



Thermo Scientific Laboratory Products
for Every Lab, Every Day

essential solutions for
maximizing productivity

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Thermo Scientific Thermolyne Small Benchtop Muffle Furnaces

Fast heatup and excellent energy efficiency — ideal for ashing most types of organic and inorganic samples, heat treating small steel parts, performing ignition tests, conducting gravimetric analysis and for the determination of volatile and suspended solids



- Available in two capacities and reaches a maximum temperature of 1100°C
- Digital single setpoint temperature control to 1100°C
- Single display shows actual temperature or setpoint
- Ceramic fiber insulation permits faster heatup, reducing energy consumption
- Embedded heating element on top and both sides improves temperature uniformity
- Drop-down door doubles as a shelf for loading and unloading
- Door safety switch stops power to heating elements when door is opened
- Thermocouple break protection cuts power to heating elements, preventing failure runaway condition
- 0.95cm (0.38in.) dia. port in chamber rear for monitoring temperatures with independent measuring devices

Ordering Information: Replacement heating elements and thermocouples available separately

Includes: Thermocouple, line cord, and 1 hearth tray

Warranty*: 1 year (parts and labor)

Certifications: All units CSA approved

Cat. No.	Capacity	Temp. Range	Temp. Stability (Uniformity)	Interior D x W x H	Exterior L x W x H	Electrical	Shipping Weight
FB1315M	1.3L (0.04 cu. ft.)	100° to 1100°C	±0.3°C at 1000°C (±7.8°C at 1000°C)	13 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	120V 50/60Hz 1060w	9kg (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 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	208V 50/60Hz 1060w	9kg (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 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	240V 50/60Hz 1060w	9kg (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 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	100V 50/60Hz 1060w	9kg (20 lb.)
FB1310M-33	1.3L (0.04 cu. ft.)	100° to 1100°C	±0.3°C at 1000°C (±7.8°C at 1000°C)	13 × 10.3 × 9.8cm (5 × 4 × 3.8in.)	33 × 23 × 36cm (13 × 9 × 14in.)	240V 50/60Hz 1060w	9kg (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 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	120V 50/60Hz 1450w	12.7kg (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 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	208V 50/60Hz 1520w	12.7kg (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 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	240V 50/60Hz 1520w	12.7kg (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 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	240V 50/60Hz 1520w	12.7kg (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 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	100V 50/60Hz 1450w	12.7kg (28 lb.)

-33 units available with plug for China: please add "CN" at the end of the Cat. No.

Hearth Trays

Cat. No.	For Use With
PH44X1	FB1300 Furnace
PH48X1	FB1400 Muffle Furnace

Thermo Scientific Thermolyne Industrial Benchtop Muffle Furnaces

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



- Reaches 1200°C maximum temperature
- Heavy-duty firebrick insulation surrounds 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 (programmable models only)

Single-setpoint Controller (B1)

- Single ramp to setpoint and a dwell
- Single display shows actual temperature or setpoint

8-step Programmable Controller (C1)

- Ramps to vary heat-up rate and dwell cycles to hold temperature at set levels from 0.1 to 999.9 minutes
- “Holdback” feature “holds” program until furnace temperature heats up or cools down to preprogrammed parameters — program will never outrun furnace performance

Includes: Oven, Platinel® II thermocouple and a ceramic hearth plate to protect the bottom heating element
Warranty*: 1 year (parts and labor)
Certifications: All units cUL, UL listed
Notes: 120V models require fixed wiring and are not supplied with a power cord

Cat. No.	Capacity	Temp. Range	Control	Interior D x W x H	Exterior L x W x H	Electrical	Shipping Weight
FD1535M	2.2L (0.08 cu. ft.)	100° to 1200°C	B1	22.8 × 10.1 × 9.5cm (9 × 4 × 3.75in.)	45.7 × 27.9 × 41.9cm (18 × 11 × 16.5in.)	120V 50/60Hz, 18.6A 2230w	23.5kg (52 lb.)
FD1530M*	2.2L (0.08 cu. ft.)	100° to 1200°C	B1	22.8 × 10.1 × 9.5cm (9 × 4 × 3.75in.)	45.7 × 27.9 × 41.9cm (18 × 11 × 16.5in.)	240V 50/60Hz, 9.3A 2230w	23.5kg (52 lb.)
FD1545M	2.2L (0.08 cu. ft.)	100° to 1200°C	C1	22.8 × 10.1 × 9.5cm (9 × 4 × 3.75in.)	45.7 × 27.9 × 41.9cm (18 × 11 × 16.5in.)	120V 50/60Hz, 18.6A 2230w	23.5kg (52 lb.)
FD1540M*	2.2L (0.08 cu. ft.)	100° to 1200°C	C1	22.8 × 10.1 × 9.5cm (9 × 4 × 3.75in.)	45.7 × 27.9 × 41.9cm (18 × 11 × 16.5in.)	240V 50/60Hz, 9.3A 2230w	23.5kg (52 lb.)
FD1530M-33	2.2L (0.08 cu. ft.)	100° to 1200°C	B1	22.8 × 10.1 × 9.5cm (9 × 4 × 3.75in.)	45.7 × 27.9 × 41.9cm (18 × 11 × 16.5in.)	240V 50/60Hz, 6.5A 1560w	23.5kg (52 lb.)
FD1540M-33	2.2L (0.08 cu. ft.)	100° to 1200°C	C1	15.2 × 12.7 × 10.8cm (6 × 5 × 4.25in.)	40 × 25 × 37cm (15.8 × 10 × 14.5in.)	240V 50/60Hz, 6.5A 1560w	12.7kg (28 lb.)

*available with plug for China; please add "CN" at the end of the Cat. No.

