

# BALL VALVE TYPE 21 · 21α 15mm - 100mm(1/2inch - 4inch)



## NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.  
: BALL VALVE TYPE 21 · 21 α  
(Material:PVC+EPDM,FKM)  
\*Certified products bear an NSF Certification Mark.

## Easy to Be Automated (No Modification Required)

Featuring a new integral molded top flange. The BALL VALVE TYPE 21 can easily be converted from the manual to automatic without replacing the body.

## FEATURES

### Simple Installation on Panel Piping

New bottom stand with an insert hole allows the valve to be secured on bench or panel only by inserting a metallic insert.

### Double-O-ring

The stem uses a double-O-ring, sealing arrangement improving durability sealing performance. The upper O-ring groove is deeper than the lower O-ring groove. Because of this design, the stem would break first at the upper O-ring groove, acting as a back up seal.

### Multi Functional Handle

Removing the handle and placing the raised lugs into the carrier allow for easy disassembly of the valve.

\*The handle has other colors.  
(blue, white, yellow)(Option)



### Locking Device (Option)

The handle lock can be done by full-open (close)



Product Type is divided by the size and materials into the following types.

MATERIAL	U-PVC	C-PVC	PP	PVDF
Nominal Size				
15mm~50mm	21α型		21型	
65mm~100mm	21型			

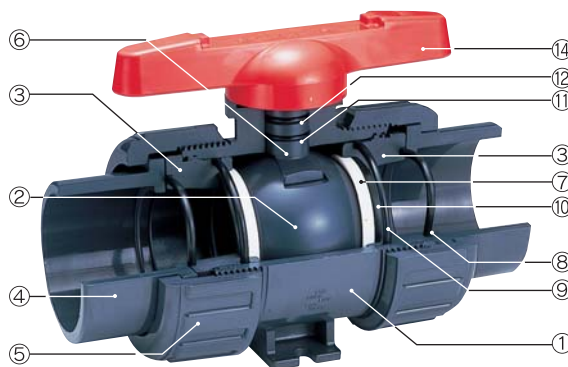
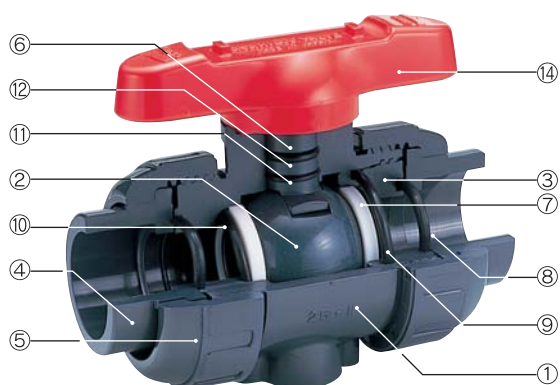
## MATERIAL AND WORKING TEMPERATURE

Body Material	Working Temperature °C (°F)	Max.Working Pressure(at R.T.) MPa{kgf/cm²}[PSI]	End Connectors			
			Socket End	Threaded End	Flanged End	Spigot End
Unplasticized Polyvinyl Chloride(PVC)	0 - 50( 30 - 120)	1.6{16.3}[230]	○	○	○	—
Chlorinated Polyvinyl Chloride(C-PVC)	0 - 90( 30 - 195)	1.6{16.3}[230]	○	○	○	—
Polypropylene(PP)	-20 - 80(-5 - 175)	1.0{10.2}[150]	○	○	○	○
Polyvinylidene Fluoride(PVDF)	-20 - 100(-5 - 210)	1.6{16.3}[230]	○	○	○	○

※ PP and PVDF ball valves of the Socket End type and PVDF ball valves of the Spigot End type are welded valves.

Notes : 1. There is a dead space in a ball valve. Volatile liquids, such as a hydrogen peroxide(H<sub>2</sub>O<sub>2</sub>)and Sodium hypochlorite (NaClO) may vaporize in the dead space, thus causing an abnormal pressure increase in the valve.

(Important: Gas is compressible. Thus if pressure rises abnormally, the valve can burst ejecting dangerous fragments.)



