AV-V-001-E



ASAHI AV

VALVE AND PIPING SYSTEMS

2013

ASAHI ORGANIC CHEMICALS INDUSTRY CO.,LTD.

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.

ASAHI AV

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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 "acrylonitorile butadiene rubber."
IIR	"IIR" is an abbreviation for "isobtylen isopren rubber."
CSM	"CSM" is an abbreviation for "chlorosulphonated polyethlene."
PPG	"PPG" is an abbreviation for "Glass Fiber Reinforced Polypropylene."
PC	"PC" is an abbreviation for "Polycarbonate."
HP-PVC	The first letter "HP" means "High Purity" "HP-PVC" reters to "high purity polyvinyl chloride."

ASAHI AV 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.



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TRUE UNION DIAPHRAGM VALVE TYPE14

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DIAPHRAGM VALVE TYPE15

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DIAPHRAGM VALVE TYPE72

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COMPACT BALL VALVE

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LAB COCK

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BUTTERFLY VALVE TYPE57

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BUTTERFLY VALVE TYPE56

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AUTOMATIC WATER FEEDING VALVE

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ALFALFA VALVE® TYPE82

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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.



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WATER BV

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GAUGE VALVE

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CONSTANT FLOW VALVE

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NEEDLE VALVE

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Y-SEDIMENT STRAINER

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AIR RELEASE 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	○	–	–	–	–	–	–	–	–	–
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Type		DIAPHRAGM VALVE TYPE 15
Body Materials		PVC, PP, PVDF
End Connectors		Flanged
Nominal Size mm	inch	
125	5	○
150	6	○
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Type		DIAPHRAGM VALVE TYPE 72
Body Materials		PVC, PP, PVDF
End Connectors		Flanged
Nominal Size mm	inch	
200	8	○
250	10	○
Page		16 - 18

Type		BALL VALVE TYPE 21													WATER BV	
Body Materials		PVC			C-PVC			PP			PVDF				PVC	
End Connectors		Flanged	Threaded	Socket	Flanged	Threaded	Socket	Flanged	Threaded	Socket (welded)	Flanged	Threaded	Socket (welded)※	Spigot※	Threaded	Socket
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	○	○	○	○	○	○	○	○	○	○	○	○	○	–	–
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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
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Type		3-WAY BALL VALVE TYPE 23											3-WAY BALL VALVE TYPE 23H				COMPACT BALL VALVE			
Body Materials		PVC			C-PVC			PP		PVDF			PP				PVC		C-PVC	
End Connectors		Flanged	Threaded	Socket	Flanged	Threaded	Socket	Threaded	Socket (welded)	Flanged	Threaded	Socket (welded)※	Flanged	Threaded	Socket (welded)	Spigot	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		23 - 24											25 - 26				27			

Type		BUTTERFLY VALVE TYPE 57			BUTTERFLY VALVE TYPE 56		BUTTERFLY VALVE TYPE 75		BUTTERFLY VALVE TYPE 56D, 75D	BUTTERFLY VALVE TYPE 57L 57TL(Lug Style)		BUTTERFLY VALVE TYPE 57L-IS	ROTARY DAMPER			BUTTERFLY VALVE TYPE 55
Body Materials		PVC	PP	PVDF	PP	PVDF	PP	PVDF	PDCPD	PDCPD	PVC	PVC	PVC (PP DISC)	PP	PVDF	FCD-S
End Connectors		Wafer	Wafer	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	–	–	–	–	–	○	○	○	–	–	–	–	○	○	–
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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	○
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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	○	–	–	–
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1.We produce resilent 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 resilieht seal type only.

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	○	○	○
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Type			GAUGE VALVE	
Body Materials			PVC	PP
End Connectors			Flanged	Flanged
Nominal Size	mm	inch		
	20	3/4	○	○
	25	1	○	○
Page			60	

1.Flanged elbows are available in a nominal size of 25 mm(1inch) 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			53 - 56										57 - 59				

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			55									

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			74 - 75	66			67		67		

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	○	–	○	○	○
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ASAHI AV PRODUCTS MODEL CODE

