

*Model BF51842C
1200°C LGO Box
Furnace with
multiple segment,
single program controller
integrated into the
main control panel.
(below)*



*Model BF51732BC, 1200°C LGO Box Furnace
features digital control and OTC system.*

Applications

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

1200°C LGO™ Box Furnaces

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Versatile LGO Series Box Furnaces feature the latest technical advances in heating elements, insulation and temperature control, all integrated into a self-contained cabinet. The patented LGO heating element (light gauge overbend) delivers maximum radiant heat energy to the process load. The LGO element is partially imbedded within the exclusive Moldatherm® insulation, combined with unique double shell construction to provide optimum temperature uniformity, energy efficiency, fast response, quick heat-up and rapid cool-down.

Features and Benefits

- Patented LGO (light gauge overbend) heating elements with 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; see specifications for model selection
- Air vent (1" dia., top) and air inlet (.375" dia., rear) for inert atmosphere exchange. May experience some leakage at door
- Self-tuning, digital instrumentation for precise temperature setpoint and display

- Platinel II® thermocouple for long-term stability
- Main power on/off switch on control panel; control panel designed for easy maintenance access
- Safety door switch to interrupt power to heating element when door is opened; protects heating elements and minimizes exposure to end-user
- Removable shelves for versatility; 0.58 cu.ft. models include 1 two-part shelf, center position; 1.95 cu.ft. models have 3 shelf positions; 1 two-part shelf included standard
- Moldatherm hearthplate supports load and prevents damage due to spillage

Digital, Single Setpoint Controller

- Microprocessor-based self-tuning PID control (proportional, integral, derivative) provides optimum thermal process, prevents overshoot
- Single segment, single setpoint, 1 ramp to setpoint
- Adjustable high limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- May be configured to display temperature in either °C or °F

Digital Single Program, Multiple Segment, Programmable Controller

- Microprocessor-based self-tuning PID control (proportional, integral, derivative) provides optimum thermal process, prevents overshoot
- Single program with multiple segments for ramp (up and down) and dwell (timed hold) temperature control. See page 35 for more information
- Adjustable high limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- May be configured to display temperature in either °C or °F

Digital Multiple Program, Multiple Segment Programmable Controller

- Available on models with "P" designation
- Microprocessor-based self-tuning PID control (proportional, integral, derivative) provides optimum thermal process, prevents overshoot
- Multiple programs and segments for ramp (up and down) and dwell (timed hold) temperature control. See page 35 for more information
- Adjustable high limit overtemperature protection
- Simultaneous LED display of actual temperature vs. setpoint
- May be configured to display temperature in either °C or °F

LINDBERG/BUE

1200°C LGO Box Furnaces

Vertical Lift Door, 0.6 cu ft (16.4 liters), Temperature Range 100°C to 1200°C

Furnace Model No.	Integrated Digital Control	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)
Single Setpoint						
BF51731C	Digital	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)
BF51731BC	Digital/OTC	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)
Programmable, Single Program						
BF51732C	Multi Seg/1 Prog	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)
BF51732BC	Multi Seg/1 Prog/OTC	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)
Programmable, Multiple Program						
BF51732PC	Multi Seg/Multi Prog	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)
BF51732PBC	Multi Seg/Multi Prog/OTC	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)
BF51732PFMC	Multi Seg/Multi Prog/FM	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)
BF51732PBFMC	Multi Seg/Multi Prog/OTC/FM	208/240V, 50/60 Hz	4500	7" (177.8) x 11" (279.4) x 13" (330.2)	27" (685.8) x 23" (584.2) x 24" (609.6)	165 (75)

Note: Required power cord and hardwiring are not included.

* Overall height with door open is 39" on vertical lift door models only.

Horizontal Side Swing Door, 2.0 cu.ft. (55.3 liters), Temperature Range 100°C to 1200°C

Single Setpoint

BF51841C	Digital	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)
BF51841BC	Digital/OTC	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)

Programmable, Single Program

BF51842C	Multi Seg/1 Prog	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)
BF51842BC	Multi Seg/1 Prog/OTC	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)

Programmable, Multiple Program

BF51842PC	Multi Seg/Multi Prog	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)
BF51842PBC	Multi Seg/Multi Prog/OTC	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)
BF51842PFMC	Multi Seg/Multi Prog/FM	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)
BF51842PBFMC	Multi Seg/Multi Prog/OTC/FM	208/240V, 50/60 Hz	5800	15" (381) x 15" (381) x 15" (381)	33" (838.2) x 28" (711.2) x 29" (736.6)	280 (127)

Note: Required power cord and hardwiring are not included.

Overtemperature Control (OTC)

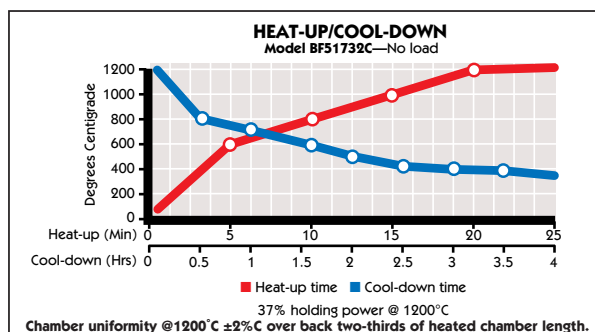
- Adjustable digital overtemperature control, available on selected models with "B" suffix designation; see chart
- Protects furnace and load in the event of primary control circuit failure
- Overrides main controller and shuts off power to furnace if high limit is reached
- Manual re-set required for 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

Flowmeter Option (FM) (Inert Atmosphere Only)

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



Note: Use with inert atmosphere will exhibit some leakage.

*Model BF51732C,
Heat-Up/Cool-Down,
No Load*

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