

Quick Fitting Type Check Valve

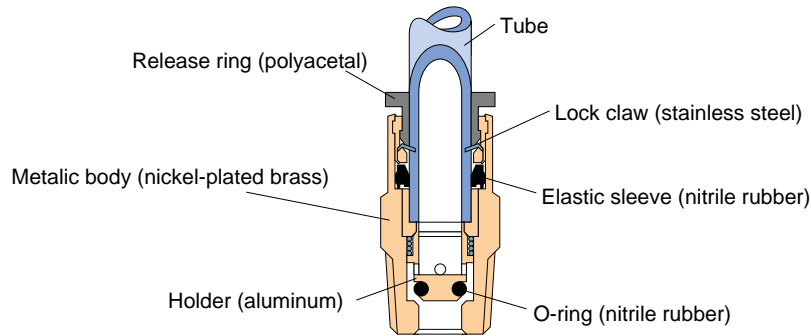
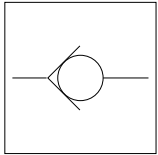
Check Valve

Features

- The Check Valve permits the air flow in one direction but checks the flow in the opposite direction, thus keeping the output pressure at a constant level.
- The Check Valve can keep the service pressure at -750mmHg (vacuum) and permits piping under low pressure.

Construction

Graphical representation



Specification

Fluid admitted	Air	
Service pressure range	0~150psi	0~0.9MPa
Operating pressure	1.45psi	0.01MPa
Working vacuum	-2.95 in. Hg	-100KPa
Service temperature range	32~140°F	0~60°C

Model Designation(Example)

CVC 6 - 01 A

(1) Type
(2) Tube dia.

mm size					
Code	4	6	8	10	12
Size	φ4	φ6	φ8	φ10	φ12

inch size					
Code	5/32	1/4	5/16	3/8	1/2
Size	φ5/32	φ1/4	φ5/16	φ3/8	φ1/2

(3) Thread size

	Metric thread(mm)		Taper pipe thread			
Code	M5	M6	01	02	03	04
Size	M5×0.8	M6×1	R1/8	R1/4	R3/8	R1/2

	Unified fine thread	Taper pipe thread			
Code	U10	01	02	03	04
Size	10~32UNF	R1/8	R1/4	R3/8	R1/2

(4) Control direction
A: Input on male thread side
B: Output on male thread side

A: Input on male thread size
Free flow

B: Output on male thread size
Free flow

*Do not make this entry for CVU.
*Indication of control direction is marked on Metallic body.

(5) Hexagon flat-to-flat specification
U: Hexagon flat-to-flat inch spec. (NPT)
No code: Hexagon flat-to-flat mm spec.

⚠ Detailed Safety Instruction

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on pages 23~24 and "Common Safety Instructions for Controllers" on pages 167~168.

⚠ Warning

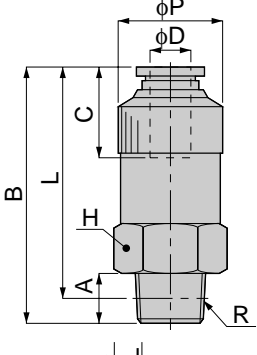
1. Frequent switching may raise the temperature of the body, thus raising the possibility of fire. Consult PISCO about such frequent switching applications.

⚠ Caution

1. When tightening the screw, observe the relevant requirements in the Common Safety Instructions for Controllers. Excessive tightening may cause faulty valve operation.

CVC

Straight



Metric thread type

unit:mm

Model	Tube dia. φD	R	A	B	L	φP	C	H	Mass (g)	Eff. a. (mm ²)
CVC 4-M5	4	M5×0.8	3	28	25	8	11	8	6.5	2.5
CVC 4-M6		M6×1	4	29						2.7
CVC 4-01		R1/8	8	24	20	9	10	9.5	2.7	
CVC 6-01	6	R1/8	8	29	25	10	12	10	9.5	6.8
CVC 6-02		R1/4	11		23			12		
CVC 8-01	8	R1/8	8	35.5	31.5	13.5	18.5	14	20	6.8
CVC 8-02		R1/4	11	39.5	33.5				22	
CVC 10-03	10	R3/8	12	62	55.5	25	21	24	46	35
CVC 10-04		R1/2	15	68.5	60.5			28		
CVC 12-03	12	R3/8	12	64.5	58	25	23.5	24	49	50
CVC 12-04		R1/2	15	71	63			28		

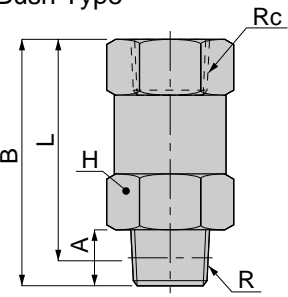


unit:inch

Model	Tube dia. φD inch(mm)	NPT	A	B	L	φP	C	H	Eff. A. mm ²	Cv	Weight (oz)
CVC 5/32-U10	5/32(3.97)	10-32UNF	0.14	1.10	0.96	0.31	0.43	5/16	2.5	0.14	0.25
CVC 5/32-N1	5/32(3.97)	NPT 1/8	0.31	0.94	0.79	0.35	0.43	7/16	2.7	0.15	0.39
CVC 1/4-N1	1/4(6.35)	NPT 1/8	0.31	1.14	0.98	0.39	0.47	9/16	6.8	0.37	0.71
CVC 1/4-N2	1/4(6.35)	NPT 1/4	0.43	1.14	0.91	0.47	0.47	9/16	6.8	0.37	0.93
CVC 5/16-N1	5/16(7.94)	NPT 1/8	0.31	1.40	1.24	0.53	0.73	9/16	6.8	0.37	0.78
CVC 5/16-N2	5/16(7.94)	NPT 1/4	0.43	1.56	1.32	0.53	0.73	9/16	15.5	0.84	0.83
CVC 3/8-N3	3/8(9.53)	NPT 3/8	0.47	2.44	2.19	0.98	0.83	1	35	1.89	1.67
CVC 3/8-N4	3/8(9.53)	NPT 1/2	0.59	2.74	2.38	1.10	0.83	1 1/8	39	2.11	2.33

CVF

Bush Type



unit:mm

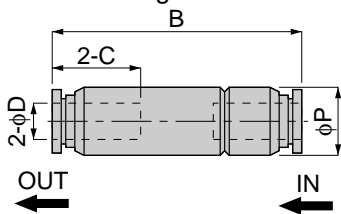
Model	R	Rc	A	B	L	H	Mass (g)	Eff. a. (mm ²)
CVF 01-01	R1/8	Rc1/8	8	26.5	22.5	14	21	6.8
CVF 02-02	R1/4	Rc1/4	11	33	27	17	34	15.5
CVF 03-03	R3/8	Rc3/8	12	52	45.5	24	37	52
CVF 04-04	R1/2	Rc1/2	15	62	55.5	27	56	78

unit:inch

Model	NPT	Female	A	B	L	H	Eff. A. mm ²	Cv	Weight (oz)
CVF N1-N1	NPT 1/8	NPT 1/8	0.31	1.04	0.89	9/16	6.8	0.37	0.77
CVF N2-N2	NPT 1/4	NPT 1/4	0.43	1.30	1.06	11/16	15.5	0.84	1.35
CVF N3-N3	NPT 3/8	NPT 3/8	0.47	2.05	1.79	1	52	2.81	1.41
CVF N4-N4	NPT 1/2	NPT 1/2	0.59	2.44	2.19	1 1/8	78	4.22	2.12

CVU

Union Straight

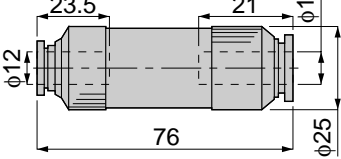


unit:mm

Model	Tube dia. φD	B	φP	C	Mass (g)	Eff. a. (mm ²)
CVU 4-4	4	34	9	11	5	2.7
CVU 6-6	6	38.5	12	12	9.5	6.8
CVU 8-8	8	55.5	15	18.5	20	15.5
CVU 10-10	10	82.5	25	21	61.5	32
CVU 12-12	12	87.5	25	23.5	68	46

CVG

Different Diam. Union Straight



unit:mm

Model	Mass (g)	Eff. a. (mm ²)
CVG 12-10	65	36

※Direction of air flow CVG 12-10A : Tube dia. φ12 → φ10
CVG 12-10B : Tube dia. φ10 → φ12

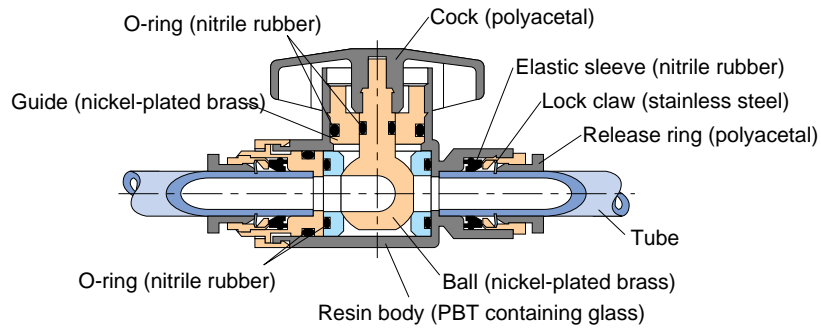
Quick-fitting Type Three-way Changeover Valve

Change Valve

Features

- The Change Valve switches the passages of air.
- The valve made of resin is compact and lightweight.
- This highly operative valve offers easy switching of fluid passages. (switching angle: 90°)

Construction



Specification

Fluid admitted	Air	
Service pressure range	0~100psi	0~0.7MPa
Working vacuum	-29.5in. Hg	-100KPa
Service temperature range	32~140°F	0~60°C

Model Designation (Example)



(1) Type

(2) Tube dia

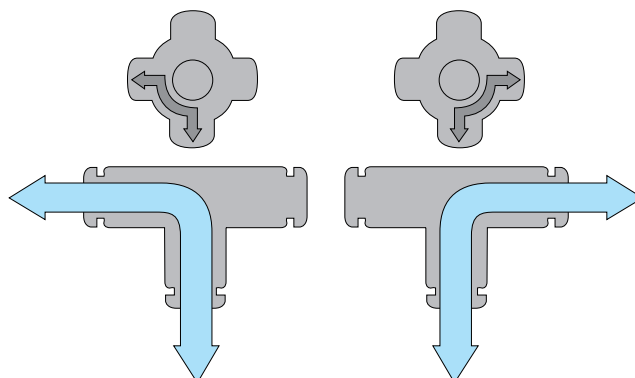
Code	6	8	10	12
Size(mm)	φ6	φ8	φ10	φ12
in. size	1/4	5/16	3/8	1/2
	φ1/4	φ5/16	φ3/8	φ1/2

(3) Tube dia

Code	6	8	10	12
Size(mm)	φ6	φ8	φ10	φ12
in. size	1/4	5/16	3/8	1/2
	φ1/4	φ5/16	φ3/8	φ1/2

Application example

- Turn the cock 90°, and the passage switches to the other.