COMMON CODE FOR MANUAL AND ACTUATED VALVES

DIGIT	1		2,3		4,5		
DESCRIPTIONS	Valve	Abbr	VALVE NAME	Abbr	OPERATION		Abbr
	Manual	V	DIAPHRAGM VALVE TYPE14	14	LEVER		LV
	Actuated	A	TRUE UNION DIAPHRAGM VALVE	T1	MANUAL HANDLE		MH
			DIAPHRAGM VALVE TYPE15	15	T STYLE HANDLE		TH
			DIAPHRAGM VALVE TYPE72	72	SIDE GEAR		SG
			DIAPHRAGM VALVE TYPE16	16	SIDE GEAR WITH SQUARE CAP		SC
			BALL VALVE TYPE21	21	TOP GEAR		TG
			WATER BV	WB	TOP GEAR WITH SQUARE CAP		TC
			LABCOCK	LC	O-RING TYPE FOR SWING CHECK VALVE		OR
			COMPACT BALL VALVE	Cb	PLASTIC STEM FOR GATE VALVE		MJ
			3 WAY BALL VALVE TYPE23	23	SS STEM FOR CLOCKWISE OPENING		MR
			3 WAY BALL VALVE TYPE23H	3H	SS STEM FOR UNCLOCKWISE OPENING		ML
			BUTTERFLY VALVE TYPE57	57	TOP GEAR WITH CAP FOR GATE VALVE CLOCKWISE OPENING		CR
			BUTTERFLY VALVE TYPE56	56	TOP GEAR WITH CAP FOR GATE VALVE UNCLOCKWISE OPENING		CL
			BUTTERFLY VALVE TYPE75	75	A TYPE FOR CONSTANT FLOW / NEEDLE VALVE		AT
			BUTTERFLY VALVE TYP55	55	B TYPE FOR CONSTANTFLOW /NEEDLE VALVE		BT
			LUG BUTTERFLY VALVE	LG	C TYPE FOR CONSTANT FLOW VALVE		CT
			PDCPD BUTTERFLY VALVE	PD	D TYPE FOR CONSTANT FLOW VALVE		DT
			ROTARY DAMPER 57 STYLE	D7	20 MESH PVC SCREEN		2U
			ROTARY DAMPER 56 STYLE	D6	30 MESH PVC SCREEN		3U
			SWING CHECK VALVE	SC	40 MESH PVC SCREEN		4U
			BALL CHECK VALVE	BC	60 MESH PVC SCREEN		6U
			BALL FOOT VALVE	FT	20 MESH SS 304 SCREEN		2S
			TRUE UNION BALL CHECK VALVE	TC	30 MESH SS 304 SCREEN		3S
			STOP VALVE (GLOBE)	ST	40 MESH SS 304 SCREEN		4S
			GAUGE VALVE	GE	60 MESH SS 304 SCREEN		6S
			AUTOMATIC WATER FEEDING VALVE	AW	TYPE T (ELECTRIC)	AC100V	T1
			ALFALFA VALVE TYPE82	AF	TYPE T (ELECTRIC)	AC200V	T2
			ROTARY ANGLE VALVE	AG	TYPE T (ELECTRIC)	DC24V	TD
			CONSTANT FLOW VALVE	CF	TYPE H (ELECTRIC)	AC100V	H1
			NEEDLE VALVE	ND	TYPE H (ELECTRIC)	AC200V	H2
			Y-SEDIMENT STRAINER	YS	TYPE S (ELECTRIC)	SINGLE AC100V	S1
			AIR RELEASE VALVE	AR	TYPE S (ELECTRIC)	SINGLE AC200V	S2
			ISOLATED VALVE FOR AIR RELEASE VALVE	IS	TYPE S (ELECTRIC)	THREE AC200V	S3
			CONTROL VALVE	CV	TYPE S (ELECTRIC)	THREE AC400V	S4
			GATE VALVE P TYPE W/PLUG	CG	TYPE M (ELECTRIC)	AC100V	M1
			GATE VALVE TYPE66	S6	TYPE M (ELECTRIC)	AC200V	M2
			GATE VALVE S TYPE	TG	TYPE M (ELECTRIC)	DC24V	MD
			DIAPHRAGM VALVE TYPE AI	DA	TYPE K (ELECTRIC)	AC100V	P1
			TRUE UNION DIAPHRAGM VALVE TYPE AI	TA	TYPE K (ELECTRIC)	AC200V	P2
					TYPE K (PNEUMATIC)	DOUBLE ACTING	KF
					TYPE K (PNEUMATIC)	Air to Open	KG
					TYPE K (PNEUMATIC)	Air to Close	KS
					PRISMA (PNEUMATIC)	DOUBLE ACTING	AF
					PRISMA (PNEUMATIC)	Air to Open	AG
					PRISMA (PNEUMATIC)	Air to Close	AS
					TYPE AN (PNEUMATIC)	DOUBLE ACTING	NF
					TYPE AN (PNEUMATIC)	Air to Open	NG
					TYPE AN (PNEUMATIC)	Air to Close	NS
					TYPE AV (PNEUMATIC)	DOUBLE ACTING	VF
					TYPE AV (PNEUMATIC)	Air to Open	VG
					TYPE AV (PNEUMATIC)	Air to Close	VS
					TYPE AI (PNEUMATIC)	DOUBLE ACTING	IF
					TYPE AI (PNEUMATIC)	Air to Open	IG
					TYPE AI (PNEUMATIC)	Air to Close	IS
					TYPE AD (PNEUMATIC)	DOUBLE ACTING	DF
					TYPE AD (PNEUMATIC)	Air to Open	DG
					OTHERS		ZZ

