

Standard Burnout Furnaces

Rugged Industrial Design

Manufactured by Pacific Kiln & Insulations Co. Inc., Standard Burnout Furnaces have a rugged industrial design and are rated to 1800° F (982° C) continuous firing temperature.

PKI introduced its first Standard Burnout Furnace to the investment casting industry and soon set a standard that has not been matched. Even today, it remains the best value on the market.

Designed for continuous 1800° F (982° C) [maximum 2000° F (1093° C)] operation, the Standard Burnout Furnace's downdraft design yields excellent heat distribution ($\pm 25^{\circ}\text{F}$ [$\pm -4^{\circ}\text{C}$]), the power burner system is 100% flame safe and spark ignited and the door is air operated by either hand or foot valve. The insulation system has the same specifications as the New Generation Burnout Furnaces, but is 6" thick. As with all PKI's Burnout Furnaces, the floor is covered with their exclusive THERMOFLO™ floor tile. The Standard Burnout Furnace is an excellent choice for non-ferrous operation or any applications that do not exceed 2000° F (1093° C).

A complete installation, operation and maintenance instruction manual is included and also contains burner system electrical schematics and an afterburner data report. Constructed to comply with OSHA, NEC and NFPA.

Fuel Requirements

Natural Gas (1,050 BTU/cu. ft.) 1-1/4" supply line at 1 PSI. LPG may be used but must be specified at time of order.

Electrical

Standard supply to the control panel is 120 VAC, 1 ph. A 20 AMP circuit should be dedicated for this service.

Air Requirements

Minimum 1/2" line at 90 PSI.

There are a variety of optional features that may also be quoted for the Standard Burnout Furnace.

Afterburner

The afterburner is incorporated into the chimney of the furnace. As smoke is drawn through the exhaust flue and into the afterburner, it is passed through the afterburner flame and then into the afterburner chamber; which completely burns the hydrocarbon smoke. The afterburner requires the installation of two, or more, insulated exhaust stack sections (included) which provide the proper retention time for complete combustion of the smoke. The burner is controlled by a setpoint controller which reads a thermocouple at the top of the stack. Two afterburner options are available for Standard Burnout Furnaces:

- Category I will handle 7.8 lbs. wax/load.
- Category II will handle 14.2 lbs. wax/load.



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**PRODUCT
DATA SHEET**

Issue Date: 022417 / Replaces: 082216

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Soaking Temperature Control

Set the desired operating temperature. When the furnace achieves temperature, it automatically holds the setpoint indefinitely. This microprocessor controller sends a relay output which controls a HI-LO fire fuel train. The air is fixed. Digital LED readout, overtemperature protection and thermocouple break protection are featured in this control system.

Single Program Temperature Control

This microprocessor controller may be programmed to follow a specific temperature profile, up or down. It has 6 ramps and 6 soaks and also sends a relay output to control the HI-LO fuel train. It holds one program or may also be used as a setpoint control. It also features digital readout, overtemperature protection and thermocouple break protection.

Multiple Program Temperature Control

If you have different temperature profiles for different jobs, this is the controller for you. It holds up to 8 different programs of 16 segments each, as well as setpoint control. It has all of the features of the above controllers and much more.

Strip Chart Recorder

This is a 2 pen, 4" wide roll chart that will give you permanent record of two thermocouple locations during the firing cycle. It has a red and blue pen and maybe turned on and off independently.

FM Safety Fuel Train

This fuel train would be in addition to the standard fuel train included on any burner and control system combination. It is not a required option, but is recommended for customers who must have their equipment meet Factory Mutual specifications. It includes a manual reset safety shutoff valve, high/low gas pressure switch and an additional FM approved gas cock. This option comes fully installed and tested.

IRI Safety Fuel Train

This option is similar to the FM Safety Fuel Train except that it includes an additional safety valve (motorized) for Industrial Risk Insurers specifications. This option comes fully installed and tested.

