

# Change Valves / Check Valves

**Change Valves**

**RoHS10**

**BVHBV**

Material: Resin Body: Glass Fiber Filled PBT Polybutylene Terephthalate Ball / Guide Ring: Brass (Electroless Nickel Plating) O-Ring: Nitrile Rubber

Part Number	Tube Outer Diameter (mm) D <sub>1</sub>	Tube Outer Diameter (mm) D <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	B <sub>4</sub>	B <sub>5</sub>	T	F <sub>1</sub>	F <sub>2</sub>	P <sub>1</sub>	P <sub>2</sub>	G	Effective Sectional Area (mm <sup>2</sup> )	Mass (g)
BVHBV	6	6	26.9	28.8	27	23.8	8.9	16.2	12	20	14.5	17.8	34.5	9	50
	8	8	26.9	28.8	26.9	23.8	8.9	16.2	12	20	14.5	17.8	34.5	11	53
	10	10	28.5	28.7	26.9	23.8	8.9	16.2	12	20	14.5	17.8	34.5	17	50
	12	12	36.1	36.5	34.8	28	11.9	22.4	15	25	21	23.8	44	24	122
			36.1	36.5	35	28	11.9	22.4	15	25	21	23.8	44	24.5	125
			36.6	36.7	35	28	11.9	22.4	15	25	21	23.8	44	34.5	117

**Features**

- Changes the direction of air passage by 90°.
- Resin body is compact and lightweight.
- Easy to handle for changing air passage.

**Structure Diagram**

**Part Number Example**      **Part Number**  
 BVHBV8-6

**Specifications**

Applicable Fluid	Air
Operating Pressure Range	0-0.7 MPa
Operating Vacuum Level	-100 kPa
Operating Temperature Range	0-60°C

**Check Valves**

**RoHS10**

**BVCVP**

(Nominal 4 / 6 / 8)

(Color Ring Shape)

Flow Direction A: IN → OUT

Flow Direction B: OUT ← IN

JIS Graphic Symbol

**Features**

- Capable of maintaining OUT pressure unchanged to prevent a back flow of air.
- Suitable for holding vacuum and for low-pressure plumbing.
- Lightweight due to resin material.

**Specifications**

Applicable Fluid	Air
Operating Pressure Range	0-0.9 MPa
Operating Vacuum Level	-100 kPa
Operating Temperature Range	0-60°C
Min. Operating Pressure	0.01 MPa

Name of Parts	Material	Surface Treatment
Resin Body	PBT Polybutylene Terephthalate	—
O-Ring	NBR Nitrile Rubber	—
Valve Body	POM Polyoxymethylene	—
Valve Retainer	POM Polyoxymethylene	—
Valve Gasket	NBR Nitrile Rubber	—
Release Ring	POM Polyoxymethylene	—
Guide Ring	Brass	Electroless Nickel Plating
Spring	Stainless Steel	—
Elastic Sleeve	NBR Nitrile Rubber	—
Metal Part	Brass	Electroless Nickel Plating

Part Number	Tube Outer Dia. (mm) D	Nominal	Flow Direction	Thread Size T	A	B	L	P	H (Wrench Flats)	X	Y	Effective Sectional Area (mm <sup>2</sup> )	Mass (g)
BVCVP	4	M5	A	M5 x 0.8	3	24.2	21.2	9	8	—	—	2.6	4.3
		1	B	R1/8	8	23.9	19.9	9	10	9.8	7.8	2.7	7.7
		4	—	—	—	31.5	—	9	—	—	—	2.9	3.7
	6	1	A	R1/8	8	30.5	26.5	11	10	11.8	9.8	7.2	9.0
		2	B	R1/4	11	27.8	21.8	11	14	—	—	7.3	16.1
		6	—	—	—	34	—	11	—	—	—	7.5	5.4
8	1	A	R1/8	8	35.5	31.5	14	14	—	—	7.3	19.3	
	2	B	R1/4	11	39.5	33.5	15	—	—	—	14.5	21.7	
	8	—	—	—	47.3	—	15	—	—	—	15.5	13.0	

**Part Number Example**      **Part Number** - **Nominal** - **Flow Direction**  
 BVCVP4 - M5 - B  
 BVCVP6 - 6 - B

# Flow Rate Controller

## Meter-Out/In

**Flow Rate Controller (Meter-Out/In) - Standard**

**RoHS10**

**Meter Out SPSNL SPJNLS**

Material: Polybutylene Terephthalate Thread: Brass (Nickel Plating) (For SPJNLS, 304 Stainless Steel)

**Flow Rate Controller - Miniature**

**Meter Out MNSPS**

Material: Polybutylene Terephthalate Thread: Brass (Nickel Plating)

**Flow Rate Controller - Straight**

**Meter Out SPSNS**

Material: Polybutylene Terephthalate Thread: Brass (Nickel Plating)

**Flow Rate Controller - Miniature Straight**

**RoHS10**

**Meter Out MNPSJS**

Material: Polybutylene Terephthalate Thread: Brass (Nickel Plating)

**Flow Rate Controller - In-Line**

**SPJNSC**

Material: Polybutylene Terephthalate Thread: Brass (Nickel Plating)

