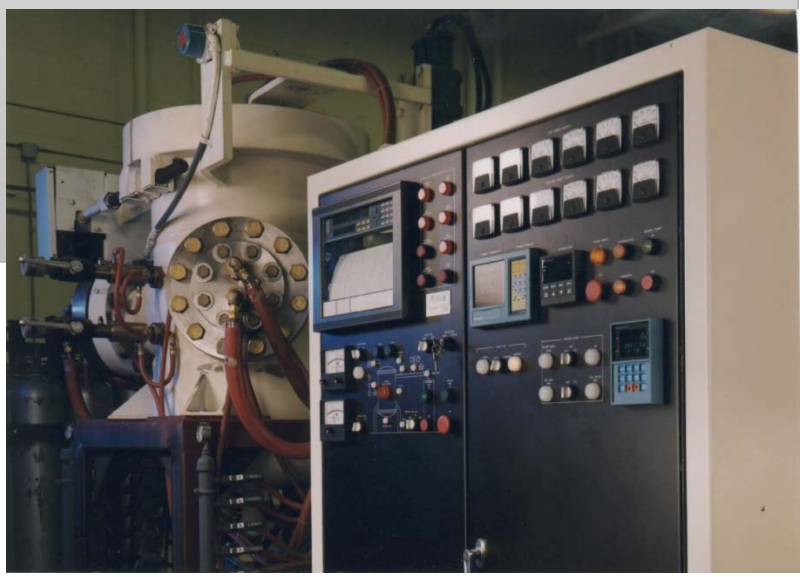
CENTORR Vacuum Industries

800.962.8631 603.595.7233 sales@centorr.com

SERIES 3850 - Sinterbar® Jr. Pressure Furnace



Description

Sinterbar™ Jr. Pressure Furnaces are vital to the efficient and economical production of a wide variety of advanced ceramics, carbide tools and wear parts, and other high performance materials. They eliminate a separate hot isostatic pressing operation for many materials with liquid phases. Overpressure capabilities permit many sinterable ceramics to be processed at higher temperature for superior properties.

The "Sinterbar" pressure furnace design allows multi-mode operation in vacuum, partial pressures, and positive gas pressures up to 1500 psig (100 bar). Available in vertical top loading laboratory sizes with furnace temperatures range up to 1650°C for carbides and 2200°C for ceramics. For broader application in high performance engineering ceramics production, Sinterbar Jr. furnaces can be supplied with either graphite or carbon-free hot zones for operation at tempertures to 2200°C and presures to 1500 psig (100 bar).

A complete furnace system includes all necessary controls for fully automatic operation of complete process cycles including Sweepgas™ binder removal. Sinterbar Jr. furnaces incorporate the latest developments in high temperature pressure furnace technology.

Key Features

Production Benefits

- Better Quality - Increased part densities. Improved mechanical properties.
- Higher Yield - Eliminates need to transfer fragile debindered parts from debinder to sinter furnace.
- Cost Savings - One-st vs. multi-step process. Reduced overall cycle time. Simplified equipment, low maintenance. Overall reduction in capital investment compared to separate sinter and HIP furnaces

Furnace Advantages

- Multi-purpose Operation - Combines binder removal, presinter, sinter, and pressure consolidation steps in one continuous cycle.
- Material Compatibility - Carbon-free all-metal or graphite furnace hot zones to suit product requirements.
- Automatic Operations - Temperature and pressure cycles programmable for automatic control.

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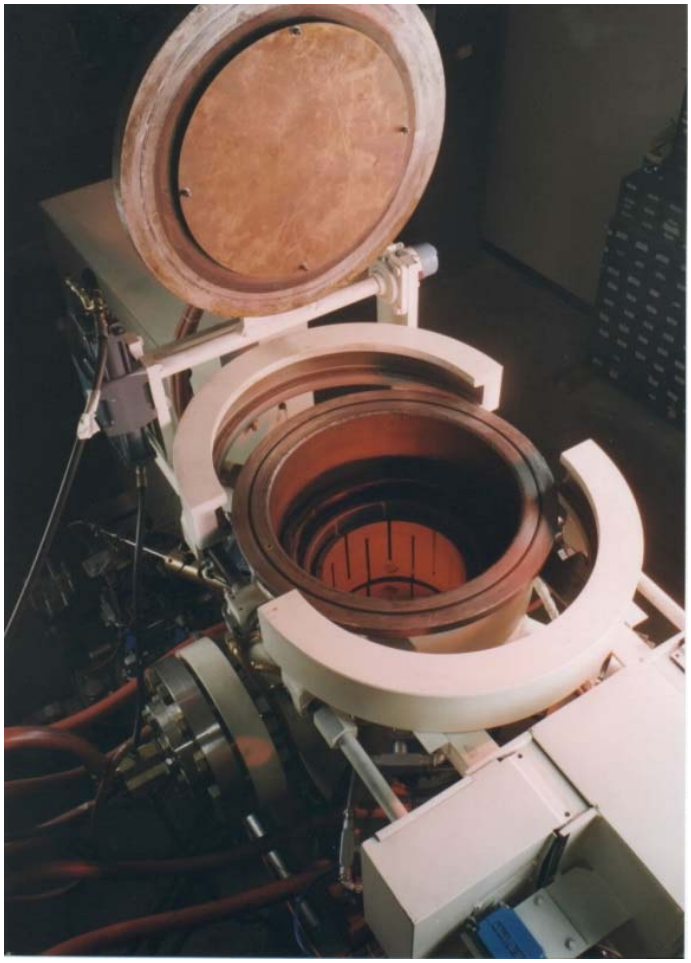
Key Features

- Cold Wall Design - Safe, compact water-cooled ASME code design chamber.
- Adjustable Gradient Hot Zone - New heater design for maximum load temperature uniformity overcomes effects of gas convection.
- Reliable Heaters - Rugged graphite or heavy tungsten rod.
- Variable Environments - Vacuum, partial pressure and positive pressure. Inert or reactive gas capability.
- Binder Removal - Sweepgas™ separation and collection system for many binder and lube materials.
- Accurate Repeatability - Precise temperature measurement and control instrumentation.
- Operating Ease - Quick acting patented access door. Automatic operation.

Optional Features

- Powered Cover lift for top loading models.
- Debinding system.
- Inert and Process Hydrogen Gas systems.
- Graphite Retort .



FURNACE APPROVALS

Centorr/Vacuum Industries furnaces are designed to our own internal quality standards developed over our 60 year history, and are built to the following industry standards:

ASTM NFPA 86 NEC (NFPA70)