

DV1 Series

Pneumatic Actuated Valves



Technical Data

BODY	316L stainless steel, MONEL® and HASTELLOY® C-276
SEATS	PCTFE, PEEK™
DIAPHRAGMS	Elgiloy®AMS 5876
ORIFICE SIZE	0.110" (2.8 mm)
FLOW CAPACITY	0.17 Cv
VALVE INTERNAL VOLUME*	0.16 cc
LEAKAGE	1×10^{-9} cc/sec helium (inboard)

* Internal volume in machined passages of the valve body between mounting surface and sealing diaphragm(s).

Operating Pressures Ratings

	SMALL DIAMETER	MEDIUM DIAMETER	LARGE DIAMETER
VALVE WORKING PRESSURE*	Vacuum (50 torr) to 500 psig	Vacuum (50 torr) to 800 psig	Vacuum (50 torr) to 3600 psig
VALVE PROOF PRESSURE	1000 psig	1600 psig	7200 psig
VALVE BURST PRESSURE	2000 psig	3600 psig	14,400 psig

* Valves cleaned for oxygen service are limited to 3000 psig (207 bar).

Operating Temperatures

SEAT MATERIAL	¼-PLUS TURN TEMPERATURE
PCTFE	-40° F to +212° F (-40° C to +100° C)
PEEK™	-40° F to +400° F (-40° C to +204 ° C)

Air Actuation Pressure Requirements

psig nominal

PRESSURE	SMALL DIAMETER	MEDIUM DIAMETER	LARGE DIAMETER
Valve Operating Pressure	Vacuum (50 torr) to 500 psig (Inlet)	Vacuum (50 torr) to 800 psig (Inlet)	Vacuum (50 torr) to 3600 psig (Inlet)
Actuation Pressure Normally Closed	40 psig (3 bar) (0–250 psig process pressure)	40 psig (3 bar) (0–250 psig process pressure)	50 psig (0–3600 psig process pressure)
Actuation Pressure Normally Open	40 psig (3 bar) (251–500 psig process pressure)	40 psig (3 bar) (501–800 psig process pressure)	N/A

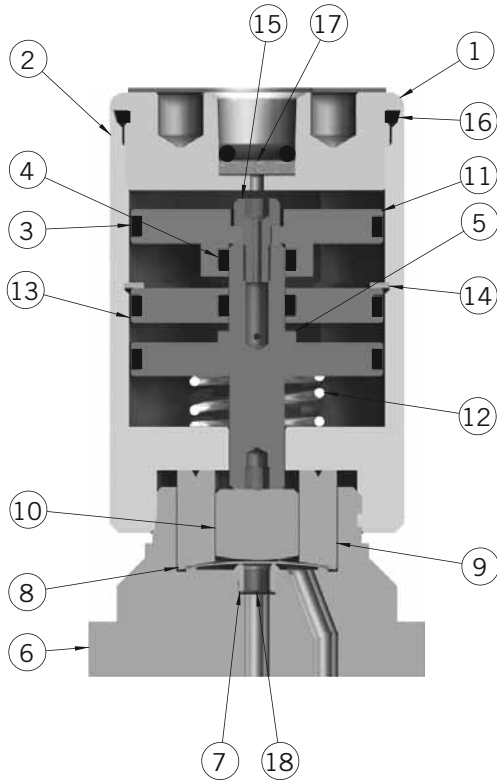
Note: Actuation/Pressure Curves available on the web at www.goreg.com

DV1 Series

Dimensions & Materials of Construction

Dimensions are in inches (millimeters) for reference only and are subject to change.