Hearth Trays

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

Thermo Scientific Thermolyne Benchtop Muffle Furnaces

Ideal for general laboratory use, including gravimetric analysis, sintering, quantitative analysis and heat treating



Includes: Power cord
Warranty*: 1 year (parts and labor)
Certifications: CSA approved

- 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
- 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
- 0.95cm (0.38in.) dia. port for monitoring chamber temperatures with independent measuring device at rear of chamber

F47900, F48000 Models

- F47900 models provide 2L of heating area, F48000 models provide 5L of heating area
- Includes one hearth tray, F48000 models also include a ceramic shelf (SH480X1) that doubles furnace load capacity

Choice of Temperature Controllers

- Furnaces that use B, C or D control also use a mechanical over-temperature protection relay
- **A1:** Digital single setpoint control; single display shows actual temperature or setpoint
- **B1:** Digital single setpoint control with a single ramp to setpoint and a dwell; single display shows actual temperature or 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
- **D1:** Digital programmable control with 4 stored programs, 16 segments per program, and RS-232 communications interface; mechanical over-temperature protection relay is included

Accessories

Cat. No.	Description	For Use With
PH479X1	Hearth Tray, 15.2 x 14.3 x 0.95cm	F47900 Muffle Furnace
SH480X1	Ceramic Shelf, 17.4 x 17.3 x 1.2cm	F48000 Muffle Furnace
PH480X1	Hearth Tray, 25.4 x 19.3 x 0.95cm	F48000 Muffle Furnace
AY408X1A	Exhaust Tubing Kit	Atmosphere Controlled Ashing and Muffle Furnaces

Cat. No.	Capacity	Temp. Range	Interior D x W x H	Exterior L x W x H	Control	Electrical	Shipping Weight
F47910‡	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	A1	240V 50/60Hz 1000w 4.2 A	18.5kg (41 lb.)
F47910-33	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	A1	240V 50/60Hz 1000w 4.2 A	18.5kg (41 lb.)
F47914	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	A1	100V 50/60Hz 750W 7.5A	18.5kg (41 lb.)
F47915‡	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	A1	120V 50/60Hz 1000w 8.3A	18.5kg (41 lb.)
F48010‡	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1	240V 50/60Hz 1800w 7.5A	27.2kg (60 lb.)
F48010-33	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1	240V 50/60Hz 1560w 6.5A	27.2kg (60 lb.)
F48015-60‡	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1	120V 50/60Hz 1800w 15A	27.2kg (60 lb.)
F48018‡	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	A1	208V 50/60Hz 1560w 7.5A	27.2kg (60 lb.)
F47920‡	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	B1	240V 50/60Hz 1000w 4.2A	18.5kg (41 lb.)
F47920-33	2L (0.07 cu. ft.)	100° to 1200°C 212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	B1	240V 50/60Hz 1000w 4.2A	18.5kg (41 lb.)
F47924	2L (0.07 cu. ft.)	100° to 1200°C 212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	B1	100V 50/60Hz 750w 7.5A	18.5kg (41 lb.)
F47925	2L (0.07 cu. ft.)	100° to 1200°C 212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	B1	120V 50/60Hz 1000w 8.3A	18.5kg (41 lb.)
F48020 -DB‡	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	B1	240V 50/60Hz 1800w 7.5A	18.5kg (41 lb.)
F48020-33	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	B1	240V 50/60Hz 1560w 6.5A	27.2kg (60 lb.)
F48028‡	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	B1	208V 50/60Hz 1560W 7.5A	27.2kg (60 lb.)
F48025-60‡	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	B1	120V 50/60Hz 1800w 15.0A	27.2kg (60 lb.)
F47920-80	2L (0.07 cu. ft.)	100° to 1200°C 212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	C1	240V 50/60Hz 1000w 4.2A	18.5kg (41 lb.)
F47920-33-80	2L (0.07 cu. ft.)	100° to 1200°C 212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	C1	240V 50/60Hz 1000w 4.2A	18.5kg (41 lb.)
F47924-80	2L (0.07 cu. ft.)	100° to 1200°C 212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	C1	100V 50/60Hz 750w 7.5A	18.5kg (41 lb.)
F47925-80	2L (0.07 cu. ft.)	100° to 1200°C 212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	C1	120V 50/60Hz 1000w 8.3A	18.5kg (41 lb.)
F48020-80	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	C1	240V 50/60Hz 1800w 7.5A	27.2kg (60 lb.)
F48020-33-80	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	C1	240V 50/60Hz 1800w 6.5A	27.2kg (60 lb.)
F48025-60-80‡	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	C1	120V 50/60Hz 1800w 15.0A	27.2kg (60 lb.)
F48028-80	5.8L (0.2 cu. ft.)	100° to 1200°C 212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	C1	208V 50/60Hz 1560w 7.5A	27.2kg (60 lb.)
F47950‡	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	D1	240V 50/60Hz 1000w 4.2A	18.5kg (41 lb.)
F47950-33	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	D1	240V 50/60Hz 1000w 4.2A	18.5kg (41 lb.)
F47954	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	D1	100V 50/60Hz 750w 7.5A	18.5kg (41 lb.)
F47955	2L (0.07 cu. ft.)	100° to 1200°C (212° to 2192°F)	15 × 13.7 × 10cm (6 × 5 × 4in.)	39 × 28.5 × 47cm (15.5 × 11.3 × 18.5in.)	D1	120V 50/60Hz 1000w 8.3A	18.5kg (41 lb.)
F48050-33	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1	240V 50/60Hz 1800w 6.5A	27.2kg (60 lb.)
F48050‡	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1	240V 50/60Hz 1800w 7.5A	27.2kg (60 lb.)
F48055-60‡	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1	120V 50/60Hz 1800w 15.0A	27.2kg (60 lb.)
F48058‡	5.8L (0.2 cu. ft.)	100° to 1200°C (212° to 2192°F)	25 × 18 × 13cm (10 × 7 × 5in.)	50 × 34 × 19cm (19.5 × 13.3 × 19in.)	D1	208V 50/60Hz 1560w 7.5A	27.2kg (60 lb.)

‡ CSA listed; -60 models include 20-amp cord.

-33 units available with plug for China; please add "CN" at the end of the Cat. No.

