

Model HFL-5748-2EQ

Vacuum Heat Treating & Brazing Furnace

The Solar Manufacturing Model HFL-5748-2EQ is a horizontal front loading vacuum heat treating and brazing furnace generally designed for high production commercial and captive heat treating shops. It is a high temperature, high vacuum, batch type furnace with electrical resistance heating elements.

Features and Benefits

- Horizontal, front loading design with hinged front door for easy, convenient unobstructed loading/unloading of work loads and fixtures
- Autoclave locking ring closure eliminates door seal problems
- Hot zone measuring 36" W x 36" H x 48" D with 3500 pound capacity
- Energy efficient graphite insulation for high temperature applications up to 2500°F
- Thin curved graphite resistance heating elements for uniform radiant heat up and cool down
- High performance external gas quenching for rapid cooling at positive pressures up to 15 PSIG (2-bar)
- Fully automated and programmable industrial controls package
- Designed for easy maintenance and minimal downtime
- Full one (1) year Warranty



READY FOR QUICK DELIVERY

Hot Zone

- Operating temperature: 2400°F
- Maximum temperature: 2500°F
- Temperature uniformity: approximately $\pm 10^\circ\text{F}$
- Hearth: molybdenum support pins and graphite rails
- Heating elements: curved graphite bands
- Insulation: four (4) layers of 0.5" high purity graphite felt
- Hot Face: 0.040" thick Flex Shield carbon fiber reinforced graphite foil sheet
- Three (3) zones of trim control
- Insulation and heating elements are mounted on a heavy duty stainless steel support structure

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Vacuum Chamber

Double wall, water cooled, horizontal front loading vacuum chamber. Hinged front door with pneumatically operated, autoclave-type locking ring to permit the furnace to safely quench at positive pressures up to 15 PSIG (2-bar). Oversized water inlets and outlets assure maximum water flow.

Gas Quenching System

The external gas quench system provides the lowest resistance, highest efficiency gas flow in the industry. A 100 HP motor drives a high-speed turbine fan to recirculate the quench gas straight through the water-to-gas heat exchanger and then into the hot zone at high velocity. The tapered graphite gas nozzles are specifically directed at the work load for optimum cooling.

Vacuum Pumping System

- Mechanical Pump: Edwards Stokes 412, 300 CFM
- Booster Blower: Roots 615, 1600 CFM
- Diffusion Pump: Varian 20"
- Holding Pump: Alcatel
- High Vacuum Valve: Right angle poppet valve

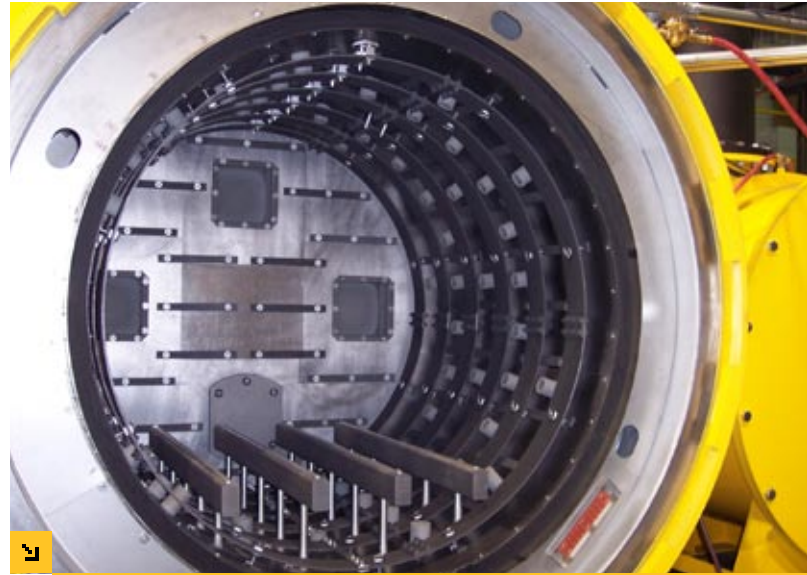
Power Supply

Hunterdon VRT power supply; rated at 210 KVA/460 volt/3 phase/60 Hertz.

Control Cabinet and Instrumentation

All industrial controls and instrumentation are housed in a suitable NEMA 12 control cabinet. The SolarVac 3000 interactive control system enables the operator to monitor, control, record and display information graphically to quickly understand the status of the furnace.

- Programmable Logic Controller: Allen-Bradley MicroLogix 1500
- Programmable Controller: Honeywell Model DCP551
- Overtemperature Controller: Honeywell Model UDC2500
- Graphic Video Recorder: Eurotherm Model 6180 utilizing a 12" color touch-screen monitor



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- Operator Interface: Allen-Bradley PanelView Plus 1500 utilizing a 15" color touch-screen monitor
- Vacuum Gauge Controller: Televac MC300
- Control Thermocouples: Type "S"
- Work Thermocouples: Type "K"

Standard Optional Equipment and Energy Savings Options

- ConserVac energy saving pump control system
- ElementGuard off-line element protection system
- Variable frequency drive for quench motor
- Dedicated rail guided load truck; manual or powered
- Gas backfill reservoir
- RA330 and molybdenum work grids and multi-tier fixtures

Additional options are available upon request.

For a full detailed price proposal with equipment specification, contact Pete Reh, Vice President of Sales at 267-384-5040 X509.



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