

BALL CHECK VALVE

Features

- Plastic valve with high resistance to both internal and external corrosion caused by sea water, various ACIDS and ALKALIS and other chemicals.
- Flow passage structure with low fluid resistance.
- Small parts quantity and a single connection reduce external stress effects, allowing high finishing accuracy.
- Lightweight and small size allow installation in narrow spaces and facilitate disassembled cleaning.
- PP and PVDF socket types are weld type.
- PVDF socket JIS standard is not available.
- PP and PVDF flanged types are not available.



Basic specifications

- Valve Type : Ball Check Valve
- Size : 15 mm — 100 mm (1/2 inch — 4 inch)
- Body Material : U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)
C-PVC (Conforming to ASTM D1784 Cell Classification 23567-A)
PP (Conforming to ASTM D4101 Cell Classification PP0210B67272)
PVDF (Conforming to ASTM D3222 Cell Classification Type II)
- Seal Material / Seat : EPDM, FKM etc.
- Connection / Flanged : JIS B2220 5K, JIS B2220 10K, ANSI B16.5 CLASS150
Socket : JIS, DIN, ASTM D2466 SCH40
Threaded : Rc, Rp, NPT
Spigot : DIN

Body Material	FLUID TEMPERATURE °C {°F}	Maximum working pressure (Normal temperature) MPa {psi}		Connection method			
		15mm - 50mm	80mm - 100mm	Flanged	Socket	Threaded	Spigot
U-PVC	0 ~ 50 { 30~120 }	1.0 { 150 }	0.7 { 100 }	○	○	○	○
C-PVC	0 ~ 90 { 30~195 }	1.0 { 150 }	0.7 { 100 }	○	○	○	-
PP	-20 ~ 80 { -5~175 }	1.0 { 150 }	0.5 { 70 }	-	○	○	○
PVDF	-20 ~ 100 { -5~210 }	1.0 { 150 }	0.7 { 100 }	-	○	○	○

Note:: The maximum working pressure is the value including the water hammer pressure.
Be careful that the maximum working pressure is not exceeded during use.

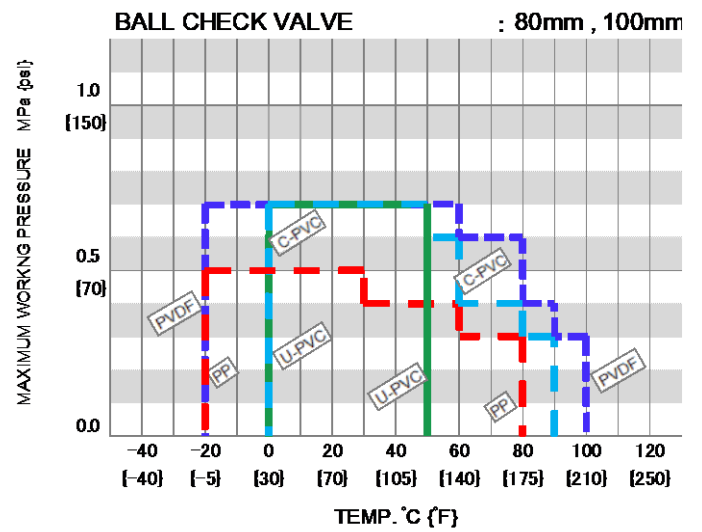
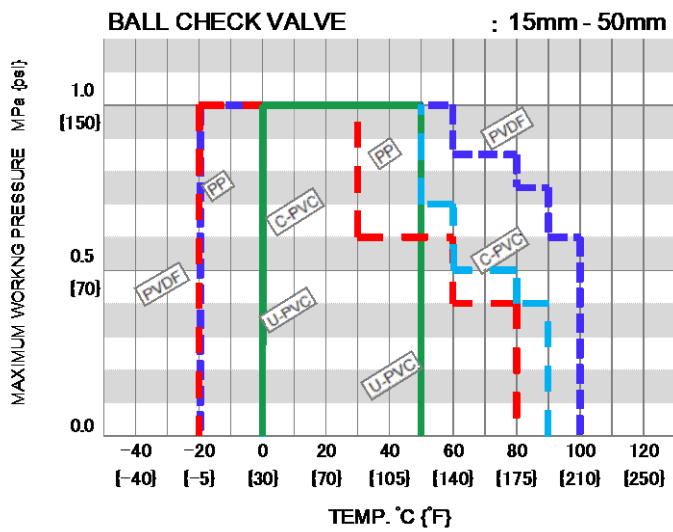
- * Concerning the allowable pressure for each temperature and material, see the technical documents at the next page of this sheet.
- * For flanged type 15 - 50 mm with the body material of PP or PVDF, true union ball check valves can be used.

