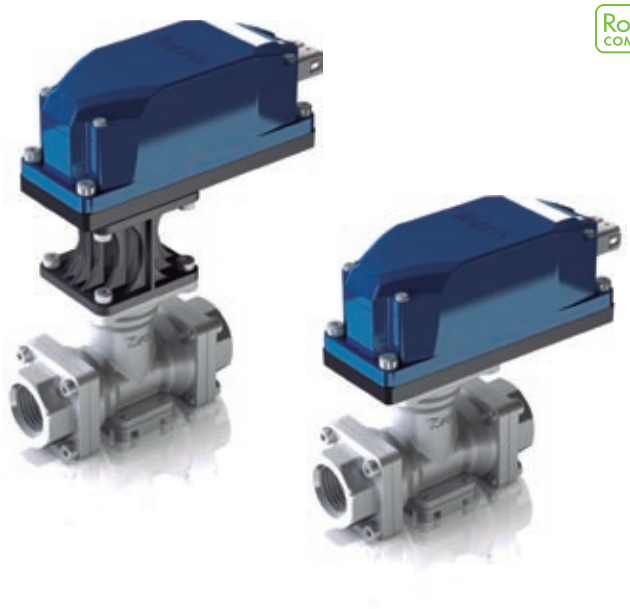
FCV-M SERIES
FLOW CONTROL VALVES

RoHS COMPLIANT

- Direct control of flow or temperature from your PID controller with 4–20 mA, 1–5 VDC or 1–10 VDC
- Select flow limits from 10.4 to 133 LPM / 2.8 to 35 GPM
- Fast: 8 seconds from 0 to 100% open
- Compact design minimizes space requirements
- 3400 steps provide fine, fast valve control
- O-ring material selectable to match liquid and temperature range requirements
- Connect directly to Tofpine configurable manifold components
- FNPT, BSPT or SAE connection ports



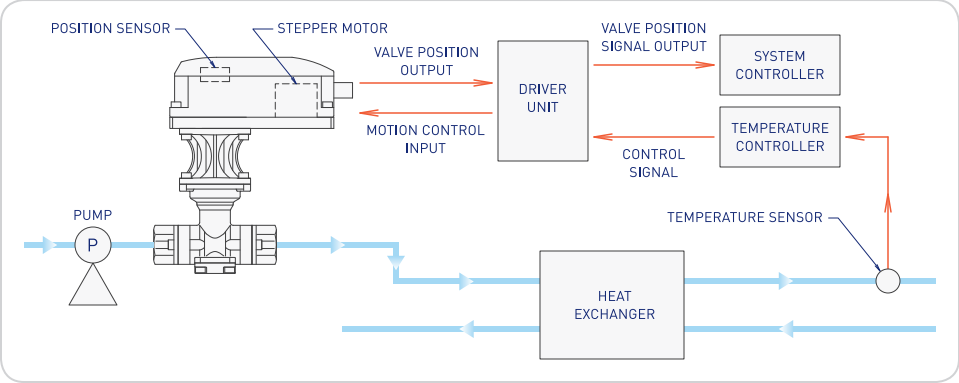
Direct-drive control valves operating from -40 to 180°C with water, Galden®, Fluorinert™ and other advanced heat transfer fluids.

EXAMPLE APPLICATION

Direct control of output from a heat exchanger

FCV-M Series Flow Control Valves are controlled by an external PID controller using an accompanying driver unit.

Valve position is controlled and continuously monitored by the PID controller with a 4–20 mA or DC signal.

