thermo scientific

Thermo Scientific Furnaces

Consistent performance at a high degree

ThermoFisher 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 up to 1200°C, temperature control options to meet your application needs, embedded or open heating elements designed to keep samples safe while maintaining reliable temperature uniformity.

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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.

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.

Lindberg/Blue M mini-mite furnace (TF55030A-1)

Lindberg/Blue M 1100 C tube furnace three zone (STF55346C)

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 contollers 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 contollers (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
- Specview™ (itools software) - visit 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 25 programs and up to 500 segments for ramp (up and down) and dwell (timed hold) temperature control per program
- Capability to repeat program steps, and cycles to repeat the whole program up to 999 times
- 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

Thermo Scientific box furnace

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
- Exhaust fan
- Adjustable air supply for incinerating processes

Thermo Scientific Lindberg/Blue models

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:

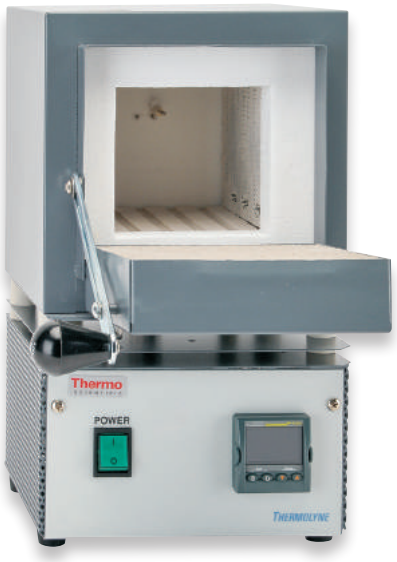
- Add “COM” to model number before last letter, as shown in note under spec table.
- Twenty-five foot cable and RS-232 converter for connection of furnace/control console RS-485 port to personal computer serial port. Required for first unit connection: Accessory No. 7043
- Cable to connect multiple (2+) 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 visit www.eurotherm.co.uk/products/temperature-controller-programmers/config-software/eurotherm-itools
- Specview software – please go to www.specview.com

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 (0.38 in.) 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	Shipp ing Weight	Plug Type
FB1315M	1.3L (0.04 cu. ft.)	100° to 1100 °C	±0.3 °C at 1000 °C (±7.8 °C at 1000 °C)	13 x 10.3 x 9.8 cm (5 x 4 x 3.8 in)	33 x 23 x 36 cm (13 x 9 x 14 in)	120 V, 50/60 Hz 1060 W, 8.9 A	9 kg (20 Lb.)	
FB1318M	1.3L (0.04 cu. ft.)	100° to 1100 °C	±0.3 °C at 1000 °C (±7.8 °C at 1000 °C)	13 x 10.3 x 9.8 cm (5 x 4 x 3.8 in)	33 x 23 x 36 cm (13 x 9 x 14 in)	208 V, 50/60 Hz 1060 W, 5.1 A	9 kg (20 Lb.)	
FB1310M	1.3L (0.04 cu. ft.)	100° to 1100 °C	±0.3 °C at 1000 °C (±7.8 °C at 1000 °C)	13 x 10.3 x 9.8 cm (5 x 4 x 3.8 in)	33 x 23 x 36 cm (13 x 9 x 14 in)	240 V, 50/60 Hz 1060 W, 4.4 A	9 kg (20 Lb.)	
FB1314M	1.3L (0.04 cu. ft.)	100° to 1100 °C	±0.3 °C at 1000 °C (±7.8 °C at 1000 °C)	13 x 10.3 x 9.8 cm (5 x 4 x 3.8 in)	33 x 23 x 36 cm (13 x 9 x 14 in)	100 V, 50/60 Hz 1060 W, 10.6 A	9 kg (20 Lb.)	
FB1310M-33CN	1.3L (0.04 cu. ft.)	100° to 1100 °C	±0.3 °C at 1000 °C (±7.8 °C at 1000 °C)	13 x 10.3 x 9.8 cm (5 x 4 x 3.8 in)	33 x 23 x 36 cm (13 x 9 x 14 in)	240 V, 50/60 Hz 1060 W, 4.4 A	9 kg (20 Lb.)	10 A
FB1310M-33CH	1.3L (0.04 cu. ft.)	100° to 1100 °C	±0.3 °C at 1000 °C (±7.8 °C at 1000 °C)	13 x 10.3 x 9.8 cm (5 x 4 x 3.8 in)	33 x 23 x 36 cm (13 x 9 x 14 in)	240 V, 50/60 Hz 1060 W, 4.4 A	9 kg (20 Lb.)	
FB1310M-33UK	1.3L (0.04 cu. ft.)	100° to 1100 °C	±0.3 °C at 1000 °C (±7.8 °C at 1000 °C)	13 x 10.3 x 9.8 cm (5 x 4 x 3.8 in)	33 x 23 x 36 cm (13 x 9 x 14 in)	240 V, 50/60 Hz 1060 W, 4.4 A	9 kg (20 Lb.)	
FB1415M	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	120 V, 50/60 Hz 1450 W, 12.0 A	12.7 kg (28 Lb.)	
FB1418M	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	208 V, 50/60 Hz 1520 W, 7.3 A	12.7 kg (28 Lb.)	
FB1410M	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	240 V, 50/60 Hz 1520 W, 6.3 A	12.7 kg (28 Lb.)	
FB1410M-33	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	240 V, 50/60 Hz 1520 W, 6.3 A	12.7 kg (28 Lb.)	
FB1410M-33CN	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	240 V, 50/60 Hz 1520 W, 6.3 A	12.7 kg (28 Lb.)	10 A
FB1410M-33-CH	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	240 V, 50/60 Hz 1520 W, 6.3 A	12.7 kg (28 Lb.)	
FB1410M-33-UK	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	240 V, 50/60 Hz 1520 W, 6.3 A	12.7 kg (28 Lb.)	
FB1414M	2.1L (0.07 cu. ft.)	100° to 1100 °C	±0.5 °C at 1000 °C (±5.0 °C at 1000 °C)	15.2 x 12.7 x 10.8 cm (6 x 5 x 4.25 in)	40 x 25 x 37 cm (15.8 x 10 x 14.5 in)	100 V, 50/60 Hz 1450 W, 14.5 A	12.7 kg (28 Lb.)	

