

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	Shipping 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: 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
- Gravimetric analysis

Cat. No.	Capacity	Temp. Range	Interior D x W x H	Exterior L x W x H	Control	Electrical	Shipping Weight	Plug Type
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: 1 year (parts and labor)

Certifications: All units cUL, UL listed

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*: 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
- 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

Safety and design features

- Heating elements are on chamber top, bottom and sides for enhanced temperature uniformity

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 Lindberg/Blue M moldatherm box furnaces

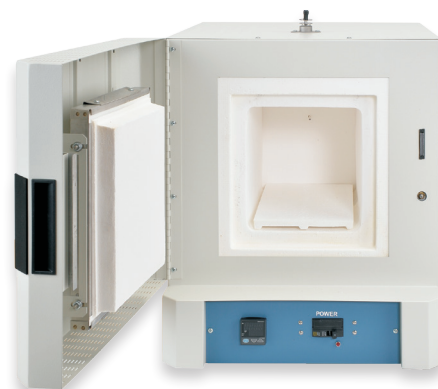
Versatile selection of chamber box furnaces in several popular chamber sizes to meet a variety of demanding industrial and laboratory applications

- Unique insulation and heating element composites 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



Model BF51794C-1 with standard left hand door

- 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 (20 x 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

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
BF51842PBFCOMC1*	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*: 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	Electrical	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	Electrical
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 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
- 6 L 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*: 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 x 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 x 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*: 1 year (parts and labor)

Thermo Scientific Lindberg/Blue M

1700 °C box furnaces

independent control

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

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

- Long-life type “B” thermocouples with 10’ compensated lead wire and polarized plug for accurate high temperature measurement

Smart heating elements

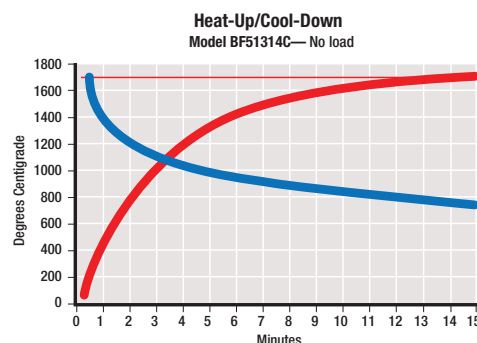
- Molybdenum disilicide elements with unique right angle bend and sidewall mounting reduce maintenance usually associated with element termination and mounting
- Designed for easy replacement without matching resistance values – fast heat-up and recovery with excellent uniformity and energy efficiency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

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



Applications

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



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

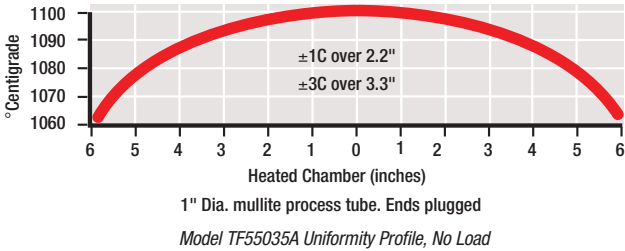
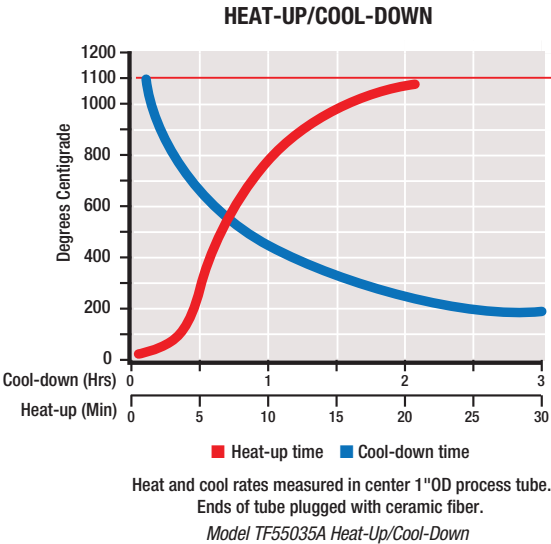
Control options

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



Applications

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



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*: 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 furnace

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

One set of (2) included with furnace:

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

Required process tube not included.

For information on process tubes contact your process tube supplier.

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

Warranty: 1 year (parts and labor)

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
- 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

Control options

- A,B
- For three zone control, there is a choice of:
 - 3 x single setpoint
- 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: 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 - vestibules/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 vestibule	STF54434C tube furnace
7219-2147-002	2 in vestibule	STF54434C tube furnace
7219-2147-011	3 in vestibule	STF54454C tube furnace
7219-2147-003	3 in vestibule	STF54434C tube furnace
7219-2147-012	2 in vestibule	STF54454C tube furnace
7219-2147-013	1 in vestibule	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)