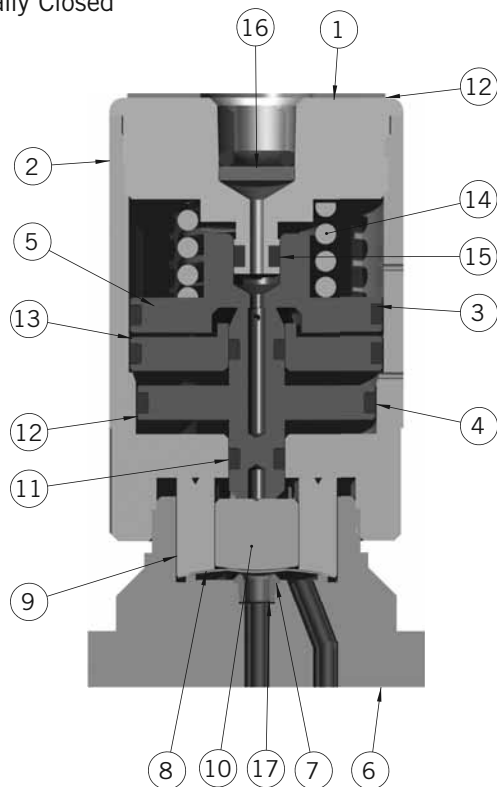
Normally Open



#	PART	MATERIALS
1	Actuator cap	Aluminum, 316L stainless steel, MONEL® & HASTELLOY® C-276
2	Actuator	Aluminum, 316L stainless steel
3	O-ring	Viton®
4	O-ring	Viton®
5	Piston	Brass
6	Body*	316L stainless steel, MONEL® & HASTELLOY® C-276
7	Seat*	PCTFE or PEEK®
8	Diaphragm*	Elgiloy®AMS 5876
9	Diaphragm retainer	316 stainless steel
10	Thrust plug	Brass
11	Upper piston	Brass
12	Spring	302 stainless steel
13	Chamber separator	Brass
14	Retaining ring	302 stainless steel
15	Cap screw	Alloy steel
16	O-ring	Viton®
17	Sintered filter	316 stainless steel, 40µ

* Wetted components

Normally Closed



#	PART	MATERIALS
1	Actuator cap	Aluminum, 316L stainless steel, MONEL® & HASTELLOY® C-276
2	Actuator	Aluminum, 316L stainless steel
3	O-rings	Viton®
4	O-rings	Viton®
5	Upper piston	Brass
6	Body*	316L stainless steel, MONEL® & HASTELLOY® C-276
7	Seat*	PCTFE (formerly Kel-F®) or PEEK™
8	Diaphragm*	Elgiloy®AMS 5876
9	Diaphragm retainer	316 stainless steel
10	Thrust plug	Brass
11	O-ring	Viton®
12	Lower piston	Brass
13	Chamber separator	Brass
14	Spring	302 stainless steel
15	O-ring	Viton®
16	Sintered filter	316 stainless steel, 40µ

