

News Release



For Immediate Release

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Solar Manufacturing Ships Two Vacuum Furnaces for Diffusion Bonding of Porous Metal Products

Solar Manufacturing, Inc. recently completed the shipment of two large vacuum furnaces to a major, multi-divisional manufacturer of diffusion bonded porous metal products used for filtering, transpiration cooling and noise suppression.

“These vacuum furnaces were purchased for the tightly controlled, high temperature sintering of stainless steel, monel, inconel, and hastelloy. These materials are then diffusion bonded to create a strong, ductile, corrosion resistant, laminated media to meet the demands of the aerospace, aviation, pharmaceutical, petrochemical, pulp and paper, food and beverage, and chemical processing industries,” explained Pete Reh, vice president of sales.

The maximum operating temperature of the hot zones are 2500°F, with working dimensions of 523 wide X 323 high X 603 deep. The energy efficient hot zones feature a Flex Shield hot face of 0.0403 thick carbon fiber, reinforced graphite foil, and four layers of 3½ thick graphite felt insulation. Thin, durable, graphite heating elements are cylindrically mounted and divided into multiple trim zones. The weight capacity of the graphite hearth and dedicated work loading truck is rated at 11,000 pounds.

The external gas quenching systems utilize a high-capacity copper heat exchanger, 150 HP drive motor, and radial blade fan for high velocity quenching through “forward tapered” graphite nozzles. The front doors of the vacuum chambers are pneumatically operated locking ring closures that facilitate positive pressure quench to 15 psig (2 bar). A 353 Varian diffusion pump allows for high vacuum performance of 1 x 10⁻⁵ Torr.

Solar Manufacturing, Inc. is part of Solar Atmospheres, Inc., one of the largest and most progressive, independent commercial heat treaters in the USA. To learn more about their diverse product line, contact Peter Reh, vice president of sales at pk_r@solararmfg.com.

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