Thermo Scientific Thermolyne Premium Large Muffle Furnaces

Robust design and choice of four temperature controllers, ideal for industrial applications including ashing organic and inorganic samples and conducting gravimetric analysis



- Spacious 14L (0.5 cu. ft.) capacity and reaches a maximum of 1200°C
- Four heating elements are located on the 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 the chamber incorporates a 0.95cm (0.38in.) dia. 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

Choice of Temperature Controllers

- **A1:** Digital single setpoint control; single display shows actual temperature or setpoint
- **B1:** Digital single setpoint control with single ramp to setpoint and a dwell; single display shows actual temperature or setpoint
- **C1:** Digital programmable control with one stored program of eight segments
- **D1:** Digital programmable control with four stored programs, 16 segments per program and Controller includes RS-232 communications

Includes: Models F6010 and F6018 include a cord and plug set
Required Accessories: All except Models F6010 and F6018 require a conduit connection
Warranty*: 1 year (parts and labor)
Certifications: All units CSA approved

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
F6018	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±0.3°C ±2.2°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	A1	208V 50/60Hz 11.2A 2325w	60.8kg (134 lb.)
F6010*	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±0.3°C ±2.2°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	A1	240V 50/60Hz 12.9A 3095w	60.8kg (134 lb.)
F6028C	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	B1	208V 50/60Hz 19.2A 4000w	60.8kg (134 lb.)
F6020C	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	B1	240V 50/60Hz 18.3A 4400w	60.8kg (134 lb.)
F6020C-33	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	B1	240V 50/60Hz 18.3A 4400w	60.8kg (134 lb.)
F6028C-80	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	C1	208V 50/60Hz 19.2A 4000w	60.8kg (134 lb.)
F6020C-80	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	C1	240V 50/60Hz 18.3A 4400w	60.8kg (134 lb.)
F6020C-33-80	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	C1	240V 50/60Hz 18.3A 4400w	60.8kg (134 lb.)
F6038CM	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	D1	208V 50/60Hz 19.3A 4000w	60.8kg (134 lb.)
F6030CM	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	D1	240V 50/60Hz 18.3A 4400w	60.8kg (134 lb.)
F6030CM-33	14L (0.5 cu.ft.)	100° to 1200°C (212° to 2192°F)	±1.5°C ±4.5°C	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 48.5 x 53.3cm (20.1 x 19.1 x 21in.)	D1	240V 50/60Hz 18.3A 4400w	60.8kg (134 lb.)

* available with plug and cord for China: order F6010CN

Accessories

Cat. No.	Description
JSX16	Shelf Pegs (4 required)
PH177X1	Hearth Tray, 22.9 x 27.3 x 1.9cm
PHX1	Hearth Tray, 8.2 x 10.1 x 1.27cm
SH408X1	Stainless-steel Shelf

Thermo Scientific Thermolyne Largest Tabletop Muffle Furnaces

Ideal for safe operation with a range of applications including annealing glass, determinations of volatiles, catalyst research and ashing organic and inorganic samples



- Triple the usable working area with two supplied accessory refractory shelves
- 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
- Adjustable power output from 1 to 100%

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 0.95cm (0.38in.) 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

- Furnaces that use B1, C1 or D1 control also use a mechanical Over-temperature Protection relay
- **B1:** Digital single setpoint control with a single ramp to setpoint and dwell; single display shows actual temperature or setpoint
- **C1:** Digital programmable control with one stored program of 8 segments
- **D1:** Digital programmable control with 4 stored programs, 16 segments per program, and RS-232 communications interface

Warranty^Y: 1 year (parts and labor)
Certifications: All units CSA approved

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
F30428C	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	B1	208V 50/60Hz 26.4A 5500w	117.9kg (260 lb.)
F30420C	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	B1	240V 50/60Hz 22.9A 5500w	117.9kg (260 lb.)
F30420C-33	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	B1	240V 50/60Hz 22.9A 5500w	117.9kg (260 lb.)
F30428C-80	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	C1	208V 50/60Hz 26.4A 5500w	117.9kg (260 lb.)
F30420C-80	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	C1	240V 50/60Hz 22.9A 5500w	117.9kg (260 lb.)
F30420C-33-80	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	C1	240V 50/60Hz 22.9A 5500w	117.9kg (260 lb.)
F30438CM	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	D1	208V 50/60Hz 26.4A 5500w	117.9kg (260 lb.)
F30430CM	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	D1	240V 50/60Hz 22.9A 5500w	117.9kg (260 lb.)
F30430CM-33	45L (1.6 cu. ft.)	100° to 1093°C	±1.2°C at 1000°C ±3.45°C	36 × 36 × 36cm (14 × 14 × 14in.)	64.7 × 54.6 × 74.9cm (25.5 × 21.5 × 29.5in.)	D1	208V 50/60Hz 22.9A 5500w	117.9kg (260 lb.)

Accessories

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

Thermo Scientific Thermolyne Atmosphere Controlled Ashing Furnaces

Ideal for coal and coke ashing procedures



Warranty*: 1 year (parts and labor)
Certifications: CSA certified

- Reaches 975°C with the standard stainless-steel manifold and 1093°C with the optional inconel manifold
- Adjustable gas flowmeter/valve (0-80L/min.) on front for easy access when adjusting the airflow rate
- Stainless-steel manifold at rear chamber prewarms incoming gases, provides a maximum temperature gradient of only $\pm 3^{\circ}\text{C}$ at 750°C
- Chamber rear has a 0.95cm (0.38in.) dia. port for monitoring chamber temperatures with independent measuring devices
- Includes 0.64cm (0.25in.) I.D. or 0.96cm (0.375in.) O.D. hose barb (in back of chamber) for inert gas line

Type F6000

- With two dual-purpose stainless-steel trays and handle to accommodate 24 (30mL) porcelain crucibles or 38 (10mL) quartz crucibles

Type F6000-60 programmable models

- Meet ASTM[®] D3174 specifications: 3 to 4 air exchanges per min.
- Can be programmed to norm: "Heating rate of 8°C/min. to 500°C, 6°C/min. from 500° to 750°C, Hold at 750°C for two hours, then turn off automatically"

