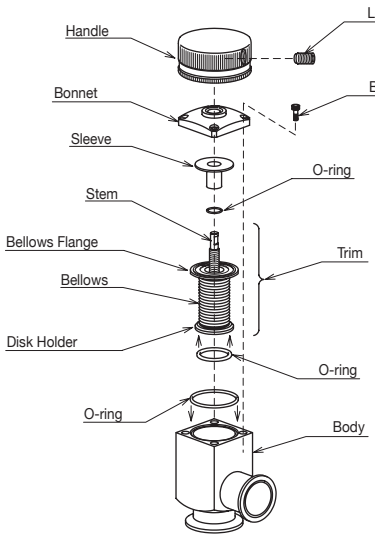
IVB/IVBL

Vaccum Isolation Valves

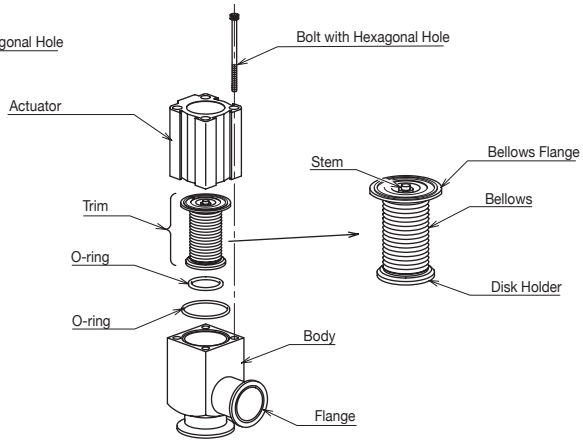
These vacuum valves have bodies made of SUS304 achieving high durability and cost reduction.

■ Features

◎ The IVB and IVBL series realize lower cost and easy-to-maintain simple structure by reducing the number of component parts.
◎ By adopting a stainless steel body (SUS304), a wide range of gases can be handled with excellent corrosion resistance.
◎ These valves have high seal performance due to their bellows seal structure.
◎ The IVB series realizes lower cost by utilizing a square-shaped body.
◎ The IVBL series realize large conductance performance due to their adoption of a burring process.



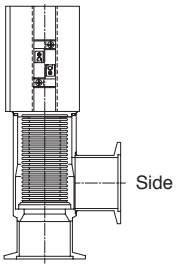
Manual Valve



Pneumatic Valve

■ Precautions

① The flow direction of the vacuum valves is designed so that the pump can be connected either to the side or bottom, but, depending on the velocity of the fluid passing through the valve, the lifetime of the bellows may decrease markedly if connected to the side.
② We recommend connecting the vacuum pump to the bottom side.
③ The valves are designed to be used under atmospheric pressure. Usage such as under vacu-um vessels are not guranteed.
④ For high temperature applications, please select appropriate material for air-fittings and tub-es to assure proper performance.



Bottom
Connection to pump side

■ Specifications

Fluid temperature		-15~100°C (maximum 70°C for actuator)
Maximum Operating Pressure		$1.4x10^{-10}$~29 psia ($1x10^{-6}$~$2x10^{5}$ Pa (abs) [0.1MPa (G)])
Standard Materials		Body/SUS304
		Bellows/SUS316L
		Actuator/A6063 (built-in magnet for magnetic proximity switch)
		Seat/fluorine rubber *Other materials not listed may be available.
Bellows Durability		Actual results more than 1M cycles (in vacuum) (the bellows cycle life drops when it is used on the pressurized side).
Actuation Pressure		58~101 psig (0.4~0.7MPa (G)
Leak Rates	Across the Seat He Leak Rates	≤ 1×10^{-9} sccs (≤ 1×10^{-10} Pa·m³/sec)
	Inbord He Leak Rates	≤ 1×10^{-9} sccs (≤ 1×10^{-10} Pa·m³/sec)