Hearth plates

Cat. No.	For Use With
PH44X1	FB1300 small muffle furnace
PH48X1	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[v]: 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

- Thermo Scientific Thermolyne Industrial Benchtop Muffle Furnaces
- 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
- Gravitmetric analysis

Cat. No.	Capacity	Temp. Range	interior D x W x H	Exterior L x W x H	Control	Electrical	Shipp ing Weight	Plug Type
FD1535M	2.2 L (0.08 cu. ft.)	100° to 1200 °C	22.8 x 10.1 x 9.5 cm (9 x 4 x 3.75 in)	45.7 x 27.9 x 41.9 cm (18 x 11 x 16.5 in)	B1	120 V, 50/60 Hz, 18.6 A, 2230 W	23.5 kg (52 Lb.)	No plug, no cable, requires hardwiring
FD1530MCN	2.2 L (0.08 cu. ft.)	100° to 1200 °C	22.8 x 10.1 x 9.5 cm (9 x 4 x 3.75 in)	45.7 x 27.9 x 41.9 cm (18 x 11 x 16.5 in)	B1	240 V, 50/60 Hz, 9.3 A, 2230 W	23.5 kg (52 Lb.)	16 A,
FD1530M	2.2 L (0.08 cu. ft.)	100° to 1200 °C	22.8 x 10.1 x 9.5 cm (9 x 4 x 3.75 in)	45.7 x 27.9 x 41.9 cm (18 x 11 x 16.5 in)	B1	240 V, 50/60 Hz, 9.3 A, 2230 W	23.5 kg (52 Lb.)	
FD1530M-33	2.2 L (0.08 cu. ft.)	100° to 1200 °C	22.8 x 10.1 x 9.5 cm (9 x 4 x 3.75 in)	45.7 x 27.9 x 41.9 cm (18 x 11 x 16.5 in)	B1	240 V, 50/60 Hz, 6.5 A, 1560 W	23.5 kg (52 Lb.)	
FD1545M	2.2 L (0.08 cu. ft.)	100° to 1200 °C	22.8 x 10.1 x 9.5 cm (9 x 4 x 3.75 in)	45.7 x 27.9 x 41.9 cm (18 x 11 x 16.5 in)	C1	120 V, 50/60 Hz, 18.6 A, 2230 W	23.5 kg (52 Lb.)	No plug, no cable, requires hardwiring
FD1540M*	2.2 L (0.08 cu. ft.)	100° to 1200 °C	22.8 x 10.1 x 9.5 cm (9 x 4 x 3.75 in)	45.7 x 27.9 x 41.9 cm (18 x 11 x 16.5 in)	C1	240 V, 50/60 Hz, 9.3 A, 2230 W	23.5 kg (52 Lb.)	
FD1540M-33	2.2 L (0.08 cu. ft.)	100° to 1200 °C	22.8 x 10.1 x 9.5 cm (9 x 4 x 3.75 in)	45.7 x 27.9 x 41.9 cm (18 x 11 x 16.5 in)	C1	240 V, 50/60 Hz, 6.5 A, 1560 W	12.7 kg (28 Lb.)	

Hearth plates

Cat. No.	For Use With
PHX1	8.2 x 10.1 x 1.27 cm (3.25 x 4 x 0.5 in.)
PHX2	20.3 x 9.6 x 1.9 cm (8 x 3.8 x 0.75 in.)

Includes: Furnace, Platinel® II thermocouple and a ceramic hearth tray (Cat No. PHX2) to protect the bottom heating element

Warranty[y]: 1 year (parts and labor)

Certifications: All units cUL, UL listed

Thermo Scientific Thermolyne benchtop muffle furnaces

Reduce energy consumption and increase heatup time

- 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
- 0.312 in. dia. port for monitoring chamber temperatures with independent measuring device at rear of chamber

F47900, F48000 models

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

Temperature controller options

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

Applications

General laboratory use including:

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

Accessories

Cat. No.	Description	For Use With
PH479X1	Hearth tray, 15.2 x 14.3 x 0.95 cm	F47900 muffle furnace
SH480X1	Ceramic shelf, 17.4 x 17.3 x 1.2 cm	F48000 muffle furnace
PH480X1	Hearth tray, 25.4 x 19.3 x 0.95 cm	F48000 muffle furnace
AY408X1A	Stainless steel exhaust tubing kit, 2.5 in. ID x 60 in. L	Atmosphere controlled ashing and muffle furnaces

Includes: Power cord and one hearth tray, F48000 models also include a ceramic shelf (SH480X1)
Warranty[v]**:** 1 year (parts and labor)
Certifications: CSA approved, CE marked as indicated

