

# **Atmospheric Glove Box Systems**

- Turnkey, Integrated Systems For Auto / Manual Operation
- For Brazing, Heat Treating And Welding In Inert Gas
- For Use With Nickel, Titanium, Steel, Superalloys, Refractories
- Use Quick, Clean
  Induction Heat
- Replace Continous Belt Furnace
- Inert Purge and Inert Regeneration Systems Available



besigned for atmospheric brazing and soldering with argon, nitrogen and other inert gases, our Glove Box Systems are ideal for low- to moderatevolume applications. With their operatorfriendly, ergonomic design, these systems are particularly well-suited for processes which require manual part manipulation. Glove Box systems are typically used with nickel, titanium, superalloys, steel and refractories.

Whatever your production requirements, GH IA can customize a Glove Box System to meet your needs. Our cost-effective manual systems are ideal for hands-on, low-volume heating. If more production volume is required, indexing turntables can be added to boost productivity. For high-volume, automated applications, custom conveyor systems can be designed to swiftly move parts through the heating chamber. Our Model IR Glove Box (shown above) is a closed loop gas recirculation type system which significantly lowers gas costs by treating and recirculating the original protective atmosphere for multiple batch applications. As a recirculation system, the Model IR uses argon very economically, consuming only 5 cubic feet (0.142 m<sup>3</sup>) per batch exchange.

After the desired atmospheric conditions are achieved, the system's quick, clean induction heating system provides an efficient and cost-effective method of transferring energy. The induction heating process requires no flux application, further reducing cost of operation. IA engineers will size and recommend the optimum power supply for your application.

Designed to attain a purity level of < 1PPM H<sub>2</sub>O and < 1 PPM O<sub>2</sub>, the system features an evacuable transfer chamber and a heat exchanger for cooling the internal atmosphere. The PLC control unit features a central operation panel with function keys, multi-lingual LCD display and a foot pedal for box pressure adjustment.

The glove box itself is constructed of vacuum-tight stainless steel with a 0.4 in. (10 mm) thick Lexan<sup>®</sup> window, front-mounted fluorescent light and three rear shelves. For operator comfort and safety, the two front glove ports are fitted with butyl work gloves.

With economical operating costs and increased productivity, GH IA Glove Box Heating Systems provide a compact, cost-effective replacement for continuous belt furnaces which heat the entire atmospheric chamber on a 24/7 basis (whether or not the unit is actually in use). Contact us today for more details.



High-volume, automated system with integrated indexing turntable



Ergonomic design increases operator comfort and safety.



GH IA Systems utilize quick, clean induction heating.

## **Atmospheric Glove Box Systems**

#### CONTROLS

Light Tree: PLC: Temperature: Provides system status notification Xycom Touch Screen Honeywell 300 Temperature Controller

#### **VACUUM PUMPING SYSTEM**

Mechanical Pump: Edwards RV12

#### **CHAMBER**

Design:

Door:

Ports:

Heavy duty, stainless steel chamber Manual or pneumatically operated All required ports; includes spare QF 40

#### UTILITY REQUIREMENTS

Electrical: Water: Air: Inert Gas: 480 VAC, 3-Phase, 100 Amp service 10 GPM @ 40 PSI (37.9 *LPM* @ 117 *kg/sq cm*) heat load of 25 kW 80 psi (234 *kg/sq cm.*) 30 psi (87.8 *kg /sq cm.*), 30 CFH (backfilling only), <-50°F (<-10°C) dew point

### **OPERATOR SAFETY FEATURES**

- Light curtain
- E-stop
- Fully-isolated heating system
- Chamber access interlocks
- Over-temperature safety latch

#### **OPTIONS AND ACCESSORIES**

- Optical pyrometer (for individual part temperature measurement with closed loop control)
- O<sub>2</sub>Analyzer (0-1000 PPM)
- H<sub>2</sub>O Analyzer (0-350 PPM)
- Indexing turntable
- Dual antechamber for improved workflow
- Automatic coil purge
- Automatic antechamber purge
- Automatic antechamber doors
- Fully automatic packages for custom applications

Learn about brazing procedures, alloys, atmospheres and more! Visit our Online Brazing Guide www.gh-ia.com/brazing.html



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