



**ELECTRIC  
HEAT TREATING  
FURNACES**

# Bench Furnaces

Grieve standard 2000°F and 2200°F Bench Furnaces provide for a variety of heat treating applications. Precision microprocessor based temperature controls and energy-saving insulation maximize the cost efficiency and performance of these rugged units. Seven sizes from 0.44 to 2.0 cubic feet. Ideal for general purpose 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 aluminized steel cabinet with enamel finish
- Brushed stainless steel control panel face
- 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 sidewall 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 BF-121212**



**MODEL BF-122412  
WITH OPTIONAL FLOOR STAND**

# SPECIFICATIONS

NOT FOR USE WITH FLAMMABLE SOLVENTS OR VAPORS.

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	
<b>BF-8128</b>	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	400 lbs
<b>BF-8128-HT</b>	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	485 lbs
<b>BF-12128</b>	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	450 lbs
<b>BF-12128-HT</b>	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	530 lbs
<b>BF-121212</b>	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	500 lbs
<b>BF-121212-HT</b>	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	600 lbs
<b>BF-12188</b>	12" x 18" x 8"	1.00	28" x 37" x 31"	2000°F	5"	52"	7.5	10	±0.3%	±10°F	65 min	50 min	525 lbs
<b>BF-12188-HT</b>	12" x 18" x 8"	1.00	30" x 39" x 33"	2200°F	6"	54"	7.5	10	±0.3%	±15°F	75 min	55 min	625 lbs
<b>BF-121812</b>	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	550 lbs
<b>BF-121812-HT</b>	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	650 lbs
<b>BF-12248</b>	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	625 lbs
<b>BF-12248-HT</b>	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	725 lbs
<b>BF-122412</b>	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	700 lbs
<b>BF-122412-HT</b>	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	800 lbs

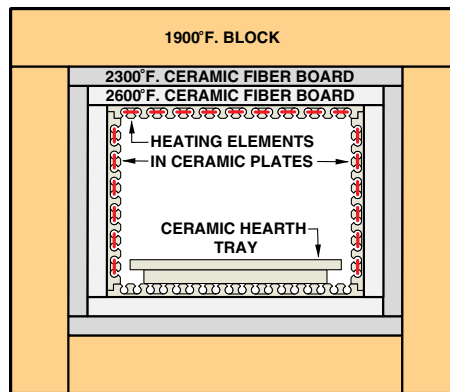
†Accuracy as percent of controller span. Uniformity at 100°F below maximum temperature. Rise Time in minutes to 100°F below maximum temperature. Tests run with empty furnace. Performance will vary with load and application. See Bulletin TC-920 for additional details.

## 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.



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**
- **Digital Shut Down Timer**, with continuous "hold" feature ..... **SDT**
- **Digital 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 ..... **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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**THE GRIEVE CORPORATION**

500 Hart Road, Round Lake, Illinois 60073-2898 USA  
 (847) 546-8225 Fax: (847) 546-9210  
 www.grievcorp.com email: sales@grievcorp.com