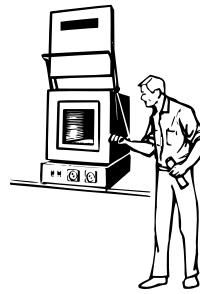




**BULLETIN
BF-720**



**INERT
ATMOSPHERE
ELECTRIC
HEAT TREATING
FURNACES**

Inert Atmosphere Bench Furnaces

Grieve standard Inert Atmosphere Bench Furnaces are specifically designed for heat treating applications requiring inert atmosphere protection. Inert atmospheres protect the work from oxidation even while being subjected to high temperatures. Seven sizes to 2.0 cubic feet with temperatures to 2200°F. Precision microprocessor based temperature controls and energy-saving insulation maximize the cost efficiency and performance of these rugged units. Ideal for heat treating of tools, dies and other parts.

STANDARD FEATURES

● Controls

- Digital, microprocessor based, thermocouple actuated, indicating temperature controller
- On-off heat switch
- LED pilot light

● Safety Equipment

- Adjustable, thermocouple actuated, manual reset excess temperature controller
- Separate heating element control contactor
- Door interlock switch turns off power to heating elements when door is opened; restores power when door is closed

● Construction

- Heavy gauge continuously welded aluminized steel cabinet for atmosphere tightness
- Brushed stainless steel control panel face
- High temperature ceramic fiber resilient door gasket to contain atmosphere
- Heat resistant alloy atmosphere inlet and outlet
- Gas spring assisted manually operated vertical lift door
- Door hot side faces away from operator at all times
- High temperature alloy wire heating elements supported by rugged ceramic plates
- Energy-saving lightweight ceramic fiber insulation reduces operating costs
- Fast heat-up
- Heating elements located on sidewalls and roof for excellent temperature uniformity throughout work space
- Ceramic hearth tray
- 1 year limited warranty

● Every furnace fully assembled and individually factory tested



MODEL BAF-121212-HT
WITH OPTIONAL INERT ATMOSPHERE INLET PIPING



MODEL BAF-122412
WITH OPTIONAL FLOOR STAND AND
INERT ATMOSPHERE INLET PIPING

SPECIFICATIONS

NOT FOR USE WITH FLAMMABLE SOLVENTS, VAPORS OR GASES.

Model	Work Space		Outside Dimensions (WxDxH)	Max Temp*	Insulation	Height w/Door Open	Heat Input KW		Operating Characteristics†				Approx Shipping Weight
	Dimensions (WxDxH)	Volume Cu Ft					230V	460V	Control Accuracy	Furnace Uniformity	Rise Time		
											230V	460V	
BAF-8128	8" x 12" x 8"	0.44	24" x 31" x 31"	2000°F	5"	52"	4.5	6	±0.3%	±15°F	65 min	50 min	420 lbs
BAF-8128-HT	8" x 12" x 8"	0.44	26" x 33" x 33"	2200°F	6"	54"	4.5	6	±0.3%	±20°F	75 min	55 min	505 lbs
BAF-12128	12" x 12" x 8"	0.67	28" x 31" x 31"	2000°F	5"	52"	6	8	±0.3%	±15°F	55 min	45 min	470 lbs
BAF-12128-HT	12" x 12" x 8"	0.67	30" x 33" x 33"	2200°F	6"	54"	6	8	±0.3%	±20°F	80 min	60 min	550 lbs
BAF-121212	12" x 12" x 12"	1.0	28" x 31" x 37"	2000°F	5"	66"	7.5	10	±0.3%	±12°F	50 min	40 min	520 lbs
BAF-121212-HT	12" x 12" x 12"	1.0	30" x 33" x 39"	2200°F	6"	68"	7.5	10	±0.3%	±17°F	65 min	50 min	620 lbs
BAF-12188	12" x 18" x 8"	1.0	28" x 37" x 31"	2000°F	5"	52"	7.5	10	±0.3%	±10°F	65 min	50 min	545 lbs
BAF-12188-HT	12" x 18" x 8"	1.0	30" x 39" x 33"	2200°F	6"	54"	7.5	10	±0.3%	±15°F	75 min	55 min	645 lbs
BAF-121812	12" x 18" x 12"	1.5	28" x 37" x 37"	2000°F	5"	66"	12	16	±0.3%	±10°F	45 min	35 min	570 lbs
BAF-121812-HT	12" x 18" x 12"	1.5	30" x 39" x 39"	2200°F	6"	68"	12	16	±0.3%	±15°F	60 min	45 min	675 lbs
BAF-12248	12" x 24" x 8"	1.33	28" x 43" x 31"	2000°F	5"	52"	12	16	±0.3%	±10°F	50 min	40 min	680 lbs
BAF-12248-HT	12" x 24" x 8"	1.33	30" x 45" x 33"	2200°F	6"	54"	12	16	±0.3%	±15°F	60 min	45 min	755 lbs
BAF-122412	12" x 24" x 12"	2.0	28" x 43" x 37"	2000°F	5"	66"	15	20	±0.3%	±10°F	45 min	35 min	775 lbs
BAF-122412-HT	12" x 24" x 12"	2.0	30" x 45" x 39"	2200°F	6"	68"	15	20	±0.3%	±15°F	60 min	45 min	850 lbs

