60A | STF54454C    |

Required power cord, hardwiring and interconnecting wiring are not included.  
**Warranty\***: 1 year (parts and labor)

- Optional Moldatherm vestibules permit operation with 1", 2" and 3" O.D. process tubes for increased versatility. Two vestibules are required for each furnace
- Tube Sleeves may be placed over customer supplied process tubes to reduce thermal shock to the process tube. All tube sleeves are 3" long

**Includes:** 1 set of two 3" vestibules and sleeves.

**Required Accessories:** Independent digital temperature control module, available separately. Required power cord, hardwiring and interconnecting wiring are not included. For information on process tubes contact your process tube supplier.

**Warranty\***: 1 year (parts and labor)

### Accessories – Vestibules/Sleeves

| Cat. No.             | Description    | For Use with           |
|----------------------|----------------|------------------------|
| <b>7219-2134-001</b> | 1in. Sleeve    | STF54434C Tube Furnace |
| <b>7219-2134-002</b> | 2in. Sleeve    | STF54434C Tube Furnace |
| <b>7219-2134-003</b> | 3in. Sleeve    | STF54434C Tube Furnace |
| <b>7219-2134-011</b> | 3in. Sleeve    | STF54454C Tube Furnace |
| <b>7219-2134-012</b> | 2in. Sleeve    | STF54454C Tube Furnace |
| <b>7219-2134-013</b> | 1in. Sleeve    | STF54454C Tube Furnace |
| <b>7219-2147-001</b> | 1in. Vestibule | STF54434C Tube Furnace |
| <b>7219-2147-002</b> | 2in. Vestibule | STF54434C Tube Furnace |
| <b>7219-2147-011</b> | 3in. Vestibule | STF54454C Tube Furnace |
| <b>7219-2147-003</b> | 3in. Vestibule | STF54434C Tube Furnace |
| <b>7219-2147-012</b> | 2in. Vestibule | STF54454C Tube Furnace |
| <b>7219-2147-013</b> | 1in. Vestibule | STF54454C Tube Furnace |

# Lindberg/Blue M 1200°C Crucible Furnace, Top Loading

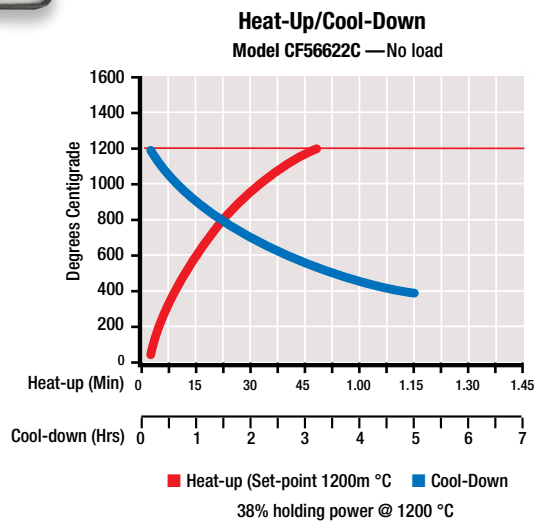
The ideal choice when working with samples in crucibles



- Unitized heating and insulation element with embedded helical wire coil
- Moldatherm insulation for maximum heat transfer to the work load
- Cover plug with Moldatherm insulation and handle for safe removal
- Moldatherm insulation protects vestibule, improves energy efficiency
- Platinel II thermocouple with 10' compensated lead wire and polarized plug for long life and accurate temperature measurement
- Moldatherm ceramic fiber hearth plate supports load and protects furnace from spillage

### Control options

- Requires independent controller (ordered separately, see chart)
- A, B
- Over-temperature control (OTC) available on select models
- See page 7 for details



### APPLICATIONS

Melting, annealing and heat treatment in:

- Ceramics
- Electronics
- Glass
- Metallurgy
- Superconductor materials research

| Model No. | Temp. Range   | Controller | Top ID          | Chamber Depth | Exterior Dimensions L x W x H          | Electrical                       | Ship Weight    | Plug Type   |
|-----------|---------------|------------|-----------------|---------------|--|----------------------------------|----------------|---|
| CF56622C  | 100 to 1200°C | CC58114C   | 12.7cm (5in.)   | 20.3cm (8in.) | 40.6 x 38.1 x 38.1cm (15 x 15 x 16in.) | 208/240V, 50/60 Hz<br>1700w; 7A  | 24kg (52 lb.)  | Required power cord, hardwiring and interconnecting wiring are not included |
| CF56822C  | 100 to 1200°C | CC58114C   | 19.1cm (7.5in.) | 20.3cm (8in.) | 50.8 x 50.8 x 48.3cm (20 x 20 x 19in)  | 208/240V, 50/60 Hz<br>2600w; 11A | 48kg (105 lb.) |   |

### Control consoles

| Controller Model No.         | Controllers | Exterior L x W x H                       | Electrical             | Ship Weight   |
|------------------------------|-------------|--|------------------------|---------------|
| CC58114C                     | A           | 48.3 x 35.6 x 25.4cm<br>(19 x 14 x 10in) | 208/240V, 50/60Hz; 30A | 16kg (35 lb.) |
| <b>With Programmer</b>       |             |  |                        |               |
| CC58114PC                    | B           | 48.3 x 35.6 x 25.4cm<br>(19 x 14 x 10in) | 208/240V, 50/60Hz; 30A | 16kg (35 lb.) |
| <b>With Overtemp Control</b> |             |  |                        |               |
| CC58114BC*                   | A, OTC      | 48.3 x 35.6 x 25.4cm<br>(19 x 14 x 10in) | 208/240V, 50/60Hz; 30A | 16kg (35 lb.) |
| CC58114PBC*                  | B, OTC      | 48.3 x 35.6 x 25.4cm<br>(19 x 14 x 10in) | 208/240V, 50/60Hz; 30A | 19kg (40 lb.) |

\* Please note: connected furnace requires 2nd thermocouple for OTC (installed when ordered together)










**Ordering Information:** Required power cord, hardwiring and interconnecting wiring are not included.  
**Warranty:** 1 year (parts and labor)

# Electrical Plug Configurations

High temperature in a furnace requires significant power, often requiring a non-standard electrical connection.

Many of our furnaces offer a choice of electrical configurations. Choose the model that best fits your needs and local circuit requirements.

The list below specifies the plug pictures that correspond to the pictures in the furnace spec tables.

|                     |  |
|---------------------|--|
| US plug: Nema 5-15  |   |
| US plug: Nema 6-15  |   |
| US plug: Nema 5-20  |   |
| US plug: Nema 6-20  |   |
| EU plug: CEE 7/7    |   |
| UK plug: BS1363     |   |
| China plug: 10A     |   |
| China plug: 16A     |   |
| Swiss plug: SEV1011 |  |

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