

MADDEN ENGINEERED PRODUCTS

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CONTINUOUS BLOWDOWN HEAT RECOVERY SYSTEM

INSTALLATION INSTRUCTIONS

VERTICAL STYLE - H V SERIES

- A. Once system is at the installation site, anchor the baseplate securely to the floor. Use the assembly drawing for installation location of the Madden supplied components:
1. Install the Kunkle Relief Valve onto the coupling on the top vessel.
Vent pipe must exit the building.
 2. Screw the Pressure Gauge into the Steam Gauge Syphon and install onto the 1/4" npt coupling on the top vessel.
 3. Install the Sight Glass and Valves between the two 3/4" npt couplings on the top vessel. See the Ernst Water Gauge and Gauge Glass Installation Instructions.
 4. Connect the Madden Nameplate with 3 pre-mounted thermometers onto the nameplate brackets with the 4 supplied bolts.
 5. Insert the 3 thermometer probes into the correct couplings as listed on the assembly drawing:
 - a. Insert the union connections of the thermometer probe assembly into the 3 couplings.
 - b. Insert the probe with capillary tube attached to the gauge in the *first* position on the nameplate into the correct coupling on the lower vessel inlet.
 - c. Insert the probe with capillary tube attached to the gauge in the *second* position on the nameplate into the correct coupling on the lower vessel outlet.
 - d. Insert the probe with capillary tube attached to the gauge in the *third* position on the nameplate into the correct coupling on the blowdown drain at bottom of lower vessel.
 6. If the vessel has an optional Magnetrol High Level Float Switch with Alarm, the alarm should be hooked up by an electrician. Wiring diagram included.
- B. Piping connections: The contractor must furnish and install all related piping. This system requires a minimum of six connections as described on the assembly drawing. Shut off valves must be installed between the boiler and the flow control valves if using Madden Orifice Meters for the flow control.
- C. The components of the Heat Exchanger System:
1. Vertical heat exchanger bottom vessel with heat exchanger coils -
Copper Coils with Bronze Manifolds or Stainless Steel Coils with Stainless Steel Manifolds
 2. Flash Tank top vessel
 3. Float Valve - interior of the Flash Tank
 4. Gauge Panel - with 3 thermometers
 5. Manifold - for inlet flow control
 6. Accessories - Sight Glass, Valves & Rods, Pressure Gauge & Syphon Tube and Safety Relief Valve
 7. Optional - High Level Alarm