



ASAHI AV

VALVE AND PIPING SYSTEMS

2008





We Meet a Variety of Users' Needs, Using Novel Ideas and Advanced Technology

Our plastic piping materials, such as valve, pipe, socket, tee, and joint, are popular under the brand name of "ASAHI AV". We have developed these products which offer various advantages, through many years of experience and a wealth of know-how.

Users rely entirely on ASAHI AV products which feature competitive cost reliability and high quality such as resistance to corrosion, chemicals, abrasion resistance, temp, and UV resistance.

ASAHI AV products find use in the fields of chemicals; steel making; food; marine development; environmental preservation; construction; piping for hot springs, water supply and sewage and agricultural application; semiconductors; biochemistry; pharmaceuticals, mining, etc.

We have established a sales service system throughout the world.

Also, we service a number of orders from foreign users and provide a variety services for them. To meet the need of the industry, which becomes increasingly advanced and diversified, Asahi Organic Chemicals Industry offers a full line of highly safe products. We hope to serve you to your satisfaction.

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Abbreviations for Major Materials Used For Asahi AV Products

Symbol	Description
PVC	"PVC" is an abbreviation for "polyvinyl chloride."
C-PVC	The first letter "C" stands for "chlorinated." "C-PVC" refers to "chlorinated polyvinyl chloride," or heat-resistant polyvinyl chloride.
HI-PVC	The first lettering "HI" means "high impact." "HI-PVC" refers to "high impact resist polyvinyl chloride."
PP	"PP" is an abbreviation for "polypropylene."
PVDF	"PVDF" is an abbreviation for "polyvinylidene fluoride."
FRP	"FRP" is an abbreviation for "fiber reinforced plastics."
ABS	"ABS" is an abbreviation for "acrylonitrile butadiene styrene."
PPS	"PPS" is an abbreviation for "polyphenylenesulfide."
PEEK	"PEEK" is an abbreviation for "polyether ether ketone."
PTFE	"PTFE" is an abbreviation for "poly tetra fluoro ethylene."
PDCPD	"PDCPD" is an abbreviation for "polydicyclo pentadiene."
UHMWPE	"UHMWPE" is an abbreviation for "ultra high molecular weight polyethylene."
EPDM	"EPDM" is an abbreviation for "ethylene propylene diene rubber."
FKM	"FKM" is an abbreviation for "fluorocarbon rubber."
Viflon F,C (FKM-F, FKM-C)	"Viflon" is Trade Mark of ASAHI ORGANIC CHEMICALS INDUSTRY CO., LTD. of the Terpolymerization Fluorocarbon Elastomers.
SBR	"SBR" is an abbreviation for "styrene butadiene rubber."
NBR	"NBR" is an abbreviation for "acrylonitrile butadiene rubber."
IIR	"IIR" is an abbreviation for "isobutylene isoprene rubber."
CSM	"CSM" is an abbreviation for "chlorosulphonated polyethylene."
PPG	"PPG" is an abbreviation for "Glass Fiber Reinforced Polypropylene."
PC	"PC" is an abbreviation for "Polypropylene."
HP-PVC	The first letter "HP" means "High Purity" "HP-PVC" refers to "high purity polyvinyl chloride."

ASAHI VALVE AND PIPING SYSTEMS

ASAHI AV VALVES

The specifications in this brochure are subject to change without prior notice due to improvements and modifications.

ASAHI AV VALVES

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Asahi AV Products

Make Your Systems More Sophisticated.



DIAPHRAGM VALVE
TYPE14
(Page 8 • 9)



TRUE UNION
DIAPHRAGM VALVE TYPE14
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DIAPHRAGM VALVE
TYPE15
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DIAPHRAGM VALVE
TYPE72
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BUTTERFLY VALVE
TYPE57
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BUTTERFLY VALVE
TYPE56
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BUTTERFLY VALVE
TYPE75
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BUTTERFLY VALVE
TYPE57L(LUG STYLE)
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BALL CHECK AND
BALL FOOT VALVE
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STOP VALVE
(GLOVE VALVE)
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GAUGE VALVE
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GATE VALVE (TYPE-C)
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NEEDLE VALVE
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Y-SEDIMENT STRAINER
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AIR RELEASE VALVE
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To meet your specific requirements, Asahi AV Valves are made of wide variety of materials and are available in various types and sizes.

You are surely making the best choice for your systems when selecting Asahi AV products.



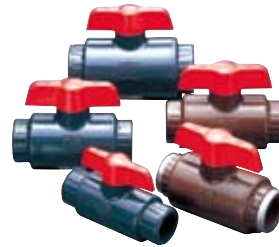
BALL VALVE TYPE21

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3-WAY BALL VALVE
TYPE23

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COMPACT BALL VALVE

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LAB COCK

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BUTTERFLY VALVE
TYPE55

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PDCPD BUTTERFLY VALVE

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ROTARY DAMPER

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SWING CHECK VALVE

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AUTOMATIC WATER
FEEDING VALVE

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ROTARY ANGLE VALVE

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ALFALFA VALVE®
TYPE82

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CONSTANT FLOW VALVE

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Range of Nominal Size and Materials

Type			DIAPHRAGM VALVE TYPE 14				TRUE UNION DIAPHRAGM VALVE TYPE 14								
Body Materials			PVC, C-PVC, PP, PVDF				PVC		C-PVC		PP		PVDF		
End Connectors			Flanged				Threaded	Socket	Threaded	Socket	Threaded	Socket (welded)	Threaded	Socket (welded)*	Spigot*
Nominal Size	mm	inch													
	15	1/2	○	○	○	○	○	○	○	○	○	○	○	○	○
	20	3/4	○	○	○	○	○	○	○	○	○	○	○	○	○
	25	1	○	○	○	○	○	○	○	○	○	○	○	○	○
	32	1 1/4	○	○	○	○	○	○	○	○	○	*○	○	○	○
	40	1 1/2	○	○	○	○	○	○	○	○	○	○	○	○	○
	50	2	○	○	○	○	○	○	○	○	○	○	○	○	○
	65	2 1/2	○	-	-	-	-	-	-	-	-	-	-	-	-
	80	3	○	-	-	-	-	-	-	-	-	-	-	-	-
100	4	○	-	-	-	-	-	-	-	-	-	-	-	-	
Page			8 - 9				10 - 11								

Type			DIAPHRAGM VALVE TYPE 15		
Body Materials			PVC, PP, PVDF		
End Connectors			Flanged		
Nominal Size	mm	inch			
	125	5	○		
	150	6	○		
Page			12 - 13		

Type			DIAPHRAGM VALVE TYPE 72		
Body Materials			PVC, PP, PVDF		
End Connectors			Flanged		
Nominal Size	mm	inch			
	200	8	○		
	250	10	○		
Page			14 - 15		

Type			BALL VALVE TYPE 21												
Body Materials			PVC			C-PVC			PP			PVDF			
End Connectors			Flanged	Threaded	Socket	Flanged	Threaded	Socket	Flanged	Threaded	Socket (welded)	Flanged	Threaded	Socket (welded)*	Spigot*
Nominal Size	mm	inch													
	15	1/2	○	○	○	○	○	○	○	○	○	○	○	○	○
	20	3/4	○	○	○	○	○	○	○	○	○	○	○	○	○
	25	1	○	○	○	○	○	○	○	○	○	○	○	○	○
	32	1 1/4	○	○	○	○	○	○	○	○	*○	○	○	○	○
	40	1 1/2	○	○	○	○	○	○	○	○	○	○	○	○	○
	50	2	○	○	○	○	○	○	○	○	○	○	○	○	○
	65	2 1/2	○	○	○	○	○	○	○	○	○	○	○	○	○
	80	3	○	○	○	○	○	○	○	○	○	○	○	○	○
100	4	○	○	○	○	○	○	○	○	○	○	○	○	○	
Page			17 - 19												

Type		LAB COCK	
Body Materials		PVC	
End Connectors		Male Thread, Female Thread, Hose	
Nominal Size		Male Thread 1/4 1/2 Female Thread 1/4 3/8	
Page		23 - 24	

Type			3-WAY BALL VALVE TYPE 23										COMPACT BALL VALVE				
Body Materials			PVC			C-PVC			PP		PVDF			PVC		C-PVC	
End Connectors			Flanged	Threaded	Socket	Flanged	Threaded	Socket	Threaded	Socket (welded)	Flanged	Threaded	Socket (welded)*	Threaded	Socket	Threaded	Socket
Nominal Size	mm	inch															
	13	3/8	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○
	15	1/2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	20	3/4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	25	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	32	1 1/4	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○
	40	1 1/2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	50	2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	65	2 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
100	4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Page			20 - 21										22				

Type			BUTTERFLY VALVE TYPE 57			BUTTERFLY VALVE TYPE 56		BUTTERFLY VALVE TYPE 75		BUTTERFLY VALVE TYPE 57L (Lug Style)		ROTARY DAMPER			BUTTERFLY VALVE TYPE 55
Body Materials			PVC	PP	PVDF	PP	PVDF	PP	PVDF	PDCPD	PVC	PVC (PP DISC)	PP	PVDF	FCD-S
End Connectors			Wafer	Wafer	Wafer	Wafer	Wafer	Wafer	Wafer	Wafer	Wafer	Wafer	Wafer	Wafer	Wafer
Nominal Size	mm	inch													
	40	1 1/2	○	○	○	-	-	-	-	-	-	○	○	○	-
	50	2	○	○	○	-	-	-	-	-	-	○	○	○	○
	65	2 1/2	○	○	○	-	-	-	-	-	-	○	○	○	○
	80	3	○	○	○	-	-	-	-	-	-	○	○	○	○
	100	4	○	○	○	-	-	-	-	-	-	○	○	○	○
	125	5	○	○	○	-	-	-	-	-	-	○	○	○	○
	150	6	○	○	○	-	-	-	-	-	-	○	○	○	○
	200	8	○	○	○	-	-	-	-	-	-	○	○	○	○
	250	10	○	○	○	-	-	-	-	-	-	○	○	○	○
	300	12	○	○	○	-	-	-	-	-	-	○	○	○	○
350	14	○	○	○	-	-	-	-	-	-	○	○	○	○	
400	16	-	-	-	○	○	-	-	-	-	○	○	○	-	
450	18	-	-	-	-	-	○	○	-	-	-	○	○	-	
500	20	-	-	-	-	-	○	○	-	-	-	○	○	-	
600	24	-	-	-	-	-	○	○	-	-	-	○	○	-	
Page			26 - 27			28		29		30 - 31		36 - 39			32-33

Type		PDCPD BUTTERFLY VALVE	
Body Materials		PDCPD	
Models		Wafer	
Nominal Size	mm	inch	
	700	28	○
	800	32	○
	850	34	○
	900	36	○
	1000	40	○
1100	44	○	
1200	48	○	
Page		34 - 35	

*Except for JIS standard.

Type			GATE VALVE (internally threaded)			RISING STEM
Body Materials			HI-PVC			HI-PVC
End Connectors			Flanged	Threaded	Wafer	Flanged
Nominal Size	mm	inch				
	40	1 1/2	○	○	○	○
	50	2	○	○	○	○
	65	2 1/2	○	-	○	○
	80(75)	3	○	-	○	○
	100	4	○	-	○	○
	125	5	○	-	○	○
	150	6	○	-	○	○
	200	8	○	-	-	○
	250	10	○	-	-	-
300	12	○	-	-	-	
350	14	○	-	-	-	
Page			50 - 54			

Type			SWING CHECK VALVE		
Body Materials			HI-PVC	PP	PVDF
End Connectors			Flanged	Flanged	Flanged
Nominal Size	mm	inch			
	15	1/2	○	○	○
	20	3/4	○	○	○
	25	1	○	○	○
	32	1 1/4	○	○	○
	40	1 1/2	○	○	○
	50	2	○	○	○
	65	2 1/2	○	○	○
	80	3	○	○	○
	100	4	○	○	○
125	5	○	○	○	
150	6	○	○	○	
200	8	○	○	○	
Page			40 - 41		

Type			GAUGE VALVE	
Body Materials			PVC	PP
End Connectors			Flanged	Flanged
Nominal Size	mm	inch		
	20	3/4	○	○
	25	1	○	○
Page			49	

1. Flanged elbows are available in a nominal size of 25 mm(1inch) only.

1. We produce resilient seal type GATE VALVES with Threaded Connection which are up to 200 mm in nominal size.
2. RISING STEM and JWWA GATE VALVES are available in resilient seal type only.

Type			BALL CHECK VALVE AND BALL FOOT VALVE									STOP VALVE (GLOBE VALVE)					
Body Materials			PVC			C-PVC			PP		PVDF		PVC			PP	
End Connectors			Flanged	Threaded	Socket	Flanged	Threaded	Socket	Threaded	Socket (welded)	Threaded	Socket (welded)*	Flanged	Threaded	Socket	Flanged	Threaded
Nominal Size	mm	inch															
	15	1/2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	20	3/4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	25	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	32	1 1/4	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-
	40	1 1/2	○	○	○	○	○	○	○	○	○	○	○	○	-	○	-
	50	2	○	○	○	○	○	○	○	○	○	○	○	○	-	○	-
	65	2 1/2	-	-	-	-	-	-	-	-	-	-	○	-	-	○	-
	80	3	○	○	○	○	○	○	○	○	○	○	○	-	-	○	-
	100	4	○	○	○	○	○	○	○	○	○	○	○	-	-	○	-
Page			42 - 45									46 - 48					

Type			TRUE UNION BALL CHECK VALVE									
Body Materials			PVC			C-PVC			PP		PVDF	
End Connectors			Flanged	Threaded	Socket	Flanged	Threaded	Socket	Threaded	Socket (welded)	Threaded	Socket (welded)*
Nominal Size	mm	inch										
	15	1/2	○	○	○	○	○	○	○	○	○	○
	20	3/4	○	○	○	○	○	○	○	○	○	○
	25	1	○	○	○	○	○	○	○	○	○	○
	32	1 1/4	-	-	-	-	-	-	-	-	-	-
	40	1 1/2	○	○	○	○	○	○	○	○	○	○
50	2	○	○	○	○	○	○	○	○	○	○	
Page			44									

Type			AIR RELEASE VALVE	AUTOMATIC WATER FEEDING VALVE		ALFALFA VALVE	ROTARY ANGLE VALVE				
Body Materials			PDCPD	HI-PVC		PVC	PVC				
End Connectors			Flanged	Flanged	Threaded	Socket	Flanged	Socket	Flanged	Threaded	Socket
Nominal Size	mm	inch									
	25	1	○	-	-	-	-	-	-	-	-
	50	2	-	○	○	○	○	○	○	○	○
	65	2 1/2	-	-	-	-	-	-	-	-	-
	80	3	○	○	○	○	○	○	○	○	○
	100	4	○	-	-	-	○	○	-	-	-
150	6	○	-	-	-	-	-	-	-	-	
Page			63 - 64		55		56		56		

Type			CONSTANT FLOW VALVE	NEEDLE VALVE	STRAINER(Y)			
Body Materials			PVC	PVC	PVC(Clear)			
End Connectors			Flanged	Flanged	Flanged	Threaded	Flanged	
Nominal Size	mm	inch						
	15	1/2	○	○	○	○	○	
	20	3/4	○	○	○	○	○	
	25	1	○	○	○	○	○	
	32	1 1/4	-	-	-	-	-	
	40	1 1/2	-	-	○	○	○	
	50	2	○	○	○	○	○	
	65	2 1/2	-	-	-	-	-	
80	3	○	○	○	○	○		
100	4	○	○	○	○	○		
Page			57 - 59		60		63 - 64	

※Except for JIS standard.

DIAPHRAGM VALVE TYPE 14 15mm - 100mm(1/2inch - 4inch)

● 15mm(1/2inch) – 50mm(2inch)

● 65mm(2 1/2inch) – 100mm(4inch)



FEATURES

Excellent Sealing Property

The DIAPHRAGM VALVE TYPE 14 uses a high quality rubber material, exhibiting lower compressive strain, for its diaphragm and cushion, resulting in optimum sealing performance.

Tight Seal at Low Torque

Using dynamic analysis by CAE, DIAPHRAGM VALVE TYPE 14 is designed so that pressure is distributed evenly. This design allows the hand wheel torque be reduced and maintain shut off at low torque.

Easier Maintenance

A bayonet mechanism, provided between the diaphragm and compressor, allows the diaphragm to be replaced easily.

Bottom Stand for Easy Support

Having a new bottom stand with an insert hole, DIAPHRAGM VALVE TYPE 14 helps support the piping. The valve is also provided with a flange stand to increase installation safety.

Built-in Travel Stop

DIAPHRAGM VALVE TYPE 14 contains a revolutionary travel stop mechanism protecting the diaphragm.

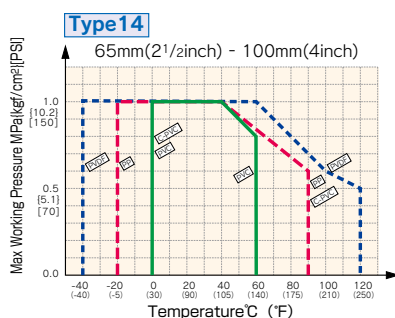
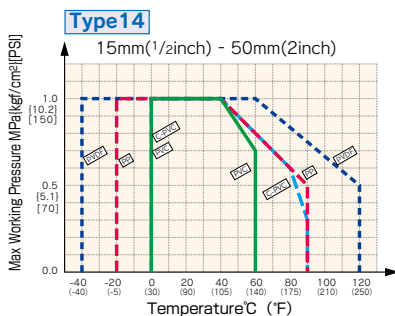
Visual Indicator

A color indicator clearly shows whether the valve is fully-opened, half-opened, or fully-closed. Because the indicator enters the handle, going out of view when the valve is fully-closed, the operator would know at glance of valve position valve is fully-opened, half-opened.

MATERIAL AND WORKING TEMPERATURE

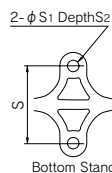
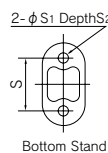
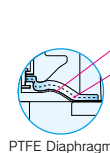
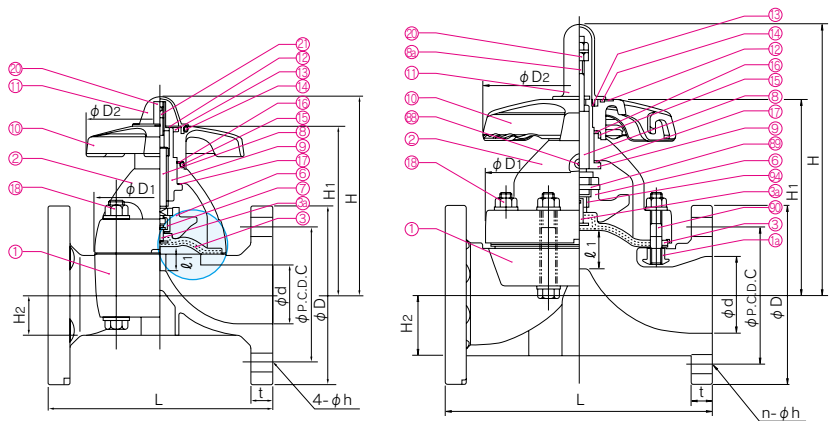
Body Material	Nominal Size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure at 20°C(70°F)	End Connectors
			MPa{kgf/cm ² } [PSI]	
PVC	15 - 100(1/2 - 4)	0 - 60(30 - 140)	1.0{10.2} [150]	Flanged End
C-PVC	15 - 100(1/2 - 4)	0 - 90(30 - 195)	1.0{10.2} [150]	Flanged End
PP	15 - 100(1/2 - 4)	-20 - 90(-5 - 195)	1.0{10.2} [150]	Flanged End
PVDF	15 - 100(1/2 - 4)	-40 - 120(-40 - 250)	1.0{10.2} [150]	Flanged End

WORKING PRESSURE VS. TEMPERATURE



DIMENSION

● 15mm(1/2inch) - 50mm(2inch) ● 65mm(2 1/2inch) - 100mm(4inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/BONNET, PVC/PVC,C-PVC/PP,PP,PVDF/PPG,PVDF/PVDF	⑬	RETAINING RING-C TYPE	1	STAINLESS STEEL304
②	BONNET	1		⑭	O-RING(A)	1	EPDM
③	DIAPHRAGM	1	EPDM,IIR,NBR,CSM,CPE,FKM VIFLON C(FKM-C), VIFLON F(FKM-F), PTFE	⑮	O-RING(B)	1	EPDM
③a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL304	⑯	THRUST RING(A)	1	UHMWPE
④	CUSHION	1	EPDM ¹⁾	⑰	THRUST RING(B)	1	UHMWPE
⑤	PVDF GAS BARRIER(OPTION)	1	PVDF	⑱	BOLT·NUT	4	STAINLESS STEEL304
⑥	COMPRESSOR	1	PVDF	⑳	STOPPER	1	COPPER ALLOY ²⁾ , STAINLESS STEEL ³⁾ 304
⑦	JOINT ²⁾	1	STAINLESS STEEL304	㉑	SCREW ²⁾	1	STAINLESS STEEL304
⑧	STEM	1	COPPER ALLOY	㉒	GREASE NIPPLE ³⁾	1	COPPER ALLOY(C3604)
⑧a	INDICATOR ROD2)	1	STAINLESS STEEL304	㉓	COMPRESSOR PIN ³⁾	1	STAINLESS STEEL304
⑨	SLEEVE	1	COPPER ALLOY(C3604)	㉔	STUD BOLT·NUT ³⁾	4	STAINLESS STEEL304
⑩	HAND WHEEL	1	PP	㉕	METAL OF COMPRESSOR	1	STAINLESS STEEL304
⑪	GAUGE COVER	1	POLYCARBONATE	㉖	INSERTED NUT ³⁾	4	COPPER ALLOY(C3604) STAINLESS STEEL304
⑫	NAME PLATE	1	PVC				

Note. 1) Used for PTFE diaphragm
 2) Used for 15mm(1/2inch)-50mm(2inch)
 3) Used for size 65mm(2 1/2inch)-100mm(4inch)

DIMENSIONS TABLE

Nominal Size		d	JIS 10K				D ₁	D ₂	ℓ ₁ (LIFT)	L	t		H	H ₁	H ₂	S	S ₁	S ₂
mm	inch		D	C	n	h					PVC C-PVC	PP PVDF						
15	1/2	16	95	70	4	15	54×66	100	10	110	12	12	104	86	19.5	25	7	13
20	3/4	20	100	75	4	15	54×66	100	10	120	13	13	106	88	17.5	25	7	13
25	1	25	125	90	4	19	67×80	100	12	130	13	13	111	93	18.5	25	7	13
32	1 1/4	32	135	100	4	19	67×80	100	12	142	16	16	116	97	22.5	25	7	13
40	1 1/2	40	140	105	4	19	108×108	156	21	180	16	16	177	144	27.5	45	9	15
50	2	52	155	120	4	19	123×123	156	25	210	20	20	191	158	36	45	9	15
65	2 1/2	67	175	140	4	19	175	220	34	250	22	23	266	188	61	85	11	20
80	3	78	185	150	8	19	201	220	42	280	22	23	280	202	63	100	15	28
100	4	100	210	175	8	19	241	257	50	340	22	24	329	241	78	120	15	28

Nominal Size		d	DIN 2501 PN10				D ₁	D ₂	ℓ ₁ (LIFT)	L	t		H	H ₁	H ₂	S	S ₁	S ₂
mm	inch		D	C	n	h					PVC C-PVC	PP PVDF						
15	1/2	16	95	65	4	14	54×66	100	10	130	12	12	104	86	19.5	25	7	13
20	3/4	20	105	75	4	14	54×66	100	10	150	13	13	106	88	17.5	25	7	13
25	1	25	115	85	4	14	67×80	100	12	160	13	13	111	93	18.5	25	7	13
32	1 1/4	32	140	100	4	18	67×80	100	12	180	16	16	116	97	22.5	25	7	13
40	1 1/2	40	150	110	4	18	108×108	156	21	200	20	20	177	144	27.5	45	9	15
50	2	52	165	125	4	18	123×123	156	25	230	22	22	191	158	36	45	9	15
65	2 1/2	67	185	145	4	18	175	220	34	290	22	22	266	188	61	85	11	20
80	3	78	200	160	8	18	201	220	42	310	24	24	280	202	63	100	15	28
100	4	100	220	180	8	18	241	257	50	350	24	26	329	241	78	120	15	28

Nominal Size		d	ANSI CLASS 150				D ₁	D ₂	ℓ ₁ (LIFT)	L		t		H	H ₁	H ₂	S	S ₁	S ₂
inch	mm		D	C	n	h				G-STANDARD	A-STANDARD	PVC C-PVC	PP PVDF						
1/2	15	0.63	3.50	2.38	4	0.62	2.13×2.60	3.94	0.39	4.25	4.33	0.43	0.43	4.09	3.39	0.77	0.98	0.28	0.51
3/4	20	0.79	3.88	2.75	4	0.62	2.13×2.60	3.94	0.39	5.88	4.72	0.51	0.51	4.17	3.46	0.69	0.98	0.28	0.51
1	25	0.98	4.25	3.12	4	0.62	2.64×3.15	3.94	0.47	5.88	5.12	0.59	0.59	4.37	3.66	0.73	0.98	0.28	0.51
1 1/4	32	1.26	4.62	3.50	4	0.62	2.64×3.15	3.94	0.47	6.38	-	0.63	0.63	4.57	3.82	0.89	0.98	0.28	0.51
1 1/2	40	1.57	5.00	3.88	4	0.62	4.25×4.25	6.14	0.83	6.94	7.09	0.63	0.63	6.97	5.67	1.08	1.77	0.35	0.59
2	50	2.05	6.00	4.75	4	0.75	4.84×4.84	6.14	0.98	7.94	8.27	0.79	0.79	7.52	6.22	1.42	1.77	0.35	0.59
2 1/2	65	2.64	7.00	5.50	4	0.75	6.89	8.66	1.34	-	9.84	0.87	0.91	10.47	7.40	2.40	3.35	0.43	0.79
3	80	3.07	7.50	6.00	4	0.75	7.91	8.66	1.65	10.37	11.02	0.87	0.91	11.02	7.95	2.48	3.94	0.59	1.10
4	100	3.94	9.00	7.50	8	0.75	9.49	10.12	1.97	12.93	13.39	0.87	0.94	12.95	9.49	3.07	4.72	0.59	1.10

TRUE UNION DIAPHRAGM VALVE TYPE 14 15mm - 50mm(1/2inch - 2inch)

FEATURES

Easy Maintenance

The valve body can be removed from the pipe line by loosening the union nuts at both ends.

Bottom Stand for Easy Support

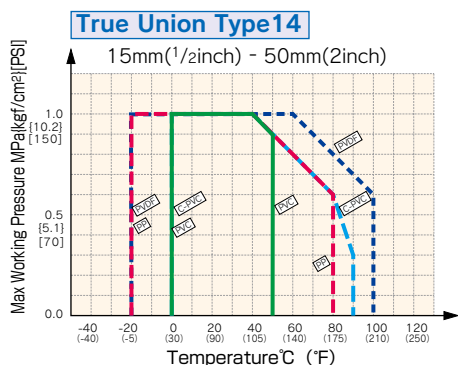
Having a new bottom stand with an insert hole, DIAPHRAGM VALVE TYPE 14 helps support the piping. The valve is also provided with a flange stand to increase installation safety.



MATERIAL AND WORKING TEMPERATURE

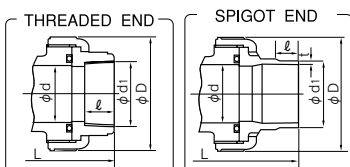
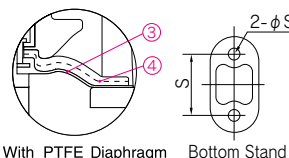
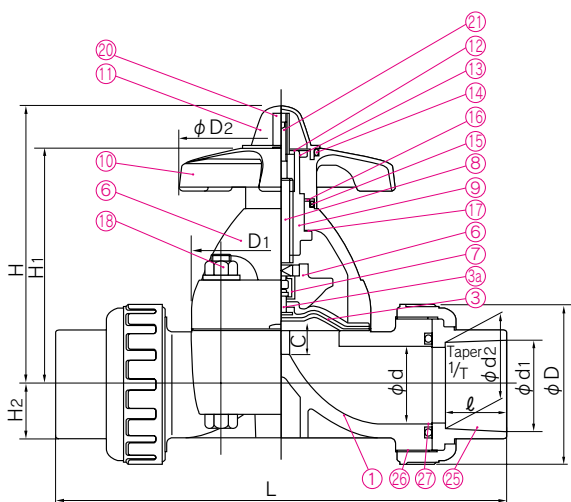
Body Material	Nominal Size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure at 20°C(70°F) MPa[kgf/cm²][PSI]	End Connectors
Unplasticized Polyvinyl Chloride(PVC)	15 - 50(1/2 - 2)	0 - 50(30 - 120)	1.0{10.2}[150]	Socket End. Threaded End
Chlorinated Polyvinyl Chloride(C-PVC)	15 - 50(1/2 - 2)	0 - 90(30 - 195)	1.0{10.2}[150]	Socket End. Threaded End
Polypropylene(PP)	15 - 50(1/2 - 2)	-20 - 80(-5 - 175)	1.0{10.2}[150]	Socket End. Threaded End
Polyvinylidene Fluoride(PVDF)	15 - 50(1/2 - 2)	-20 - 100(-5 - 210)	1.0{10.2}[150]	Socket End. Threaded End. Spigot End

WORKING PRESSURE VS. TEMPERATURE



DIMENSION

SOCKET END



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/BONNET PVC/PVC C-PVC/PP PP/PP PVDF/PPG PVDF/PVDF	⑪	GAUGE COVER	1	PC
②	BONNET			⑫	NAME PLATE	1	PVC
③	DIAPHRAGM	1	EPDM IIR NBR, CSM CPE, FKM VIFLON C (FKM-C) VIFLON F (FKM-F) PTFE	⑬	RETAINING RING-C TYPE	1	STAINLESS STEEL304
				⑭	O-RING(A)	1	EPDM
				⑮	O-RING(B)	1	EPDM
				⑯	THRUST RING(A)	1	UHMWPE
④	CUSHION	1	EPDM*	⑰	THRUST RING(B)	1	UHMWPE
				⑱	BOLT·NUT	4	STAINLESS STEEL304
⑤	COMPRESSOR	1	PVDF	⑲	STOPPER	1	COPPER ALLOY(C3604)
				⑳	SCREW	1	STAINLESS STEEL304
⑥	JOINT	1	STAINLESS STEEL304	⑳	UNION NUT	2	PVC C-PVC PP PVDF
⑦	STEM	1	COPPER ALLOY(C3604)				
⑧	SLEEVE	1	COPPER ALLOY(C3604)	㉑	O-RING(C)	2	EPDM FKM Others
⑨	HAND WHEEL	1	PP				

*With PTFE Diaphragm

DIMENSIONS TABLE

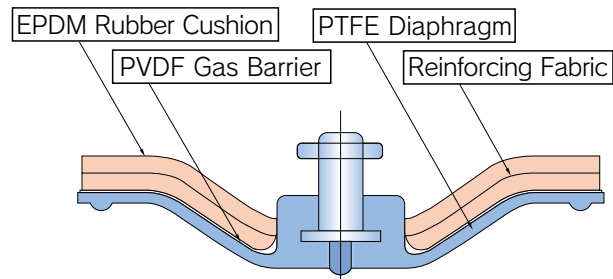
Nominal Size		d	Socket End								Threaded End				D	D ₁	D ₂	C (LIFT)	H	H ₁	H ₂	S	S ₁	S ₂
mm	inch		PVC, C-PVC				PP				JIS B 2023		L											
			d ₁	ℓ	1/T	L	d ₁	d ₂	ℓ	L	d ₁	ℓ	PVC, C-PVC	PP, PVDF										
15	1/2	16	22.11	20	1/34	134	21.2	20.2	20	134	Rc 1/2	15	128	128	48	54×66	100	10	104	86	19.5	25	7	13
20	3/4	20	26.13	24	1/34	156	26.2	25.2	23	154	Rc 3/4	17	148	148	60	54×66	100	10	106	88	17.5	25	7	13
25	1	25	32.16	27	1/34	186	33.0	32.0	25	182	Rc 1	20	172	172	70	67×80	100	12	111	93	18.5	25	7	13
32	1 1/4	32	38.19	30	1/34	200	—	—	—	—	Rc 1 1/4	22	188	188	82	67×80	100	12	116	97	22.5	25	7	13
40	1 1/2	40	48.21	37	1/37	271	47.0	46.0	28	253	Rc 1 1/2	25	245	245	100	108×108	156	21	177	144	27.5	45	9	15
50	2	52	60.25	42	1/37	303	59.0	58.0	28	275	Rc 2	28	281	278	106	123×123	156	25	191	158	36	45	9	15

Nominal Size		d	Socket End								Threaded End				Spigot End								D	D ₁	D ₂	C (LIFT)	H	H ₁	H ₂	S	S ₁	S ₂				
mm	inch		PVC, C-PVC				PP, PVDF				DIN 2999		L		PVC		PP, PVDF																			
			DIN 8063		L		DIN 16962(PP)		L		d ₁ ℓ		PVC, C-PVC		PP, PVDF		DIN 3441		L		DIN 3442												PP		PVDF	
			d ₁	ℓ	d ₁	d ₂	ℓ	L	d ₁	ℓ	PVC, C-PVC	PP, PVDF	d ₁	ℓ	L	d ₁	ℓ	t	t	L	d ₁	ℓ											t	t	L	
15	1/2	16	20	16	128	19.5	19.3	14.5	125	Rp 1/2	15	128	128	20	18.5	150	20	18.5	2.5	1.9	150	48	54×66	100	10	104	86	19.5	25	7	13					
20	3/4	20	25	19	147	24.5	24.3	16	141	Rp 3/4	17	148	148	25	24	172	25	22	2.7	1.9	172	60	54×66	100	10	106	88	17.5	25	7	13					
25	1	25	32	22	172	31.5	31.3	18	164	Rp 1	20	172	172	32	24.5	195	32	22.5	3.0	2.4	195	70	67×80	100	12	111	93	18.5	25	7	13					
32	1 1/4	32	40	26	188	39.45	39.2	20.5	177	Rp 1 1/4	22	188	188	40	28	212	40	26	3.7	2.4	212	82	67×80	100	12	116	97	22.5	25	7	13					
40	1 1/2	40	50	31	246	49.45	49.2	23.5	231	Rp 1 1/2	25	245	245	50	34	276	50	32	4.6	3.0	276	100	108×108	156	21	177	144	27.5	45	9	15					
50	2	52	63	38	294	62.5	62.1	27.5	274	Rp 2	28	281	278	63	38.5	308	63	36	5.8	3.0	307	106	123×123	156	25	191	158	36	45	9	15					

Nominal Size		d	Socket End								Threaded End				D	D ₁	D ₂	C (LIFT)	H	H ₁	H ₂	S	S ₁	S ₂
inch	mm		PVC, C-PVC				PP, PVDF(IPS)				ANSI/ASME B1·20·1		L											
			ASTM SCH80		L		d ₁	ℓ	L	d ₁	ℓ	PVC, C-PVC	PP, PVDF											
			d ₁	d ₂	ℓ	L	d ₁	ℓ	L	d ₁	ℓ													
1/2	15	0.63	0.848	0.836	0.875	5.47	0.83	0.87	5.43	1/2-14NPT	0.59	5.04	5.04	1.89	2.13×2.60	3.94	0.39	4.09	3.39	0.77	0.98	0.28	0.51	
3/4	20	0.79	1.058	1.046	1.000	6.18	1.03	1.00	6.09	3/4-14NPT	0.67	5.83	5.83	2.36	2.13×2.60	3.94	0.39	4.17	3.46	0.69	0.98	0.28	0.51	
1	25	0.98	1.325	1.310	1.125	7.32	1.30	1.13	7.24	1-11 1/2 NPT	0.79	6.77	6.77	2.76	2.64×3.15	3.94	0.47	4.37	3.66	0.73	0.98	0.28	0.51	
1 1/4	32	1.26	1.670	1.655	1.250	7.95	1.65	1.25	7.80	1 1/4-11 1/2 NPT	0.87	7.40	7.40	3.23	2.64×3.15	3.94	0.47	4.57	3.82	0.89	0.98	0.28	0.51	
1 1/2	40	1.57	1.912	1.894	1.375	10.47	1.89	1.37	10.28	1 1/2-11 1/2 NPT	0.98	9.65	9.65	3.94	4.25×4.25	6.14	0.83	6.97	5.67	1.08	1.77	0.35	0.59	
2	50	2.05	2.387	2.369	1.500	11.54	2.36	1.50	11.54	2-11 1/2 NPT	1.10	11.06	10.95	4.17	4.84×4.84	6.14	0.98	7.52	6.22	1.42	1.77	0.35	0.59	

DIAPHRAGM VALVE TYPE 14

- We recommend that a PVDF Gas Barrier should be installed with PTFE DIAPHRAGM VALVE if it is used in an application that has corrosive gas.
- Temperature variations during operation or long periods of storage may cause the diaphragm to settle. In this case, it is recommended to check bonnet bolt torque, prior to installation(See the table below).



Diaphragm with PVDF Gas Barrier

▼ Tightening Torque for Diaphragm Valve Bonnet for TYPE 14

Unit: N·m[kgf·cm]

Nominal Size mm(inch)	15 (1/2)	20 (3/4)	25 (1)	32 (1 1/4)	40 (1 1/2)	50 (2)	65 (2 1/2)	80 (3)	100 (4)
Rubber Diaphragm	3.0 {31}	3.0 {31}	5.0 {51}	5.0 {51}	12.0 {122}	15.0 {153}	13.0 {133}	18.0 {184}	35.0 {357}
PTFE Diaphragm	5.0 {51}	5.0 {51}	8.0 {82}	8.0 {82}	15.0 {153}	20.0 {204}	15.0 {153}	20.0 {204}	40.0 {408}

DIAPHRAGM VALVE TYPE 15 125mm, 150mm(5inch, 6inch)

Flanged End type

- 125mm(5inch) · 150mm(6inch)



FEATURES

Improved outside sealing ability

By means of 3D CAD/CAE analysis, Type 15 diaphragm valve has increased body thickness. In addition, using the elastomer that has high impact resilience, the sealing ability of valve is improved against high temperature changes.

Easier to operate

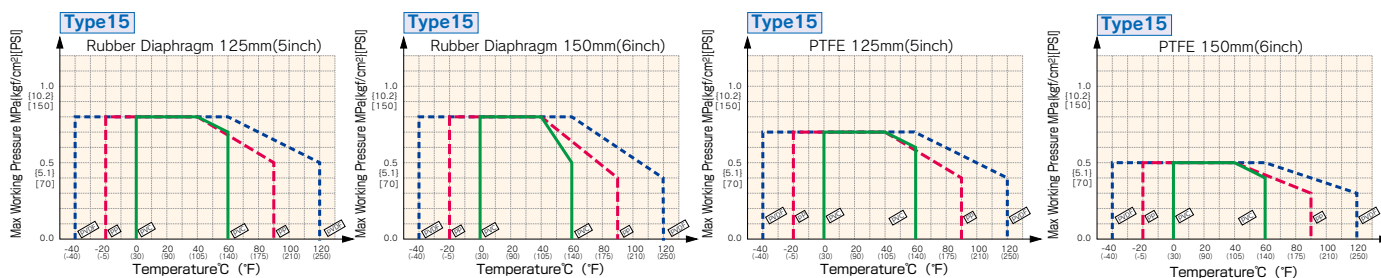
In order to reduce frictional force, material and shape of sliding parts are redesigned.

Also improved hand wheel design which allows for easy operation.

