



Model BF51442C requires the 1200°C, CC58114C controller (below) ordered separately.

Applications

- Ashing
- Fusion
- Ignitions
- Alloying
- Sintering
- Heat-treating

1200°C Box Furnaces, Heavy-Duty

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Heavy-Duty 1200°C Box Furnaces feature a unique internal construction and outer shell design which reduces external surface temperatures without compromising interior temperature uniformity. Requires independent control console, Model No. CC58114C (ordered separately).

Features

- Individual heating elements at chamber top, bottom and sides for uniform heat distribution
- Swing down door provides convenient loading platform.

- Helically coiled, high temperature alloy wire elements for extended service life
- Unique Moldatherm® ceramic fiber insulation to allow rapid heat-up, recovery and cool-down rates
- 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 (Model BF51442C)
- Heating element imbedded in Moldatherm insulation (Model BF51542C)
- Rugged, heavy-duty Inconel™ hearthplate supports load and protects the furnace from damage due to spillage (Model BF51542C)
- Long-life Platinel II® thermocouple with 10' compensated lead wire and polarized plug



The Model CC58114C Controller can be positioned adjacent to or remote from the furnace, permitting applications in fume hoods or containment areas.

1200°C Box Furnace, Heavy Duty

With Refractory Plate Heating Element, Temperature Range 100 to 1200°C

Furnace Model No.	Independent Controller	Electrical Volts, Hz, 1Ø	Watts	Interior Dimensions, Furnace H x F-B x W in" (mm)	Exterior Dimensions, Furnace H x F-B x W in" (mm)	Ship Weight lbs (kg)
BF51442C	CC58114C	208/240V, 50/60 Hz	4800	5.25" (133.35) x 14" (355.6) x 7.5" (190.5)	24.5" (622.3) x 20" (508) x 20" (508)	145 (66)

With Moldatherm® Heating Element (Four Sides), Temperature Range 100 to 1200°C

BF51542C	CC58114C	208/240V, 50/60 Hz	6200	9.5" (241.3) x 14.5" (368.3) x 10.5" (266.7)	28.5" (723.9) x 31" (787.4) x 28" (711.2)	335 (152)
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Note: Required power cord, hardwiring and interconnecting wiring are not included.

1200°C Digital, Single Setpoint Controller

Control console is fully wired and includes advanced microprocessor-based digital control, a solid-state power module, on/off circuit breaker and thermocouple input jack. Includes microprocessor-based PID control (proportional, integral, derivative), single segment, single setpoint, 1 ramp to setpoint. Built-in adjustable high limit overtemperature protection. Simultaneous LED display of actual temperature vs. setpoint. May be configured to display temperature in either °C or °F.

Option P 1200°C Digital Single Program, Multiple Segment Programmable Controller

Control console is fully wired and includes advanced microprocessor-based digital control, a

solid-state power module, on/off circuit breaker and thermocouple input jack. Includes microprocessor-based PID control (proportional, integral, derivative), with single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control. See page 35 for more information. Built-in adjustable high limit overtemperature protection. Simultaneous LED display of actual temperature vs. setpoint. May be configured to display temperature in either °C or °F.

Option B Overtemperature Control (OTC)

Adjustable digital overtemperature control, factory installed on selected control consoles with "B" suffix designation; see chart. 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 re-set required for safety. Operates via magnetic contacts through signal from independent thermocouple.

Optional RS485 Digital Communications Port

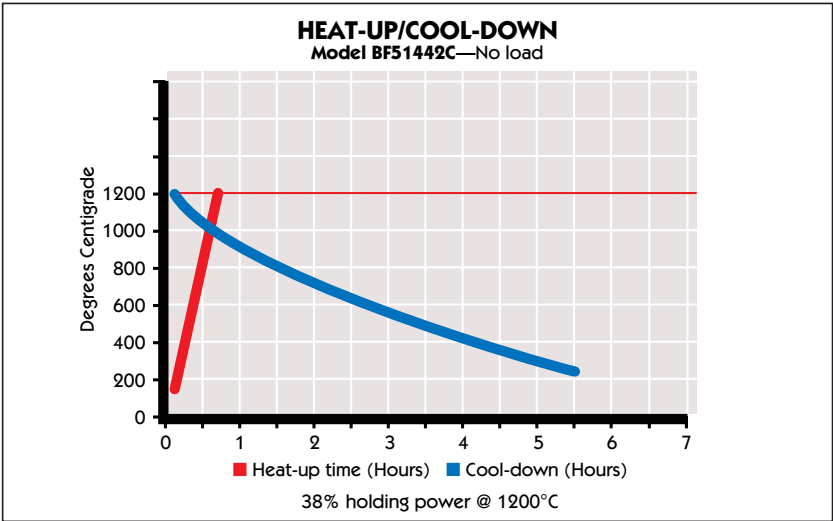
RS485 Digital communications port available as an option. Allows controller to be connected to a PC for remote monitoring and control of the furnace. Up to 30 units can be connected to one PC. Please see page 35 for ordering information and additional options.