⚠ Detailed Safety Instructions

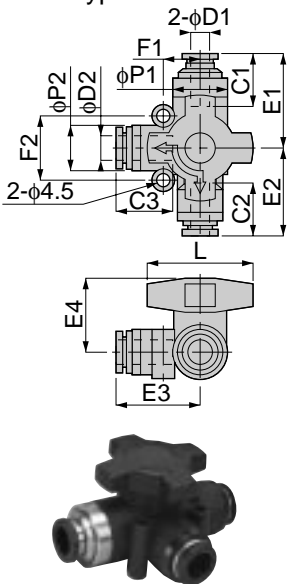
Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 23~24 and "Common Safety Instructions for Change Series Valves" on page 279.

⚠ Caution

1. When operating the cock, turn it 90 degrees completely until it stops. Inadequate turning may result in poor conduction or low flow rate due to faulty switching.
2. Check the arrow mark on the cock before actually introducing air.
3. For use with negative pressures, provide a vacuum filter on the suction side. Otherwise dust sucked in may cause malfunction.

HBV

Union Type



unit:mm

Model	Tube dia. φD1	Tube dia. φD2	L	φP1	φP2	C1	C2	C3	E1	E2	E3	E4	F1	F2	Mass (g)
HBV 6-6	6	6	35	17.5	14.5	17	17	17	27	29	27	24	12	20	50.5
HBV 8-6	6	8	35	17.5	14.5	17	17	18.5	27	29	27	24	12	20	51
HBV 8-8	8					18.5	18.5		28.5						50
HBV 10-10	10	10	44	24	21	21	21.5	21.5	36.5	37	35	28	15	25	122.5
HBV 12-10	10	12	44	24	21	21	21.5	23.5	36.5	37	35	28	15	25	123.5
HBV 12-12	12					23.5	23.5		37						118.5

Model	Orifice dia. (φmm)	Eff. Area (mm ²)
HBV 6-6	5	9
HBV 8-6	5	11
HBV 8-8	6	17
HBV 10-10	9	24
HBV 12-10	9	24.5
HBV 12-12		34.5

Quick-fitting Type Shut-off Valve (Residual Pressure Release Valve)

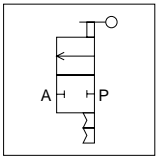
Hand Valve

Features

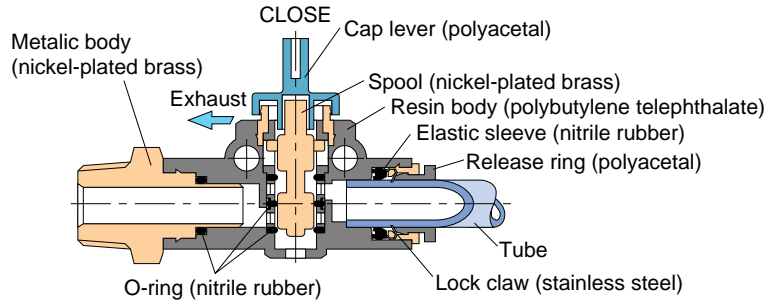
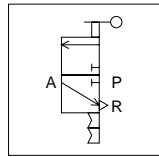
- The Hand Valve turns on and off air pressure to pneumatic devices.
- The three-directional control valve, when closed, discharges the residual pressure from the output side (device). The two-directional control valve does not have air discharge mechanism.
- Hand Valves come in four types for your applications.

Construction

2-way valve
Graphical representation



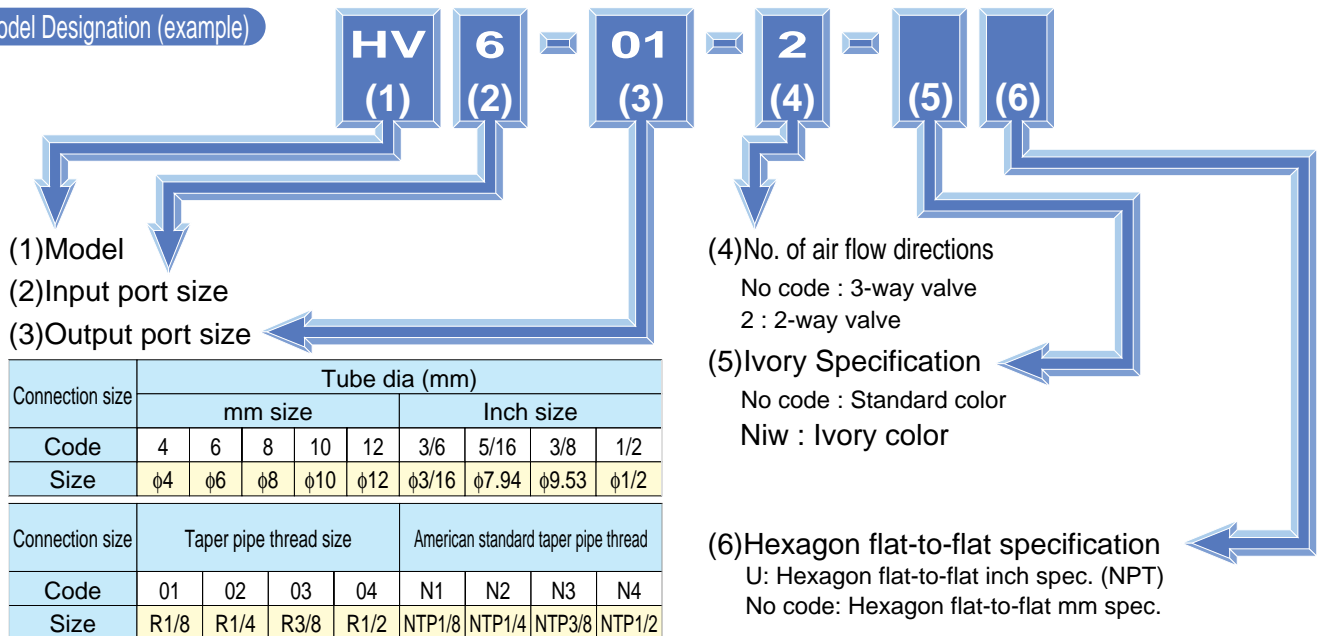
3-way valve
Graphical representation



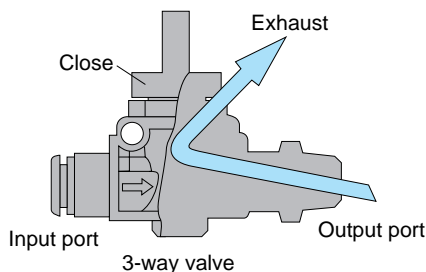
Specification

Fluid admitted	Air	
Service pressure range	0~150psi	0~0.9MPa
Working vacuum	-29.5in. Hg	-100KPa
Service temperature range	32~140°F	0~60°C

Model Designation (example)



About 3-way and 2-way Valves



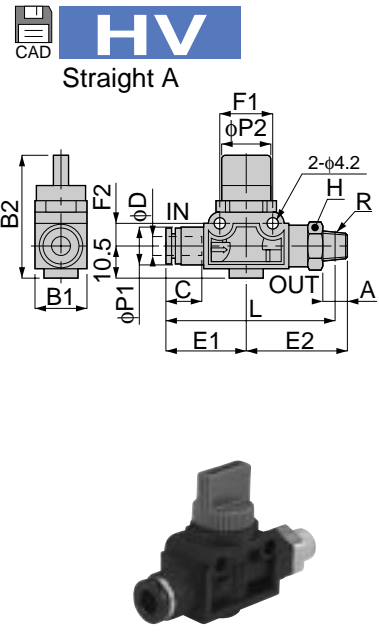
- The three-directional control valve, when air is stopped, discharges the residual pressure from the output side (connected devices). Therefore it assures safety at adjustment or repair of the connected devices. The two-directional control valve, which does not discharge the residual pressure, is suited for air supply to a tank or other devices from which the residual pressure should not be discharged. The two-directional control valve is also suited for the system where vacuum piping is used.

⚠ Detailed Safety Instructions

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 23-24 and "Common Safety Instructions for Change Series Valves" on page 279.

