



Water Temperature Controls - Hot/Cold Water Systems

Model IMC50G & IMC50R Hot/Cold Water Mixer

Emech digital control valve pre-piped as an Industrial Mixing Center with all requisite installation components for compact design and ease of install.

IMC50G is designed for non-recirculated systems.

IMC50R is designed for recirculated system.

Standard inlet/outlet piping is in upward piping orientation. Also, available in downward 'D' piping orientation.

The 3-port mixing valve utilizes ceramic shear action disc technology to provide tight shut-off, high pressure differential capability, and long life integrity. Fitted with the electronic actuator and integrated temperature sensor, the system delivers high performance stand-alone closed-loop temperature control.

Even with sudden changes of inlet pressure and temperature to the valve, the actuator controller aggressively minimizes outlet temperature variations, making the system ideal for use in process applications.

Operational Specifications

- Operating temperature range: -13°F to 257°F (-25°C to 125°C)
- $\pm 1^\circ\text{F}$ ($\pm 0.5^\circ\text{C}$) over a 32°F - 212°F (0°C - 100°C) control range
- Capable of positioning from 0% to 100% of either inlet temperature
- 90° stroke time as low as 1.5 seconds for fast control action
- 100% duty cycle rated actuator
- Capable of control blending to within 1°F of either hot or cold inlet temperature

Technical Specifications

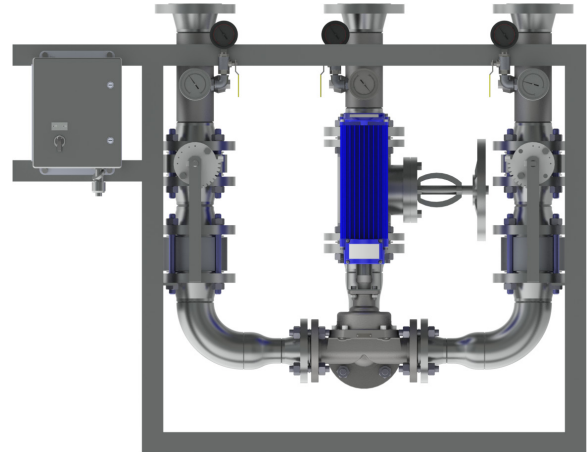
- Rated pressure: 145 psi (10 bar)
- BUBBLE TIGHT zero seat leakage shut-off (exceeds ASME B16.104 and FCI 70.2, Classes V and VI standards)
- Design verification to ASME B16.34
- Power: 120VAC 1A
- Failsafe position feedback (non-contact absolute encoder)
- Keypad: 4 membrane switches with "dual touch" safety features
- Display: 3.5 digit LCD display with back light
- Gearbox: planetary, lifetime lubrication, low backlash

Standard Materials of Construction

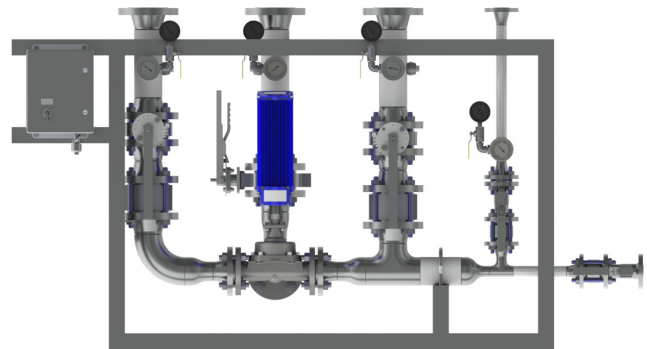
- Water Pipe: 316 Stainless Steel
- Fittings: 316 Stainless Steel
- Digital Control Valve: 316 Stainless Steel
- Digital Control Valve Discs: Ceramic, Durable Corrosion Resistant
- Frame: Fabricated Stainless Steel

Connectivity

- Analog (4-20mA) input and output control signals for interfacing with SCADA control
- External RS232 connection for actuator configuration
- Stand-alone closed loop temperature control, or remote analog (4-20mA) digital control options
- Extra digital input for interfacing ancillary devices (e.g., flow switch, level switch)



IMC50G



IMC50R

Flow Capacity (gpm)					
Model	Pressure Drop (psi)		Standard Recirc. Size **	Nominal Min. Flow	Max. Flow @ 15 ft/sec
	5	20			
IMC50G D/R/RD*	107	213	1"	19	390

* R = Recirculation D = Downward Inlet/Outlet Pipe Orientation RD = Recirculation + Downward Inlet/Outlet Pipe Orientation

** If Model equipped with R

Example Model = IMC50RD (Includes recirculation plus downward I/O pipe orientation)

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for up-to-date information.