Cat. No.	Capacity	Maximum Temp.	Holds	Interior D x W x H	Exterior L x W x H	Control	Electrical
F6020C-33-60†	14L (0.5 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital single setpoint with ramp and dwell (B1)	240V, 18.3A 4400w
F6028C-60†	14L (0.5 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital single setpoint with ramp and dwell (B1)	208V, 19.2A 4000w
F6020C-33-60-80†	14L (0.5 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital programmable with 1 program, 8 segments (C1)	240V, 18.3A 4400w
F6028C-60-80	14L (0.5 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital programmable with 1 program, 8 segments (C1)	208V, 19.2A 4000w
F6030CM-33-60†	14L (0.5 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	25 x 33 x 18cm (10 x 12.8 x 6.8in.)	51 x 49 x 53cm (20 x 19.1 x 21in.)	Digital programmable with 4 programs, 16 segments each (D1)	240V, 18.3A 4400w
F30420C-60-80†	45L (1.6 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5x 21.5 x 29.5in.)	Digital programmable with 1 program, 8 segments (C1)	240V, 22.9A 5500w
F30420-33-60-80	45L (1.6 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5x 21.5 x 29.5in.)	Digital programmable with 1 program, 8 segments (C1)	240V, 22.9A 5500w
F30428C-60-80†	45L (1.6 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5x 21.5 x 29.5in.)	Digital programmable with 1 program, 8 segments (C1)	208V, 23.4A 5500w
F30430CM-60†	45L (1.6 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5x 21.5 x 29.5in.)	Digital programmable with 4 programs, 16 segments each (D1)	240V, 22.9A 5500w
F30430CM-33-60†	45L (1.6 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5x 21.5 x 29.5in.)	Digital programmable with 4 programs, 16 segments each (D1)	240V, 22.9A 5500w
F30438CM-60†	45L (1.6 cu.ft.)	975°C	24 (30mL) porcelain or 38 (10mL) quartz crucibles	36 x 36 x 36cm (14 x 14 x 14in.)	65 x 55 x 75cm (25.5x 21.5 x 29.5in.)	Digital programmable with 4 programs, 16 segments each (D1)	208V, 23.4A 5500w

† CSA approved.

Accessories

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	Shelf Handle	Atmosphere Controlled Ashing Furnaces
SH304X1	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

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



- Unique insulation and heating element composites to 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 best control parameters for the thermal process
- PID control (proportional, integral, derivative) prevents 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 (1in. dia., top) and air inlet (0.375in. 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, with over-temperature protection:

- **A:** Digital single segment, single setpoint, one ramp to setpoint
- **B:** Digital single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control

Ordering Information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace. Up to 30 units can be connected to one PC
Includes: 10ft. power cord except 1.5 cu. ft. models which require customer-supplied power cord or hardwiring
Warranty*: 1 year (parts and labor)
Certifications: UL

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

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

Thermo Scientific Lindberg/Blue M LGO Box Furnaces

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



- Feature exclusive LGO™ (light gauge overbend) 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
- Choice of side hinge or vertical lift door
- 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 (proportional, integral, derivative) 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

Digital, Single-Setpoint Controller (A)

- Single segment, single setpoint, one ramp to setpoint

Digital Single-Program, Multiple-Segment Programmable Controller (B)

- Single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control

Digital Multiple-Program, Multiple-Segment Programmable Controller (C)

- Available on models with P designation
- Multiple programs and segments for ramp (up and down) and dwell (timed hold) temperature control

Over-temperature Control (OTC)

- Adjustable digital over-temperature control, available on selected models with B suffix designation
- 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
- Manual reset required for safety
- Operates via magnetic contacts through signal from independent thermocouple

Flowmeter Option (FM) (Inert Atmosphere Only)

- Available on selected models with FM designation
- Gas flowmeter, adjustable, located on front control panel
- Adjustable flowrate, range 1.0 to 10.0 cu. ft./hr. standard
- Suitable for inert gas or airflow to chamber
- Allows fresh air exchange for ashing applications
- Not suitable for combustible or volatile gases

Ordering Information: Required power cord and hardwiring not included. Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC

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^Y: 1 year (parts and labor)

Cat. No.	Capacity	Temp. Range	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Control	Electrical	Shipping Weight
BF51731C-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	A	208/240V 50/60Hz 4500w	75kg
BF51731BC-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	A/OTC	208/240V 50/60Hz 4500w	75kg
BF51732C-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	B	208/240V 50/60Hz 4500w	75kg
BF51732BC-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	B/OTC	208/240V 50/60Hz 4500w	75kg
BF51732PC-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	C	208/240V 50/60Hz 4500w	75kg
BF51732PBC-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	C/OTC	208/240V 50/60Hz 4500w	75kg
BF51732PFMC-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	C/FM	208/240V 50/60Hz 4500w	75kg
BF51732PBFMC-1	16.4L (0.6 cu. ft.)	100° to 1200°C	27.9 × 33.0 × 17.8cm (11 × 12 × 11in.)	58.4 × 61 × 68.6cm (23 × 24 × 27in.)	C/OTC/FM	208/240V 50/60Hz 4500w	75kg
BF51841C-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	A	208/240V 50/60Hz 5800w	127kg
BF51841BC-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	A/OTC	208/240V 50/60Hz 5800w	127kg
BF51842C-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	B	208/240V 50/60Hz 5800w	127kg
BF51842BC-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	B/OTC	208/240V 50/60Hz 5800w	127kg
BF51842PC-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	C	208/240V 50/60Hz 5800w	127kg
BF51842PBC-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	C/OTC	208/240V 50/60Hz 5800w	127kg
BF51842PFMC-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	C/FM	5800w	127kg
BF51842PBFMC-1	55.3L (2.0 cu. ft.)	100° to 1200°C	38.1 × 38.1 × 38.1cm (15 × 15 × 15in.)	71.1 × 73.7 × 83.8cm (28 × 29 × 33in.)	C/OTC/FM	5800w	127kg

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

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

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



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

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

Warranty^Y: 1 year (parts and labor)

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

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

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



1200°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
- Built-in adjustable high limit over-temperature protection
- Simultaneous LED display of actual temperature vs. setpoint in °C or °F
- Designed for operation on 120, 208, or 240V 50/60Hz, single-phase line

Over-temperature Control on selected control consoles with "B" suffix designation

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

Ordering Information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC

Cat. No.	Description	Electrical
CC58114C-1	Single-Setpoint	208/240V 50/60Hz 30A
CC58114PC-1	Single-zone Console, Digital, Programmable	208/240V 50/60Hz 30A
CC58114BC-1	Single Setpoint with Over Temperature Control	208/240V 50/60Hz 30A
CC58114PBC-1	Single-zone Console, Digital, Programmable, with Over Temperature Control	208/240V 50/60Hz 30A

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

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, 0.375in. diameter, for fresh air or inert gas inlet (located at back wall, bottom)
- 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 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 10ft. compensated lead wire and polarized plug for accurate high-temperature measurement
- Removable panels for easy access to replaceable heating elements and thermocouples

