INDUSTRIAL OVENS AND FURNACES

ASSAY FURNACE

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Pyradia is a manufacturer of ovens and furnaces, well known in the mining industry for the design and production of custom-built equipment. This furnace has several unique features which facilitate its use and assure results of the highest quality.

Four and a half inches of high-quality refractory brick and two and a half inches of mineral board ensure excellent insulating properties, resulting in reduced heat-up time and increased temperature uniformity. The materials used in the construction of the treating chamber offer excellent protection against corrosive emanations that may result from the process. The guillotine-type door is counterweighed and opens from top to bottom by a lever conveniently located on the front of the furnace. The operator of the furnace may open the door slightly with minimum heat loss and minimum amount of fresh air entering the chamber.

FURNACE CASING

The furnace casing is made of heavy gauge sheet metal and is specially formed to provide superior structural strength. The control panel is slightly recessed, providing protection for the electronic controls. All electric and electronic controls are grouped at the base of the furnace. These easy-to-read controls include:

- Watlow PM-6 electronic digital temperature and safety control (calibrated at our plant)
- Simple phase or three phase ammeter
- Pilot lights and switches
- Security contactors

Pyradia Belfab

Pyradia Inc.
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HEAT CHAMBER

The heat treating chamber is completely independent from the furnace casing, ensuring better ventilation of the electrical connections for increased reliability. It can be easily removed for maintenance purposes. This characteristic, coupled with superior insulation, also enables the furnace casing to remain cool. A drawer is installed beneath the door, allowing the operator to clean the hearth plate without spilling residue on the lab floor. Process residue is swept towards the front of the plate and falls into the drawer, which can be quickly emptied. An access door on each side of the furnace allows for an easy replacement of elements and thermocouples.

- **REDUCED HEAT UP TIME**
- **INCREASED TEMPERATURE UNIFORMITY**
- **EASY TO OPERATE**
- **UP TO 2400°F (1315°C)**

HEARTH PLATE AND CHIMNEY

A silicon carbide hearth plate is solidly held in place by a support integrated in the refractory brick. Resistant to wear and corrosion, this plate allows uniform distribution of heat. A Venturi-type chimney, extending from the vault of the heating chamber, enables complete evacuation of gases and fumes resulting from the process. It also permits a continuous exchange of air inside the furnace casing. A 6-inch diameter connecting duct is installed and may be rapidly connected to ducting of a conventional chimney at little cost.

ELEMENTS

Six silicon carbide elements are located beneath the hearth plate. The number, configuration, and location of the elements, as designed by Pyradia's Engineering Department, ensures superior heat-up time and temperature uniformity. A low-watt density maximizes element life. Our furnaces are built to offer maximum reliability and efficiency.

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DOOR VENT

A wide door vent made of stainless steel is integrated into the furnace door. Its location permits an ideal view of the inside of the chamber, especially the top of the cupels. At the proper moment, the opening of the vent enables fresh air to come in contact with the top of each cupel, providing excellent oxidation. The high-quality results of this procedure are attributable to a thorough study of the fresh air circulation and ventilation in the chamber.

SPECIFICATIONS

Overall dimensions	43''/ 110 cm W x 42''/ 107 cm D x 85 1/4''/ 216 cm H
Available work space	14 1/2''/ 36 cm W x 22''/ 56 cm D x 6''H / 15 cm (each side)
Capacity	35 – 15 gram fusion pots 28 – 20 gram fusion pots 24 – 30 gram fusion pots
Maximum operating temperature	2 400°F / 1315°C
Power	20 KW
Available voltage	208v / 240v - 1 Ø 208v / 240v - 3 Ø 480v - 3 Ø 600v - 3 Ø
Weight	850 lbs / 385 kgs

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