

# Hard Cast Heaters Ceramic Heater Plates

### Features

#### Description

- 1100 °C Continuous Use Temperature
- Wire in Parallel or Series
- Flanged or Flat
- 11 Gauge Iron Chromium Aluminum Wire
- Very Strong - Load Bearing
- Support Assemblies Available

#### Standard Model Set

- **Set Consists of :**
  - (1) Top Right Flanged Heater
  - (1) Right Side Heater
  - (2) Bottom Heaters
  - (1) Top Left Flanged Heater
  - (1) Left Side Heater

#### Features

- Embedded Wire
- Protected Circuit
- Front Loading Box
- 480 Volts / 60 Kw
- 11.25 Cubic Feet



Pictured is our standard size model. It is a front loaded box, 30" wide by 18" tall and 36" deep, making the area 11.25 cubic feet of space. The heaters offer 1100 °C operating temperature, and provide 60 Kw of power from a 480V supply.

### Product Information

**Zircar** HCH Hard Cast Heaters were developed for our own use. Our experience with refractory heaters in the manufacturing of **Zircar** textiles and powders has perfected the construction, design and operation of HCH. Our instructions for use will extend the life of HCH for months or years.

Sections can be cast individually then strung together to assemble any full length.

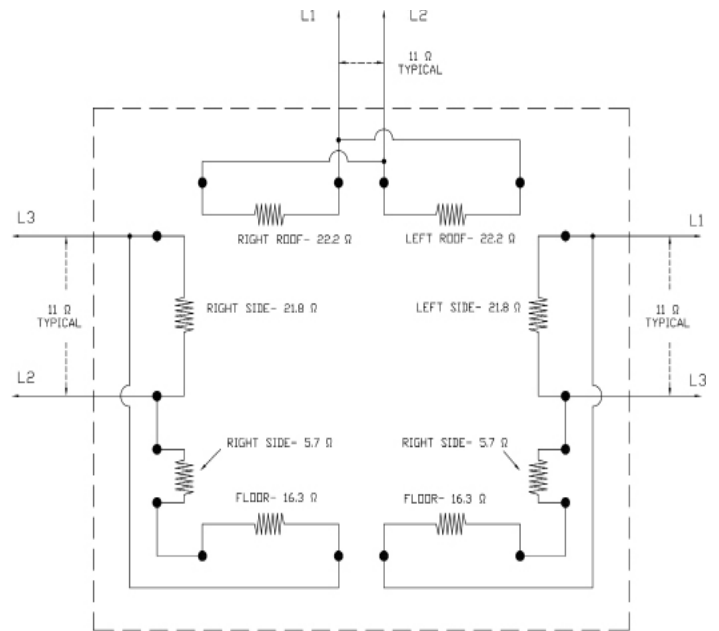
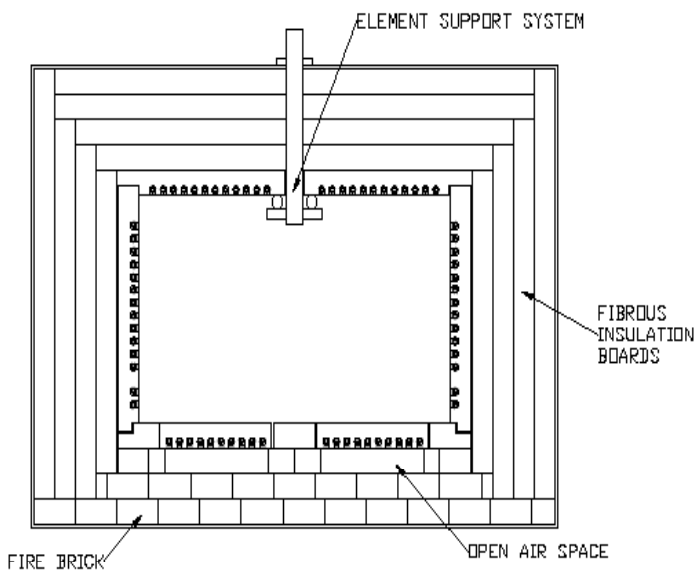
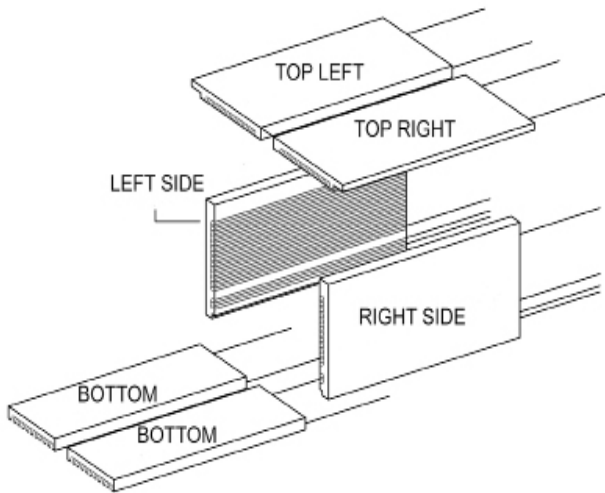
**HCH-1** Exposed Wire  
**HCH-2** Embedded Wire

For more information,  
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website: [www.zircarzirconia.com](http://www.zircarzirconia.com)

#### The **Zircar** Fibrous Ceramics Advantage

Low Mass,  
Low Heat Storage &  
Low Thermoconductivity  
*means*  
High Thermal Shock Resistance,  
High Insulation Performance,  
Higher System Efficiency &  
Lower Energy Costs

# Process Images



FURNACE REAR VIEW



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## Process Images (cont.)



After firing to 1100 °C, the casting is strung with the coiled element wire.



The heaters are finished with element potting compound and ready for installation.

## Properties & Characteristics

Hard Cast Refractory	
<b>Properties (Nominal)</b>	
Maximum Continuous Use Temperature, °C	1100
Density, lb/ft <sup>3</sup> (g/cm <sup>3</sup> )	140 (2.24)
Flexural Strength, MPa (lb/in <sup>2</sup> )	600 (4.1)
Compressive Strength, MPa (lb/in <sup>2</sup> )	20.7 (3000)
<b>Chemical Composition, Wt%</b>	
Al <sub>2</sub> O <sub>3</sub>	>60
SiO <sub>2</sub>	>30
Other Metal Oxides	<10

## Custom Design Quotations

### Contact Us For A Quotation For Your Custom Part

Call: 845-651-3040  
email: [sales@zircarzirconia.com](mailto:sales@zircarzirconia.com)

**Zircar** machines custom shapes to your design specifications. Our capabilities include:

- 3D CNC Machining
- Layered Configurations
- Lap Joined Boards and Cylinders
- Diamond Wire Splitting of Cylinders



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