Smart Heating Elements

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

Over-temperature Protection (OTP)†

- Adjustable digital over-temperature control 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
- Manual reset required for safety
- Operates via signal from independent thermocouple

Programmable Controller With Communications (COM Models)

- With RS-485 data port (communications card and port) for connection to remote computer
- Enables modification, interrogation and data transfer of instrument control and configuration parameters
- Up to 30 units can be connected to one PC
- Software not included (available as an option)

Digital Multiple Program, Multiple Segment Programmable Controller

- Microprocessor-based PID control (proportional, integral, derivative) prevents overshoot
- Up to 30 programs and up to 300 segments for ramp (up and down) and dwell (timed hold) temperature control – up to 99 segments per program
- Simultaneous digital LED display of actual temperature vs. setpoint in either °C or °F Digital Single-Setpoint Controller

Digital Single Setpoint Controller:

- Microprocessor-based PID control (proportional, integral, derivative) prevents overshoot
- Single segment, single setpoint, one ramp to setpoint
- Adjustable high limit over-temperature protection
- Simultaneous LED display of actual temperature vs. setpoint in either °C or °F

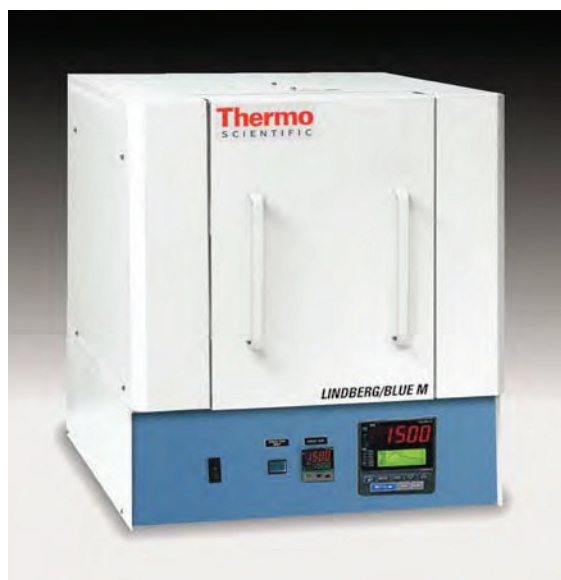
Ordering Information: Required power cord and hardwiring not included
Required Accessories: Power cord, hardwiring
Warranty*: 1 year (parts and labor)

Cat. No.	Capacity	Maximum Temp.	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Controller	Electrical	Shipping Weight
BF51634C-1	17L (0.6 cu. ft.)	1700°C	26.7 × 27.9 × 22.9cm (10.5 × 11 × 9in.)	61 × 71.1 × 78.7cm (24 × 28 × 31in.)	Digital/1 setpoint	208/240V 50/60Hz 5900w	159kg (350 lb.)
BF51634PC-1	17L (0.6 cu. ft.)	1700°C	26.7 × 27.9 × 22.9cm (10.5 × 11 × 9in.)	61 × 71.1 × 78.7cm (24 × 28 × 31in.)	Multisegment/multiprogram	208/240V 50/60Hz 5900w	159kg (350 lb.)
BF51634PCOMC-1	17L (0.6 cu. ft.)	1700°C	26.7 × 27.9 × 22.9cm (10.5 × 11 × 9in.)	61 × 71.1 × 78.7cm (24 × 28 × 31in.)	Multisegment/multiprogram/communications	208/240V 50/60Hz 5900w	159kg (350 lb.)
BF51664C-1	25.5L (0.9 cu. ft.)	1700°C	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	76.2 × 71.1 × 78.7cm (30 × 28 × 31in.)	Digital/1 setpoint	208/240V 50/60Hz 7100w	168kg (370 lb.)
BF51664PC-1	25.5L (0.9 cu. ft.)	1700°C	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	76.2 × 71.1 × 78.7cm (30 × 28 × 31in.)	Multisegment/multiprogram	208/240V 50/60Hz 7100w	168kg (370 lb.)
BF51664PCOMC-1	25.5L (0.9 cu. ft.)	1700°C	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	76.2 × 71.1 × 78.7cm (30 × 28 × 31in.)	Multisegment/multiprogram/communications	208/240V 50/60Hz 7100w	168kg (370 lb.)

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

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 hearthplate supports load and protects interior from spillage and mishandling
- Type “R” thermocouple is integrated into chamber backwall
- 6L models with vertical lift door, 25L models with side swing door

Ordering information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC

Warranty¹: 1 year (parts and labor)

Cat. No.	Capacity	Maximum Temp.	Controller	Interior Dimensions (D x W x H)	Exterior Dimensions (L x W x H)	Electrical
BF51433C-1	6L (0.21 cu. ft.)	1500°C	Multi Seg/1 Prog	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	208/240V 50/60Hz 6400w
BF51433BC-1	6L (0.21 cu. ft.)	1500°C	Multi Seg/1 Prog/OTC	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	208/240V 50/60Hz 6400w
BF51433PC-1	6L (0.21 cu. ft.)	1500°C	300 Seg/30 Prog	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	208/240V 50/60Hz 6400w
BF51433PBC-1	6L (0.21 cu. ft.)	1500°C	300 Seg/30 Prog/OTC	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	208/240V 50/60Hz 6400w
BF5143COMC-1	6L (0.21 cu. ft.)	1500°C	Multi Seg/1 Prog/RS485 port	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	208/240V 50/60Hz 6400w
BF51433PBCOMC-1	6L (0.21 cu. ft.)	1500°C	300 Seg/30 Prog/OTC/RS485 port	30.5 × 15.2 × 12.7cm (12 × 6 × 5in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	208/240V 50/60Hz 6400w
BF51643C-1	25L (0.88 cu. ft.)	1500°C	300 Seg/30 Prog	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	208/240V 50/60Hz 14800w
BF51643BC-1	25L (0.88 cu. ft.)	1500°C	300 Seg/30 Prog/OTC	39.4 × 27.9 × 22.9cm (15.5 × 11 × 9in.)	73.7 × 63.5 × 66cm (29 × 25 × 26in.)	1 208/240V 50/60Hz 4800w

