

Mega-Mini LA

Compact, Low-Pressure, Pneumatically-Actuated Valves



Color Text Marking

Color text printing on the actuator allows for quick differentiation between normally-open (blue) or normally-closed (red) valves.

End-Connections

Available in tube-stub, UJR (VCR® compatible), UPG, F900 compression, and IGS surface-mount, allowing for installation flexibility – both in new gas lines as well as in existing lines.

Ultra-Smooth Internal Finish

All internal surfaces undergo a UP Treatment as standard, resulting in a surface finish of 2 Ra average, 5 Ra maximum.

Minimal Internal Volume

0.84 cc total internal volume for the male UJR version ensures excellent gas displacement characteristics. This is 3½ times less than the internal volume of competitive valves!

Space-Saving Actuator

The actuator is only 1.378" (35 mm) diameter, and offers the same performance as our full-size actuator without all the bulk.

Unique Rotating Actuator

The actuator features a unique rotating mechanism, allowing for actuation pressure to be supplied from any direction for both normally-open and normally-closed valves.

Alloy Diaphragm

Nickel-cobalt alloy diaphragm minimizes particle generation, and provides a durable shut-off surface against the seat.

PCTFE Seat

PCTFE is standard with polyimide and PFA as optional seat materials. The seat is fixed to ensure robust shut-off performance and minimize particle generation.

Stringent Leakage Standards

Seat and external leakage successfully test at 5×10^{-11} acc/sec – which is two orders of magnitude tighter than industry standards.

General Specifications

Available Sizes	1/4"
Surface Finish	2 Ra average, 5 Ra maximum
Tested Durability	Over 4 million cycles

Materials of Construction

Body	SS 316L
Diaphragm	Nickel-cobalt alloy
Standard Seat	PCTFE
Optional Seat	Polyimide, PFA
Actuator	Aluminum alloy

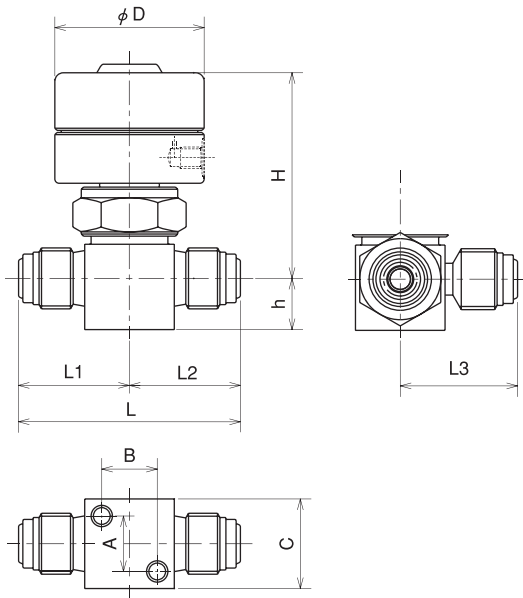
Operating Specifications

Max Operating Pressure	145 psi (1 MPa)
Min Operating Pressure	Vacuum
Temperature Range	14 °F ~ 176 °F (-10 °C ~ 80 °C)

Functional Performance

Maximum Cv	0.1
Leakage Across Seat (Design)	1×10^{-10} scc/sec He
Leakage Across Seat (Tested)	$< 5 \times 10^{-11}$ scc/sec He
Inboard Leakage (Design)	2×10^{-10} scc/sec He
Inboard Leakage (Tested)	$< 5 \times 10^{-11}$ scc/sec He

Dimensions



Part Number	L	L1	L2	L3	h	H	ØD	A	B	C
FPR-SD-71-6.35	52.0				12	50.5	35	13	13	21
FPR-SD-71-6.35-2	66.0				12	50.5	35	13	13	21
FPR-SD-71-6.35UG	41.0				12	50.5	35	13	13	21
FPR-SD-71-6.35UG-2	41.0				12	50.5	35	13	13	21
FPR-SDTB-71-6.35	59.0	26	33	27.5	12	50.5	35	13	13	21
FPR-SD-51-6.35BW-FFL	44.4				12	50.5	35	13	13	21

All dimensions in millimeters.

Part Number Designation

FPR - SD TB - 51 LS - 6.35 BW - PI - FD

Operation

- FP** Normally Open
- FPR** Normally Closed

Series

- SD** Stainless Steel Compact Direct Diaphragm Valve

Valve Configuration

- (Blank)** 2-Way
- TB** 3-Port
- CL** 2-Way, Corner Left

End-Connections

- 2** IGS Surface-Mount
- 5** Tube-Stub
- 7** UJR / UPG

Max Operating Pressure

- 1** 1 MPa (145 psi)

Options

- (Blank)** None
- RS2** Proximity Sensor
- LS** Limit Switch

Body & Internal Finish Options

- (Blank)** UP Treatment
- PS** Cr₂O₃ Treatment
- FD** Fluorine Passivation
- 316LP** SS Double-Melt Body Material

Seat Material

- (Blank)** PCTFE
- PI** Polyimide
- PA** PFA

End-Connection Pattern

- (Blank)** Male UJR Both Ends
- 2** Female UJR Both Ends
- 1** Male UJR Inlet
- 3** Female UJR Outlet
- UG** UPG Both Ends
- BW** Butt Weld Both Ends

End-Connection Size

- 6.35** 1/4"

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