* Wetted components

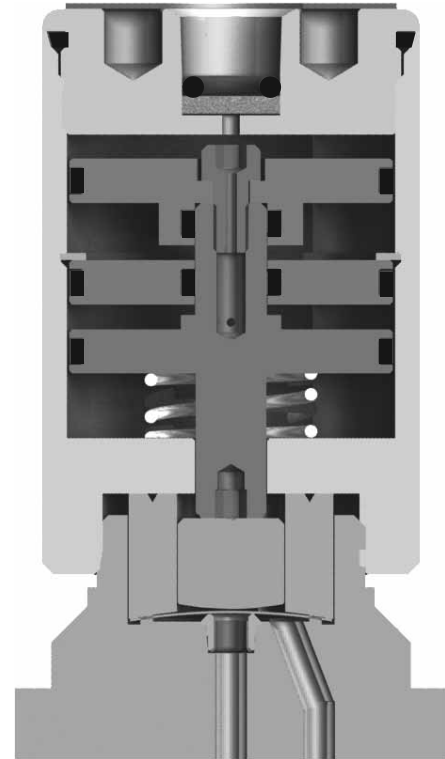
DV1 Series

Dimensions

Pneumatic Small Diameter Actuator

END CONNECTION	LENGTH	HEIGHT	ACTUATOR DIAMETER	C/L CENTER LINE
¼" MNPT	2.00" (5.1 cm)	2.75" (7.0 cm)	1.31" (3.3 cm)	0.38" (1.0 cm)
¼" FNPT	2.00" (5.1 cm)	2.75" (7.0 cm)	1.31" (3.3 cm)	0.38" (1.0 cm)
½" GYROLOK®	1.71" (4.3 cm)	2.75" (7.0 cm)	1.31" (3.3 cm)	0.38" (1.0 cm)
¼" GYROLOK®	1.87" (4.8 cm)	2.75" (7.0 cm)	1.31" (3.3 cm)	0.38" (1.0 cm)
¼" NPT extended	3.15" (8.0 cm)	2.75" (7.0 cm)	1.31" (3.3 cm)	0.38" (1.0 cm)
6mm GYROLOK®	47.5mm	69.85mm	33.27mm	9.65mm
8mm GYROLOK®	47.5mm	69.85mm	33.27mm	9.65mm

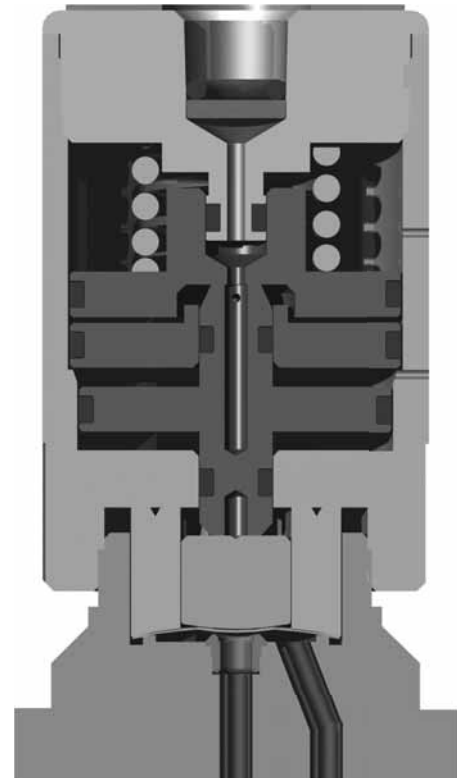
Normally Open



Pneumatic Medium Diameter Actuator

END CONNECTION	LENGTH	HEIGHT	ACTUATOR DIAMETER	C/L CENTER LINE
¼" MNPT	2.00" (5.1 cm)	2.75" (7.0 cm)	1.56" (4.0 cm)	0.38" (1.0 cm)
¼" FNPT	2.00" (5.1 cm)	2.75" (7.0 cm)	1.56" (4.0 cm)	0.38" (1.0 cm)
½" GYROLOK®	1.71" (4.3 cm)	2.75" (7.0 cm)	1.56" (4.0 cm)	0.38" (1.0 cm)
¼" GYROLOK®	1.87" (4.8 cm)	2.75" (7.0 cm)	1.56" (4.0 cm)	0.38" (1.0 cm)
¼" NPT extended	3.15" (8.0 cm)	2.75" (7.0 cm)	1.56" (4.0 cm)	0.38" (1.0 cm)
6mm GYROLOK®	47.5mm	69.85mm	39.62mm	9.65mm
8mm GYROLOK®	47.5mm	69.85mm	39.62mm	9.65mm

Normally Closed



Pneumatic Large Diameter Actuator

END CONNECTION	LENGTH	HEIGHT	ACTUATOR DIAMETER	C/L CENTER LINE
¼" MNPT	2.00" (5.1 cm)	3.25" (8.3 cm)	2.36" (6.0 cm)	0.38" (1.0 cm)
¼" FNPT	2.00" (5.1 cm)	3.25" (8.3 cm)	2.36" (6.0 cm)	0.38" (1.0 cm)
½" GYROLOK®	1.71" (4.3 cm)	3.25" (8.3 cm)	2.36" (6.0 cm)	0.38" (1.0 cm)
¼" GYROLOK®	1.87" (4.8 cm)	3.25" (8.3 cm)	2.36" (6.0 cm)	0.38" (1.0 cm)
¼" NPT extended	3.15" (8.0 cm)	3.25" (8.3 cm)	2.36" (6.0 cm)	0.38" (1.0 cm)
6mm GYROLOK®	47.5mm	82.55mm	59.94mm	9.65mm
8mm GYROLOK®	47.5mm	82.55mm	59.94mm	9.65mm