

MADDEN ENGINEERED PRODUCTS, LLC

Elkhart, IN

Tel: 574-295-4292 -- Email: info@maddenep.com

CONTINUOUS BLOWDOWN HEAT RECOVERY SYSTEM

INSTALLATION INSTRUCTIONS

HORIZONTAL STYLE - H C SERIES

- A. Once system is at the installation site, anchor the foot pads 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 of the 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.
 3. Install the Sight Glass and Valves between the two 3/4" npt couplings. 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. (Optional) Install Keckley Discharge Valve if supplied.
 7. (Optional) Magnetrol High Level Float Switch with Alarm should be hooked up by an electrician if supplied. 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. Horizontal Flash Tank with Integral Heat Exchanger
 2. U-Tube Bundle with Stainless Steel Tubes
 3. Float Valve
 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 - Discharge Valve and High Level Alarm