

FINE series PURE

Bellows • Metal Diaphragm series



Safety & Clean Technology

Fujikin Incorporated



Pneumatically-Actuated Bellows Valves

Stainless Steel 1MPa

The Fujikin pneumatically-actuated bellows valve is a compact valve designed for ultra-pure, flammable, or toxic fluid lines for all types of semiconductor equipment and facilities.

The Fujikin bellows valve is the most successful valve in the semiconductor industry due to its superior sealing performance, remarkable durability, compactness, ease of cleaning, and excellent purge characteristics.

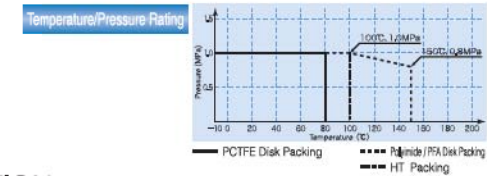


SPECIFICATIONS

Specification	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum CV	Actuation Pressure	Actuator Port	End-Connections	Actuation Type
	6.35 (1/4")	1MPa	-10~80 °C	0.3	0.34~0.69MPa	Rc 1/8"	F900 UJR Tube Stub	Normally Closed (NC) Normally Open (NO)
	9.52 (3/8")	145 psi	14~176 °F	0.8	48~70 psi			
	12.7 (1/2")							

● All valves are helium leak tested. Vacuum method/results: External leakage: 5×10^{-11} Pa·m³/sec. Seat leakage: 5×10^{-11} Pa·m³/sec.
● Demonstrated superior durability - over 5 million cycles (actual test results).

Materials	Part	Material
	Body	SUS316L
	Bellows	SUS316L
	Disk Packing	PCTFE
	Actuator	A5056



PART NUMBER DESIGNATION

Please use the part number designations below when placing an order.

FPR-[]-71 []-6.35 []-[]-[]-[]

A	B	C	D	E	F	G	H	I	J
FP : Normally open FPR : Normally closed	TB : Added only for 3-port valves	7 : UJR, UPG end-connection 9 : F900 end-connection 5 : Tube Stub end-connection*	1 : 1MPa maximum operating pressure	RS 2 : With proximity sensor* LS : With limit switch*	End-Connection Size 6.35 : 1/4" ⁰⁰ 9.52 : 3/8" ⁰⁰ 12.7 : 1/2" ⁰⁰ (UJR connections have a 1/2" port diameter)	BW : Butt weld*	Blank : Male UJR on both ends 2 : Female UJR on both ends 3 : UJR male inlet / Female UJR outlet	Blank : Inconel bellows* PI : Polyimide disk packing* PA : PFA disk packing* HT : High-temperature PCTFE disk packing* BR : Female UJR with Purging*	UP : UP treatment* PS : Cr ₂ O ₃ treatment*

* Optional or made to order.

Actual shipped products may have additional designations (such as #A, #B) in the part number. These indicate production history and do not indicate a change in function or dimensions.



DIMENSIONS

Figure 1

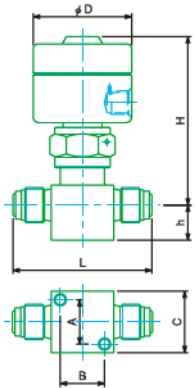


Figure 2

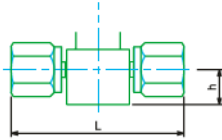


Figure 3

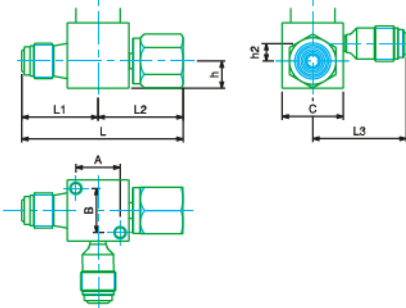


Figure 4

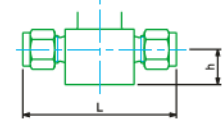
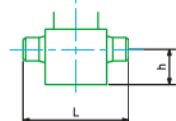


Figure 5



(Unit : mm)

Part Number	Figure	D	L	H	h	A	B	C	L1	L2	L3	h2
FP(R)-71-6.35	1	40	57.1	68.4	14.3	18	18	25				
FP(R)-71-6.35-2	2	40	70.6	68.4	14.3	18	18	25				
FP(R)-71-9.52	1	40	76.2	72.9	11.1	20.2	20.2	28				
FP(R)-71-9.52-2	2	40	83	72.9	12.7	20.2	20.2	28				
FP(R)-TB-71-6.35	3	40	65.7	74.7	11.1	18	18	25	31	34.7	38.1	7.1
FP(R)-TB-71-9.52×6.35	3	40	69.9	74.7	11.1	18	18	25	31.8	38.1	38.1	7.1
FP(R)-51-6.35	5	40	42.9	67.9	17.3	18	18	25				
FP(R)-51-9.52	5	40	57.1	72.9	12.7	20.2	20.2	28				
FP(R)-51-12.7	5	40	57.1	27.9	12.7	20.2	20.2	28				
FP(R)-91-6.35	4	40	63.5	68.4	14.3	18	18	25				
FP(R)-91-9.52	4	40	80	72.9	12.7	20.2	20.2	28				
FP(R)-91-12.7	4	40	85	62.9	12.7	20.2	20.2	28				

See Figure 1 for dimension keys not shown in other Figures.

OPTIONS

Block Valve

FBL-9.52×6.35-2B3

Block valve design allows for
 · Compact tubing arrangement
 · Dead-space free configuration

In addition to our standard 2-actuator, 3-port block, we also offer custom block valves according to customer's specifications.



Proximity Sensor

FPR-71RS2-6.35

An electrical signal confirms open or closed position of valve. The non-contact proximity sensor offers unsurpassed safety.



Limit Switch

FPR-71LS-6.35

An electrical signal confirms open or closed position of valve.



Multi-Mini

FBT-70-6.35-334-BF-EAJ

Smaller size actuator (Ø30 mm) makes it easy to create even more compact block valve configurations.



Other

Angle-type and 3/4" OD (Ø19.05 mm connection size) size can be made according to customer specifications.



FPR-51-6.35



FPR-91-19.05

Photos are samples of each product type.