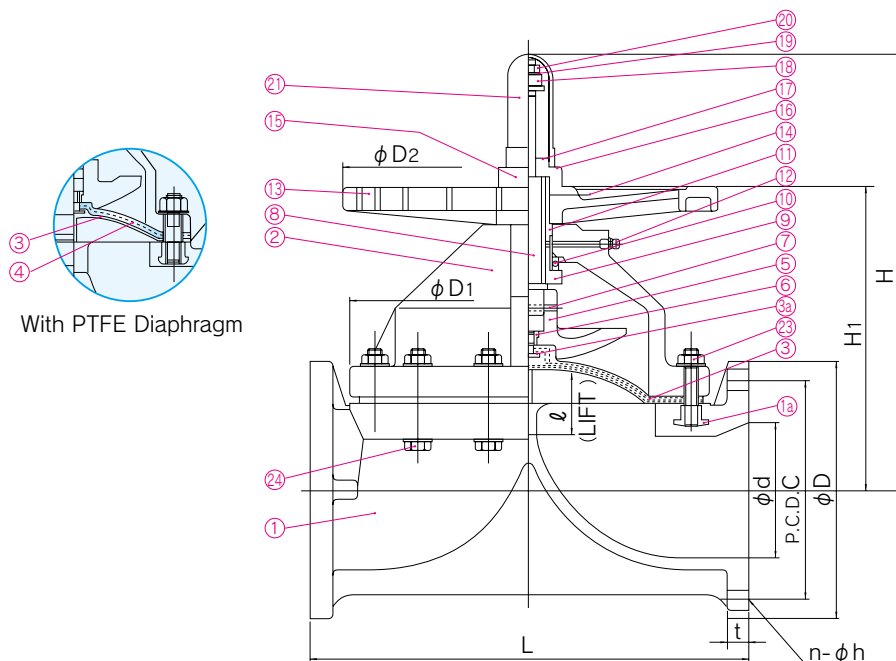
MATERIAL AND WORKING TEMPERATURE

Body material	Nominal size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure at 20°C(70°F) MPa{kgf/cm²}[PSI]			
			Rubber Diaphragm		PTFE Diaphragm	
			125mm(5inch)	150mm(6inch)	125mm(5inch)	150mm(6inch)
PVC	125(5) · 150(6)	0 - 60(30 - 140)	0.8{8.2}[115]	0.8{8.2}[115]	0.7{7.1}[100]	0.5{5.1}[70]
PP	125(5) · 150(6)	-20 - 90(-5 - 195)	0.8{8.2}[115]	0.8{8.2}[115]	0.7{7.1}[100]	0.5{5.1}[70]
PVDF	125(5) · 150(6)	-40 - 120(-40 - 250)	0.8{8.2}[115]	0.8{8.2}[115]	0.7{7.1}[100]	0.5{5.1}[70]

WORKING PRESSURE VS. TEMPERATURE



DIMENSION



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/BONNET PVC/PVC PP/PP	⑪	O-RING(A)	1	NBR
②	BONNET	1	PVDF/PPG PVDF/PVDF	⑫	GREASE NIPPLE	1	COPPER ALLOY(C3604)
③	DIAPHRAGM	1	EPDM,PTFE,FKM,NBR VIFLON F (FKM-F) VIFLON C (FKM-C)	⑬	HAND WHEEL	1	PP
③a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL304 Others	⑭	NAME PLATE	1	PVC
④	CUSION ¹⁾	1	EPDM	⑮	CAP	1	PP
⑤	COMPRESSOR	1	PVDF	⑯	SHEET GASKET(A)	1	EPDM
⑥	COMPRESSOR NUT	1	COPPER ALLOY(C3604)	⑰	SHEET RING	1	STAINLESS STEEL304
⑦	COMPRESSOR PIN	1	STAINLESS STEEL304	⑱	STOPPER	1	Chromized STEEL (SS400)
⑧	STEM	1	COPPER ALLOY	⑲	SPRING WASHER	1	STAINLESS STEEL304
⑨	SLEEVE(A)	1	COPPER ALLOY	⑳	SET NUT	1	STAINLESS STEEL304
⑩	THRUST BEARING(A)	1	HIGH CARBON CHROMIUM BEARING(SUJ2)	㉑	GAUGE COVER	1	POLYCARBONATE
				㉒	STUD BOLT·NUT	4	STAINLESS STEEL304
				㉓	BOLT·NUT	-	STAINLESS STEEL304
				㉔	INSERTED NUT	4	COPPER ALLOY ²⁾ STAINLESS STEEL304 ³⁾

Note : 1) Used for PTFE diaphragm
 2) Used for PVC,PP Body
 3) Used for PVDF Body

DIMENSIONS TABLE

Nominal Size		d	JIS 10K				L	t		D ₁	D ₂	ℓ	H	H ₁
mm	inch		D	C	n	h		PVC	PP,PVDF					
125	5	125	250	210	8	23	410	22	24	320	300	60	420	308
150	6	148	280	240	8	23	480	24	27	385	410	70	476	334

Nominal Size		d	DIN 2501 PN10				L	t		D ₁	D ₂	ℓ	H	H ₁
mm	inch		D	C	n	h		PVC	PP,PVDF					
125	5	125	250	210	8	18	400	22	23	320	300	60	420	308
150	6	148	285	240	8	22	480	24	27	385	410	70	476	334

Nominal Size		d	ANSI CLASS 150				L	t		D ₁	D ₂	ℓ	H	H ₁
inch	mm		D	C	n	h		PVC	PP,PVDF					
5	125	4.92	10.00	8.50	8	0.88	16.14	0.87	0.94	12.60	11.81	2.36	16.54	12.13
6	150	5.83	11.00	9.50	8	0.88	18.90	0.94	1.06	15.16	16.14	2.76	18.74	13.15

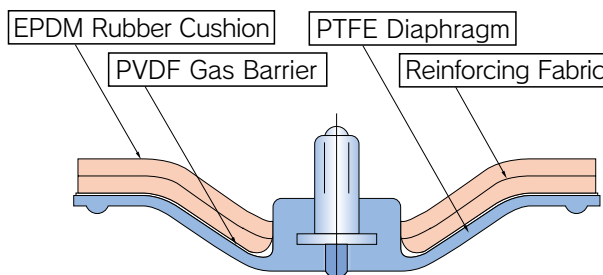
DIAPHRAGM VALVE TYPE 15

- We recommend that a PVDF gas barrier should be installed with PTFE DIAPHRAGM VALVE if it is used in an application that has corrosive gas.
- Temperature variations during operation or long periods of storage may cause the diaphragm to settle. In this case, it is recommended to check bonnet bolt torque, prior to installation(See the table below).

▼ Tightening Torque for Diaphragm Valve Bonnet for TYPE 15

Unit: N·m{kgf·cm}

Material	Nominal Size	125	150
	mm(inch)	(5)	(6)
Rubber Diaphragm		45.0 {459}	45.0 {459}
PTFE Diaphragm		45.0 {459}	45.0 {459}



Diaphragm with PVDF Gas Barrier

DIAPHRAGM VALVE TYPE 72 200mm, 250mm(8inch, 10inch)

● 200mm(8inch) · 250mm(10inch)



FEATURES

Sealed Bonnet

Having a sealed bonnet with an O-ring, prevents rain water or external atmosphere from entering the bonnet, DIAPHRAGM VALVE TYPE 72 can be safely used outdoors.

Sealed Indicator

Because a clear indicator gauge protects the exposed metallic part on top of the stem against atmosphere, corrosive gas or fluid does not of the valve.

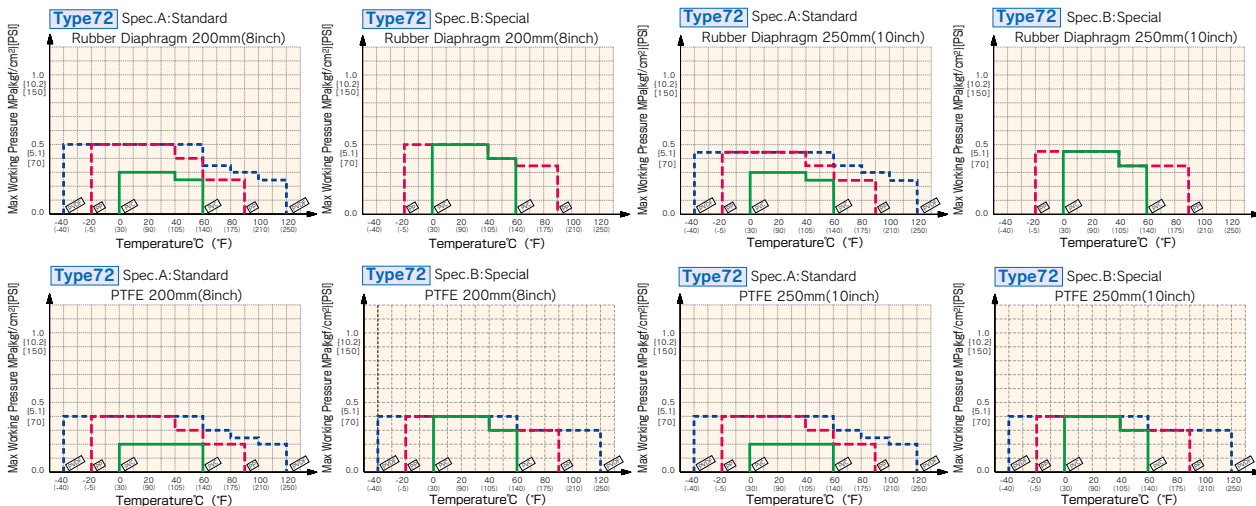
Position Indication

The position indicator also shows the degree of the valve position.

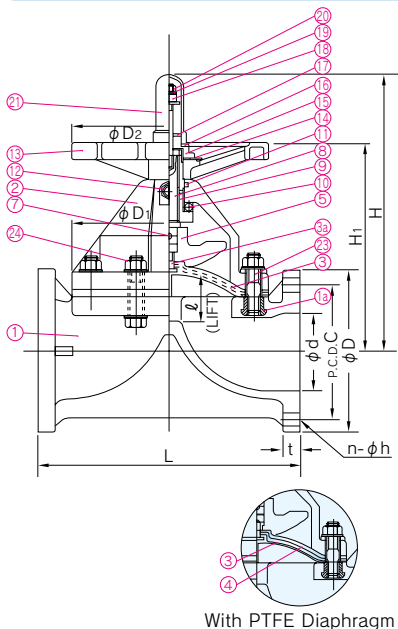
MATERIAL AND WORKING TEMPERATURE

Body material	Nominal size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure at 20°C(70°F) MPa[kgf/cm²][PSI]			
			Rubber Diaphragm		PTFE Diaphragm	
			200mm(8inch)	250mm(10inch)	200mm(8inch)	250mm(10inch)
PVC	200(8)·250(10)	0 - 60(30 - 140)	0.3{3.1}[40]	0.3{3.1}[40]	0.2{2.0}[30]	0.2{2.0}[30]
PP	200(8)·250(10)	-20 - 90(-5 - 195)	0.5{5.1}[70]	0.45{4.6}[65]	0.4{4.1}[55]	0.4{4.1}[55]
PVDF	200(8)·250(10)	-40 - 120(-40 - 250)	0.5{5.1}[70]	0.45{4.6}[65]	0.4{4.1}[55]	0.4{4.1}[55]

WORKING PRESSURE VS. TEMPERATURE



DIMENSION



PARTS & MATERIALS

DESCRIPTION	MATERIAL	DESCRIPTION	MATERIAL
① BODY	1 BODY/BONNET PVC/PVC PP/PP PVDF/PPG PVDF/PVDF	⑪ O-RING(A)	1 NBR
② BONNET	1	⑫ GREASE NIPPLE	1 COPPER ALLOY
③ DIAPHRAGM	1 EPDM,PTFE,FKM,NBR VIFLON F (FKM-F) VIFLON C (FKM-C)	⑬ HAND WHEEL	1 PP
		⑭ NAME PLATE	1 PVC
④ CUSION ¹⁾	1 EPDM	⑮ CAP	1 PP
⑤ COMPRESSOR	1 GRAY IRON CASTING	⑯ SEAT GASKET(A)	1 EPDM
⑥ COMPRESSOR NUT	1 COPPER ALLOY(C3604)	⑰ SEAT RING	1 STAINLESS STEEL304
⑦ COMPRESSOR PIN	1 STAINLESS STEEL304	⑱ STOPPER	1 CHROMIZED STEEL(SS400)
⑧ STEM	1 SUM23	⑲ SPRING WASHER	1 STAINLESS STEEL304
⑨ SLEEVE(A)	1 GRAY IRON CASTING	⑳ SET NUT	1 STAINLESS STEEL304
⑩ THRUST BEARING(A)	1 HIGH CARBON CHROMIUM BEARING(SUJ2)	㉑ GAUGE COVER	1 POLYCARBONATE
		㉒ STUD BOLT·NUT	— STAINLESS STEEL304
		㉓ BOLT·NUT	— STAINLESS STEEL304
		㉔ INSERTED NUT	— COPPER ALLOY(C3604) ²⁾ STAINLESS STEEL304 ³⁾
		㉕ INSERTED METAL OF DIAPHRAGM	1 STAINLESS STEEL304 Others

Note : 1) Used for PTFE Diaphragm
2) Used for PVC,PP Body
3) Used for PVDF Body

DIMENSIONS TABLE

Nominal Size		* d	JIS 10K				* D ₁	D ₂	ℓ	L	t		* H ₁	H
mm	inch		C	* D	h	n					PVC	PP,PVDF		
200	8	196	290	330	23	12	430	410	95	570	28	32	419	627
250	10	247	355	400	25	12	540	560	128	680	30	37	510	778

*.....Standard dimensions based on PVC material

Nominal Size		* d	DIN 2501 PN10				* D ₁	D ₂	ℓ	L	t		* H ₁	H
mm	inch		C	* D	h	n					PVC	PP,PVDF		
200	8	196	295	340	22	8	430	410	95	600	30	34	419	627
250	10	247	350	395	22	12	540	560	128	730	34	36	510	778

*.....Standard dimensions based on PVC material

Nominal Size		* d	ANSI CLASS 150				* D ₁	D ₂	ℓ	L	t		* H ₁	H
inch	mm		C	* D	h	n					PVC,PP,PVDF			
8	200	7.72	11.75	13.50	0.88	8	16.93	16.14	3.74	22.44	1.26	16.50	24.69	
10	250	9.72	14.25	16.00	1.00	12	21.26	22.05	5.04	26.77	1.46	20.08	30.63	

*.....Standard dimensions based on PVC material

SPEC. A (Standard)	Body Material:PVC Diaphragm Material : Rubbers or PTFE	Body Material:PP Diaphragm Material : Rubbers or PTFE	Body Material:PVDF Diaphragm Material : Rubbers or PTFE
SPEC. B (Special)	Body Material:PVC Diaphragm Material : Rubbers or PTFE	Body Material:PP Diaphragm Material : Rubbers or PTFE	Body Material:PVDF Diaphragm Material : PTFE

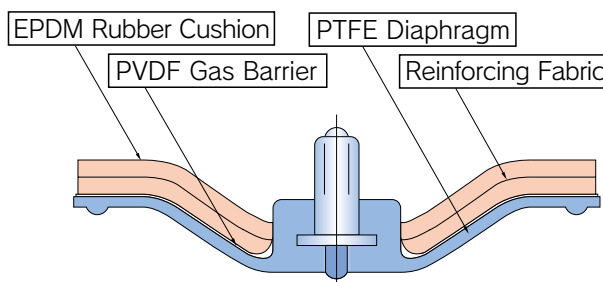
DIAPHRAGM VALVE TYPE 72

- We recommend that a PVDF Gas Barrier should be installed with PTFE DIAPHRAGM VALVE if it is used in an application that has corrosive gas.
- Temperature variations during operation or long periods of storage may cause the diaphragm to settle. In this case, it is recommended to check bonnet bolt torque, prior to installation(See the table below).

▼ Tightening Torque for Diaphragm Valve Bonnet for TYPE 72

Unit:N·m{kgf·cm}

Material	Nominal Size	200	250
	mm(inch)	(8)	(10)
Rubber Diaphragm		25.0 {255}	25.0 {255}
PTFE Diaphragm		25.0 {255}	25.0 {255}



Diaphragm with PVDF Gas Barrier

MATERIAL AND WORKING TEMPERATURE (SPEC. B-Special)

Body material	Nominal size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure at 20°C(70°F) MPa{kgf/cm ² } [PSI]			
			Rubber Diaphragm		PTFE Diaphragm	
			200mm(8inch)	250mm(10inch)	200mm(8inch)	250mm(10inch)
PVC	200(8)·250(10)	0 - 60(30 - 140)	0.5{5.1}[70]	0.45{4.6}[65]	0.4{4.1}[55]	0.4{4.1}[55]
PP	200(8)·250(10)	-20 - 90(-5 - 195)	0.5{5.1}[70]	0.45{4.6}[65]	0.4{4.1}[55]	0.4{4.1}[55]
PVDF	200(8)·250(10)	-40 - 120(-40 - 250)	-	-	0.4{4.1}[55]	0.4{4.1}[55]

DIAPHRAGM VALVE/Chlor-Alkali Specification & EL Specification

FEATURES

As a solution for blister or crack problem on the surface of the valve body or the diaphragm in the severe working conditions especially for Chlor/Brine application, we prepared a special specification "EL-Specification".

The "EL-Specification", which has EL-PVDF body and EL-PTFE diaphragm, provides excellent chemical resistance and longer product life.

According to the result of our field tests, it is confirmed that the "EL-Specification" has 2 to 5 times longer product life than standard "C/A Specification" in the same working condition.



The detail of EL-Specification

Feature:To prevent the generation of blister and crack by applying special material.

Medium:High temperature brine, Sodium hypochlorite, Hydrofluoric acid and so on.

Countermeasure:for blister, crack, peeling-off and so on.

Parts:EL-PVDF(Body) and EL-PTFE(Diaphragm)

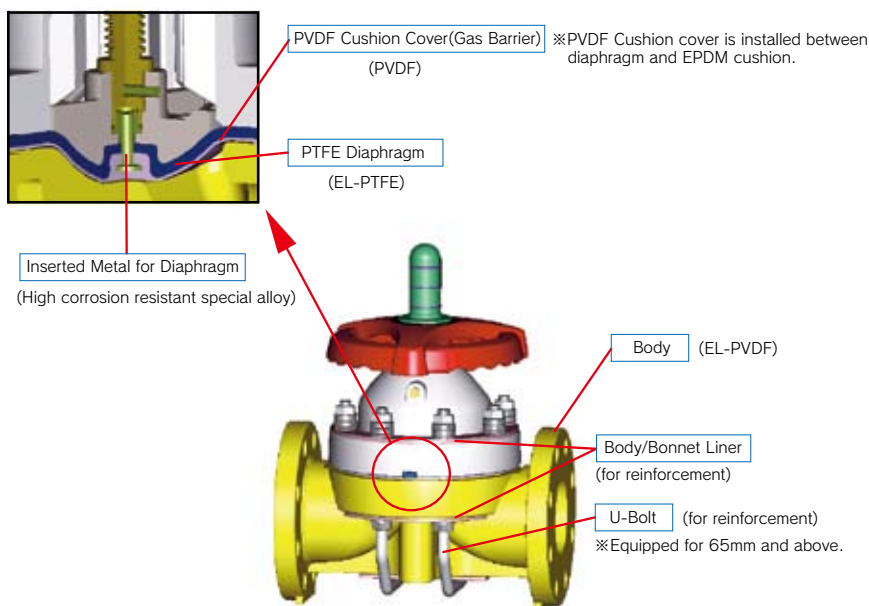
Target:Chlor/Alkali industry, pulp & paper industry, steel industry and so on.

Reference:Many factories especially in Electrolysis plants in world wide.

Size

15mm (1/2inch) - 100mm (4inch)

Contents of EL-Specification



Field Test Result



EL-PVDF/No blister is observed



PVDF/Blister is observed

{ Electrolysis Plant/ Return Brine
88°C, 0.3MPa, after 5years service }

Comparison table between EL-Specification and Chlor/Alkali specification

Parts Specification	Body	PTFE Diaphragm	Inserted Metal for PTFE Diaphragm	PVDF Cushion Cover	Remark
EL Spec.	EL-PVDF	EL-PTFE	Special Alloy	Equipped	c/w Body/Bonnet Liner and Conical Spring Washer
C/A Spec.	PVDF	PTFE	Special Alloy	Equipped	c/w Body/Bonnet Liner and Conical Spring Washer

Note : Please contact us for further information.

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

DIAPHRAGM VALVE
BALL VALVE
BUTTERFLY VALVE
SWING CHECK VALVE
BALL CHECK/BALL FOOT VALVE
STOP VALVE
GAUGE VALVE
GATE VALVE
AUTOMATIC WATER FEEDING VALVE
ROTARY ANGLE VALVE
ALFALFA VALVE
CONSTANT FLOW VALVE
NEEDLE VALVE
Y-SEDIMENT STRAINER
AIR RELEASE VALVE

FEATURES

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.

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)

Locking Device (Option)

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



NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

:BALL VALVE TYPE 21(Material:PVC+EPDM,FKM)

*Certified products bear an NSF Certification Mark.

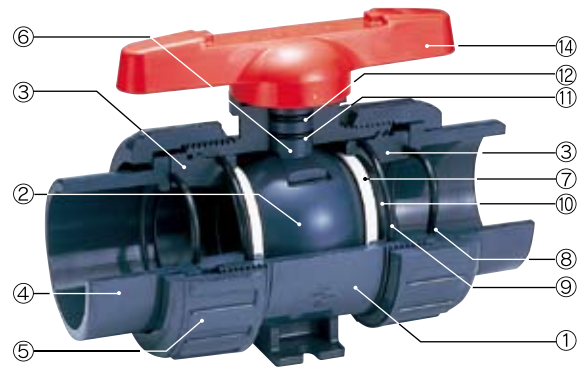
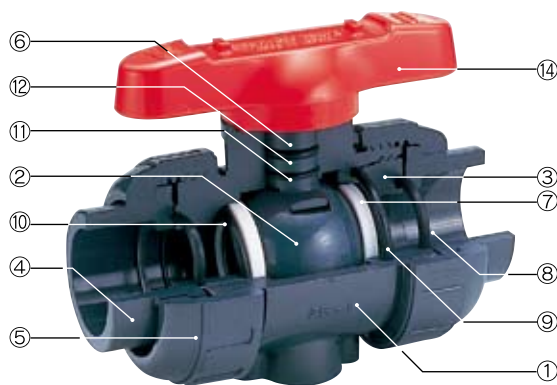
MATERIAL AND WORKING TEMPERATURE

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)	1.0{10.2}[150]	○	○	○	—
Chlorinated Polyvinyl Chloride(C-PVC)	0 - 90(30 - 195)	1.0{10.2}[150]	○	○	○	—
Polypropylene(PP)	-20 - 80(-5 - 175)	1.0{10.2}[150]	○	○	○	○
Polyvinylidene Fluoride(PVDF)	-20 - 100(-5 - 210)	1.0{10.2}[150]	○	○	○	○

※ 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(H₂O₂)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

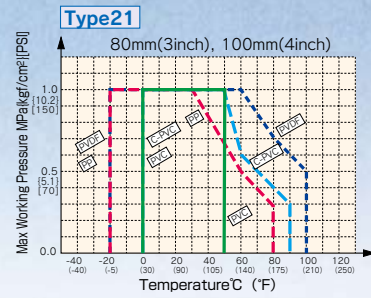
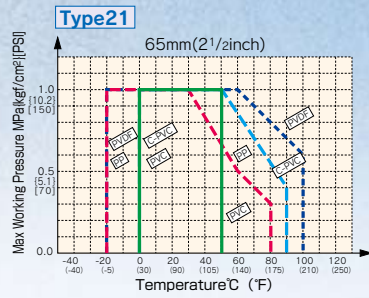
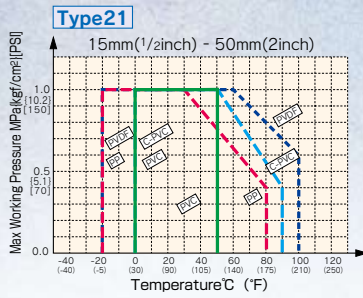
● 15mm(1/2inch) – 50mm(2inch)

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)

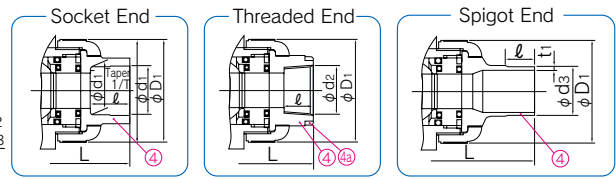
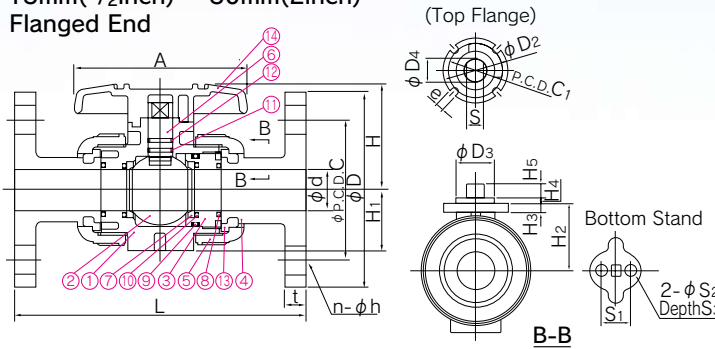
No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, C-PVC, PP, PVDF	⑨	O-RING(B)	2	EPDM, FKM, etc
②	BALL	1	PVC, C-PVC, PP, PVDF	⑩	CUSHION	2	EPDM, FKM, etc
③	CARRIER	2	PVC, C-PVC, PP, PVDF	⑪	O-RING(D)	1	EPDM, FKM, etc
④	END CONNECTOR	2	PVC, C-PVC, PP, PVDF	⑫	O-RING(E)	1	EPDM, FKM, 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

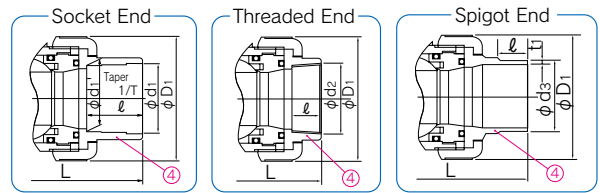
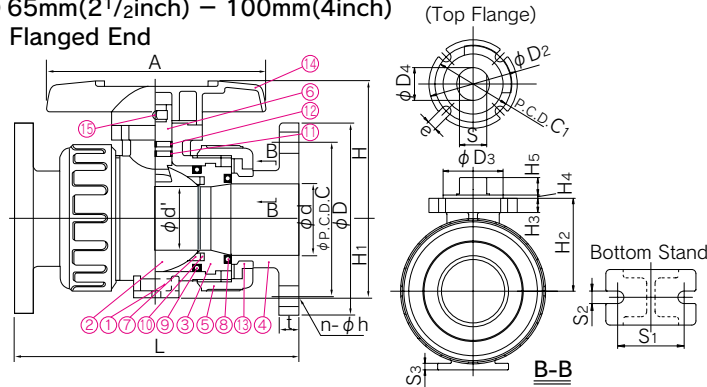


DIMENSION

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



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



DIMENSIONS TABLE

JIS		Unit:mm																		
Nominal Size	d	d'	D ₁	D ₂	D ₃	D ₄	C ₁	H	H ₁	H ₂	H ₃	H ₄	H ₅	A	S	S ₁	S ₂	S ₃	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 ₁	ℓ	1/T	L	d ₁	d ₁ '	ℓ	L	d ₂	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	Rc1/2	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	—	—	—	—	Rc1/4	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	Rc1/2	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

DIN		Unit:mm																			
Nominal Size		d	d'	D ₁	D ₂	D ₃	D ₄	C ₁	H	H ₁	H ₂	H ₃	H ₄	H ₅	A	S	S ₁	S ₂	S ₃	e	
mm	inch																				
10	3/8	13	—	46	—	—	—	—	43.5	—	—	—	—	—	80	—	—	—	—	—	—
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				Spigot End										
	DIN PN10										PVC, C-PVC			PP, PVDF			L		PVC		PP, PVDF		L								
	D	C	n	h	PVC C-PVC	PP	PVDF	t	d ₁	ℓ	L	d ₁	d ₁ '	ℓ	L	d ₂	ℓ	PVC C-PVC	PP	PVDF	d ₃	d ₃ '	ℓ	d ₃	ℓ	t	PP	PVDF	PP	PVDF	
10	3/8	90	60	4	14	120	119	119	12	16	14	99	15.5	15.4	13	96	96	Rp3/8	15	99	98	98	16	13	16	—	—	—	—	114	114
15	1/2	95	65	4	14	130	130	130	12	20	16	102	19.5	19.3	14.5	99	99	Rp1/2	15	102	100	100	20	15	18.5	20	18.5	2.5	1.9	124	124
20	3/4	105	75	4	14	150	150	150	14	25	19	120	24.5	24.3	16	113	113	Rp3/4	17	120	119	119	25	20	24	25	22	2.7	1.9	144	144
25	1	115	85	4	14	160	160	160	14	32	22	131	31.5	31.3	18	123	123	Rp1	20	131	130	130	32	25	24.5	32	22.5	3.0	2.4	154	154
32	1 1/4	140	100	4	18	180	180	180	16	40	26	150	39.45	39.2	20.5	139	139	Rp1 1/4	22	150	146	146	40	31	28	40	26	3.7	2.4	174	174
40	1 1/2	150	110	4	18	200	200	200	16	50	31	163	49.45	49.2	23.5	149	149	Rp1 1/2	25	163	160	160	50	40	34	50	32	4.6	3.0	194	194
50	2	165	125	4	18	230	230	230	16	63	38	197	62.5	62.1	27.5	176	176	Rp2	28	197	194	194	63	51	38	63	36	5.8	3.0	224	224
65	2 1/2	185	145	4	18	290	288	287	18	75	44	233	74.25	73.95	31	205	204	Rp2 1/2	32	215	213	212	75	65	44	75	38	6.9	3.6	245	244
80	3	200	160	8	18	312	311	308	21	90	51	284	89.2	88.85	35.5	252	249	Rp3	35	265	264	261	90	80	51	90	38	8.2	4.3	296	293
100	4	220	180	8	18	352	352	347	18	110	61	351	109.05	108.65	41.5	312	307	Rp4	45	340	340	335	110	93.6	46	110	44.5	10.0	5.3	355	350

ANSI		Unit:inch																			
Nominal Size		d	d'	D ₁	D ₂	D ₃	D ₄	C ₁	H	H ₁	H ₂	H ₃	H ₄	H ₅	A	S	S ₁	S ₂	S ₃	e	
inch	mm																				
1/2	15	0.59	—	1.89	1.65	0.98	0.53	1.42	2.03	1.14	1.18	0.24	0.12	0.31	3.62	0.41	0.75	0.29	0.43	0.22	
3/4	20	0.79	—	2.36	1.65	0.98	0.59	1.42	2.34	1.38	1.44	0.24	0.12	0.39	3.94	0.43	0.75	0.29	0.43	0.22	
1	25	0.98	—	2.76	1.65	0.98	0.59	1.42	2.68	1.54	1.71	0.24	0.12	0.39	4.33	0.43	0.75	0.29	0.43	0.22	
1 1/4	32	1.26	—	3.23	1.89	1.18	0.75	1.65	3.17	1.85	2.07	0.31	0.12	0.39	4.76	0.59	1.18	0.35	0.59	0.22	
1 1/2	40	1.57	—	3.94	2.24	1.38	0.91	1.97	3.50	2.17	2.40	0.39	0.12	0.47	5.16	0.71	1.18	0.35	0.59	0.26	
2	50	2.01	—	4.96	2.24	1.38	0.91	1.97	4.04	2.60	2.85	0.39	0.12	0.47	6.26	0.71	1.18	0.35	0.59	0.26	
2 1/2	65	2.56	2.28	5.24	3.19	2.17	1.18	2.76	4.96	2.83	3.35	0.51	0.12	0.63	7.87	0.94	1.89	0.35	0.24	0.35	
3	80	3.07	2.70	5.98	3.19	2.17	1.18	2.76	5.51	3.35	3.70	0.51	0.12	0.75	9.45	0.94	2.17	0.43	0.28	0.35	
4	100	3.94	3.54	8.27	4.57	2.76	1.57	4.02	7.01	4.33	4.96	0.63	0.12	0.91	11.81	1.34	2.56	0.43	0.31	0.43	

Nominal Size	Flanged End										Socket End (IPS)						Threaded End									
	ANSI CLASS 150										PVC, C-PVC			PP, PVDF			L		PVC, C-PVC		PP		PVDF			
	D	C	n	h	PVC, C-PVC	PP	PVDF	t	ASTM SCH40			ASTM SCH80			L	d ₂	ℓ	PVC, C-PVC	PP	PVDF						
1/2	15	3.50	2.38	4	0.62	5.63	5.63	5.63	0.47	—	—	—	—	0.848	0.836	0.875	4.45	0.83	0.87	4.45	4.45	1/2-14 NPT	0.59	4.02	4.02	4.02
3/4	20	3.88	2.75	4	0.62	6.77	6.77	6.77	0.55	—	—	—	—	1.058	1.046	1.000	5.08	1.03	1.00	5.08	5.08	3/4-14 NPT	0.67	4.72	4.72	4.72
1	25	4.25	3.12	4	0.62	7.36	7.36	7.36	0.55	—	—	—	—	1.325	1.310	1.125	5.75	1.30	1.13	5.75	5.75	1-11 1/2 NPT	0.79	5.16	5.16	5.16
1 1/4	32	4.62	3.50	4	0.62	7.48	7.48	7.48	0.63	—	—	—	—	1.670	1.655	1.250	6.46	1.65	1.25	6.46	6.46	1 1/4-11 1/2 NPT	0.87	5.91	5.91	5.91
1 1/2	40	5.00	3.88	4	0.62	8.35	8.35	8.35	0.63	—	—	—	—	1.912	1.894	1.375	7.24	1.89	1.37	7.24	7.24	1 1/2-11 1/2 NPT	0.98	6.42	6.42	6.42
2	50	6.00	4.75	4	0.75	9.21	9.21	9.21	0.63	—	—	—	—	2.387	2.369	1.500	8.23	2.36	1.50	8.23	8.23	2-11 1/2 NPT	1.10	7.76	7.76	7.76
2 1/2	65	7.00	5.50	4	0.75	10.20	10.12	10.08	0.71	—	—	—	—	2.889	2.868	1.750	9.45	2.880	1.752	9.37	9.33	1/2-8 NPT	1.26	8.46	8.39	8.35
3	80	7.50	6.00	4	0.75	12.05	12.01	11.89	0.71	—	—	—	—	3.516	3.492	1.875	11.14	3.480	1.874	11.10	10.98	3-8 NPT	1.38	10.43	10.39	10.28
4	100	9.00	7.50	8	0.75	14.72	14.72	14.53	0.71	4.518	4.491	2.000	13.86	—	—	—	—	4.480	2.252	14.37	14.13	4-8 NPT	1.77	14.25	14.25	14.06

Note : Pay attention that the following chemicals such as Hydrogen Peroxide (H₂O₂) and Sodium hypochlorite (NaClO) are adapted will cause the abnormal pressure rising due to their vaporization nature.

3-WAY BALL VALVE TYPE 23 15mm - 100mm(1/2inch - 4inch)

FEATURES

Compact and Economic

The 3-WAY BALL VALVES allows two flow patterns, using one valve. The valve is suitable for a pipeline which requires two ball valves and a tee. That is, the 3-WAY BALL VALVES is economic because it makes piping compact and saves space.

Reversible Flow Direction

The 3-WAY BALL VALVE is based on the Asahi true union ball valve design which can be installed or removed just by tightening or loosening its union nut. The 3-WAY BALL VALVES has a L-shaped fluid channel and a handle which can be rotated 360°. The arrow on top of the handle indicates the flow direction.

Equipped ISO Mounting Flange

The feature provides for easier mounting of actuators on valves.

Interchangeable with Ball Valve Type21

The face to face dimensions, as well as the connecting parts, end connectors and union nuts, are the same as the ball valve Type21.

Other Special Features

- Double O-ring seal on stem for an added protection.
- W-L port ball and *Cross port ball are available upon request.
- *Note: Cross port ball is available at the size of 15mm (1/2inch) up to 50mm (2inch).
- Built-in spanner wrench on the handle for valve disassembly and assembly.

NSF Product

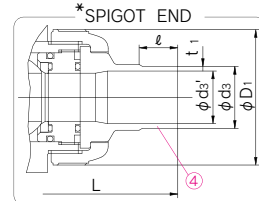
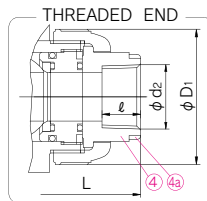
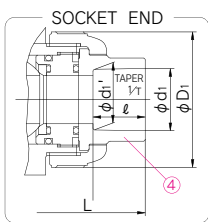
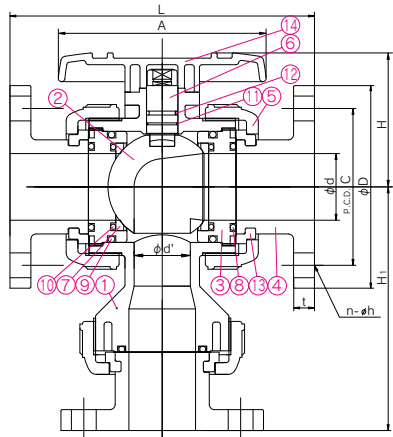
NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

:3-WAY BALL VALVE TYPE 23(Material:PVC+EPDM,FKM)

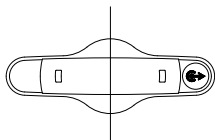
*Certified products bear an NSF Certification Mark.



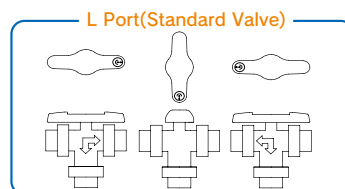
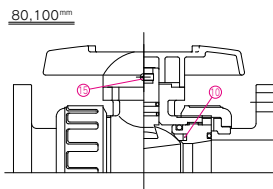
DIMENSION



* JIS and DIN Standard only.

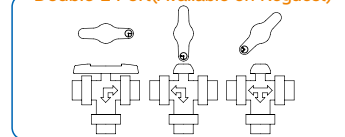


(Top view of the handle.)
NOTE: The shape and appearance of assembly differ a little with nominal size compared to this drawing.

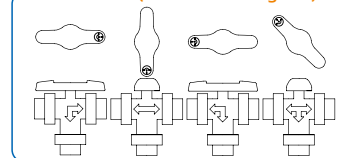


Changing the ball allows for standard valve to be converted.
(only 15mm(1/2inch)~50mm(2inch))

Double L Port(Available on Request)



Cross Port(Available on Request)



*Available at the size of 15mm up to 50mm.

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)	1.0{10.2}[150]	○	○	○	○
Chlorinated Polyvinyl Chloride(C-PVC)	0 - 90(30 - 195)	1.0{10.2}[150]	○	○	○	○
Polypropylene(PP)	-20 - 80(-5 - 175)	1.0{10.2}[150]	○ ※	○	○	○
Polyvinylidene Fluoride(PVDF)	-20 - 100(-5 - 210)	1.0{10.2}[150]	○ ※	○	○	○

* PP and PVDF 3-WAY BALL VALVES of the Socket End are welded valves.

Note : 1. There is a dead space in a ball valve. Volatile liquids, such as a hydrogen peroxide (H₂O₂) 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 its pressure rises abnormally, the valve can burst ejecting dangerous fragments.

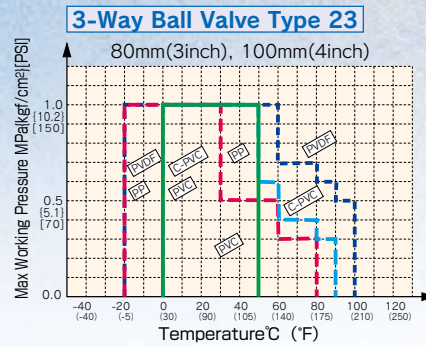
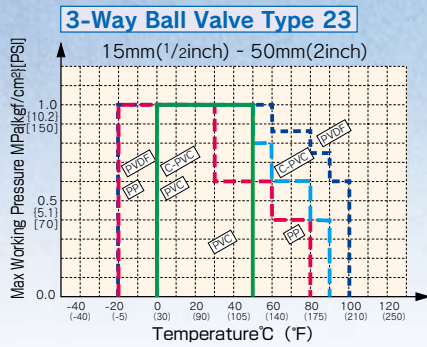
PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC,PP,C-PVC,PVDF	⑨	O-RING(B)	2	EPDM,FKM,others
②	BALL	1	PVC,PP,C-PVC,PVDF	⑩	O-RING(C), CUSHION	2	EPDM,FKM,others
③	CARRIER	2	PVC,PP,C-PVC,PVDF	⑪	O-RING(D)	1	EPDM,FKM,others
④	END CONNECTOR	3	PVC,PP,C-PVC,PVDF	⑫	O-RING(E)	1	EPDM,FKM,others
⑤	UNION NUT	3	PVC,PP,C-PVC,PVDF	⑬	STOP RING	3	PVDF(Used for Flanged End)
⑥	STEM	1	PVC,PP,C-PVC,PVDF	⑭	HANDLE	1	ABS
⑦	SEAT	2	PTFE	⑮	TAPPING SCREW(A)	1	STAINLESS STEEL304
⑧	O-RING(A)	3	EPDM,FKM,others	⑯	RING	3	STAINLESS STEEL304

Note : The stop ring (⑫) is used for Flanged End valves only.

