Water Temperature Control - Recirculation Systems

Digital

The Brain® Model DMC80

DMC80 is a fully Digital Mixing Center (DMC) designed specifically to be the primary water temperature controller in a continuously pumped circulating hot water system.

Digital technology provides enhanced water temperature control accuracy which resists zero system demand "Temperature Creep" without the use of a manual throttling valve or a temperature activated pump shut-off device (aquastat).

Operational Specifications (DRV80)

- +/-2°F water temperature control at points of use 25' downstream during demand
- +/-2°F water temperature control at the DRV 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 81-158°F (27-70°C)
- Programmable thermal disinfection mode
- Programmable 1st level hi/lo temp alarm display
- Programmable temperature error level for safety shutdown

Technical Specifications (DRV80)

- 100-240 V AC
- Polymer Electronics Enclosure
- Stainless Steel Valve Construction
- Complete Assembly Lead Free Compliant
- DMC80 3" NPT Inlet/Outlet
- DMC50 2" NPT Inlet/Outlet
- Maximum inlet HW supply temperature 185°F (85°C)
- Minimum Circulation Flow – 10 GPM/38 LPM
- Minimum System Draw Off - 0
- ASSE 1017, CSA B125 and CE Certified
- Operational water pressure of 10-150 psig
- Display in °C or °F
- Shipping weight 660 lbs (299 kg)

Connectivity (DRV80)

SPCO Relay Outputs – Relay which is energized during operation.

LCD Display – Provides information on set point, delivered temperature, error codes and alert conditions.

RS485 Serial Port – Connects the DRV to either BrainScan or Modbus.

   BrainScan® – BAS interface for Modbus, Bacnet™ or LonWorks™ plus operates as a web server.

   Modbus – DRV can be configured to communicate directly with Building Automation Systems (BAS) using Modbus protocols.
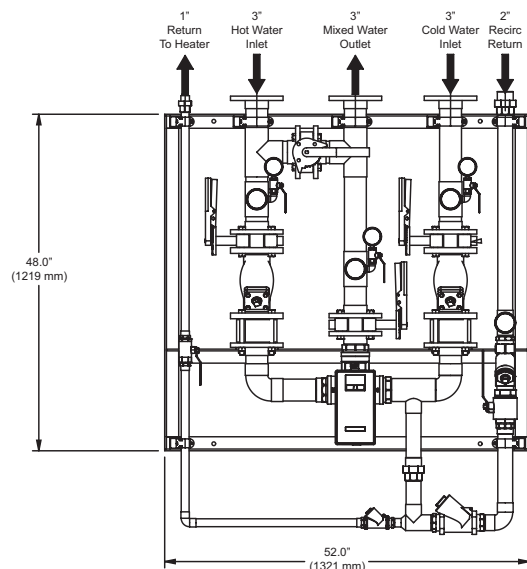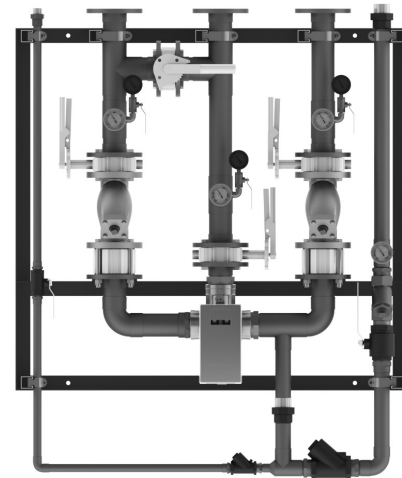
*DMC50 is a DMC80 supplied with a 2" pipe work, fittings with union inlet/outlet connections.

For a submittal drawing, refer to D40815.

Recirculation Systems - Digital (gpm)							
Model	Pressure Drop (psi)				Minimum System Draw-Off	Maximum Flow @7.5 ft/sec.	C_v
	5	10	15	20			
DMC80	94	133	163	188	0	165	42

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.