Thermo Scientific M104 Muffle Furnaces

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



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

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

Cat. No.	Description	Capacity	Max. Temp.	Temp. Uniformity	Chamber Dimensions (D x W x H)	Exterior Dimensions (D x W x H)	Heat Output	Electrical	Shipping Weight
M104 Muffle Furnace									
50040485	With electronic controller and upper limit cut-out	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50040486	With electronic controller, upper limit cut-out and 24-hour timer	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50040487	With electronic controller, upper limit cut-out, 24-hour timer and exhaust fan	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50040488	With digital programmable temperature controller and upper limit cut-out	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50040489	With digital programmable temperature controller, upper limit cut-out and exhaust fan	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50049820	With adjustable fresh air supply for incinerating processes	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50040903	With electronic controller	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
M104G Muffle Furnace									
50047438	With electronic controller, upper limit cut-out and 24-hour timer	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50047439	With electronic controller, 24-hour timer and exhaust fan	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50051429	With electronic controller and adjustable fresh air supply	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50047440	With digital programmable controller	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50047441	With digital programmable controller and exhaust fan	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)
50057773	With digital programmable controller and adjustable fresh air supply for incinerating processes	3.5L (0.12355 cu. ft.)	1000°C	± 10°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	2.5kW	230V 50/60Hz, 1040W	51kg (112.4 lb.)

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

Thermo Scientific K114 Chamber Furnaces

Ideal for use in crowded laboratories and for routine high temperature laboratory applications such as incinerating, annealing, baking, pre-heating and drying



- Extremely short heating and recovery times along with accurate temperature control
- Asbestos-free insulation for minimal energy consumption and low exterior temperature
- High temperature accuracy and optimised heating system layout ensure most efficient use of work space
- Easy temperature controls and easy handling and loading via tilting door
- Designed for minimum space requirements and can be set up under a laboratory fume hood
- Reaches 1100°C in 35 min.*

Ordering Alerts: Not available in North America. Available options include choice of automatic upper limit cut-out (TWB), Digicon™ controller or Thermicon™ programmable controller, and timer

Certifications: CE

Warranty[†]: 2 years (parts and labor)

Cat. No.	Description	Capacity	Max. Temp.	Temp. Uniformity	Chamber Dimensions (D x W x H)	Exterior Dimensions (D x W x H)	Heat Output	Electrical	Shipping Weight
50040491	With electronic controller and upper limit cut-out	3.5L (0.12355 cu. ft.)	1100°C	± 6°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	1.7kW	230V 50/60Hz, 690W	79.4kg (36 lb.)
50040492	With electronic controller, upper limit cut-out, and 24-hr. timer	3.5L (0.12355 cu. ft.)	1100°C	± 6°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	1.7kW	230V 50/60Hz, 690W	79.4kg (36 lb.)
50040493	With digital programmable temperature controller and upper limit cut-out	3.5L (0.12355 cu. ft.)	1100°C	± 6°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	1.7kW	230V 50/60Hz, 690W	79.4kg (36 lb.)
50049812	With adjustable fresh air supply for incinerating purposes	3.5L (0.12355 cu. ft.)	1100°C	± 6°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	1.7kW	230V 50/60Hz, 690W	79.4kg (36 lb.)
50040902	With electronic controller	3.5L (0.12355 cu. ft.)	1100°C	± 6°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	1.7kW	230V 50/60Hz, 690W	79.4kg (36 lb.)
50047063	With electronic controller and exhaust fan	3.5L (0.12355 cu. ft.)	1100°C	± 6°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	1.7kW	230V 50/60Hz, 690W	79.4kg (36 lb.)
50051059	With digital programmable controller and exhaust fan	3.5L (0.12355 cu. ft.)	1100°C	± 6°K	16 × 17 × 13cm (6.3 × 6.7 × 5.1in)	57 × 45.6 × 64.6cm (22.4 × 18 × 25.4in)	1.7kW	230V 50/60Hz, 690W	79.4kg (36 lb.)

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

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.*

Ordering Alerts: Not available in North America; models available with optional 24 hr. timer, Thermicon P digital program controller with microprocessor, exhaust fan and/or exhaust flue. Exhaust flue (50006394) and tray (50006408) available separately

Certifications: CE

Warranty: 2 years (parts and labor)

Cat. No.	Description	Capacity	Max. Temp.	Temp. Uniformity	Chamber Dimensions (D x W x H)	Exterior Dimensions (D x W x H)	Heat Output	Electrical	Shipping Weight
51010272	With electronic controller and upper limit cut-out	9L (0.31783 cu. ft.)	1100°C	±7°K	30 × 20 × 15cm (11.8 × 7.9 × 5.9in)	72 × 57.6 × 75.2cm (28.4 × 22.7 × 29.6in)	2.9kW	230V 50/60Hz 1400W	78kg (172 lb.)
50057440	With electronic controller, upper limit cut-out and 24-hr. timer	9L (0.31783 cu. ft.)	1100°C	±7°K	30 × 20 × 15cm (11.8 × 7.9 × 5.9in)	72 × 57.6 × 75.2cm (28.4 × 22.7 × 29.6in)	2.9kW	230V 50/60Hz 1400W	78kg (172 lb.)
51000808	With digital program controller, upper limit cut-out, exhaust fan and flue	9L (0.31783 cu. ft.)	1100°C	±7°K	30 × 20 × 15cm (11.8 × 7.9 × 5.9in)	72 × 57.6 × 75.2cm (28.4 × 22.7 × 29.6in)	2.9kW	230V 50/60Hz 1400W	78kg (172 lb.)
50056360	With electronic controller, upper limit cut-out, 24-hour timer and exhaust fan	9L (0.31783 cu. ft.)	1100°C	±7°K	30 × 20 × 15cm (11.8 × 7.9 × 5.9in)	72 × 57.6 × 75.2cm (28.4 × 22.7 × 29.6in)	2.9kW	230V 50/60Hz 1400W	78kg (172 lb.)
51000802	With digital program controller and upper limit cut-out	9L (0.31783 cu. ft.)	1100°C	±7°K	30 × 20 × 15cm (11.8 × 7.9 × 5.9in)	72 × 57.6 × 75.2cm (28.4 × 22.7 × 29.6in)	2.9kW	230V 50/60Hz 1400W	78kg (172 lb.)

