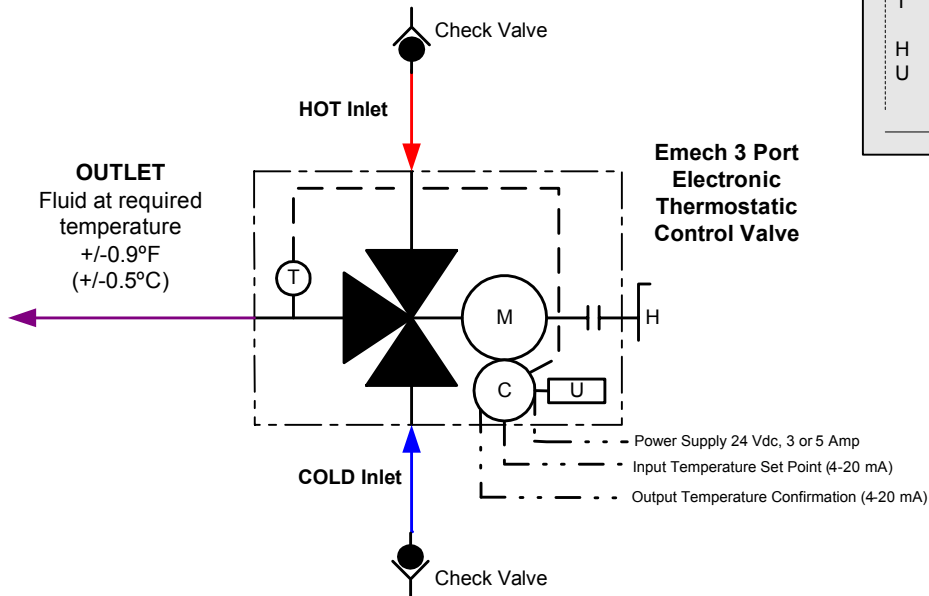


APPLICATION NOTE 2: Emech Thermostatic Mixing Application

Model F3 3-Port Valve, and G1 Electronic Actuator.

LEGEND

M	Motor /Driver/ Gearbox
C	Electronic Controls
T	Emech Thermistor Temperature Sensor & Cable
H	Hand wheel Over-ride
U	User Interface (LCD)



F3 Valve and G1 Actuator

Advantages of the Emech 3 Port Electronic Thermostatic Control Valve

1. The Temperature Sensor 'T', is located in the valve outlet. The sensor measures any error in output temperature, and the actuator can respond immediately. There is MINIMAL DELAY due to 'transport' lags.
2. As the control valve and temperature sensor are physically close together, the Emech controller can be set with very 'aggressive gains'. The result is FAST, STABLE control REGARDLESS of variable pressure differentials and large step change disturbances.
3. The Emech solution can operate as a 'stand-alone' control valve. The set point can be entered at the LOCAL Keypad.
4. The Emech Controller is a fully integrated unit. Only a power supply and an optional 4-20mA set point signal is required.
5. Unlike most 3 port valves the Emech Valve can isolate BOTH INLETS at once (i.e. it has a fully closed position). This may eliminate the need for separate isolation valving.
6. The Emech solution includes full P.I.D. gain configuration. An RS232 connection enables the actuator to be tuned to suit the installation.
7. The Emech valve uses ceramic 'hard-seal' disc technology for long life sealing integrity, and low torque operation.

Disclaimer:

This diagram is for general discussion purposes only. It is NOT intended as a design document. The actual operation and equipment selection is the responsibility of the plant owner. The information is solely intended to provide a general understanding of the subject matter and to assist Emech's customers and potential customers to assess whether they require further information. Emech does not guarantee or warrant the accuracy, completeness or currency of any information provided.

SDAN0002_RevB_F3-G1 Mixing Control.vsd

