IB
Bellows Valves

A higher Cv value IB series has is more advantageous than diaphragm valves in use where large flows are required, such as facility supply lines.

■ Features

◎ The proprietary seat shape serves to reduce particle generation from the disk and improves durability.
◎ Smaller dead space enables shorter purge time.
◎ The IB series can be used not only in gas supply systems but also in exhaust systems. Unique specifications such as high temperature, high corrosion resistance, and variable flow rate can also be accommodated.

■ Specifications

Size			IB4 (1/4")	IB6 (3/8")·IB8 (1/2")
Cv			0.3	0.85
Wetted Area Volume			0.185in³ (3.03cm³)	0.359in³ (5.88cm³)
			CVC male, OPEN state	
Maximum Operating Pressure			142psig (0.98MPa(G))	
Fluid Temperature Range	Manual Valve		-10~100ºC	
	Pneumatic Valve	PCTFE	-10~100ºC	
		PFA	-10~150ºC*	
		Flurine rubber	-10~180ºC*	
Atomospheric Temperature			-10~60ºC	
Actuation Pressure			58~101psig (0.4~0.7MPa(G))	
Leak Rates	Across the Seat He Leak Rates		≤ 1×10^{-9} sccs (≤ 1×10^{-10} Pa·m³/sec)	
	Inboard He Leak Rates		≤ 1×10^{-9} sccs (≤ 1×10^{-10} Pa·m³/sec)	
Cycle Life (N2 charged, own test)			Pneumatic valve 1 million cycles , manual valve 100,000 cycles	

*Bonnet Gasket Material is"M:SUS316S(PFA coating)"only

■ Product Grade

Grade		STD	EP
Material		SUS316L	
Surface Roughness	Only Body's Internal Roughness	≤ Rz3.2 μm	≤ Rz0.7 μm
		No bead cut in wetted area	
Cleaning		Degreasing + Precision cleaning	
Clean Room Environment		Class 10 (some products, Class 100)	
Packaging		Single bagged package	Double bagged package

■ Standard Materials

Body	SUS316L
Bellows	SUS316L
Bellows Flange	SUS316L
Bonnet	SUS304

■ Precautions

① Depending on the customer's usage conditions, the IB series may have a lower bellows life cycle due to accumulation of buildup material or corrosion.
② The valves are designed to be used under atmospheric pressure. Usage such as under vacuum vessels are not guranteed.
③ For high temperature applications, please select appropriate material for air-fittings and tubes to assure proper performance.

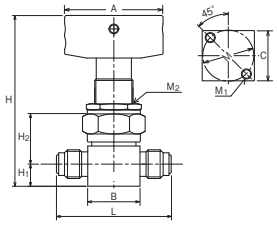
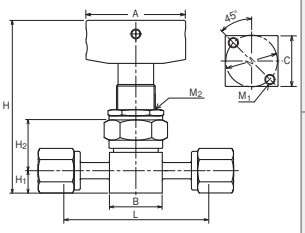
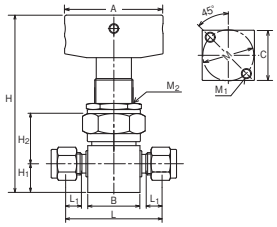
Product Code Table

Model	Size	Operation	Valve shape		Connection	Bonnet Gasket material	Disk material		Grade + Body material
IB	4	Q	S	-	V	C	C	-	EP-316L
IB-type bellows Seal valve	4:1/4" 6:3/8" 8:1/2"	Q: 90° ~ Handle rotation Manual Valves	Straight		V: CVC male VF: CVC female S: Conpression W: Butt weld	C:PCTFE M:SUS316L (PFA coating)	C:PCTFE F: Fluorine rubber A:PFA		STD-316L : Mechanical polished + SUS316L EP-316L : Electro polished + SUS316L

Please ask the sales representative about handle colors.

Dimensions

Unit: inch (mm)

Model	Type	Connection	L	L_1	H	H_1	H_2	A	B	C	M	M_1	M_2
	IB4QS-V□□	1/4" CVC Male	2.25 (57.1)	-	3.35 (85.0)	0.43 (11.0)	1.06 (27.0)	1.93 (49.0)	1.02 (26.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.31 (8.0)	M19×1.0
	IB8QS-V□□	1/2" CVC Male	2.56 (65.1)	-	3.87 (98.2)	0.63 (16.0)	1.34 (34.0)	1.93 (49.0)	1.02 (26.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.31 (8.0)	M19×1.0
	IB4QS-VF□□	1/4" CVC Female	2.78 (70.6)	-	3.35 (85.0)	0.43 (11.0)	1.06 (27.0)	1.93 (49.0)	1.02 (26.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.31 (8.0)	M19×1.0
	IB8QS-VF□□	1/2" CVC Female	3.27 (83.0)	-	3.87 (98.2)	0.63 (16.0)	1.34 (34.0)	1.93 (49.0)	1.02 (26.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.31 (8.0)	M19×1.0
	IB4QS-S□□	1/4" Compression Fittings	1.89 (48.0)	0.31 (7.9)	3.46 (88.0)	0.56 (14.3)	1.06 (27.0)	1.93 (49.0)	1.02 (26.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.31 (8.0)	M19×1.0
	IB6QS-S□□	3/8" Compression Fittings	2.52 (64.0)	0.37 (9.5)	3.74 (95.0)	0.50 (12.7)	1.34 (34.0)	1.93 (49.0)	1.02 (26.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.31 (8.0)	M19×1.0
	IB8QS-S□□	1/2" Compression Fittings	2.52 (64.0)	0.50 (12.7)	3.74 (95.0)	0.50 (12.7)	1.34 (34.0)	1.93 (49.0)	1.02 (26.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.31 (8.0)	M19×1.0