COMMON CODE FOR MANUAL AND ACTUATED VALVES

DIGIT	6		7		8, 9		10,11 & 12	
DESCRIPTIONS	BODY MATERIAL	Abbr	SEAL MATERIAL	Abbr	END CONNECTOR	Abbr	NOMINAL SIZE	Abbr
	U-PVC	U	EPDM	E	FLANGED END JIS10K	F1	10mm	010
	C-PVC	C	FKM	V	FLANGED END JIS5K	F5	13mm	013
	PP	P	VIFLON-F	F	FLANGED END JWWA	FW	15mm	015
	PVDF	F	VIFLON-C	C	FLANGED END ANSI CLASS150	FA	20mm	020
	HI-PVC	I	SBR	S	FLANGED END ANSI CLASS150 (A-STANDARD)	FJ	25mm	025
	FCD-S	S	NBR	N	FLANGED END DIN	FD	32mm(30mm)	032(030)
	PDCPD	D	PTFE	T	WAFER JIS10K	W1	40mm	040
	FRP	R	PTFE W/PA-TI	D	WAFER JIS2K	W2	50mm	050
	PVDF+PPG	G	EL-PTFE	L	WAFER JIS5K	W5	65mm	065
	EL-PVDF	Y	PTFE+PVDF GAS BARRIER	0	WAFER JWWA	WW	80mm(75mm)	080(075)
	U-PVC (WHITE)	W	PTFE/EPDM	1	WAFER ANSI CLASS150	WA	100mm	100
	EL-PVDF+PPG	X	PTFE/FKM	2	WAFER DIN	WD	125mm	125
	OTHERS	Z	PTFE/VIFLON-F	3	SOCKET END JIS	SJ	150mm	150
			PTFE/VIFLON-C	4	SOCKET END ASTM SCH40	S4	200mm	200
			PTFE+PVDF GAS BARRIER W/EPDM	5	SOCKET END ASTM SCH80	S8	250mm	250
			PTFE+PVDF GAS BARRIER W/FKM	6	SOCKET DIN	SD	300mm	300
			PTFE+PVDF GAS BARRIER W/VIFLON-F	7	SOCKET END BS (BS4346)	SB	350mm	350
			PTFE+PVDF GAS BARRIER W/VIFLON-C	8	SOCKET END IPS	SI	400mm	400
			NONE OR OTHER	Z	THREADED END RC	NJ	450mm	450
					THREADED END NPT	NA	500mm	500
					THREADED END RP	ND	600mm	600
					THREADED END R	NR	700mm	700
					SPIGOT END JIS	PJ	800mm	800
					SPIGOT END DIN	PD	900mm	900
					PE STYLE ISO	EI	1000mm	A00
					PE STYLE JIS	EJ	1100mm	A10
					NONE END AND STD	ZZ	1200mm	A20
					OTHERS	ZZ		

LABCOCK CODE

DIGIT	8		9, 10, 11 & 12	
DESCRIPTIONS	END CONNECTOR	Abbr	DESCRIPTION	Abbr
	JIS	J	1/4 MALE X 1/4 MALE	O4O4
	ANSI	A	1/2 MALE X 1/4 MALE	O2O4
	DIN	D	1/2 MALE X 1/2 MALE	O2O2
	OTHERS	Z	1/4 FEMALE X 1/4 FEMALE	N4N4
			3/8 FEMALE X 1/4 FAMALE	N8N4
			3/8 FEMALE X 3/8 FEMALE	N8N8
			HOSE X HOSE	H0H0
			1/4 MALE X 1/4 FEMALE	O4N4
			1/4 MALE X 3/8 FEMALE	O4N8
			1/2 MALE X 1/4 FEMALE	O2N4
			1/2 MALE X 3/8 FEMALE	O2N8
			1/4 MALE X HOSE	O4H0
			1/2 MALE X HOSE	O2H0
			1/4 FEMALE X HOSE	N4H0
			3/8 FEMALE X HOSE	N8H0
			1/2 MALE X ELBOW	O2L0

ASAHI AV VALVE

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.

