



Hot Water Generation - Steam to Water

RadiTemp™ Shell and Tube Heat Exchanger Model RT812050G & RT812050R

A complete pre-piped instantaneous steam/water shell and tube heater with Emech® Digital Control Valve (E50WR).

RT812050G is designed for non-recirculated systems.

RT812050R is designed for recirculated systems.

The E50WR utilizes ceramic shear action disc technology to provide high pressure differential capability and long life integrity. Fitted with the electronic actuator and integrated temperature sensor, the system delivers high performance stand-alone closed-loop temperature control. Even with sudden changes of inlet pressure and temperature to the valve, the actuator controller aggressively minimizes outlet temperature variations, making the system ideal for use in process applications.

Operational Specifications

- Operating temperature range: -13°F to 257°F (-25°C to 125°C)
- $\pm 1^\circ\text{F}$ ($\pm 0.5^\circ\text{C}$) over a 32°F - 212°F (0°C - 100°C) control range
- Capable of positioning from 0% to 100% of either inlet temperature
- 90° stroke time as low as 1.5 seconds for fast control action
- 100% duty cycle rated actuator
- Capable of control blending to within 1°F of either hot or cold inlet temperature

Technical Specifications

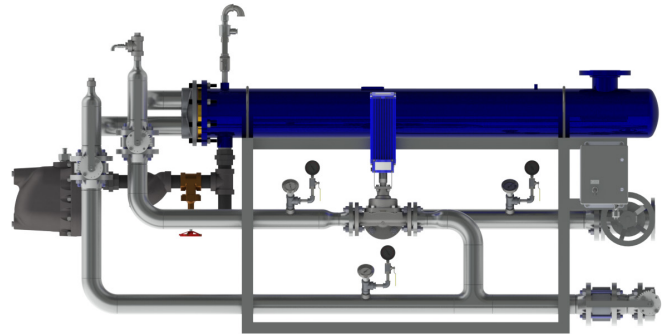
- Maximum domestic pressure: 145 PSI
- Maximum steam pressure: 15 PSIG
- Minimum flow rate: 19 GPM
- Design conditions: At 80°F temperature rise 167 GPM using 15 PSIG steam at 7,070 lbs/hr; at 100°F temperature rise 124 GPM using 15 PSIG steam at 6,554 lbs/hr; at 120°F temperature rise 95 GPM using 15 PSIG steam at 6,003 lbs/hr
- Single wall heat exchanger tubes shall be straight 5/8" x .065" OD Admiralty Brass expanded into Naval Brass tube sheets with a free-floating end cover
- BUBBLE TIGHT zero seat leakage shut-off (exceeds ASME B16.104 and FCI 70.2, Classes V and VI standards)
- Design verification to ASME B16.34
- Power: 120VAC 1A
- Failsafe position feedback (non-contact absolute encoder)
- Keypad: 4 membrane switches with "dual touch" safety features
- Display: 3.5 digit LCD display with back light
- Gearbox: planetary, lifetime lubrication, low backlash

Standard Materials of Construction

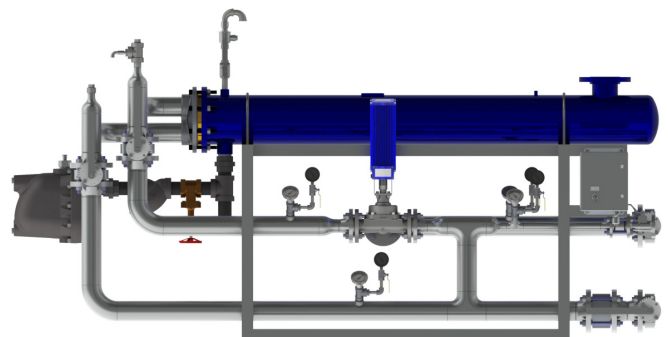
- Water Pipe: 316 Stainless Steel
- Fittings: 316 Stainless Steel
- Single wall tube bundle: Admiralty Brass
- Heat Exchanger Shell: Carbon Steel
- Steam Trap Model 20JD8 F&T: Ductile Iron
- Air Vent Model TS2: Brass
- Pressure Relief Valve: Stainless Steel
- Digital Control Valve: 316 Stainless Steel
- Digital Control Valve Discs: Ceramic, Durable Corrosion Resistant
- Frame: Fabricated Stainless Steel

Connectivity

- Analog (4-20mA) input and output control signals for interfacing with SCADA control
- External RS232 connection for actuator configuration
- Stand-alone closed loop temperature control, or remote analog (4-20mA) control options
- Extra digital input for interfacing ancillary devices (e.g., flow switch, level switch)



RT812050G



RT812050R

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for up-to-date information.

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