Accessories M104, K114, M110 Muffle Furnaces

Cat. No.	Description	For Use With
Accessories		
50040537	Exhaust Flue	K114 Chamber Furnace and M104 Muffle Furnace
50040492	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	

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

Thermo Scientific Lindberg/Blue M Mini-Mite Tube Furnaces

Compact, portable 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

Ordering information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC
Includes: 9ft. (3m) power cord
Warranty[†]: 1 year (parts and labor)

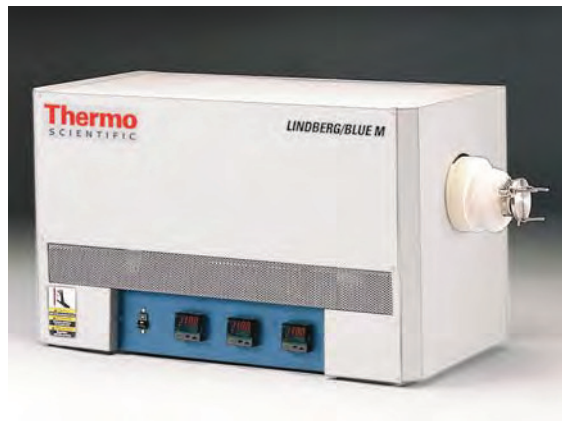
Cat. No.	Temperature Range	Heating Zone	Outside Dia. [Tube]	Overall L x W x H	Control Temperature	Electrical	Shipping Weight
TF55030A-1	100° to 1100°C	30.5cm (12in.)	30.5cm (12in.)	28 × 41 × 38cm (11 × 16 × 15in.)	Digital, Single Segment	120V 50/60Hz 800w	16kg (35 lb.)
TF55030C-1	100° to 1100°C	30.5cm (12in.)	30.5cm (12in.)	28 × 41 × 38cm (11 × 16 × 15in.)	Digital, Single Segment	208/240V 50/60Hz 800w	16kg (35 lb.)
TF55035A-1	100° to 1100°C	30.5cm (12in.)	30.5cm (12in.)	28 × 41 × 38cm (11 × 16 × 15in.)	Digital, Multisegment Programmable	120V 50/60Hz 800w	16kg (35 lb.)
TF55035C-1	100° to 1100°C	30.5cm (12in.)	30.5cm (12in.)	28 × 41 × 38cm (11 × 16 × 15in.)	Digital, Multisegment Programmable	208/240V 50/60Hz 800w	16kg (35 lb.)

To add RS-485 Digital Communications Port to Furnace model, add "**COM**" before last letter in cat. no. - e.g., TF55030**COM**A-1

208-240V units are available with cord and plug for China: please add "**K**" before last letter in cat.no. - e.g., TF55030**K**C-1 (note: no RS-485 port available for this version)

Thermo Scientific Lindberg/Blue M 1100°C Tube Furnaces

Three-zone 1100°C tube furnaces feature Moldatherm ceramic fiber insulation, excellent temperature uniformity, fast heatup and cooldown, and quick recovery 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 zones, three programmable controllers (one for each zone)
- Microprocessor-based self-tuning PID control (proportional, integral, derivative) provides optimum thermal process without overshoot
- Single program with multiple segments for ramp (up/down) and dwell (timed hold) temperature control
- Adjustable high-limit over-temperature protection
- Simultaneous LED display of temperature and setpoint in °C or °F

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; one set of (2) tube adapters included
- RS485 digital communications port available as an option; allows controller to be connected to a PC for remote monitoring and control

Ordering information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC
Includes: One set of two tube adapters (59545)
Required Accessories: Power cord and hardwiring
Warranty*: 1 year (parts and labor)

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

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

Tube Adapters/Sleeves

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

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

Ease of observation and operation and configurable for horizontal or vertical use



Includes: Independent digital temperature control module (ordered separately) are available in standard or programmable options
Warranty[†]: 1 year (parts and labor)

- 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

Cat. No.	Controller (Please order separately)	Temperature Range	Heated Zone	Exterior L x W x H	Tube O.D.	Electrical	Shipping Weight
Single Zone							
HTF55122A-1	Independent CC58114A	100° to 1200°C	30.5cm (12in.)	33.0 × 53.3 × 30.5cm (13 × 21 × 12in.)	1.9 to 2.54cm (0.75 to 1in.)	120V 50/60Hz	28kg (60 lb.)
HTF55322A-1	Independent CC58114A	100° to 1200°C	30.5cm (12in.)	43.2 × 58.4 × 40.6cm (17 × 23 × 16in.)	2.54 to 7.62cm (1 to 3in.)	120V 50/60Hz	55kg (120 lb.)
HTF55322C-1	Independent CC58114C	100° to 1200°C	30.5cm (12in.)	43.2 × 58.4 × 40.6cm (17 × 23 × 16in.)	2.54 to 7.62cm (1 to 3in.)	208/240V 50/60Hz	55kg (120 lb.)
HTF55342C-1	Independent CC58114C	100° to 1200°C	61.0cm (24in.)	43.2 × 88.9 × 40.6cm (17 × 35 × 16in.)	2.54 to 7.62cm (1 to 3in.)	208/240V 50/60Hz	80kg 175 lb.)
Three Zone							
HTF55347C-1	Independent CC58434C	100° to 1200°C	61.0cm (24in.)	43.2 × 88.9 × 40.6cm (17 × 35 × 16in.)	2.54 to 7.62cm (1 to 3in.)	208/240V 50/60Hz	89kg (195 lb.)
HTF55667C-1	Independent CC58434C	100° to 1200°C	91.4cm (36in.)	53.3 × 124.5 × 50.8cm (21 × 49 × 20in.)	76.2 to 152.4cm (3 to 6in.)	208/240V 50/60Hz	141kg (310 lb.)