⚠ Caution

1. When operating the cap lever, turn it 90 degrees completely until it stops. Inadequate turning may result in poor conduction or low flow rate due to faulty switching.
2. Distinguish between the two-directional and the three-directional control valve by checking the marking ② or ③ on the top surface of the cap lever.
3. For use with negative pressures, provide a vacuum filter on the suction side. Otherwise dust sucked in may cause malfunction.



unit:mm

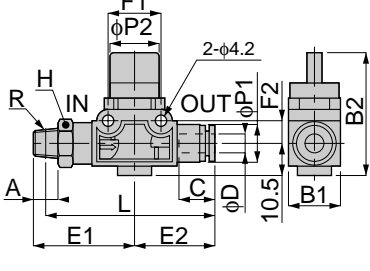
Model	Tube dia φD	R	A	B1	B2	L	φP1	φP2	C	E1	E2	H	F1	F2	Mass (g)	Orifice dia. (φmm)	Eff. Area (mm ²)
HV 6-01-□-□	6	R1/8	8		55.5						33.5				33		7.5
HV 6-02-□-□		R1/4	11	17	40.5	56.5	12.5	16.5	17	26	36.5	14	18	8	39.5	5	7.7
HV 6-03-□-□		R3/8	12			58						38.5	17		52		7.5
HV 8-01-□-□	8	R1/8	8		57.5						33.5				34.5		8.7
HV 8-02-□-□		R1/4	11	17	40.5	58.5	15	16.5	18	28	36.5	14	18	8	40.5	5	8.9
HV 8-03-□-□		R3/8	12			60						38.5	17		53.5		8.6
HV 10-02-□-□	10	R1/4	11		69						42.5				61.5		16.2
HV 10-03-□-□		R3/8	12	21	41	69.5	17.5	19.5	20	32.5	43.5	17	24	11	70	7	16
HV 10-04-□-□		R1/2	15			71						46.5	21		91.5		15.7
HV 12-02-□-□	12	R1/4	11		71.5						42.5				65		16.3
HV 12-03-□-□		R3/8	12	21	41	72	21	19.5	23.5	35	43.5	17	24	11	73	7	16.3
HV 12-04-□-□		R1/2	15			73.5						46.5	21		95		16.1
HV 1/4-01-□-□	1/4	R1/8	8		55.5						33.5				33		8.2
HV 1/4-02-□-□		R1/4	11	17	40.5	56.5	12.5	16.5	17	26	36.5	14	18	8	39.5	5	8
HV 1/4-03-□-□		R3/8	12			58						38.5	17		52		8.2
HV 5/16-01-□-□	5/16	R1/8	8		57.5						33.5				34.5		8.7
HV 5/16-02-□-□		R1/4	11	17	40.5	58.5	15	16.5	18	28	36.5	14	18	8	40.5	5	8.9
HV 5/16-03-□-□		R3/8	12			60						38.5	17		53.5		8.6
HV 3/8-02-□-□	3/8	R1/8	11		69						42.5				61.5		15.4
HV 3/8-03-□-□		R3/8	12	21	41	69.5	17.5	19.5	20	32.5	43.5	17	24	11	70	7	15.7
HV 3/8-04-□-□		R1/2	15			71						46.5	21		91.5		15.4

unit:inch

MODEL	Tube dia. φ	NPT	A	B	C	E1	E2	F1	F2	W	H	Weight (g)	Orifice φmm	Eff. A. mm ²	Cv
HV3/16-N1U	3/16	1/8	0.31	1.59	0.67	1.02	1.16	0.71	0.31	0.67	9/16	33.7	4.0	5.1	0.27
HV3/16-N2U	3/16	1/4	0.43	1.59	0.67	1.02	1.20	0.71	0.31	0.67	9/16	39.6	4.0	5.1	0.27
HV3/16-N3U	3/16	3/8	0.47	1.59	0.67	1.02	1.26	0.71	0.31	0.67	11/16	53.3	4.0	5.2	0.28
HV1/4-N1U	1/4	1/8	0.31	1.59	0.67	1.02	1.16	0.71	0.31	0.67	9/16	33.8	5.0	7.5	0.40
HV1/4-N2U	1/4	1/4	0.43	1.59	0.67	1.02	1.20	0.71	0.31	0.67	9/16	39.8	5.0	7.7	0.41
HV1/4-N3U	1/4	3/8	0.47	1.59	0.67	1.02	1.26	0.71	0.31	0.67	11/16	53.3	5.0	7.5	0.40
HV5/16-N1U	5/16	1/8	0.31	1.59	0.71	1.10	1.16	0.71	0.31	0.83	9/16	34.8	5.0	8.7	0.47
HV5/16-N2U	5/16	1/4	0.43	1.59	0.71	1.10	1.20	0.71	0.31	0.83	9/16	40.7	5.0	8.9	0.48
HV5/16-N3U	5/16	3/8	0.47	1.59	0.71	1.10	1.26	0.71	0.31	0.83	11/16	54.4	5.0	8.6	0.46
HV3/8-N2U	3/8	1/4	0.43	1.61	0.79	1.28	1.44	0.94	0.43	0.83	11/16	63.0	5.0	16.2	0.87
HV3/8-N3U	3/8	3/8	0.47	1.61	0.79	1.28	1.46	0.94	0.43	0.83	11/16	71.3	7.0	16.0	0.86
HV3/8-N4U	3/8	1/2	0.59	1.61	0.79	1.28	1.48	0.94	0.43	0.83	7/8	94.3	7.0	15.7	0.85
HV1/2-N2U	1/2	1/4	0.43	1.61	0.93	1.38	1.44	0.94	0.43	0.83	11/16	65.5	7.0	16.3	0.88
HV1/2-N3U	1/2	3/8	0.47	1.61	0.93	1.38	1.46	0.94	0.43	0.83	11/16	73.9	7.0	16.3	0.88
HV1/2-N4U	1/2	1/2	0.59	1.61	0.93	1.38	1.52	0.94	0.43	0.83	7/8	96.8	7.0	16.1	0.87



Straight B



unit:mm

Model	Tube dia. φD	R	A	B1	B2	L	φP1	φP2	C	E1	E2	H	F1	F2	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
HV 01-6-□-□	6	R1/8	8			55.5				33.5					33		8.3
HV 02-6-□-□		R1/4	11	17	40.5	56.5	12.5	16.5	17	36.5	26	14	18	8	39.5	5	8.5
HV 03-6-□-□		R3/8	12				58				38.5		17			52	
HV 01-8-□-□	8	R1/8	8			57.5				33.5					34.5		8.9
HV 02-8-□-□		R1/4	11	17	40.5	58.5	15	16.5	18	36.5	28	14	18	8	40.5	5	8.9
HV 03-8-□-□		R3/8	12				60				38.5		17			53.5	
HV 02-10-□-□	10	R1/4	11			69				42.5					61.5		16.6
HV 03-10-□-□		R3/8	12	21	41	69.5	17.5	19.5	20	43.5	32.5	17	24	11	70	7	16.9
HV 04-10-□-□		R1/2	15				71				46.5		21			91.5	
HV 02-12-□-□	12	R1/4	11			71.5				42.5					65		17
HV 03-12-□-□		R3/8	12	21	41	72	21	19.5	23.5	43.5	35	17	24	11	73	7	17.1
HV 04-12-□-□		R1/2	15				73.5				46.5		21			95	
HV 01-1/4-□-□	1/4	R1/8	8			55.5				33.5					33		8.7
HV 02-1/4-□-□		R1/4	11	17	40.5	56.5	12.5	16.5	17	36.5	26	14	18	8	39.5	5	8.4
HV 03-1/4-□-□		R3/8	12				58				38.5		17			52	
HV 01-5/16-□-□	5/16	R1/8	8			57.5				33.5					34.5		8.9
HV 02-5/16-□-□		R1/4	11	17	40.5	58.5	15	16.5	18	36.5	28	14	18	8	40.5	5	8.9
HV 03-5/16-□-□		R3/8	12				60				38.5		17			53.5	
HV 02-3/8-□-□	3/8	R1/4	11			69				42.5					61.5		16.5
HV 03-3/8-□-□		R3/8	12	21	41	69.5	17.5	19.5	20	43.5	32.5	17	24	11	70	7	16.8
HV 04-3/8-□-□		R1/2	15				71				46.5		21			91.5	

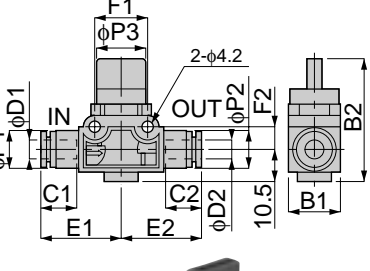


unit:inch

MODEL	Tube dia. φ	NPT	A	B	C	E1	E2	F1	F2	W	H	Weight (g)	Orifice φmm	Eff. A. mm ²	Cv
HVN1-3/16U	3/16	1/8	0.31	1.59	0.67	1.02	1.16	0.71	0.31	0.67	9/16	34.0	4.0	5.6	0.30
HVN2-3/16U	3/16	1/4	0.43	1.59	0.67	1.02	1.2	0.71	0.31	0.67	9/16	39.8	4.0	6.0	0.32
HVN3-3/16U	3/16	3/8	0.47	1.59	0.67	1.02	1.26	0.71	0.31	0.67	11/16	53.5	4.0	5.7	0.30
HVN1-1/4U	1/4	1/8	0.31	1.59	0.67	1.02	1.16	0.71	0.31	0.67	9/16	33.8	5.0	8.3	0.44
HVN2-1/4U	1/4	1/4	0.43	1.59	0.67	1.02	1.20	0.71	0.31	0.67	9/16	39.5	5.0	8.5	0.46
HVN3-1/4U	1/4	3/8	0.47	1.59	0.67	1.02	1.26	0.71	0.31	0.67	11/16	53.5	5.0	8.2	0.44
HVN1-5/16U	5/16	1/8	0.31	1.59	0.71	1.10	1.16	0.71	0.31	0.83	9/16	35.1	5.0	8.9	0.48
HVN2-5/16U	5/16	1/4	0.43	1.59	0.71	1.10	1.20	0.71	0.31	0.83	9/16	40.9	5.0	8.9	0.48
HVN3-5/16U	5/16	3/8	0.47	1.59	0.71	1.10	1.26	0.71	0.31	0.83	11/16	54.6	5.0	8.9	0.48
HVN2-3/8U	3/8	1/4	0.43	1.61	0.79	1.28	1.44	0.94	0.43	0.83	11/16	63.1	7.0	16.6	0.89
HVN3-3/8U	3/8	3/8	0.47	1.61	0.79	1.28	1.46	0.94	0.43	0.83	11/16	71.3	7.0	16.9	0.91
HVN4-3/8U	3/8	1/2	0.59	1.61	0.79	1.28	1.48	0.94	0.43	0.83	7/8	94.4	7.0	16.5	0.89
HVN2-1/2U	1/2	1/4	0.43	1.61	0.93	1.38	1.44	0.94	0.43	0.83	11/16	65.8	7.0	17.0	0.92
HVN3-1/2U	1/2	3/8	0.47	1.61	0.93	1.38	1.46	0.94	0.43	0.83	11/16	74.3	7.0	17.1	0.92
HVN4-1/2U	1/2	1/2	0.59	1.61	0.93	1.38	1.52	0.94	0.43	0.83	7/8	97.1	7.0	16.8	0.91