Controller Model No.	Digital	With Programmer	With Overtemp Control	Electrical Volts, Hz	Maximum Amps	Exterior Dimensions H x F-B x W in" (mm)	Ship Weight lbs (kg)
CC58114C	■			208/240V, 50/60Hz	30	10" (254) x 19" (482.6) x 14" (355.6)	40 (18)
CC58114PC	■	■		208/240V, 50/60Hz	30	10" (254) x 19" (482.6) x 14" (355.6)	40 (18)

With Overtemp Control

CC58114BC	■		■	208/240V, 50/60Hz	30	10" (254) x 19" (482.6) x 14" (355.6)	40 (18)
CC58114PBC	■	■	■	208/240V, 50/60Hz	30	10" (254) x 19" (482.6) x 14" (355.6)	40 (18)

Note: Required power cord, hardwiring and interconnecting wiring are not included.



Chamber uniformity @1200°C ±5°C nominal.
Model BF51442C, Heat-Up/Cool-Down, No Load

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

Model BF51333C Box Furnace is constructed with rugged firebrick insulation for stability, silicon carbide heating elements to maximize heat transfer, insulating door plug and swing-down door for convenience and safety



Left, Model CC58125C Controller, ordered separately.



1500°C Box Furnace, Independent Control

1500°C Box Furnace, Brick Sidewall Composition, Temperature Range 500°C to 1500°C

Furnace Model No.	Independent Controller	Electrical Volts, Hz, 1Ø	Watts	Interior Dimensions H x F-B x W in" (mm)	Exterior Dimensions H x F-B x W in" (mm)	Ship Weight lbs (kg)
BF51333C	CC58125C	208/240V, 50/60 Hz	5900	5" (127) x 12" (304.8) x 6" (152.4)	26" (660.4) x 29" (736.6) x 25" (635)	440 (200)

Note: Required power cord, hardwiring and interconnecting wiring are not included. Silicon-carbide heating elements. Fitted hearthplate protects interior from spills. Type "R" thermocouple integrated into chamber backwall, top. Includes 10' compensated thermocouple lead wire and polarized plug.

1500°C Digital, Single Setpoint Controller

Control console is fully wired and includes advanced microprocessor-based digital control, a solid-state power module, on/off circuit breaker and thermocouple input jack. Includes microprocessor-based PID control (proportional, integral, derivative), single segment, single setpoint, 1 ramp to setpoint. Built-in adjustable high limit overtemperature protection. Simultaneous LED display of actual temperature vs. setpoint. May be configured to display temperature in either °C or °F.

Option P 1500°C Digital Single Program, Multiple Segment Programmable Controller

Control console includes advanced microprocessor-based digital control, a solid-state

power module, on/off circuit breaker and thermocouple input jack. Includes microprocessor-based PID control (proportional, integral, derivative), single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control. See Page 35 for more information. Built-in adjustable high limit overtemperature protection. Simultaneous LED display of actual temperature vs. setpoint. May be configured to display temperature in either °C or °F.

Option B Overtemperature Control (OTC)

Adjustable digital overtemperature control, factory installed on selected control consoles with "B" suffix designation; see chart. Protects furnace and load in the event of primary control circuit failure. Overrides main controller,

assumes temperature control and shuts off power to furnace if high limit is reached. Manual re-set required for safety. Operates via magnetic contacts through signal from independent thermocouple.

Optional RS485 Digital Communications Port

RS485 Digital communications port available as an option. 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. Please see page 35 for ordering information and additional options.

Controller Model No.	Digital	With Programmer	With Overtemp Control	Electrical Volts, Hz	Maximum Amps	Exterior Dimensions H x F-B x W in" (mm)	Ship Weight lbs (kg)
CC58125C	■			208/240V, 50/60Hz	60	10" (254) x 19" (482.6) x 14" (355.6)	35 (16)
CC58125BC	■		■	208/240V, 50/60Hz	60	10" (254) x 19" (482.6) x 14" (355.6)	35 (16)
CC58125PC	■	■		208/240V, 50/60Hz	60	10" (254) x 19" (482.6) x 14" (355.6)	35 (16)
CC58125PBC	■	■	■	208/240V, 50/60Hz	60	10" (254) x 19" (482.6) x 14" (355.6)	35 (16)