

BV Series Finger Valve

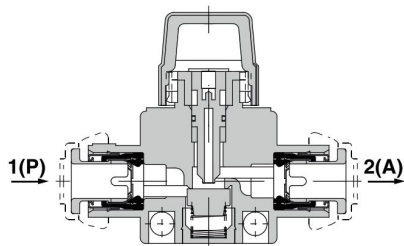


BV Series

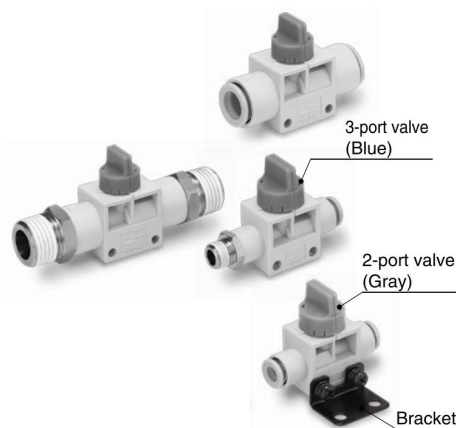
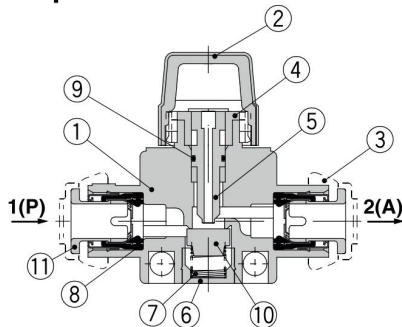
Finger Valve

Construction

2-port valve: BV2 series



3-port valve: BV3 series



Component Parts

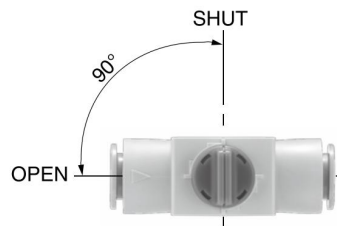
No.	Description	Standard type	Material
1	Body	Standard type	PBT
2	Knob	Standard type	POM
3	Cam ring		POM
4	Stem		POM
5	Spring guide		Brass
6	Spring		Electroless nickel plated Stainless steel
7	Seal		NBR
8	O-ring		NBR
9	Valve		NBR
10	Cassette	Standard type	POM

Replacement Parts

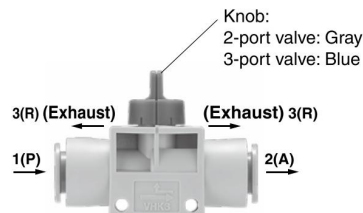
Description	Model	
	One-touch fitting Applicable tubing O.D. ø8 or less	One-touch fitting Applicable tubing O.D. ø10 or more 1(P)-Male thread 2(A)-Male thread Port size R3/8 or more
	Part no.	
Bracket assembly ^{Note 2)}	BV-B1 ^{Note 1)}	BV-B2 ^{Note 1)}

Note 1) The bracket, bolts, nuts, and washers are supplied with the bracket assembly.

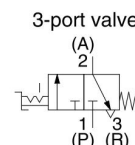
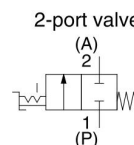
With a function to prevent the knob from coming out
Large effective area: 2.0 to 17.5 mm²
Reduced operating force
Poppet valve construction seldom suffers seal deflection.
 The series begins with the min. tubing O.D. of ø4.
Selection from four types in accordance with the piping specifications
The 3-port valve discharges residual pressure from 2(A) with the handle set at SHUT.
(There is no exhaust port.)



2-port valves and 3-port valves can be distinguished by the color of their knobs.



The valve direction clearly indicates whether the valve is open or closed.
(SHUT-OPEN: Counterclockwise)
Symbol



Specifications

Valve	2/3-port valves
Fluid	Air
Proof pressure	1.5 MPa
Max. operating pressure ^{Note 1)}	1.0 MPa
Operating vacuum pressure*	-100 kPa
Ambient temperature and operating fluid temperatures	0 to 60°C
Applicable tubing material ^{Note 2)}	Nylon, Soft nylon, Polyurethane
Accessory (Option)	Bracket

Note 1) Please note that when the valve is used at micro pressures of 0.1 MPa or less, valve leakage may be more than the standard value (5 cm³/min).

Note 2) Use caution about the maximum operating pressure when soft nylon or polyurethane tubing is used.