## PARTS & MATERIALS

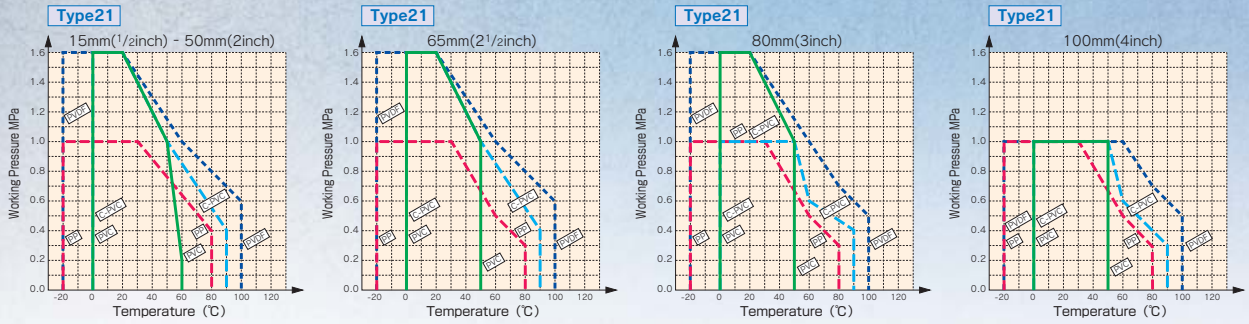
### ● 15mm(1/2inch) - 50mm(2inch)

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, C-PVC, PP, PVDF	⑨	O-RING(B)	1	EPDM, FKM, etc
②	BALL	1	PVC, C-PVC, PP, PVDF	⑩	O-RING(C)	2	EPDM, FKM, etc
③	CARRIER	1	PVC, C-PVC, PP, PVDF	⑪	O-RING(D)	1	EPDM, FKM, etc
④	END CONNECTOR	2	PVC, C-PVC, PP, PVDF	⑫	O-RING(E)	1	EPDM, FKM, etc
⑤	UNION NUT	2	PVC, C-PVC, PP, PVDF	⑬	STOP RING	2	PVDF(used for flanged End)
⑥	STEM	1	PVC, C-PVC, PP, PVDF	⑭	HANDLE	1	ABS
⑦	SEAT	2	PTFE				
⑧	O-RING(A)	2	EPDM, FKM, etc				

### ● 65mm(2 1/2inch) - 100mm(4inch)

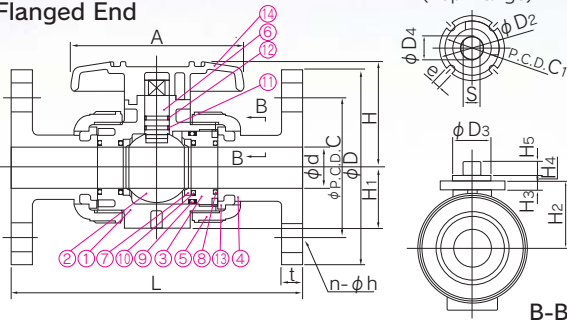
No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, C-PVC, PP, PVDF	⑨	O-RING(B)	2	EPDM, FKM, etc
②	BALL	1	PVC, C-PVC, PP, PVDF	⑩	CUSHION	2	EPDM, FKM, etc
③	CARRIER	2	PVC, C-PVC, PP, PVDF	⑪	O-RING(D)	1	EPDM, FKM, etc
④	END CONNECTOR	2	PVC, C-PVC, PP, PVDF	⑫	O-RING(E)	1	EPDM, FKM, etc
⑤	UNION NUT	2	PVC, C-PVC, PP, PVDF	⑬	STOP RING	2	PVDF(used for flanged End)
⑥	STEM	1	PVC, C-PVC, PP, PVDF	⑭	HANDLE	1	ABS
⑦	SEAT	2	PTFE	⑮	SCREW	1	STAINLESS STEEL(304)
⑧	O-RING(A)	2	EPDM, FKM, etc				