Cat. No.	Capacity	Temp. Range	Interior D x W, x H	Exterior L x W, x H	Control	Electrical	Shipping Weight	Plug Type
F47910‡	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	A1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47910-33†	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	A1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47910-33CN†	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	A1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	 10 A
F47910-33-CH†	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	A1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47910-33-UK†	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	A1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47914	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	A1	100 V, 50/60 Hz 750 W, 7.5 A	18.5 kg (41 Lb.)	
F47915‡	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	A1	120 V, 50/60 Hz 1000 W, 8.3 A	18.5 kg (41 Lb.)	
F47920‡	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	B1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47920-33†	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	B1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47920-33CN†	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	B1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	 10 A
F47920-33-CH†	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	B1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47920-33-UK†	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	B1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47924	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	B1	100 V, 50/60 Hz 750 W, 7.5 A	18.5 kg (41 Lb.)	
F47925	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	B1	120 V, 50/60 Hz 1000 W, 8.3 A	18.5 kg (41 Lb.)	
F47920-80	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	C1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47920-33-80†	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	C1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47920-33-80CN	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	C1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47920-33-80-CH	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	C1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47920-33-80-UK	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	C1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47924-80	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	C1	100 V, 50/60 Hz 750 W, 7.5 A	18.5 kg (41 Lb.)	
F47925-80	2 L (0.07 cu. ft.)	100° to 1200 °C 212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	C1	120 V, 50/60 Hz 1000 W, 8.3 A	18.5 kg (41 Lb.)	
F47950‡	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	D1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47950-33†	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	D1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47950-33CN	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	D1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47950-33-CH	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	D1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47950-33-UK	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	D1	240 V, 50/60 Hz 1000 W, 4.2 A	18.5 kg (41 Lb.)	
F47954	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	D1	100 V, 50/60 Hz 750 W, 7.5 A	18.5 kg (41 Lb.)	
F47955	2 L (0.07 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	15 x 13.7 x 10 cm (6 x 5 x 4 in)	39 x 28.5 x 47 cm (15.5 x 11.3 x 18.5 in)	D1	120 V, 50/60 Hz 1000 W, 8.3 A	18.5 kg (41 Lb.)	
F48010‡	5.8 L (0.2 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	25 x 18 x 13 cm (10 x 7 x 5 in)	50 x 34 x 19 cm (19.5 x 13.3 x 19 in)	A1	240 V, 50/60 Hz 1800 W, 7.5 A	27.2 kg (60 Lb.)	
F48010-33†	5.8 L (0.2 cu. ft.)	100° to 1200 °C (212° to 2192 °F)	25 x 18 x 13 cm (10 x 7 x 5 in)	50 x 34 x 19 cm (19.5 x 13.3 x 19 in)	A1	240 V, 50/60 Hz 1560 W, 6.5 A	27.2 kg (60 Lb.)	

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

† CE marked; ‡ CSA listed

Thermo Scientific Thermolyne premium large muffle furnaces

Robust design and choice of four temperature controllers

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

Accessories

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

Includes: Models F6010 and F6018 include a cord and plug set

Required Accessories: All models except F6010 and F6018 require hardwiring

Warranty[x]: 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 0.25 in. 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
F30428C	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	B1	208 V, 50/60 Hz 26.4 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30420C	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	B1	240 V, 50/60 Hz 22.9 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30420C-33	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	B1	240 V, 50/60 Hz 22.9 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30428C-80	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	C1	208 V, 50/60 Hz 26.4 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30420C-80	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	C1	240 V, 50/60 Hz 22.9 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30420C-33-80	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	C1	240 V, 50/60 Hz 22.9 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30438CM	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	D1	208 V, 50/60 Hz 26.4 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30430CM	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	D1	240 V, 50/60 Hz 22.9 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring
F30430CM-33	45 L (1.6 cu. ft.)	100° to 1093 °C	±1.2 °C at 1000 °C ±3.45 °C	36 x 36 x 36 cm (14 x 14 x 14 in)	64.7 x 54.6 x 74.9 cm (25.5 x 21.5 x 29.5 in)	D1	240 V, 50/60 Hz 22.9 A, 5500 W	117.9 kg (260 Lb.)	No plug, no cable, requires hardwiring

Hearth trays

Cat. No.	Description	D x W x H
PH146X1	Hearth tray	17.1 x 14.9 x 1.9 cm (6.75 x 5.9 x 0.75 in)
SH412X1	Shelf - max weight 11.3 kg (25 lbs)	35.2 x 25.4 x 1.27 cm (13.87 x 10 x 0.56 in)
AY408X1A	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

- Thermo Scientific Thermolyne atmosphere controlled ashing furnaces
- Reaches 975 °C with the standard stainless-steel manifold and 1093 °C with the optional inconel manifold
- Adjustable gas flowmeter/valve (0-80 L/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 ±3 °C at 750 °C
- Chamber rear has a 0.25 in. diameter port for monitoring chamber temperatures with independent measuring devices
- Includes hose barb (in back of chamber) for inert gas line with tubing 0.64 cm (0.25 in.) I.D. and 0.96 cm (0.375 in.) O.D

Type F6000

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

Applications

- Coal and coke ashing procedures

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‡	14 L (0.5 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	25 x 33 x 18 cm (10 x 12.8 x 6.8 in)	51 x 49 x 53 cm (20 x 19.1 x 21 in)	B1	240 V, 18.3 A 4400 W	No plug, no cable, requires hardwiring
F6028C-60†	14 L (0.5 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	25 x 33 x 18 cm (10 x 12.8 x 6.8 in)	51 x 49 x 53 cm (20 x 19.1 x 21 in)	B1	208 V, 19.2 A 4000 W	No plug, no cable, requires hardwiring
F6020C-33-60-80‡	14 L (0.5 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	25 x 33 x 18 cm (10 x 12.8 x 6.8 in)	51 x 49 x 53 cm (20 x 19.1 x 21 in)	C1	240 V, 18.3 A 4400 W	No plug, no cable, requires hardwiring
F6028C-60-80	14 L (0.5 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	25 x 33 x 18 cm (10 x 12.8 x 6.8 in)	51 x 49 x 53 cm (20 x 19.1 x 21 in)	C1	208 V, 19.2 A 4000 W	No plug, no cable, requires hardwiring
F6030CM-33-60‡	14 L (0.5 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	25 x 33 x 18 cm (10 x 12.8 x 6.8 in)	51 x 49 x 53 cm (20 x 19.1 x 21 in)	D1	240 V, 18.3 A 4400 W	No plug, no cable, requires hardwiring
F30420C-60-80†	45 L (1.6 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	36 x 36 x 36 cm (14 x 14 x 14 in)	65 x 55 x 75 cm (25.5x 21.5 x 29.5 in)	C1	240 V, 22.9 A 5500 W	No plug, no cable, requires hardwiring
F30420-33-60-80‡	45 L (1.6 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	36 x 36 x 36 cm (14 x 14 x 14 in)	65 x 55 x 75 cm (25.5x 21.5 x 29.5 in)	C1	240 V, 22.9 A 5500 W	No plug, no cable, requires hardwiring
F30428C-60-80†	45 L (1.6 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	36 x 36 x 36 cm (14 x 14 x 14 in)	65 x 55 x 75 cm (25.5x 21.5 x 29.5 in)	C1	208 V, 23.4 A 5500 W	No plug, no cable, requires hardwiring
F30430CM-60†	45 L (1.6 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	36 x 36 x 36 cm (14 x 14 x 14 in)	65 x 55 x 75 cm (25.5x 21.5 x 29.5 in)	D1	240 V, 22.9 A 5500 W	No plug, no cable, requires hardwiring
F30430CM-33-60‡	45 L (1.6 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	36 x 36 x 36 cm (14 x 14 x 14 in)	65 x 55 x 75 cm (25.5x 21.5 x 29.5 in)	D1	240 V, 22.9 A 5500 W	No plug, no cable, requires hardwiring
F30438CM-60†	45 L (1.6 cu.ft.)	975 °C	24 (30 mL) porcelain or 38 (10 mL) quartz crucibles	36 x 36 x 36 cm (14 x 14 x 14 in)	65 x 55 x 75 cm (25.5x 21.5 x 29.5 in)	D1	208 V, 23.4 A 5500 W	No plug, no cable, requires hardwiring