* Use BV2 (2-port valve) for vacuum application.

BV Series Finger Valve

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How to Order



Standard type

BV

2

06

06

1

2

3

4

5

1 Valve model

2	2-port valve
3	3-port valve

2 1(P) port size

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
M5	M5 x 0.8
01S	R 1/8
02S	R 1/4
03S	R 3/8
04S	R 1/2

* All Male Thread With Sealent

3 2(A) port size

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
M5	M5 x 0.8
01S	R 1/8
02S	R 1/4
03S	R 3/8
04S	R 1/2

* All Male Thread With Sealent

4 Knob color

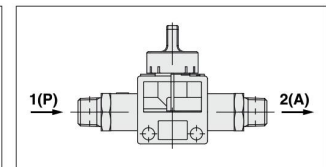
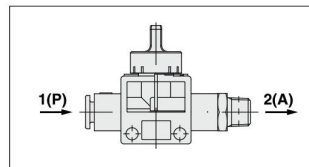
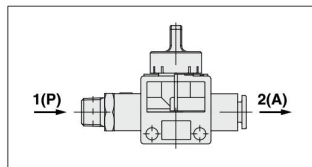
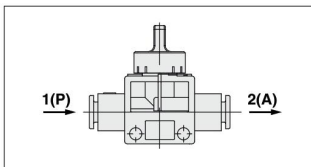
Nil (Standard)	2-port valve	Gray
	3-port valve	Blue

5 Bracket

Nil	None
L	With L-bracket

* Bracket and screws are attached.

Standard Type



1(P): One-touch fitting
2(A): One-touch fitting

		2(A) Applicable tubing O.D. (mm)				
		ø4	ø6	ø8	ø10	ø12
Applicable tubing O.D. (mm)	ø4	●				
	ø6	●	●			
	ø8		●	●		
	ø10			●	●	
	ø12				●	●

1(P): Male thread
2(A): One-touch fitting

		2(A) Applicable tubing O.D. (mm)				
		ø4	ø6	ø8	ø10	ø12
Port size R	M5	●	●			
	1/8	●	●	●		
	1/4		●	●	●	●
	3/8		●	●	●	●
	1/2				●	●

1(P): One-touch fitting
2(A): Male thread

		2(A) Port size R				
		M5	1/8	1/4	3/8	1/2
Applicable tubing O.D. (mm)	ø4	●	●			
	ø6	●	●	●	●	
	ø8		●	●	●	●
	ø10			●	●	●
	ø12				●	●

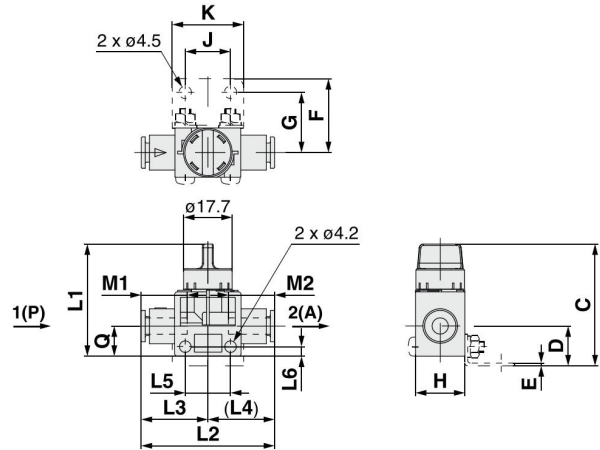
1(P): Male thread
2(A): Male thread

		2(A) Port size R				
		M5	1/8	1/4	3/8	1/2
Port size R	M5	●				
	1/8	●	●			
	1/4		●	●		
	3/8			●	●	
	1/2				●	●

BV Series Finger Valve

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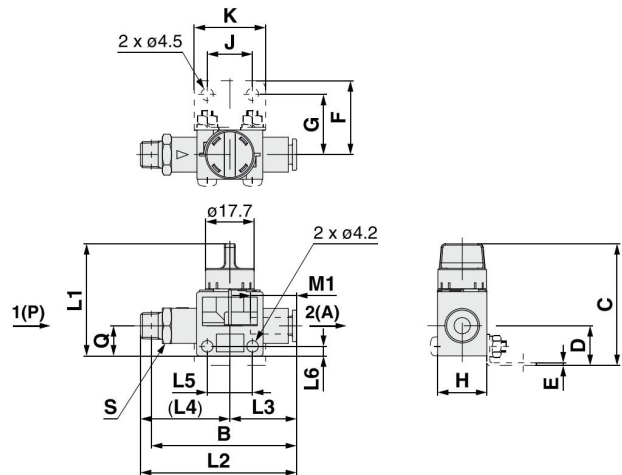
1(P)/2(A): One-touch Fitting