WORKING PRESSURE VS. TEMPERATURE

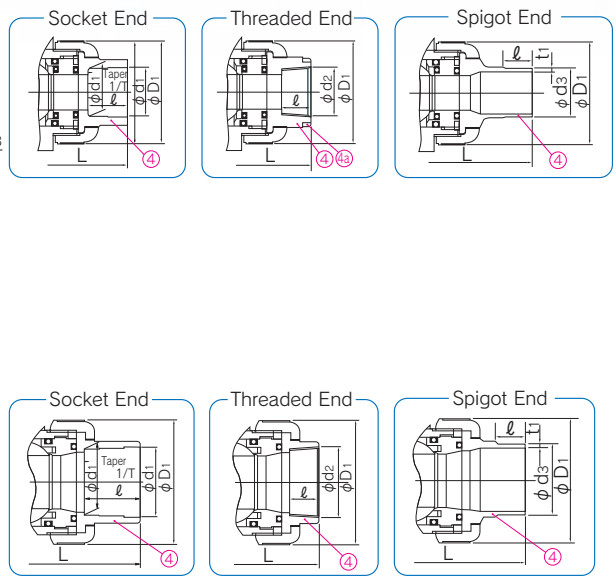
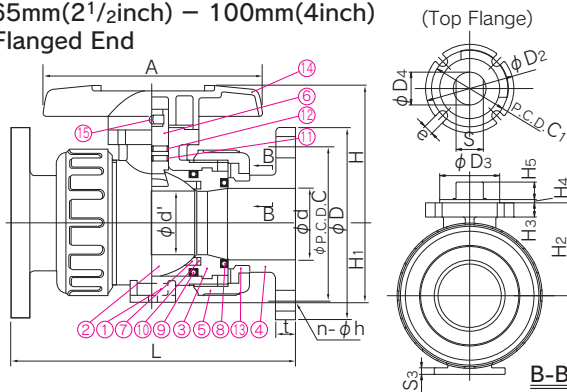


DIMENSION

● 15mm(1/2inch) – 50mm(2inch) Flanged End



● 65mm(2 1/2inch) – 100mm(4inch) Flanged End



DIMENSIONS TABLE

JIS		Unit:mm																	
Nominal Size	d	d'	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	C <sub>1</sub>	H	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	H <sub>4</sub>	H <sub>5</sub>	A	S	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	e
15 1/2	15	—	48	42	25	13.5	36	51.5	29	30	6	3	8	92	10.5	19	7.3	11	5.5
20 3/4	20	—	60	42	25	15	36	59.5	35	36.5	6	3	10	100	11	19	7.3	11	5.5
25 1	25	—	70	42	25	15	36	68	39	43.5	6	3	10	110	11	19	7.3	11	5.5
32 1 1/4	32	—	82	48	30	19	42	80.5	47	52.5	8	3	10	121	15	30	9	15	5.5
40 1 1/2	40	—	100	57	35	23	50	89	55	61	10	3	12	131	18	30	9	15	6.5
50 2	51	—	126	57	35	23	50	102.5	66	72.5	10	3	12	159	18	30	9	15	6.5
65 2 1/2	65	58	133	81	55	30	70	126	72	85	13	3	16	200	24	48	9	6	9
80 3	78	68.5	152	81	55	30	70	140	85	94	13	3	19	240	24	55	11	7	9
100 4	100	90	210	116	70	40	102	178	110	126	16	3	23	300	34	65	11	8	11

Nominal Size	Flanged End												Socket End								Threaded End					
	JIS 5K				JIS 10K				L				PVC, C-PVC				PP				L					
	D	C	n	h	D	C	n	h	PVC C-PVC	PP	PVDF	t	d <sub>1</sub>	ℓ	1/T	L	d <sub>1</sub>	d <sub>1</sub> '	ℓ	L	d <sub>2</sub>	ℓ	PVC C-PVC	PP	PVDF	
15 1/2	80	60	4	12	95	70	4	15	143	143	143	12	22.11	20	1/34	108	21.2	20.2	20	108	Rc1 1/2	15	102	100	100	
20 3/4	85	65	4	12	100	75	4	15	172	172	172	14	26.13	24	1/34	128	26.2	25.2	23	126	Rc3/4	17	120	119	119	
25 1	95	75	4	12	125	90	4	19	187	187	187	14	32.16	27	1/34	145	33.0	32.0	25	141	Rc1	20	131	130	130	
32 1 1/4	115	90	4	15	135	100	4	19	190	190	190	16	38.19	30	1/34	162	—	—	—	—	Rc1 1/4	22	150	146	146	
40 1 1/2	120	95	4	15	140	105	4	19	212	212	212	16	48.21	37	1/37	189	47.0	46.0	28	171	Rc1 1/2	25	163	160	160	
50 2	130	105	4	15	155	120	4	19	234	234	234	16	60.25	42	1/37	220	59.0	58.0	28	192	Rc2	28	197	194	194	
65 2 1/2	155	130	4	15	175	140	4	19	261	257	256	18	76.60	61	1/48	273	75.0	73.0	35	219	Rc2 1/2	32	215	213	212	
80 3	180	145	4	19	185	150	8	19	306	305	302	18	89.60	64	1/49	316	88.0	86.0	35	257	Rc3	35	265	264	261	
100 4	200	165	8	19	210	175	8	19	374	374	369	18	114.70	84	1/56	419	113.0	111.0	45	341	Rc4	45	362	362	357	

