



## Specification

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### Digital-Flo® Model DF90W80 Boiler Water/Water Plate and Frame Heat Exchanger

Category: Boiler Water/Water Plate and Frame Heat Exchanger

Type: Digital-Flo®

Model: DF90W80

#### General:

##### 1.0 Digital-Flo DF90W80

- A. The assembly shall be pre-piped boiler water to water package with performance matched components and pressure tested before delivery. The instantaneous plate and frame water heater shall be of the counter-current flow single wall 316 stainless steel gasketed plate heat exchanger designed and manufactured in accordance with ASME Code Section VIII. Gaskets shall be of glue free design, made of Nitrile, suitable for fluids.
- B. Temperature controller (DRV) shall be digital using integrated circuit board technology designed to deliver blended water economically at a safe, accurate temperature for sanitary use in re-circulated hot water systems. The DRV shall have a 2 line, 16 character display of delivered temperature with the option of °F or °C. Display also shows the error codes and alarm conditions. DRV shall be compliant with ASSE Standard 1017 and CSA B125, UL listed and so certified and identified.
- C. The Digital-Flo shall comprise domestic side check valves, strainers, DRV, thermometers, ball valves, safety shut-off valve, plate and frame exchanger all pre-piped with type L copper on a stainless steel frame. Domestic and boiler side pumps supplied by others.
- D. Complete package to be Lead Free compliant
- E. System to have a maximum boiler water temperature of 220 deg. F. Designed to generate 90 GPM of domestic water utilizing 160° or greater boiler water with a 30 deg delta T on the boiler side and a 100 deg. delta T on the domestic side.
- F. Water heater package shall have all of the following operational capabilities:
  - 1. +/- 2F water temperature control from 0 to full system demand.
  - 2. 2°F minimum inlet to outlet water temperature differential
  - 3. Automatic shutoff of hot water flow upon cold water inlet supply failure.
  - 4. Automatic shutoff of hot water flow in the event of a power failure
  - 5. Programmable set point range of 81-158°F (27-70°C)
  - 6. Programmable thermal disinfection mode
  - 7. Programmable 1st level hi/lo temp alarm display
  - 8. Programmable error temperature error level for double safety shutdown.
  - 9. LCD display which indicates: set point, delivered temperature, error codes and alarm conditions.

10. Isolation valves and clean in place connections to chemically clean the exchanger without dis-assembly of the plates.
11. ¼" domestic side pressure relief pop-off valve with 165 psig crack pressure. Self-seating.

G. Water heater package shall have the following connectivity capabilities:

1. SPCO relay outputs which are energized during operation.
2. RS485 Serial Port for connection to BrainScan<sup>®</sup> or Modbus (BrainScan<sup>®</sup> is optional adder)

H. Warranty

Pre-package skid shall have a 2 year warranty from date of installation but not longer than 27 months from date of shipment. DRV shall have a 5 year all components parts warranty.