



## Hot Water Generation – Steam/Water Single Wall

### Digital-Flo® Steam/Water Shell and Tube Heat Exchanger

#### Model DF812080

DF812080 is a complete pre-piped single wall instantaneous steam/water shell and tube heater. The assembly includes a properly sized shell and tube heat exchanger with a Digital Recirculating Valve (DRV80).

Digital technology provides enhanced water temperature control accuracy and enhanced user safety in a single control component.

#### Operational Specifications

- $\pm 2^{\circ}\text{F}$  water temperature control at points of use 25' downstream during demand
- $\pm 2^{\circ}\text{F}$  water temperature control during zero system demand "idling" periods
- $2^{\circ}\text{F}$  minimum valve inlet to outlet temperature requirement (system recirculation temperature loss)
- Automatic shutoff of hot water flow upon cold water inlet supply failure
- Automatic shutoff of hot water flow in the event of a power failure
- Programmable set point range of  $81\text{--}158^{\circ}\text{F}$  ( $27\text{--}70^{\circ}\text{C}$ )
- Programmable 1st level hi/lo temp alarm display
- Programmable temperature error level for double safety shutdown.

#### Technical Specifications

- Maximum steam pressure: 15 PSIG
- Maximum domestic pressure: 150 PSI
- Minimum recirculation flow: 10 GPM
- Design conditions: Domestic-165 GPM at  $100^{\circ}\text{F}$  delta T using 15 PSIG steam
- Complete assembly Lead Free Compliant
- All domestic side valve fittings and isolation valves, strainers, inlet/return check valves, inlet system blend and return thermometers pre-piped.
- DRV – all wetted parts 316 stainless steel
- DRV to be UL Listed
- Heat exchanger tubes shall be straight  $5/8"$  OD admiralty brass expanded into Navel Brass tube sheets with a free floating bolted end cover
- Water pipe of type L copper
- Fabricated carbon steel frame with machine grade enamel paint
- 120 volt power supply required
- Secondary (double) safety shut-off valve included

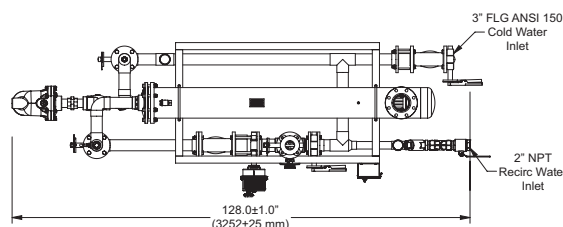
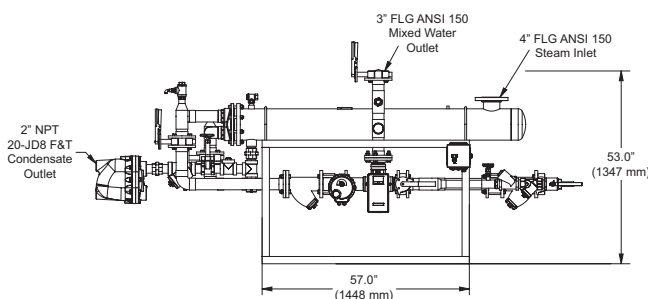
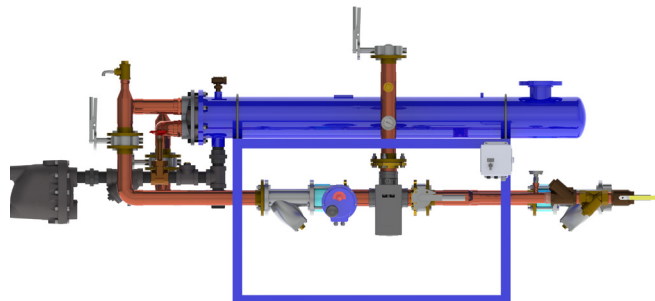
#### Connectivity

**SPCO Relay Outputs** – Relay which is energized during operation.

**LCD Display** – Provides information on set point, delivered temperature, error messages and alert conditions.

**RS485 Serial Port** – Connects the DRV to either Modbus RTU or BrainScan®. (See DF812080BS for package with BrainScan®.)

**Modbus RTU** – DRV can be configured to communicate directly with Building Automation Systems (BAS) using Modbus RTU protocol.



For a submittal drawing, refer to D589781.