†CSA listed. ‡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

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

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

Temperature controller

- Programmable control C2
- See page 6 for control details

Applications

- Incineration
- Ashing
- Baking
- Annealing
- Analytical processes

Cat. No.	Capacity	Max. Temp.	Temp. Uniformity	Chamber (D x W x H)	Exterior (D x W x H)	Control	Heat Output	Electrical	Shipping Weight	Plug Type
50040493	3.5 L (0.12 cu. ft.)	1100 °C	± 6 °K	16 x 17 x 13 cm (6.3 x 6.7 x 5.1 in)	57 x 45.6 x 64.6 cm (22.4 x 18 x 25.4 in)	C2 with upper limit cut-out	1.7 kW	230 V, 50/60 Hz, 690 W	79.4 kg (175 Lb.)	
50051059	3.5 L (0.12 cu. ft.)	1100 °C	± 6 °K	16 x 17 x 13 cm (6.3 x 6.7 x 5.1 in)	57 x 45.6 x 64.6 cm (22.4 x 18 x 25.4 in)	C2 with exhaust fan	1.7 kW	230 V, 50/60 Hz, 690 W	79.4 kg (175 Lb.)	

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

See page 17 for available accessories.

Ordering Alerts: Not available in North America.
Certifications: CE
Warranty*: 2 years (parts and labor)

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.*

Temperature controller

- Programmable control 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
51000802	9 L (0.32 cu. ft.)	1100 °C	±7 °K	30 x 20 x 15 cm (11.8 x 7.9 x 5.9 in)	72 x 57.6 x 75.2 cm (28.4 x 22.7 x 29.6 in)	C2 with upper limit cut-out	2.9 kW	230 V, 50/60 Hz 1400 W	78 kg (172 Lb.)	
51000808	9 L (0.32 cu. ft.)	1100 °C	±7 °K	30 x 20 x 15 cm (11.8 x 7.9 x 5.9 in)	72 x 57.6 x 75.2 cm (28.4 x 22.7 x 29.6 in)	C2 with upper limit cut-out, exhaust fan and flue	2.9 kW	230 V, 50/60 Hz 1400 W	78 kg (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 availble in North America
Certifications: CE
Warranty¥: 2 years (parts and labor)

Lindberg/Blue M products

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 55 L (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.