Certificate / Approval / Directive

PED, NSF/ANSI61

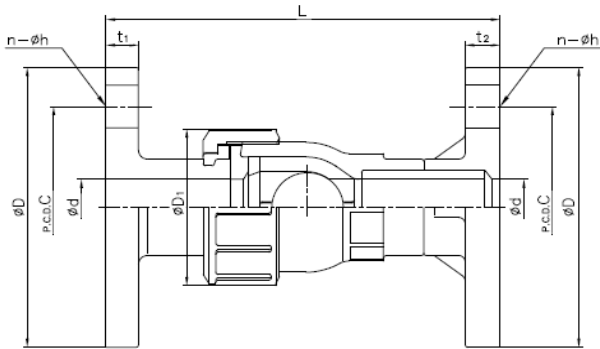
“For details of applicable products, please consult us.”

Working pressure vs. Temperature

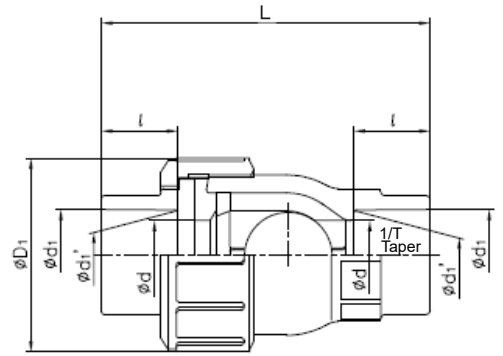


Product dimension

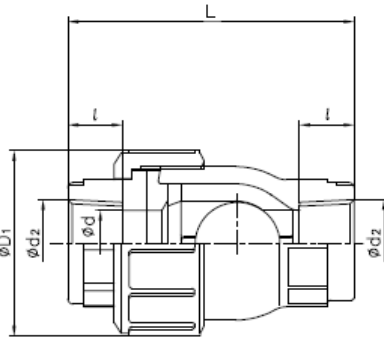
FLANGED



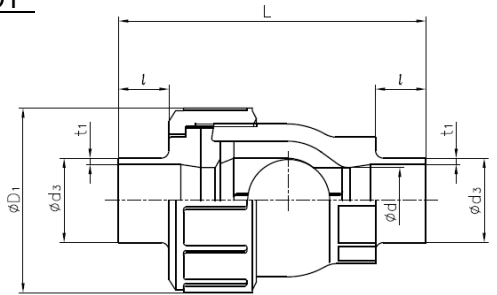
SOCKET



THREADED



SPIGOT



■ JIS (Unit: mm)