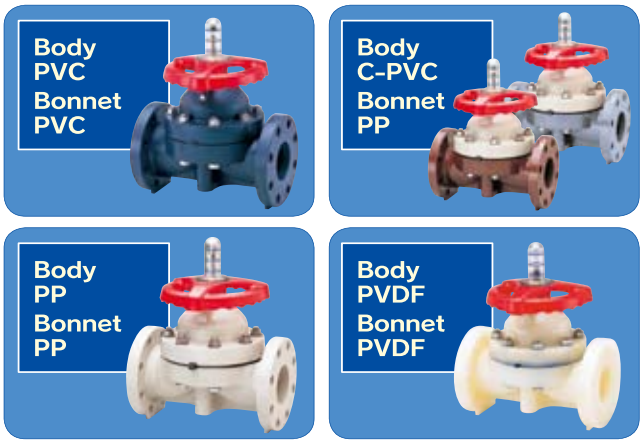
Visual Indicator

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

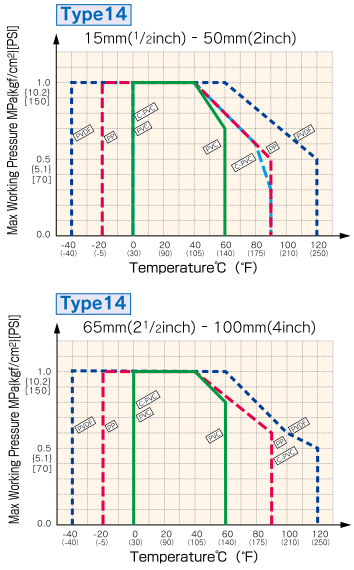
Body Material	Nominal Size mm(inch)	Working Temperature ℃ (°F)	Max. Working Pressure at 20℃(70°F) MPa{kgf/cm²}[PSI] 15mm - 100mm (1/2inch - 4inch)	End Connectors
PVC	15 - 100 (1/2 - 4)	0 - 60 (30 - 140)	1.0{10.2}[150]	Flanged End
C-PVC	15 - 100 (1/2 - 4)	0 - 90 (30 - 195)	1.0{10.2}[150]	Flanged End
PP	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

Material Examples



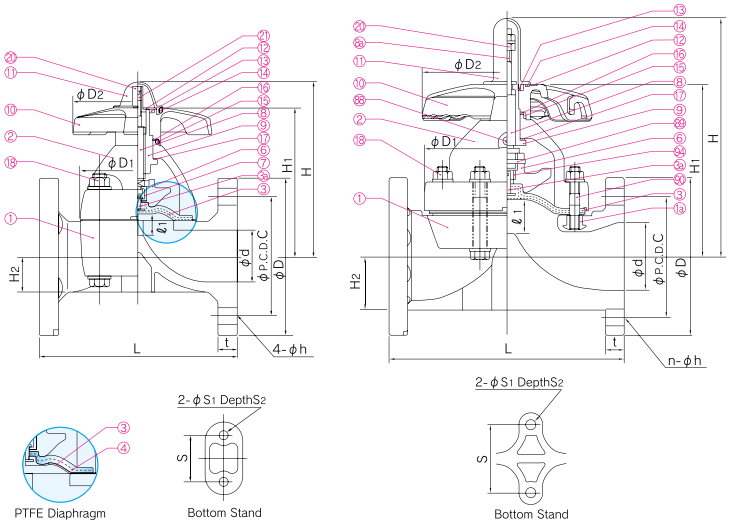
※ PPG Bonnet is also available.