The ring (⑯) is used for 15,20,and 25mm C-PVC valves.

WORKING PRESSURE VS. TEMPERATURE



DIMENSIONS TABLE

Nominal Size		Flanged End											Socket End										Unit:mm									
		JIS 5K				JIS 10K				L			PVC, C-PVC				PP															
mm	inch	D	C	n	h	D	C	n	h	L	t	H ₁	d ₁	ℓ	1/T	L	H ₁	d ₁	d ₁ '	ℓ	L	H ₁	d ₁	d ₁ '	ℓ	L	H ₁					
15	1/2	80	60	4	12	95	70	4	15	143	12	94	22.11	20	1/34	108	77	21.20	20.20	20	108	77	22.11	20	1/34	108	77	21.20	20.20	20	108	77
20	3/4	85	65	4	12	100	75	4	15	172	14	115	26.13	24	1/34	128	93	26.20	25.20	23	126	92	26.13	24	1/34	128	93	26.20	25.20	23	126	92
25	1	95	75	4	12	125	90	4	19	187	14	133	32.16	27	1/34	145	112	33.00	32.00	25	141	110	32.16	27	1/34	145	112	33.00	32.00	25	141	110
40	1 1/2	120	95	4	15	140	105	4	19	212	16	165	48.21	37	1/37	189	154	47.00	46.00	28	171	145	48.21	37	1/37	189	154	47.00	46.00	28	171	145
50	2	130	105	4	15	155	120	4	19	234	16	187	60.25	42	1/37	220	180	59.00	58.00	28	192	166	60.25	42	1/37	220	180	59.00	58.00	28	192	166
80	3	180	145	4	19	185	150	8	19	304	18	256	89.60	64	1/49	316	261	88.00	86.00	35	258	232	89.60	64	1/49	316	261	88.00	86.00	35	258	232
100	4	200	165	8	19	210	175	8	19	372	18	305	114.70	84	1/56	418	328	113.00	111.00	45	340	289	114.70	84	1/56	418	328	113.00	111.00	45	340	289

Nominal Size		Threaded End																					Unit:mm							
		d ₂	ℓ	L	H ₁	d	d'	D ₁	D ₂	D ₃	D ₄	C ₁	H	H ₂	H ₃	H ₄	H ₅	A	S	e										
15	1/2	Rc 1/2	15	102	74	15	15	48	42	25	13.5	36	51.5	30	6	3	8	92	10.5	5.5										
20	3/4	Rc 3/4	17	120	89	20	20	60	42	25	15	36	59.5	36.5	6	3	10	100	11	5.5										
25	1	Rc 1	20	131	105	25	25	70	42	25	15	36	68	43.5	6	3	10	110	11	5.5										
40	1 1/2	Rc 1 1/2	25	163	141	40	32	100	57	35	23	50	89	61	10	3	12	131	18	6.5										
50	2	Rc 2	28	197	168	51	43	126	57	35	23	50	102.5	72.5	10	3	12	159	18	6.5										
80	3	Rc 3	35	264	235	78	68.5	152	81	55	30	70	140	94	13	3	19	240	24	9										
100	4	Rc 4	45	360	299	100	90	210	116	70	40	102	178	126	16	3	23	300	34	11										

Nominal Size		Flanged End											Socket End										Threaded End				Unit:mm	
		DIN PN10				L			PVC, C-PVC				PP, PVDF						d ₂		ℓ		L		H ₁			
mm	inch	D	C	n	h	L	t	H ₁	d ₁	ℓ	L	H ₁	d ₁	d ₁ '	ℓ	L	H ₁	d ₁	d ₁ '	ℓ	L	H ₁	d ₂	ℓ	L	H ₁		
15	1/2	95	65	4	14	130	12	88	20	16	102	72	19.50	19.30	14.5	99	71	Rp 1/2	15	102	74	19.50	19.30	14.5	99	71		
20	3/4	105	75	4	14	150	14	104	25	19	120	85	24.50	24.30	16	114	83	Rp 3/4	17	120	89	24.50	24.30	16	114	83		
25	1	115	85	4	14	160	14	120	32	22	131	104	31.50	31.30	18	123	100	Rp 1	20	131	105	31.50	31.30	18	123	100		
40	1 1/2	150	110	4	18	200	16	159	50	31	163	142	49.45	49.20	23.5	148	131	Rp 1 1/2	25	163	141	49.45	49.20	23.5	148	131		
50	2	165	125	4	18	230	16	185	63	38	197	170	62.50	62.10	27.5	176	154	Rp 2	28	197	168	62.50	62.10	27.5	176	154		
80	3	200	160	8	18	310	21	259	90	51	282	245	89.20	88.85	35.5	251	224	Rp 3	35	264	235	89.20	88.85	35.5	251	224		
100	4	220	180	8	18	350	18	305	110	61	349	305	109.05	108.65	41.5	310	279	Rp 4	45	338	299	109.05	108.65	41.5	310	279		

Nominal Size		Spigot End																				
		PVC				PP, PVDF																
mm	inch	d ₃	d ₃ '	ℓ	H ₁	d ₃	ℓ	PP	t	L	H ₁											
15	1/2	20	15	18.5	83	20	18.5	2.5	1.9	124	83											
20	3/4	25	20	24	99	25	22	2.7	1.9	144	99											
25	1	32	25	24.5	115	32	22.5	3.0	2.4	154	115											
40	1 1/2	50	40	34	153	50	32	4.6	3.0	194	153											
50	2	63	51	38	178	63	36	5.8	3.0	224	178											
80	3	90	80	51	252	90	38	8.2	4.3	295	246											
100	4	110	93.6	61	308	110	44.5	10.0	5.3	353	301											

Nominal Size																							Unit:mm			
		d	d'	D ₁	D ₂	D ₃	D ₄	C ₁	H	H ₂	H ₃	H ₄	H ₅	A	S	e										
15	1/2	15	15	48	42	25	13.5	36	51.5	30	6	3	8	92	10.5	5.5										
20	3/4	20	20	60	42	25	15	36	59.5	36.5	6	3	10	100	11	5.5										
25	1	25	25	70	42	25	15	36	68	43.5	6	3	10	110	11	5.5										
40	1 1/2	40	32	100	57	35	23	50	89	61	10	3	12	131	18	6.5										
50	2	51	43	126	57	35	23	50	102.5	72.5	10	3	12	159	18	6.5										
80	3	78	68.5	152	81	55	30	70	140	94	13	3	19	240	24	9										
100	4	100	90	210	116	70	40	102	178	126	16	3	23	300	34	11										

Nominal Size		Flanged End											Socket End										Threaded End				Unit:inch					
		ASTM Class 150				L			ASTM SCH40				PVC, C-PVC						PP, PVDF						d ₂		ℓ		L		H ₁	
inch	mm	D	C	n	h	L	t	H ₁	d ₁	d ₁ '	ℓ	L	d ₁	d ₁ '	ℓ	L	H ₁	d ₁	d ₁ '	ℓ	L	H ₁	d ₂	ℓ	L	H ₁						
1/2	15	3.50	2.38	4	0.62	5.63	0.47	3.70	—	—	—	—	0.848	0.836	0.875	4.45	3.08	0.830	0.870	4.45	3.09	1/2-14 NPT	0.59	4.02	2.89							
3/4	20	3.88	2.75	4	0.62	6.77	0.55	4.50	—	—	—	—	1.058	1.046	1.000	5.08	3.56	1.030	1.000	5.08	3.61	3/4-14 NPT	0.67	4.72	3.48							
1	25	4.25	3.12	4	0.62	7.36	0.55	5.24	—	—	—	—	1.325	1.310	1.125	5.75	4.32	1.300	1.130	5.75	4.37	1-11 1/2 NPT	0.79	5.16	4.13							
1 1/2	40	5.00	3.88	4	0.62	8.35	0.63	6.50	—	—	—	—	1.912	1.894	1.375	7.24	5.71	1.890	1.370	7.24	5.85	1 1/2-11 1/2 NPT	0.98	6.42	5.53							
2	50	6.00	4.75	4	0.75	9.21	0.63	7.34	—	—	—	—	2.387	2.369	1.500	8.23	6.66	2.360	1.500	8.23	6.76	2-11 1/2 NPT	1.10	7.76	6.61							
3	80	7.50	6.00	4	0.75	11.97	0.71	10.06	—	—	—	—	3.516	3.492	1.875	11.10	9.59	3.480	1.874	11.10	11.10	3-8 NPT	1.38	10.39	9.25							
4	100	9.00	7.50	8	0.75	14.65	0.71	12.01	4.518	4.491	2.000	13.90	—	—	—	—	11.58	4.480	2.252	14.37	14.37	4-8 NPT	1.77	14.17	11.77							

Nominal Size																							Unit:inch			
		d	d'	D ₁	D ₂	D ₃	D ₄	C ₁	H	H ₂	H ₃	H ₄	H ₅	A	S	e										
1/2	15	0.59	0.59	1.89	1.65	0.98	0.53	1.42	2.03	1.18	0.24	0.12	0.31	3.62	0.41	0.22										
3/4	20	0.79	0.79	2.36	1.65	0.98	0.59	1.42	2.34	1.44	0.24	0.12	0.39	3.94	0.4											

COMPACT BALL VALVE 13mm - 80mm(3/8inch - 3inch)

FEATURES

· Features such as compact, light weight and assembly of a reduced number of parts, the COMPACT BALL VALVES can easily be installed in a small space.

NSF Product

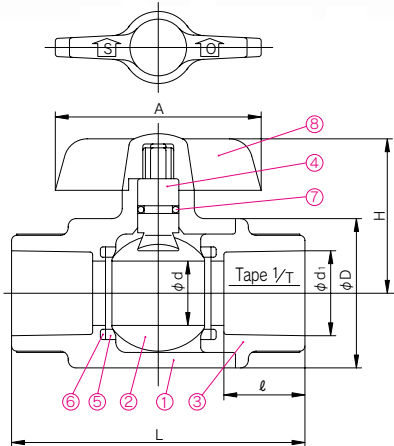
NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

· Compact BALL VALVE (Material:PVC+EPDM)

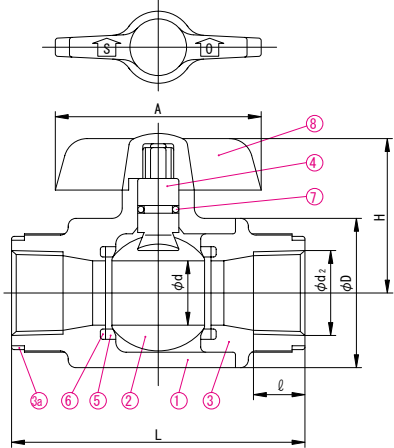
*Certified products bear an NSF Certification Mark.



SOCKET END



THREADED END

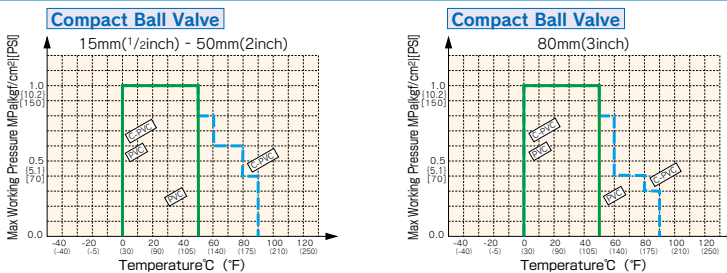


MATERIAL AND WORKING TEMPERATURE

Body material	Working Temperature °C (°F)	Max. Working Pressure(at R.T.) MPa[kgf/cm ²][PSI]	End Connectors	Color
Unplasticized Polyvinyl Chloride(PVC)	0-50(30-120)	1.0{10.2}[150]	Socket End Threaded End	Dark gray
Chlorinated Polyvinyl Chloride(C-PVC)	0-90(30-195)	1.0{10.2}[150]	Socket End Threaded End	Brown or Light gray

Notes : 1. There is a dead space in a ball valve. Volatile liquids, such as a hydrogen peroxide (H₂O₂) 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 its pressure rises abnormally, the valve can burst ejectng dangerous fragments.)

WORKING PRESSURE VS. TEMPERATURE



DIMENSIONS TABLE

Nominal Size		Socket End					Threaded End			Unit:mm			
		d	Socket End		Threaded End			D	H	A			
mm	inch	d ₁	l	1/T	L	JIS B 0203	L						
13	3/8	13	18.20	17	1/30	67	Rc 1/2	15	67	35	42	60	
15	1/2	15	22.20	21	1/34	79	-	-	-	39	44	70	
20	3/4	20	26.25	28	1/34	102	Rc 3/4	17	102	48	55	80	
25	1	25	32.30	31.5	1/34	114	Rc 1	20	114	58	60	80	
32	1 1/4	31	38.28	33	1/34	127	Rc 1 1/4	22	127	66	70	95	
40	1 1/2	35	48.43	42	1/37	152	Rc 1 1/2	25	152	72.5	76	110	
50	2	45	60.50	49	1/37	176	Rc 2	28	176	88.5	85	110	
80	3	68.5	89.60	64	1/49	236	Rc 3	35	236	130	124	200	

Nominal Size		Socket End					Threaded End			Unit:mm			
		d	Socket End		Threaded End			D	H	A			
mm	inch	d ₁	l	L	DIN 2999								
13	3/8	13	16	14	85	Rc 3/8	15	85	35	42	60		
15	1/2	15	20	16	97	Rc 1/2	15	97	39	44	70		
20	3/4	20	25	19	102	Rc 3/4	17	102	48	55	80		
25	1	25	32	22	114	Rc 1	20	114	58	60	80		
32	1 1/4	31	40	26	127	Rc 1 1/4	22	127	66	70	95		
40	1 1/2	35	50	31	152	Rc 1 1/2	25	152	72.5	76	110		
50	2	45	63	38	176	Rc 2	28	176	88.5	85	110		
80	3	68.5	90	51	236	Rc 3	35	236	130	124	200		

Nominal Size		Socket End					Threaded End			Unit:inch			
		d	Socket End		Threaded End			D	H	A			
inch	mm	d ₁	d ₂	l	L	ANSI/ASME B1.20.1							
1/2	13	0.51	0.848	0.836	0.69	3.35	1/2-14NPT	0.59	3.35	1.38	1.65	2.36	
3/4	20	0.79	1.058	1.046	0.72	4.02	3/4-14NPT	0.67	4.02	1.89	2.17	3.15	
1	25	0.98	1.325	1.310	0.87	4.49	1-11 1/2NPT	0.79	4.49	2.28	2.36	3.15	
1 1/4	32	1.22	1.670	1.655	0.94	5.00	1 1/4-11 1/2NPT	0.87	5.00	2.60	2.76	3.74	
1 1/2	40	1.38	1.912	1.894	1.09	5.98	1 1/2-11 1/2NPT	0.98	5.98	2.85	2.99	4.33	
2	50	1.77	2.387	2.369	1.16	6.93	2-11 1/2NPT	1.10	6.93	3.48	3.31	4.33	
3	80	2.70	3.516	3.492	1.87	9.29	3-8NPT	1.17	9.29	5.12	4.88	7.87	

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, C-PVC
②	BALL	1	PVC, C-PVC
③	END CONNECTOR	1	PVC, C-PVC
④	STEM	1	PVC, C-PVC
⑤	SEAT	2	PTFE
⑥	CUSHION	2	EPDM, FKM
⑦	O-RING	1	EPDM, FKM
⑧	HANDLE	1	ABS
⑨	RING※	2	STAINLESS STEEL304

Note : The ring (⑨) is used for C-PVC valves 13mm ~ 25mm in nominal size.

LAB COCK



FEATURES

The LAB COCK is a compact, light weight plastic valve which is highly corrosion-resistant, in durable.

NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

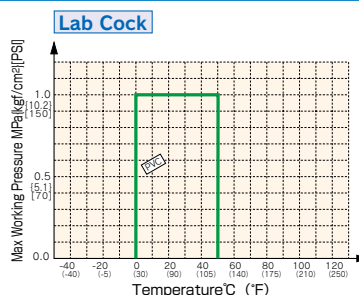
:LAB COCK(Material:PVC+EPDM)

*Certified products bear an NSF Certification Mark.

MATERIAL AND WORKING TEMPERATURE

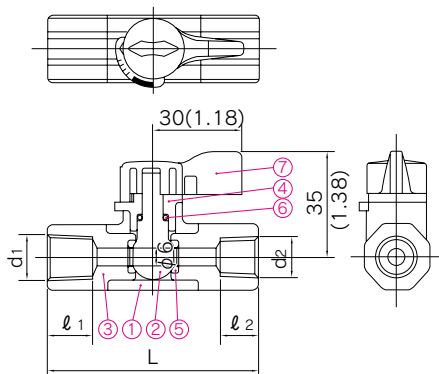
Body material	Unplasticized Polyvinyl Chloride(PVC)
Working Temperature	0°C - 50°C (30° F - 120° F)
Max.Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI]
End Connectors	Hose, Male thread, Female thread
Nominal Size	●Hose:12 to 15mm(standard hose inner diameter) ●Male thread:1/4, 1/2 ●Female thread:1/4, 3/8

WORKING PRESSURE VS. TEMPERATURE

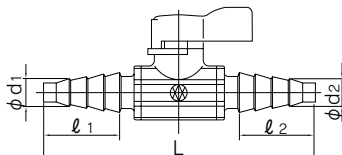


DIMENSION

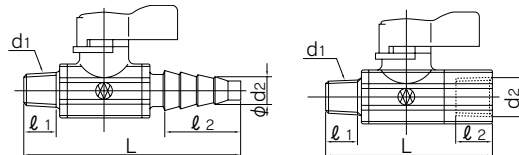
FEMALE THREAD × FEMALE THREAD



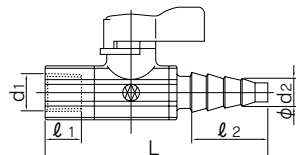
HOSE × HOSE



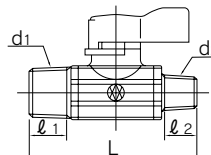
MALE THREAD × HOSE



FEMALE THREAD × HOSE



MALE THREAD × MALE THREAD



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC
②	BALL & STEM	1	PVC
③	END CONNECTOR	2	PVC
④	GLAND	1	PVC
⑤	SEAT	2	EPDM, PTFE, others
⑥	O-RING	1	EPDM, others
⑦	HANDLE	1	ABS

DIMENSIONS TABLE

JIS											Unit:mm
	d ₁	d ₂	l ₁	l ₂	L		d ₁	d ₂	l ₁	l ₂	L
FEMALE THREAD × FEMALE THREAD	Rc 1/4	Rc 1/4	15	15	71	MALE THREAD × HOSE	R 1/4	10	13	30.5	88.5
	Rc 3/8	Rc 1/4	15	15	71		R 1/2	10	15	30.5	91
	Rc 3/8	Rc 3/8	15	15	71		R 1/4	R 1/4	13	13	66
HOSE × HOSE	10	10	30.5	30.5	111	MALE THREAD × MALE THREAD	R 1/2	R 1/4	15	13	68.5
FEMALE THREAD × HOSE	Rc 1/4	10	15	30.5	91		R 1/2	R 1/2	15	15	71
	Rc 3/8	10	15	30.5	91	MALE THREAD × FEMALE THREAD	R 1/4	Rc 1/4	13	15	68.5
					R 1/4		Rc 3/8	13	15	68.5	
					R 1/2		Rc 1/4	15	15	71	
						R 1/2	Rc 3/8	15	15	71	

DIN							Unit:mm						
		d ₁	d ₂	ℓ ₁	ℓ ₂	L			d ₁	d ₂	ℓ ₁	ℓ ₂	L
①	FEMALE THREAD × FEMALE THREAD	Rp 1/4	Rp 1/4	15	15	71	④	MALE THREAD × HOSE	R 1/4	10	13	30.5	88.5
		Rp 3/8	Rp 1/4	15	15	71			R 1/2	10	15	30.5	91
		Rp 3/8	Rp 3/8	15	15	71			R 1/4	R 1/4	13	13	66
②	HOSE × HOSE	10	10	30.5	30.5	111	⑤	MALE THREAD × MALE THREAD	R 1/2	R 1/4	15	13	68.5
③	FEMALE THREAD × HOSE	Rp 1/4	10	15	30.5	91			R 1/2	R 1/2	15	15	71
		Rp 3/8	10	15	30.5	91			R 1/4	Rp 1/4	13	15	68.5
							⑥	MALE THREAD × FEMALE THREAD	R 1/4	Rp 3/8	13	15	68.5
									R 1/2	Rp 1/4	15	15	71
									R 1/2	Rp 3/8	15	15	71

ANSI							Unit:inch						
		d ₁	d ₂	ℓ ₁	ℓ ₂	L			d ₁	d ₂	ℓ ₁	ℓ ₂	L
①	FEMALE THREAD × FEMALE THREAD	1/4-18NPT	1/4-18NPT	0.51	0.51	2.80	④	MALE THREAD × HOSE	1/4-18NPT	0.39	0.51	1.20	3.48
		3/8-18NPT	1/4-18NPT	0.59	0.51	2.80			1/2-14NPT	0.39	0.59	1.20	3.58
		3/8-18NPT	3/8-18NPT	0.59	0.59	2.80			1/4-18NPT	1/4-18NPT	0.51	0.51	2.60
②	HOSE × HOSE	0.39	0.39	1.20	1.20	4.37	⑤	MALE THREAD × MALE THREAD	1/2-14NPT	1/4-18NPT	0.59	0.51	2.70
③	FEMALE THREAD × HOSE	1/4-18NPT	0.39	0.51	1.20	3.58			1/2-14NPT	1/2-14NPT	0.59	0.59	2.80
		3/8-18NPT	0.39	0.59	1.20	3.58			1/4-18NPT	1/4-18NPT	0.51	0.51	2.70
							⑥	MALE THREAD × FEMALE THREAD	1/4-18NPT	3/8-18NPT	0.51	0.59	2.70
									1/2-14NPT	1/4-18NPT	0.59	0.51	2.80
									1/2-14NPT	3/8-18NPT	0.59	0.59	2.80
							⑦	MALE THREAD × ELBOW	1/2-14NPT	0.63	0.59	1.26	3.66

■ LAB COCK 1/2inch MALE THREAD × ELBOW16mm

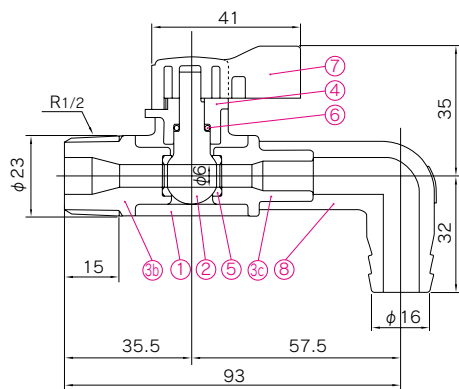


MATERIAL AND WORKING TEMPERATURE

Body material	Unplasticized Polyvinyl Chloride(PVC)
Working Temperature	0°C - 50°C (30° F - 120° F)
Max. Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI]
End Connectors	R1/2inch Male thread × Elbow16mm

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC
②	BALL & STEM	1	PVC
③	END CONNECTOR	1	PVC
④	END CONNECTOR	1	PVC
⑤	GLAND	1	PVC
⑥	SEAT	2	PTFE
⑦	O-RING	1	EPDM, Others
⑧	HANDLE	1	ABS
⑨	ELBOW	1	PVC



Panel Mounting

● Diaphragm Valve Type14	15mm - 100mm(1/2inch - 4inch)
● Ball Valve Type21	15mm - 100mm(1/2inch - 4inch)

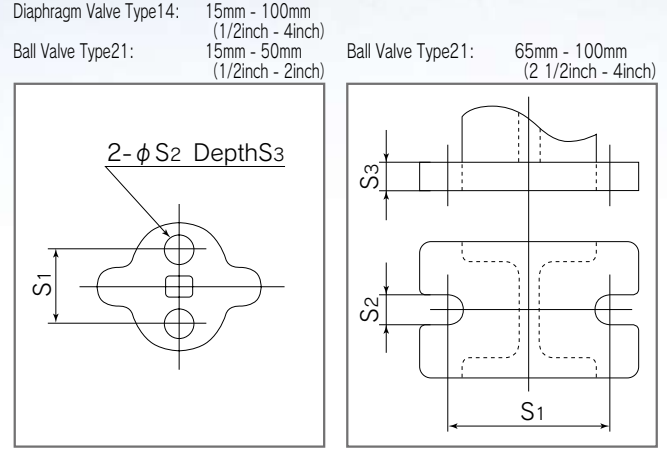
Procedure

Refer to the User's Manual for Metal Insert (Ensat) by the Maker.

Bottom Stand Dimension

Diaphragm Valve Type14 Unit:mm(inch)

Nominal Size mm (inch)	S1	S2	S3
15mm - 32mm (1/2 - 1 1/4)	25 (0.98)	7 (0.28)	13 (0.51)
40mm, 50mm (1 1/2, 2)	45 (1.8)	9 (0.35)	15 (0.59)
65mm (2 1/2)	85 (3.35)	11 (0.43)	20 (0.79)
80mm (3)	100 (3.94)	15 (0.59)	28 (1.10)
100mm (4)	120 (4.72)	15 (0.59)	28 (1.10)

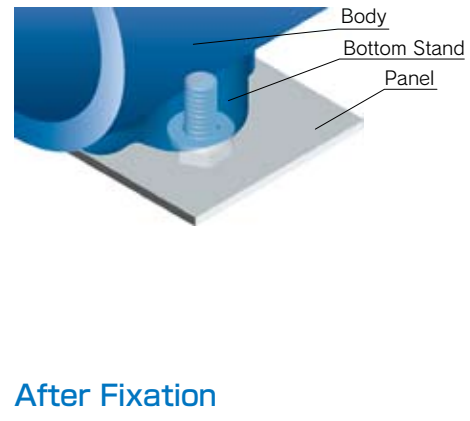
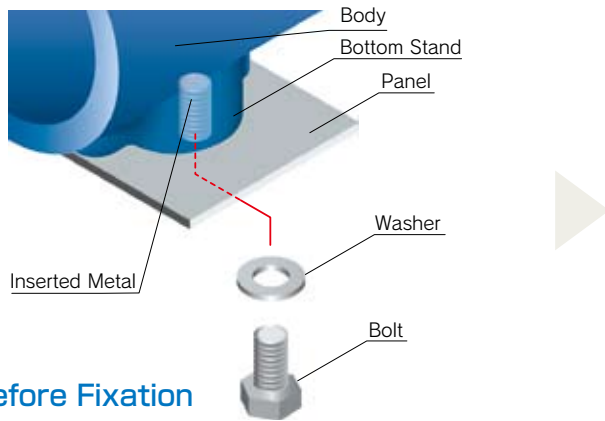


Ball Valve Type21 Unit:mm(inch)

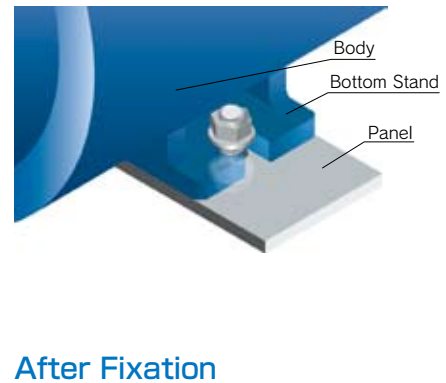
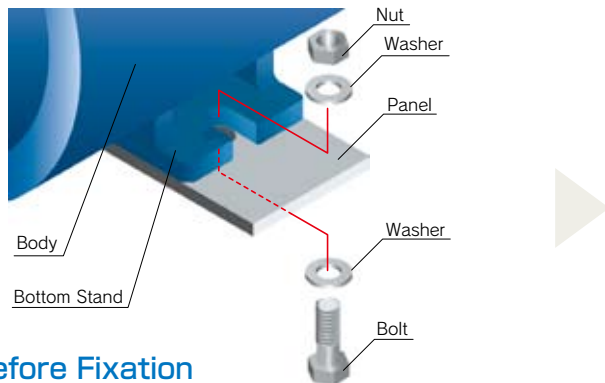
Nominal Size mm (inch)	S1	S2	S3
15mm - 25mm (1/2 - 1)	19 (0.75)	7.3 (0.29)	11 (0.43)
32mm - 50mm (1 1/4 - 2)	30 (1.18)	9 (0.35)	15 (0.59)
65mm (2 1/2)	48 (1.89)	9 (0.35)	6 (0.24)
80mm (3)	55 (2.17)	11 (0.43)	7 (0.28)
100mm (4)	65 (2.56)	11 (0.43)	8 (0.31)

Fixation of Bottom Stand with Panel

Nominal size 15 - 50mm(1/2inch - 2inch)



Nominal size 65 - 100mm(2 1/2inch - 4inch)



BUTTERFLY VALVE TYPE 57 40mm - 350mm(1 1/2inch - 14inch)

FEATURES



■ Excellent Sealing Performance

Sealing performance has been improved due to its specially designed seat "PAT pending".

■ Lowered Operating Torque

Required operating torque has been reduced by applying specially designed seat.

■ Protection for Over Tightening of Mating Flange

The valve body acts as a protector against over tightening to avoid breakage or deformation of the seat. (Please refer to sketch of below)

■ Spherical Design Disc

Spherical design disc provides superior durability and improved Cv value.

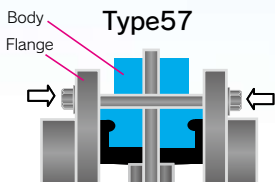
■ Stem Retainer

Stem retainer allows field automation or accessories preventing the stem from being removed.

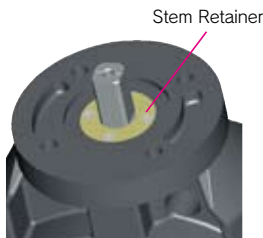
■ Plastic Gear Box

Corrosion resistant plastic gear box provides a broader range of applications.

■ Wetted Part Lubricants Free (SPECIAL)



Body contacts flanges to protect the seat from deformation and to avoid increased operating torque.



● Plastic Gear Box Housing

Superior corrosion resistance allows applications such as severe chemicals and sea waters.

● NAMUR Mounting Dimension

NAMUR standard is applied on the gear box housing.

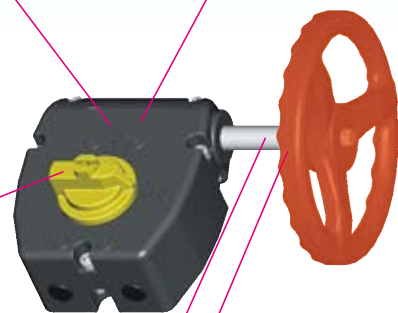
● Highly Visible Position Indicator

Highly visible from a distance.

● Stainless Steel Trim and Hardware

● Plastic Hand Wheel

Corrosion resistance gripping design allows easy operation.

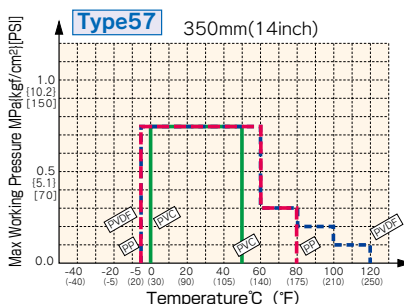
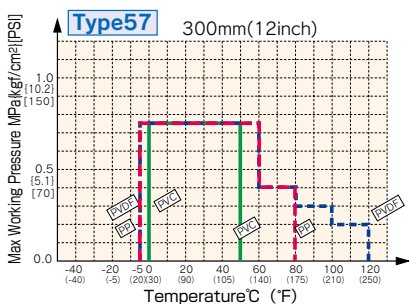
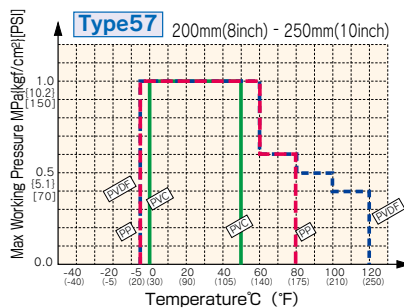
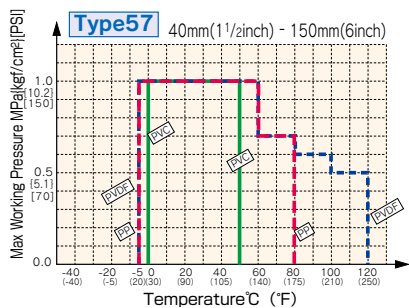


Note: Long stem type and chain drive type are available on special request.

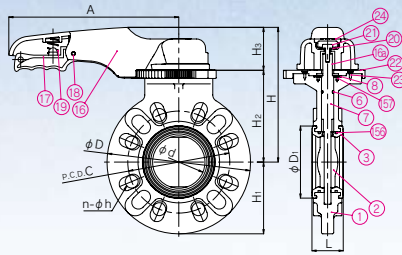
SPECIFICATIONS

Body material	Working Temperature °C (°F)	Max. Working Pressure MPa[kgf/cm ²][PSI]	
		40mm-250mm(1 1/2inch~10inch)	300mm·350mm(12inch·14inch)
Polyvinyl Chloride(PVC)	0 - 50(30 - 120)	1.0{10.2}[150]	0.75{7.7}[110]
Polypropylene(PP)	-5 - 80(20 - 175)	1.0{10.2}[150]	0.75{7.7}[110]
Polyvinylidene Fluoride(PVDF)	-5 - 120(20 - 250)	1.0{10.2}[150]	0.75{7.7}[110]

WORKING PRESSURE VS. TEMPERATURE



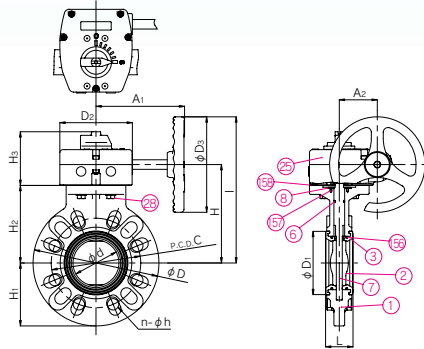
Lever Type ● 40mm(1½inch) – 200mm(8inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/DISC PVC/PP PP/PP PVDF/PVDF	⑱	PIN	1	PPG
②	DISC	1	PVC/PVC	⑲	SPRING	1	STAINLESS STEEL304
③	SEAT	1	EPDM FKM Others	⑳	WASHER (A)	1	STAINLESS STEEL304
⑥	O-RING(C)	1		㉑	BOLT (B)	1	STAINLESS STEEL304
⑦	STEM	1	STAINLESS STEEL403 Others	㉒	LOCKING PLATE	1	PPG
⑧	STEM RETAINER(A)	1	PP	㉓	SCREW (B)	4	STAINLESS STEEL304
⑯	HANDLE(A)	1	PP	㉔	CAP(A)	1	PP
⑰	HANDLE LEVER	1	PPG	⑳	HANDLE INSERTED METAL	1	STAINLESS STEEL316L
				㉕	RETAINING RING	2	STAINLESS STEEL304
				㉖	SCREW (F)	4	STAINLESS STEEL304

Gear Type ● 40mm(1½inch) – 350mm(14inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/DISC PVC/PP PP/PP PVDF/PVDF	㉔	GEAR BOX	1	PLASTIC STAINLESS STEEL
②	DISC	1	PVC/PVDF	㉕	BOLT (C)	4	STAINLESS STEEL304
③	SEAT	1	EPDM FKM Others	㉖	RETAINING RING	2	STAINLESS STEEL (SCS13)
⑥	O-RING(C)	1		㉗	SCREW (F)	4	STAINLESS STEEL304
⑦	STEM	1	STAINLESS STEEL403 Others	㉘	GASKET (L)	1	EPDM
⑧	STEM RETAINER(A)	1	PP				

DIMENSIONS TABLE

Nominal Size		JIS 5K																		JIS 10K				H		H ₁		H ₂		H ₃		I		A		A ₁		A ₂		Number of handle wheel rotation
mm	inch	d	C			n			h			D	D ₁	D ₂	D ₃	L	LEVER	GEAR	H ₁	LEVER	GEAR	LEVER	GEAR	I	A	A ₁	A ₂													
40	1½	45	95	4	15	105	4	19	150	71	122	160	39	156	130	75	100	95	56	92	210	220	167	64	9.5															
50	2	56	105	4	15	120	4	19	165	81	122	160	42	166	140	83	110	105	56	92	220	220	167	64																
65	2½	69	130	4	15	140	4	19	185	95	122	160	46	176	150	93	120	115	56	92	230	220	167	64																
80	3	77	145	4	19	150	8	19	211	105	122	160	46	191	165	106	135	130	56	92	245	250	167	64																
100	4	102	165	8	19	175	8	19	238	134	122	160	56	206	180	119	150	145	56	92	260	250	167	64																
125	5	129	200	8	19	210	8	23	263	169	122	160	66	237	195	132	168	160	69	92	275	320	167	64																
150	6	150	230	8	19	240	8	23	285	190	122	160	71	252	210	143	183	175	69	92	290	320	167	64																
200	8	195	280	8	23	290	12	23	340	242	122	160	87	283	241	170	214	206	69	92	321	400	167	64																
250	10	250	345	12	23	355	12	25	421	302	122	160	112	—	276	211	—	241	—	92	356	—	167	64																
300	12	303	390	12	23	400	16	25	488	360	188	300	129	—	340	244	—	298	—	108	490	—	242	99																
350	14	351	435	12	23	445	16	25	539	393	188	300	129	—	367	270	—	325	—	108	517	—	242	99																

Nominal Size		DIN PN 10																		H		H ₁		H ₂		H ₃		I		A		A ₁		A ₂		Number of handle wheel rotation
mm	inch	d	C			n			h			D	D ₁	D ₂	D ₃	L	LEVER	GEAR	H ₁	LEVER	GEAR	LEVER	GEAR	I	A	A ₁	A ₂									
40	1½	45	110	4	18	150	71	122	160	39	156	130	75	100	95	56	92	210	220	167	64	9.5														
50	2	56	125	4	18	165	81	122	160	42	166	140	83	110	105	56	92	220	220	167	64															
65	2½	69	145	4	18	185	95	122	160	46	176	150	93	120	115	56	92	230	220	167	64															
80	3	77	160	8	18	211	105	122	160	46	191	165	106	135	130	56	92	245	250	167	64															
100	4	102	180	8	18	238	134	122	160	56	206	180	119	150	145	56	92	260	250	167	64															
125	5	129	210	8	18	263	169	122	160	66	237	195	132	168	160	69	92	275	320	167	64															
150	6	150	240	8	22	285	190	122	160	71	252	210	143	183	175	69	92	290	320	167	64															
200	8	195	295	8	22	340	242	122	160	87	283	241	170	214	206	69	92	321	400	167	64															
250	10	250	350	12	22	421	302	122	160	112	—	276	211	—	241	—	92	356	—	167	64															
300	12	303	400	12	22	488	360	188	300	129	—	340	244	—	298	—	108	490	—	242	99															
350	14	351	460	16	22	539	393	188	300	129	—	367	270	—	325	—	108	517	—	242	99															

Nominal Size		ANSI CLASS 150																		H		H ₁		H ₂		H ₃		I		A		A ₁		A ₂		Number of handle wheel rotation
inch	mm	d	C			n			h			D	D ₁	D ₂	D ₃	L	LEVER	GEAR	H ₁	LEVER	GEAR	LEVER	GEAR	I	A	A ₁	A ₂									
1½	40	1.77	3.88	4	0.62	5.91	2.80	4.80	6.30	1.54	6.14	5.12	2.95	3.94	3.74	2.20	3.62	8.27	8.66	6.57	2.52	9.5														
2	50	2.20	4.75	4	0.75	6.50	3.19	4.80	6.30	1.65	6.54	5.51	3.25	4.33	4.13	2.20	3.62	8.66	8.66	6.57	2.52															
2½	65	2.72	5.50	4	0.75	7.28	3.74	4.80	6.30	1.81	6.93	5.91	3.64	4.72	4.53	2.20	3.62	9.06	8.66	6.57	2.52															
3	80	3.03	6.00	4	0.75	8.31	4.13	4.80	6.30	1.81	7.52	6.50	4.15	5.31	5.12	2.20	3.62	9.65	9.84	6.57	2.52															
4	100	4.02	7.50	8	0.75	9.37	5.28	4.80	6.30	2.20	8.11	7.09	4.69	5.91	5.71	2.20	3.62	10.24	9.84	6.57	2.52															
5	125	5.08	8.50	8	0.88	10.35	6.65	4.80	6.30	2.60	9.33	7.68	5.20	6.61	6.30	2.72	3.62	10.83	12.60	6.57	2.52															
6	150	5.91	9.50	8	0.88	11.22	7.48	4.80	6.30	2.80	9.92	8.27	5.61	7.20	6.89	2.72	3.62	11.42	12.60	6.57	2.52															
8	200	7.68	11.75	8	0.88	13.39	9.53	4.80	6.30	3.43	11.14	9.49	6.69	8.43	8.11	2.72	3.62	12.64	15.75	6.57	2.52															
10	250	9.84	14.25	12	1.00	16.57	11.89	4.80	6.30	4.41	—	10.87	8.31	—	9.49	—	3.62	14.02	—	6.57	2.52															
12	300	11.93	17.00	12	1.00	19.21	14.17	7.40	11.81	5.08	—	13.39	9.61	—	11.73	—	4.25	19.29	—	9.53	3.90															
14	350	13.82	18.75	12	1.12	21.22	15.47	7.40	11.81	5.08	—	14.45	10.63	—	12.80	—	4.25	20.35	—	9.53	3.90															

Note. The shape and appearance of the actual assembly may differ slightly in nominal size as compared with this drawing.

