Fisher™ D2T FloPro Control Valve

The Fisher D2T FloPro control valve is a compact, rugged valve designed for on/off service. This valve is ideal for use as a dump valve on gas separators and scrubbers. It is also well suited for other high pressure applications in natural gas production, compression, and processing. The D2T FloPro valve has threaded NPT end connections and is available in an NPS 1 globe style or angle style valve body configuration.

Fisher D2T FloPro Control Valve

Features

- Field-Selectable Flow Rates--The FloPro feature allows easy setting of 0.25, 0.375, and 0.5 inch port equivalent flow rates, eliminating the need for more than one port size. See figure 2.
- Trim Options--The valve plug and seat ring are available in S17400 double H1150, or solid R30006 (Alloy 6) for erosive service.
- Quad-O compliant Packing System--Features Fisher ENVIRO-SEAL™ packing technology to provide reduced packing maintenance and meet Low E fugitive emission requirements for Leak Detection and Repair (LDAR) programs in compliance with the Code of Federal Regulations (CFR) 40, Part 60, Subpart OOOO.
- NACE MR0175/ISO 15156 Service- Ready--Sour service trim is the standard construction for the D2T FloPro control valve. The materials of construction meet the metalurgical requirements of NACE MR0175/ISO 15156. Environmental limits may apply.
- CL900 Service--Valve assembly is designed and specified for ASME B16.34 CL900 service.
- Low Temperature Materials--Valve and actuator construction materials allow use in low temperature applications of -46° C (-50° F).
- Field-Reversible Actuator--The D2T FloPro actuator can be converted in the field from Air-to-Open to Air-to-Close actuator action. (Conversion to Air-to-Close actuator action requires removing four springs from the actuator casing configuration.) (Conversion to Air-to-Open actuator action requires adding four springs to the actuator casing configuration.)
- Easy Installation--Compact design allows installation where space is at a premium.
- Easy Maintenance--Screwed bonnet/body joint allows repair or maintenance with a minimum of tools and without removing the valve body from the piping system.

Specifications

Valve Assembly Pressure Class(1)

ASME B16.34 CL900

Temperature Range(1)

155 bar from -46 to 93°C, and 150 bar at 149°C. (2250 psig from –50 to 200°F, and 2185 psig at 300°F)

Maximum Allowable Pressure Drop(1)

Flow Down(2)
Maximum Inlet Pressure: 155 bar (2250 psig)
Maximum Outlet Pressure: 103 bar (1500 psig)
Flow Up
Maximum Inlet Pressure: 103 bar (1500 psig)
Maximum Outlet Pressure: 103 bar (1500 psig)

Shutoff Classification

Class IV ANSI/FCI 70-2 and IEC 60534-4

Construction Materials

Valve Body and Bonnet: ASME SA 352 LCC
Valve Plug and Seat: ■ R30006 (Alloy 6) or ■ S17400 double H1150
Valve Stem: S31600
O-Rings: HNBR (Hydrogenated Nitrile)
Packing: PTFE/Carbon PTFE
Packing Springs: N07718
Stem Bushing: PPS (polyphenylene sulfide)
Actuator Diaphragm: Nitrile/Polyester
Actuator Springs: Zinc-plated steel

Flow Characteristic

FloPro Characterized

Flow Coefficients

See figure 2

Port Diameter

13 mm (0.5 inch)

Maximum Travel

13 mm (0.5 inch)

Valve Travel Indications

See figure 2

Approximate Weight

7.7 kg (17 lb)

Dimensions

See figure 3

Material Temperature Capabilities

Valve Body Assembly: -46 to 149°C (-50 to 300°F)
Actuator Assembly: -46 to 93°C (-50 to 200°F)

Bonnet/Body Connection

Screwed with leakoff bleed

Standard Actuator Configuration

The D2T FloPro actuator is an on/off spring-and-diaphragm.
Globe Valve Body: Supplied as either Air-to-Open or Air-to-Close.