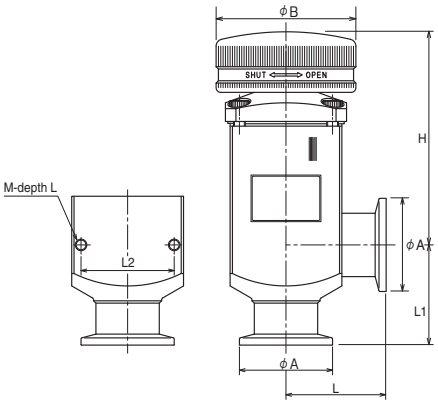
	IVB Series				IVBL Series			
	15A	25A	40A	50A	50A	65A	80A	100A
Orifice (mm)	0.63 (16)	0.91 (23)	1.10 (28)	1.50 (38)	1.89 (48)	2.36 (60)	2.76 (70)	3.78 (96)
Valve Lift (mm)	0.39 (10)	0.47 (12)	0.59 (15)	0.79 (20)	0.79 (20)	1.18 (30)	1.18 (30)	1.57 (40)
Conductance (ℓ /sec)	5	11	28	42	60	95	125	320
Cylinder Volume NC/NO (cc)	9	13	16	33	56	136	136	295
Cylinder Volume DA (cc)	9	13	16	33	56	50	50	112

Product Code Table

Model	Size	Operation	Valve Shape	Connection (IN Side)	Connection (OUT Side)	Seat Material	Custom Specifications	Accessories	Accessories	RoHS
IVB	40	C	A	VF	G	F	Specific code	SO	PE	(RS)
IVB: Square Shaped Bellows Valve IVBL: Round Shaped Bellows Valve	15:15A 25:25A 40:40A 50:50A 65S:65A 80S:80A 100S:100A	M: Manual C: Normally Closed D: Double Acting O: Normally Open	A: Angle Type Y: Y-shape Straight Z: Z-shape Inline	NW: ISO KF Flange VF: JIS VF Flange VG: JIS VG Fange CF: ConFlat Flange MF: ISO MF Flange	Same Cases As IN Side Omitted F: JIS VF Flange G: JIS VG Flange	Fluorine Rubber	Standard Products Are Omitted	Not Shown: No Switch SO: With Switch On the Open Position SC: With Switch On the Closed Position W: With Open and Closed Position *1	Not Shown: With PD31L3 Switch PE: With PE33L3 Switch *1	Not Shown: Not RoHS Compliant (RS): RoHS Compliant Product

* We handle materials and shapes other than those noted.
*1 The accessories switch is an option only for the pneumatic type.

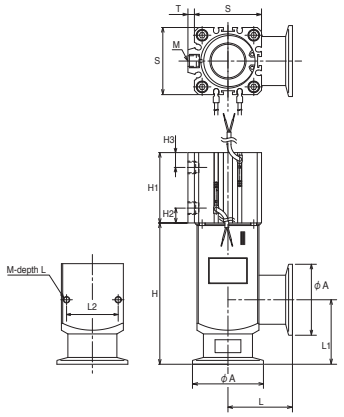
IVB Series (15A-50A) Manual Type



Unit: inch (mm)

Type	Connection	A	B	L	L_1	L_2	H	M-depth L
IVB15MA-NWF	NW16	1.18 (30.0)	2.13 (54.0)	1.54 (39.0)	1.54 (39.0)	1.26 (32.0)	3.48 (88.5)	M4-6
IVB25MA-NWF	NW25	1.57 (40.0)	2.36 (60.0)	1.69 (43.0)	1.69 (43.0)	1.57 (40.0)	3.66 (93.0)	M5-8
IVB40MA-NWF	NW40	2.17 (55.0)	2.36 (60.0)	1.97 (50.0)	1.97 (50.0)	1.57 (40.0)	3.92 (99.5)	M5-8
IVB50MA-NWF	NW50	2.95 (75.0)	2.91 (74.0)	2.76 (70.0)	2.76 (70.0)	1.97 (50.0)	4.25 (108.0)	M5-8