BUTTERFLY VALVE TYPE 56 400mm(16inch)



FEATURES

Step Further to All Plastic

TYPE 56 with lever operator butterfly valve which metal parts are reduced as much as possible.

Easy Transformation of Operation Devices

Application of modular design on top flange provides the valve with flexible and easy change of operation types, from lever to gear and from manual to automatic and so on.

Excellent Handling and Safety

Application of newly innovative locking device(patent pending)for lever type gives the valve opening degrees by 19 levels.

And also handle lever with locking hole provides one solution against wrong handle operation.

Handle Lever with Flexibility of Mounting Direction

Symmetric design on top flange offers easy change of handle lever mounting direction at working site.

Option

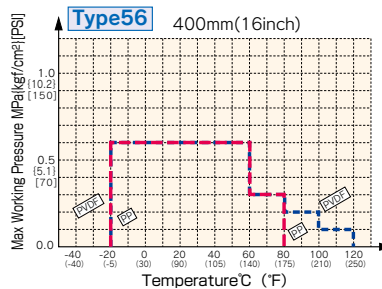
Long stem type and chain drive type are available on special request.

SPECIFICATIONS

Body material	Nominal size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure (at R.T.) MPa{kgf/cm ² }[PSI]	
			400mm(16inch)	
PP	400(16)	-20 - 80(-5 - 175)	0.6{6.1}[87]	
PVDF	400(16)	-20 - 120(-5 - 250)	0.6{6.1}[87]	

※R.T. ... Room Temperature

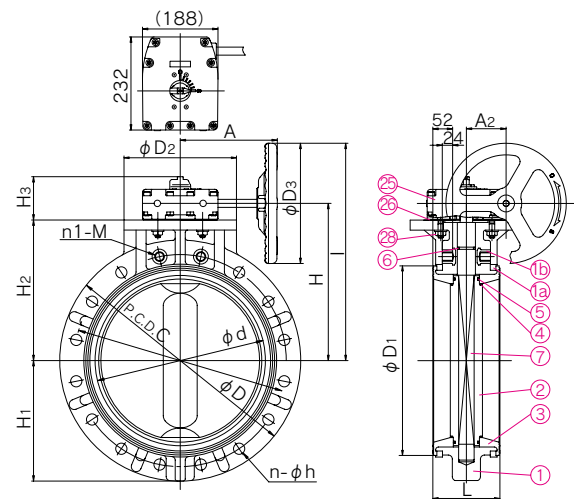
WORKING PRESSURE VS. TEMPERATURE



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/DISC PP/PP PVDF/PVDF	⑥	O-RING(C)	1	EPDM,FKM,OTHERS
②	DISC	1		⑦	STEM	1	STAINLESS STEEL(SUS403)
③	STEM SEAT	1	EPDM,FKM,OTHERS	⑭	RING ¹⁾	2	STEEL(SS400)
④	O-RING(A)	2	EPDM,FKM,OTHERS	⑮	INSERTED METAL OF BODY ²⁾	4	COPPER ALLOY(C3604)
⑤	O-RING(B)	2	EPDM,FKM,OTHERS				

Note: 1) Used for PP body: with epoxy powder coat
2) Used for JIS 10K400mm(16inch)



DETAIL OF INSERTED NUTS

NOM. SIZE	BOLT HOLES	Q'TY OF INSERTED NUT	ℓ ₁		ℓ ₃
			UPPER	TOTAL (2×n1)	
400 16	M24	14	2×2	4	46 24

※JIS 10K 400mm(16inch)only

DIMENSIONS TABLE

JIS																	Unit:mm			
Nominal Size	d	JIS 10K						D	D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	A	A ₂	Number of handle rotation
mm	inch	C	n	h	n ₁	M														
400	16	406	510	14	27	2	24	600	470	235	300	169	390	300	350	108	540	242	99.2	9.5

DIN																	Unit:mm	
Nominal Size	d	DIN PN 10				D	D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	A	A ₂	Number of handle rotation
mm	inch	C	n	h														
400	16	406	515	16	26	600	470	235	300	169	390	300	350	108	540	242	99.2	9.5

ANSI																	Unit:inch	
Nominal Size	d	ANSI Class 150				D	D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	A	A ₂	Number of handle rotation
inch	mm	C	n	h														
16	400	15.98	21.25	16	1.12	23.62	18.50	9.25	11.81	6.65	15.35	11.81	13.78	4.25	21.26	9.53	3.91	9.5

BUTTERFLY VALVE TYPE 75 450mm - 600mm(18inch - 24inch)

- 450mm(18inch) – 600mm(24inch)

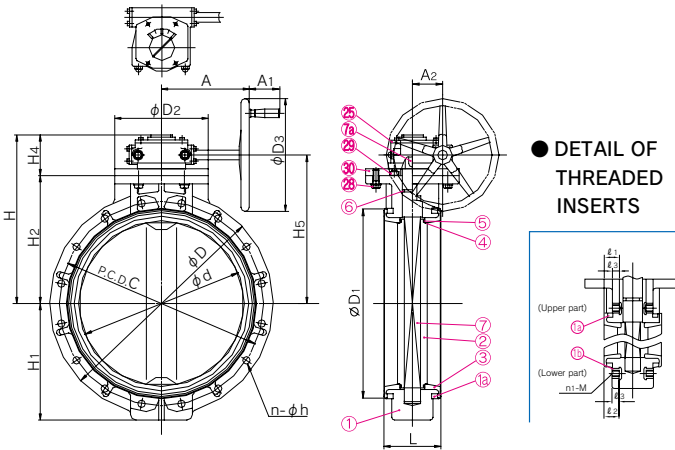
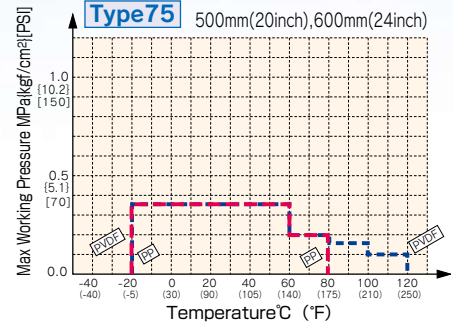
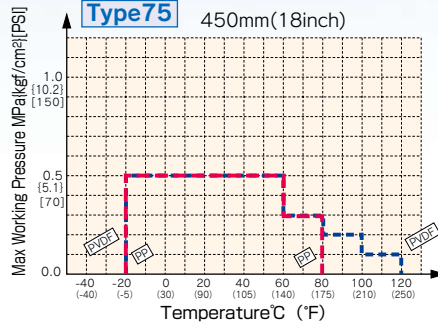


SPECIFICATIONS

Body material	Nominal size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure (at R.T.) MPa{kgf/cm²}[PSI]		
			450mm(18inch)	500mm(20inch)	600mm(24inch)
PP	450 - 600(18 - 24)	-20 - 80(-5 - 175)	0.5 {5.1}[73]	0.5 {5.1}[73]	0.5 {5.1}[73]
PVDF	450 - 600(18 - 24)	-20 - 120(-5 - 250)	0.35 {3.6}[51]	0.35 {3.6}[51]	0.35 {3.6}[51]

※R.T...Room Temperature

WORKING PRESSURE VS. TEMPERATURE



● DETAIL OF THREADED INSERTS

PARTS & MATERIALS

No.	Pcs.	MATERIAL	No.	Pcs.	MATERIAL
①	BODY	1 BODY / DISC PP / PP PVDF / PVDF	㉗	KEY(A)	1 CARBON STEEL(S45C)
②	DISC	1	㉘	GEAR BOX	1 CAST ALUMINIUM ALLOY (FC250)
③	SEAT	1	㉙	BOLT(A)	4 STAINLESS STEEL(SUS304)
④	O-RING(A)	2 EPDM	㉚	BOLT(D)	4 STAINLESS STEEL(SUS304)
⑤	O-RING(B)	2 FKM	㉛	STAND	1 CHROMIZED STEEL(SS400)
⑥	O-RING(C)	1 others	㉜	RING	2 CHROMIZED STEEL(SS400)
⑦	STEM	2 STAINLESS STEEL(SUS403)			

1) Used only for JIS 10K.

Option

Long stem type and chain drive type are available on special request.

DIMENSIONS TABLE

Nominal Size mm inch	M	BOLT HOLES n	Q'TY OF INSERTED NUT			l ₁	l ₂	l ₃
			UPPER	LOWER	TOTAL (2×n1)			
450 18	M24	16	2×2	2×2	8	43	48	24
500 20	M24	16	2×2	2×2	8	43	53	24
600 24	M30	20	2×2	2×2	8	58	58	30

JIS

Unit:mm

Nominal Size mm inch	d	JIS 10K					D			D ₁	D ₂	D ₃	L	H ₁	H ₂	H ₃	H	A	A ₁	A ₂
		C	n	h	n ₁	M	PP	PVDF												
450 18	452	565	16	27	4	M24	633	630	525	340	410	179	315	370	139	445	319	85	110	
500 20	502	620	16	27	4	M24	683	680	575	340	410	190	350	400	139	475	319	85	110	
600 24	603	730	20	33	4	M30	793	790	686	340	410	209	424	465	139	540	319	85	110	

DIN

Unit:mm

Nominal Size mm inch	d	DIN 2501 PN10			D		D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₄	H ₅	A	A ₁	A ₂
		C	n	h	PP	PVDF												
450 18	452	565	20	26	633	630	525	340	410	179	509	315	370	139	445	319	85	110
500 20	502	620	20	26	683	680	575	340	410	190	539	350	400	139	475	319	85	110
600 24	603	730	20	30	793	790	686	340	410	209	604	424	465	139	540	319	85	110

ANSI

Nominal Size inch mm	d	ANSI Class150			D		D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₄	H ₅	A	A ₁	A ₂
		C	n	h	PP	PVDF												
18 450	17.80	22.75	16	1.25	24.92	24.80	20.67	13.39	16.14	7.05	20.04	12.40	14.57	5.47	17.52	12.56	3.35	4.33
20 500	19.76	25.00	20	1.25	26.89	26.77	22.64	13.39	16.14	7.48	21.22	13.78	15.75	5.47	18.70	12.56	3.35	4.33
24 600	23.74	29.50	20	1.38	31.22	31.10	27.01	13.39	16.14	8.23	23.78	16.69	18.31	5.47	21.26	12.56	3.35	4.33

BUTTERFLY VALVE TYPE 57L (Lug Style) 80mm,100mm,150mm(3inch,4inch,6inch)

FEATURES

●PDCPD



●PVC



■ Easy Piping Maintenance

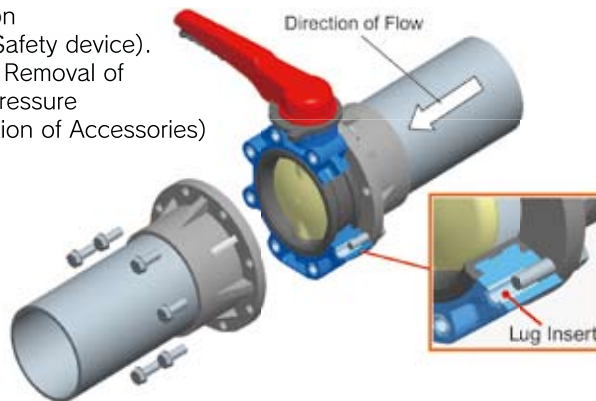
It is not necessary to remove fluid from the pipe line.

■ Strong In Pulsating Pressure

3 Times Stronger than a Major Competitor.

■ Same Features as Type57

- a) Protection for Over-Tightening Constant Stem Torque.
- b) New Designed Disc and Seat (Liner).
 - Longer Life
 - Lower Sealing Torque
 - Higher Cv Value
- c) Plastic Gear Box.
 - Extremely Corrosion Resistant
 - Easy Operation
- d) Stem Retainer (Safety device).
 - Prevention of Removal of Stem under Pressure (Safe Installation of Accessories)



SPECIFICATIONS

- JIS and DIN Standard

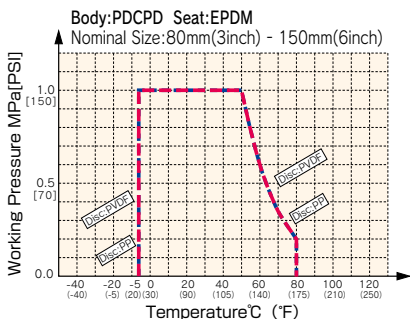
Body material	Standard	Working Temperature °C (°F)	Max. Working Pressure MPa{kgf/cm²}[PSI]	
			80mm - 150mm (3inch - 6inch)	300mm (12inch)
Poly diethyl cyclo penta diene (PDCPD)	JIS, DIN	-5 -80 (20 - 175)	1.0MPa{10.2kgf/cm²}[150PSI]	

- ANSI Standard

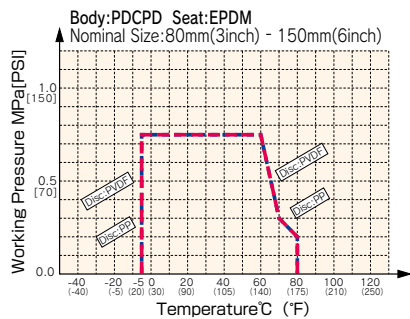
Body material	Standard	Working Temperature °C (°F)	Max. Working Pressure MPa{kgf/cm²}[PSI]	
			80mm - 250mm (3inch - 10inch)	300mm (12inch)
Polyvinyl Chloride (PVC)	ANSI	-5 -50 (20 - 120)	1.0MPa{10.2kgf/cm²}[150PSI]	0.75MPa{7.7kgf/cm²}[110PSI]

WORKING PRESSURE VS. TEMPERATURE

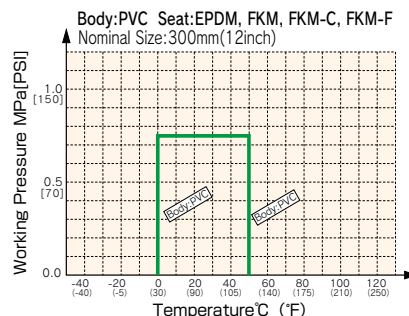
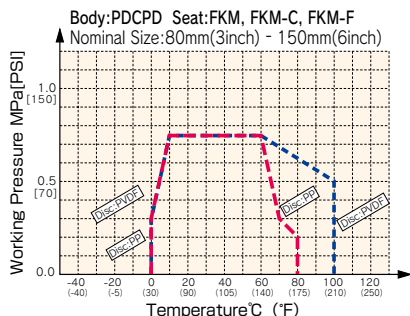
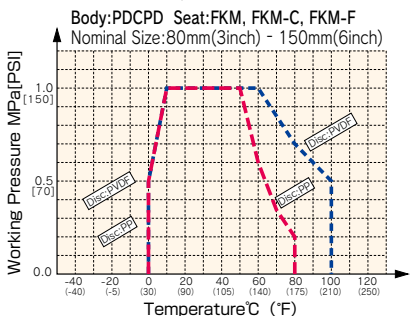
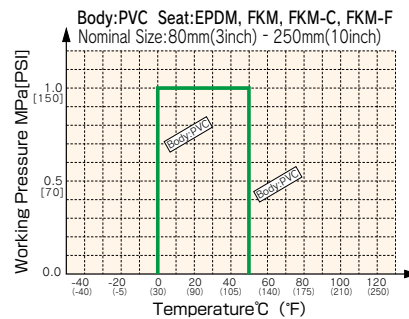
LUG-BUTTERFLY VALVE TYPE57L(WAFER)



LUG-BUTTERFLY VALVE TYPE57L(LUG)



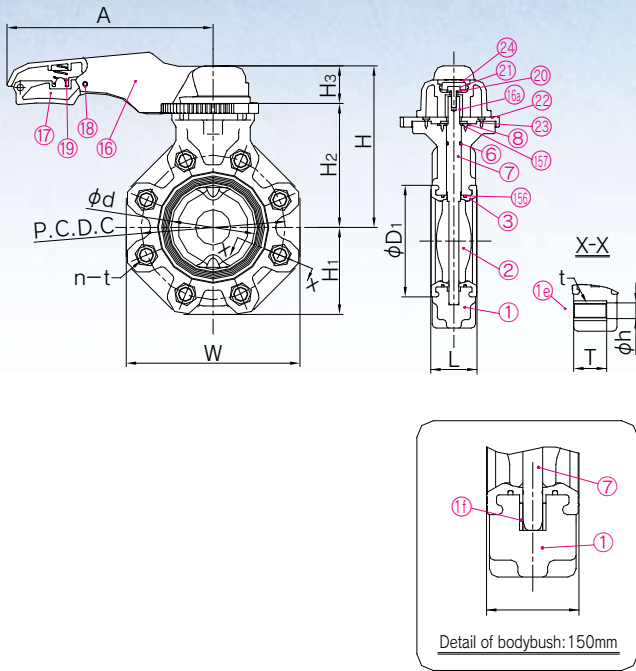
LUG-BUTTERFLY VALVE TYPE57L



Lever Type

●80mm, 100mm, 150mm (3inch, 4inch, 6inch)

DIMENSION



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	PDCPD,PVC	
⑯	LUG-INSERT	8	STAINLESS STEEL(SUS304)	used for 150mm PDCPD only
⑪	BODYBUSH	1	STAINLESS STEEL(SUS304)	
②	DISC	1	PP,PVDF	
③	SEAT	1	FKM	
⑥	O-RING(C)	1	EPDM	
⑦	STEM	1	STAINLESS STEEL(SUS403)	
⑧	STEM RETAINER(A)	1	PP	
⑯	HANDLE(A)	1	PP	
⑰	HANDLE INSERTED METAL	1	STAINLESS STEEL(SUS316L)	
⑱	HANDLE LEVER	1	PPG	
⑲	SPRING	1	STAINLESS STEEL(SUS304)	
⑳	WASHER(A)	1	STAINLESS STEEL(SUS304)	
㉑	BOLT(B)	1	STAINLESS STEEL(SUS304)	
㉒	LOCKING PLATE	1	PPG	
㉓	SCREW(B)	4	STAINLESS STEEL(SUS304)	
㉔	CAP(A)	1	PP	
⑮	RETAINING RING	2	STAINLESS STEEL(SCS13)	
⑰	SCREW(F)	4	STAINLESS STEEL(SUS304)	

DIMENSIONS TABLE

Unit:mm

Nominal Size	d	JIS 10K			D ₁	L	H	H ₁	H ₂	H ₃	A	W	T	t	
mm	inch	C	n	h											
80	3	77	150	8	19	105	46	191	94	135	56	250	193	40	M16×40 width across fat 24
100	4	102	175	8	19	134	56	206	105	150	56	250	217	40	M16×40 width across fat 24
150	6	150	240	8	23	190	71	252	138	183	69	320	285	50	M20×50 width across fat 30

Unit:mm

Nominal Size	d	DIN PN10			D ₁	L	H	H ₁	H ₂	H ₃	A	W	T	t	
mm	inch	C	n	h											
80	3	77	160	8	18	105	46	191	94	135	56	250	193	40	M16×40 width across fat 24
100	4	102	180	8	18	134	56	206	105	150	56	250	217	40	M16×40 width across fat 24
150	6	150	240	8	23	190	71	252	138	183	69	320	285	50	M20×50 width across fat 30

Unit:mm

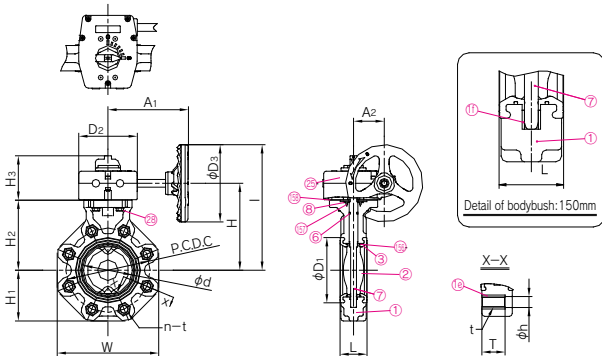
Nominal Size	d	ANSI 150lb			D	D ₁	L	H	H ₁	H ₂	H ₃	A	W	T	t	
mm	inch	C	n	h												
80	3	3.03	6.00	4	0.75	7.28	4.13	1.81	7.52	3.82	5.31	2.20	9.84	7.09	1.26	5/8-11 UNC
100	4	4.02	7.50	8	0.75	8.27	5.28	2.20	8.11	4.41	5.91	2.20	9.84	8.50	1.52	5/8-11 UNC
150	6	5.91	9.50	8	0.87	10.63	7.48	2.80	9.92	5.55	7.20	2.72	12.60	10.67	1.97	3/4-10 UNC
200	8	7.68	11.75	8	0.87	12.60	9.53	3.43	11.14	6.61	8.43	2.72	15.75	12.76	2.26	3/4-10 UNC

Note : The shape and appearance of assembly differ little with nominal size compared to this drawing.

Gear Type

●80mm, 100mm, 150mm (3inch, 4inch, 6inch)

DIMENSION



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	PDCPD,PVC	
⑯	LUG-INSERT	8	STAINLESS STEEL(SUS304)	used for 150mm PDCPD only
⑪	BODYBUSH	1	STAINLESS STEEL(SUS304)	
②	DISC	1	PP,PVDF	
③	SEAT	1	FKM	
⑥	O-RING(C)	1	EPDM	
⑦	STEM	1	STAINLESS STEEL(SUS403)	
⑧	STEM RETAINER(A)	1	PP	
㉔	GEAR BOX	1	PLASTIC etc.	
㉓	BOLT(C)	4	STAINLESS STEEL(SUS304)	
⑮	RETAINING RING	2	STAINLESS STEEL(SCS13)	
⑰	SCREW(F)	4	STAINLESS STEEL(SUS304)	
⑮	GASKET(L)	1	EPDM	

DIMENSIONS TABLE

JIS

Nominal Size	d	JIS 10K			D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	A ₁	A ₂	W	T	t	Number of handle wheel rotation	GEAR BOX TYPE	
mm	inch	C	n	h																	
80	3	77	160	8	19	105	122	160	46	165	94	130	92	245	167	64	193	40	M16×40 width across fat 24	9.5	TYPE1
100	4	102	175	8	19	134	122	160	56	180	105	145	92	260	167	64	217	40	M16×40 width across fat 24		
150	6	150	240	8	23	190	122	160	71	210	138	175	92	290	167	64	285	50	M20×50 width across fat 30		

DIN

Nominal Size	d	DIN PN10			D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	A ₁	A ₂	W	T	t	Number of handle wheel rotation	GEAR BOX TYPE	
mm	inch	C	n	h																	
80	3	77	160	8	18	105	122	160	46	165	94	130	92	245	167	64	193	40	M16×40 width across fat 24	9.5	TYPE1
100	4	102	180	8	18	134	122	160	56	180	105	145	92	260	167	64	217	40	M16×40 width across fat 24		
150	6	150	240	8	23	190	122	160	71	210	138	175	92	290	167	64	285	50	M20×50 width across fat 30		

ANSI

Nominal Size	d	ANSI 150lb			D	D ₁	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	A ₁	A ₂	W	T	t	Number of handle wheel rotation	GEAR BOX TYPE	
mm	inch	C	n	h																		
80	3	3.03	6.00	4	0.75	7.28	4.13	4.80	6.30	1.81	6.50	3.82	5.12	3.62	9.65	6.57	2.52	7.09	1.26	5/8-11 UNC	9.5	TYPE1
100	4	4.02	7.50	8	0.75	8.27	5.28	4.80	6.30	2.20	7.09	4.41	5.71	3.62	10.24	6.57	2.52	8.50	1.52	5/8-11 UNC		
150	6	5.91	9.50	8	0.87	10.63	7.48	4.80	6.30	2.80	8.27	5.55	6.89	3.62	11.42	6.57	2.52	10.67	1.97	3/4-10 UNC		
200	8	7.68	11.75	8	0.87	12.60	9.53	4.80	6.30	3.43	9.49	6.61	8.11	3.62	12.64	6.57	2.52	12.76	2.26	3/4-10 UNC		
250	10	9.84	14.25	12	0.98	15.75	11.89	4.80	6.30	4.41	10.87	7.95	9.49	3.62	14.02	6.57	2.52	15.91	2.52	7/8-9 UNC		
300	12	11.93	17.01	12	0.98	18.31	14.17	7.40	11.81	5.08	13.39	9.29	11.73	4.52	19.29	9.53	3.90	18.54	2.52	7/8-9 UNC		

NOTE. The shape and appearance of assembly differ little with nominal size compared to this drawing.

BUTTERFLY VALVE TYPE 55 50mm - 250mm(2inch - 10inch)

FEATURES

Extreme Corrosion Resistance

All of the wetted parts are completely covered with PTFE, which can result in excellent performance against a highly corrosive media. Therefore BUTTERFLY VALVE TYPE 55 is the most suitable valve for lines of highly corrosive media in factories of Soda electrolysis, Chemicals and Agricultural chemicals.

Improved Cv Value

Thinner disc makes the area of flow passage wider and the Cv value is improved as a result.

Excellent resistibility to high and low temperature.

BUTTERFLY VALVE TYPE 55 can be used continuously at the range from -20°C to 100°C (-5°F to 210°F)

Simple Structure for Stem Sealing

Simple structure for stem sealing offers high reliability and also allows for easy maintenance.



APPLICATIONS

Electrolytic soda, agricultural chemicals, chemicals, steel, aluminum refining exhaust fumes dischargers, desulfurizers, erosive and corrosive solution lines

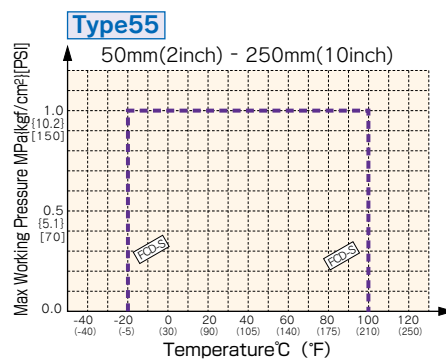
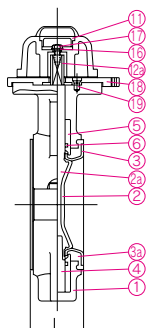
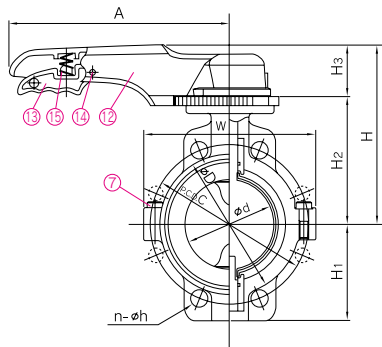
SPECIFICATIONS

Body material	DUCTILE CAST IRON (FCD-S)[with epoxy powder coat]	Nominal size mm(inch)	50(2), 80(3), 100(4), 125(5) 150(6), 200(8), 250(10)
Disc·Seat material	PTFE	Max. Working Pressure	1.0MPa{10.2kgf/cm ² }[150PS1]
		Working Temperature	-20°C - 100°C(-5° F - 210° F)

DIMENSION

WORKING PRESSURE VS. TEMPERATURE

Lever



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	FCD-S(Epoxy Powder Coat)
②	DISC	1	PTFE
②a	DISC INSERT	1	STAINLESS STEEL304
③	SEAT	1	PTFE
③a	CUSHION RUBBER	1	CR
④	STEM	1	STAINLESS STEEL304
⑤	BUSH	2	STAINLESS STEEL304
⑥	O-RING	2	EPDM
⑦	BOLT(A)	-	STAINLESS STEEL304
⑪	CAP	1	PP
⑫	HANDLE	1	PP
⑫a	INSERTED METAL OF HANDLE	1	STAINLESS STEEL304
⑬	HANDLE LEVER	1	PPG
⑭	PIN	1	PPG
⑮	SPRING	1	STAINLESS STEEL304
⑯	WASHER	1	STAINLESS STEEL304
⑰	BOLT(C)	1	STAINLESS STEEL304
⑱	LOCKING PLATE	1	PPG
⑲	SCREW	4	STAINLESS STEEL304

DIMENSIONS TABLE

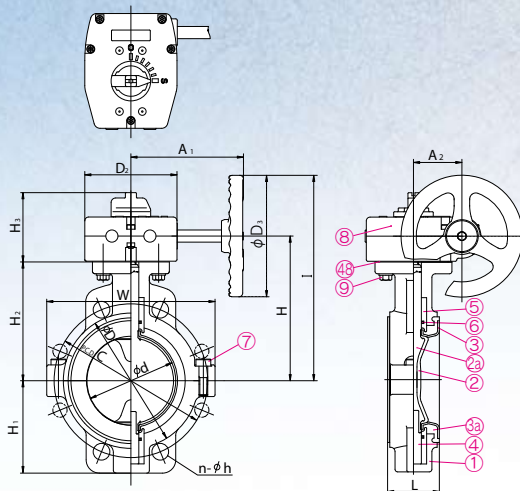
Nominal Size		JIS 10K										Unit:mm	
mm	inch	d	C	n	h	D	L	H	H ₁	H ₂	H ₃	W	A
50	2	55	120	2(4)	19	90	44	161	61	105	56	116	220
80	3	80	150	4(8)	19	125	54	180	95	124	56	152	250
100	4	100	175	4(8)	19	154	59	196	99	140	56	174	250
125	5	125	210	4(8)	23	181	64	235	120	166	69	206	320

Nominal Size		DIN PN 10										Unit:mm	
mm	inch	d	C	n	h	D	L	H	H ₁	H ₂	H ₃	W	A
50	2	55	125	2(4)	18	90	44	161	61	105	56	116	220
80	3	80	160	4(8)	18	125	54	180	95	124	56	152	250
100	4	100	180	4(8)	18	154	59	196	99	140	56	174	250
125	5	125	210	4(8)	18	181	64	235	120	166	69	206	320

Nominal Size		ANSI Class 150, ANSI Class 125										Unit:inch	
inch	mm	d	C	n	h	D	L	H	H ₁	H ₂	H ₃	W	A
2	50	2.17	4.75	2(4)	0.75	3.54	1.73	6.43	2.40	4.13	2.20	4.57	8.66
3	80	3.15	6.00	-(4)	0.75	4.92	2.13	7.09	3.74	4.88	2.20	5.98	9.84
4	100	3.94	7.50	4(8)	0.75	6.06	2.32	7.72	3.90	5.51	2.20	6.85	9.84
5	125	4.92	8.50	4(8)	0.88	7.13	2.52	9.25	4.72	6.54	2.72	8.11	12.60

DIMENSION

Gear



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	※FCD-S(Epoxy Powder Coat)	⑤	BUSH	2	STAINLESS STEEL304
②	DISC	1	PTFE	⑥	O-RING	2	EPDM
③	DISC INSERTED METAL	1	STAINLESS STEEL304	⑦	BOLT(A)	-	STAINLESS STEEL304
④	SEAT	1	PTFE	⑧	GEAR BOX	1	PLASTIC etc.
⑤	SEAT CUSION	1	CR	⑨	BOLT(B)	4	STAINLESS STEEL304
⑥	STEM	1	STAINLESS STEEL304				

Note : FCD-S: DUCTILE CAST IRON

DIMENSIONS TABLE

JIS																		Unit:mm			
Nominal Size mm inch	d	JIS 5K			JIS 10K			D	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	W	A ₁	A ₂	Number of handle rotation	GEAR BOX MODEL No.
		C	n	h	C	n	h														
50 2"	55	105	2(4)	15	120	2(4)	19	90	122	160	44	135	61	100	92	215	116	167	64	9.5	TYPE1
80 3	80	145	-(4)	19	150	4(8)	19	125	122	160	54	154	95	119	92	234	152	167	64		
100 4	100	165	4(8)	19	175	4(8)	19	154	122	160	59	170	99	135	92	250	174	167	64		
125 5	125	200	4(8)	19	210	4(8)	23	181	122	160	64	193	120	158	92	273	206	167	64		
150 6	150	230	4(8)	19	240	4(8)	23	211	122	160	75	210	137	175	92	290	236	167	64		
200 8	191	280	4(8)	23	290	4(12)	23	265	122	160	85	240	163	205	92	320	282	167	64		
250 10	245	345	4(12)	23	355	4(12)	25	325	122	160	96	275	200	240	92	355	341	167	64		

NOTE. The shape and appearance of assembly differ little with nominal size compared to this drawing.

DIN																		Unit:mm	
Nominal Size mm inch	d	DIN 2501 PN10			D	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	W	A ₁	A ₂	Number of handle rotation	GEAR BOX MODEL No.	
		C	n	h															
50 2"	55	125	2(4)	18	90	122	160	44	135	61	100	92	215	116	167	64	9.5	TYPE1	
80 3	80	160	-(4)	18	125	122	160	54	154	95	119	92	234	152	167	64			
100 4	100	180	4(8)	18	154	122	160	59	170	99	135	92	250	174	167	64			
125 5	125	210	4(8)	18	181	122	160	64	193	120	158	92	273	206	167	64			
150 6	150	240	4(8)	22	211	122	160	75	210	137	175	92	290	236	167	64			
200 8	191	295	4(8)	22	265	122	160	85	240	163	205	92	320	282	167	64			
250 10	245	350	4(12)	22	325	122	160	96	275	200	240	92	355	341	167	64			

NOTE. The shape and appearance of assembly differ little with nominal size compared to this drawing.

ANSI																		Unit:mm	
Nominal Size mm inch	d	ANSI Class 150, ANSI Class 125			D	D ₂	D ₃	L	H	H ₁	H ₂	H ₃	I	W	A ₁	A ₂	Number of handle rotation	GEAR BOX MODEL No.	
		C	n	h															
50 2"	2.17	4.75	2(4)	0.75	3.54	4.80	6.30	1.73	5.31	2.40	3.94	3.62	8.46	4.57	6.57	2.52	9.5	TYPE1	
80 3	3.15	6.00	-(4)	0.75	4.92	4.80	6.30	2.13	6.06	3.74	4.69	3.62	9.21	5.98	6.57	2.52			
100 4	3.94	7.50	4(8)	0.75	6.06	4.80	6.30	2.32	6.69	3.90	5.31	3.62	9.84	6.85	6.57	2.52			
125 5	4.92	8.50	4(8)	0.88	7.13	4.80	6.30	2.52	7.60	4.72	6.22	3.62	10.75	8.11	6.57	2.52			
150 6	5.91	9.50	4(8)	0.88	8.31	4.80	6.30	2.95	8.27	5.39	6.89	3.62	11.42	9.29	6.57	2.52			
200 8	7.52	11.75	4(8)	0.88	10.43	4.80	6.30	3.35	9.45	6.42	8.07	3.62	12.60	11.10	6.57	2.52			
250 10	9.65	14.25	4(12)	1.00	12.80	4.80	6.30	3.78	10.83	7.87	9.45	3.62	13.98	13.43	6.57	2.52			

NOTE. The shape and appearance of assembly differ little with nominal size compared to this drawing.

PDCPD BUTTERFLY VALVE 700mm - 1200mm(28inch - 48inch)



Nominal Size
700mm - 1200mm
(28inch - 48inch)

FEATURES

High Corrosion Resistance

The body and disc are made of PDCPD. And the corrosion-resistant resin, covering the whole contact surface, makes the valve highly resistant against chemical and sea water.

Light Weight

PDCPD having 1/4 or less the specific gravity of iron, the PDCPD BUTTERFLY VALVE is significantly lighter than a metallic butterfly valve.

Tight Seal

A seat made of a synthetic rubber, makes the valve highly water-tight.

Excellent Flow Characteristics

Being concentric and streamlined, the disc gives small resistance to a flow, thus allowing it to be laminar. The seat is kept clean, since it is integrated with the entire internal wall of the body.

Easy to Install

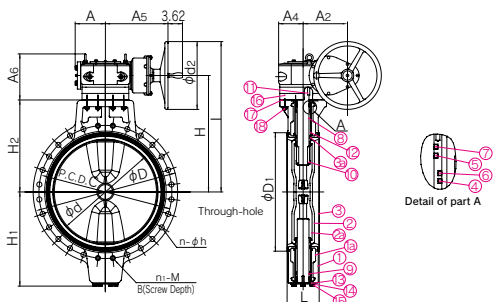
The seat is flanged, so that it needs no gasket. The PDCPD BUTTERFLY VALVE is so light that it is easy install.

Economics

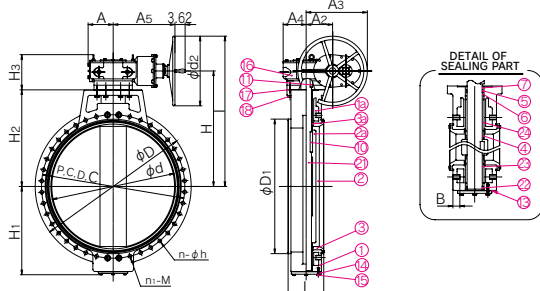
Because of its high corrosion resistance, the PDCPD BUTTERFLY VALVE remains easy to operate after prolonged periods of use and needs little maintenance. Its light weight reduces piping costs.

DIMENSION

700mm - 1000mm(28inch - 40inch)



1100mm, 1200mm(44inch, 48inch)



APPLICATIONS

Irrigation facilities, water supply and sewerage systems, heat accumulators, seawater, air pipelines, etc.

