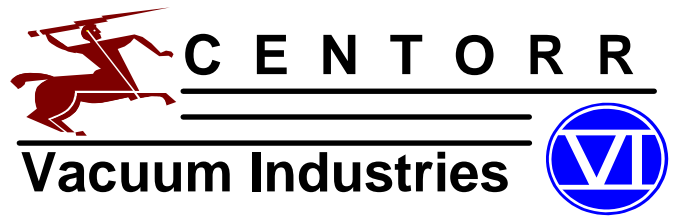


PRODUCT Information



Wire Anneal Furnace SERIES WA

HIGH TEMPERATURE CONTROLLED INERT ATMOS- PHERE WIRE ANNEAL FURNACE

APPLICATIONS

High Temperature Annealing of wire in protective atmosphere.
(Replaces Vacuum Batch Furnaces).

MAIN FEATURES

Low cost system
Inexpensive to operate
Compact—minimum floor space or height required
Easy to maintain—minimum down-time
No out-gassing problems—no vacuum
Prevents sticking—spooling is done outside of
Furnace where wire is cold
Even temperature distribution
Significant improvement over other processes

SPECIFICATIONS

Floor space: 4' x 6' (1.2M x 1.8M)
Power: 15 KVA (single phase or three phase)
Water: 3 GPM @ 50 PSI and 70°F
(11.4 LPM @ 3.5 Kgs/cm² and 21°C)
Operating Temperature: Up to 1600°C
Hot Zone Size: 4" Dia. x 12" High
(102 mm Dia. x 305 mm High)
Heat Zone Material: Refractory Metal
Furnace Chamber: All Stainless Steel
Internal Chamber: Water-cooled Copper
Entry and Exit Spools: Stainless Steel, Water-Cooled
Atmosphere: Argon
Temperature Control: Indicator-Controller with W/Re
Thermocouple
Access: Hinged Front Door
Gas Purifier: Centorr Vacuum Industries Model 2A-100-SS
Number of Wires: Eight to Twelve
Wire Diameter: .005" to .030" (.13 mm to .76 mm)



A typical furnace system consists of the following:

- A. BASIC FURNACE ASSEMBLY
 1. Furnace Chamber Assembly
 2. Entry and Exit Spools
 3. Heating Elements
 4. Heat Shields
- B. POWER SUPPLY
- C. TEMPERATURE CONTROL INSTRUMENTATION
- D. PROCESS GAS SYSTEM
- E. GAS PURIFIER, OR PURIFIER WITH OXYGEN MONITOR
- F. OPTIONS AND SPARES



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Basic Furnace Assembly

The Basic Furnace consists of an all stainless steel chamber, inside of which is the resistance heated Heat Zone. Heat Zone components are readily accessible for inspection or maintenance. The inside of the furnace chamber is designed to conform to the best High Vacuum Practice. Particular attention is given to the choice of heat zone materials and to surface finishes. Ports are provided for Sighting, Thermocouples, Process Gas, etc. Centorr Vacuum Industries' proprietary Rotatable Sight Window is included as standard equipment.

Water-cooled spools are provided at the entry and exit to the furnace. The flow of process gas from the furnace center toward the outside end of each tunnel serves to keep air from entering the heat zone and also to carry with it any impurities which may evolve during heating.

Power Supply System

Power Supply Systems consist of Silicon Controlled Rectifier Power Controller (Saturable Core Reactors also available) with Current Limit, Step-down Transformer, Circuit Breaker, Contactor, Control Transformer, Ammeter, Voltmeter, Push-Buttons, Indicator Lights, Water Interlocks, all completely wired and packaged in an attractive floor standing cabinet.

Utility requirements are given in KVA at customer's Primary Voltage, Single or Three Phase, and 50 or 60 Hertz.

Temperature Control Instrumentation

Centorr Vacuum Industries can supply from the simplest Manual Power control to the most elaborate instrumentation. This furnace is generally supplied with a temperature Indicator-Controller working in conjunction with a W/Re Thermocouple. A Temperature Recorder can be supplied optionally.

Process Gas System

Process Gas System consists of three flow meters each with valve, and low gas pressure interlock with panel-mounted alarm.

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.



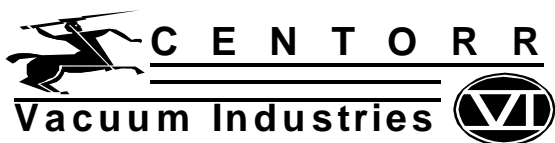
Gas Purifier, or Purifier With Oxygen Monitor

It is imperative that the process gas be extremely pure. For this reason we recommend our Model 2G-100-SS Gas purifier with O² Monitor

Options and Spares

Various options and spares are available to suit each application.

NOTE: Chamber mounting brackets and wire feed and take-up spools and mechanism are by customer.



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