



## Specification

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### Flo-Rite-Temp® Model FRT535PR Steam to Water Shell and Tube Heat Exchanger

Category: Steam to Water Shell and Tube Heat Exchanger

Type: Flo-Rite-Temp

Model: FRT535PR (Parallel > Recirculating)

#### General:

##### 1.0 Flo-Rite-Temp FRT535PR

- A. The assembly shall be pre-piped parallel (redundant water heater) steam to water Flo-Rite-Temp water heater with performance matched components and pressure tested before delivery. The instantaneous Flo-Rite-Temp heater shall be of single wall construction with straight admiralty brass tubes expanded into naval brass tube sheets with a bolted end cover. Heat exchanger will be fixed on one end of the shell, and free floating on the opposite end, designed and manufactured in accordance with ASME Code Section VIII.
- B. The Flo-Rite-Temp assembly shall comprise domestic side check valves, strainers, thermostatic diverting valve for recirculation control, thermometers, ball valves, Flo-Rite-Temp water heater all pre-piped with type L copper on a painted carbon steel frame.
- C. Complete assembly to be Lead Free compliant.
- D. Steam pressure on system to be no more than 15 PSIG. Designed to generate 35 GPM (redundant) 70 GPM (parallel) with a 40°F entering cold water temperature, a 140°F mixed water set point utilizing 15 PSIG steam at a maximum of 1750 lbs/hr (redundant) and 3500 lbs/hr (parallel) steam load.
- E. Water heater assembly shall have all of the following operational capabilities:
  - 1. +/- 4F water temperature control from 0 to full system demand.
  - 2. Pressure drop not to exceed 10 psi at maximum flow.
  - 3. Operational steam pressure, constant of 2-15 psig.
  - 4. Pressure sensitive mixing valve shall fail in the cold position in the event of diaphragm failure.
  - 5. Operational water pressure of 20-150 psig.
  - 6. Isolation valves and clean in place connections to chemically clean the exchanger without disassembly of the exchanger.
  - 7. ¼" domestic side pressure relief pop-off valve with 165 psig crack pressure. Self-seating.
  - 8. Thermostatic air vent to vent exchanger air on start-up.
  - 9. Inverted bucket steam trap for condensate return.
  - 10. 16 gauge 5/8" OD admiralty brass straight tubes expanded into naval brass tube sheets.
  - 11. Carbon steel shell with 2.5" npt steam inlet and 1" condensate outlet connections.
  - 12. Pressure sensitive mixing valve integrally mounted to the shell and tube using feed-forward sensing.
  - 13. Assembly to include vacuum breaker installed between the condensate outlet of the shell and the steam trap.
- F. Warranty: Pre-package skid shall have a 2 year warranty from date of installation but not longer than 27 months from date of shipment.