*1950°F for continuous operation under Nitrogen atmosphere. For operation at higher temperatures, furnace must be periodically run with air atmosphere to build up protective oxide coating on heating elements.

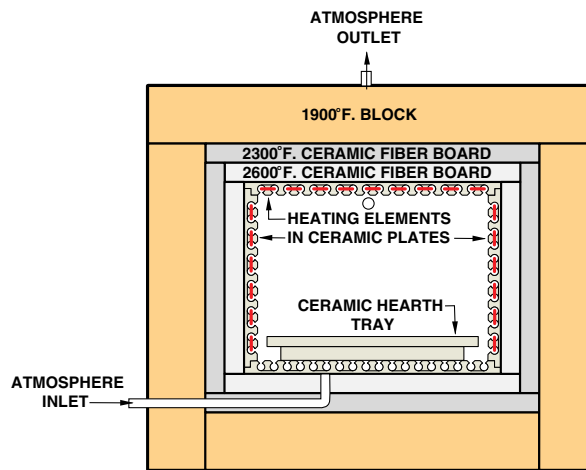
†Accuracy as percent of controller span. Uniformity at 100°F below maximum temperature. Rise Time in minutes to 100°F below maximum temperature. Tests run with empty furnace. Performance will vary with load and application. See Bulletin TC-920 for additional details.

STANDARD EQUIPMENT

● Standard Electrical Characteristics

- 208 volts, 1 or 3-phase, 50/60 Hz
- 230 volts, 1 or 3-phase, 50/60 Hz
- 460 volts, 3-phase, 50/60 Hz
- Other electrical characteristics available

Each furnace features completely wired control panel, located under the furnace, enclosing terminals for incoming power, temperature controller, heating element control contactor, excess temperature controller, separate contactor interlocked with excess temperature controller, 115 volt control circuit transformer, on-off heat switch and red pilot light. Door interlock switch turns off power to heating elements when door is opened. High temperature enamel painted aluminized steel exterior. Ceramic hearth tray rated for 60 lbs distributed loading. Atmosphere inlet (1/2" NPT) at side of workspace and atmosphere outlet (3/4" NPT) through the top at back. Sealed rear terminal box with vent petcock.



Cross section through work space (Front View)

ADDITIONAL EQUIPMENT AVAILABLE*

- **Floor Stand, 26" High**, heavy duty steel cabinet with shelf**FS**
- **Programmable Temperature Controller**, microprocessor based, digital indicating, thermocouple actuated, in lieu of standard controller**PTC**
- **Recording Thermometer**, thermocouple actuated, 24-hour, 10" diameter circular chart, used in conjunction with standard controller, includes floor stand to house recorder. Floor stand cannot be used for storage**RT**
- **Programmable Recording Temperature Controller**, microprocessor based, thermocouple actuated, digital display, 24-hour, 10" diameter circular chart, in lieu of standard controller, includes floor stand to house temperature controller. Floor stand cannot be used for storage**PRTC**

- **Digital Timing Temperature Controller**, microprocessor based, digital indicating, incorporates 99 hour 59 minute timer, starts timing when temperature reaches set point and shuts down oven at end of set time**DTS3**
- **Shut Down Timer**, with continuous "hold" feature; 1, 5, 10 or 30 hour range**SDT**
- **Batch Timer**, for uniformly timing batch operations. Continuous alarm with door interlock; alarms at end of preset time period until door is opened or timer reset; 1, 5, 10 or 30 hour range**BT**
- **Alloy Hearth Tray**
 - 7" x 11"**AH812**
 - 11" x 11"**AH1212**
 - 11" x 17"**AH1218**
 - 11" x 23"**AH1224**

- **Quench Tank**, carbon steel, 40 gallon capacity, 12" x 20" x 12" deep work basket, subway grating basket support, 1/2 HP direct driven mixer, 23" x 23" x 44" high overall, for 115 or 230/1/60**QT**
- **Quench Tank Electric Heater**, with temperature control**QTH**

*See Bulletin TC-960 for modifications and other optional equipment.



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