Applicable tubing O. D. (mm)		Model	H	L1	L2	L3	L4	L5	L6	M1	M2	Q	Flow rate characteristics						Weight (g)	Bracket mounting dimensions							
1(P)	2(A)												1(P)→2(A)			2(A)→3(R)*1				Bracket assembly no. C D E F G J K							
				C _{dm} (l/bar)			b Cv			C _{dm} (l/bar)			b Cv														
4	4	BV□-04-04	18	41	47.6	23.8	23.8	16.5	3.5	15.8	15.8	11	0.7	0.15	0.14	0.25	0.6	0.06	15	BV-B1	44.5	14.5	1	27	22	16.5	26
6	4	BV□-06-04	18	41	48	23.7	23.7	16.5	3.5	16.8	16.8	11	1.0	0.15	0.21	0.25	0.6	0.06	15	BV-B1	44.5	14.5	1	27	22	16.5	26
	6	BV□-06-06			48.6	24.3	24.3						1.4	0.15	0.35	0.25	0.6	0.06	16								
8	6	BV□-08-06	18	41	50.5	24.3	24.3	16.5	3.5	18.7	16.8	11	2	0.15	0.36	0.25	0.6	0.06	16	BV-B1	44.5	14.5	1	27	22	16.5	26
	8	BV□-08-08			52.4	26.2	26.2						1.9	0.15	0.39	0.25	0.6	0.06	17								
10	8	BV□-10-08	22	46	58.5	28	28	21.5	4	20.8	18.7	14	2.7	0.15	0.55	0.67	0.6	0.16	28	BV-B2	49	17	1	30	25	21.5	31
	10	BV□-10-10			61	30.5	30.5						3.1	0.15	0.65	0.67	0.6	0.16	29								
12	10	BV□-12-10	22	46	62	30.5	30.5	21.5	4	21.8	20.8	14	3.3	0.15	0.68	0.67	0.6	0.16	31	BV-B2	49	17	1	30	25	21.5	31
	12	BV□-12-12			63	31.5	31.5						3.4	0.15	0.70	0.67	0.6	0.16	32								

*1 3-port valve

1(P): Male Thread, 2 (A): One-touch Fitting



Connection thread R	Applicable tubing O. D. (mm)	Model	H	L1	L2	L3	L4	L5	L6	M1	Q	Flow rate characteristics						Weight (g)	*2 B	S (Width across flats)	Bracket mounting dimensions									
												1(P)→2(A)			2(A)→3(R)*1						Bracket assembly no. C D E F G J K									
				C _{dm} (l/bar)			b Cv			C _{dm} (l/bar)			b Cv																	
M5	4	BV□-M5-04	18	41	52.9	23.8	29.1	16.5	3.5	15.8	15.8	11	0.4	0.15	0.10	0.25	0.6	0.06	19	49	11	BV-B1	44.5	14.5	1	27	22	16.5	26	
	6	BV□-M5-06			53.9	24.3	29.6						16.8	0.4	0.15	0.10	0.25	0.6	0.06	21	50									13
1/8	4	BV□-01S-04	18	41	55.4	23.8	31.6	16.5	3.5	15.8	15.8	11	0.7	0.15	0.17	0.25	0.6	0.06	21	51	11	BV-B1	44.5	14.5	1	27	22	16.5	26	
	6	BV□-01S-06			56.9	24.3	32.6						16.8	1.4	0.15	0.35	0.25	0.6	0.06	23	53									13
1/4	8	BV□-01S-08	18	41	62.2	26.2	36	16.5	3.5	18.7	18.7	11	1.9	0.15	0.47	0.25	0.6	0.06	31	58	17	BV-B1	44.5	14.5	1	27	22	16.5	26	
	6	BV□-02S-06			60.4	24.3	36.1						16.8	1.4	0.15	0.35	0.25	0.6	0.06	31	54									14
	8	BV□-02S-08			65.2	26.2	39						18.7	1.9	0.15	0.47	0.25	0.6	0.06	32	59									17
	10	BV□-02S-10			74.8	30.5	43.3						20.8	3.1	0.15	0.78	0.67	0.6	0.16	49	68									19
3/8	6	BV□-03S-06	18	41	62.4	24.3	38.1	16.5	3.5	16.8	16.8	11	1.4	0.15	0.35	0.25	0.6	0.06	41	56	17	BV-B1	44.5	11.5	1	27	22	16.5	26	
	8	BV□-03S-08			66.2	26.2	40						18.7	1.9	0.15	0.47	0.25	0.6	0.06	40	60									17
1/2	10	BV□-03S-10	22	46	74.8	30.5	44.3	21.5	4	20.8	20.8	14	3.1	0.15	0.78	0.67	0.6	0.16	51	68	19	BV-B2	49	17	1	30	25	21.5	31	
	12	BV□-03S-12			77.3	31.5	45.8						21.8	3.4	0.15	0.85	0.67	0.6	0.16	64	71									22
1/2	10	BV□-04S-10	22	46	78.2	30.5	47.7	21.5	4	20.8	20.8	14	3.1	0.15	0.78	0.67	0.6	0.16	72	70	22	BV-B2	49	17	1	30	25	21.5	31	
	12	BV□-04S-12			80.2	31.5	48.7						21.8	3.4	0.15	0.85	0.67	0.6	0.16	70	72									22