Union Straight

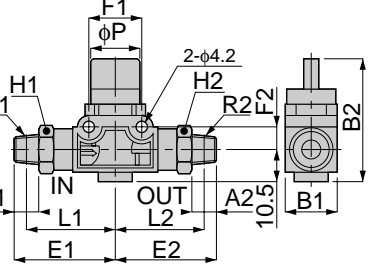


unit:mm

Model	Tube dia. φD1	Tube dia. φD2	B1	B2	φP1	φP2	φP3	C1	C2	E1	E2	F1	F2	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
HV 4-4-□-□	4	4	17	40.5	10	10	16.5	15	15	26	26	18	8	23.5	5	3.4
HV 6-6-□-□	6	6	17	40.5	12.5	12.5	16.5	17	17	26	26	18	8	24.5	5	7.2
HV 8-6-□-□	8	6	17	40.5	15	12.5	16.5	18	18	28	28	18	8	25.5	5	8.1
HV 8-8-□-□		8														8.7
HV 10-10-□-□	10	10	21	41	17.5	17.5	19.5	20	20	32.5	32.5	24	11	44	7	17.4
HV 12-10-□-□	12	10	21	41	21	17.5	19.5	23.5	20	35.5	32.5	24	11	47.5	7	17.5
HV 12-12-□-□		12														18.1
HV 1/4-1/4-□-□	1/4	1/4	17	40.5	12.5	12.5	16.5	17	17	26	26	18	8	24.5	5	8.1
HV 5/16-1/4-□-□	5/16	1/4	17	40.5	15	12.5	16.5	18	17	28	26	18	8	25.5	5	8.8
HV 5/16-5/16-□-□		5/16														8.7
HV 3/8-3/8-□-□		3/8														3/8



Nipple Type



unit:mm

Model	R1	R2	A1	A2	B1	B2	L1	L2	φP	E1	E2	H1	H2	F1	F2	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
HV 01-01-□-□	R1/8	R1/8	8	8	17	40.5	29.5	29.5	16.5	33.5	33.5	14	14	18	8	42	5	8.8
HV 02-01-□-□	R1/4	R1/8	8	17	40.5	30.5	29.5	16.5	36.5	33.5	14	14	18	8	48.5		9	
HV 02-02-□-□		R1/4	11	21	41	36.5	36.5	19.5	42.5	42.5	17	17	24	11	79.5		15.8	
HV 03-02-□-□	R3/8	R1/4	11	21	41	37	36.5	19.5	43.5	42.5	17	17	24	11	86.5	7	15.6	
HV 03-03-□-□		R3/8																12



unit:inch

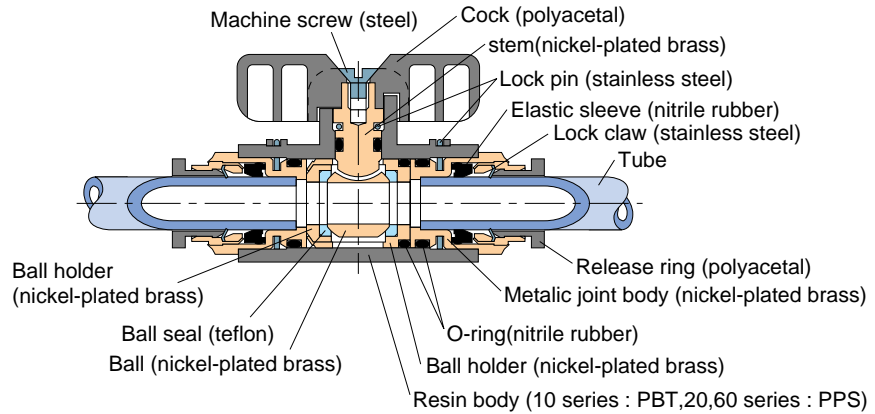
MODEL	NPT1	NPT2	A1	A2	B	L1	L2	E1	E2	F1	F2	H1	H2	W	Weight (g)	Orifice φmm	Eff. A. mm ²	Cv
HVN1-N1U	1/8	1/8	0.31	0.31	1.59	1.16	1.16	1.32	1.32	0.71	0.30	9/16	9/16	0.67	43.0	5.0	8.8	0.47
HVN2-N1U	1/4	1/8	0.43	0.31	1.59	1.16	1.16	1.44	1.32	0.71	0.30	9/16	9/16	0.67	48.9	5.0	9.0	0.48
HVN2-N2U	1/4	1/4	0.43	0.43	1.61	1.42	1.42	1.67	1.67	0.94	0.43	11/16	11/16	0.83	81.1	5.0	15.8	0.85
HVN3-N2U	3/8	1/4	0.47	0.43	1.61	1.42	1.42	1.71	1.67	0.94	0.43	11/16	11/16	0.83	89.5	5.0	15.6	0.84
HVN3-N3U	3/8	3/8	0.47	0.47	1.61	1.46	1.46	1.71	1.71	0.94	0.43	11/16	11/16	0.83	97.7	7.0	15.7	0.85

Quick-fitting Type Shut-off Valve Ball Valve

Features

- The Ball Valve turns on and off the air pressure to pneumatic equipment.
- It provides effective sectional area appropriate to the tube size.
- The graduations on the lever enables rough adjustments of flow rate (10 series).
- Water can be passed because of PPS used for the body resin (20, 60 series).

Construction



Specification

Series	10 Series	20 Series	60 Series
Fluid admitted	Air	Air, water (conditional)	
Service pressure range	0~100psi(0~0.7MPa)	0~150psi(0~0.9MPa)	
Working vacuum	-29.5in. Hg	-100KPa	
Service temperature range	32~140°F	0~60°C	
Effective cross-sectional area	10mm ² (0.542Cv)	20mm ² (1.084Cv)	60mm ² (3.252Cv)

⚠ Warning

*Conditions of Water (when used)

1. Operating temperature : 32~140°F(0~60°C)
2. Operating pressure : 0~43.5psi(0~0.3MPa)
3. No water hammer is allowed.
4. Be sure to install the insert ring.

Model Designation (Example)

BVC (1) **20** (2) = **06** (3) **01** (4) (5)

(1) Type

(2) Effective cross-sectional area

Code	No code	20	60
Effective cross-sectional area	10mm ²	20mm ²	60mm ²

(3) Port size

Port size	Tube dia (mm)				in. size				
Code	04	06	08	10	12	1/4	5/16	3/8	1/2
Size	φ4	φ6	φ8	φ10	φ12	φ1/4	φ5/16	φ3/8	φ1/2

Port size	Taper pipe thread				American standard Taper pipe thread			
Code	01	02	03	04	N1	N2	N3	N4
Size	R1/8	R1/4	R3/8	R1/2	NPT1/8	NPT1/4	NPT3/8	NPT1/2

(4) Port size

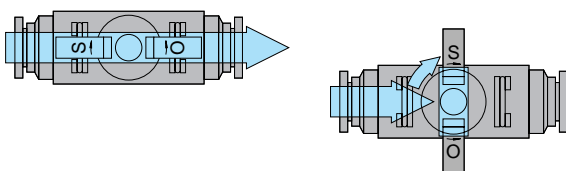
Port size	Tube dia (mm)				in. size				
Code	04	06	08	10	12	1/4	5/16	3/8	1/2
Size	φ4	φ6	φ8	φ10	φ12	φ1/4	φ5/16	φ3/8	φ1/2

Port size	tube dia (mm)				in. size				Taper pipe thread				American standard Taper pipe thread				
Code	04	06	08	10	12	1/4	5/16	3/8	1/2	01	02	03	04	N1	N2	N3	N4
Size	φ4	φ6	φ8	φ10	φ12	φ1/4	φ5/16	φ3/8	φ1/2	R1/8	R1/4	R3/8	R1/2	NPT1/8	NPT1/4	NPT3/8	NPT1/2

(5) Hexagon flat-to-flat specification

U: Hexagon flat-to-flat inch spec. (NPT)
No code: Hexagon flat-to-flat mm spec.

Application example



(5) Hexagon flat-to-flat specification

U: Hexagon flat-to-flat inch spec. (NPT)
No code: Hexagon flat-to-flat mm spec.

- Either of the ports can be an air inlet port.
Turn the lever in O direction and air flows.
Turn the lever to the end stop in S direction and air stops.

⚠ Detailed Safety Instruction

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 23~24 and "Common Safety Instructions for Change Series Valves" on page 279.