Maximum Actuator Casing Pressure

2.8 bar (40 psig)

Minimum Required Actuator Casing Pressure

2.1 to 2.4 bar (30 to 35 psig)

Actuator Diaphragm Effective Area

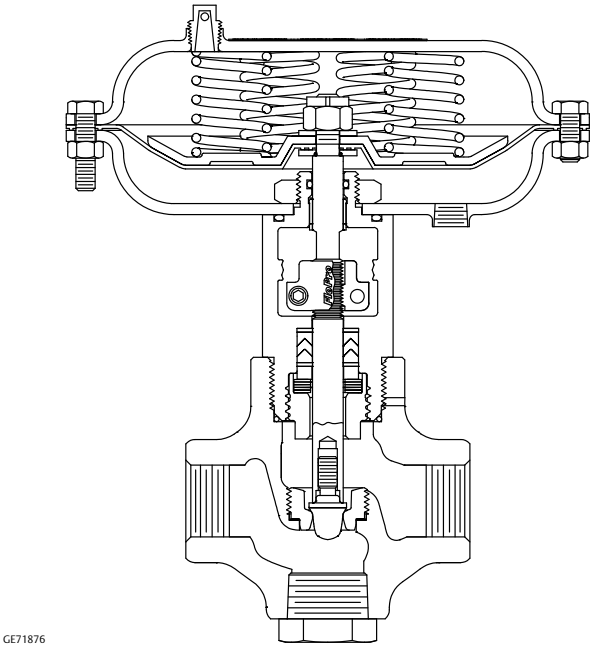
194 cm^2 (30 square inches)

Actuator Pressure Connections

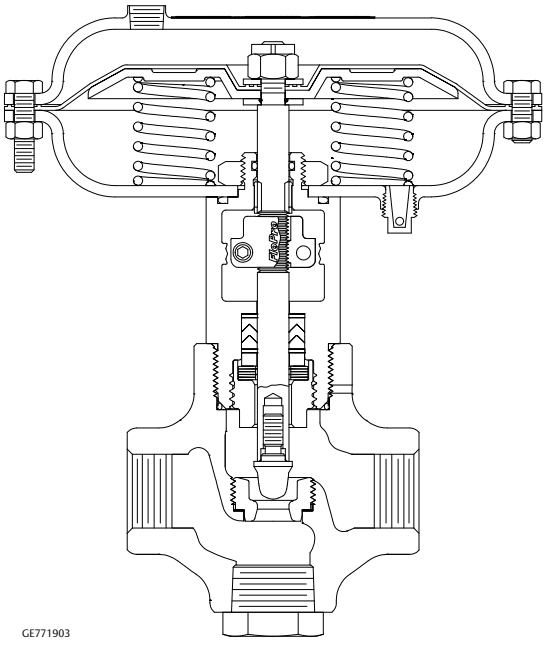
1/4 NPT internal; see figure 3 for locations

1. The pressure or temperature limits in the referenced tables and any applicable ASME code limitations should not be exceeded.
2. Standard flow direction.