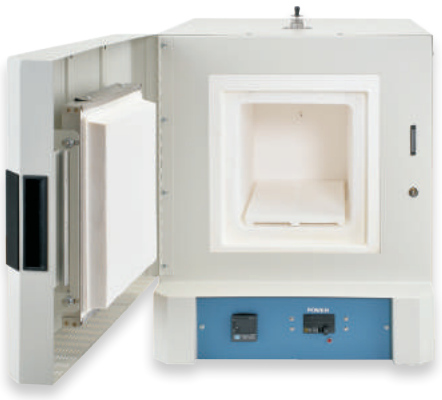
LGO™ heating element

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

- 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

Controller choices, all with over-temperature protection

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

Cat. No.	Capacity	Temp. Range	Interior (D x W x H)	Exterior (L x W x H)	Control	Electrical	Shipping Weight	Plug Type
BF51748 A-1	1.99 L (0.07 cu. ft.)	100° to 1100 °C	20.3 x 10.2 x 10.2 cm (4 x 8 x 4 in)	50.8 x 38.1 x 44.4 cm (20 x 15 x 17.5 in)	A/OTP	120 V, 50/60 Hz 1800 W, 15 A	25 kg (55 Lb.)	
BF51748C-1**	1.99 L (0.07 cu. ft.)	100° to 1100 °C	20.3 x 10.2 x 10.2 cm (4 x 8 x 4 in)	50.8 x 38.1 x 44.4 cm (20 x 15 x 17.5 in)	A/OTP	208/240 V, 50/60 Hz 1800 W, 7.5 A	25 kg (55 Lb.)	
BF51848 A-1	1.99 L (0.07 cu. ft.)	100° to 1100 °C	20.3 x 10.2 x 10.2 cm (4 x 8 x 4 in)	50.8 x 38.1 x 44.4 cm (20x 15 x 17.5 in)	B/OTP	120 V, 50/60 Hz 1800 W, 15 A	25 kg (55 Lb.)	
BF51848C-1	1.99 L (0.07 cu. ft.)	100° to 1100 °C	20.3 x 10.2 x 10.2 cm (4 x 8 x 4 in)	50.8 x 38.1 x 44.4 cm (20 x 15 x 17.5 in)	B/OTP	208/240 V, 50/60 Hz 1800 W, 7.5 A	25 kg (55 Lb.)	
BF51848KC-1**	1.99 L (0.07 cu. ft.)	100° to 1100 °C	20.3 x 10.2 x 10.2 cm (4 x 8 x 4 in)	50.8 x 38.1 x 44.4 cm (20 x 15 x 17.5 in)	B/OTP	208/240 V, 50/60 Hz 1800 W, 7.5 A	25 kg (55 Lb.)	
BF51766 A-1	5.3 L (0.19 cu. ft.)	100° to 1100 °C	22.9 x 15.2 x 15.2 cm (9 x 6 x 6 in)	53.3 x 43.1 x 54.6 cm (21 x 17 x 21.5 in)	A/OTP	120 V, 50/60 Hz 1800 W, 15 A	50 kg (110 Lb.)	
BF51766C-1**	5.3 L (0.19 cu. ft.)	100° to 1100 °C	22.9 x 15.2 x 15.2 cm (9 x 6 x 6 in)	53.3 x 43.1 x 54.6 cm (21 x 17 x 21.5 in)	A/OTP	208/240 V, 50/60 Hz 1800 W, 7.5 A	50 kg (110 Lb.)	
BF51766KC-1**	5.3 L (0.19 cu. ft.)	100° to 1100 °C	22.9 x 15.2 x 15.2 cm (9 x 6 x 6 in)	53.3 x 43.1 x 54.6 cm (21 x 17 x 21.5 in)	A/OTP	208/240 V, 50/60 Hz 1800 W, 7.5 A	50 kg (110 Lb.)	
BF51866 A-1	5.3 L (0.19 cu. ft.)	100° to 1100 °C	22.9 x 15.2 x 15.2 cm (9 x 6 x 6 in)	53.3 x 43.1 x 54.6 cm (21 x 17 x 21.5 in)	B/OTP	120 V, 50/60 Hz 1800 W, 15 A	50 kg (110 Lb.)	
BF51866C-1	5.3 L (0.19 cu. ft.)	100° to 1100 °C	22.9 x 15.2 x 15.2 cm (9 x 6 x 6 in)	53.3 x 43.1 x 54.6 cm (21 x 17 x 21.5 in)	B/OTP	208/240 V, 50/60 Hz 1800 W, 7.5 A	50 kg (110 Lb.)	
BF51866KC-1**	5.3 L (0.19 cu. ft.)	100° to 1100 °C	22.9 x 15.2 x 15.2 cm (9 x 6 x 6 in)	53.3 x 43.1 x 54.6 cm (21 x 17 x 21.5 in)	B/OTP	208/240 V, 50/60 Hz 1800 W, 7.5 A	50 kg (110 Lb.)	
BF51794C-1**	18.4 L (0.65 cu. ft.)	100° to 1100 °C	35.6 x 22.9 x 22.9 cm (14 x 9 x 9 in)	65.4 x 53.3 x 66 cm (25.75 x 21 x 26 in.)	A/OTP	208/240 V, 50/60 Hz 3500 W, 14.6 A	59 kg (130 Lb.)	
BF51894C-1	18.4 L (0.65 cu. ft.)	100° to 1100 °C	35.6 x 22.9 x 22.9 cm (14 x 9 x 9 in)	65.4 x 53.3 x 66 cm (25.75 x 21 x 26 in)	B/OTP	208/240 V, 50/60 Hz 3500 W, 14.6 A	59 kg (130 Lb.)	
BF51728C-1**	42.5 L (1.5 cu. ft.)	100° to 1100 °C	45.7 x 30.5 x 30.5 cm (18 x 12 x 12 in)	76.2 x 60.9 x 71.1 cm (30 x 24 x 28 in)	A/OTP	208/240 V, 50/60 Hz 5600 W, 23.3 A	84 kg (185 Lb.)	No plug, no cable, requires hardwiring
BF51728RHDC-1*	42.5 L (1.5 cu. ft.)	100° to 1100 °C	45.7 x 30.5 x 30.5 cm (18 x 12 x 12 in)	76.2 x 60.9 x 71.1 cm (30 x 24 x 28 in)	A/OTP	208/240 V, 50/60 Hz 5600 W, 23.3 A	84 kg (185 Lb.)	No plug, no cable, requires hardwiring
BF51828C-1	42.5 L (1.5 cu. ft.)	100° to 1100 °C	45.7 x 30.5 x 30.5 cm (18 x 12 x 12 in)	76.2 x 60.9 x 71.1 cm (30 x 24 x 28 in)	B/OTP	208/240 V, 50/60 Hz, 23.3 A	84 kg (185 Lb.)	No plug, no cable, requires hardwiring
BF51828RHDC-1*	42.5 L (1.5 cu. ft.)	100° to 1100 °C	45.7 x 30.5 x 30.5 cm (18 x 12 x 12 in)	76.2 x 60.9 x 71.1 cm (30 x 24 x 28 in)	B/OTP	208/240 V, 50/60 Hz, 23.3 A	84 kg (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