⚠ Warning

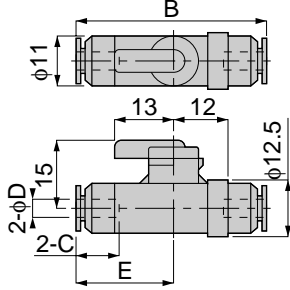
1. When the fluid admitted is water, do not use the 20 or 60 series unless all the conditions required in Specifications are satisfied. Otherwise damage to the valve body or leaks may result.

⚠ Caution

1. When operating the lever, turn it 90 degrees completely until it stops. Inadequate turning may result in poor conduction or low flow rate due to faulty switching.
2. For use with negative pressures, provide a vacuum filter on the suction side. Otherwise dust sucked in may cause malfunction.
3. Do not pull out the lock pin, or the body will come off. Also, before use, make certain that the lock pin is properly in place.

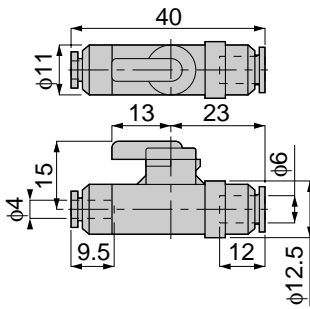
Change Series Ball Valve

BVU₁₀ Union Straight



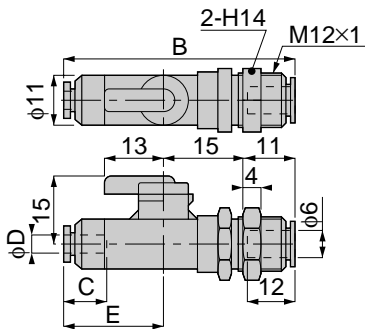
unit:mm								
Model	Tube dia. φD	B	C	E	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVU 4-4	4	37	9.5	17	12	4	2.5	3.4
BVU 6-6	6	40.5	12	17.5	12.5	4	4	10.3

BVG₁₀ Reducing Union Straight



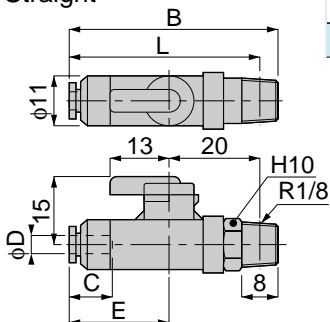
unit:mm				
Model	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVG 6-4	12.5	4	2.5	3.8

BVM₁₀ Bulkhead Union Straight



unit:mm								
Model	Tube dia. φD	B	C	E	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVM 6-4	4	46.5	9.5	17	16.5	4	2.5	3.8
BVM 6-6	6	47.5	12	17.5		4	4	10.3

BVC₁₀ Straight

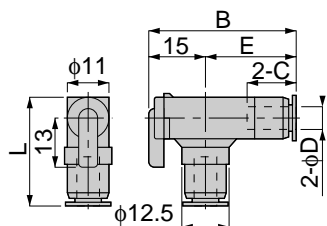


unit:mm									
Model	Tube dia. φD	B	L	C	E	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVC 01-4	4	41	37	9.5	17	14.5	4	2.5	3.8
BVC 01-6	6	41.5	37.5	12	17.5	15	4	4	10.5

Change Series Ball Valve

BVLU₁₀

Union Elbow



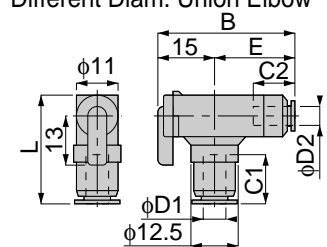
unit:mm

Model	Tube dia. φD	B	L	C	E	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVLU 4-4	4	36.5	26	9.5	21.5	17.5	4	2.5	4
BVLU 6-6	6	39.5	29	12	24.5	18	4	4	8



BVLG₁₀

Different Diam. Union Elbow



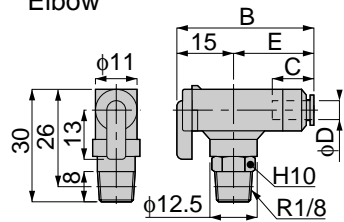
unit:mm

Model	Tube dia. φD1	Tube dia. φD2	B	L	C1	C2	E	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVLG 4-6	4	6	36.5	26	9.5	12	21.5	17.5	4	3.5	4
BVLG 6-4	6	4	39.5	29	12	9.5	24.5	17.5	4	3.5	4



BVLC₁₀

Elbow



unit:mm

Model	Tube dia. φD	B	C	E	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVLC 4-01	4	36.5	9.5	21.5	20	4	3.5	4
BVLC 6-01	6	39.5	12	24.5	20	4	4	8

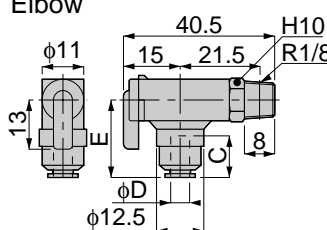


unit:inch

Model	Tube dia. φD	B	E	C	Ball I.D.	Weight (g)	Orifice φmm	Eff.a. mm ²	Cv
BVLC1/8-N1U	1/8	1.44	0.9	0.43	0.16	20.6	2.5	4.0	0.21
BVLC5/32-N1U	5/32	1.44	0.9	0.43	0.16	20.3	2.5	4.0	0.21

BVLC₁₀

Elbow



unit:mm

Model	Tube dia. φD	C	E	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVLC 01-4	4	9.5	20.5	20	4	3.5	4
BVLC 01-6	6	12	23.5	20	4	4	8

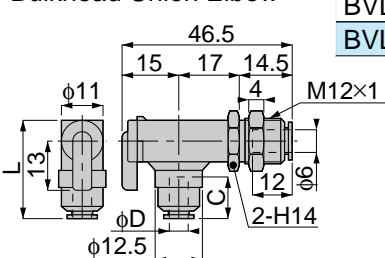


unit:inch

Model	Tube dia. φD	L	C	Ball I.D.	Weight (g)	Orifice φmm	Eff.a. mm ²	C v
BVLCN1-1/8U	1/8	1.02	0.4	0.16	20.5	2.5	3.8	0.20
BVLCN1-5/32U	5/32	1.02	0.4	0.16	20.5	2.5	3.8	0.20

BVLM₁₀

Bulkhead Union Elbow

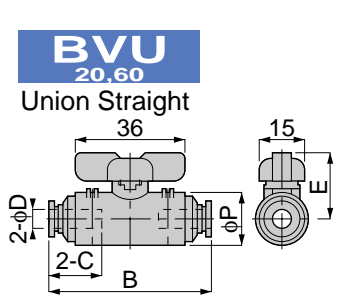


unit:mm

Model	Tube dia. φD	L	C	Mass (g)	Ball I.D. (φ)	Orifice (φmm)	Eff. a. (mm ²)
BVLM 6-4	4	26	9.5	18.5	4	3.5	4
BVLM 6-6	6	29	12	19	4	4	8

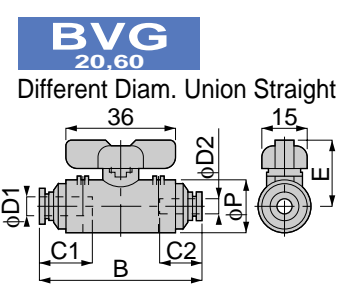


Change Series Ball Valve



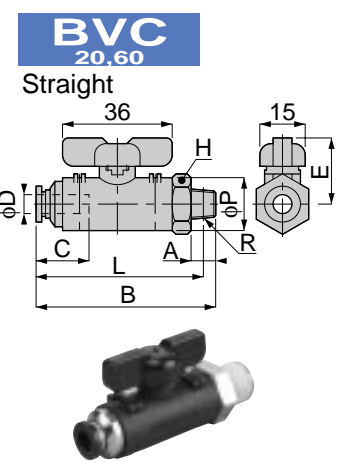
Model	Tube dia. φD	B	φP	C	E	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
BVU 20-0606	6	54.5	17	17	22	45	5	10.7
BVU 20-0808	8	56		18.5		6	21.7	
BVU 60-1010	10	66	24	21	25	102.5	9	41
BVU 60-1212	12	69		23.5		9		55.9

unit:mm



Model	Tube dia. φD1	Tube dia. φD2	B	φP	C1	C2	E	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
BVG 20-0806	8	6	55	17	18.5	17	22	42.5	5	13.1
BVG 60-1210	12	10	67.5	24	23.5	21	25	100.5	9	40.9

unit:mm

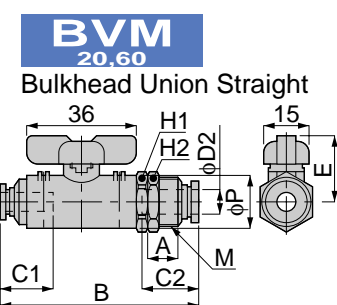


Model	Tube dia. φD	R	A	B	L	C	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)	
BVC 20-0601	6	R1/8	8	59	55	17	55.5	5	12.7	
BVC 20-0602		R1/4	11	62	56		58.5		12.8	
BVC 20-0603		R3/8	12	63	56.5		67.5		12.5	
BVC 20-0801	8	R1/8	8	60	56	18.5	53.5	6	22	
BVC 20-0802		R1/4	11	63	57		56.5		23.1	
BVC 20-0803		R3/8	12	64	57.5		64.5		23.1	
BVC 60-1002	10	R1/4	11	74	70	21	130	8.5	39.9	
BVC 60-1003		R3/8	12	75	69		132.5	9	41.3	
BVC 60-1004		R1/2	15	78	71.5		149.5	9	41.2	
BVC 60-1202	12	R1/4	11	75.5	73	23.5	128	8.5	51.9	
BVC 60-1203		R3/8	12	76.5			70.5	130.5	9	55.5
BVC 60-1204		R1/2	15	79.5			73	147.5	9	55.3

