Armstrong®

Specifications

DMC80 FLEX - The Brain® Digital Recirculation Valve

Category: The Brain®
Type: Digital Recirculation Valve
Model: DMC80 FLEX

1.0 Digital Mixing Center (DMC)

1.1 Digital Recirculation Valve (DRV) shall be supplied pre-piped and pressure tested as a lead-free Digital Mixing Center (DMC) complete with a hot water inlet, cold water inlet, mixed water outlet, recirculation return inlet, and return to heater connections.

1.2 DMC80 FLEX shall comprise of a DRV80 with isolation valves, strainers, and check valves securely mounted on carbon steel unistruts with industrial grade enamel paint.

2.0 Digital Recirculation Valve (DRV80)

2.1 DRV shall have four thermistors integral of the mixing valve body that measure the hot water inlet, cold water inlet, mixed water outlet, and over-temp safety temperatures.

2.2 DRV mixing valve body shall be of 316L stainless steel, mixing valve proportioner of 316L stainless steel, and a NEMA 3S electronics enclosure.

2.3 DRV80 shall have 3” inlets and outlet connections that will deliver 94 gpm @ 5 psid.

2.4 DRV shall be capable of +/- 2° F control during high, low, or extended periods of zero system demand with a continuous recirculation of >10 gpm. Temperature control shall be achieved without aquastat-like control of the recirculation pump.

2.5 DRV setpoint shall be programmed by the factory to customer specification. DRV shall also be field adjustable.

3.0 DRV80 shall have the following operational specifications:

3.1 +/- 2° F water temperature control

3.2 1° F minimum return differential

3.3 Minimum continuous recirculation of 10 gpm

3.4 Automatic shutoff of hot water flow upon cold water inlet supply failure

3.5 Automatic shutoff of hot water flow in the event of a power failure

3.6 Programmable set point range of 81° - 158° F (27° –70° C)

3.7 Programmable thermal disinfection mode

3.8 Programmable 1st level hi/lo temp alert display

3.9 Programmable temperature error level for safety shutdown

4.0 DRV shall have the following connectivity specifications:

4.1 SPCO relay outputs which are energized during operation

4.2 LCD display which indicates: set point, delivered temperature, error codes, and alarm conditions

4.3 MODBUS 485 port for remote set point adjustment and remote operating temperature visibility

4.4 RS485 Serial Port for connection to a performance matched hot water monitoring system

5.0 DRV shall be certified to ASSE 1017, UL listed, and conform to CSA B125

6.0 Warranty

6.1 DRV shall have a 5-year all components warranty, with exception of batteries and O-rings.

6.2 Pre-piped DMC components shall have a 2-year warranty from date of installation, but not longer than 27 months from date of shipment.