Model BF51842C-1 with horizontal side swing door

- 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

Cat. No.	Capacity	Temp. Range	Interior (D x W x H)	Exterior (L x W x H)	Control	Electrical	Shipping Weight	Plug Type
Vertical Lift Door								
BF51731C-1	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	A	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51731BC-1**	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	A/OTC	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51732C-1	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	B	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51732BC-1	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	B/OTC	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51732PC-1**	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	C	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51732PBC-1**	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	C/OTC	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51732PFMC-1	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	C/FM	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51732PBFMC-1	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	C/OTC/FM	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
BF51732PBFCOMC-1*	16.4 L (0.6 cu. ft.)	100° to 1200 °C	27.9 x 33.0 x 17.8 cm (11 x 12 x 11 in)	58.4 x 61 x 68.6 cm (23 x 24 x 27 in)	C/OTC/FM	208/240 V, 50/60 Hz 4500 W, 16-19 A	75 kg	No plug, no cable, requires hardwiring
Horizontal Side Swing Door								
BF51841C-1**	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	A	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51841BC-1**	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	A/OTC	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51842C-1	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	B	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51842BC-1**	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	B/OTC	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51842PC-1	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in	C	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51842PBC-1	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	C/OTC	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51842PFMC-1	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	C/FM	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51842PBFMC-1	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	C/OTC/FM	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, requires hardwiring
BF51842PBFMCOMC1*	55.3 L (2.0 cu. ft.)	100° to 1200 °C	38.1 x 38.1 x 38.1 cm (15 x 15 x 15 in)	71.1 x 73.7 x 83.8 cm (28 x 29 x 33 in)	C/OTC/FM	208/240 V, 50/60 Hz 5800 W, 25 A	127 kg	No plug, no cable, 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[v]: 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 10 ft. 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 50/60 Hz, single-phase line
- Required power cord, hardwiring and interconnecting wiring are not included

Applications

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

Cat. No.	Capacity	Temp. Range	Interior (D x W x H)	Exterior (L x W x H)	Description	Electricial	Shipping Weight	Plug Type
BF51442C	9 L (0.32 cu. ft.)	100° to 1200 °C	35.6 x 19.5 x 13.3 cm (14 x 7.5 x 5.25 in)	50.8 x 50.8 x 62.2 cm (20 x 20 x 24.5 in)	With refractory plate heating element	208/240 V, 50/60 Hz 4800 W, 21A	66 kg (145 Lb.)	No plug, no cable, requires hardwiring
BF51542C	23 L (0.81 cu. ft.)	100° to 1200 °C	36.8 x 26.7 x 24.1 cm (14.5 x 10.5 x 9.5 in)	78.7 x 71.1 x 72.4 cm (31 x 28 x 28.5 in)	With Moldatherm heating element (four sides)	208/240 V, 50/60 Hz 6200 W, 26A	152 kg (335 Lb.)	No plug, no cable, requires 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	Electricial
CC58114C-1	A	208/240 V, 50/60 Hz, 30 A
CC58114PC-1	B	208/240 V, 50/60 Hz, 30 A
CC58114BC-1*	A, OTC	208/240 V, 50/60 Hz, 30 A
CC58114PBC-1**	B, OTC	208/240 V, 50/60 Hz, 30 A

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

**No digital communications port option available

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: 5.9 L (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

BF51333C	5.9 L (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)	208/540 V, 50/60 Hz, 5900 W; 25 A	200 kg (440 Lb.)	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

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 50/60 Hz, 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

Control consoles for 1500 °C box furnace

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

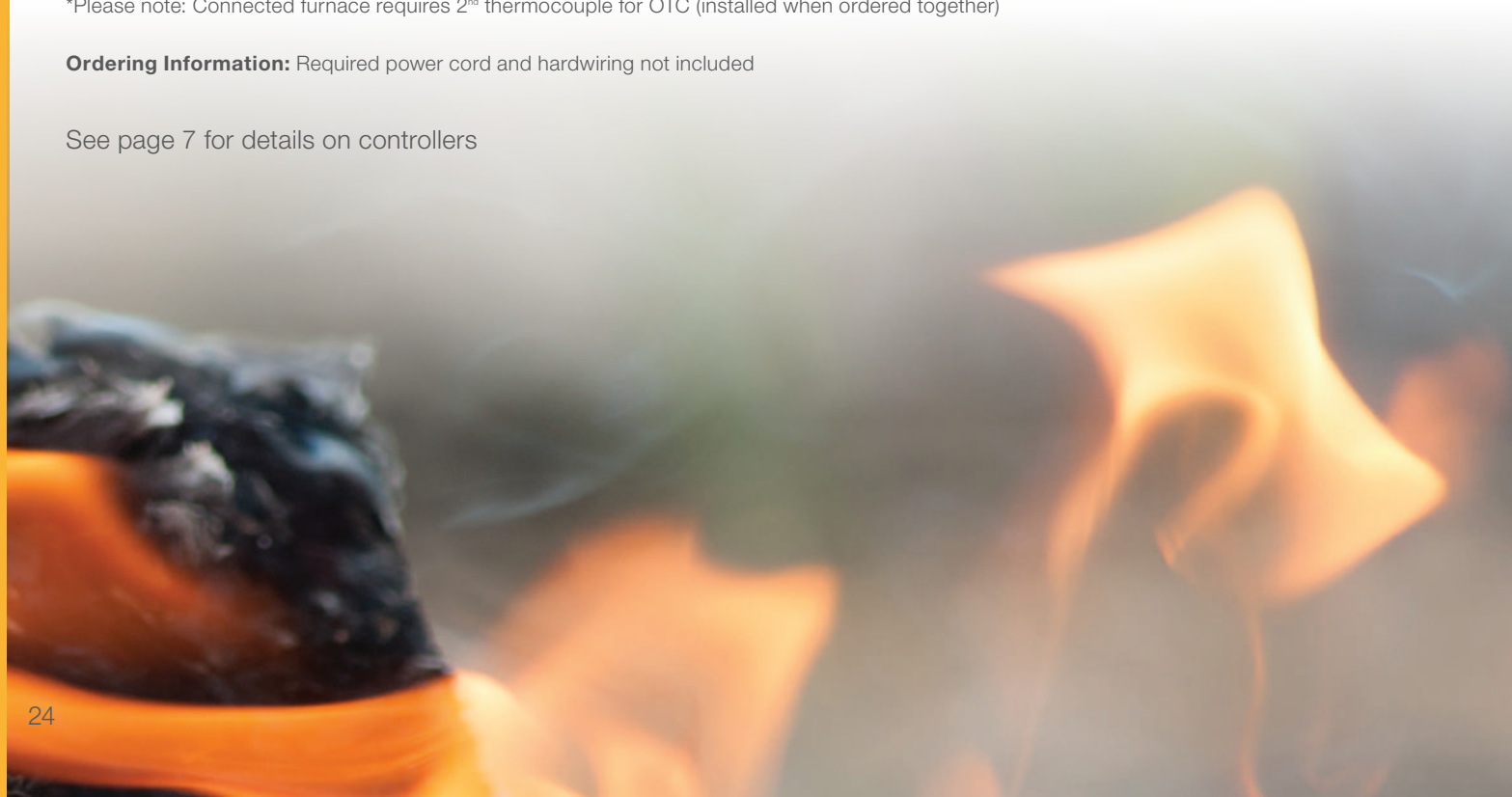
Not available in Europe

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

*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

- 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, 25 L models with side swing door