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/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
				⑯	THRUST RING(A)	1	UHMWPE
③a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL304	⑰	THRUST RING(B)	1	UHMWPE
④	CUSHION	1	EPDM[1)]	⑱	BOLT·NUT	4	STAINLESS STEEL304
⑤	PVDF GAS BARRIER(OPTION)	1	PVDF	⑳	STOPPER	1	COPPER ALLOY[2)], STAINLESS STEEL[3)]304
⑥	COMPRESSOR	1	PVDF	㉑	SCREW[2)]	1	SCM435
⑦	JOINT[2)]	1	STAINLESS STEEL304	㉘	GREASE NIPPLE[3)]	1	COPPER ALLOY(C3604)
⑧	STEM	1	COPPER ALLOY	㉙	COMPRESSOR PIN[3)]	1	STAINLESS STEEL304
⑧a	INDICATOR ROD2)	1	STAINLESS STEEL304	㉚	STUD BOLT·NUT[3)]	4	STAINLESS STEEL304
⑨	SLEEVE	1	COPPER ALLOY(C3604)	㉞	METAL OF COMPRESSOR	1	STAINLESS STEEL304
⑩	HAND WHEEL	1	PP	⑱a	INSERTED NUT[3)]	4	COPPER ALLOY(C3604) STAINLESS STEEL304
⑪	GAUGE COVER	1	POLYCARBONATE				
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

JIS

Unit:mm

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

DIN

Unit:mm

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

ANSI

Unit:inch

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

ASAHI AV VALVE

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.

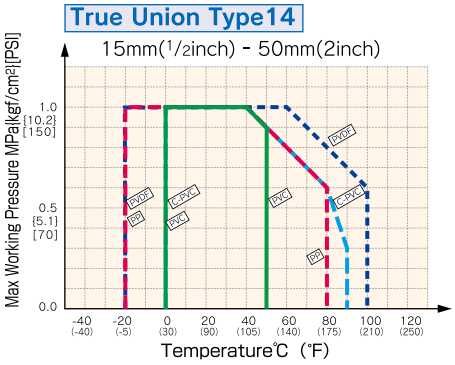
Bottom Stand for Easy Support

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.

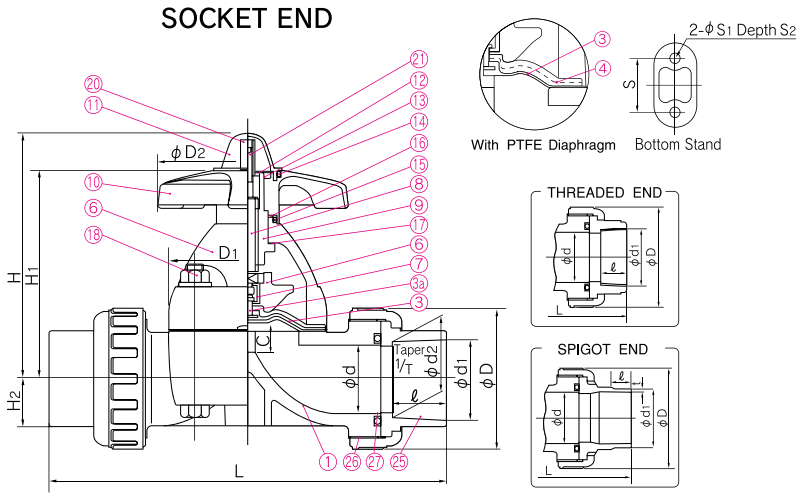
MATERIAL AND WORKING TEMPERATURE

Body Material	Nominal Sze mm(inch)	Working Temperature ℃(°F)	Max. Working Pressure at 20℃(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



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
				⑬	RETAINING RING-C TYPE	1	STAINLESS STEEL304
				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
				⑯	THRUST RING(A)	1	UHMWPE
				⑰	THRUST RING(B)	1	UHMWPE
				⑱	BOLT･NUT	4	STAINLESS STEEL304
③a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL304	⑳	STOPPER	1	COPPER ALLOY(C3604)
				㉑	SCREW	1	STAINLESS STEEL304
④	CUSHION	1	EPDM＊	㉕	ENDCONNECTOR	2	PVC C-PVC PP PVDF
⑥	COMPRESSOR	1	PVDF				
⑦	JOINT	1	STAINLESS STEEL304	㉖	UNION NUT	2	
⑧	STEM	1	COPPER ALLOY(C3604)	㉗	O-RING(C)	2	EPDM FKM Others
⑨	SLEEVE	1	COPPER ALLOY(C3604)				
⑩	HAND WHEEL	1	PP				