unit:mm

Model	Tube dia. φ D	NPT	A	B	L	C	φP	E	H	Weight (g)	Orifice φ mm	Eff.a. mm ²	Cv
BVC20-1/4 N1U	1/4	1/8	0.31	2.33	2.17	0.67	0.67	0.87	11/16	56.5	5.0	12.7	0.68
BVC20-1/4 N2U	1/4	1/4	0.43	2.44	2.21	0.67	0.67	0.87	11/16	59.9	5.0	12.8	0.69
BVC20-1/4 N3U	1/4	3/8	0.47	2.48	2.23	0.67	0.67	0.87	11/16	68.4	5.0	12.5	0.67
BVC20-5/16 N1U	5/16	1/8	0.31	2.36	2.21	0.73	0.67	0.87	11/16	54.4	6.0	22.0	1.19
BVC20-5/16 N2U	5/16	1/4	0.43	2.48	2.25	0.73	0.67	0.87	11/16	57.8	6.0	23.1	1.25
BVC20-5/16 N3U	5/16	3/8	0.47	2.52	2.27	0.73	0.67	0.87	11/16	66.5	6.0	23.1	1.25
BVC60-3/8 N2U	3/8	1/4	0.43	2.91	2.76	0.83	0.94	0.98	1.00	134.2	8.5	39.9	2.16
BVC60-3/8 N3U	3/8	3/8	0.47	2.95	2.72	0.83	0.94	0.98	1.00	137.0	9.0	41.3	2.23
BVC60-3/8 N4U	3/8	1/2	0.59	3.07	2.81	0.83	0.94	0.98	1.00	153.9	9.0	41.2	2.23
BVC60-1/2 N2U	1/2	1/4	0.43	2.97	2.81	0.93	0.94	0.98	1.00	130.2	8.5	51.9	2.81
BVC60-1/2 N3U	1/2	3/8	0.47	3.01	2.78	0.93	0.94	0.98	1.00	133.1	9.0	55.5	3.00
BVC60-1/2 N4U	1/2	1/2	0.59	3.13	2.87	0.93	0.94	0.98	1.00	149.8	9.0	55.3	2.99

unit:inch



Model	Tube dia. φD1	Tube dia. φD2	M	A	B	φP	C1	C2	E	H1	H2	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
BVM 20-0806	6	8	M16x1	11	66	17	17	18.5	22	19	19	48	5	12.5
BVM 20-0808	8				67		18.5					46	6	21
BVM 60-1210	10	12	M22x1	17	84.5	24	21	23.5	25	24	27	116	9	40.8
BVM 60-1212	12				86		23.5					114	10	54.6

unit:mm

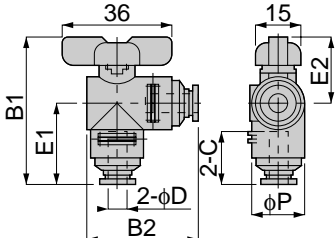
Model	Tube dia. φ D1	Tube dia. φ D2	UNF	F	B	φ P	C1	C2	E	H1	H2	L	Weight (g)	Orifice φ mm	Eff.a. mm ²	Cv
BVM20-5/16 1/4U	1/4	5/16	5/8	0.43	2.60	0.67	0.67	0.73	0.87	3/4	3/4	0.16	50.1	5.0	12.5	0.67
BVM20-5/16 5/16U	5/16	5/16	5/8	0.43	2.64	0.67	0.73	0.73	0.87	3/4	3/4	0.16	48.0	6.0	21.0	1.13
BVM60-1/2 3/8U	3/8	1/2	7/8	0.67	3.33	0.94	0.83	0.93	0.98	1.00	1.00	0.20	115.3	9.0	40.8	2.21
BVM60-1/2 1/2U	1/2	1/2	7/8	0.67	3.39	0.94	0.93	0.93	0.98	1.00	1.00	0.20	111.3	10.0	54.6	2.95

unit:inch

Change Series Ball Valve

BVLU 20.60

Union Elbow



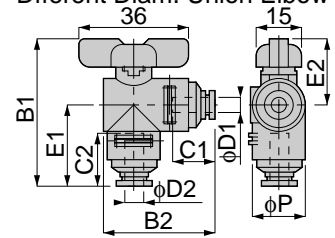
Model	Tube dia. φD	B1	B2	φP	C	E1	E2	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
BVLU 20-0606	6	49.5	37	17	17	17	22	46	5	9.6
BVLU 20-0808	8	50	38		18.5	28		41.5	6	18.1
BVLU 60-1010	10	60.5	45	24	21	35.5	25	105.5	9	33.5
BVLU 60-1212	12	62	46.5		23.5	37		101	10	44.3



unit:mm

BVLG 20.60

Different Diam. Union Elbow



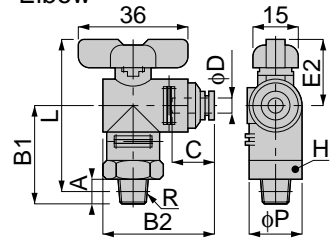
Model	Tube dia. φD1	Tube dia. φD2	B1	B2	φP	C1	C2	E1	E2	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
BVLG 20-0608	6	8	50	37	17	17	18.5	28	22	43.5	5	12.5
BVLG 20-0806	8	6	49.5	38		18.5	17	27				11.4
BVLG 60-1012	10	12	62	45	24	21	23.5	37	25	103.5	9	39.7
BVLG 60-1210	12	10	60.5	46.5		23.5	21	35.5				36.1



unit:mm

BVLC 20.60

Elbow



Model	Tube dia. φD	R	A	B1	B2	L	φP	C	E1	E2	H	Mass (g)	Orifice (φmm)	Eff. a. (mm ²)
BVLC 20-0601	6	R1/8	8	32	37	50	17	17	32	22	17	56.5	5	11.7
BVLC 20-0602		R1/4	11	35		51			35			59.5		11.9
BVLC 20-0603		R3/8	12	36		51.5			36			68		
BVLC 20-0801	8	R1/8	8	32	38	50	18.5	18.5	32	25	24	54	6	17.9
BVLC 20-0802		R1/4	11	35		51			35			57.5		18.5
BVLC 20-0803		R3/8	12	36		51.5			36			66		18.7
BVLC 60-1002	10	R1/4	11	43.5	45	62.5	24	21	43.5	25	24	133	8.5	35.8
BVLC 60-1003		R3/8	12	44.5		63			44.5			135.5		36.6
BVLC 60-1004		R1/2	15	47.5		64.5			47.5			152.5		36
BVLC 60-1202	12	R1/4	11	43.5	46.5	62.5	23.5	23.5	43.5	25	24	131	8.5	44.5
BVLC 60-1203		R3/8	12	44.5		63			44.5			133.5		46
BVLC 60-1204		R1/2	15	47.5		64.5			47.5			150.5		46.2



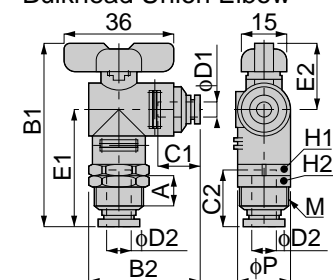
unit:mm

Model	Tube dia. φ D	NPT	A	B1	B2	L	C	E1	E2	H	Weight (g)	Orifice φ mm	Eff.a. mm ²	Cv
BVLC20-1/4 N1U	1/4	1/8	0.31	2.13	1.46	1.10	0.67	1.26	0.87	11/16	57.4	5.0	11.7	0.63
BVLC20-1/4 N2U	1/4	1/4	0.43	2.25	1.46	1.14	0.67	1.38	0.87	11/16	60.7	5.0	11.9	0.64
BVLC20-1/4 N3U	1/4	3/8	0.47	2.29	1.46	1.16	0.67	1.42	0.87	11/16	69.3	5.0	11.9	0.64
BVLC20-5/16 N1U	5/16	1/8	0.31	2.13	1.50	1.10	0.73	1.26	0.87	11/16	55.3	6.0	17.9	0.97
BVLC20-5/16 N2U	5/16	1/4	0.43	2.25	1.50	1.14	0.73	1.38	0.87	11/16	58.8	6.0	18.5	1.00
BVLC20-5/16 N3U	5/16	3/8	0.47	2.29	1.50	1.16	0.73	1.42	0.87	11/16	67.3	6.0	18.7	1.01
BVLC60-3/8 N2U	3/8	1/4	0.43	2.70	1.77	1.56	0.83	1.71	0.98	1.00	136.6	8.5	35.8	1.94
BVLC60-3/8 N3U	3/8	3/8	0.47	2.74	1.77	1.52	0.83	1.75	0.98	1.00	139.5	9.0	36.6	1.98
BVLC60-3/8 N4U	3/8	1/2	0.59	2.85	1.77	1.61	0.83	1.87	0.98	1.00	156.4	9.0	36.0	1.95
BVLC60-1/2 N2U	1/2	1/4	0.43	2.70	1.83	1.56	0.93	1.71	0.98	1.00	132.9	8.5	44.5	2.41
BVLC60-1/2 N3U	1/2	3/8	0.47	2.74	1.83	1.52	0.93	1.75	0.98	1.00	136.6	9.0	46.0	2.49
BVLC60-1/2 N4U	1/2	1/2	0.59	2.85	1.83	1.61	0.93	1.87	0.98	1.00	152.8	9.0	46.2	2.50

unit:inch

BVLM 20.60

Bulkhead Union Elbow



Model	Tube dia. φD1	Tube dia. φD2	M	A	B1	B2	φP	C1	C2	E1	E2	H1	H2	Mass (g)
BVLM 20-0806	6	8	M16×1	11	61	37	17	17	18.5	39	22	19	19	49
BVLM 20-0808	8					38		18.5						47
BVLM 60-1210	10	12	M22×1	17	79	45	24	21	23.5	54	25	24	27	119
BVLM 60-1212	12					46.5		23.5						117