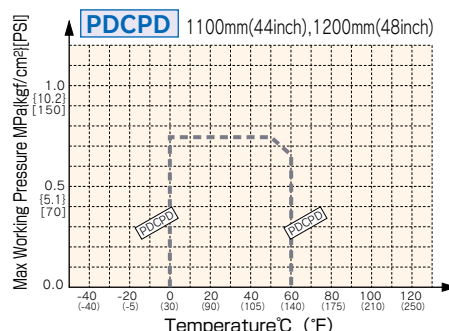
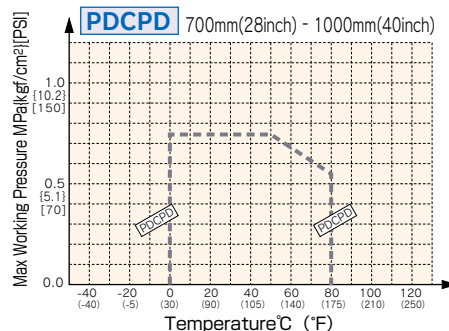
SPECIFICATIONS

Body material	Body & Disc=PDCPD. Seat=EPDMetc.
Nominal Size	700mm(28inch) - 1200mm(48inch)
Max. Working Pressure	0.75Mpa{7.7kgf/cm ² } [110PSI]
Working Temperature	70 - 1000mm(28inch - 40inch) 0 - 80°C (30° F - 176° F) 1100, 1200mm(44inch - 48inch) 0 - 60°C (30° F - 140° F)

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PDCPD
②	DISC	1	PDCPD
③	SEAT	1	
④	O-RING (A)	11	EPDM
⑤	O-RING (B)	3	
⑥	O-RING (C)	1	NBR
⑦	O-RING (D)	1	NBR
⑧	STEM (A)	1	STAINLESS STEEL (SUS304)
⑨	STEM (B)	1	STAINLESS STEEL (SUS304)
⑩	KEY (A)	1	CARBON STEEL (S45C)
⑪	KEY (B)	1	CARBON STEEL (S45C)
⑫	BUSH	2	BRONZE CAST (BC6)
⑬	GASKET (A)	1	NONAS SHEET
⑭	STEM HOLDER	1	STAINLESS STEEL (SUS304)
⑮	BOLT (A)	6	STAINLESS STEEL (SUS304)
⑯	GEAR BOX	1	CASTIRON (FC200) etc.
⑰	GASKET (B)	1	NONAS SHEET
⑱	BOLT (B)	8	STAINLESS STEEL (SUS304)
⑲	STEM	1	STAINLESS STEEL (SUS304)
⑳	THRUST	1	BRONZE CAST (BC6)
㉑	BUSH (A)	1	BRONZE CAST (BC6)
㉒	BUSH (B)	1	BRONZE CAST (BC6)
㉓	INSERT METAL OF BODY	1	CAST IRON (FCD450)
㉔	INSERT METAL OF DISC	1	CAST IRON (FCD450)
㉕	INSERT METAL OF RING	2	STAINLESS STEEL (SUS304)

WORKING PRESSURE VS. TEMPERATURE



LIST OF FLANGE STANDARDS

Nominal Size mm(inch)	FLANGE STANDARDS			Max. Working Pressure
	JIS 10K	ANSI Class 150	DIN PN10	MPa {kgf/cm ² } [PSI]
700(28)	○	○	○	0.75 {7.7} [110]
800(32)	○	○	○	0.75 {7.7} [110]
900(36)	○	—	○	0.75 {7.7} [110]
1000(40)	○	○	○	0.75 {7.7} [110]
1100(44)	○	○	—	0.75 {7.7} [110]
1200(48)	○	○	○	0.75 {7.7} [110]

DIMENSIONS TABLE

Nominal Size		d	JIS 10K						JWWA						D	D ₁	D ₂	L	H	I	H ₁	H ₂	A	A ₂	A ₄	A ₅	A ₆	Gear box Model No.				
mm	inch		C	h	N	n	n ₁		M	B	C	h	N	n															n ₁		M	B
700	28	670	840	33	24	20	4	8	M30	35	854	33	16	16	—	—	—	—	928	760	350	206	685	897	589	590	194	286	158	403	296	BRL-10
800	32	770	950	33	28	24	4	8	M30	35	960	33	20	16	4	8	M30	35	1034	870	350	240	715	927	619	620	194	286	158	403	296	BRL-10
900	36	870	1050	33	28	24	4	8	M30	35	1073	33	20	16	4	8	M30	35	1168	978	350	240	800	1112	704	705	194	286	158	403	296	BRL-10
1000	40	970	1160	39	28	24	4	8	M36	35	1179	33	24	20	4	8	M30	35	1262	1080	460	300	845	1157	749	750	229	242	210	565	323	BRL-20
1100	44	1080	1270	39	28	24	4	8	M36	42	1283	33	24	20	4	8	M30	35	1380	1195	460	300	942	1260	780	840	229	242	210	565	323	BRL-20
1200	48	1170	1380	39	32	28	4	8	M36	42	1387	33	28	24	4	8	M30	35	1488	1300	460	350	992	1310	850	890	229	242	210	565	323	BRL-20

Nominal Size		d	DIN PN 10						D	D ₁	D ₂	L	H	I	H ₁	H ₂	A	A ₂	A ₄	A ₅	A ₆	Gear box Model No.		
mm	inch		C	h	N	n	n ₁																M	B
700	28	670	840	33	24	20	4	8	M27	35	928	760	350	206	685	897	589	590	194	286	158	403	296	BRL-10
800	32	770	950	33	28	20	4	8	M30	35	1034	870	350	240	715	927	619	620	194	286	158	403	296	BRL-10
900	36	870	1050	33	28	24	4	8	M30	35	1168	978	350	240	800	1112	704	705	194	286	158	403	296	BRL-10
1000	40	970	1160	39	28	24	4	8	M33	42	1262	1080	460	300	845	1157	749	750	229	242	210	565	323	BRL-20
1200	48	1170	1380	39	32	28	4	8	M36	42	1488	1300	460	350	992	1310	850	890	229	242	210	565	323	BRL-20

Nominal Size		d	ANSI Class 125						ANSI Class 150						D	D ₁	D ₂	L	H	I	H ₁	H ₂	A	A ₂	A ₄	A ₅	A ₆	Gear box Model No.				
mm	inch		C	h	N	n	n ₁		M	B	C	h	N	n															n ₁		M	B
700	28	26.38	—	—	—	—	—	—	—	34.00	1.38	28	24	4	8	1 1/4	1.38	36.54	29.92	17.13	8.11	29.41	37.99	23.19	23.23	7.64	11.26	6.22	15.87	11.65	BRL-10	
800	32	30.31	—	—	—	—	—	—	—	38.50	1.62	28	24	4	8	1 1/2	1.38	41.34	34.25	17.13	9.45	30.59	39.17	24.37	24.41	7.64	11.26	6.22	15.87	11.65	BRL-10	
900	36	34.25	47.25	1.62	36	32	4	8	1 1/2	1.38	—	—	—	—	—	—	—	45.98	38.50	25.00	9.45	33.94	46.46	27.72	27.76	7.64	11.26	6.22	15.87	11.65	BRL-10	
1000	40	38.19	—	—	—	—	—	—	—	47.25	1.62	36	32	4	8	1 1/2	1.38	50.00	42.52	25.00	11.81	36.30	48.82	29.49	29.53	9.02	9.53	8.27	22.24	12.72	BRL-20	
1100	44	42.52	—	—	—	—	—	—	—	51.75	1.62	40	36	4	8	1 1/2	1.77	54.33	47.05	25.00	11.81	39.84	52.36	30.71	33.07	9.02	9.53	8.27	22.24	12.72	BRL-20	
1200	48	46.06	56.00	1.62	44	40	4	8	1 1/2	1.77	56.00	1.62	44	40	4	8	1 1/2	1.77	58.58	51.18	25.00	13.78	41.81	54.33	33.46	35.04	9.02	9.53	8.27	22.24	12.72	BRL-20

Nominal Size mm(inch)	700(28)	800(32)	900(36)	1000(40)	1100(44)	1200(48)
Stem Torque N·m {kgf·cm}	4,500 {45,900}	5,900 {60,200}	7,500 {76,500}	10,200 {104,000}	13,000 {132,600}	15,000 {153,000}
Hand Wheel operating force N{kgf}	339 {35}	444 {45}	565 {58}	326 {33}	415 {42}	479 {49}
Number of Handle Rotation	60	60	60	137	137	137
Gear Box Model	BRL-10	BRL-10	BRL-10	BRL-20	BRL-20	BRL-20

ROTARY DAMPER (PVC,PP) 40mm - 600mm(1½inch - 24inch)

FEATURES

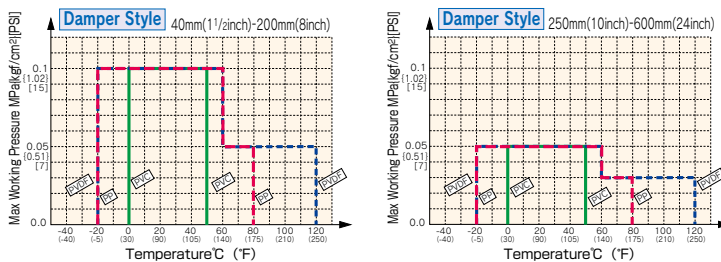
DAMPER STYLE is Designed for Flow Control.

Note : DAMPER STYLE is not a tight shut off valve.
Consult factory for Leakage rates.

SPECIFICATIONS

Body material	Nominal size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure (at R.T.) MPa{kgf/cm²}[PSI]		
			40(1½inch)~200(8inch)	250(10inch)~350(14inch)	400(16inch)~600(24inch)
PVC	40 - 350 (1½ - 14)	0 - 50 (30 - 120)	0.1 {1.0} [15]	0.05 {0.5} [7]	-
PP	40 - 600 (1½ - 24)	-20 - 80 (-5 - 175)	0.1 {1.0} [15]	0.05 {0.5} [7]	0.05 {0.5} [7]
PVDF	40 - 600 (1½ - 24)	-20 - 120 (-5 - 250)	0.1 {1.0} [15]	0.05 {0.5} [7]	0.05 {0.5} [7]

WORKING PRESSURE VS. TEMPERATURE



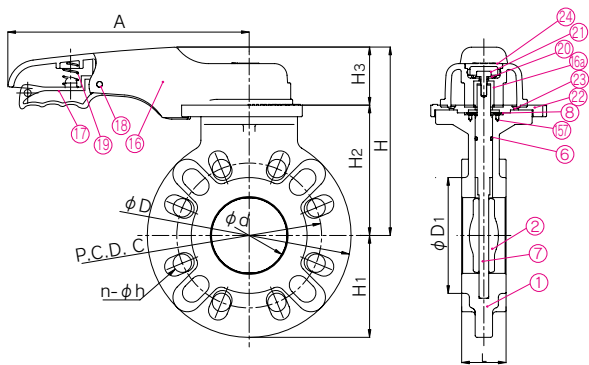
PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	BODY/DISC/STEM	
②	DISC	1	PVC/PP/PVC	
⑦	STEM	1	PP/PP/PP	
⑥	O-RING(C)	1	EPDM, FKM, OTHERS	
⑧	STEM HOLDER(A)	1	STAINLESS STEEL304 PP	40mm - 200mm 450mm - 600mm
⑨	BOLT(A)	3	STAINLESS STEEL304	250mm - 400mm
⑩	HANDLE(A)	1	PP	
⑬	INSERTED METAL OF HANDLE	1	STAINLESS STEEL316	40mm - 400mm
⑰	HANDLE LEVER	1	PPG STAINLESS STEEL304	40mm - 400mm 450mm - 600mm
⑱	PIN	1	PPG STAINLESS STEEL304	40mm - 400mm 450mm - 600mm
⑲	SPRING	1	STAINLESS STEEL304	
⑳	WASHER(A)	1	STAINLESS STEEL304	
㉑	BOLT(B)	1	STAINLESS STEEL304	40mm - 400mm
㉒	NUT(B)	1	STAINLESS STEEL304	450mm - 600mm
㉓	LOCKING PLATE	1	PPG STAINLESS STEEL304	40mm - 400mm 450mm - 600mm
㉔	SCREW(B)	4	STAINLESS STEEL304	40mm - 400mm
㉕	CAP(A)	1	PP	40mm - 400mm
㉖	BOLT·NUT(N)	3	STAINLESS STEEL304	450mm - 600mm
㉗	STEM HOLDER(C)	1	PPG	250mm - 400mm
㉘	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	10k400mm - 600mm

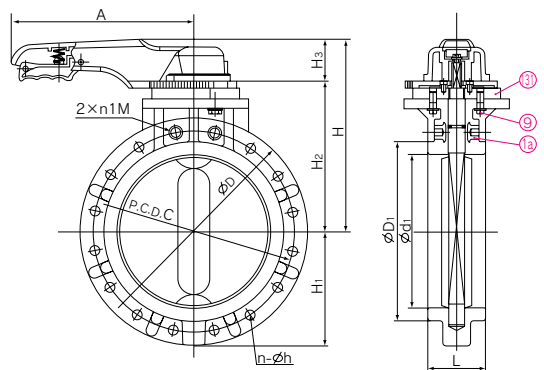


● PVC

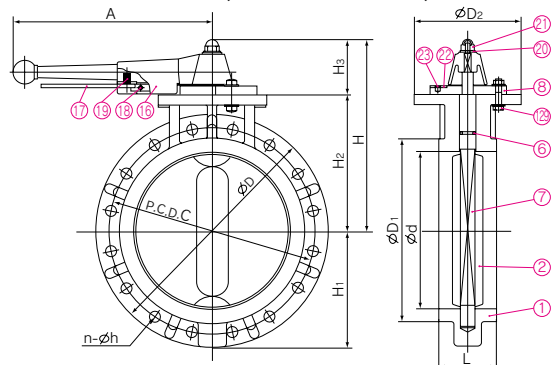
● PVC, PP
40mm - 200mm (1½inch - 8inch)



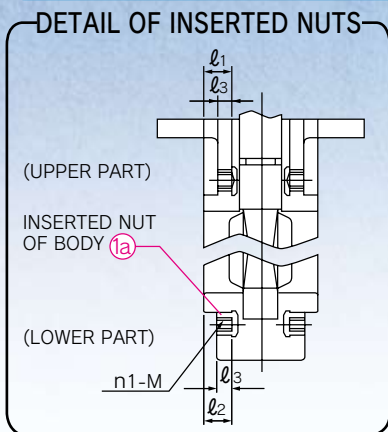
250mm - 400mm (10inch - 16inch)



450mm - 600mm (16inch - 24inch)



DIMENSIONS TABLE



JIS							Unit:mm		
Nominal Size		M	BOLT HOLES n	Q'TY OF INSERTED NUT			l ₁	l ₂	l ₃
mm	inch			UPPER	LOWER	TOTAL (2×n ₁)			
400	16	M24	14	2×2	—	4	46	—	24
450	18	M24	16	2×2	2×2	8	43	48	24
500	20	M24	16	2×2	2×2	8	43	53	24
600	24	M30	20	2×2	2×2	8	58	58	30

1) PP, body : used for 400(16inch)~600mm(24inch)(JIS 10K) only

JIS													Unit:mm		
Nominal Size		d	JIS 10K					D ₁ PVC,PP	D	L	H	H ₁	H ₂	H ₃	A
mm	inch		C	n	h	n ₁	M								
40	1 1/2	47	105	4	19	—	—	86	150	32	156	75	100	56	220
50	2	58	120	4	19	—	—	96	165	35	166	83	110	56	220
65	2 1/2	71	140	4	19	—	—	116	185	37	176	93	120	56	220
80	3	79	150	8	19	—	—	120	211	37	191	106	135	56	250
100	4	104	175	8	19	—	—	152	238	47	206	119	150	56	250
125	5	131	210	8	23	—	—	190	264	57	237	132	168	69	320
150	6	152	240	8	23	—	—	208	285	62	252	143	183	69	320
200	8	197	290	12	23	—	—	264	340	76	283	170	214	69	400
250	10	247	355	12	25	—	—	321	406	96	342	203	273	69	400
300	12	298	400	16	25	—	—	370	483	116	399	242	330	69	400
350	14	347	445	16	25	—	—	420	520	116	426	260	338	69	400
400	16	394	510	14	27	2	M24	470	600	157	451	300	382	69	400
450	18	441	565	16	27	4	M24	525	630	167	496	315	370	126	323
500	20	488	620	16	27	4	M24	575	699	177	526	350	400	126	323
600	24	600	730	20	33	4	M30	686	813	197	591	424	465	126	323

DIN													Unit:mm	
Nominal Size		d	DIN PN 10			D ₁ PVC,PP	D	L	H	H ₁	H ₂	H ₃	A	
mm	inch		C	n	h									
40	1 1/2	47	110	4	18	86	150	32	156	75	100	56	220	
50	2	58	125	4	18	96	165	35	166	83	110	56	220	
65	2 1/2	71	145	4	18	116	185	37	176	93	120	56	220	
80	3	79	160	8	18	120	211	37	191	106	135	56	250	
100	4	104	180	8	18	152	238	47	206	119	150	56	250	
125	5	131	210	8	18	190	264	57	237	132	168	69	320	
150	6	152	240	8	22	208	285	62	252	143	183	69	320	
200	8	197	295	8	22	264	340	76	283	170	214	69	400	
250	10	247	350	12	23	321	406	96	342	203	273	69	400	
300	12	298	400	12	23	370	483	116	399	242	330	69	400	
350	14	347	460	16	23	420	520	116	426	260	338	69	400	
400	16	394	515	16	27	470	600	157	451	300	382	69	400	
450	18	441	565	20	27	525	630	167	496	315	370	126	323	
500	20	488	620	20	27	575	699	177	526	350	400	126	323	
600	24	600	725	20	30	686	813	197	591	424	465	126	323	

ANSI													Unit:inch	
Nominal Size		d	ANSI Class 150			D ₁ PVC,PP	D	L	H	H ₁	H ₂	H ₃	A	
inch	mm		C	n	h									
1 1/2	40	1.83	3.68	4	0.63	3.39	5.91	1.26	6.14	2.95	3.94	2.20	8.66	
2	50	2.26	4.74	4	0.75	3.78	6.50	1.38	6.54	3.25	4.33	2.20	8.66	
2 1/2	65	2.78	5.49	4	0.75	4.57	7.28	1.46	6.93	3.64	4.72	2.20	8.66	
3	80	3.09	6.00	4	0.75	4.72	8.31	1.46	7.52	4.15	5.31	2.20	9.84	
4	100	4.07	7.50	8	0.75	5.98	9.37	1.85	8.11	4.69	5.91	2.20	9.84	
5	125	5.14	8.50	8	0.87	7.48	10.39	2.24	9.33	5.20	6.61	2.72	12.60	
6	150	5.96	9.51	8	0.87	8.19	11.22	2.44	9.92	5.61	7.20	2.72	12.60	
8	200	7.76	11.75	8	0.87	10.39	13.39	2.99	11.14	6.69	8.43	2.72	15.75	
10	250	9.72	14.25	12	0.98	12.64	15.98	3.78	13.46	7.99	10.75	2.72	15.75	
12	300	11.73	17.01	12	0.98	14.57	19.02	4.57	15.71	9.53	12.99	2.72	15.75	
14	350	13.66	18.74	12	1.14	16.54	20.47	4.57	16.77	10.24	13.31	2.72	15.75	
16	400	15.51	21.24	16	1.14	18.50	23.62	6.18	17.76	11.81	15.04	2.72	15.75	
18	450	17.36	22.76	16	1.26	20.67	24.80	6.57	19.53	12.40	14.57	4.69	12.72	
20	500	19.21	25.00	20	1.26	22.64	27.52	6.97	20.71	13.78	15.75	4.96	12.72	
24	600	23.62	29.51	20	1.38	27.01	32.01	7.76	23.27	16.69	18.31	4.96	12.72	

Note : The shape and appearance of the valve differ a little with nominal size compared to the drawing.

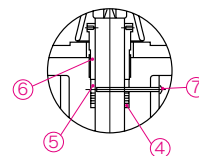
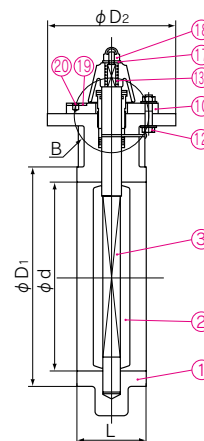
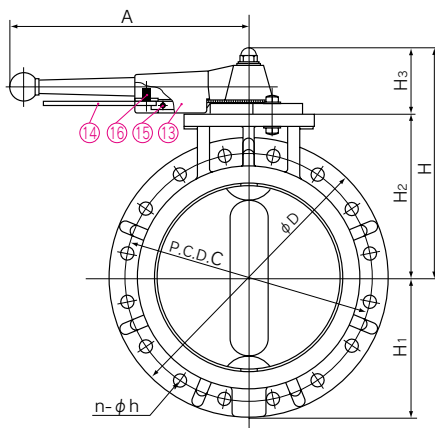
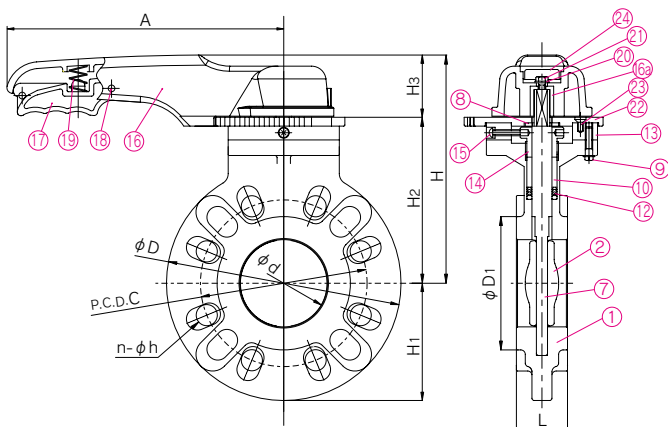
ROTARY DAMPER (PVDF) 40mm - 600mm(1½inch - 24inch)



● PVDF

● PVDF
40mm – 200mm (1½inch – 8inch)

250mm – 600mm (10inch – 24inch)
Consalt us more details

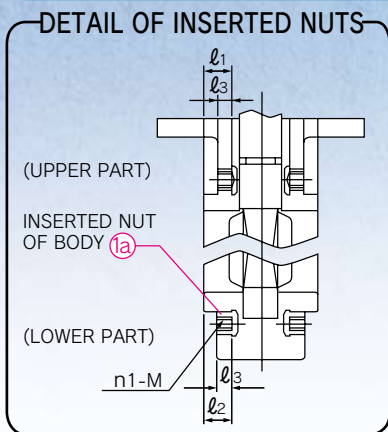


Part "B"

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	PVDF	
②	DISC	1	PVDF	
⑦	STEM	1	PVDF	
⑧	STEM HOLDER(A)	1	STAINLESS STEEL304	40mm - 300mm(1½"-14")
⑨	BOLT(A)	4	STAINLESS STEEL304	
⑩	BUSH(A)	1	PTFE	40mm - 350mm(1½"-14")
		1	PVDF	400mm - 600mm(16"-24")
⑫	V-PACKING	1	PTFE	
⑬	SPECER(A)	1set	C-PVC	
⑭	GLAND	1set	PVDF	
⑮	SCREW(A)	1	STAINLESS STEEL304	
⑯	HANDLE(A)	1	PP	
⑰	HANDLE INSERTED METAL	1	STAINLESS STEEL304	
⑱	HANDLE LEVER	1	PPG	
⑲	PIN	1	PPG	
⑳	SPRING	1	STAINLESS STEEL304	
㉑	WASHER(A)	1	STAINLESS STEEL304	
㉒	BOLT(B)	1	STAINLESS STEEL304	
㉓	LOCKING PLATE	1	PPG	
㉔	SCREW(B)	2	STAINLESS STEEL304	
㉕	CAP(A)	1	PP	
㉖	STEM HOLDER(C)	1	PP	300mm - 400mm(12"-16")
㉗	BODY INSERTED METAL	4	COPPER ALLOY	

DIMENSIONS TABLE



JIS							Unit:mm		
Nominal Size		M	BOLT HOLES n	Q'TY OF INSERTED NUT			l_1	l_2	l_3
mm	inch			UPPER	LOWER	TOTAL (2×n1)			
400	16	M24	14	2×2	—	4	46	—	24
450	18	M24	16	2×2	2×2	8	43	48	24
500	20	M24	16	2×2	2×2	8	43	53	24
600	24	M30	20	2×2	2×2	8	58	58	30

1) PP, body : used for 400(16inch)~600mm(24inch)(JIS 10K)only

JIS										Unit:mm						
Nominal Size		d	JIS 10K					D ₁ PVDF	D	L	H	H ₁	H ₂	H ₃	A	
mm	inch		C	n	h	n ₁	M									
40	1 1/2	46	105	4	19	—	—	86	150	32	179	75	123	56	220	
50	2	57	120	4	19	—	—	96	165	35	189	83	133	56	220	
65	2 1/2	70	140	4	19	—	—	116	185	37	199	93	143	56	220	
80	3	78	150	8	19	—	—	120	211	37	214	106	157	56	250	
100	4	103	175	8	19	—	—	152	238	47	229	119	173	56	250	
125	5	130	210	8	23	—	—	190	264	57	257	132	188	69	320	
150	6	150	240	8	23	—	—	208	285	62	272	143	203	69	320	
200	8	197	290	12	23	—	—	264	340	76	303	170	234	69	400	
250	10	247	355	12	25	—	—	321	406	96	358	203	240	118	323	
300	12	298	400	16	25	—	—	370	483	116	419	242	297	122	323	
350	14	347	445	16	25	—	—	420	520	116	422	260	300	122	323	
400	16	394	510	14	27	2	M24	470	600	157	472	300	350	122	323	
450	18	441	565	16	27	4	M24	525	630	167	516	315	370	126	323	
500	20	488	620	16	27	4	M24	575	699	177	546	350	400	126	323	
600	24	600	730	20	33	4	M30	686	813	197	611	424	465	126	323	

DIN										Unit:mm						
Nominal Size		d	DIN PN 10				D ₁ PVDF	D	L	H	H ₁	H ₂	H ₃	A		
mm	inch		C	n	h	n ₁										
40	1 1/2	46	110	4	18	86	150	32	179	75	123	56	220			
50	2	57	125	4	18	96	165	35	189	83	133	56	220			
65	2 1/2	70	145	4	18	116	185	37	199	93	143	56	220			
80	3	78	160	8	18	120	211	37	214	106	157	56	250			
100	4	103	180	8	18	152	238	47	229	119	173	56	250			
125	5	130	210	8	18	190	264	57	257	132	188	69	320			
150	6	150	240	8	22	208	285	62	272	143	203	69	320			
200	8	197	295	8	22	264	340	76	303	170	234	69	400			
250	10	247	350	12	23	321	406	96	358	203	240	118	323			
300	12	298	400	12	23	370	483	116	419	242	297	122	323			
350	14	347	460	16	23	420	520	116	422	260	300	122	323			
400	16	394	515	16	27	470	600	157	472	300	350	122	323			
450	18	441	565	20	27	525	630	167	516	315	370	126	323			
500	20	488	620	20	27	575	699	177	546	350	400	126	323			
600	24	600	725	20	30	686	813	197	611	424	465	126	323			

ANSI										Unit:inch						
Nominal Size		d	ANSI Class 150				D ₁ PVDF	D	L	H	H ₁	H ₂	H ₃	A		
inch	mm		C	n	h	n ₁										
1 1/2	40	1.81	3.88	4	0.62	3.39	5.91	1.26	7.05	2.95	4.84	2.20	8.66			
2	50	2.24	4.75	4	0.75	3.78	6.50	1.38	7.44	3.27	5.24	2.20	8.66			
2 1/2	65	2.76	5.50	4	0.75	4.57	7.28	1.46	7.83	3.66	5.63	2.20	8.66			
3	80	3.07	6.00	4	0.75	4.72	8.31	1.46	8.43	4.17	6.22	2.20	9.84			
4	100	4.06	7.50	8	0.75	5.98	9.37	1.85	9.02	4.69	6.81	2.20	9.84			
5	125	5.12	8.50	8	0.88	7.48	10.39	2.24	10.12	5.20	7.40	2.72	12.60			
6	150	5.91	9.50	8	0.88	8.19	11.22	2.44	10.71	5.63	7.99	2.72	12.60			
8	200	7.76	11.75	8	0.88	10.39	13.39	3.23	11.93	6.69	9.21	2.72	15.75			
10	250	9.72	14.25	12	0.98	12.20	15.98	3.78	14.09	7.99	9.45	4.65	12.72			
12	300	11.73	17.01	12	0.98	14.57	19.02	4.57	16.50	9.53	11.69	4.80	12.72			
14	350	13.66	18.74	12	1.14	16.54	20.47	4.57	16.61	10.24	11.81	4.80	12.72			
16	400	15.51	21.24	16	1.14	18.50	23.62	6.18	18.58	11.81	13.78	4.80	12.72			
18	450	17.36	22.76	16	1.26	20.67	24.80	6.57	20.31	12.40	14.57	4.96	12.72			
20	500	19.21	25.00	20	1.26	22.64	27.52	6.97	21.50	13.78	15.75	4.96	12.72			
24	600	23.62	29.51	20	1.38	27.01	32.01	7.76	24.06	16.69	18.31	4.96	12.72			

SWING CHECK VALVE 15mm - 200mm (1/2inch - 8inch)



15mm(1/2inch), 20mm(3/4inch)

25mm(1inch) - 200mm(8inch)

FEATURES

- The SWING CHECK VALVE prevents backflow, thus protecting equipment, such as a pump.
- Being of a swing arm type, the valve gives little resistance to flow.
- The SWING CHECK VALVE is highly resistant to corrosive chemicals, acid and alkaline, because of its plastic construction.
- To maintain the SWING CHECK VALVE, only the bonnet lid has to be removed, without taking the body out of pipeline.

MATERIAL AND WORKING TEMPERATURE RANGES

O-ring Type

Body material	Working Temperature °C (°F)	Max. Working Pressure (at R.T.)MPa[kgf/cm ²][PSI]		
		15(1/2inch) - 80(3inch)	100(4inch) - 150(6inch)	200(8inch)
HI-PVC	0 - 50(30 - 120)	1.0{10.2}[150]	0.7{7.1}[100]	0.5{5.1}[70]
PP	-20 - 80(-5 - 175)	1.0{10.2}[150]	0.7{7.1}[100]	0.5{5.1}[70]
PVDF	-20 - 100(-5 - 210)	1.0{10.2}[150]	0.7{7.1}[100]	0.5{5.1}[70]

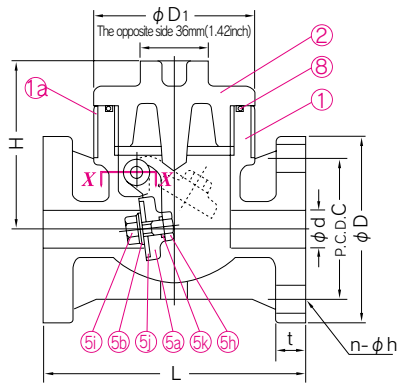
Gasket Type

Body material	Working Temperature °C (°F)	Max. Working Pressure (at R.T.)MPa[kgf/cm ²][PSI]			
		15(1/2inch) - 65(2 1/2inch)	80(3inch) - 100(4inch)	125(5inch) - 150(6inch)	200(8inch)
HI-PVC	0 - 50(30 - 120)	0.6{6.1}[85]	0.5{5.1}[70]	0.4{4.1}[55]	0.3{3.1}[40]
PP	-20 - 80(-5 - 175)	0.6{6.1}[85]	0.5{5.1}[70]	0.4{4.1}[55]	0.3{3.1}[40]
PVDF	-20 - 100(-5 - 210)	0.6{6.1}[85]	0.5{5.1}[70]	0.4{4.1}[55]	0.3{3.1}[40]

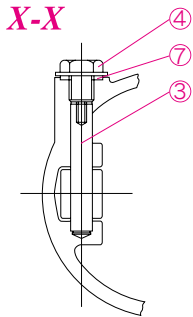
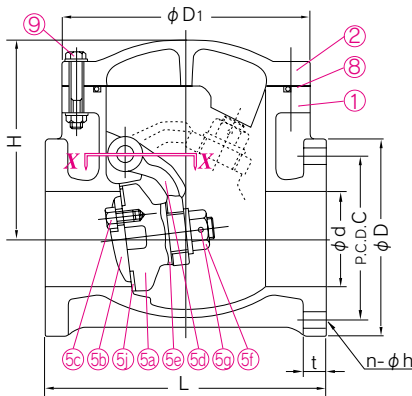
O-ring Type

In case SEAT material of No.⑤ is Rubber

● 15mm(1/2inch) · 20mm(3/4inch)



● 25mm(1inch) - 200mm(8inch)



PARTS & MATERIALS O-ring Type

● 15mm(1/2inch) · 20mm(3/4inch)

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	HI-PVC, PP, PVDF
②	BONNET	1	HI-PVC, PP, PVDF
③	SHAFT	1	HI-PVC, PP, PVDF
④	PLUG	1	HI-PVC, PP, PVDF
⑤	DISC	1	HI-PVC, PP, PVDF
⑥	SEAT HOLDER	1	HI-PVC, PP, PVDF
⑦	BOLT(B)	1	HI-PVC, PP, PVDF
⑧	NUT(B)	1	HI-PVC, PP, PVDF
⑨	SEAT	1	EPDM, others
⑩	O-RING(A)	1	EPDM, others
⑪	GASKET	1	EPDM, others
⑫	O-RING(B)	1	EPDM, others
⑬	BODY RING	1	STAINLESS STEEL304

Note : 1) ⑬ Body-ring is available for PP Body 15mm(1/2inch) · 20mm(3/4inch).
2) PP body design uses PVDF components on the swing arm assemble.

● 25mm(1inch) - 200mm(8inch)

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	HI-PVC, PP, PVDF
②	BONNET	1	HI-PVC, PP, PVDF
③	SHAFT	1	HI-PVC, PP, PVDF
④	PLUG	1	HI-PVC, PP, PVDF
⑤	DISC	1	HI-PVC, PP, PVDF
⑥	SEAT HOLDER	1	HI-PVC, PP, PVDF
⑦	BOLT(A)	-	HI-PVC, PP, PVDF
⑧	ARM	1	HI-PVC, PP, PVDF
⑨	WASHER	1	HI-PVC, PP, PVDF
⑩	NUT(A)	1	HI-PVC, PP, PVDF
⑪	PIN	1	HI-PVC, PP, PVDF
⑫	SEAT	1	EPDM, others
⑬	GASKET(B)	1	EPDM, others
⑭	O-RING(B)	1	EPDM, others
⑮	BOLT.NUT	-	STAINLESS STEEL304

Note : 1) In the case of nom. size with more than 65mm(2 1/2inch), part "5g" is available.
2) PP body design uses PVDF components on the swing arm assemble.

Gasket Type

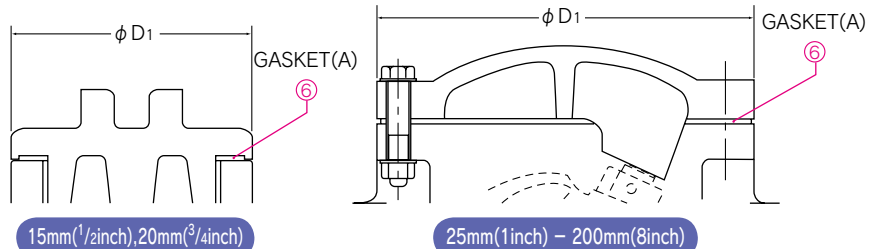
In case SEAT material of No.⑤ is PTFE

Material of gasket(A) is PVDF(cushion:EPDM)

PARTS & MATERIALS Gasket Type

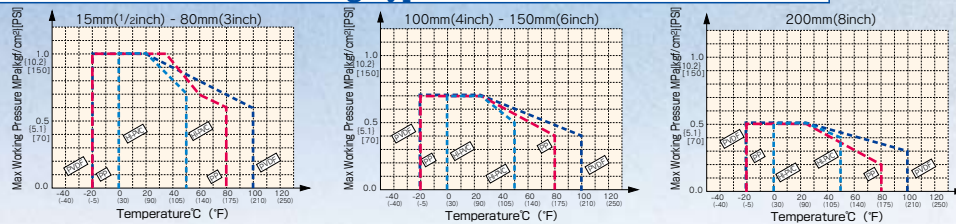
No.	DESCRIPTION	Pcs.	MATERIAL
⑤	SEAT	1	PTFE
⑥	O-RING(A)	1	PTFE
⑦	GASKET(A)	1	PVDF(cushion EPDM)
⑧	GASKET(B)	1	PTFE

Note : Parts not shown above are common to "o-ring Type".

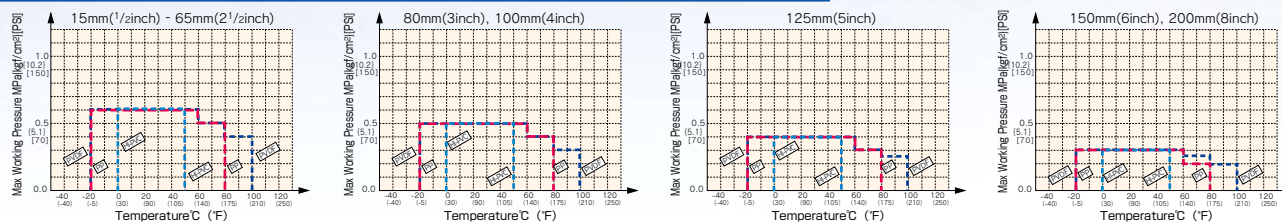


WORKING PRESSURE VS. TEMPERATURE

SWING CHECK VALVE O-ring Type



SWING CHECK VALVE Gasket Type



DIMENSIONS TABLE

JIS		Unit:mm														
Nominal Size		d	JIS 5K				JIS 10K				D ₁	L	H			
mm	inch		D	C	n	h	D	C	n	h			HI-PVC	PP·PVDF	Rubber SEAT	PTFE SEAT
15	1/2	20	80	60	4	12	95	70	4	15	86	140	15	15	90	90
20	3/4	20	85	65	4	12	100	75	4	15	86	140	15	15	90	90
25	1	25	95	75	4	12	125	90	4	19	130	160	16	16	117	120
32	1 1/4	40	—	—	—	—	135	100	4	19	145	180	18	18	135	138
40	1 1/2	40	120	95	4	15	140	105	4	19	145	180	18	18	135	138
50	2	50	130	105	4	15	155	120	4	19	180	200	20	21	161	164
65	2 1/2	65	155	130	4	15	175	140	4	19	200	240	22	23	165	168
80	3	80	180	145	4	19	185	150	8	19	205	260	22	25	168	171
100	4	100	200	165	8	19	210	175	8	19	265	300	24	26	210	213
125	5	125	235	200	8	19	250	210	8	23	330	350	24	27	245	248
150	6	150	265	230	8	19	280	240	8	23	370	400	25	27	280	283
200	8	200	320	280	8	23	330	290	12	23	425	500	30	34	333	336

DIN		Unit:mm													
Nominal Size		d	DIN PN10				D ₁	L	t		H				
mm	inch		D	C	n	h			HI-PVC	PP·PVDF	Rubber SEAT	PTFE SEAT			
15	1/2	20	95	65	4	14	86	140	15	15	90	90			
20	3/4	20	105	75	4	14	86	140	15	15	90	90			
25	1	25	115	85	4	14	130	160	16	16	117	120			
32	1 1/4	40	140	100	4	18	145	180	18	18	135	138			
40	1 1/2	40	150	110	4	18	145	180	18	18	135	138			
50	2	50	165	125	4	18	180	200	20	21	161	164			
65	2 1/2	65	185	145	4	18	200	240	22	23	165	168			
80	3	80	200	160	8	18	205	260	22	25	168	171			
100	4	100	220	180	8	18	265	300	24	26	210	213			
125	5	125	250	210	8	18	330	350	24	27	245	248			
150	6	150	285	240	8	22	370	400	25	27	280	283			
200	8	200	340	295	8	22	425	500	30	34	333	336			

ANSI		Unit:inch													
Nominal Size		d	ANSI CLASS 150				D ₁	L	t		H				
inch	mm		D	C	n	h			HI-PVC	PP·PVDF	Rubber SEAT	PTFE SEAT			
1/2	15	0.79	3.50	2.38	4	0.62	3.39	5.51	0.59	0.59	3.54	3.54			
3/4	20	0.79	3.88	2.75	4	0.62	3.39	5.51	0.59	0.59	3.54	3.54			
1	25	0.98	4.25	3.12	4	0.62	5.12	6.30	0.63	0.63	4.61	4.72			
1 1/4	32	—	—	—	—	—	—	—	—	—	—	—			
1 1/2	40	1.57	5.00	3.88	4	0.62	5.71	7.09	0.71	0.71	5.31	5.43			
2	50	1.97	6.00	4.75	4	0.75	7.09	7.87	0.79	0.83	6.34	6.46			
2 1/2	65	2.56	7.00	5.50	4	0.75	7.87	9.45	0.87	0.91	6.50	6.61			
3	80	3.15	7.50	6.00	4	0.75	8.07	10.24	0.87	0.98	6.61	6.73			
4	100	3.94	9.00	7.50	8	0.75	10.43	11.81	0.94	1.02	8.27	8.39			
5	125	4.92	10.00	8.50	8	0.88	12.99	13.78	0.94	1.06	9.65	9.76			
6	150	5.91	11.00	9.50	8	0.88	14.57	15.75	0.98	1.06	11.02	11.14			
8	200	7.87	13.50	11.75	8	0.88	16.73	19.69	1.18	1.34	13.11	13.23			

* Important: The swing check valve can be used in both vertical and horizontal pipelines. However, when installing the valve, be sure to make the direction of the arrow embossed on the valve agree with that of flow.
 * Swing check valves 15mm(1/2inch) and 30mm(1 1/4inch) mm in nominal size are made out of those in 20mm(3/4inch) and 40mm(1 1/2inch) in nominal size, respectively.
 Note : For pressure limits by fluid temperature ranges and materials, see "WORKING PRESSURE VS. TEMPERATURE" in this catalog.