DIMENSIONS TABLE

JIS

Unit:mm

Nominal Size		d	Socket End								Threaded End				D	D_1	D_2	C (LIFT)	H	H_1	H_2	S	S_1	S_2
			PVC, C-PVC				PP				JIS B 0203		L											
mm	inch		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

DIN

Unit:mm

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
			PVC, C-PVC			PP, PVDF				DIN 2999	L			PVC			PP, PVDF															
			DIN 8063		L	DIN 16962(PP)			L					DIN 3441		L	DIN 3442	PP	PVDF	L												
mm	inch		d_1	ℓ		d_1	d_2	ℓ		d_1	ℓ	PVC, C-PVC	PP, PVDF	d_1	ℓ		d_1	ℓ	t	t												
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

ANSI

Unit:inch

Nominal Size		d	Socket End						Threaded End				D	D_1	D_2	C (LIFT)	H	H_1	H_2	S	S_1	S_2
			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										
inch	mm		d_1	d_2	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 1/2NPT	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 1/2NPT	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 1/2NPT	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 1/2NPT	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

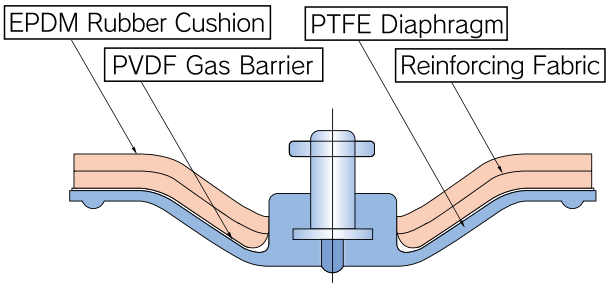
BS

Unit:mm

Nominal Size		d	Socket End			D	D_1	D_2	C (LIFT)	H	H_1	H_2	S	S_1	S_2
			PVC												
mm	inch		d_1	ℓ	L										
15	1/2	16	21.4	17	128	48	54×66	100	10	104	86	19.5	25	7	13
20	3/4	20	26.8	20	147	60	54×66	100	10	106	88	17.5	25	7	13
25	1	25	33.6	23	172	70	67×80	100	12	111	93	18.5	25	7	13
32	1 1/4	32	42.3	27.5	188	82	67×80	100	12	116	97	22.5	25	7	13
40	1 1/2	40	48.3	30.5	246	100	108×108	156	21	177	144	27.5	45	9	15
50	2	52	60.4	36.5	299	106	123×123	156	25	191	158	36	45	9	15

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}

Material \ 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}

ASAHI AV VALVE

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.

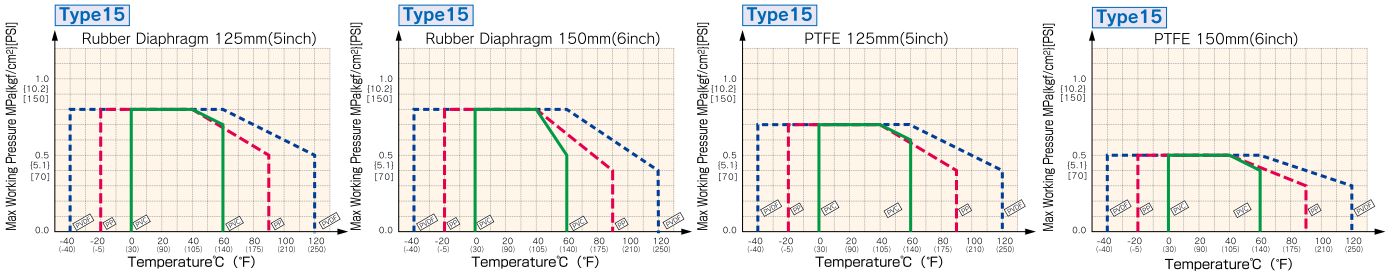
Easier to operate

In order to reduce frictional force, material and shape of sliding parts are redesigned.
Also improved hand wheel design which allows for easy operation.