Model	Orifice (φmm)	Eff. a. (mm ²)
BVLM 20-0806	5	11.7
BVLM 20-0808	6	18.6
BVLM 60-1210	9	36.4
BVLM 60-1212	10	45.2



unit:mm

Model	Tube dia. φ D1	Tube dia. φ D2	UNF	F	B1	B2	φ P	C1	C2	E1
BVLM20-5/16 1/4U	1/4	5/16	5/8	0.43	2.40	1.46	0.67	0.67	0.73	1.54
BVLM20-5/16 5/16U	5/16	5/16	5/8	0.43	2.40	1.50	0.67	0.73	0.73	1.54
BVLM60-1/2 3/8U	3/8	1/2	7/8	0.67	3.11	1.77	0.94	0.83	0.93	2.13
BVLM60-1/2 1/2U	1/2	1/2	7/8	0.67	3.11	1.83	0.94	0.93	0.93	2.13

unit:inch

Model	E2	H1	H2	L	Weight (g)	Orifice φ mm	Eff.a. mm ²	Cv
BVLM20-5/16 1/4U	0.87	3/4	3/4	0.16	50.8	5.0	11.7	0.63
BVLM20-5/16 5/16U	0.87	3/4	3/4	0.16	48.8	6.0	18.6	1.00
BVLM60-1/2 3/8U	0.98	1.00	1.00	0.20	117.8	9.0	36.4	1.97
BVLM60-1/2 1/2U	0.98	1.00	1.00	0.20	113.9	10.0	45.2	2.44

unit:inch

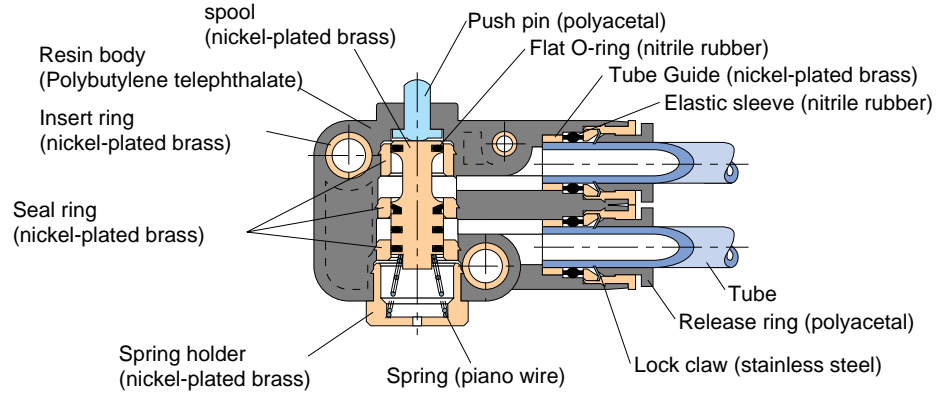
Quick-fitting Type Mechanical Valve

Mechanical Valve

Features

- This push-type valve turns on and off the input of air pressure.
- The operating force is not affected by strength of pressure owing to the spool valve mechanism.
- The valve has three ports to exhaust the residual pressure on the output side (equipment) when closed and two ports that have no exhaust function.

Construction

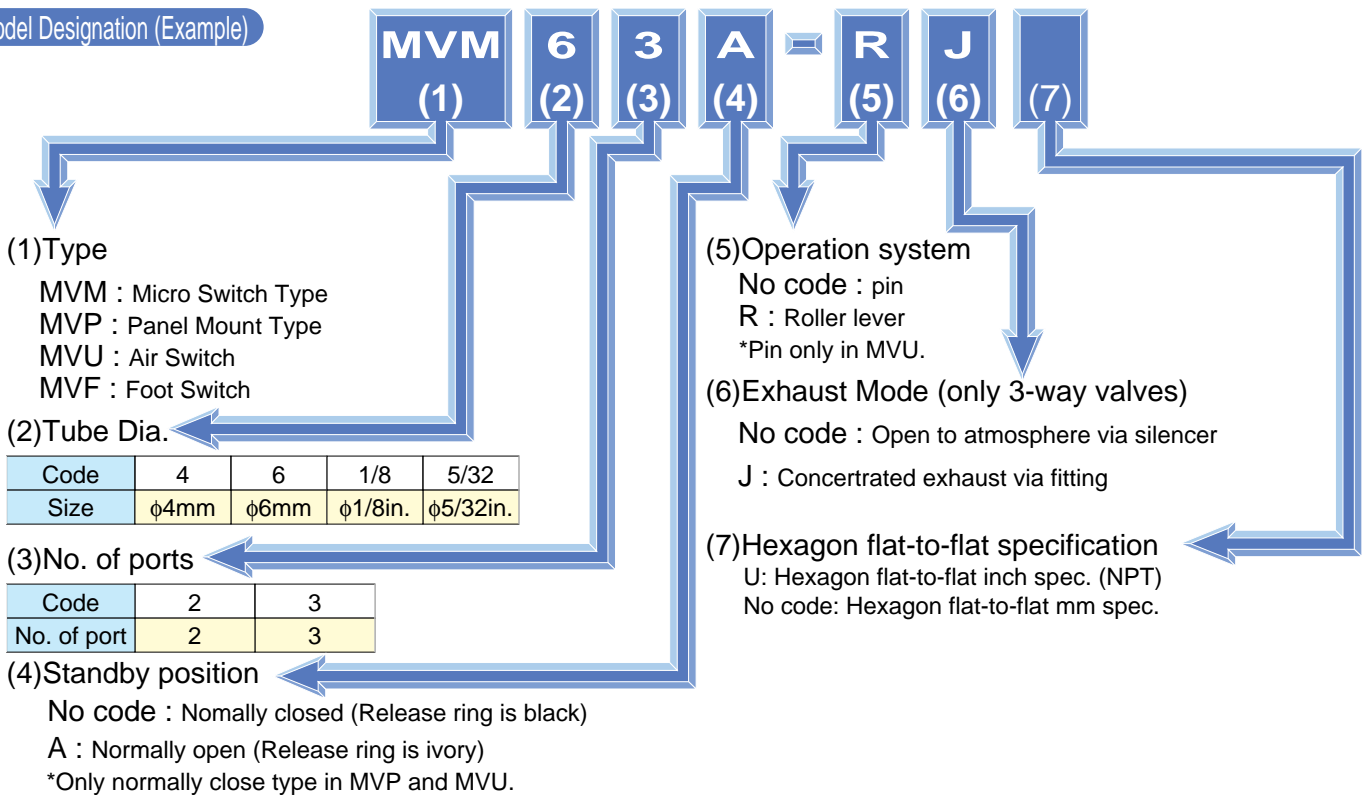


*Black in normal-close type, ivory in normal-open type.

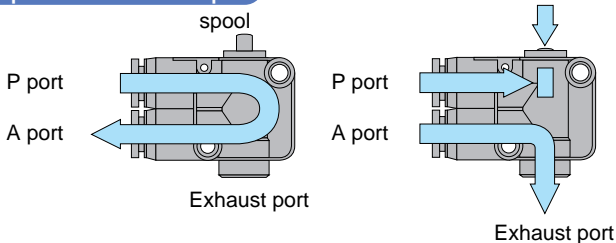
Specification

Fluid admitted	Air	
Service pressure range	0~100psi	0~0.7MPa
Working vacuum	32~140°F	0~60°C
Lubrication	ISO VG32 (Turbine oil class 1)	

Model Designation (Example)



Application example



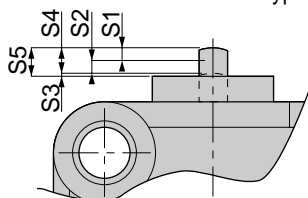
- In case of Three-Way, Normally Open type, the compressed air entered from P port flows to A port. While the spool is pushed down, the air inlet is blocked and the residual pressurized air is released from the exhaust port (open to air type or concentrated exhaust type).
- *Three-Way, Normally Closed type works contrary to Normally Open type.

Change Series Mechanical Valve

unit:mm

MVM

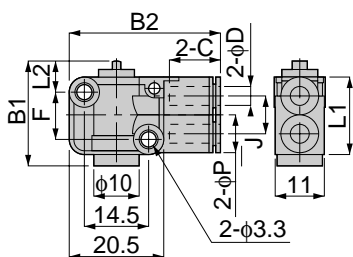
Stroke Dimensions for Pin Type



Tube dia.	Pre-Stroke S1	Operating Stroke S2	Over Stroke S3	Recommended Stroke S4	Max. Stroke S5
φ4	1.0	1.0	0.4	2	2.4
φ6	1.6	1.6	0.4	3.2	3.6

MVM

Microswitch Pin Type

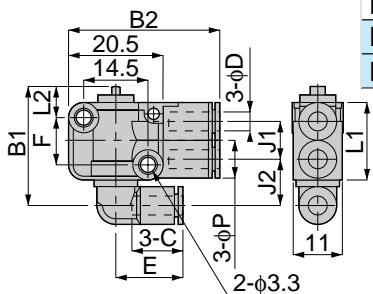


unit:mm

Model	Tube dia. φD	B1		B2	L1	L2	φP	C	J	F	Mass (g)	Eff. a. (mm ²)
		max	min									
MVM 4□	4	23.5	21	33	17	7	8	11	8	10.5	10	3
MVM 4□A											10.5	
MVM 6□	6	30.5	27	33.5	22	6.5	10.5	12	10.5	15.5	12.5	7
MVM 6□A												

MVM

Microswitch Pin Type (Concentrated Exhaust)