**Flow Rate Controller - Miniature In-Line**

**SPJNSK**

Material: Polybutylene Terephthalate Thread: Brass (Nickel Plating)

**Part Number Example**      **Part Number** - **Nominal** - **Color**  
 SPSNL4 - M5 - B  
 MNPSJS6 - M5 - W

Part Number	Type	D	Nom.	Color	A	B	C <sub>2</sub>	E	Wrench Flats H	Thread Size M	Mass (g)
SPSNL SPJNLS SPSNN	4	M5	1	B	19.1(20.8)	10(12.4)	29.45(30.2)	9(10)	8	M5 x 0.8	9
					20.9(23.1)	14.65(16.2)	40.05(38.4)	9(10)	10(13)	R1/8	21
					20.95(22.3)	11.2(12.2)	29.45(30.2)	11.2(12.5)	8	M5 x 0.8	10
	6	1	2	W	21.95(24.1)	14.65(15.7)	40.05(38.4)	11.2(12.5)	10(13)	R1/8	22
					23.95(25.8)	18.2(20.0)	48(45.7)	11.2(12.5)	14(16)	R1/4	38(40)
					25.1(25.3)	15.65(15.4)	40.05(38.4)	13.6(14.5)	10(13)	R1/8	23
	8	2	3	W	27.6(27.2)	19.3(19.0)	48(45.7)	13.6(14.5)	14(16)	R1/4	41
					28.6(29.5)	21.4(21.3)	54.2(52.4)	13.6(14.5)	19	R3/8	71(65)
					29.6(29.9)	20.8(19.0)	48(45.7)	16.3(17.5)	14(16)	R1/4	46(44)
	10	3	4	W	30(31.7)	23(21.8)	54.2(52.4)	16.3(17.5)	19	R3/8	74(68)
					32.9(33.9)	26.5(25.2)	59.8(58.8)	16.3(17.5)	24	R1/2	106(112)
					35.9(32.0)	24.7(21.7)	54.2(52.4)	19.7(20.0)	19	R3/8	77(69)
12	4	4	W	38.9(35.2)	28.2(25.7)	59.8(58.8)	19.7(20.0)	24	R1/2	109(113)	

⊕ Dimensions in ( ) are for SPJNLS. \*Color is applicable to SPJNLS only.  
 ⊕ The picture and drawing indicate SPSNL / SPSNN. For SPJNLS, refer to the CAD data.  
 ⊕ For SPSNN (Meter-In), the ring is red.

Part Number	Type	D	Nom.	A	B	C <sub>2</sub>	E	Wrench Flats H	Thread Size M	Mass (g)	Max. Tightening Torque (Kg-cm)
MNSPS	4	M3	1	15.7	9.9	30.5	8.0	8	M3 x 0.5	8	3
				15.7	9.9	30.5	8.0	8	M5 x 0.8	8	12
				16.7	9.9	30.5	10.4	8	M5 x 0.8	10.4	12

Part Number	Type	D	Nom.	A	B	C <sub>2</sub>	E	Wrench Flats H	T	Thread Size M	Mass (g)	Control Type
SPSNS	4	1	M5	41.4	14.85	34.1	9.8	10	18.1	R1/8	34.1	Meter-Out
				35.2	11.4	29.12	11.9	8	15.9	M5 x 0.8	29.2	
	6	2	2	38.65	14.85	34.05	11.9	10	18.1	R1/8	34.1	
				42.2	18.4	42.4	11.9	14	20.1	R1/4	42.4	
	8	1	3	40.15	14.85	33.87	13.9	10	18.1	R1/8	33.9	
				49.2	18.4	42.32	13.9	14	20.18	R1/4	42.4	
	10	2	3	45.9	20.6	47.6	13.9	19	22.5	R3/8	47.7	
				46.4	18.4	42.32	16.9	14	20.1	R1/4	42.4	
				48.6	20.6	47.6	16.9	19	22.5	R3/8	47.7	

⊕ For SPSNS, the tube connection port will not move.

Part Number	Type	D	Nom.	Color	A	B	C <sub>1</sub>	C <sub>2</sub>	E	Wrench Flats H	T	Thread Size M	Mass (g)	Control Type
MNPSJS	4	M5	1	W	28	12.4	27.2	30.2	7.8	8	11.2	M5x0.8	13.2	Meter-Out
					28.3	11.4	25.1	27.6	7.9	7	9.3	M3x0.5	7.7	
					29	12.4	27.2	30.2	8.8	8	11.2	M5x0.8	14	
					30.6	12.4	27.2	30.2	10.8	8	11.2	M5x0.8	15	

Part Number	Type	D	Body Color	A	B	Mass (g)
SPJNSC	4	6	B (Black)	Min	48.8	13.9
				Max	52.3	10
				52	57	12
			W (White)	63	68	15

Part Number	Type	D	Body Color	A	B	C	E	Wrench Flats H	Thread Size M	Mass (g)		
SPJNSK	4	6	B (Black)	Min	39.8	43.3	4	10	10	9	M5 x 0.8	12.5
				Max	42.8	46.3	4	12	10	9	M5 x 0.8	13.4

**Specifications**

Applicable Fluid	Air
Operating Temperature Range	0-60°C
Operating Pressure Range	0.05-0.7 MPa

