



## **DMC40 FLEX - The Brain® Digital Recirculation Valve**

Category: The Brain®  
Type: Digital Recirculation Valve  
Model: DMC40 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 DMC40 FLEX shall comprise of a DRV40 with isolation valves, strainers, and check valves securely mounted on carbon steel unistruts with industrial grade enamel paint.

### **2.0 Digital Recirculation Valve (DRV40)**

- 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 DRV40 shall have 1.5" inlets and outlet connections that will deliver 48 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 >5 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 DRV40 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 5 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



## Specifications

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- 3.6 Programmable set point range of 81° - 158° F (27° -70° C)
- 3.7 Programmable thermal disinfection mode
- 3.8 Programmable 1<sup>st</sup> 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.