mm	d	D ₁	FLANGED												SOCKET						THREADED							
			JIS 5K						JIS 10K						U-PVC, C-PVC			PP			JIS B 0203		L					
			D	C	n	h	t ₂	t ₂	D	C	n	h	t ₂	t ₂	L	t ₁	d ₁	ℓ	1/T	L	d ₁	d ₁ '	ℓ	L	d ₂	ℓ	U-PVC C-PVC	PVDF PP
15	15	48	80	60	4	12	9	9	95	70	4	15	14	14	131	12	22.11	20	1/34	89	21.2	20.2	22	93	Rc1/2	15	80	78
20	20	60	85	65	4	12	10	10	100	75	4	15	15	14	156	14	26.13	24	1/34	106	26.2	25.2	23	104	Rc3/4	17	95	92
25	25	70	95	75	4	12	10	10	125	90	4	19	15	16	169	14	32.16	27	1/34	117	33.0	32.0	25	113	Rc 1	20	105	102
40	40	96	120	95	4	15	12	12	140	105	4	19	16	16	214	16	48.21	37	1/37	162	47.0	46.0	28	144	Rc1 1/2	25	141	137
50	51	106	130	105	4	15	14	14	155	120	4	19	20	20	244	16	60.25	42	1/37	189	59.0	58.0	28	162	Rc 2	28	164	160
80	78	152	180	145	4	19	14	-	185	150	8	19	22	22	310	18	89.60	64	1/49	277	88.0	86.0	35	219	Rc 3	35	222	216
100	100	210	200	165	8	19	16	-	210	175	8	19	22	22	397	18	114.70	84	1/56	376	113.0	111.0	45	298	Rc 4	45	308	301

■ DIN (Unit: mm)

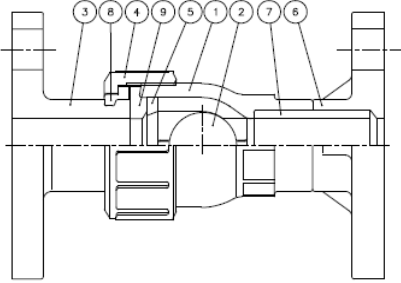
mm	d	D ₁	SOCKET							THREADED				SPIGOT				
			U-PVC C-PVC			PP PVDF				d ₂	ℓ	L		d ₃	t ₁		ℓ	L
			d ₁	ℓ	L	d ₁	d ₁ '	ℓ	L			U-PVC C-PVC	PVDF PP		PP	PVDF		
15	15	48	20	16	81	19.50	19.30	14	78	Rp 1/2	15	80	78	20	2.5	1.9	19	100
20	20	60	25	19	96	24.50	24.30	16	90	Rp 1/4	17	95	92	25	2.7	1.9	19	110
25	25	70	32	22	107	31.50	31.30	18	99	Rp 1	20	105	102	32	3.0	2.4	19	116
40	40	96	50	31	150	49.45	49.20	23	135	Rp 1 1/2	25	141	137	50	4.6	2.9	19	142
50	51	106	63	38	181	62.50	62.10	27	160	Rp 2	28	164	160	63	5.8	3.0	19	157
80	78	152	90	51	248	89.20	88.85	35	217	Rp 3	35	222	216	90	8.2	4.3	38	256
100	100	210	110	61	330	109.05	108.65	41	291	Rp 4	45	308	301	110	10.0	5.3	44.5	333

■ ANSI (Unit: inch)

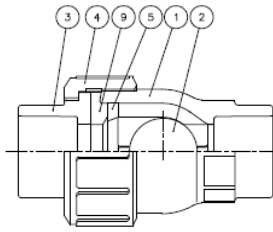
inch	mm	d	D ₁	FLANGED							SOCKET								THREADED			
				ANSI CLASS 150				L	t ₁	t ₂	U-PVC C-PVC				PVDF PP				ANSI/ASME B 1.20.1		L	
				D	C	n	h				U-PVC	ASTM SCH40			L	d ₁	d ₁ '	ℓ	L	d ₂	ℓ	U-PVC C-PVC
				d ₁	d ₁ '	ℓ	L	d ₁	d ₁ '	ℓ	L	d ₂	ℓ	U-PVC C-PVC		PVDF PP						
1/2	15	0.59	1.89	3.50	2.38	4	0.62	5.16	0.47	0.55	0.848	0.836	0.688	3.35	0.825	-	0.874	3.82	1/2 - 14NPT	0.59	3.15	3.07
3/4	20	0.79	2.36	3.88	2.75	4	0.62	6.14	0.55	0.59	1.058	1.046	0.719	3.74	1.030	-	1.000	4.41	3/4 - 14NPT	0.67	3.74	3.62
1	25	0.98	2.76	4.25	3.12	4	0.62	6.65	0.55	0.59	1.325	1.310	0.875	4.33	1.300	-	1.126	4.88	1 - 11 1/2NPT	0.79	4.13	4.02
1 1/2	40	1.57	3.78	5.00	3.88	4	0.62	8.43	0.63	0.63	1.912	1.894	1.094	5.71	1.890	-	1.374	5.79	1 1/2 - 11 1/2NPT	0.98	5.55	5.39
2	50	2.01	4.17	6.00	4.75	4	0.75	9.61	0.63	0.79	2.387	2.369	1.156	6.50	2.360	-	1.500	6.89	2 - 11 1/2NPT	1.10	6.46	6.30
3	80	3.07	5.98	7.50	6.00	4	0.75	12.20	0.71	0.87	3.516	3.492	1.875	9.57	3.480	-	1.874	9.57	3 - 8NPT	1.38	8.74	8.50
4	100	3.94	8.27	9.00	7.50	8	0.75	15.63	0.71	0.87	4.518	4.491	2.000	12.20	4.480	-	2.252	12.68	4 - 8NPT	1.77	12.13	11.85

