

B*all*
Valve
(B series)

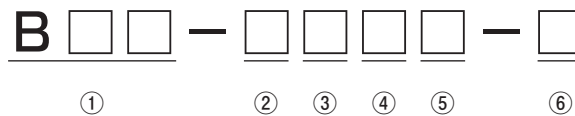
FEATURES OF BALL VALVE SERIES

Can be selected in accordance with the application pressure from vacuum to 30MPa as well as by the fluids being handled. Oil free specification is also available. Non-standard connections can also be made upon request.

Ball valve series

Valve series	Max. working pressure MPa	Working Temperature range °C	Type & size of Connection			Applicable fluid				
			BI-LOK	VTF	NPT/Rc	Vac.	Air	Gas	Wtr	Lqd
B05	4.9 @38°C	- 10 ~ 80	1/4 ~ 1/2 φ6 ~ 12		1/4 ~ 1/2	○	○	○	○	
B17	17.5 @38°C	- 10 ~ 100	1/4 ~ 1/2		1/4 ~ 1/2	○	○	○	○	
B30	30.0 @38°C	- 40 ~ 80	1/4 ~ 1/2		1/4 ~ 1/2	○	○	○	○	
BOFR	0.98 @38°C	- 10 ~ 80	1/4 ~ 3/4	1/4 ~ 3/4	1/4 ~ 1/2	○	○	○		
BAA	4.0 @38°C	- 10 ~ 100			1/4 ~ 2		○	○	○	

Ball valve part number definition



① Ball valve series (Initial symbol : B)

② Connection size (inside)

1) inch BI-Lok, VTF Connection

Symbol	4	6	8	12
Size	1/4"	3/8"	1/2"	3/4"

2) mm BI-Lok Connection

Symbol	6M	8M	10M	12M
Size	6mm	8mm	10mm	12mm

3) Screwed fittings Connection

Symbol	2	4	6	8	12	16	20	24	32
Size	1/8B	1/4B	3/8B	1/2B	3/4B	1B	1-1/4B	1-1/2B	2B

③ Connection end (inside)

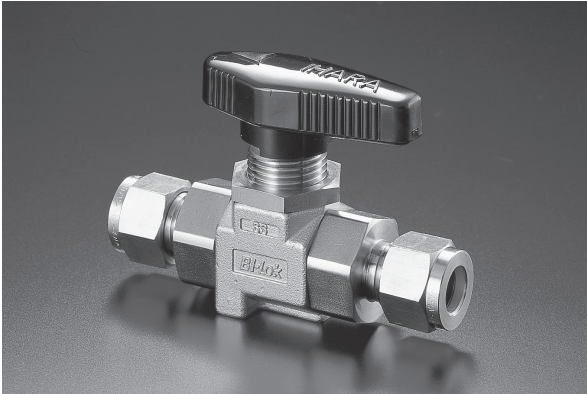
Mark	Connection end	Mark	Connection end
D	BI-Lok	NM	Male NPT
DC	BI-Lok Single ferrule	NF	Female NPT
VM	Male VTF	RM	ISO / R
VF	Female VTF	RF	ISO / Rc
OR	OFS	VO	VTF O-ring seal type

④ Connection size (outside)

⑤ Connection end (outside) Omit when identical with the IN side.

⑥ Style of body S : Straight type A : Angle type

B05 Series 4.9Mpa Panel mounted Compact Ball Valve



Features

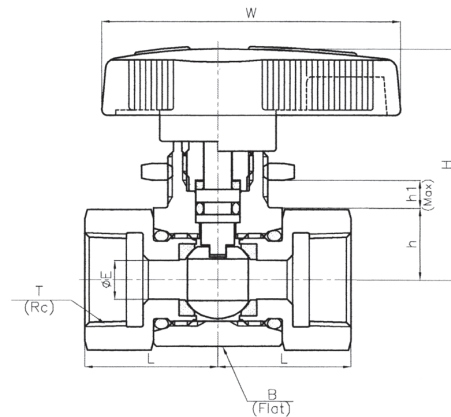
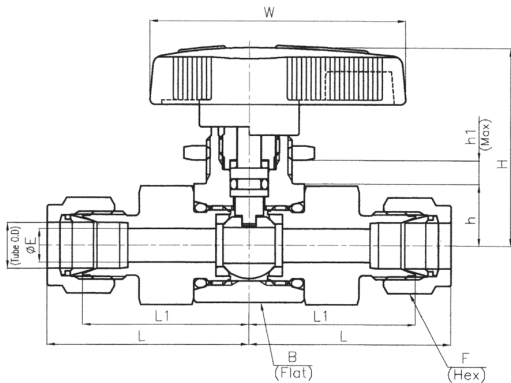
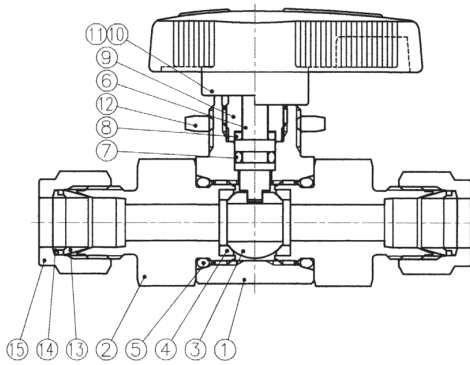
Both side screwed bonnet type construction
Compact and light weight
Handle shaped to provide superior operability
Durability enhanced with RF-PTFE packing