Control choices

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

BF51422PBC Box furnace with vertical lift door

Applications

- Annealing
- Melting
- Heat treatment
- Brazing
- Alloying

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

Ordering information: Required power cord and hardwiring are not included
Warranty[4]: 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

- 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

Applications

- Ashing
- Fusion
- Ignitions
- Alloying
- Sintering

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

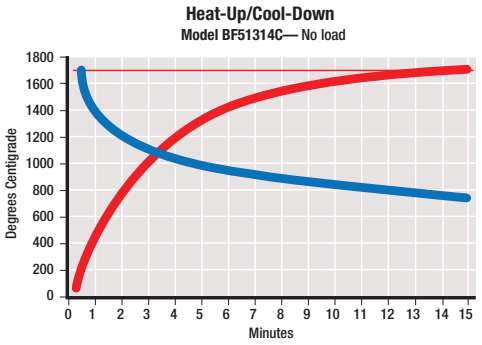
- Available in two popular chamber sizes (see chart)
- Double shell design for lower external cabinet temperature with energy savings
- Moldatherm high temperature ceramic fiber insulation with advanced graded design for fast heat-up and resistance to thermal shock
- Removable panels for easy access 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

Applications

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



■ Heat-Up ■ Cool-Down
42% holding power @ 1700 °C
Chamber uniformity @1700°C ±3% °C nominal.
Model BF51314C Heat-Up/Cool-Down, No Load.

Cat. No.	Capacity	Temp. Range	Control	Interior (D x W x H)	Exterior (L x W x H)	Electrical	Shipping Weight	Plug Type
BF51314C	2.5 L (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)	208/540 V, 50/60 Hz, 3500 W, 14.6 A	39 kg (85 lbs)	No plug, no cable, requires hardwiring
BF51524C	9 L (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)	208/540 V, 50/60 Hz, 5000 W, 50 A	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 (L x W x H)	Electrical
CC59246PCOMC-1	C, with RS-485 digital communications port	BF51314C	38.1 x 53.3 x 25.4 cm (15 x 21 x 10 in)	208/240 V, 50/60 Hz, 30 A
CC59246PBCOMC-1*	C, OTC with RS-485 digital communications port	BF51314C		
CC59256PCOMC-1	C, with RS-485 digital communications port	BF51524C		
CC59256PBCOMC-1*	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

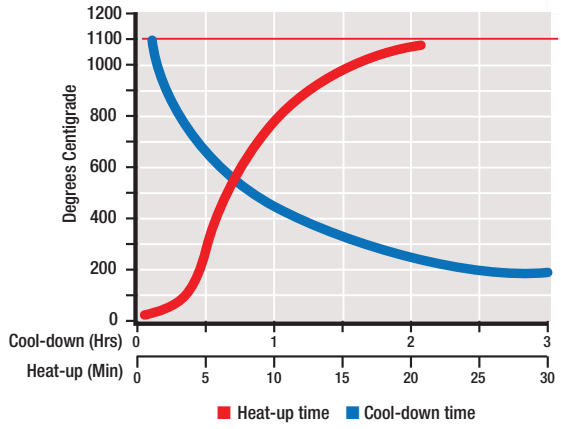
Control options

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

Applications

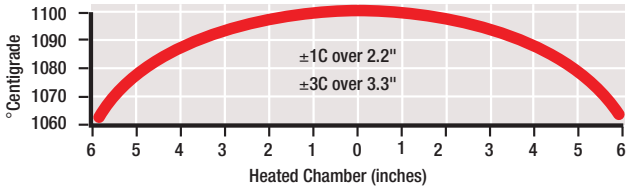
- Pyrolysis
- Thermal Expansion
- Calibration
- Sintering
- Viscosity testing

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



1" Dia. mullite process tube. Ends plugged

Model TF55035A Uniformity Profile, No Load

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
TF55030 A-1	100° to 1100 °C	30.5 cm (12 in)	25.4 cm (1 in)	28 x 41 x 38 cm (11 x 16 x 15 in)	A, OTC	120 V, 50/60 Hz 800 W, 6.8 A	16 kg (35 Lb.)	
TF55030C-1	100° to 1100 °C	30.5 cm (12 in)	25.4 cm (1 in)	28 x 41 x 38 cm (11 x 16 x 15 in)	A, OTC	208/240 V, 50/60 Hz 800 W, 3.3 A	16 kg (35 Lb.)	
TF55035 A-1	100° to 1100 °C	30.5 cm (12 in)	25.4 cm (1 in)	28 x 41 x 38 cm (11 x 16 x 15 in)	B, OTC	120 V, 50/60 Hz 800 W, 6.8 A	16 kg (35 Lb.)	
TF55035C-1	100° to 1100 °C	30.5 cm (12 in)	25.4 cm (1 in)	28 x 41 x 38 cm (11 x 16 x 15 in)	B, OTC	208/240 V, 50/60 Hz 800 W, 3.3 A	16 kg (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. 1 set of two tube adapters 1” included.