IVB Series (15A-50A) Pneumatic Type



Unit: inch (mm)

Type	Connection	A	L	L_1	L_2	M-depth L	H	H_1	H_2	H_3	S	T	M
IVB15DA-NWF	NW16	1.18 (30.0)	1.54 (39.0)	1.54 (39.0)	1.26 (32.0)	M4-6	3.52 (89.5)	1.69 (43.0)	0.43 (11.0)	0.31 (8.0)	1.77 (45.0)	0.18 (4.5)	Rc 1/8
IVB25DA-NWF	NW25	1.57 (40.0)	1.69 (43.0)	1.69 (43.0)	1.57 (40.0)	M5-8	3.78 (96.0)	2.15 (54.5)	0.45 (11.5)	0.45 (11.5)	2.05 (52.0)	0.20 (5.0)	Rc 1/8
IVB40DA-NWF	NW40	2.17 (55.0)	1.97 (50.0)	1.97 (50.0)	1.57 (40.0)	M5-8	4.31 (109.5)	2.15 (54.5)	0.45 (11.5)	0.45 (11.5)	2.05 (52.0)	0.20 (5.0)	Rc 1/8
IVB50DA-NWF	NW50	2.95 (75.0)	2.76 (70.0)	2.76 (70.0)	1.97 (50.0)	M5-8	5.35 (136.0)	2.38 (60.5)	0.47 (12.0)	0.47 (12.0)	2.52 (64.0)	0.28 (7.0)	Rc 1/4
IVB15CA-NWF	NW16	1.18 (30.0)	1.54 (39.0)	1.54 (39.0)	1.26 (32.0)	M4-6	3.52 (89.5)	2.68 (68.0)	0.43 (11.0)	-	1.77 (45.0)	0.18 (4.5)	Rc 1/8
IVB25CA-NWF	NW25	1.57 (40.0)	1.69 (43.0)	1.69 (43.0)	1.57 (40.0)	M5-8	3.78 (96.0)	3.13 (79.5)	0.45 (11.5)	-	2.05 (52.0)	0.20 (5.0)	Rc 1/8
IVB40CA-NWF	NW40	2.17 (55.0)	1.97 (50.0)	1.97 (50.0)	1.57 (40.0)	M5-8	4.31 (109.5)	3.13 (79.5)	0.45 (11.5)	-	2.05 (52.0)	0.20 (5.0)	Rc 1/8
IVB50CA-NWF	NW50	2.95 (75.0)	2.76 (70.0)	2.76 (70.0)	1.97 (50.0)	M5-8	5.35 (136.0)	3.76 (95.5)	0.47 (12.0)	-	2.52 (64.0)	0.28 (7.0)	Rc 1/4
IVB15OA-NWF	NW16	1.18 (30.0)	1.54 (39.0)	1.54 (39.0)	1.26 (32.0)	M4-6	3.52 (89.5)	2.68 (68.0)	-	0.31 (8.0)	1.77 (45.0)	0.18 (4.5)	Rc 1/8
IVB25OA-NWF	NW25	1.57 (40.0)	1.69 (43.0)	1.69 (43.0)	1.57 (40.0)	M5-8	3.78 (96.0)	2.93 (74.5)	-	0.45 (11.5)	2.05 (52.0)	0.20 (5.0)	Rc 1/8
IVB40OA-NWF	NW40	2.17 (55.0)	1.97 (50.0)	1.97 (50.0)	1.57 (40.0)	M5-8	4.31 (109.5)	2.93 (74.5)	-	0.45 (11.5)	2.05 (52.0)	0.20 (5.0)	Rc 1/8
IVB50OA-NWF	NW50	2.95 (75.0)	2.76 (70.0)	2.76 (70.0)	1.97 (50.0)	M5-8	5.35 (136.0)	3.76 (95.5)	-	0.47 (12.0)	2.52 (64.0)	0.28 (7.0)	Rc 1/4