Specifications

Fluid : Air, Gases, Water, Vacuum
Max.Working Pressure : 4.9Mpa @ 38°C
Working Temperature range : - 10 ~ 80°C
Cv value : 0.7 (4D), 2.2 (6D), 4.2 (8D)
Lubricant : Fluoro-carbon Base

Materials

No.	Part Description	Qty	Material
1	Body	1	SCS14
2	Body cap	2	SUS316
3	Ball	1	SUS316
4	Seat packing	2	RF-PTFE
5	O-ring	2	FKM
6	Stem	1	SUS316
7	O-ring	1	Fluoro-rubber
8	Thrust washer	1	PCTFE
9	Gland	1	SUS304
10	Handle	1	Polycarbonate
11	Set screw	1	SUS304
12	Panel nut	1	SUS304
13	Front ferrule	2	SUS316
14	Back ferrule	2	SUS316
15	Nut	2	SUS316



Dimensions (BI-LOK connection)

Part No.		A		Dimensions mm							F		Panel Hole	Weight	
Straight	Angle	in	mm	E	L	L ₁	H	h	h ₁	W	B	in	mm		kg
B05-4D-S	B05-4D-A	1/4	6.35	4.8	36.4	29	36.5	10.5	5	45	19	9/16	14.28	14.8	0.20
B05-6D-S	B05-6D-A	3/8	9.53	7.1	42.5	35	41.7	13	5	54	24	11/16	17.46	18.5	0.30
B05-8D-S	B05-8D-A	1/2	12.7	10.0	48.2	38	51.5	17	5	70	30	7/8	22.22	25.8	0.50
B05-6MD-S	B05-6MD-A	—	6	4.8	36.5	29	36.5	10.5	5	45	19	—	14	14.8	0.20
B05-8MD-S	B05-8MD-A	—	8	4.8	37.5	30	36.5	10.5	5	45	19	—	17	14.8	0.20
B05-10MD-S	B05-10MD-A	—	10	7.1	42.7	34.9	41.7	13	5	54	24	—	19	18.5	0.30
B05-12MD-S	B05-12MD-A	—	12	10.0	48.2	38	51.5	17	5	70	30	—	22	25.8	0.50

Dimensions (Pipe tapered thread connection)

Part No.		T	Dimensions mm							Panel Hole	Weight
NPT Conn	Rc Conn.	NPT/Rc	E	L	H	h	h ₁	W	B		kg
B05-4NF-S	B05-4RF-S	1/4	5	23	36.5	10.5	5	45	19	14.8	0.20
B05-6NF-S	B05-6RF-S	3/8	7.1	24	41.7	13	5	54	24	18.5	0.30
B05-8NF-S	B05-8RF-S	1/2	10.0	29.5	51.5	17	5	70	30	25.8	0.50

(Note) • Dimension L for BI-Lok connection is with the nut in the finger tight position.

B17 Series

17.5MPa Panel mounted Compact Ball Valve



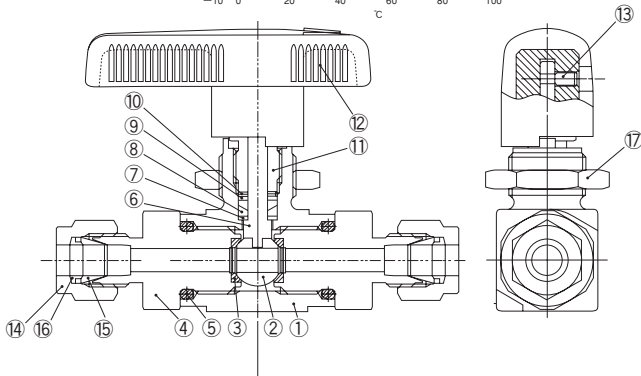
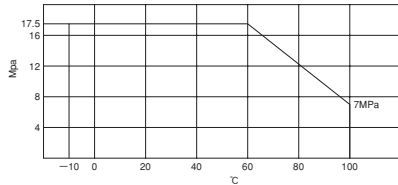
Features

Both side screwed bonnet type construction
Compact and light weight
Handle shaped to provide superior operability
Durability enhanced with PCTFE packing