BALL CHECK AND BALL FOOT VALVE 15mm - 100mm(1/2inch - 4inch)

● SINGLE UNION BALL CHECK VALVE



FEATURES

■ Backflow Prevention

The valves prevent backflow in horizontal or vertical lines. They require minimal back pressure to seat completely.

■ Compact and Light

The BALL CHECK and BALL FOOT VALVES are so compact and light that they can be installed in a limited space. They are also easy to maintain, because of minimal internal parts.

■ NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

•Ball CHECK VALVE (Material:PVC+EPDM,FKM)

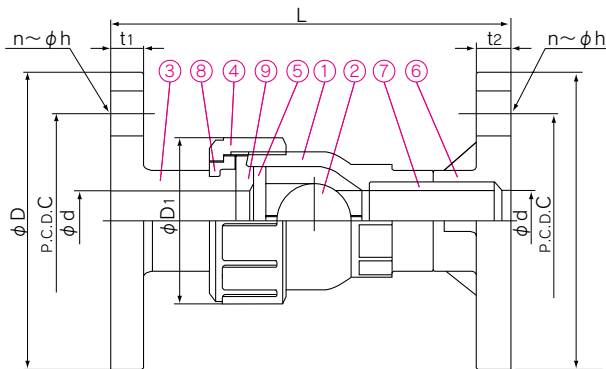
*Certified products bear an NSF Certification Mark.

SPECIFICATIONS

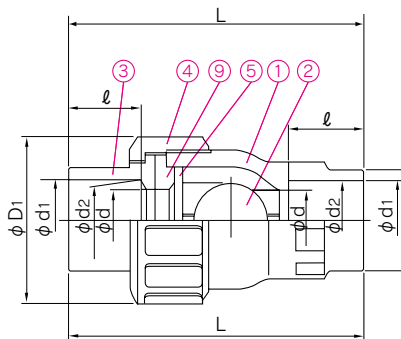
Body material	Unplasticized Polyvinyl Chloride(PVC), Chlorinated Polyvinyl Chloride(C-PVC) Polyvinylidene Fluoride(PVDF), Polypropylene(PP)
End Connectors	Socket End, Threaded End, Flanged End
Nominal Size	15mm(1/2inch) - 100mm(4inch)
Working Temperature	PVC:0°C - 50°C(30°F - 120°F) C-PVC:0°C - 90°C(30°F - 195°F) PVDF : -20°C - 100°C(-5°F - 210°F) PP: -20°C - 80°C(-5°F - 175°F)
Max. Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI](at R.T).....15mm(1/2inch) - 50mm(2inch) 0.7MPa{7.1kgf/cm ² }[100PSI](at R.T).....80mm(3inch) - 100mm(4inch)

DIMENSIONS

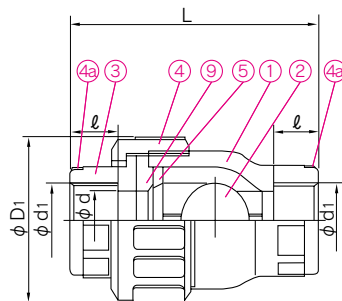
● FLANGED END



● SOCKET END

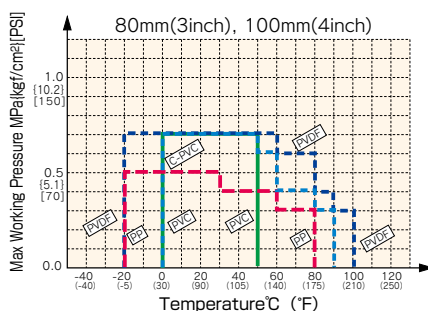
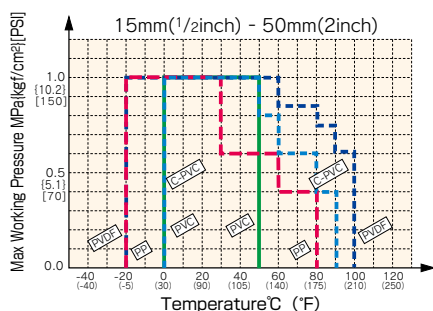


● THREADED END



WORKING PRESSURE VS. TEMPERATURE

BALL CHECK VALVE



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, C-PVC, PP, PVDF
②	BALL	1	PVC, C-PVC, PP, PVDF
③	END CONNECTOR	1	PVC, C-PVC, PP, PVDF
④	UNION NUT	1	PVC, C-PVC, PP, PVDF
⑤	STOP RING(A)	1	PVC, C-PVC, PP, PVDF
⑥	TS FLANGE ²⁾	1	PVC, C-PVC
⑦	PIPE ²⁾	1	PVC, C-PVC
⑧	STOP RING(B) ²⁾	1	PVDF
⑨	SEAT	1	EPDM,FKM,Others
④a	RING ¹⁾	1	STAINLESS STEEL304

Note :

1):used for C-PVC Body, threaded end 15mm(1/2inch) - 25mm(1inch)

2):used for Flanged End

3):DIN Flanged End is not available.

* By replacing some of its parts, the ball check valve can be switched to the ball foot valve, with a slight change in dimensions.

DIMENSIONS TABLE

JIS Unit:mm

Nominal Size		d	D ₁	Flanged End											
				JIS 5K				JIS 10K				L		t ₁	t ₂
				D	C	n	h	D	C	n	h	PVC,C-PVC	PVDF		
mm	inch														
15	1/2	15	48	80	60	4	12	95	70	4	15	131	135	12	14
20	3/4	20	60	85	65	4	12	100	75	4	15	156	156	14	15
25	1	25	70	95	75	4	12	125	90	4	19	169	167	14	15
40	1 1/2	40	96	120	95	4	15	140	105	4	19	214	200	16	16
50	2	51	106	130	105	4	15	155	120	4	19	244	224	16	20
80	3	78	152	180	145	4	19	185	150	8	19	310	291	18	22
100	4	100	210	200	165	8	19	210	175	8	19	397	363	18	22

Nominal Size		Socket End								Threaded End			
		PVC,C-PVC				PP				JIS B 0203		L	
		d ₁	ℓ	1/T	L	d ₁	d ₂	ℓ	L	d ₁	ℓ	U-PVC,C-PVC	PP,PVDF
mm	inch												
15	1/2	22.11	20	1/34	89	21.2	20.2	22	93	Rc 1/2	15	80	78
20	3/4	26.13	24	1/34	106	26.2	25.2	23	104	Rc 3/4	17	95	92
25	1	32.16	27	1/34	117	33.0	32.0	25	113	Rc 1	20	105	102
40	1 1/2	48.21	37	1/37	162	47.0	46.0	28	144	Rc 1 1/2	25	141	137
50	2	60.25	42	1/37	189	59.0	58.0	28	162	Rc 2	28	164	160
80	3	89.60	64	1/49	277	88.0	86.0	35	219	Rc 3	35	222	216
100	4	114.70	84	1/56	376	113.0	111.0	45	298	Rc 4	45	308	301

DIN Unit:mm

Nominal Size		d	D ₁	Socket End						Threaded End				
				PVC, C-PVC			PP,PVDF			DIN 2999				
				DIN 8063		L	DIN 16962			L	d ₁	ℓ	L	
				d ₁	ℓ		d ₁	d ₂	ℓ				U-PVC,C-PVC	PP,PVDF
mm	inch													
15	1/2	15	48	20	16	81	19.50	19.30	14	78	Rc 1/2	15	80	78
20	3/4	20	60	25	19	96	24.50	24.30	16	90	Rc 3/4	17	95	92
25	1	25	70	32	22	107	31.50	31.30	18	99	Rc 1	20	105	102
40	1 1/2	40	96	50	31	150	49.45	49.20	23	135	Rc 1 1/2	25	141	137
50	2	51	106	63	38	181	62.50	62.10	27	160	Rc 2	28	164	160
80	3	78	152	90	51	248	89.20	88.85	35	217	Rc 3	35	222	216
100	4	100	210	110	61	330	109.05	108.65	41	291	Rc 4	45	308	301

ANSI Unit:inch

Nominal Size		d	D ₁	Flanged End								Socket End								Threaded End			
				ANSI Class 150				L				PVC, C-PVC				PVDF, PP				ANSI/ASME B 1.20.1			
				ASTM SCH40		t ₁	t ₂	ASTM SCH40		L	PVDF, PP		ANSI/ASME B 1.20.1		L								
				D	C			n	h		PVC	PVDF	d ₁	d ₂	ℓ	L	d ₁	ℓ	PVC	PP,PVDF			
inch	mm																						
1/2	15	0.59	1.89	3.50	2.38	4	0.63	5.16	5.31	0.47	0.55	0.848	0.836	0.688	3.35	0.825	-	0.874	3.82	1/2-14 NPT	0.59	3.15	3.07
3/4	20	0.79	2.36	3.86	2.75	4	0.63	6.14	6.14	0.55	0.59	1.058	1.046	0.719	3.74	1.030	-	1.000	4.41	3/4-14 NPT	0.67	3.74	3.62
1	25	0.98	2.76	4.25	3.12	4	0.63	6.65	6.57	0.55	0.59	1.325	1.310	0.875	4.33	1.300	-	1.126	4.88	1-1 1/2 NPT	0.79	4.13	4.02
1 1/2	40	1.57	3.78	5.00	3.88	4	0.63	8.43	7.87	0.63	0.63	1.912	1.894	1.094	5.71	1.890	-	1.374	5.79	1 1/2-1 1/2 NPT	0.98	5.55	5.39
2	50	2.01	4.17	5.98	4.75	4	0.75	9.61	8.82	0.63	0.79	2.387	2.369	1.156	6.50	2.360	-	1.500	6.89	2-1 1/2 NPT	1.10	6.46	6.30
3	80	3.07	5.98	7.52	6.00	4	0.75	12.20	11.46	0.71	0.87	3.516	3.492	1.875	9.57	3.480	-	1.874	9.57	3-8 NPT	1.38	8.74	8.50
4	100	3.94	8.27	9.02	7.50	8	0.75	15.63	14.29	0.71	0.87	4.518	4.491	2.000	12.20	4.480	-	2.252	12.68	4-8 NPT	1.77	12.13	11.85

Note : The shape and appearance of the valve differ a little with nominal size compared to the drawing.

The measurement of the minimum pressure for opening & closing the valve with air or gas on Asahi Ball Check Valve.

UNIT:MPa{kgf/cm²}

Test Items		Vertical Piping				Horizontal Piping			
Nominal Size		Min. Air Pressure to open the valve		Min. Air Pressure to shut the Disc perfectly		Min. Air Pressure to open the valve		Min. Air Pressure to shut the Disc perfectly	
mm	inch								
15	1/2	0.005{0.05}		0.02 {0.2}		0.001{0.01}		0.02 {0.2}	
20	3/4	0.005{0.05}		0.03 {0.3}		0.001{0.01}		0.03 {0.3}	
25	1	0.005{0.05}		0.03 {0.3}		0.001{0.01}		0.03 {0.3}	
40	1 1/2	0.01 {0.1}		0.03 {0.3}		0.002{0.02}		0.03 {0.3}	
50	2	0.01 {0.1}		0.03 {0.3}		0.002{0.02}		0.03 {0.3}	
80	3	0.01 {0.1}		0.02 {0.2}		0.002{0.02}		0.02 {0.2}	
100	4	0.01 {0.1}		0.02 {0.2}		0.002{0.02}		0.02 {0.2}	

● TRUE UNION BALL CHECK VALVE

15mm(1/2inch) – 50mm(2inch)



FEATURES

The valve body can be removed from the pipe line by loosening the union nuts at its both ends.

● NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

:TRUE UNION BALL CHECK VALVE (Material:PVC+EPDM,FKM)

*Certified products bear an NSF Certification Mark.

SPECIFICATIONS

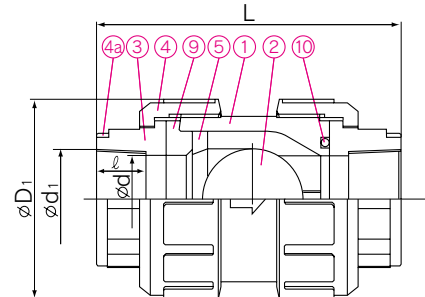
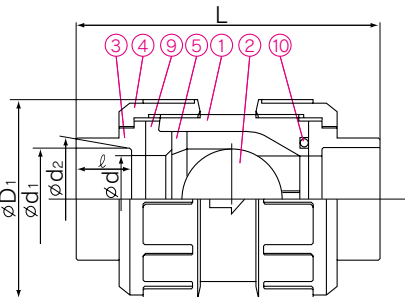
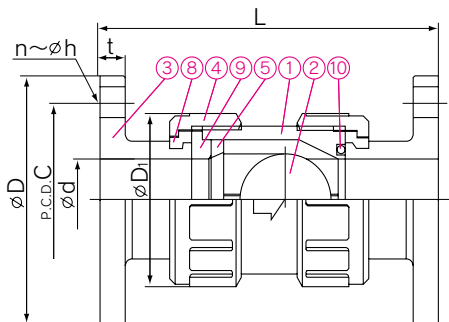
Body material	Unplasticized Polyvinyl Chloride(PVC), Chlorinated Polyvinyl Chloride(C-PVC) Polyvinylidene Fluoride(PVDF)
End Connectors	Socket End, Threaded End, Flanged End
Nominal Size	15mm(1/2inch) - 50mm(2inch)

DIMENSIONS

● FLANGED END

● SOCKET END

● THREADED END



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC,C-PVC,PP,PVDF
②	BALL	1	PVC,C-PVC,PP,PVDF
③	END CONNECTOR	2	PVC,C-PVC,PP,PVDF
④	UNION NUT	2	PVC,C-PVC,PP,PVDF
⑤	STOP RING(A)	1	PVC,C-PVC,PP,PVDF
⑥	STOP RING(B) ²⁾	2	PVDF
⑨	SEAT	1	EPDM,FKM,Others
⑩	O-RING	1	EPDM,FKM,Others
⑬	RING ¹⁾	2	STAINLESS STEEL304

Note :

1):used for C-PVC body. threaded end 15mm(1/2inch) - 25mm(1inch)

2):used for flanged end

DIMENSIONS TABLE

DIN																						
Nominal Size	d	D ₁	Flanged End								Socket End							Threaded End				
			DIN PN10				L				PVC, C-PVC			PVDF,PP				DIN 2999		L		
			D	C	n	h	PVC C-PVC	PP PVDF	t	DIN 8063		DIN 16962			L	d ₁	ℓ	PVC C-PVC	PP PVDF			
			d ₁	ℓ	d ₁	L	d ₁	d ₂	ℓ													
15	1/2	15	48	95	65	4	14	130	128	12	20	16	84	19.50	19.30	14	79	R 1/2	15	86	83	
20	3/4	20	60	105	75	4	14	155	154	14	25	19	100	24.50	24.30	16	93	R 3/4	17	103	98	
25	1	25	70	115	85	4	14	165	163	14	32	22	113	31.50	31.30	18	103	R 1	20	113	109	
40	1 1/2	40	96	150	110	4	18	192	190	16	50	31	158	49.45	49.20	23	141	R 1/2	25	151	147	
50	2	51	106	165	125	4	18	214	211	16	63	38	190	62.50	62.10	27	167	R 2	28	177	171	

ANSI																							Unit:inch		
Nominal Size	d	D ₁	Flanged End								Socket End(IPS)							Threaded End							
			ANSI Class 150				L				PVC, C-PVC			PVDF, PP				ANSI/ASME B1.20.1		L					
			D	C	n	h	PVC C-PVC	PP PVDF	t ₁	ASTM SCH40		L	d ₁	d ₁ '	ℓ	L	d ₁	ℓ	PVC C-PVC	PP PVDF					
			d ₁	d ₂	ℓ																				
1/2	15	0.59	1.89	3.50	2.38	4	0.62	5.12	5.04	0.47	0.848	0.836	0.688	3.43	0.831	-	0.630	3.23	1/2- 14 NPT	0.59	3.39	3.27			
3/4	20	0.79	2.36	3.88	2.75	4	0.62	6.10	6.06	0.55	1.058	1.046	0.719	3.86	1.041	-	1.000	4.37	3/4- 14 NPT	0.67	4.06	3.86			
1	25	0.98	2.76	4.25	3.12	4	0.62	6.50	6.42	0.55	1.325	1.310	0.875	4.37	1.305	-	0.827	4.29	1- 11 1/2 NPT	0.79	4.45	4.29			
1 1/2	40	1.57	3.78	5.00	3.88	4	0.62	7.56	7.48	0.63	1.912	1.894	1.094	5.94	1.889	-	1.260	6.22	1 1/2- 11 1/2 NPT	0.98	5.94	5.79			
2	50	2.01	4.17	6.00	4.75	4	0.75	8.43	8.31	0.63	2.387	2.369	1.156	6.77	2.364	-	1.260	6.93	2- 11 1/2 NPT	1.10	6.97	6.73			

● BALL FOOT VALVE



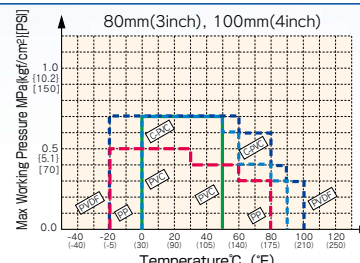
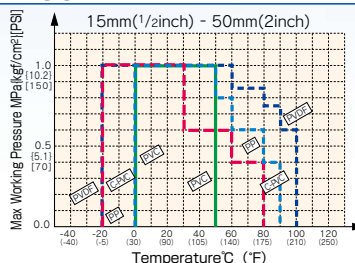
SPECIFICATIONS

Body material	Unplasticized Polyvinyl Chloride(PVC), Chlorinated Polyvinyl Chloride(C-PVC) Polyvinylidene Fluoride(PVDF), Polypropylene(PP)
End Connectors	Socket End, Threaded End, Flanged End
Nominal Size	15 mm(1/2inch) - 100 mm(4inch)
Working Temperature	PVC:0°C - 50°C(30°F - 120°F) C-PVC:0°C - 90°C(30°F - 195°F) PVDF: -20°C - 100°C(-5°F - 210°F) PP: -20°C - 80°C(-5°F - 175°F)
Max. Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI](at R.T.).....15mm(1/2inch) - 50mm(2inch) 0.7MPa{7.1kgf/cm ² }[100PSI](at R.T.).....80mm(3inch) - 100mm(4inch)

R.T.:Room Temperature

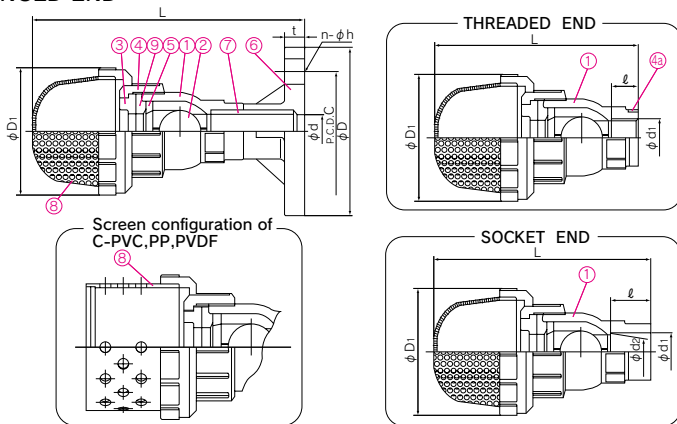
WORKING PRESSURE VS. TEMPERATURE

BALL FOOT VALVE



DIMENSIONS

● FLANGED END



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC,C-PVC,PP,PVDF
②	BALL	1	PVC,C-PVC,PP,PVDF
③	END CONNECTOR	1	PVC,C-PVC,PP,PVDF
④	UNION NUT	1	PVC,C-PVC,PP,PVDF
⑤	STOP RING(A)	1	PVC,C-PVC,PP,PVDF
⑥	FLANGE ²⁾	1	PVC,C-PVC
⑦	PIPE ²⁾	1	PVC,C-PVC
⑧	SCREEN	1	PVC,C-PVC,PP,PVDF
⑨	SEAT	1	EPDM,FKM,Others
④④	RING ¹⁾	1	STAINLESS STEEL304

Note :

1):Used for C-PVC body, threaded end 15mm(1/2inch) - 25mm(1inch)

2):Used for Flanged End

Flanged End Body is PVC(JIS only),C-PVC

DIMENSIONS TABLE

Nominal Size		D ₁	Flanged End												Socket End								Threaded End		
mm	inch		JIS 5K				JIS 10K				L		d	t	PVC,C-PVC				PP				JIS B 0203		
			D	C	n	h	D	C	n	h	PVC C-PVC	PVDF			d ₁	ℓ	1/T	L	d ₁	d ₂	ℓ	L	d ₁	ℓ	L
15	1/2	60	80	60	4	12	95	70	4	15	155	144	18	14	22.11	20	1/34	120	21.2	20.2	22	122	Rc 1/2	15	115
20	3/4	70	85	65	4	12	100	75	4	15	178	162	22	15	26.13	24	1/34	138	26.2	25.2	23	137	Rc 3/4	17	131
25	1	96	95	75	4	12	125	90	4	19	202	182	25	15	32.16	27	1/34	156	33.0	32.0	25	154	Rc 1	20	149
40	1 1/2	133	120	95	4	15	140	105	4	19	274	237	41	16	48.21	37	1/37	213	47.0	46.0	28	204	Rc 1 1/2	25	201
50	2	133	130	105	4	15	155	120	4	19	304	257	52	20	60.25	42	1/37	233	59.0	58.0	28	219	Rc 2	28	219
80	3	210	180	145	4	19	185	150	8	19	467	409	78	22	89.60	64	1/49	394	88.0	86.0	35	365	Rc 3	35	365
100	4	260	200	165	8	19	210	175	8	19	587	499	100	22	114.70	84	1/56	494	113.0	111.0	45	455	Rc 4	45	455

Nominal Size		D ₁	Socket End												Threaded End		
mm	inch		PVC, C-PVC				PP				PVDF				DIN 2999		
			DIN 8063		L		DIN 16962		L		d ₁	d ₂	ℓ	L	d ₁	ℓ	L
15	1/2	60	20	16	115.5	19.50	19.30	14.5	114	19.50	19.30	14.5	114	Rc 1/2	15	115	
20	3/4	70	25	19	134	24.50	24.30	16	131	24.50	24.30	16	131	Rc 3/4	17	132	
25	1	96	32	22	155	31.50	31.30	18	151	31.50	31.30	18	151	Rc 1	20	153	
40	1 1/2	133	50	31	208.5	49.45	49.20	23.5	201	49.45	49.20	23.5	201	Rc 1 1/2	25	203	
50	2	133	63	38	228.5	62.50	62.10	27.5	218	62.50	62.10	27.5	218	Rc 2	28	219	
80	3	210	90	51	380.5	89.20	88.85	35.5	365	89.20	88.85	35.5	365	Rc 3	35	360	
100	4	260	110	61	466.5	109.05	108.65	41.5	447	109.05	108.65	41.5	447	Rc 4	45	451	

Nominal Size		D ₁	Flanged End								Socket End(IPS)								Threaded End		
inch	mm		ANSI Class 150				L		d	t	PVC, C-PVC				PVDF,PP				ANSI/ASME B 1.20.1		
			D	C	n	h	C-PVC	PVDF			d ₁	d ₂	ℓ	L	d ₁	d ₂	ℓ	L	d ₁	ℓ	L
1/2	15	2.36	3.50	2.38	4	0.63	6.50	5.67	0.71	0.55	0.848	0.836	0.688	4.53	0.825	-	0.874	4.63	1/2- 14 NPT	0.59	4.53
3/4	20	2.76	3.86	2.76	4	0.63	7.48	6.38	0.87	0.59	1.058	1.046	0.719	5.11	1.030	-	1.000	5.33	3/4- 14 NPT	0.67	5.20
1	25	3.78	4.25	3.13	4	0.63	8.62	7.32	0.98	0.59	1.325	1.310	0.875	6.09	1.300	-	1.126	6.17	1- 11 1/2 NPT	0.79	6.02
1 1/2	40	5.24	5.00	3.88	4	0.63	11.61	9.41	1.61	0.63	1.912	1.894	1.094	7.94	1.890	-	1.374	8.13	1 1/2- 11 1/2 NPT	0.98	7.99
2	50	5.24	5.98	4.74	4	0.75	12.80	10.12	2.05	0.79	2.387	2.369	1.156	8.61	2.360	-	1.500	8.84	2- 11 1/2 NPT	1.10	8.62
3	80	8.27	7.52	6.00	4	0.75	18.39	16.10	3.07	0.87	3.516	3.492	1.875	14.33	3.480	-	1.874	14.31	3- 8 NPT	1.38	14.37
4	100	10.24	9.02	7.50	8	0.75	22.95	19.45	3.94	0.87	4.518	4.491	2.000	17.06	4.480	-	2.252	17.30	4- 8 NPT	1.77	17.91

STOP VALVE (GLOVE VALVE) 15mm - 100mm(1/2inch - 4inch)



FEATURES

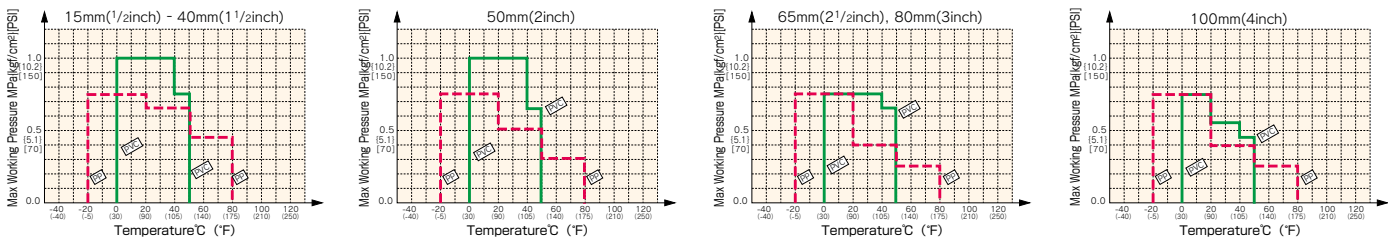
- The STOP VALVE is compact and economical.
- Used for efficient throttling of flow.
- Positive shut-off.
- Displas excellent flow regulating character-istics throughout the entire lift of the disc.

SPECIFICATIONS

Body material	Unplasticized Polyvinyl Chloride(PVC) Polypropylene(PP)
End Connectors	Socket End : 15mm(1/2inch) - 25mm(1inch) Threaded End : 15mm(1/2inch) - 50mm(2inch) Flanged End : 15mm(1/2inch) - 100mm(4inch)
Working Temperature	PVC:0°C - 50°C(30°F - 120°F) PP:-20°C - 80°C(-5°F - 175°F)
Max. Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI](at R.T).....15mm(1/2inch) - 50mm(2inch) 0.7MPa{7.1kgf/cm ² }[100PSI](at R.T).....65mm(2 1/2inch) - 100mm(4inch)

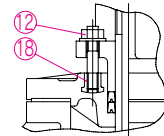
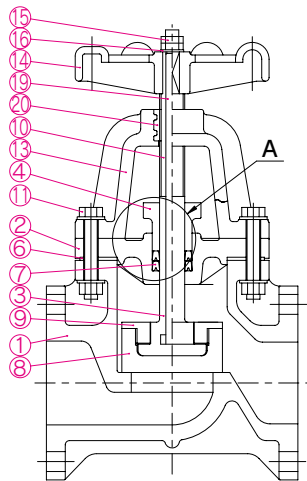
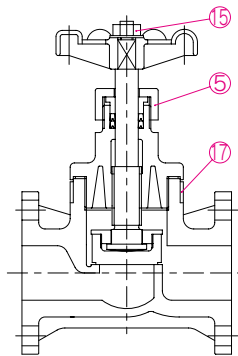
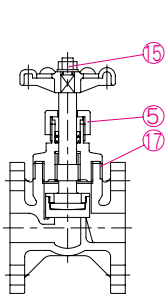
WORKING PRESSURE VS. TEMPERATURE

STOP VALVE



DIMENSIONS

- 15mm (1/2inch) - 30mm (1 1/4inch)
- 40mm (1 1/2inch) - 50mm (2inch)
- 65mm (2 1/2inch) - 100mm (4inch)



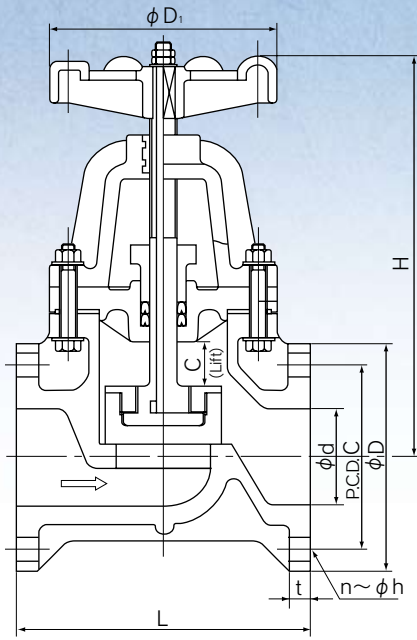
DETAIL OF PART A
65mm (2 1/2") ~ 100mm (4")

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, PP	⑪	BOLT · NUT	4	STAINLESS STEEL 304 65mm(2 1/2inch) and over
②	BONNET	1	PVC, PP	⑫	STUD BOLT · NUT	2	STAINLESS STEEL 304 65mm(2 1/2inch) and over
③	STEM	1	PVC, PP	⑬	SUPPORT OF STEM	1	PP 65mm(2 1/2inch) and over
④	GLAND	1	PVC, PP	⑭	HAND WHEEL	1	PP
⑤	GLAND NUT	1	PVC, PP Up to 50mm(2inch)	⑮	NUT(A)	1	PVC Up to 50mm(2inch)
⑥	SHEET GASKET	1	EPDM, Others	⑮	NUT(A)	2	STAINLESS STEEL 304 65mm(2 1/2inch) and over
⑦	GLAND PACKIKG	2	EPDM, Others	⑯	WASHER	1	PVC Up to 50mm(2inch)
⑧	DISC	1	PP	⑯	WASHER	1	STAINLESS STEEL 304 65mm(2 1/2inch) and over
⑨	STEM HOLDER	1	PP	⑰	RING FOR REINFORCING*	1	STAINLESS STEEL PP Body 15mm(1/2inch)~50mm(2inch)
⑩	STEM WTH TRAPEZOID SCREW	1	COPPER ALLOY(C3604) 65mm(2 1/2inch) and over	⑱	INSERTED NUT	1	COPPER ALLOY(C3604) 65mm(2 1/2inch) and over
				⑲	INSERTED METAL OF STEM	1	STEEL(SS400) 65mm(2 1/2inch) and over
				⑳	INSERTED METAL	1	BRONZE(BC6) 65mm(2 1/2inch) and over

*When the body is made of PP, it uses an Stainless Steel 304 reinforcing ring.

● FLANGED END



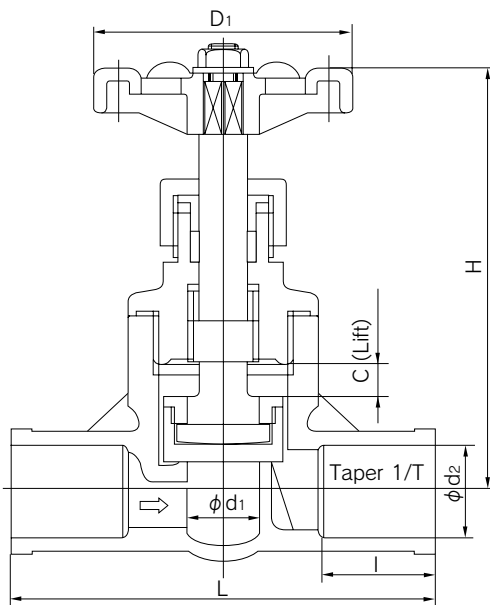
DIMENSIONS TABLE

JIS													Unit:mm	
Nominal Size	d	JIS 10K				L	t	Lift C	H		D ₁	Working Press. at R.T. MPa[kgf/cm ²][PSI]		
		D	C	n	h				Shut	Open		PVC	PP	
15	1/2	18	95	70	4	15	85	12	8	124	132	66	1.0{10.2}[150]	0.75{7.7}[110]
20	3/4	24	100	75	4	15	95	14	8	132	140	66	1.0{10.2}[150]	0.75{7.7}[110]
25	1	28	125	90	4	19	110	14	11	150	161	91	1.0{10.2}[150]	0.75{7.7}[110]
32	1 1/4	37	135	100	4	19	135	16	13	154	167	91	1.0{10.2}[150]	0.75{7.7}[110]
40	1 1/2	41	140	105	4	19	190	16	20	210	230	135	1.0{10.2}[150]	0.75{7.7}[110]
50	2	52	155	120	4	19	200	16	24	228	252	135	1.0{10.2}[150]	0.75{7.7}[110]
65	2 1/2	67	175	140	4	19	220	18	35	310	345	185	0.75{7.7}[110]	0.75{7.7}[110]
80	3	78	185	150	8	19	240	18	35	324	359	185	0.75{7.7}[110]	0.75{7.7}[110]
100	4	100	210	175	8	19	290	18	40	379	419	185	0.75{7.7}[110]	0.75{7.7}[110]

DIN													Unit:mm	
Nominal Size	d	DIN PN10				L	t	Lift C	H		D ₁	Working Press. at R.T. MPa[kgf/cm ²][PSI]		
		D	C	n	h				Shut	Open		PVC	PP	
15	1/2	18	95	65	4	14	85	12	8	124	132	66	1.0{10.2}[150]	0.75{7.7}[110]
20	3/4	24	105	75	4	14	95	14	8	132	140	66	1.0{10.2}[150]	0.75{7.7}[110]
25	1	28	115	85	4	14	110	14	11	150	161	91	1.0{10.2}[150]	0.75{7.7}[110]
32	1 1/4	37	140	100	4	18	135	16	13	154	167	91	1.0{10.2}[150]	—
40	1 1/2	41	150	110	4	18	190	16	20	210	230	135	1.0{10.2}[150]	0.75{7.7}[110]
50	2	52	165	125	4	18	200	16	24	228	252	135	1.0{10.2}[150]	0.75{7.7}[110]
65	2 1/2	67	185	145	4	18	220	18	35	310	345	185	0.75{7.7}[110]	0.75{7.7}[110]
80	3	78	200	160	8	18	240	18	35	324	359	185	0.75{7.7}[110]	0.75{7.7}[110]
100	4	100	220	180	8	18	290	18	40	379	419	185	0.75{7.7}[110]	0.75{7.7}[110]

ANSI													Unit:inch	
Nominal Size	d	ANSI CLASS 150				L	t	Lift C	H		D ₁	Working Press. at R.T. MPa[kgf/cm ²][PSI]		
		D	C	n	h				Shut	Open		PVC	PP	
1/2	15	0.71	3.50	2.38	4	0.63	3.35	0.47	0.32	4.88	5.20	2.60	1.0{10.2}[150]	0.75{7.7}[110]
3/4	20	0.94	3.86	2.76	4	0.63	3.74	0.55	0.32	5.20	5.51	2.60	1.0{10.2}[150]	0.75{7.7}[110]
1	25	1.10	4.25	3.13	4	0.63	4.33	0.55	0.43	5.91	6.34	3.58	1.0{10.2}[150]	0.75{7.7}[110]
1 1/4	32	1.46	4.61	3.50	4	0.63	5.31	0.63	0.51	6.06	6.57	3.58	1.0{10.2}[150]	—
1 1/2	40	1.61	5.00	3.88	4	0.63	7.48	0.63	0.79	8.27	9.06	5.31	1.0{10.2}[150]	0.75{7.7}[110]
2	50	2.05	5.98	4.74	4	0.75	7.87	0.63	0.95	8.98	9.92	5.31	1.0{10.2}[150]	0.75{7.7}[110]
2 1/2	65	2.64	7.01	5.49	4	0.75	8.66	0.71	1.38	12.20	13.58	7.28	0.75{7.7}[110]	0.75{7.7}[110]
3	80	3.07	7.52	6.00	4	0.75	9.45	0.71	1.38	12.75	14.13	7.28	0.75{7.7}[110]	0.75{7.7}[110]
4	100	3.94	9.02	7.50	8	0.75	11.42	0.71	1.57	14.92	16.50	7.28	0.75{7.7}[110]	0.75{7.7}[110]

● SOCKET END



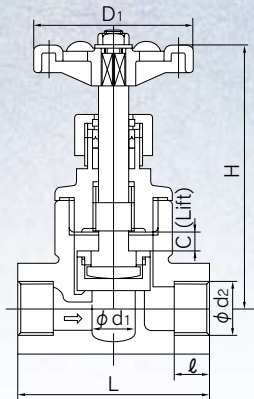
DIMENSIONS TABLE

JIS											Unit:mm	
Nominal Size	d ₂	d ₁	ℓ	L	Taper 1/T	Lift C	H		Working Press. at R.T. MPa[kgf/cm ²][PSI]			
							Shut	Open	PVC	PP		
15	1/2	22.4 ± 0.2	15	30	110	1/34	8	124	132	1.0{10.2}[150]	0.75{7.7}[110]	
20	3/4	26.45 ± 0.2	18	35	130	1/34	8	132	140	1.0{10.2}[150]	0.75{7.7}[110]	
25	1	32.55 ± 0.25	25	40	150	1/34	11	150	161	1.0{10.2}[150]	0.75{7.7}[110]	

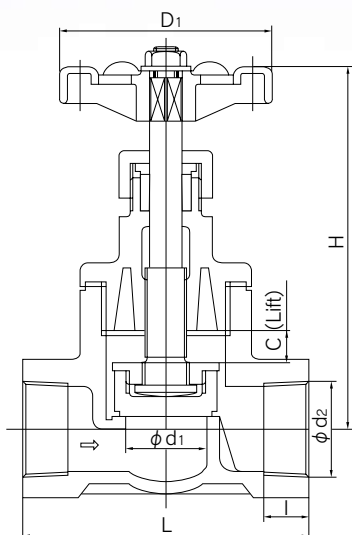
DIN											Unit:mm	
Nominal Size	d ₂	d ₁	ℓ	L	Lift C	H		Working Press. at R.T. MPa[kgf/cm ²][PSI]				
						Shut	Open	PVC	PP			
15	1/2	20	15	16	82	8	124	132	1.0{10.2}[150]	0.75{7.7}[110]		
20	3/4	25	18	19	98	8	132	140	1.0{10.2}[150]	0.75{7.7}[110]		
25	1	32	25	22	114	11	150	161	1.0{10.2}[150]	0.75{7.7}[110]		

ANSI											Unit:inch	
Nominal Size	d ₂	d ₁	ℓ	L	Taper 1/T	Lift C	H		Working Press. at R.T. MPa[kgf/cm ²][PSI]			
							Shut	Open	PVC	PP		
15	1/2	0.848	0.59	1.18	4.33	1/34	0.32	4.88	5.20	1.0{10.2}[150]	0.75{7.7}[110]	
20	3/4	1.058	0.71	1.38	5.12	1/34	0.32	5.20	5.51	1.0{10.2}[150]	0.75{7.7}[110]	
25	1	1.325	0.98	1.58	5.91	1/34	0.43	5.91	6.34	1.0{10.2}[150]	0.75{7.7}[110]	

● 15mm (1/2inch) – 30mm (1 1/4inch)



● 40mm (1 1/2inch) – 50mm (2inch)



DIMENSIONS TABLE (Threaded End)

JIS										Unit:mm	
Nominal Size		d ₂	d ₁	ℓ	L	Lift C	H		D ₁	Working Press. at R.T. MPa[kgf/cm ²][PSI]	
mm	inch						Shut	Open		PVC	PP
15	1/2	Rc 1/2	15	15	85	8	124	132	66	1.0{10.2}[150]	0.75{7.7}[110]
20	3/4	Rc 3/4	18	18	95	8	132	140	66	1.0{10.2}[150]	0.75{7.7}[110]
25	1	Rc 1	25	20	110	11	150	161	91	1.0{10.2}[150]	0.75{7.7}[110]
32	1 1/4	Rc 1 1/4	35	25	135	13	154	167	91	1.0{10.2}[150]	—
40	1 1/2	Rc 1 1/2	41	25	140	17	218	235	135	1.0{10.2}[150]	—
50	2	Rc 2	52	27	180	22	237	259	135	1.0{10.2}[150]	—

DIN										Unit:mm	
Nominal Size		d ₂	d ₁	ℓ	L	Lift C	H		D ₁	Working Press. at R.T. MPa[kgf/cm ²][PSI]	
mm	inch						Shut	Open		PVC	PP
15	1/2	Rp 1/2	15	15	85	8	124	132	66	1.0{10.2}[150]	0.75{7.7}[110]
20	3/4	Rp 3/4	18	18	95	8	132	140	66	1.0{10.2}[150]	0.75{7.7}[110]
25	1	Rp 1	25	20	110	11	150	161	91	1.0{10.2}[150]	0.75{7.7}[110]
32	1 1/4	Rp 1 1/4	35	25	135	13	154	167	91	1.0{10.2}[150]	—
40	1 1/2	Rp 1 1/2	41	25	140	17	218	235	135	1.0{10.2}[150]	—
50	2	Rp 2	52	27	180	22	237	259	135	1.0{10.2}[150]	—

ANSI										Unit:inch	
Nominal Size		d ₂	d ₁	ℓ	L	Lift C	H		D ₁	Working Press. at R.T. MPa[kgf/cm ²][PSI]	
inch	mm						Shut	Open		PVC	PP
1/2	15	NPT. 1/2	0.59	0.59	3.35	0.32	4.88	5.20	2.60	1.0{10.2}[150]	0.75{7.7}[110]
3/4	20	NPT. 3/4	0.71	0.71	3.74	0.43	5.20	5.51	2.60	1.0{10.2}[150]	0.75{7.7}[110]
1	25	NPT. 1	0.98	0.79	4.33	0.43	5.91	6.31	3.58	1.0{10.2}[150]	0.75{7.7}[110]
1 1/4	32	NPT. 1 1/4	1.38	0.98	5.32	0.51	6.06	6.58	3.58	1.0{10.2}[150]	—
1 1/2	40	NPT. 1 1/2	1.61	0.98	5.51	0.67	8.58	9.25	5.32	1.0{10.2}[150]	—
2	50	NPT. 2	2.05	1.06	7.09	0.87	9.33	10.20	5.32	1.0{10.2}[150]	—

GAUGE VALVE 20mm, 25mm (3/4inch, 1inch)

●20mm (3/4inch)



Flanged Elbow

●25mm (1inch)



●25mm (1inch)



FEATURES

Backflow Prevention

- The contact surface is sealed with an anti-corrosive diaphragm.
- The gauge pipe can easily be installed by inserting the pipe and tightening the union nut.
- The GAUGE VALVE has a drain plug G¹/₄ in diameter which helps to maintain the valve (Sampling is possible by removing the plug).