Figure 1. Fisher D2T FloPro Constructions

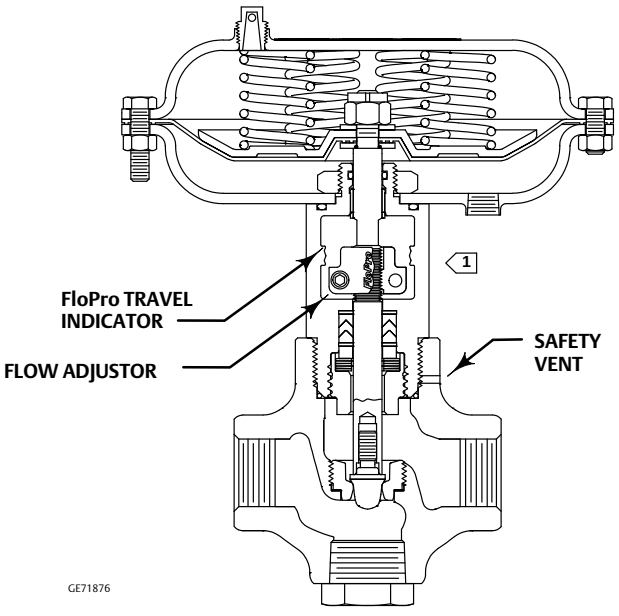


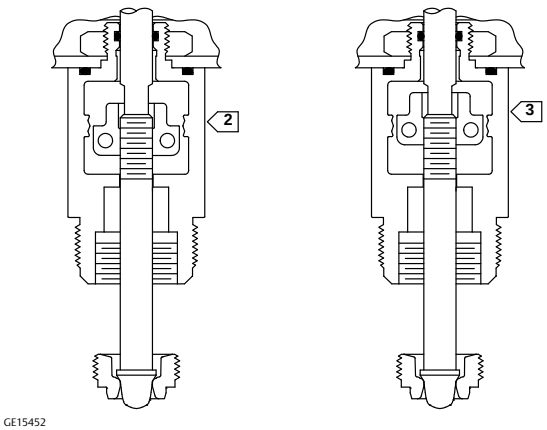
AIR-TO-OPEN



AIR-TO-CLOSE

Figure 2. Flow Rate Adjustments



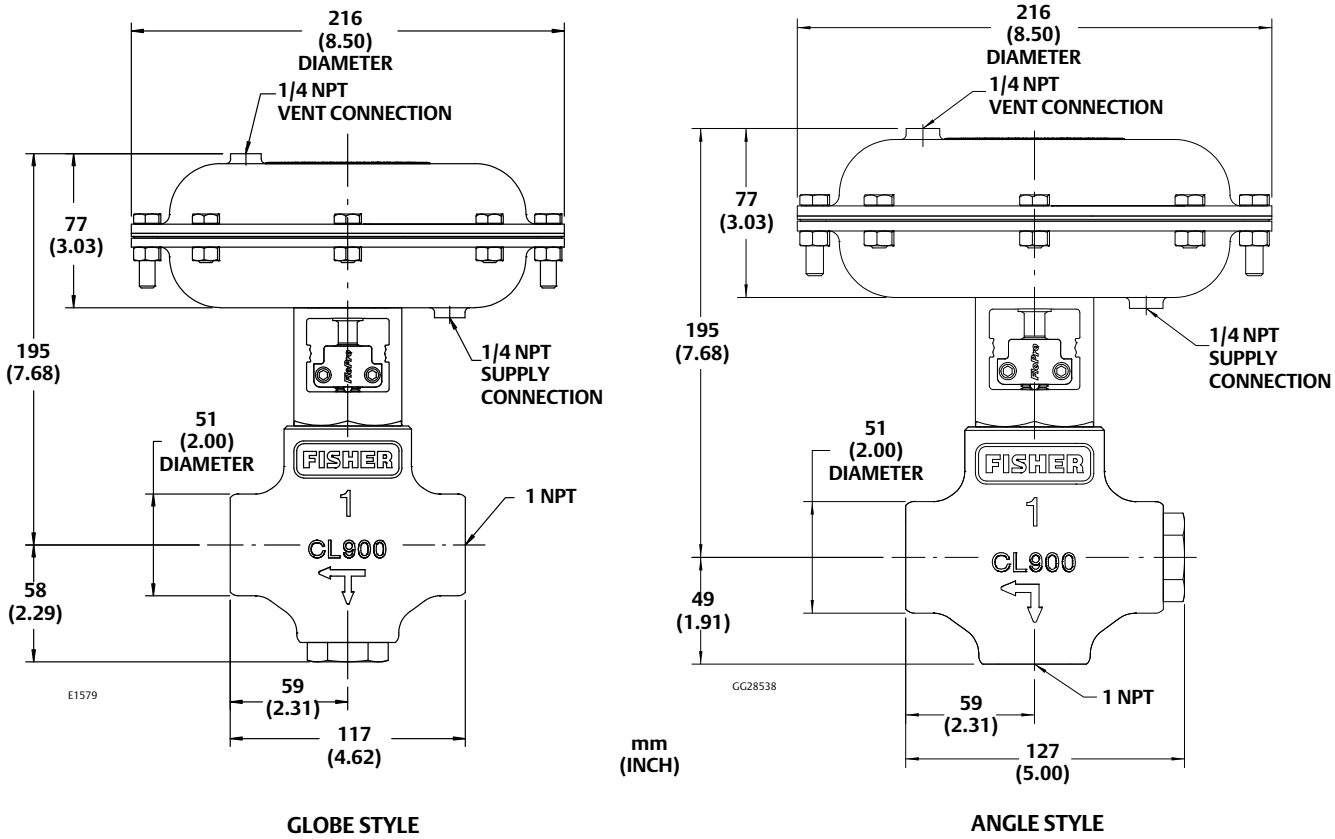


1 0.5 INCH FLOW RATE
Cv = 6
Fl = 0.77
Xt = 0.476

2 0.375 INCH FLOW RATE
Cv = 4
Fl = 0.706
Xt = 0.319

3 0.25 INCH FLOW RATE
Cv = 2
Fl = 0.65
Xt = 0.245

Figure 3. Fisher D2T Valve Dimensions (Air-to-Open Configuration Shown)



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