Furnace Mounting Of Control Panel

With this option, the control panel would be mounted on the furnace wherever specified by the customer. The panel is then completely wired to the rest of the combustion and control system and then tested; which assures a quick, trouble-free start-up.



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Oxygen Analyzer/Readout

This is a control panel installed O₂ analyzer that gives a continuous digital readout of the percentage of oxygen in the load area. It operates from the compressed air of the door system and can be linked to the temperature recorder option for a permanent record. This instrument is essential in evaluating combustion efficiency, burnout problems and rapid prototype processing.

Cabinet Cooler

Control panels located on, or near, furnaces and other hot foundry equipment can experience internal temperatures above the recommended operating temperatures of sensitive electronic equipment. This simple to operate, compressed-air powered cabinet cooler will automatically maintain a temperature of 90°F-100°F (32°C-38°C) in the control panel.

Independent High Limit Control

This is a separate high limit controller operating off a second thermocouple, providing an additional safety feature which shuts down the burner system in the event of a runaway condition.

Foot Valve

The Standard Burnout Furnace comes with a hand operated valve for operating the door cylinder. The optional foot valve allows hands-free door operation.

Custom Options

PKI is able to provide virtually any type of additional options for Standard Burnout Furnaces. These options can be simple or complex mechanical systems or elaborate control systems. We would be pleased to discuss your ideas and/or requirements with you and how to integrate them into the furnace.



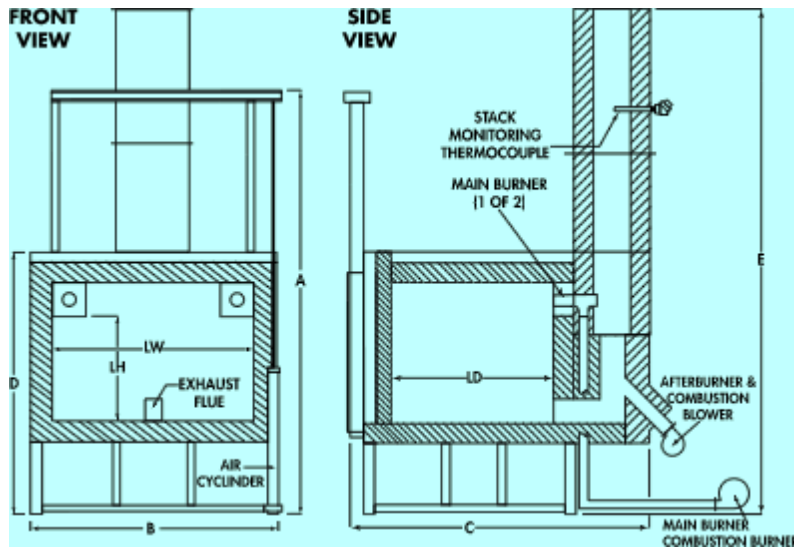
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New Generation Burnout Furnace Specifications*

Model	Load Area Dimensions			Overall Furnace Dimensions					Main Burner Typical Input	Main Burner Max. Input	Afterburner Max. Input	Min. Gas Press. Req.
	LW	LD	LH	A	B	C	D	E	BTU/HR**	BTU/HR	BTU/HR***	PSIG
PBF-36	48"	36"	36"	126"	61"	80"	78"	150"	535,000	750,000	690,000	1
PBF-48	48"	48"	36"	126"	61"	91"	78"	150"	550,000	750,000	690,000	1
PBF-60	60"	48"	36"	126"	73"	91"	78"	150"	565,000	750,000	690,000	1
PBF-80	60"	48"	48"	144"	73"	91"	86"	158"	585,000	750,000	690,000	1

*Product specifications subject to change without notice. Check with manufacturer for critical specification requirements.

**Actual fuel consumption will vary with operating conditions.

***Based on Category I afterburner. Category II will be higher.



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