



Hot Water Generation – Steam/Water Single Wall

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

Model DF53540

DF53540 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 (DRV40).

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°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: 5 GPM
- Design conditions: Domestic-41 GPM at 100°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

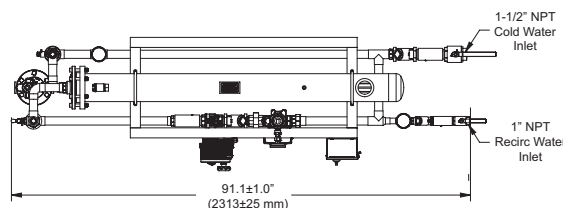
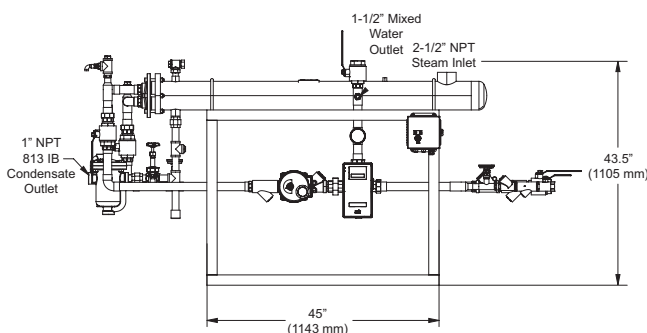
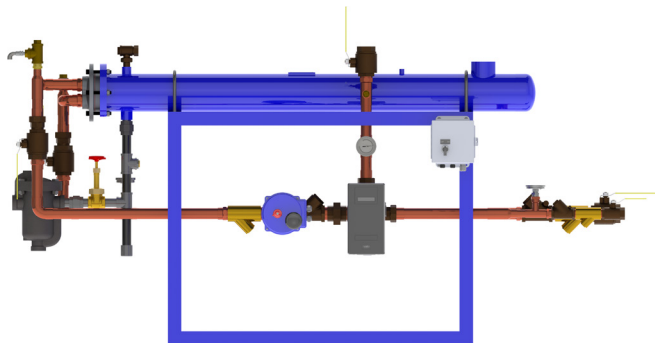
Connectivity

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 DF53540BS 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 D589701.