Parts list

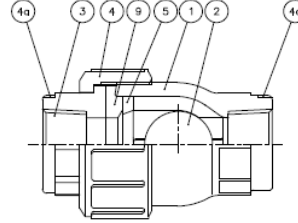
FLANGED



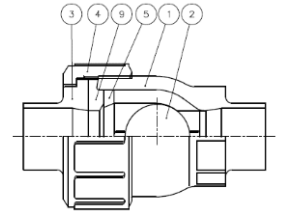
SOCKET



THREADED



SPIGOT



PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL
1 BODY	1	FLANGED	8 STOP RING (B) ⁽²⁾	1	PVDF
2 BALL	1	U-PVC, C-PVC	9 SEAT	1	EPDM, FKM, etc
3 END CONNECTOR	1	SOCKET	4a RING ⁽¹⁾	2	STAINLESS STEEL
4 UNION NUT	1	U-PVC, C-PVC, PP, PVDF			
5 STOP RING (A)	1	THREADED			
6 TS FLANGE ⁽²⁾	1	U-PVC, C-PVC, PP, PVDF			
7 PIPE ⁽²⁾	1	SPIGOT			
		U-PVC, PP, PVDF			

(1) Used for 15 to 25 mm for C-PVC threaded type. (2) Used for flanged type.

Cv value for each opening degree

FULL-OPEN Cv VALUE

mm	15	20	25	40	50	80	100
inch	1/2	3/4	1	1 1/2	2	3	4
FULL-OPEN Cv VALUE	6.5	17	25	86	130	280	500

The values shown are reference values, not guaranteed values.

DATASHEET

Product weight

BALL CHECK VALVE

UNIT : kg

mm	inch	FLANGED		SOCKET				THREADED			
		U-PVC	PP	U-PVC	C-PVC	PP	PVDF	U-PVC	C-PVC	PP	PVDF
15	1/2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
20	3/4	0.4	0.4	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2
25	1	0.6	0.7	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.3
40	1 1/2	1.1	1.1	0.6	0.6	0.3	0.7	0.6	0.7	0.4	0.7
50	2	1.8	1.6	0.8	0.9	0.5	1.1	0.8	0.9	0.6	1.0
80	3	4.0	4.3	2.4	2.6	1.5	2.8	2.2	2.4	1.5	2.9
100	4	7.2	11.0	5.9	6.1	3.0	6.5	5.8	6.2	3.7	7.0

Product model code list

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE
V	BC	ZZ	*	*	*	*	***
: V MANUAL VALVE	: BC BALL CHECK	: ZZ NONE	: U U-PVC C C-PVC P PP F PVDF	: E EPDM V FKM	: S SOCKET N THREADED F FLANGED P SPIGOT	: J JIS 1 10K 5 5K D DIN A ANSI	: 015 15mm 5 100 100mm

Installation, Operation and Maintenance Manual

"For details of Installation, Operation and Maintenance, please contact our nearest distribution agent or sales office.