Specifications

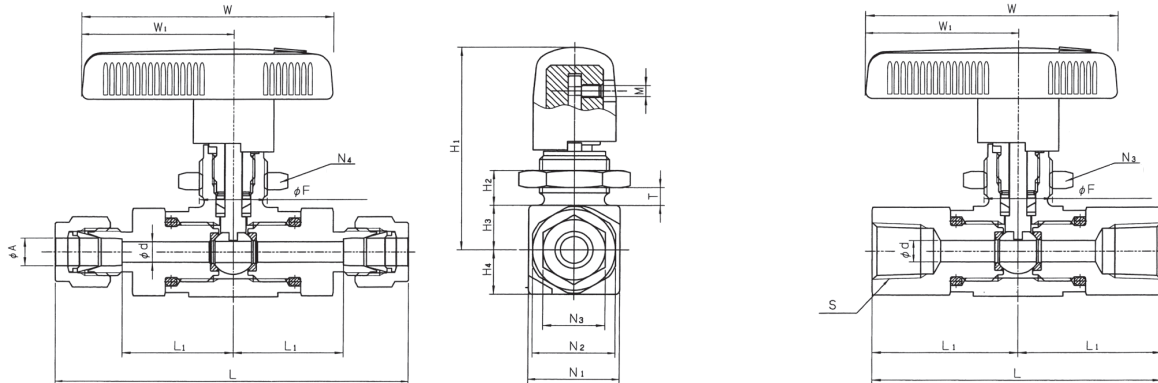
Fluid : Air, Gases, Water, Vacuum
Max.Working Pressure : 17.5Mpa @ 38°C
Working Temperature range : - 10 ~ 100°C
Cv value : 0.7 (4D), 2.2 (6D), 4.2 (8D)
Lubricant : Fluoro-carbon Base

Pressure-Temperature Rating



Materials

No.	Part Description	Qty	Material
1	Body	1	SCS14
2	Valve Ball	1	SUS316
3	Ball Seat	2	PCTFE
4	Side bonnet	2	SUS316
5	O-ring	2	FKM
6	Stem	1	SUS316
7	Packing ring	1	SUS316
8	Gland packing	1	PTFE
9	Gland washer	1	SUS316
10	Coned disc spring	2	SUS304
11	Gland nut	1	SUS304
12	Handle	1	Nylon&C3604
13	Set screw	1	SUS304
14	Nut	2	SUS316
15	Front ferrule	2	SUS316
16	Back ferrule	2	SUS316
17	Panel nut	1	SUS316



Dimensions (BI-LOK connection)

Part No.	A		Dimensions mm															Weight kg
	in	mm	d	L	L ₁	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃	N ₄	F	T	W	W ₁	
B17-4D-S	1/4	6.35	4.8	83	26.0	47	10	10.5	10.5	21	19.05	22.22	16.5	6	59	35.5	M3x0.5	0.20
B17-6D-S	3/8	9.53	7.1	90	28.3	52	12	12	12	24	20.65	17.46	23.8	8	64	38	M4x0.7	0.27
B17-8D-S	1/2	12.7	10.4	102	28.0	60	14	15	15	30	25.4	22.22	30.16	9.5	102	63	M5x0.8	0.47

Dimensions (Pipe tapered thread connection)

Part No.	T		Dimensions mm															Weight kg
	NPT Conn	RC Conn.	NPT/RC	d	L	L ₁	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃	F	T	W	W ₁	
B17-4NF-S	B17-4RF-S	1/4	4.8	67.8	33.9	47	10	10.5	10.5	21	19.05	22.22	16.5	6	59	35.5	M3x0.5	0.20
B17-6NF-S	B17-6RF-S	3/8	7.1	70.8	35.4	52	12	12	12	24	22.22	23.8	18.5	8	64	38	M4x0.7	0.27
B17-8NF-S	B17-8RF-S	1/2	10.4	84.8	42.4	60	14	15	15	30	27	30.16	24.5	9.5	102	63	M5x0.8	0.46

(Note) • Dimension L for BI-Lok connection is with the nut in the finger tight position.

