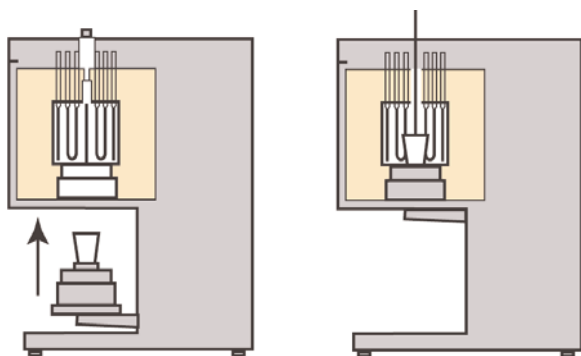




# 1700°C & 1800°C Bottom Loading Furnaces



BLF 17/3/3508P1



## General Features

- Maximum operating temperatures of 1700°C and 1800°C.
- Three chamber sizes available.
- Convenient loading of chamber through electrically actuated lift mechanism.
- Superior sample uniformity is obtained by positioning elements on all sides of hexagon shaped chamber.
- All standard 1700°C and 1800°C BLF furnaces are fitted with 3216P1 programmer and a separate independent over-temperature protection control.
- Elevator hearth design provides safe and smooth loading and unloading of delicate loads.
- Fast heating and cooling of the sample is achieved by raising or lowering the sample from the furnace chamber.
- Long-life molybdenum disilicide heating elements are suitable for intermittent or continuous operation.
- Advanced high temperature, high strength hot face insulation is combined with graded low thermal mass insulation to improve thermal performance and energy efficiency.
- Positive break safety switch isolates power to the heating elements when hearth is lowered.
- Chamber vent provides for process exhaust.
- Large diameter heating elements greatly reduce potential for mechanical breakage.
- Low temperatures of outer case and critical components are provided through fan cooling.
- Molybdenum disilicide element resistance does not change with usage, providing no restriction on placement of a new element in circuit with older elements.
- Optional gas containment cover allows processing under high purity inert atmospheres.
- Optional protective alumina liner is available for aggressive processes that may harm elements or insulation materials.
- Additional options are described on pages 43-46.

## 1700° & 1800°C Bottom Loading Furnaces

Furnace Model	Max. Temp. (°C)	Internal Chamber Dimensions Inches (mm)		External Dimensions Inches (mm)			TC Type	Max. Power (kW)	Furnace Voltage	Shipping Weight (lb.)
		Diameter	Height	Height	Width	Depth				
BLF 17/3	1700	6.00 (150)	7.50 (190)	38.50 (975)	21.00 (530)	29.50 (750)	Type B	5.0	208/240	397
BLF 17/8	1700	8.00 (200)	10.00 (250)	76.75 (1950)	31.50 (800)	53.50 (1360)	Type B	9.0	208/240*	1178
BLF 17/21	1700	13.00 (330)**	12.00 (300)	73.00 (1850)	33.50 (850)	49.25 (1250)	Type B	12.0	208/240*	1180
BLF 18/3	1800	6.00 (150)	7.50 (190)	38.50 (975)	21.00 (530)	29.50 (750)	Pt 20% Rh/Pt 40% Rh	6.0	208/240	397
BLF 18/8	1800	8.00 (200)	10.00 (250)	76.75 (1950)	31.50 (800)	53.50 (1360)	Pt 20% Rh/Pt 40% Rh	10.0	208/240*	1178

\*\*Edge to edge of hexagon shaped hearth.

Specify voltage at time of order.

\*3 phase electrical design.

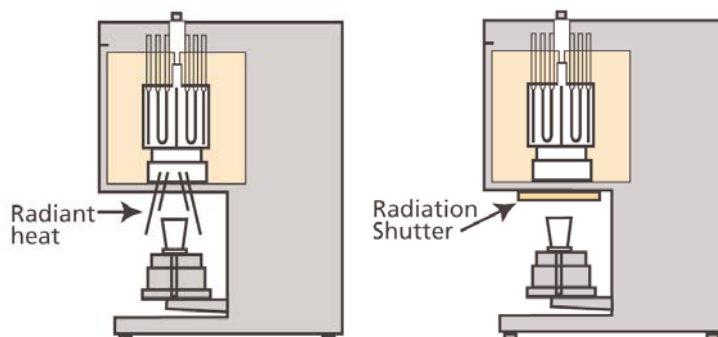
Continuous operation at or near maximum temperature may impact element, thermocouple and insulation life.



BLF 17/8/3508P1

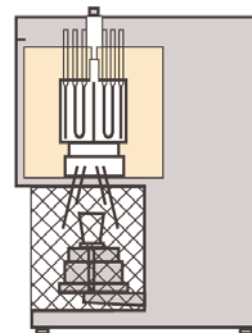
## Radiation Shutter

To prevent heat loss and direct heat radiation from a BLF furnace chamber when the hearth is in the lowered position, an optional radiation shutter may be provided.



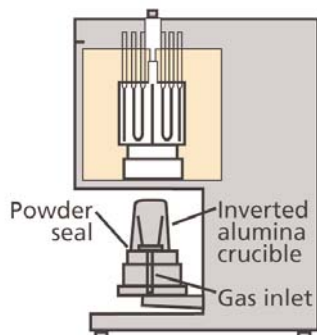
## Hearth Cage

Carbolite offers an optional hearth cage that encloses the hearth when in the lowered position. This option may be desirable if the load is not stable on the hearth, there is potential for the load to break during cooling, or as a safety guard to prevent contact with the hot load.



## Atmosphere Processing

BLF furnace chambers are not gas tight. Therefore, to process under an inert atmosphere, a ceramic muffle is placed on the furnace hearth. An inverted alumina crucible provides a gas tight enclosure over the furnace load, and inert gas is introduced through the furnace hearth.



## Protective Liner

Because some processes, e.g. glass melting, can potentially cause damage to heating elements and/or insulation materials, an optional protective liner may be installed in the furnace chamber.