Accessories

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

Thermo Scientific Controllers for Lindberg/Blue M1200°C Tube Furnaces

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



Ordering information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC
Warranty[†]: 1 year (parts and labor)

- Fully wired with advanced microprocessor-based digital control, solid-state power module, ON/ OFF circuit breaker and thermocouple input jacks for each zone
- Built-in adjustable high-limit over-temperature protection
- LED simultaneously displays actual temperature vs. setpoint in °C or °F
- Designed for operation on 120, 208, or 240V 50/60Hz, single-phase line

Over-temperature Control

- 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

Cat. No.	Description	For Use with	Electrical
CC58114A-1	Single-zone Console, Digital	1200°C Furnaces	120V 50/60Hz
CC58114C-1*	Single-Setpoint	1200°C Furnaces	208/240V 50/60Hz
CC58114BA*	Single-zone Console, Digital, with Over Temperature Control	1200°C Furnaces	120V 50/60Hz
CC58114PA-1	Single-zone, Multiple Segment	1200°C Split-hinge Tube Furnace	120V 50/60Hz
CC58114PBA-1	Single-zone, Multiple Segment	1200°C Split-hinge Tube Furnace	120V 50/60Hz
CC58114BC-1*	Single-zone Console, Digital, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC58114PBC-1	Single-zone Console, Digital, Programmable, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC58114PC-1	Single-zone Console, Digital, Programmable	1200°C Furnaces	208/240V 50/60Hz
CC58434C-1	Three-zone	1200°C Split-hinge Tube Furnace	208/240V 50/60Hz
CC58434BC-1	Three-zone Console, Digital, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC58434PC-1	Three-zone Console, Digital, Programmable Controller for Center Zone, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC584343PBC-1	Three-zone Console, Programmable, with Over Temperature Control	1200°C Furnaces	208/240V 50/60Hz
CC584343PC-1	Three-zone Console, Digital, Programmable	1200°C Furnaces	208/240V 50/60Hz
CC58434PBC-1	Three-zone, 16 Segment	1200°C Split-hinge Tube Furnace	208/240V 50/60Hz

* not available with RS585 port

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

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
- Available with Single Program/Multiple Segment or Multiple Program/Multiple Segment Programmable Controller
- Program(s) and segment(s) for ramp (up and down) and dwell (timed hold) temperature control
- Adjustable high limit over-temperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- Temperature display in °C or °F
- Optional Over-temperature Control (OTC) on Multi-Program/Multi-Segment model

Ordering information: Optional RS485 Digital Communications Port allows controller to be connected to a PC for remote monitoring and control of the furnace; up to 30 units can be connected to one PC

Includes: 1 set of two 2" tube adapters

Warranty: 1 year (parts and labor)

Cat. No.	Type	Temperature Range	Heated Zone	Exterior L x W x H	Tube O.D.	Electrical	Shipping Weight
STF55433C-1	Multisegment/single program	500° to 1500°C	30.5cm (12in.)	33.0 × 53.3 × 30.5cm (13 × 21 × 12in.)	2.54 to 7.62cm (1 to 3in.)	208/240V 50/60Hz	123kg (270 lb.)
STF55433PC-1	Multisegment/multiprogram	500° to 1500°C	30.5cm (12in.)	43.2 × 58.4 × 40.6cm (17 × 23 × 16in.)	2.54 to 7.62cm (1 to 3in.)	208/240V 50/60Hz	123kg (270 lb.)
STF55433PBC-1	Multisegment/multiprogram/OTC	500° to 1500°C	30.5cm (12in.)	43.2 × 58.4 × 40.6cm (17 × 23 × 16in.)	2.54 to 7.62cm (1 to 3in.)	208/240V 50/60Hz	123kg (270 lb.)

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	2.5cm (1in.)	STF55433C-1, STF55433PC-1, STF55433PBC-1
7100-2444-068	5cm (2in.)	STF55433C-1, STF55433PC-1, STF55433PBC-1
7100-2444-069	7.6cm (3in.)	STF55433C-1, STF55433PC-1, STF55433PBC-1

Thermo Scientific Lindberg/Blue M 1700°C Tube Furnaces

Rapid heatup, recovery and cooldown



- 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; 10ft. 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

Includes: 1 set of two 3” vestibules and sleeves.
Required Accessories: Independent digital temperature control module, available separately
Warranty^Y: 1 year (parts and labor)

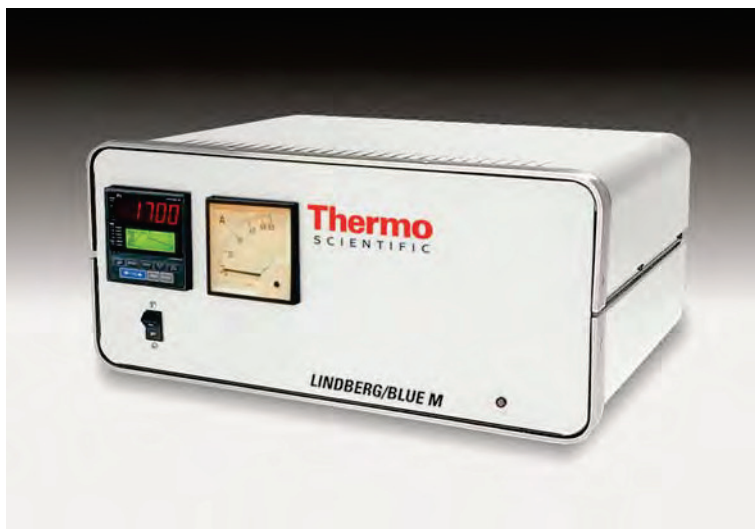
Cat. No.	Temp. Range and Control	Heated Zone	Exterior L x W x H	Tube O.D.	Electrical	Shipping Weight
STF54434C	500° to 1700°C Independent	30.5cm (12in.)	40.6 × 55.9 × 48.3cm (16 × 22 × 19in.)	7.6cm (3in.)	208/240V, 50/60Hz 5000w	43kg (95 lb.)
STF54454C	500° to 1700°C Independent	61.0cm (24in.)	40.6 ×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

Accessories – Vestibules/Sleeves

- 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

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

Thermo Scientific Controllers for Lindberg/Blue M 1700°C Tube Furnaces



- Holdback feature allows the operator to set a “process vs. setpoint” temperature value which, when exceeded, holds the program to allow the process to catch up
- RS485 data port for connection to remote computer, allowing modification, interrogation and data transfer of all instrument control and configuration parameters
- Up to 30 units can be connected to one PC (software not included)

Warranty^Y: 1 year (parts and labor)

Cat. No.	Description	Electrical	For Use with
CC59256PCOMC-1	Digital, with Programmer, RS485 data port	208/240V 50/60 Hz	STF54434C
CC59256PBCOMC-1	Digital, with Programmer and Over Temperature Control, RS485 data port	208/240V 50/60 Hz	STF54434C
CC59256PCM2CTC-1	Digital, with Programmer	208/240V 50/60 Hz	STF54454C