Includes: 9ft. (3m) power cord

Warranty[x]: 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

- 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

Applications

- Gravimetric analysis
- Sintering
- Quantitative analysis
- Heat treatment

* Note that maximum temperature difference between center zone and two end zones is +/-50°C

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

Tube adapters

Cat. No.	Description	For Use With
59541TA	1 in adapter	STF55346C -1 tube furnace
59543	2 in adapter	STF55346C -1 tube furnace
59545	3 in adapter	STF55346C -1 tube furnace
59555	3 in adapter	STF55666C -1 tube furnace
59556	4 in adapter	STF55666C -1 tube furnace
59557	5 in adapter	STF55666C -1 tube furnace
59558TA	6 in adapter	STF55666C -1 tube furnace
59549	Blank (solid) adapter	STF55346C -1 tube furnace
59559TA	Blank (solid) adapter	STF55666C -1 tube furnace

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)

Thermo Scientific Lindberg/Blue M 1200 °C split-hinge tube furnaces and controllers

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

- 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

Applications

- Annealing
- Crystal growing
- Calibration
- Heat treatment

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

Accessories

Cat. No.	Description	For Use with
59510	0.75 in adapter	HTF55122 tube furnace
59511	1 in adapter	HTF55122 tube furnace
59521	1 in adapter	HTF55322, HTF55342, HTF55347 tube furnaces
59522	1.5 in adapter	HTF55322, HTF55342, HTF55347 tube furnaces
59523	2 in adapter	HTF55322, HTF55342, HTF55347 tube furnaces
59524	2.5 in adapter	HTF55322, HTF55342, HTF55347 tube furnaces
59525	3 in adapter	HTF55322, HTF55342, HTF55347 tube furnaces
59535TA	3 in adapter	HTF55667 tube furnace
59536TA	4 in adapter	HTF55667 tube furnace
59537TA	5 in adapter	HTF55667 tube furnace
59538TA	6 in 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 furrnace

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[x]: 1 year (parts and labor)

Thermo Scientific controllers for Lindberg/Blue M 1200 °C tube Furnaces

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

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 HTF55322A	120 V, 50/60 Hz, 30 A
CC58114C-1*	Single zone, A	HTF55122C HTF55342C	208/240 V, 50/60 Hz, 30 A
CC58114BA-1*	Single zone, A, OTC	HTF55122A HTF55322A	120 V, 50/60 Hz, 30 A
CC58114PA-1	Single zone, B	HTF55122A HTF55322A	120 V, 50/60 Hz, 30 A
CC58114PBA-1	Single zone, B, OTC	HTF55122A HTF55322A	120 V, 50/60 Hz, 30 A
CC58114BC-1*	Single zone, A, OTC	HTF55122C HTF55342C	208/240 V, 50/60 Hz, 30 A
CC58114PBC-1	Single zone, B, OTC	HTF55122C HTF55342C	208/240 V, 50/60 Hz, 30 A
CC58114PC-1	Single zone, B	HTF55122C HTF55342C	208/240 V, 50/60 Hz, 30 A
CC58434C-1	Three-zone, center zone: A, end zones: A	HTF55347C HTF55667C	208/240 V, 50/60 Hz, 70 A
CC58434BC-1	Three-zone, center zone: A, end zones: A, OTC	HTF55347C HTF55667C	208/240 V, 50/60 Hz, 70 A
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 HTF55667C	208/240 V, 50/60 Hz, 70 A
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 HTF55667C	208/240 V, 50/60 Hz, 70 A
CC584343PBC-1	Three-zone, center zone: B, end zones: B, OTC	HTF55347C HTF55667C	208/240 V, 50/60 Hz, 70 A
CC584343PC-1	Three-zone, center zone: B, end zones: B	HTF55347C HTF55667C	208/240 V, 50/60 Hz, 70 A

*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
STF55433C-1	B	500° to 1500 °C	30.5 cm (12 in)	48.3 x 58.4 x 43.2 cm (19 x 23 x 17 in)	2.54 to 7.62 cm (1 to 3 in)	208/240 V, 50/60 Hz, 6000 W, 25 A	123 kg (270 Lb.)	No plug, no cable, requires hardwiring
STF55433PC-1	C	500° to 1500 °C	30.5 cm (12 in)	48.3 x 58.4 x 43.2 cm (19 x 23 x 17 in)	2.54 to 7.62 cm (1 to 3 in)	208/240 V, 50/60 Hz, 6000 W, 25 A	123 kg (270 Lb.)	No plug, no cable, requires hardwiring
STF55433PBC-1	C, OTC	500° to 1500 °C	30.5 cm (12 in)	48.3 x 58.4 x 43.2 cm (19x23x17 in)	2.54 to 7.62 cm (1 to 3 in)	208/240 V, 50/60 Hz, 6000 W, 25 A	123 kg (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
7100-2444-070	2.5 cm (1 in)	STF55433C-1, STF55433PC-1, STF55433PBC-1
7100-2444-068	5 cm (2 in)	STF55433C-1, STF55433PC-1, STF55433PBC-1
7100-2444-069	7.6 cm (3 in)	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[x]: 1 year (parts and labor)

Thermo Scientific Lindberg/Blue M 1700 °C tube furnaces

Rapid heat-up, recovery and cooldown

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

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

Applications

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

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

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

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

Accessories - venstibules/sleeves

Cat. No.	Description	For Use with
7219-2134-001	1 in sleeve	STF54434C tube furnace
7219-2134-002	2 in sleeve	STF54434C tube furnace
7219-2134-003	3 in sleeve	STF54434C tube furnace
7219-2134-011	3 in sleeve	STF54454C tube furnace
7219-2134-012	2 in sleeve	STF54454C tube furnace
7219-2134-013	1 in sleeve	STF54454C tube furnace
7219-2147-001	1 in venstibule	STF54434C tube furnace
7219-2147-002	2 in venstibule	STF54434C tube furnace
7219-2147-011	3 in venstibule	S TF54454C tube furnace
7219-2147-003	3 in venstibule	STF54434C tube furnace
7219-2147-012	2 in venstibule	STF54454C tube furnace
7219-2147-013	1 in venstibule	STF54454C tube furnace

- 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)

thermoscientific

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.

Some furnace models are delivered without a plug. As noted in the specification tables, these models require hardwiring by a technician.	
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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