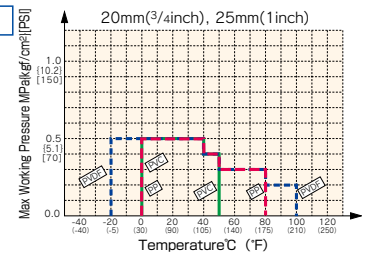
SPECIFICATIONS

Unit:mm

Nominal Size	20mm (3/4inch)	25mm (1inch)
Gauge Pipe Outer Size	18	26
Body material	Unplasticized Polyvinyl Chloride(PVC), Polypropylene (PP)	
Nominal Size	20mm(3/4inch) - 25mm(1inch)	
Working Temperature	PVC:0°C - 50°C (30° F - 120° F), PP : -20°C - 80°C (-5° F - 175° F)	
Max. Working Pressure	0.5MPa{5.1kgf/cm ² }[70PSI]	

WORKING PRESSURE VS. TEMPERATURE

GAUGE VALVE



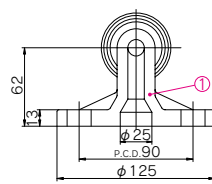
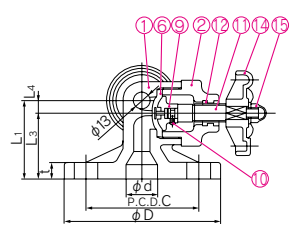
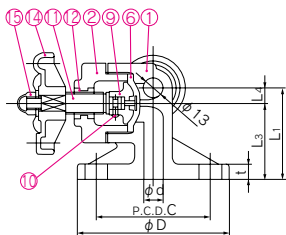
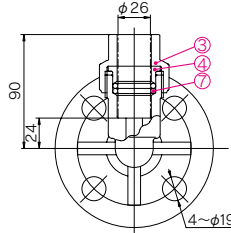
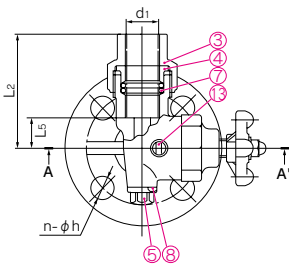
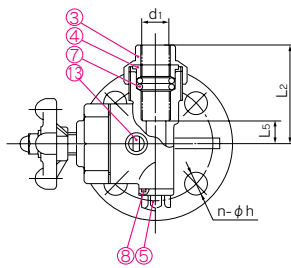
DIMENSIONS

●20mm (3/4inch)

●25mm (1inch)

Flanged Elbow

●25mm (1inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, PP
②	BONNET	1	PVC, PP
③	GLAND NUT	1	PVC, PP
④	GLAND	1	PVC, PP
⑤	DRAIN PLUG	1	PVC, PP
⑥	DIAPHRAGM	1	EPDM, PTFE, Others
⑦	O-RING (A)	2	EPDM, PTFE, Others
⑧	O-RING (B)	1	EPDM, PTFE, Others
⑨	COMPRESSOR	1	PVDF
⑩	COMPRESSOR PIN	2	STAINLESS STEEL304
⑪	STEM	1	COPPER ALLOY(C3604)
⑫	INSERTED METAL OF BONNET	1	COPPER ALLOY(C3604)
⑬	INDICATION OF MATERIAL	1	PAPER
⑭	HAND WHEEL	1	PP
⑮	NUT	1	STAINLESS STEEL304

DIMENSIONS TABLE

JIS														Unit:mm
Nominal Size		d	JIS 10K				L ₁	L ₂	L ₃	L ₄	L ₅	t	d ₁	
mm	inch		D	C	n	h								
20	3/4	13	100	75	4	15	60	64	50	10	15	10	18	
25	1	25	125	90	4	19	62	90	52	10	24	13	26	

DIN														Unit:mm
Nominal Size		d	DIN PN 10				L ₁	L ₂	L ₃	L ₄	L ₅	t	d ₁	
mm	inch		D	C	n	h								
20	3/4	13	105	75	4	14	60	64	50	10	15	10	18	
25	1	25	115	85	4	14	62	90	52	10	24	13	26	

ANSI														Unit:inch
Nominal Size		d	ANSI CLASS 150				L ₁	L ₂	L ₃	L ₄	L ₅	t	d ₁	
inch	mm		D	C	n	h								
3/4	20	0.51	3.88	2.75	4	0.62	2.36	2.52	1.97	0.39	0.59	0.39	0.71	
1	25	0.98	4.25	3.12	4	0.62	2.44	3.54	2.05	0.39	0.94	0.51	1.02	

GATE VALVE

Hand wheel Model



Cap(Square Nut)

Rising Stem



Threaded Body

Stem Extension

FEATURES

High Corrosion and Impact-resistance

All wet sections are made of corrosion-resistant material, thus preventing corrosion and turbid water due to rust. The GATE VALVE, made of high impact polyvinyl chloride, can be used for water supply and drainage.

Light and Rugged Structure

Being made of synthetic resin, the ASAHI AV GATE VALVE is about 1/5 the weight of a cast iron gate valve. However, the ASAHI AV GATE VALVE gives the same torque strength as a cast iron gate valve, so it endures high torque.

Flexibility Covering Flow Variations

The gate valve is so flexible in covering many flow variations with tight shut-off.

Easy Maintenance

The stem sealed with an O-ring, prevents external leaks and is easy to replace.

NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

:GATE VALVE TYPE P(Plug) (Material:PVC+EPDM,FKM)

*Certified products bear an NSF Certification Mark.

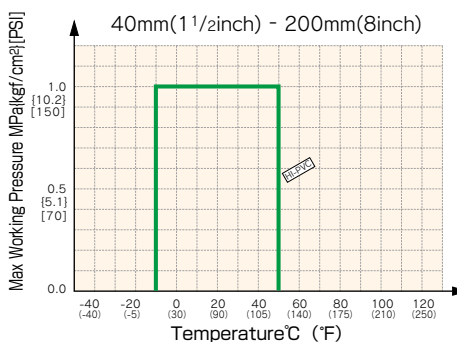
SPECIFICATIONS

Body material	Valve:High Impact Polyvinyl Chloride(HI-PVC)
Gate material	TYPE-P :32mm(1 1/4inch) to 350mm(14inch) ...PP TYPE-S :32mm(1 1/4inch) to 150mm(6inch)HI-PVC+SBR Soft seals:32mm(1 1/4inch) to 150mm(6inch)C-PVC+SBR 65mm(2 1/2inch), 125mm(5inch)C-PVC+SBR
Nominal size	Popular series (Type P):40 to 350mm(1 1/2inch to 14inch) Resilient series(Type S):40 to 200mm(1 1/2inch to 8inch)
Working Temperature	- 10°C - 50°C(15°F - 120°F)
Max. Working Pressure	40mm(1 1/2inch) - 200mm(8inch) 1.0Mpa{10.2kgf/cm ² } [150PSI] 250mm(10inch) 0.75Mpa{7.7kgf/cm ² } [110PSI] 300mm(12inch), 350mm(14inch) 0.5Mpa{5.1kgf/cm ² } [70PSI]
End Connectors	Flanged End Threaded Type(40mm,50mm)are available.
Mechanism	Round Handle, Cap (Square Nut), Stem Extension

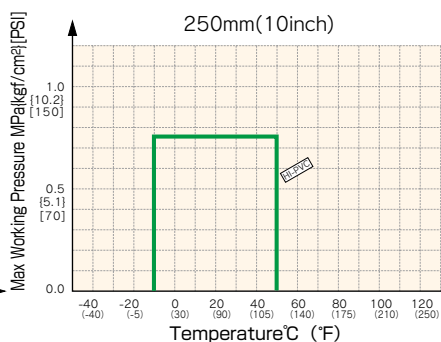
WORKING PRESSURE VS. TEMPERATURE

GATE VALVE

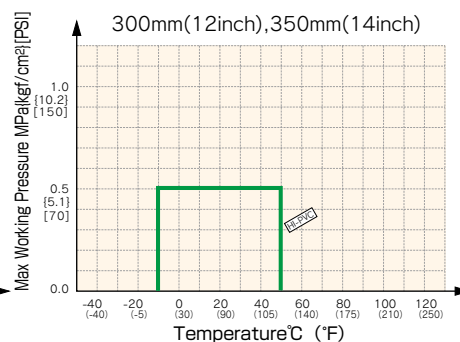
Gate Valve TypeP, Type S



Gate Valve TypeP, Type S



Gate Valve TypeP, Type S



GATE VALVE TYPE-S (Soft Seal) 50mm - 200mm(2inch - 8inch)

Hand Wheel

FEATURES

Reliable Watertightness

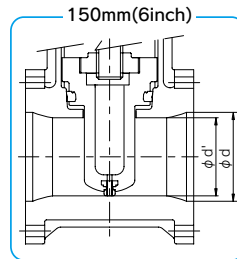
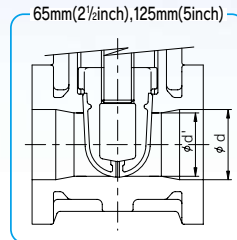
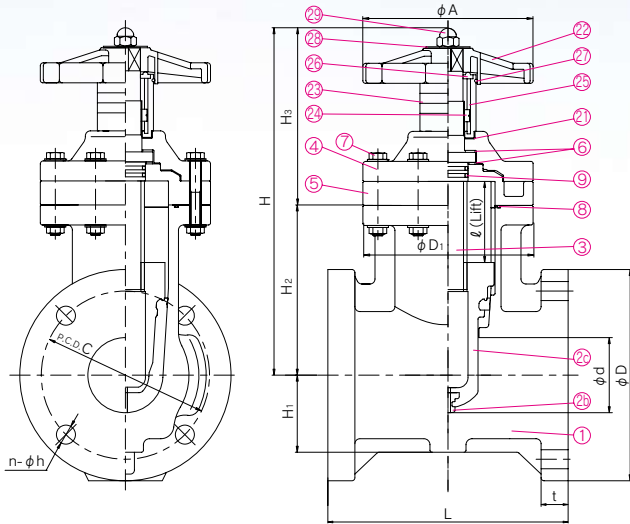
The rubber valve seat, a soft seal type, offers reliable shut-off.

Provides Smooth Flow

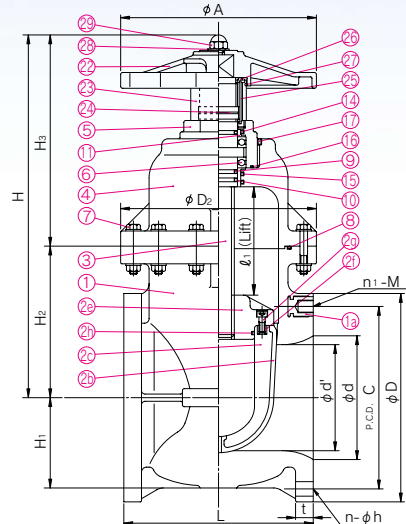
Being free of cavities, the valve body has no sand or foreign matter build up in it, thus providing a smooth flow.

※ Threaded End Type (40mm, 50mm) are available.

●50mm(2inch)~150mm(6inch) (STEM:PVC)



●200mm(8inch) (STEM:PVC)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	HI-PVC	⑥	THRUST RING	2	PP,SUJ2	⑰	SET SCREW(A)	1	STAINLESS STEEL304
⑱	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	⑦	BOLT·NUT	—	STAINLESS STEEL304	⑳	PACKING	1	EPDM
㉒	SEAT	1	SBR,NBR	㉑	O-RING(A)	1	EPDM, Others	㉓	HAND WHEEL	1	PP
㉔	GATE(A)	1	HI-PVC,C-PVC	⑧	O-RING(B)	1	EPDM, Others	㉕	INDICATING COVER	1	PC
㉖	GATE(B)	1	PP	⑨	O-RING(C)	2-3	EPDM, Others	㉗	INDICATING RING	1	PVC
㉘	INSERTED METAL OF GATE(A)	4	COPPER ALLOY(C3604)	⑭	O-RING(E)	1	EPDM, Others	㉙	GUIDE PIN	1	STAINLESS STEEL304
㉚	BOLT(A)	4	STAINLESS STEEL304	⑮	O-RING(F)	1	EPDM, Others	㉛	GUIDE PIN HOLDER	1	PVC
③	STEM	1	PVC	⑯	O-RING(D)	1	EPDM, Others	㉜	O-RING(G)	1	EPDM
④	BONNET(A)	1	HI-PVC	⑩	BUSH(A)	1	PP	㉝	WASHER	1	PVC
⑤	BONNET(B)	1	HI-PVC	⑪	BUSH(B)	1	PP	㉞	BOX NUT	1	STAINLESS STEEL304

DIMENSIONS TABLE

Nominal Size		d	d ₁	JIS 10K					L	t	D ₁	A	ℓ	H	H ₁	H ₂
mm	inch			D	C	n	h	n ₁ -M								
50	2	50	—	155	120	4	19	—	180	23	130	130	52	270	134	136
65	2 1/2	65	—	175	140	4	19	—	190	24	155	155	67	302	152	150
80	3	75	—	185	150	8	19	—	200	25	170	170	77	325	170	155
100	4	100	—	210	175	8	19	—	230	27	195	195	102	370	207	163
125	5	125	110	250	210	8	23	—	260	27	235	235	112	407	227	180
150	6	150	130	280	240	8	23	—	270	28	270	270	132	445	263	182
200	8	196	168	330	290	10	23	2-M20	290	28	310	310	175	577	240	337

Nominal Size		d	d ₁	DIN PN10					L	t	D ₁	A	ℓ	H	H ₁	H ₂
mm	inch			D	C	n	h	n ₁ -M								
50	2	50	—	165	125	4	18	—	180	23	130	130	52	270	134	136
65	2 1/2	65	—	185	145	4	18	—	190	24	155	155	67	302	152	150
80	3	75	—	200	160	8	18	—	200	25	170	170	77	325	170	155
100	4	100	—	220	180	8	18	—	230	27	195	195	102	370	207	163
125	5	125	110	250	210	8	18	—	260	27	235	235	112	407	227	180
150	6	150	130	285	240	8	23	—	270	28	270	270	132	445	263	182
200	8	196	168	340	295	6	23	2-M20	290	28	310	310	175	577	240	337

Nominal Size		d	d ₁	ANSI CLASS 150					L	t	D ₁	A	ℓ	H	H ₁	H ₂
inch	mm			D	C	n	h	n ₁ -M								
2	50	1.97	—	5.98	4.74	4	0.75	—	7.01	0.91	5.12	5.12	2.05	10.63	5.28	5.35
2 1/2	65	2.56	—	7.01	5.49	4	0.75	—	7.48	0.94	6.10	6.10	2.64	11.89	5.98	5.91
3	80	2.95	—	7.52	6.00	4	0.75	—	7.99	0.98	6.69	6.69	3.03	12.79	6.69	6.10
4	100	3.94	—	9.02	7.50	8	0.75	—	9.02	1.06	7.68	7.68	4.02	14.57	8.15	6.42
5	125	4.92	4.33	10.00	8.50	8	0.87	—	10.24	1.06	9.25	9.25	4.41	16.03	8.94	7.09
6	150	5.91	5.12	10.98	9.51	8	0.87	—	10.51	1.06	10.63	10.63	5.20	17.52	10.35	7.17
8	200	7.72	6.61	13.50	11.75	6	0.87	2-W ³ / ₄	11.50	1.10	12.20	12.20	6.89	22.72	9.45	13.27

GATE VALVE TYPE-S (Soft Seal) 50mm - 200mm(2inch - 8inch)

Cap(square Nut) Model

FEATURES

■ Built-in Stopper

Feeling in the shut, position.

■ Reliable Watertightness

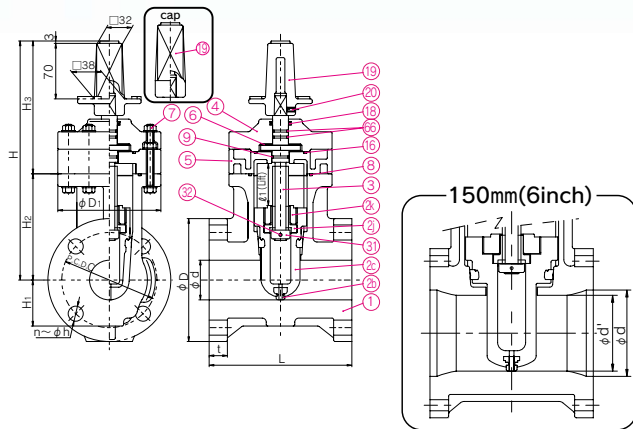
The rubber valve seat, a soft seal type, offers reliable shut-off.

■ Provides Smooth Flow

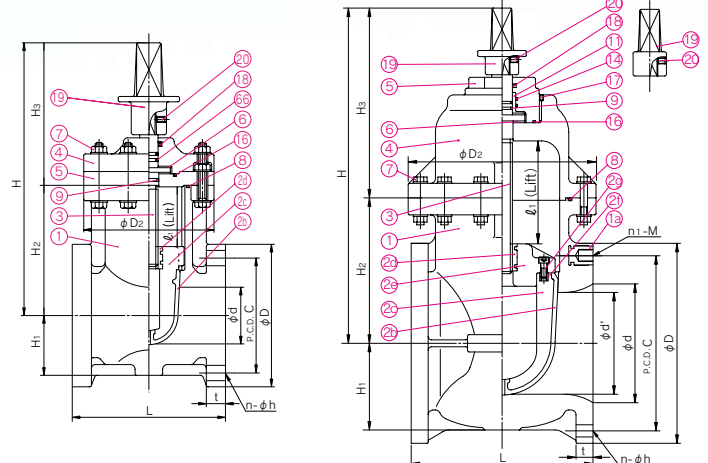
Being free of cavities, the valve body has no sand or foreign matter build up in it, thus providing a smooth flow.

※ Threaded End Type (40mm, 50mm)are available.

● 32mm(1¹/₄inch) – 150mm(6inch)
(basides 65mm(2¹/₂inch), 125mm(5inch))



● 65mm(2¹/₂inch), 125mm(5inch) ● 200mm(8inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	HI-PVC	⑭	FEMALE SCREW HOLDER	1	HI-PVC	⑩	O-RING(D)	1	EPDM, Others
①a	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	⑮	STEM	1	SUS403, Others	⑪	BUSH(A)	1	PP
②b	SEAT	1	SBR, NBR	⑯	BONNET(A)	1	HI-PVC	⑫	BUSH(B)	1	PP
②c	GATE(A)	1	C-PVC	⑰	BONNET(B)	1	HI-PVC	⑬	SET SCREW(A)	1	STAINLESS STEEL304
②d	INSERTED METAL OF GATE(A)	1	BC6	⑱	THRUST RING	2	PP	⑭	DUST SEAL	1	EPDM
②e	GATE(B)	1	PP	⑲	BOLT · NUT	—	STAINLESS STEEL304	⑮	CAP(A)	1	CAST IRON(FC200)
②f	INSERTED METAL OF GATE(B)	4	COPPER ALLOY(C3604)	⑳	O-RING(B)	1	EPDM, Others	⑯	SET SCREW(B)	1	STAINLESS STEEL304
②g	BOLT(A)	4	STAINLESS STEEL304	㉑	O-RING(C)	1·2	EPDM, Others	㉑	O-RING(H)	2	EPDM
②h	FEMALE SCREW METAL	1	COPPER ALLOY(C3604)	㉒	O-RING(E)	2	EPDM, Others				

DIMENSIONS TABLE

Nominal Size		d	d ₁	JIS 10K					L	t	D ₁	A	ℓ	H	H ₁	H ₂
mm	inch			D	C	n	h	n ₁ -M								
50	2	50	—	155	120	4	19	—	180	23	130	130	52	270	134	136
65	2 ¹ / ₂	65	—	175	140	4	19	—	190	24	155	155	67	302	152	150
80	3	75	—	185	150	8	19	—	200	25	170	170	77	325	170	155
100	4	100	—	210	175	8	19	—	230	27	195	195	102	370	207	163
125	5	125	110	250	210	8	23	—	260	27	235	235	112	407	227	180
150	6	150	130	280	240	8	23	—	270	28	270	270	132	445	263	182
200	8	196	168	330	290	10	23	2-M20	290	28	310	310	175	577	240	337

Nominal Size		d	d ₁	DIN PN10					L	t	D ₁	A	ℓ	H	H ₁	H ₂
mm	inch			D	C	n	h	n ₁ -M								
50	2	50	—	165	125	4	18	—	180	23	130	130	52	270	134	136
65	2 ¹ / ₂	65	—	185	145	4	18	—	190	24	155	155	67	302	152	150
80	3	75	—	200	160	8	18	—	200	25	170	170	77	325	170	155
100	4	100	—	220	180	8	18	—	230	27	195	195	102	370	207	163
125	5	125	110	250	210	8	18	—	260	27	235	235	112	407	227	180
150	6	150	130	285	240	8	23	—	270	28	270	270	132	445	263	182
200	8	196	168	340	295	6	23	2-M20	290	28	310	310	175	577	240	337

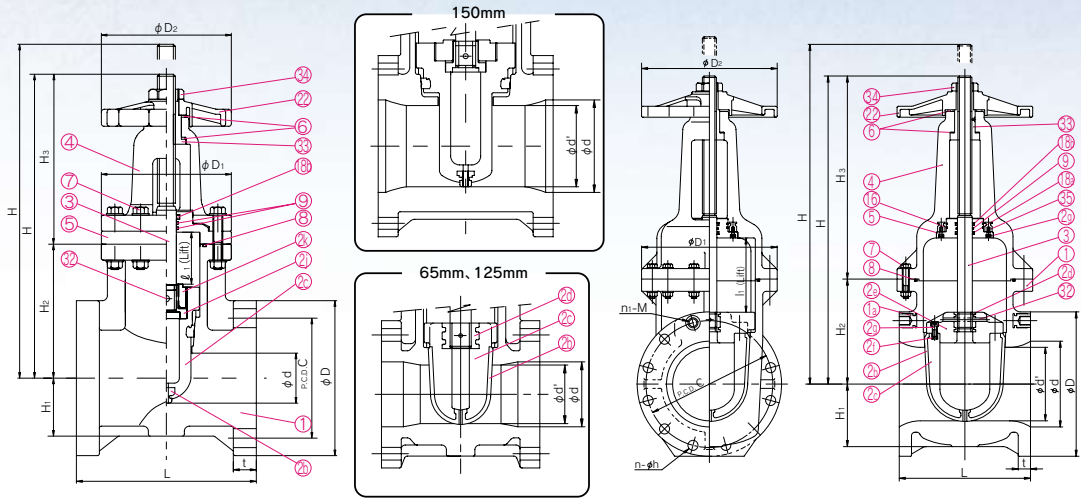
Nominal Size		d	d ₁	ANSI CLASS 150					L	t	D ₁	A	ℓ	H	H ₁	H ₂
inch	mm			D	C	n	h	n ₁ -M								
2	50	1.97	—	5.98	4.74	4	0.75	—	7.01	0.91	5.12	5.12	2.05	10.63	5.28	5.35
2 ¹ / ₂	65	2.56	—	7.01	5.49	4	0.75	—	7.48	0.94	6.10	6.10	2.64	11.89	5.98	5.91
3	80	2.95	—	7.52	6.00	4	0.75	—	7.99	0.98	6.69	6.69	3.03	12.79	6.69	6.10
4	100	3.94	—	9.02	7.50	8	0.75	—	9.02	1.06	7.68	7.68	4.02	14.57	8.15	6.42
5	125	4.92	4.33	10.00	8.50	8	0.87	—	10.24	1.06	9.25	9.25	4.41	16.03	8.94	7.09
6	150	5.91	5.12	10.98	9.51	8	0.87	—	10.51	1.06	10.63	10.63	5.20	17.52	10.35	7.17
8	200	7.72	6.61	13.50	11.75	6	0.87	2-W ³ / ₄	11.50	1.10	12.20	12.20	6.89	22.72	9.45	13.27

GATE VALVE (Rising Stem) 40mm - 200mm(1½ inch - 8inch)

FEATURES

·Externally threaded stem and straight flow channel prevent foreign matter deposits and restrictions through.

- 40mm(1½inch) – 150mm(6inch)
- 65mm(2½inch), 125mm(5inch)
- 200mm(8inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	HI-PVC	⑭	FEMALE SCREW HOLDER	1	HI-PVC, PVC	⑮	DUST SEAL (A)	1	EPDM, Others
⑫	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	⑮	STEM	1	STAINLESS STEEL304	⑯	DUST SEAL (B)	1	NBR
⑬	SEAT	1	SBR, NBR	⑰	BONNET(A)	1	HI-PVC	⑳	HAND WHEEL	1	PP
⑭	GATE(A)	1	HI-PVC, C-PVC	⑱	BONNET(B)	1	HI-PVC, PP	㉑	PIN(A)	1	STAINLESS STEEL304
⑮	INSERTED METAL OF GATE(A)	1	BC6	㉒	THRUST RING	2	PP	㉒	SLEEVE	1	COPPER ALLOY(C3604), BC6
⑯	GATE(B)	1	HI-PVC	㉓	BOLT·NUT	—	STAINLESS STEEL304	㉓	NUT	1	COPPER ALLOY(C3604), BC6
⑰	INSERTED METAL OF GATE(B)	4	COPPER ALLOY(C3604)	㉔	O-RING(B)	1	EPDM, Others	㉔	INSERTED METAL OF BONNET	4	COPPER ALLOY(C3604)
⑱	BOLT(A)	4	STAINLESS STEEL304	㉕	O-RING(C)	2·1	EPDM, Others				
㉑	FEMALE SCREW METAL	1	COPPER ALLOY(C3604)	㉖	O-RING(D)	2	EPDM, Others				

DIMENSIONS TABLE

Nominal Size		d	d ₁	JIS 10K					L	t	D ₁	D ₂	ℓ	H	H ₁	H ₂
mm	inch			D	C	n	h	n ₁ -M								
40	1½	40	—	140	105	4	19	—	165	22	120	120	42	295	107	253
50	2	50	—	155	120	4	19	—	180	23	130	130	52	343	134	291
65	2½	65	—	175	140	4	19	—	190	24	155	155	67	407	152	340
80	3	75	—	185	150	8	19	—	200	25	170	170	77	450	170	373
100	4	100	—	210	175	8	19	—	230	27	195	195	102	564	207	462
125	5	125	110	250	210	8	23	—	260	27	235	235	112	593	227	481
150	6	150	130	280	240	8	23	—	270	28	270	270	132	690	263	558
200	8	196	168	330	290	10	23	2-M20	290	28	310	310	175	877	240	702

Nominal Size		d	d ₁	DIN PN10					L	t	D ₁	D ₂	ℓ	H	H ₁	H ₂
mm	inch			D	C	n	h	n ₁ -M								
40	1½	40	—	150	110	4	18	—	165	22	120	120	42	295	107	253
50	2	50	—	165	125	4	18	—	180	23	130	130	52	343	134	291
65	2½	65	—	185	145	4	18	—	190	24	155	155	67	407	152	340
80	3	75	—	200	160	8	18	—	200	25	170	170	77	450	170	373
100	4	100	—	200	180	8	18	—	230	27	195	195	102	564	207	462
125	5	125	110	250	210	8	18	—	260	27	235	235	112	593	227	481
150	6	150	130	285	240	8	23	—	270	28	270	270	132	690	263	558
200	8	196	168	340	295	6	23	2-M20	290	28	310	310	175	877	240	702

Nominal Size		d	d ₁	ANSI Class 150					L	t	D ₁	D ₂	ℓ	H	H ₁	H ₂
inch	mm			D	C	n	h	n ₁ -M								
1½	40	1.57	—	5.00	3.88	4	0.63	—	6.50	0.87	4.72	4.72	1.65	11.61	4.21	9.96
2	50	1.97	—	5.98	4.47	4	0.75	—	7.01	0.91	5.12	5.12	2.05	13.50	5.28	11.46
2½	65	2.56	—	7.01	5.49	4	0.75	—	7.48	0.94	6.10	6.10	2.64	16.02	5.98	13.39
3	80	2.95	—	7.52	6.00	4	0.75	—	7.99	0.98	6.69	6.69	3.03	17.72	6.69	14.69
4	100	3.94	—	9.02	7.50	8	0.75	—	9.02	1.06	7.68	7.68	4.02	22.20	8.15	18.19
5	125	4.92	4.33	10.00	8.50	8	0.87	—	10.24	1.06	9.25	9.25	4.41	23.35	8.94	18.94
6	150	5.91	5.12	10.98	9.51	8	0.87	—	10.51	1.06	10.63	10.63	5.20	27.17	10.35	21.97
8	200	7.72	6.61	13.50	11.75	6	0.87	2-W¾	11.50	1.10	12.20	12.20	6.89	34.53	9.45	27.64

AUTOMATIC WATER FEEDING VALVE 50mm, 80mm(2inch, 3inch)

Eliminating human intervention

The AV AUTOMATIC WATER FEEDING VALVE is designed as follows. Its sensor compares the water level with upper and lower water level limits for rice plant growth which are set on the sensor. Based on the results of the comparison, the sensor controls the AUTOMATIC WATER FEEDING VALVE as required through a tube connected with the body to automatically feed or stop water.



FEATURES

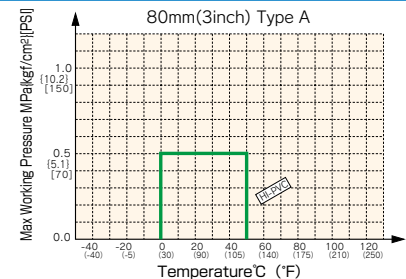
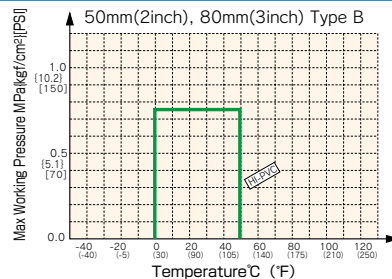
- The AUTOMATIC WATER FEEDING VALVE saves irrigation water, thus relieving water shortage.
- The valve properly controls water supply and reduces labor. This in turn means that working hours are shortened.
- The valve can manually be operated to water fields, orchards, etc.
- The valve can be used in various of applications, such as intermittent irrigation, cold-weather damage prevention, and so on.
- The valve operates on water pressure from a pipeline without electric power.
- The valve prevents a fertilizer and agricultural chemical agent from flowing out of fields, thus inhibiting pollution of lakes and ponds.

SPECIFICATIONS

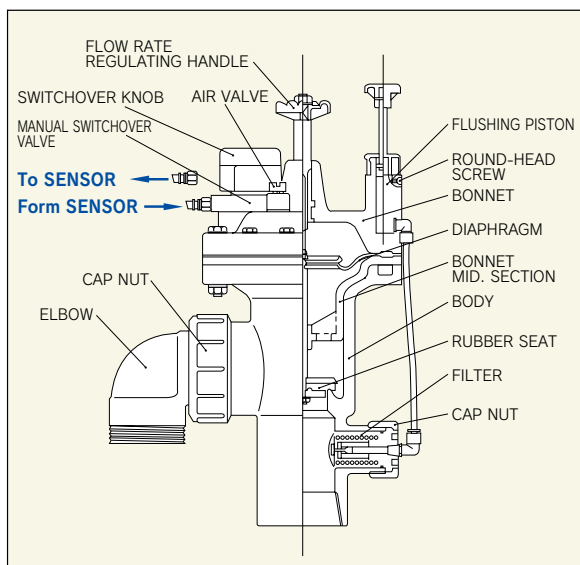
Body material	Valve body: High impact Polyvinyl Chloride(HI-PVC)		
Nominal Size	50mm(2inch)	80mm(3inch)	
Operating Pressure	0.02 - 0.75MPa {0.2 - 7.7kgf/cm ² }	Type A	0.015 - 0.5MPa{0.15 - 5.1kgf/cm ² }
		Type B	0.03 - 0.75MPa{0.3 - 7.7kgf/cm ² }
Max. Working Pressure	1.0MPa {10.2kgf/cm ² }	Type A	0.5MPa{5.1kgf/cm ² }
		Type B	1.0MPa{10.2kgf/cm ² }
Water Level Adjustment	-6cm - 12cm		
End Connectors	Threaded End, Socket End Flanged End(conforming to City Water Standards and JIS)		

WORKING PRESSURE VS. TEMPERATURE

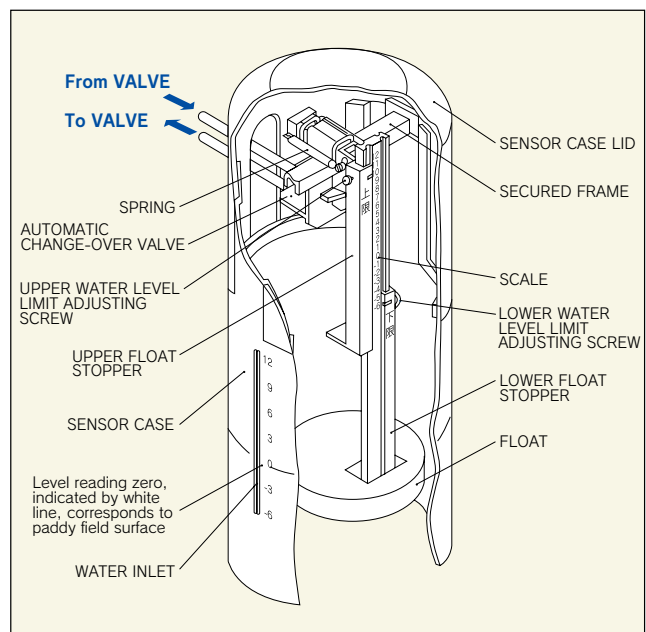
AUTOMATIC WATER FEEDING VALVE



Valve body



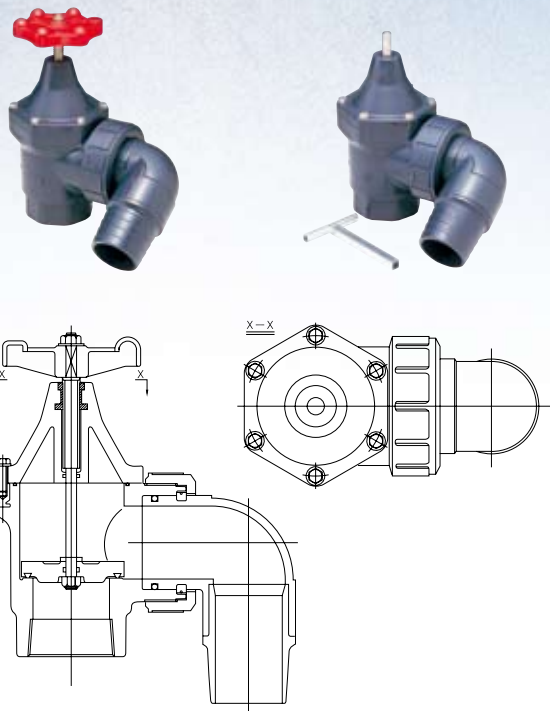
Sensor



Note : The connection of the AUTOMATIC WATER FEEDING VALVE comes in three types: Threaded End, Socket End, Flanged End (City Water and JIS standards).

ROTARY ANGLE VALVE 50mm, 80mm(2inch, 3inch)

Secured handle type T-shaped handle type



●80mm(3inch)ROTARY ANGLE VALVE (Threaded End)

FEATURES

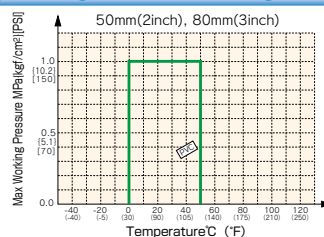
- The ASAHI ROTARY ANGLE VALVE is more compact than conventional angle valves. Because the ROTARY ANGLE VALVE uses a Machino, elbow, or hose socket type receptacle, it can be installed in a small valve box. Only by replacing its attachment, the valve can easily be switched between paddy field and field types.