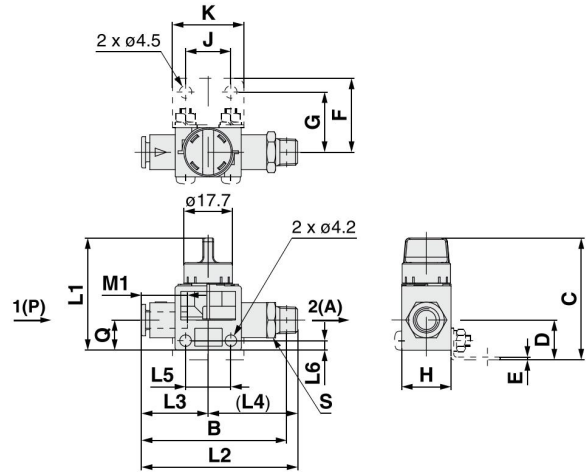
*1 3-port valve *2 Reference dimensions after insertion of R thread.

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BV Series Finger Valve

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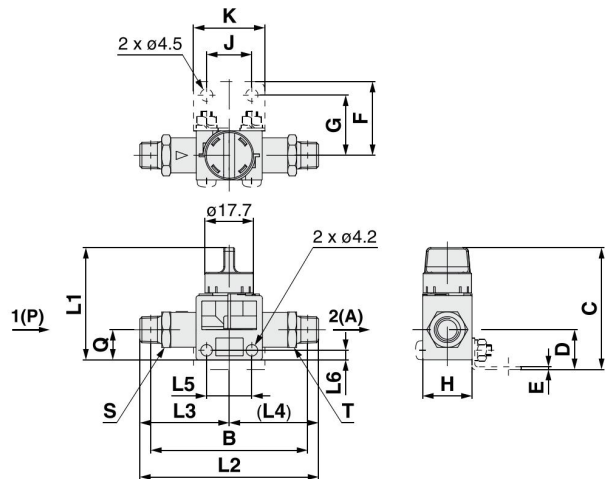
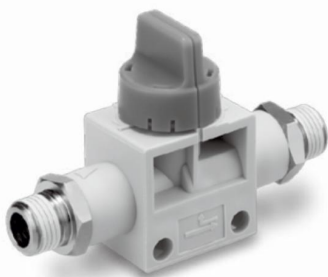
1(P): One-touch Fitting, 2(A): Male Thread