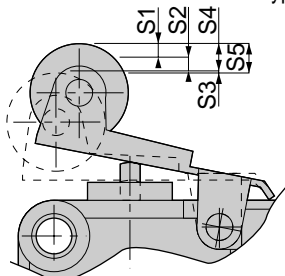


unit:mm

Model	Tube dia. φD	B1		B2	L1	L2	φP	C	J1	J2	E	F	Mass (g)	Eff. a. (mm ²)
		max	min											
MVM 43-J	4	26.5	24	33	17	7	8	11	8	8.5	15	10.5	11	3
MVM 43A-J														
MVM 63-J	6	34.5	31	33.5	22	6.5	10.5	12	10.5	11.5	16.5	15.5	14.5	7
MVM 63A-J													15	

MVM

Stroke Dimensions for Roller Type



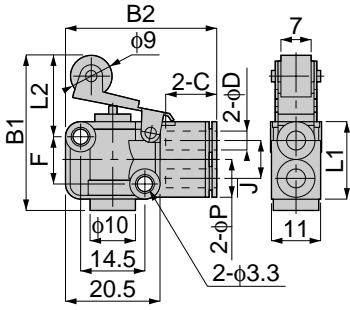
unit:mm

Tube dia.	Pre-Stroke S1	Operating Stroke S2	Over Stroke S3	Recommended Stroke S4	Max. Stroke S5
φ4	1.5	1.7	0.4	3.2	3.6
φ6	2.0	2.5	0.4	4.5	4.9

Change Series Mechanical Valve

MVM

Microswitch Roller Type



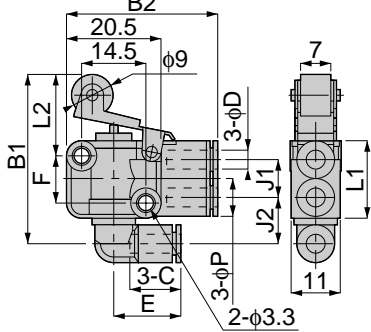
Model	Tube dia. φD	B1		B2	L1	L2		φP	C	J	F	Mass (g)	Eff. a. (mm ²)
		max	min			max	min						
MVM 4□-R	4	34.5	30.5	33	17	18	14.5	8	11	8	10.5	12.5	3
MVM 4□A-R													
MVM 6□-R	6	42	37	33.5	22	19.5	15	10.5	12	10.5	15.5	15	7
MVM 6□A-R													



unit:mm

MVM

Microswitch Roller Type
(Concentrated Exhaust)



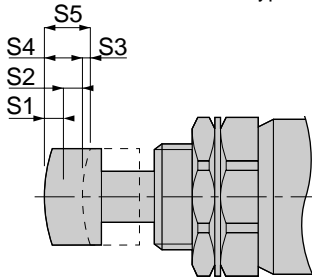
Model	Tube dia. φD	B1		B2	L1	L2		φP	C	J	E	F	Mass (g)	Eff. a. (mm ²)
		max	min			max	min							
MVM 43-RJ	4	37.5	33.5	33	17	18	14.5	8	11	8	15	10.5	13	3
MVM 43A-RJ													13.5	
MVM 63-RJ	6	46	41	33.5	22	19.5	15	10.5	12	10.5	16.5	15.5	17	7
MVM 63A-RJ														



unit:mm

MVP

Stroke Dimensions for Pin Type

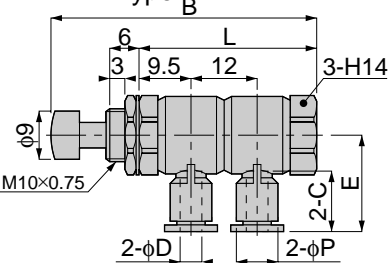


Tube dia.	Pre-Stroke S1	Operating Stroke S2	Over Stroke S3	Recommended Stroke S4	Max. Stroke S5
φ4	1.8	1.8	0.4	3.6	4
φ6	1.8	1.8	0.4	3.6	4

unit:mm

MVP

Panel Mount Type
Pin Type



Model	Tube dia. φD	B		L	φP	C	E	Mass (g)	Eff. a. (mm ²)
		max	min						
MVP 42	4	49.5	46	33	8	11	18	31	3
MVP 43		49	45.5	32.5				30	
MVP 62	6	49.5	46	33	10.5	12	18.5	32	5
MVP 63		49	45.5	32.5				31	

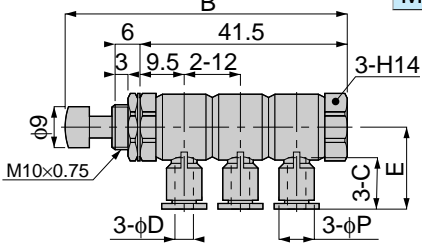


unit:mm

Change Series Mechanical Valve

MVP

Panel Mount Pin Type
(Concentrated Exhaust)

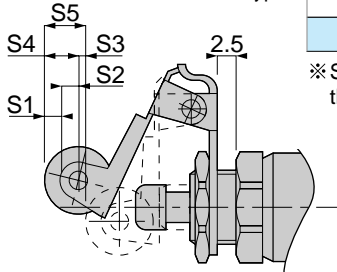


Model	Tube dia. φD	B		φP	C	E	Mass (g)	Eff. a. (mm ²)
		max	min					
MVP 43-J	4	57	53.5	8	11	18	33	3
MVP 63-J	6	57	53.5	10.5	12	18.5	35	5

unit:mm

MVP

Stroke Dimensions for Roller Type



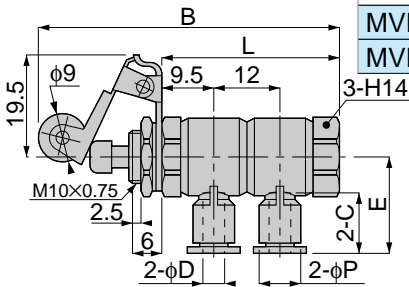
Tube dia.	Pre-Stroke S1	Operating Stroke S2	Over Stroke S3	Recommended Stroke S4	Max. Stroke S5
φ4	1.8	2.1	0.4	3.9	4.3
φ6	1.8	2.1	0.4	3.9	4.3

※ Stroke Dimensions were measured for the product mounted on 2.5-mm plate. Dimensions vary when the thickness of the plate changes.

unit:mm

MVP

Panel Mount Roller Type

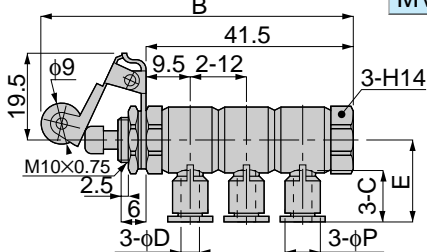


Model	Tube dia. φD	B		L	φP	C	E	Mass (g)	Eff. a. (mm ²)
		max	min						
MVP 42-R	4	56.5	53	33	8	11	18	34.5	3
MVP 43-R		57	53.5	32.5				33.5	
MVP 62-R	6	56.5	53	33	10.5	12	18.5	35.5	5
MVP 63-R		57	53.5	32.5				34.5	

unit:mm

MVP

Panel Mount Roller Type
(Concentrated Exhaust)



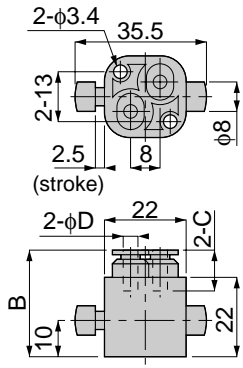
Model	Tube dia. φD	B		φP	C	E	Mass (g)	Eff. a. (mm ²)
		max	min					
MVP 43-RJ	4	66	62.5	8	11	18	36.5	3
MVP 63-RJ	6	66	62.5	10.5	12	18.5	38	5

unit:mm

Change Series Mechanical Valve

MVU

Air Switch



unit:mm

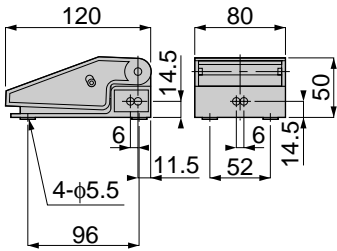
Model	Tube dia. φD	B	C	Mass (g)	Eff. a. (mm ²)
MVU 42	4	29	11	22.5	3
MVU 43				24	
MVU 62	6	31.5	12	22.5	5
MVU 63				24	

※Main body is Ivory color. Release ring is black.



MVF

Foot Switch



unit:mm

Model	Tube dia. φD	Mass (g)	Eff. a. (mm ²)
MVF 4□□	4	172.5	3
MVF 6□□	6	174.5	7

※MVF 4□□ uses MVM 4□□ or MVM 4□□ A.
MVF 6□□ uses MVM 6□□ or MVM 6□□ A.



⚠ Detailed Safety Instruction

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 23~24 and "Common Safety Instructions for Change Series Valves" on page 279.

⚠ Warning

1. Do not allow any load beyond the limit stroke to bear on the push pin or roller by machine operation. Otherwise damage to the body may result.
2. Do not use the valve with cam and dog whose operation involves steep leading and trailing edges. Impacts may inflict damage to the device body.
3. Do not carry out the air switch or foot switch type of operation by a machine. Such an operation may damage the device body.
4. In applications that require high level of reliability, make certain that the mechanical valve operates properly at start-up.
5. Do not subject the product with a rotary resin body to forcible swinging or rotation. Otherwise the body may suffer damage or develop leakage.
6. Do not use the valve in locations where it can be exposed to water drops, oil drops, dust, etc. The valve is neither drip-proof nor dustproof, so that malfunction may result.

⚠ Caution

1. Consult PISCO about applications involving frequent operations.
2. Confirm the number of ports and the conduction system by checking the marking on the body.
3. With the microswitch or the panel mounting type, the effective sectional area may change with the stroke. Insufficient stroke may cause low flow rate.
4. With the air switch or the foot switch type, push the button or the top lid of the case completely until it stops. Failure to do so may result in poor conduction or low flow rate due to faulty switching.