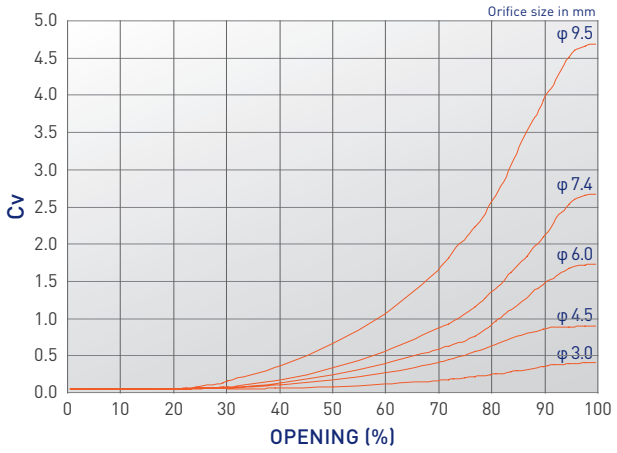


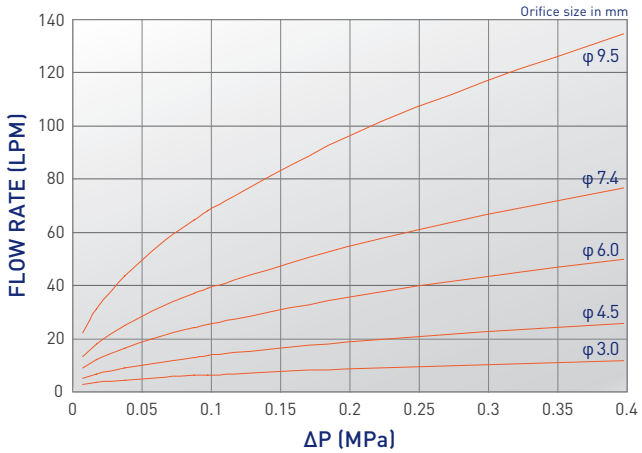
SPECIFICATIONS

Model	FCV-M25				FCV-M32	
Orifice Diameter (mm)	φ 3.0	φ 4.5	φ 6.0	φ 7.4	φ 7.4	φ 9.5
Flow Limit (Water at 0.4 MPa / 58 PSI ΔP)	10.4 LPM	24.5 LPM	48.4 LPM	75 LPM	75 LPM	133 LPM
» Contact Proteus for flow limits with other liquids	2.8 GPM	6.5 GPM	12.8 GPM	20 GPM	20 GPM	35 GPM
Connection Size > FNPT or BSPT	1/4" • 3/8" • 1/2"				1/2" • 3/4"	
> SAE with O-ring Seal	9/16-18 • 3/4-16				3/4-16 • 1 1/16-12	
Fluid Type	Water, water/glycol mixtures, Galden®, Fluorinert™, silicone oils, etc.					
Fluid Temperature*	0–60°C • 0–130°C • -20–100°C • -40–130°C • 0–180°C					
Ambient Environment	5–50°C; 30–80% relative humidity; non-condensing					
Maximum Applied Differential Pressure (ΔP)	0.4 MPa / 58 PSI					
Maximum Operating Pressure	1.0 MPa / 145 PSI					
Power Source	24 VDC ± 10%; 300 mA					
I/O Signal	4–20 mA • 1–5 VDC • 1–10 VDC					
Input Impedance	20Ω for 4–20 mA • 1MΩ for 1–5 VDC/1–10 VDC					
Output Allowable Load Resistance	< 300Ω for 4–20 mA • >1KΩ for 1–5 VDC/1–10 VDC					
Drive System	DC stepper motor					
Resolution of Valve Movement	~3400 steps					
Response Time (0 to 100% Open)	~6 seconds					
Hysteresis	< 1.5%					
Water and Dust Proofing	IP67					
Wetted Materials*	304 Stainless Steel, filled PTFE • Buna-N, EPDM, Silicone rubber, Viton®					
Weight (Valve Unit)	~1.5 kg / 3.31 lb				~ 1.7 kg / 3.75 lb	

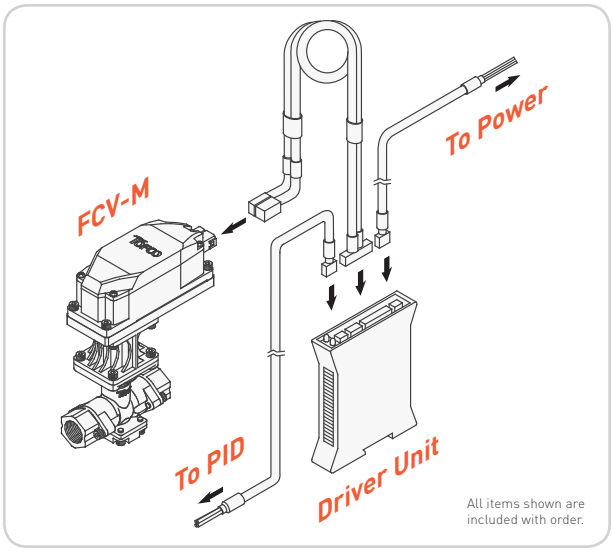
*Depends on fluid type.

FLOW CHARACTERISTICS

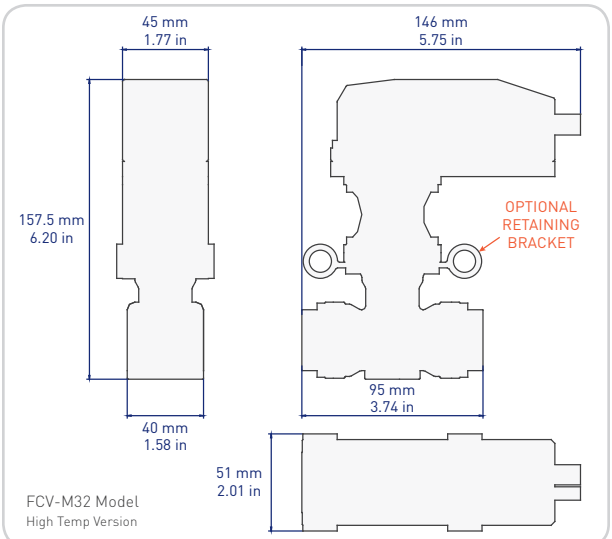




INTERCONNECTION



EXAMPLE DIMENSIONS



Wetted Materials

Materials in the flow path are 304 stainless steel and filled PTFE. O-ring material is selected for compatibility with your fluid and temperature range.

O-Ring Material	Temperature Range
Buna-N	-30 to 100°C
Viton®	-15 to 200°C
EPDM	-45 to 130°C
Silicone Rubber	-50 to 200°C

Tell Us About Your Application!

Proteus flow experts will work with you to specify the optimum flow control valve for your application.

» Download and complete the FCV-M Series Application Check Sheet available at www.proteusind.com/flowcontrol

» Contact us at sales@proteusind.com or (650) 964-4163

Liquid Distribution Manifolds

Tofpine manifolds are configurable to create compact and cost-effective liquid distribution systems.

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PID Controllers

Florite controllers provide accurate and reliable process control.

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Flow Meters

Add flow monitoring capability with a Proteus flow sensor calibrated for your fluid and temperature range.

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EXCEPTIONAL FLOW COMPONENTS BY TOFCO WORLD-CLASS SUPPORT BY Proteus

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