

PRODUCT

INFORMATION



SERIES 5 BELL JAR

Because of its simplicity, ease of access into the furnace, and small volume, the furnace is easily purged. Work specimens are, therefore, very quickly prepared and a very high degree of purity is maintained.

The Centorr/Vacuum Industries' Model 5BJ Single Arc furnace consists of a water-cooled stainless steel Bell Jar hinged from a fixed base plate. Clamps are provided for operation at slightly positive pressure. The electrode (stinger) shaft penetrates down through the Bell Jar top. The hearth is water-cooled copper with interchangeable top surface.

Applications:

- Powder Melting
- Arc Casting
- Metallic and Non-Metallic Buttons
- Annealing
- Compound Synthesis
- Material Densification

Main Features:

- Ease of Operation
- Extremely dependable and versatile
- Low initial cost
- Instant high temperature
- Accepts variety of hearth configurations
- Extremely pure melts
- Provision for titanium getter

Various configurations of cavities can be provided in the hearth top surface.

Light and window are provided for observation inside the Bell Jar. The stinger is sealed to the Bell Jar top by means of a ball joint and stainless steel bellows. Pressure compensation for "zero feel" is incorporated into the design of this seal.

Provision is made for attachment to a vacuum pump for evacuation prior to backfilling with inert gas. Also included are ports and gauges for inert gas.



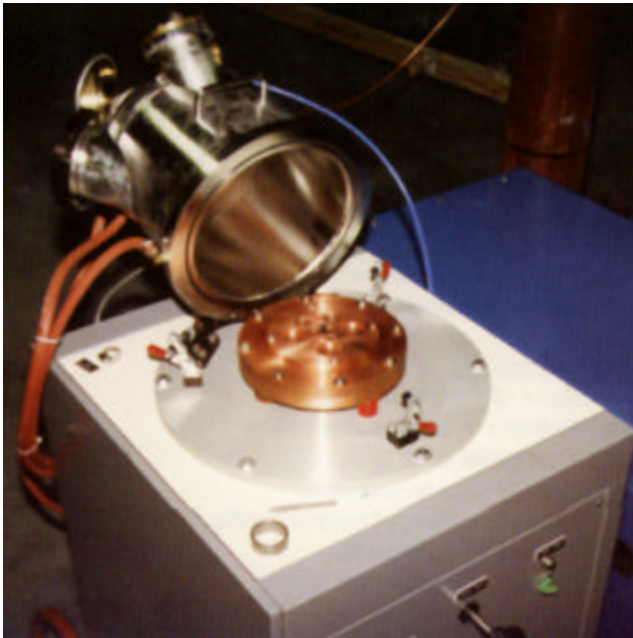
Bell Jar Specifications

A typical system consists of:

- Basic Furnace
- Evacuation Kit
- Inert Gas Kit
- Power Cables
- Power Supply
- Base Cabinet

REQUIREMENTS

Electrical:	Up to 1000 Amps D.C. Welding Type Power Supply
Water:	4 GPM @ 50 PSI and 70°F (30.4 LPM @ 3.5 Kgs/cm ²)
Evacuation Pump:	2 CFM (56.6 LPM) vacuum pump
Inert Gas:	2-10 CFM (56.6—283.2 LPM)



SPECIFICATIONS

Maximum Temperature: Over 3500°C

Hearth: 9" (22.9 cm) O.D. Water-Cooled Copper.

Bell Jar: 9 1/2" (24.4 cm) diameter x 11 1/2" (29.2 cm) high Stainless Steel water-jacketed.

Stinger Tip: 1/4" (6.4 mm) diameter Thoriated Tungsten Rod.

Arc Starter: 1/4" (6.4 mm) diameter Thoriated Tungsten Rod.

Power Cables: Two (2) 6' (1.8M) long water-cooled.

Base Plate: 18.5" (47 cm) diameter Aluminum.

Light: At Bell Jar top, 7.5 Watts.

Window: View port at Bell Jar Top.

OPTIONAL

- Partial Pressure Control
- High Vacuum Diffusion Pumping System, 10⁻⁵ - 10⁻⁶ Torr Vacuum
- High Frequency Arc Starter.

Centorr/Vacuum Industries Manufactures a complete line of High Temperature Vacuum and Controlled Atmosphere Furnaces for the Research and Development Laboratory, the Materials, Testing and Evaluation Laboratory, and for Production.



Centorr/Vacuum Industries, Inc.

55 Northeastern Blvd.

Nashua, NH 03062

Toll: 800-962-8631

Tel: 603-595-7233

Fax: 603-595-9220

www.centorr.com

Email: sales@centorr.com