BOFR Series

0.98Mpa Panel mounted Compact Ball Valve



Features

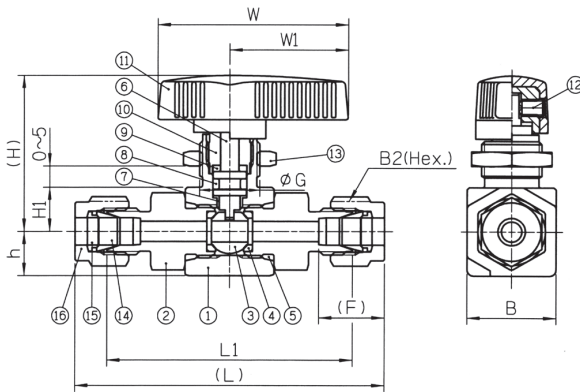
Both side screwed bonnet type connection
Fluid contacting surface is oil free
Compact and light weight
Handle shape to provide superior operability
Durability enhanced with RF-PTFE packing

Specifications

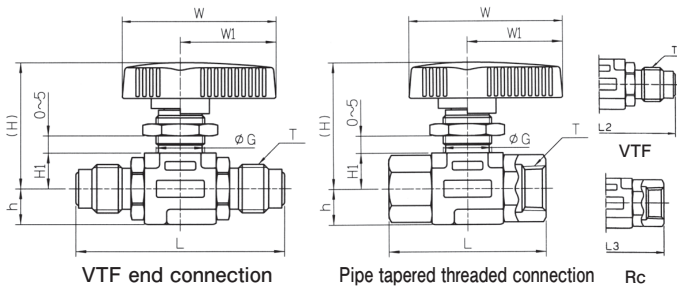
Fluid : Air, Gases, Water
Max.Working Pressure : 0.98MPa @ 38°C
Working Temperature range : - 10 ~ 80°C
Cv value : 0.7 (4D), 2.2 (6D), 4.2 (8D)
Lubricant : Fluoro-carbon Base

Materials

No.	Part Description	Qty	Material
1	Body	1	SCS 14
2	Body cap	2	SUS 316
3	Ball	1	SUS 316
4	Seat packing	2	RF-PTFE
5	O-ring	2	Fluoro-rubber
6	Stem	1	SUS 316
7	Gland washer	1	PTFE
8	O-ring	1	Fluoro-rubber
9	Thrust washer	1	PCTFE
10	Gland	1	SUS 304
11	Handle	1	Nylon&C3604
12	Set screw	1	SUS 304
13	Panel nut	1	SUS 304
14	Front ferrule	2	SUS 316
15	Back ferrule	2	SUS 316
16	Nut	2	SUS 316



BI-LOK end connection



VTF end connection

Pipe tapered threaded connection Rc

Bottom Mounting

SIZE	M	DEP.	D	D ₁
1/4	6M,8M	M3x0.5	5	15
3/8	10M	M3x0.5	5	18
1/2	12M	M3x0.5	5	24
3/4		M4x0.7	5	32

Dimensions

Conection	Part No.	A	d	L	L ₁	L ₂	L ₃	H	H ₁	h	W	W ₁	F	B	B ₂	D	D ₁	G	C	T (inch)
BI-Lok	BOFR-4D-S	1/4	4.8	73	58	—	—	37	10.5	10.5	45	28	15.4	21	14.28	15	15	14.5	5	—
	BOFR-6D-S	3/8	7.1	85	70	—	—	42.2	13	13	54	33	17	24	17.46	18	18	18.5	5	—
	BOFR-8D-S	1/2	10	97	76	—	—	52	17	15	70	44	23	30	22.22	24	22	25.5	5	—
	BOFR-12D-S	3/4	12.5	130	108.6	—	—	68	19	20	116	80	24.6	38	28.58	32	16	36.5	5	—
M BI-Lok	BOFR-6MD-S	6mm	4.8	73	58	—	—	37	10.5	10.5	45	28	15.4	21	14	15	15	14.5	5	—
	BOFR-8MD-S	8mm	4.8	75	60	—	—	37	10.5	10.5	45	28	16.3	21	17	15	15	14.5	5	—
	BOFR-10MD-S	10mm	7.1	86	69.8	—	—	42.2	13	13	54	33	17.3	24	19	18	18	18.5	5	—
	BOFR-12MD-S	12mm	10	97	76	—	—	52	17	15	70	44	22.9	30	22	24	22	25.5	5	—
VTF	BOFR-4VM-S	1/4	4.8	—	—	61	—	37	10.5	10.5	45	28	—	21	—	15	15	14.5	5	9/16-18
	BOFR-8VM-S	3/8&1/2	10	—	—	76	—	52	17	15	70	44	—	30	—	24	22	25.5	5	7/8-14
	BOFR-12VM-S	3/4	12.5	—	—	123.6	—	68	19	20	116	80	—	38	—	32	16	36.5	5	11/4-18
Rc	BOFR-4RF-S	1/4	4.8	—	—	—	—	46	37	10.5	45	28	—	21	—	15	15	14.5	5	—
	BOFR-6RF-S	3/8	7.1	—	—	—	—	48	42.2	13	54	33	—	24	—	18	18	18.5	5	—
	BOFR-8RF-S	1/2	10	—	—	—	—	59	52	17	70	44	—	30	—	24	22	25.5	5	—

(Note) · Dimension L for BI-Lok connection is with the nut in the finger tight position.