Applicable tubing O. D. (mm)	Connection thread R	Model	H	L1	L2	L3	L4	L5	L6	M1	Q	Flow rate characteristics						Weight (g)	*2 B	S (Width across flats)	Bracket mounting dimensions								
												1(P)→2(A)			2(A)→3(R)*1						Bracket assembly no.	C	D	E	F	G	J	K	
												C _{dm} (l/min)	b	C _v	C _{dm} (l/min)	b	C _v												
4	M5	BV□-04-M5	18	41	52.9	23.8	29.1	16.5	3.5	15.8	11	0.4	0.15	0.08	0.25	0.6	0.08	19	49	11	BV-B1	44.5	14.5	1	27	22	16.5	26	
	1/8	BV□-04-01S			55.4		31.6					0.7	0.15	0.14	0.25	0.6	0.08	21	51	11									
6	M5	BV□-06-M5	18	41	53.9	24.3	29.6	16.5	3.5	16.8	11	0.4	0.15	0.08	0.25	0.6	0.08	21	50	13	BV-B1	44.5	14.5	1	27	22	16.5	26	
	1/8	BV□-06-01S			56.9		32.6					1.4	0.15	0.35	0.25	0.6	0.08	23	53	13									
	1/4	BV□-06-02S			60.4		36.1					1.4	0.15	0.29	0.25	0.6	0.08	31	54	14									
	3/8	BV□-06-03S			62.4		38.1					1.4	0.15	0.29	0.25	0.6	0.08	41	56	17									
8	1/8	BV□-08-01S	18	41	62.2	26.2	36	16.5	3.5	18.7	11	1.9	0.15	0.39	0.25	0.6	0.08	31	58	17	BV-B1	44.5	14.5	1	27	22	16.5	26	
	1/4	BV□-08-02S			65.2		39					1.9	0.15	0.39	0.25	0.6	0.08	32	59										17
	3/8	BV□-08-03S			66.2		40					1.9	0.15	0.39	0.25	0.6	0.08	40	60										17
10	1/4	BV□-10-02S	22	46	73.8	30.5	43.3	21.5	4	20.8	14	3.1	0.15	0.65	0.67	0.6	0.21	49	68	19	BV-B2	49	17	1	30	25	21.5	31	
	3/8	BV□-10-03S			74.8		44.3					3.1	0.15	0.65	0.67	0.6	0.21	51											51
	1/2	BV□-10-04S			78.2		47.7					3.1	0.15	0.65	0.67	0.6	0.21	72											70
12	1/4	BV□-12-02S	22	46	76.3	31.5	44.8	21.5	4	21.8	14	3.4	0.15	0.70	0.67	0.6	0.21	63	70	22	BV-B2	49	17	1	30	25	21.5	31	
	3/8	BV□-12-03S			77.3		45.8					3.4	0.15	0.70	0.67	0.6	0.21	64	71										
	1/2	BV□-12-04S			80.2		48.7					3.4	0.15	0.70	0.67	0.6	0.21	70	72										

*1 3-port valve *2 Reference dimensions after insertion of R thread.

1(P)/2(A): Male Thread



Connection thread R	Model	H	L1	L2	L3	L4	L5	L6	Q	Flow rate characteristics						Weight (g)	*2 B	S (Width across flats)	T (Width across flats)	Bracket mounting dimensions								
										1(P)→2(A)			2(A)→3(R)*1							Bracket assembly no.	C	D	E	F	G	J	K	
										C _{dm} (l/min)	b	C _v	C _{dm} (l/min)	b	C _v													
M5	M5	BV□-M5-M5	18	41	58.2	29.1	29.1	16.5	3.5	11	0.4	0.15	0.08	0.25	0.6	0.06	23	51	11	11	BV-B1	44.5	14.5	1	27	22	16.5	26
1/8	M5	BV□-01S-M5	18	41	61.6	32.6	29	16.5	3.5	11	0.4	0.15	0.08	0.25	0.6	0.06	26	54	13	13	BV-B1	44.5	14.5	1	27	22	16.5	26
	1/8	BV□-01S-01S			65.2		32.6				1.6	0.15	0.35	0.25	0.6	0.06	30	57										
1/4	1/8	BV□-02S-01S	18	41	71.6	39	32.6	16.5	3.5	11	1.8	0.15	0.37	0.25	0.6	0.06	39	62	17	13	BV-B1	44.5	14.5	1	27	22	16.5	26
	1/4	BV□-02S-02S			78		39				1.9	0.15	0.39	0.25	0.6	0.06	47	66										
3/8	1/4	BV□-03S-02S	22	46	85.1	44.3	40.8	21.5	4	14	2.7	0.15	0.56	0.67	0.6	0.16	65	73	19	17	BV-B2	49	17	1	30	25	21.5	31
	3/8	BV□-03S-03S			88.6		44.3				3.1	0.15	0.66	0.67	0.6	0.16	72	76										
1/2	3/8	BV□-04S-03S	22	46	93	48.7	44.3	21.5	4	14	2.8	0.15	0.61	0.67	0.6	0.16	90	79	22	19	BV-B2	49	17	1	30	25	21.5	31
	1/2	BV□-04S-04S			97.4		48.7				3.4	0.15	0.71	0.67	0.6	0.16	101	81										

*1 3-port valve *2 Reference dimensions after insertion of R thread.

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