SPECIFICATIONS

Body material	PVC
Nominal size	50mm(2inch)、80mm(3inch)
Max. Working Pressure	0.75MPa{7.7kgf/cm ² }
Attachment Angle	90° (45° ·straight)
Type of Attachment	Machino:40,50,65,80mm(standard) Paddy fields:50,80mm(special elbow) Fields:50,80mm(hose joint)
End Connectors	Socket End, Flanged End, Threaded End
Operation	T-shaped handle, Secured handle

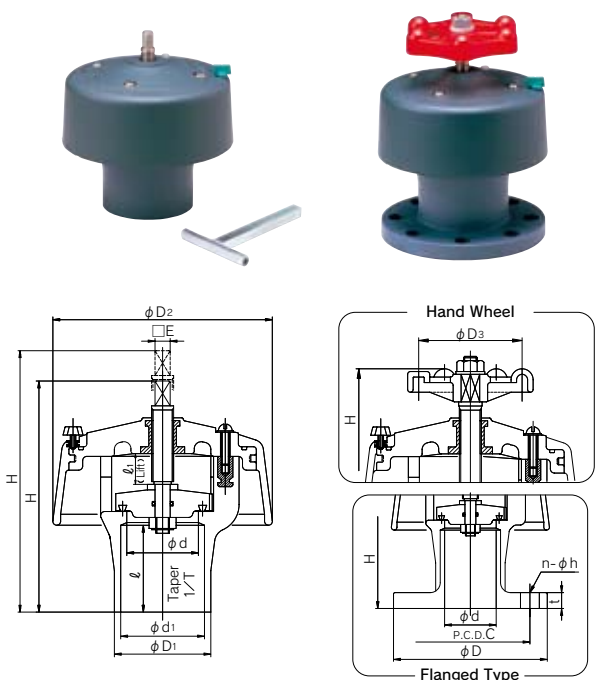
WORKING PRESSURE VS. TEMPERATURE

ROTARY ANGLE VALVE



ALFALFA VALVE TYPE 82 50mm - 100mm(2inch - 4inch)

T-shaped handle type Secured handle type



FEATURES

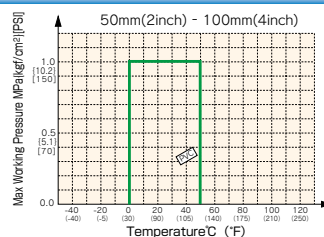
- Taking every effort to obtain satisfactory appearance, watertightness and strength, we have innovatively designed ALFALFA VALVE TYPE 82 to prevent water scattering and damage to surrounding rice plants. TYPE 82 can easily be disassembled at a site because it consists of a reduced number of parts. If foreign material clogs the valve, it can easily be eliminated only by closing the valve, loosening the thumbscrew and removing the cover (the pump does not need to be stopped).

SPECIFICATIONS

Body material	PVC
Nominal size	50mm(2inch)、80mm(3inch)、100mm(4inch)
Max. Working Pressure	1.0MPa{10.2kgf/cm ² }
End Connectors	Socket End, Flanged End
Operation	T-shaped handle, Secured handle

WORKING PRESSURE VS. TEMPERATURE

ALFALFA VALVE



DIMENSIONS TABLE

Nominal Size	Flanged Type														Socket Type								
	d		JIS 10K				t	d ₁	1/T	ℓ	D ₁	D ₂	D ₃	E	ℓ ₁	H		H(full opened)					
			D	C	n	h										Socket End	Flanged End	Socket End	Flanged End				
50	2	52	155	120	4	19	16	60.80	1/37	63	70	160	75	11	25	162	163	178	179	187	188	203	204
80	3	78	185	150	8	19	18	89.80	1/43	72	101	190	110	11	35	196	209	214	227	231	244	249	262
100	4	100	210	175	8	19	18	115.00	1/44	92	129	220	110	11	45	246	261	264	279	291	306	309	324

CONSTANT FLOW VALVE 15mm - 100mm(1/2inch - 4inch)

AV CONSTANT FLOW VALVE keeps the flow rate constant.

- 15mm(1/2inch) · 20mm(3/4inch)



- 25mm(1inch) – 100mm(4inch)

FEATURES

High Accuracy

The CONSTANT FLOW VALVE accurately controls the flow rate to within ±6% of the full scale value and offers high rangeability (set value for maximum flow rate/set value for minimum flow rate).

Flexible Flow Rate

Using the handle, the flow rate setting on the valve can be changed at will. The CONSTANT FLOW VALVE can also be used as shut off valve because it completely shuts off the flow.

Opening Degree Indicator

The CONSTANT FLOW VALVE has indicator showing opening degree which reads the flow rate (m³/hour).

High Durability and Resistance to Chemicals

The CONSTANT FLOW VALVE uses a spring made of Stainless Steel coated with PCTFE (Polychloro-frifluoro-ethylene). The spring is highly durable and chemical-resistant, it has high cycle life.

APPLICATION

- Ultra-pure water lines at semiconductor factories
- Chemical injection lines at chemical plants
- Lines supplying water to swimming pools
- Seawater supply lines for fish cultivation
- Cooling tower and scrubber blow water supply lines
- Anti-foaming equipment

SPECIFICATIONS

Body material	Unplasticized Polyvinyl Chloride (PVC) ※We also produce C-PVC CONSTANT FLOW VALVE 25(1inch) and 50(2inch)mm in nominal size on request.
Nominal Size	15mm(1/2inch), 20mm(3/4inch), 25mm(1inch), 50mm(2inch), 80mm(3inch), 100mm(4inch)
End Connectors	Flanged End
Working Temperature	0°C - 50°C (30° F - 120° F)
Upstream Working Pressure range	0.25MPa or less {2.6kgf/cm ² } · 0.25 to 0.5 MPa {2.6 - 5.1kgf/cm ² } 0.5 to 0.75MPa {5.1 - 7.7kgf/cm ² } · 0.75 to 1.0 MPa {7.7 - 10.2kgf/cm ² }
Accuracy	Full scale value ±6%(reference: water at ambient temperature)

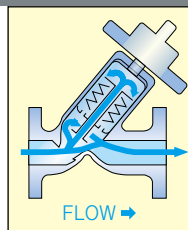
WORKING PRESSURE VS. TEMPERATURE

Unit:MPa{kgf/cm²}

Nominal Size	Temp. C(°F)		0~50(30~120)			
	mm	inch	A	B	C	D
15	1/2		—	0.25{2.7} - 0.5{5.1}	0.5{5.1} - 0.75{7.7}	—
20	3/4		—	0.25{2.7} - 0.5{5.1}	0.5{5.1} - 0.75{7.7}	—
25	1		0.25{2.7}Under	0.25{2.7} - 0.5{5.1}	0.5{5.1} - 0.75{7.7}	—
50	2		0.25{2.7}Under	0.25{2.7} - 0.5{5.1}	0.5{5.1} - 0.75{7.7}	—
80	3		0.25{2.7}Under	0.25{2.7} - 0.5{5.1}	0.5{5.1} - 0.75{7.7}	0.75{7.7} - 1.0{10.2}
100	4		—	—	0.5{5.1} - 0.75{7.7}	0.75{7.7} - 1.0{10.2}

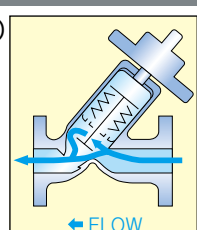
Type-A 25mm(1inch) - 80mm(3inch)

- The fluid flow path is suitable for semi-conductor industry. (Ultra pure water line)



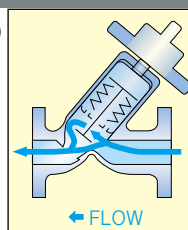
Type-C 15mm(1/2inch) - 100mm(4inch)

- The range of working differential pressure is large (For lines with large pressure differential between upstream & downstream)



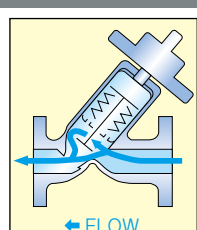
Type-B 15mm(1/2inch) - 80mm(3inch)

- The flow rate setting range is large (Covers small and large flow rates)



Type-D 80mm(3inch) - 100mm(4inch)

- A large flow rate can be set



DIAPHRAGM VALVE
 BALL VALVE
 BUTTERFLY VALVE
 SWING CHECK VALVE
 BALL CHECK BALL FOOT VALVE
 STOP VALVE
 GAUGE VALVE
 GATE VALVE
 AUTOMATIC WATER FEEDING VALVE
 ROTARY ANGLE VALVE
 ALFALFA VALVE
 CONSTANT FLOW VALVE
 NEEDLE VALVE
 Y-SEDIMENT STRAINER
 AIR RELEASE VALVE

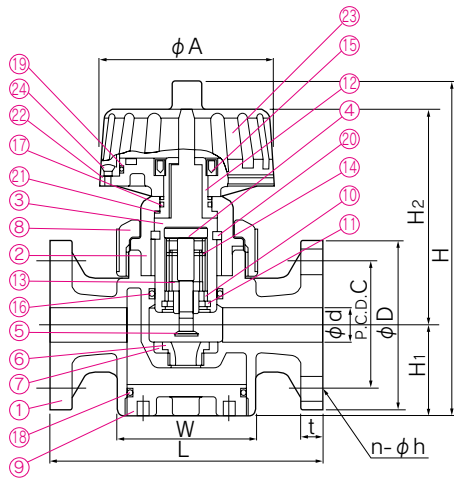
Range for preset flow rate and working differential pressure

Nominal Size	TYPE	Flow rate		Rangeability	Working differential pressure	
		GAL/min	m ³ /hr		PSI	MPa[kgf/cm ²]
15mm (1/2inch)	TYPE B	0.176 - 3.52	0.04 - 0.8	20 : 1	2.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE C	0.35 - 3.52	0.08 - 0.8	10 : 1	4.27 - 28.45	0.03-0.2 {0.3-2.0}
20mm (3/4inch)	TYPE B	0.26 - 5.28	0.06 - 1.2	20 : 1	2.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE C	0.53 - 5.28	0.12 - 1.2	10 : 1	4.27 - 28.45	0.03-0.2 {0.3-2.0}
25mm (1inch)	TYPE A	2.20 - 8.81	0.5 - 2.0	4 : 1	2.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE B	0.441 - 8.81	0.1 - 2.0	20 : 1	2.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE C	0.881 - 8.81	0.2 - 2.0	10 : 1	4.27 - 28.45	0.03-0.2 {0.3-2.0}
50mm (2inch)	TYPE A	8.81 - 35.22	2.0 - 8.0	4 : 1	2.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE B	1.76 - 35.22	0.4 - 8.0	20 : 1	2.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE C	3.52 - 35.22	0.8 - 8.0	10 : 1	4.27 - 28.45	0.03-0.2 {0.3-2.0}
80mm (3inch)	TYPE A	22.02 - 88.07	5.0 - 20.0	4 : 1	4.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE B	4.403 - 88.07	1.0 - 20.0	20 : 1	2.85 - 14.22	0.02-0.1 {0.2-1.0}
	TYPE C	8.81 - 88.07	2.0 - 20.0	10 : 1	4.27 - 28.45	0.03-0.2 {0.3-2.0}
	TYPE D	66.04 - 132.1	15.0 - 30.0	2 : 1	4.27 - 21.33	0.03-0.15{0.3-1.5}
100mm (4inch)	TYPE C	44.03 - 264.2	10.0 - 60.0	6 : 1	4.27 - 28.45	0.03-0.2 {0.3-2.0}
	TYPE D	132.1 - 264.2	30.0 - 60.0	2 : 1	2.85 - 21.33	0.02-0.15{0.2-1.5}

[Notes to users as to selection of the type.]

The Possible preset range of the flow rate and the range of the working differential pressure differs from type to type among A, B, C and D. The right type, therefore, should be selected from the above table in accordance with the working conditions.

● 15mm(1/2inch) · 20mm(3/4inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC	⑬	SPRING(A)	1	STAINLESS STEEL304 (With PCTFE Coated)
②	BONNET	1	PVC	⑭	SPRING(B)	1	STAINLESS STEEL304 (With PCTFE Coated)
③	CYLINDER	1	PVC	⑮	NUT	1	PVC
④	PISTON	1	PVC	⑯	O-RING(A)	1	EPDM, Others
⑤	PLUG	1	PVC	⑰	O-RING(B)	1	EPDM, Others
⑥	ORIFICE	1	PVC	⑱	O-RING(C)	1	EPDM
⑦	SEAT	1	EPDM	⑲	O-RING(D)	1	EPDM
⑧	CAP NUT	1	PVC	⑳	KEY	2	PP
⑨	CAP	1	PVC	㉑	THRUST RING	1	PP
⑩	SPRING BASE	1	PVC	㉒	HANDLE BASE	1	PVC
⑪	STOP RING	1	PVDF	㉓	HANDLE COVER	1	PC
⑫	SLEEVE	1	COPPER ALLOY(C3604)	㉔	SCREW	4	STAINLESS STEEL304

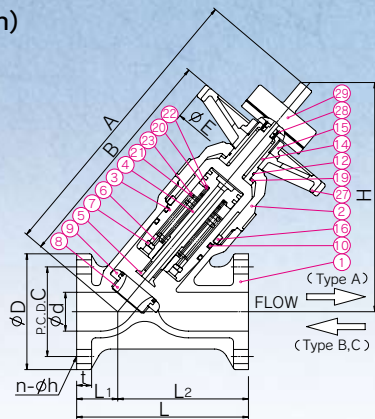
DIMENSIONS TABLE

JIS														Unit:mm
Nominal Size		d	JIS 10K				t	L	W	A	H ₁	H ₂	H	
mm	inch		D	C	n	h								
15	1/2	16	95	70	4	15	12	160	82×82	103	51	129	197	
20	3/4	20	100	75	4	15	13	160	82×82	103	53	127	197	

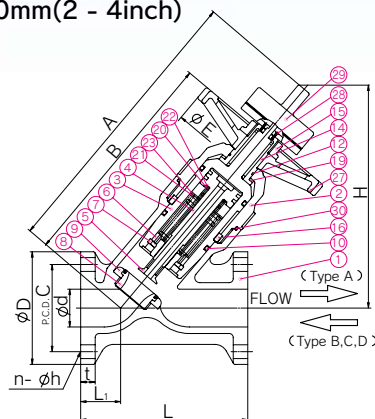
DIN														Unit:mm
Nominal Size		d	DIN PN10				t	L	W	A	H ₁	H ₂	H	
mm	inch		D	C	n	h								
15	1/2	16	95	65	4	14	12	160	82×82	103	51	129	197	
20	3/4	20	100	75	4	14	13	160	82×82	103	53	127	197	

ANSI														Unit:inch
Nominal Size		d	ANSI CLASS 150				t	L	W	A	H ₁	H ₂	H	
inch	mm		D	C	n	h								
1/2	15	0.63	3.50	2.38	4	0.63	0.47	6.30	3.23×3.23	4.06	2.01	5.08	7.76	
3/4	20	0.79	3.86	2.76	4	0.63	0.51	6.30	3.23×3.23	4.06	2.09	5.08	7.76	

● 25mm(1inch)



● 50mm - 100mm(2 - 4inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC	⑭	SLEEVE	1	COPPER ALLOY(C3604)
②	BONNET	1	PVC	⑮	CAP	1	PVC
③	CYLINDER	1	PVC	⑯	KEY	2	PVC
④	PISTON	1	PVC	⑰	THRUST RING	1	PP
⑤	PLUG	1	PVC	⑱	SPRING(A)	1	STAINLESS STEEL304 (With PCTFE Coated)
⑥	SPRING BASE	1	PVC	⑲	SPRING(B)	1	STAINLESS STEEL304 (With PCTFE Coated)
⑦	STOP RING	1	PVDF	⑳	WASHER(A)	1	PVC
⑧	ORIFICE	1	EPDM	㉑	WASHER(B)	1	PVC
⑨	SEAT	1	EPDM	㉒	HAND WHEEL	1	PP
⑩	O-RING(A)	2	EPDM, Others	㉓	MACHINE SCREW	4	COPPER ALLOY(C3604)
⑪	O-RING(B)	1	EPDM	㉔	LIFT INDICATOR	1set	PVC
⑫	O-RING(C)	1	EPDM				

Note :
The shape and appearance of assembly differ a little with nominal size compared to this drawing.

DIMENSIONS TABLE

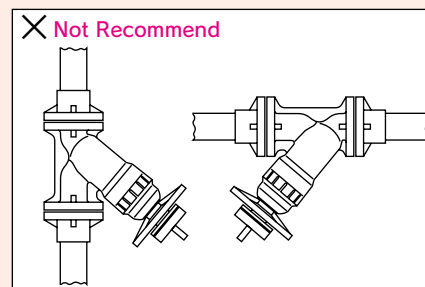
Nominal Size		d	JIS 10K				L	L ₁	E	t	A	B	H
mm	inch		D	C	n	h							
25	1	25	125	90	4	19	160	40	150	14	272	201	218
50	2	52	155	120	4	19	230	55	210	20	390	309	307
80	3	78	185	150	8	19	280	70	210	22	484	387	377
100	4	100	210	175	8	19	410	85	250	22	623	483	446

Nominal Size		d	DIN PN10				L	L ₁	E	t	A	B	H
mm	inch		D	C	n	h							
25	1	25	115	85	4	14	160	40	150	14	272	201	218
50	2	52	165	125	4	18	230	55	210	20	390	309	307
80	3	78	200	160	8	18	280	70	210	22	484	387	377
100	4	100	220	180	8	18	400	85	250	22	623	483	446

Nominal Size		d	ANSI CLASS 150				L	L ₁	E	t	A	B	H
inch	mm		D	C	n	h							
1	25	0.98	4.25	3.13	4	0.63	6.30	1.58	5.91	0.55	10.71	7.91	8.58
2	50	2.05	5.98	4.74	4	0.75	9.06	2.17	8.27	0.79	15.35	12.17	12.09
3	80	3.07	7.25	6.00	4	0.75	11.02	2.75	8.27	0.89	19.06	15.24	14.84
4	100	3.94	9.00	7.50	8	0.75	16.14	3.35	9.84	0.87	24.50	19.00	17.56

Note :

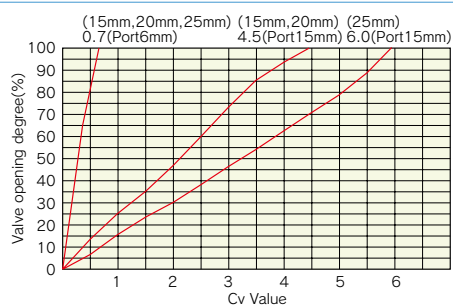
- Regardless of horizontal installation or vertical installation, the strainer with the 60-mesh screen should be installed in the up stream side of the valve in order to avoid the malfunction possibly caused by clogging of foreign particles.
Install the valve as shown in the drawing, because malfunctioned.
- Every type of valve has its own flow direction across the valve.
Make sure that the flow direction is consistent with the arrow-mark indicated on the valve body when installing.



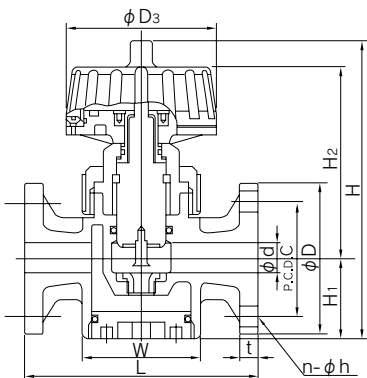
NEEDLE VALVE 15mm - 25mm(1/2inch - 1inch)



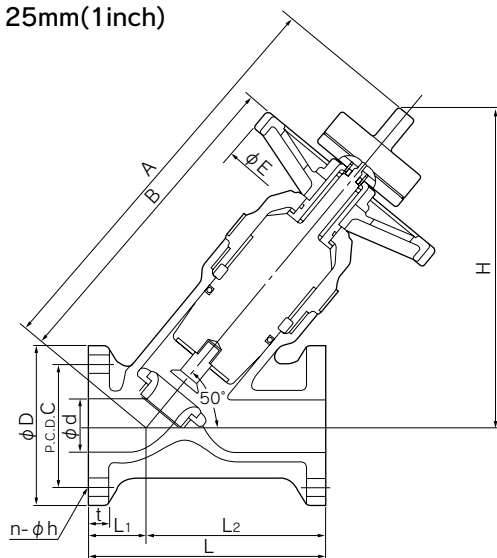
SPECIFICATIONS



● 15mm(1/2inch) ~ 20mm(3/4inch)



● 25mm(1inch)



FEATURES

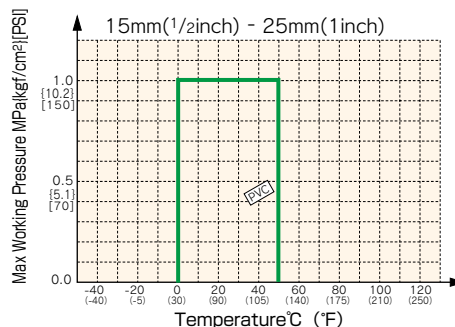
- A shut-off valve and the rubber seat completely seals the fluid.
- Being independent of a shut-off valve, the NEEDLE VALVE exercises highly accurate control for a long time.
- The NEEDLE VALVE uses an unique plug in a special shape, thus offering accurate flow control.
- With its piping intact, the NEEDLE VALVE can be inspected or cleaned inside only by removing its bonnet (valves in 15 and 20mm in nominal size)

SPECIFICATIONS

Nominal Size	15mm(1/2inch), 20mm(3/4inch)		25mm(1inch)	
Port Size(mm)	6	15	6	15
Maximum CV Value	0.7	4.5	0.7	6.0
End Connectors	Flanged End			
Type of Rubber	EPDM, Others			
Body material	PVC			
Max. Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI]			
Working Temperature	0 - 50°C(30° F - 120° F)			

WORKING PRESSURE VS. TEMPERATURE

NEEDLE VALVE



DIMENSIONS TABLE

JIS		Unit:mm											
Nominal Size	d	JIS 10K				L	t	W	D ₃	H ₁	H ₂	H	
mm	inch	D	C	n	h								
15	1/2	16	95	70	4	15	160	12	82×82	103	51	129	197
20	3/4	20	100	75	4	15	160	13	82×82	103	53	127	197

DIN		Unit:mm											
Nominal Size	d	DIN				L	t	W	D ₃	H ₁	H ₂	H	
mm	inch	D	C	n	h								
15	1/2	16	95	65	4	14	160	12	82×82	103	51	129	197
20	3/4	20	105	75	4	14	160	13	82×82	103	53	127	197

ANSI		Unit:inch											
Nominal Size	d	ANSI 150 lbs				L	t	W	D ₃	H ₁	H ₂	H	
inch	mm	D	C	n	h								
1/2	15	0.63	3.50	2.38	4	0.63	6.30	0.47	3.23×3.23	4.06	2.01	5.08	7.76
3/4	20	0.79	3.86	2.76	4	0.63	6.30	0.51	3.23×3.23	4.06	2.09	5.00	7.76

DIMENSIONS TABLE

JIS		Unit:mm												
Nominal Size	d	JIS 10K				L ₁	L ₂	L	t	A	B	H	E	
mm	inch	D	C	n	h									
25	1	25	125	90	4	19	40	120	160	14	272	201	218	150

DIN		Unit:mm												
Nominal Size	d	DIN				L ₁	L ₂	L	t	A	B	H	E	
mm	inch	D	C	n	h									
25	1	25	115	85	4	14	40	120	160	14	272	201	218	150

ANSI		Unit:inch												
Nominal Size	d	ANSI 150 lbs				L ₁	L ₂	L	t	A	B	H	E	
inch	mm	D	C	n	h									
1	25	0.98	4.25	3.13	4	0.63	1.57	4.72	6.30	0.55	10.71	7.91	8.58	5.91

Y-SEDIMENT STRAINER 15mm - 100mm(1/2inch - 4inch)



Note : Volatile liquids such as a hydrogen peroxide (H₂O₂) and sodium hypochlorite (NaClO) medium, may vaporize, thus causing an abnormal pressure increase in the valve. (Important: Gas is compressible. Thus if its pressure rises abnormally, gas may break a valve into pieces, which in turn violently scatter in all directions.)

- Store the Sediment Strainer in an indoor place free of direct sunlight.
- Do not store the Sediment Strainer in a hot place.
- Install the Sediment Strainer in a place free of direct sunlight.

FEATURES

- Because of its plastic body, the sediment STRAINER (Y) is highly corrosion chemical and wear resistant.
- The body is transparent, so that flow through the STRAINER can easily be checked.
- The sediment STRAINER is easy to disassemble and reassemble to clean or replace its screen.

NSF Product

NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.

:Y-SEDIMENT STRAINER TYPE-Y (Material:PVC+EPDM,FKM)

*Certified products bear an NSF Certification Mark.

SPECIFICATIONS

Body material	Unplasticized Polyvinyl Chloride (PVC) (The body is only made of transparent PVC.)
Nominal Size	15mm(1/2inch),20mm(3/4inch),25mm(1inch),40mm(1 1/2inch), 50mm(2inch),80mm(3inch),100mm(4inch)
End Connectors	Socket End, Threaded End, Flanged End
Working Temperature	0 - 50°C (30° F - 120° F)
Mesh	20 mesh (30,40 & 60 Mesh Available)
Max. Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI]...15 - 50mm(1/2inch - 2inch) 0.6MPa{6.1kgf/cm ² }[85PSI] ...80,100mm(3inch - 4inch)

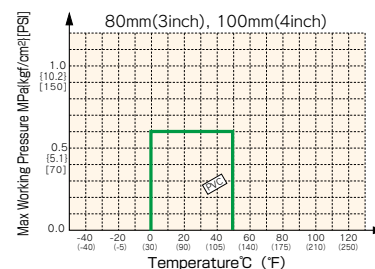
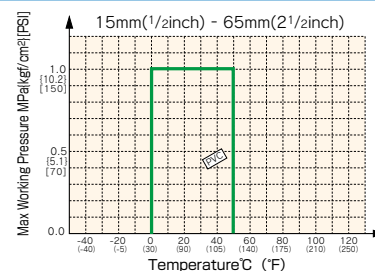
PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC
②	FILTER SCREEN	1	PVC,PVDC
③	SCREEN SUPPORT	1	PVC
④	END CONNECTOR	2	PVC
⑤	UNION NUT	3	PVC
⑥	RETAINING RING	1	PVC
⑦	SPLIT RING	1	PVC
⑧	O-RING(A)	2	EPDM,FKM,Others
⑨	O-RING(B)	1	EPDM,FKM,Others
⑩	STOP RING ¹⁾	2	PVDF

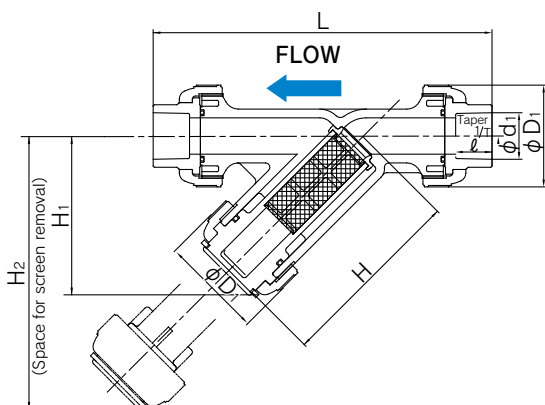
1)Used for Flanged End

WORKING PRESSURE VS. TEMPERATURE

STRAINER(Y)



DIMENSIONS (Socket End)



DIMENSIONS TABLE (Socket End)

JIS		Unit:mm								
Nominal Size	d	d ₁	ℓ	1/T	D ₁	L	H	H ₁	H ₂	
mm	inch									
15	1/2	15	22.11	20	1/34	48	172	97	78	134
20	3/4	20	26.13	24	1/34	60	210	120	98	168
25	1	25	32.16	27	1/34	70	238	133	111	189
40	1 1/2	40	48.21	37	1/37	100	313	177	149	256
50	2	51	60.25	42	1/37	106	346	190	160	277
80	3	78	89.60	64	1/49	152	487	271	234	399
100	4	100	114.70	84	1/56	210	653	361	316	537

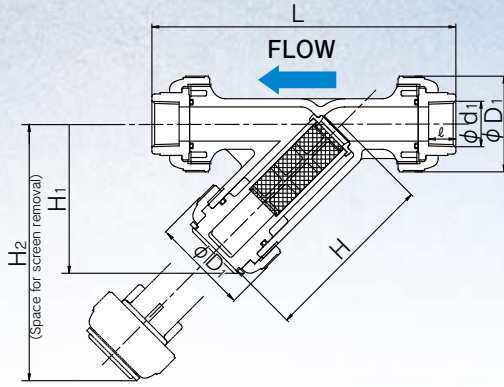
DIN 8063

Nominal Size		d	d ₁	ℓ	D ₁	L	H	H ₁	Unit:mm	
mm	inch									
15	1/2	15	20	16	48	165	97	78		
20	3/4	20	25	19	60	201	120	98		
25	1	25	32	22	70	224	133	111		
40	1 1/2	40	50	31	96	228	177	149		
50	2	51	63	38	106	337	190	160		
80	3	78	90	51	152	457	271	234		
100	4	100	110	61	210	607	361	316		

ANSI ASTM SCH80

Nominal Size		d	d ₁	ℓ	D ₁	L	H	H ₁	H ₂	Unit:inch	
inch	mm										
1/2	15	0.59	0.848	0.87	1.89	6.93	3.82	3.07	5.23		
3/4	20	0.79	1.058	1.00	2.36	8.30	4.72	3.86	6.55		
1	25	0.98	1.325	1.12	2.76	9.37	5.24	4.37	7.37		
1 1/2	40	1.57	1.912	1.38	3.93	12.13	6.97	5.87	9.98		
2	50	2.01	2.387	1.50	4.17	13.31	7.48	6.29	10.80		
3	80	3.07	3.516	1.87	5.98	17.83	10.67	9.21	15.59		
4	100	3.94	4.518	2.25	8.27	23.54	14.21	12.44	20.94		

DIMENSIONS (Threaded End)



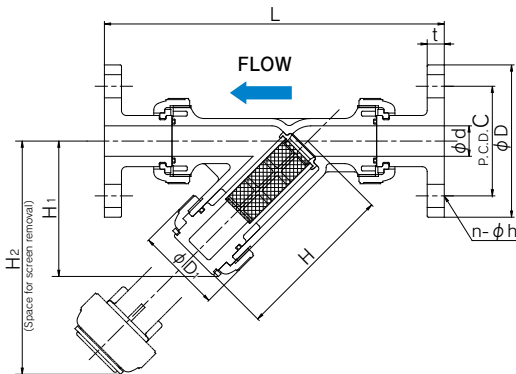
Nominal Size		d	d ₁	ℓ	D ₁	L	H	H ₁	H ₂
mm	inch								
15	1/2	15	Rc 1/2	15	48	165	97	78	134
20	3/4	20	Rc 3/4	17	60	202	120	98	168
25	1	25	Rc 1	20	70	224	133	111	189
40	1 1/2	40	Rc 1 1/2	25	96	287	177	149	256
50	2	51	Rc 2	28	106	324	190	160	277
80	3	78	Rc 3	35	152	436	271	234	399
100	4	100	Rc 4	45	210	596	361	316	537

DIMENSIONS TABLE (Threaded End)

Nominal Size		d	d ₁	ℓ	D ₁	L	H	H ₁	H ₂
mm	inch								
15	1/2	15	Rc 1/2	15	48	165	97	78	134
20	3/4	20	Rc 3/4	17	60	202	120	98	168
25	1	25	Rc 1	20	70	224	133	111	189
40	1 1/2	40	Rc 1 1/2	25	100	287	177	149	256
50	2	51	Rc 2	28	106	324	190	160	277
80	3	78	Rc 3	35	152	436	271	234	399
100	4	100	Rc 4	45	210	596	361	316	537

Nominal Size		d	d ₁	ℓ	D ₁	L	H	H ₁	H ₂
inch	mm								
1/2	15	0.59	NPT 1/2	0.59	1.89	6.50	3.82	3.07	5.23
3/4	20	0.79	NPT 3/4	0.67	2.36	7.95	4.72	3.86	6.55
1	25	0.98	NPT 1	0.79	2.76	8.82	5.24	4.37	7.37
1 1/2	40	1.57	NPT	0.98	3.94	11.30	6.97	5.87	9.98
2	50	2.01	NPT 2	1.10	4.17	12.76	7.48	6.30	10.80
3	80	3.07	NPT 3	1.38	5.98	17.17	10.67	9.21	15.59
4	100	3.94	NPT 4	1.77	8.27	23.47	14.21	12.44	20.94

DIMENSIONS (Flanged End)



Nominal Size		d	C	D	n	h	D ₁	L	H	H ₁	H ₂
mm	inch										
15	1/2	15	65	95	4	14	48	193	97	78	134
20	3/4	20	75	105	4	14	60	232	120	98	168
25	1	25	85	115	4	14	70	253	133	111	189
40	1 1/2	40	110	150	4	18	96	324	177	149	256
50	2	51	125	165	4	18	106	361	190	160	277
80	3	78	160	200	8	18	152	483	271	234	399
100	4	100	180	220	8	18	210	608	361	316	537

DIMENSIONS TABLE (Flanged End)

Nominal Size		d	C	D	n	h	D ₁	L	H	H ₁	H ₂
mm	inch										
15	1/2	15	70	95	4	15	48	206	97	78	134
20	3/4	20	75	100	4	15	60	254	120	98	168
25	1	25	90	125	4	19	70	280	133	111	189
40	1 1/2	40	105	140	4	19	100	336	177	149	256
50	2	51	120	155	4	19	106	361	190	160	277
80	3	78	150	185	8	19	152	477	271	234	399
100	4	100	175	210	8	19	210	608	361	316	537

Nominal Size		d	C	D	n	h	D ₁	L	H	H ₁	H ₂
inch	mm										
1/2	15	0.59	2.38	3.50	4	0.63	1.89	8.11	3.82	3.07	5.23
3/4	20	0.79	2.76	3.86	4	0.63	2.36	10.00	4.72	3.86	6.55
1	25	0.98	3.13	4.25	4	0.63	2.76	11.02	5.24	4.37	7.37
1 1/2	40	1.57	3.88	5.00	4	0.63	3.94	13.23	6.97	5.87	9.98
2	50	2.01	4.47	5.98	4	0.75	4.17	14.21	7.48	6.30	10.80
3	80	3.07	6.00	7.52	4	0.75	5.98	18.78	10.67	9.21	15.59
4	100	3.94	7.50	9.02	8	0.75	8.27	23.94	14.21	12.44	20.94

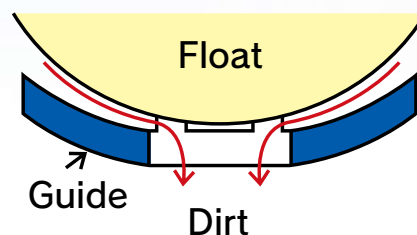
Recommendations for use

- Observe flow direction before installation. (Direction arrow mark is embossed on body.)
- Screen should be cleaned periodically.
- Avoid direct sunlight.
- Caution : the following, chemicals such as Hydrogen Peroxide (H₂O₂). Sodium Hypochlorite(NaClO) are capable of generating will cause the abnormal pressure due to their vaporization nature.

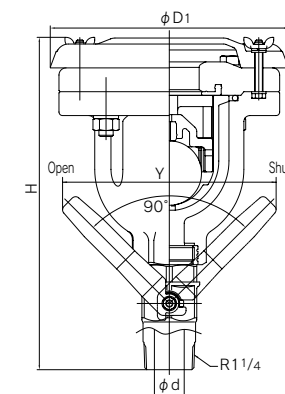
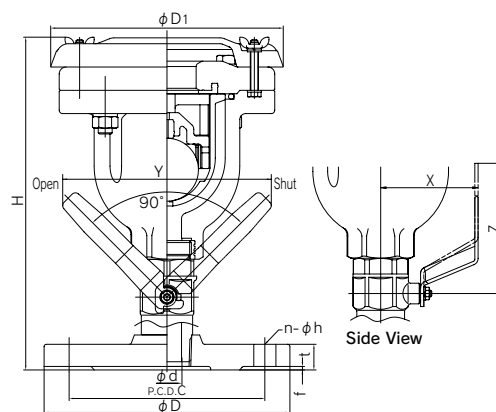
AIR RELEASE VALVE 25mm,80mm,100mm,150mm,200mm (1inch,3inch,4inch,6inch,8inch)

FEATURES

- Light Weight**
 75% Lighter than Cast Iron Type
- Compact**
 10 to 40% Smaller than Cast Iron Type by Volume Ratio
- Superior Exhaust Performance**
 1.5 Times Larger than Cast Iron Type
- Works at Low Pressure**
 Half of Minimum Pressure of Cast Iron Type
- Superior Cold and Heat Resistance**
 Wide Temperature Range -40°C (-40°F) to 50°C (122°F).
- Excellent Corrosion and Impact Resistance**
 PDCPD Material
- Top Bonnet Entry**
 Easy Inline Access to Internal Parts



25mm (1inch)



DIMENSION TABLE

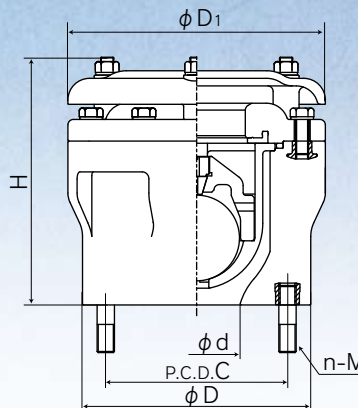
Nominal Size 25mm (1inch)														Unit:mm(inch)	
Nominal Size	End Connectors	D_1	H	d	D	$n-\phi h$	P.C.D.C	f	t	X	Y	Z	Weight		
mm	inch												kg	Lb	
25	1	Flanged (JIS 10K)	200 (7.87)	298 (11.73)	25 (0.98)	211 (8.31)	4- ϕ 19 (4- ϕ 0.75inch)	168 (6.61)	3 (0.12)	22 (0.87)	112 (4.41)	178 (7.01)	150 (5.91)	8.8	19.4
		Male Threaded	200 (7.87)	281 (11.06)	25 (0.98)	R1 1/4			3 (0.12)	22 (0.87)	112 (4.41)	178 (7.01)	150 (5.91)	3.8	8.4

SPECIFICATIONS

Nominal size		End Connectors	Working Pressure(at R.T.) MPa{kgf/cm ² }[PSI]	Max. Working Pressure MPa{kgf/cm ² }[PSI]	Body material	Isalating Valve Material
mm	inch					
25	1	Flanged Male Threaded	0.75 {7.7}	1.3 {13.3}[109]	PDCPD	C3771BE

DIAPHRAGM VALVE
 BALL VALVE
 BUTTERFLY VALVE
 SWING CHECK VALVE
 BALL CHECK BALL FOOT VALVE
 STOP VALVE
 GAUGE VALVE
 GATE VALVE
 AUTOMATIC WATER FEEDING VALVE
 ROTARY ANGLE VALVE
 ALFALFA VALVE
 CONSTANT FLOW VALVE
 NEEDLE VALVE
 Y-SEDIMENT STRAINER
 AIR RELEASE VALVE

■80mm(3inch)~200mm(8inch)



DIMENSIONS TABLE

Nominal Size 80mm - 200mm (3inch - 8inch)											Unit:mm(inch)	
Nominal Size		D ₁	H	d	D	JWWA		JIS 10K		Weight		
mm	inch					P.C.D.C	n-φh	P.C.D.C	n-φh	kg	Lb	
80	3	238 (9.37)	230 (9.06)	80 (3.15)	211 (8.31)	168 (6.62)	4-M16	—	—	6.9	15.2	
100	4	260 (10.24)	288 (11.34)	100 (3.94)	238 (9.37)	195 (7.68)	4-M16	175	8-M16	10.3	22.7	
150	6	341 (13.43)	393 (15.48)	150 (5.91)	290 (11.42)	247 (9.73)	6-M16	240	8-M20	20.7	45.6	
200	8	440 (17.33)	526 (20.71)	200 (7.88)	342 (13.47)	299 (11.77)	8-M16	290	12-M20	41.0	90.2	

SPECIFICATIONS

Nominal size		End Connectors	Working Pressure(at R.T.) MPa{kgf/cm ² }[PSI]	Max. Working Pressure MPa{kgf/cm ² }[PSI]	Body material
mm	inch				
80	3	Flanged (JIS 10K)	1.0 {10.2}[150]	1.4 {14.3}[203]	PDCPD
100	4	Flanged (JIS 10K)	1.0 {10.2}[150]	1.4 {14.3}[203]	PDCPD
150	6	Flanged (JIS 10K)	1.0 {10.2}[150]	1.4 {14.3}[203]	PDCPD
200	8	Flanged (JIS 10K)	1.0 {10.2}[150]	1.4 {14.3}[203]	PDCPD