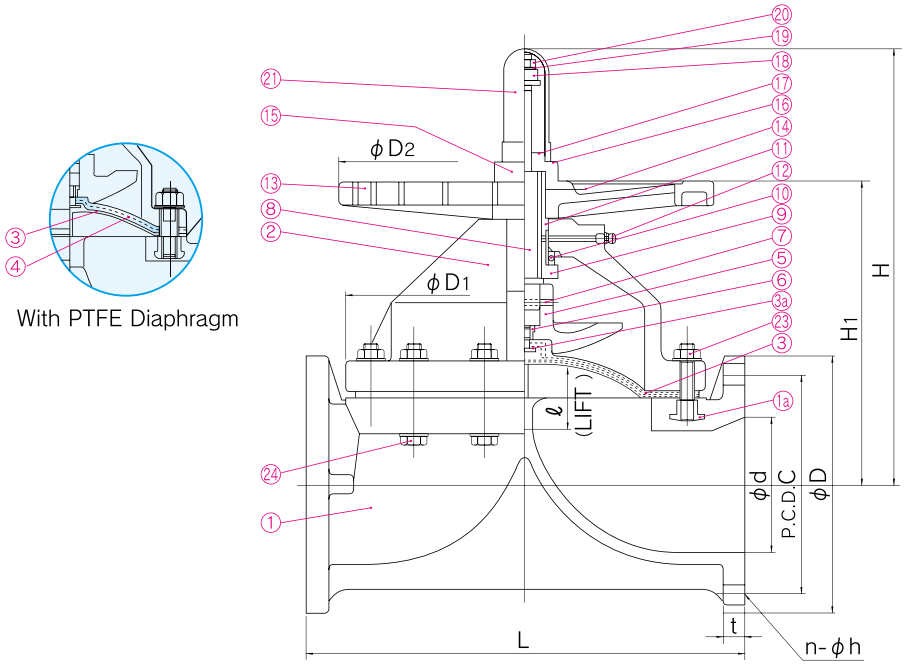
MATERIAL AND WORKING TEMPERATURE

Body material	Nominal size mm(inch)	Working Temperature ℃(°F)	Max. Working Pressure at 20℃(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 PVDF/PPG PVDF/PVDF	⑪	O-RING(A)	1	NBR
				⑫	GREASE NIPPLE	1	COPPER ALLOY(C3604)
②	BONNET	1		⑬	HAND WHEEL	1	PP
				⑭	NAME PLATE	1	PVC
③	DIAPHRAGM	1	EPDM,PTFE,FKM,NBR VIFLON F(FKM-F) VIFLON C(FKM-C)	⑮	CAP	1	PP
				⑯	SHEET GASKET(A)	1	EPDM
				⑰	SHEET RING	1	STAINLESS STEEL304
③a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL304 Others	⑱	STOPPER	1	Chromized STEEL(SS400)
				⑲	SPRING WASHER	1	STAINLESS STEEL304
④	CUSION[1)]	1	EPDM	⑳	SET NUT	1	STAINLESS STEEL304
⑤	COMPRESSOR	1	PVDF	㉑	GAUGE COVER	1	POLYCARBONATE
⑥	COMPRESSOR NUT	1	COPPER ALLOY(C3604)	㉓	STUD BOLT·NUT	4	STAINLESS STEEL304
⑦	COMPRESSOR PIN	1	STAINLESS STEEL304	㉔	BOLT·NUT	–	STAINLESS STEEL304
⑧	STEM	1	COPPER ALLOY	⑱a	INSERTED NUT	4	COPPER ALLOY[2)] STAINLESS STEEL304[3)]
⑨	SLEEVE(A)	1	COPPER ALLOY				
⑩	THRUST BEARING(A)	1	HIGH CARBON CHROMIUM BEARING(SUJ2)				

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

DIMENSIONS TABLE

JIS Unit:mm

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

DIN Unit:mm

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

ANSI Unit:inch

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

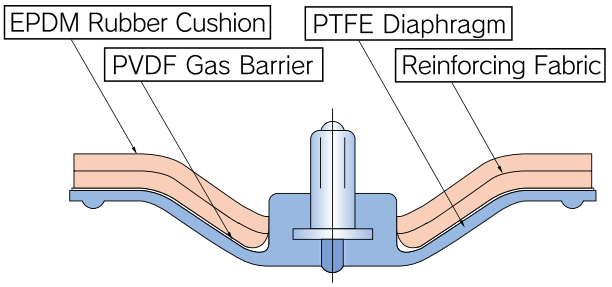
DIAPHRAGM VALVE TYPE 15

- 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 mm(inch)	125 (5)	150 (6)
Rubber Diaphragm	45.0 {459}	45.0 {459}
PTFE Diaphragm	45.0 {459}	45.0 {459}



Diaphragm with PVDF Gas Barrier

ASAHI AV VALVE

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.

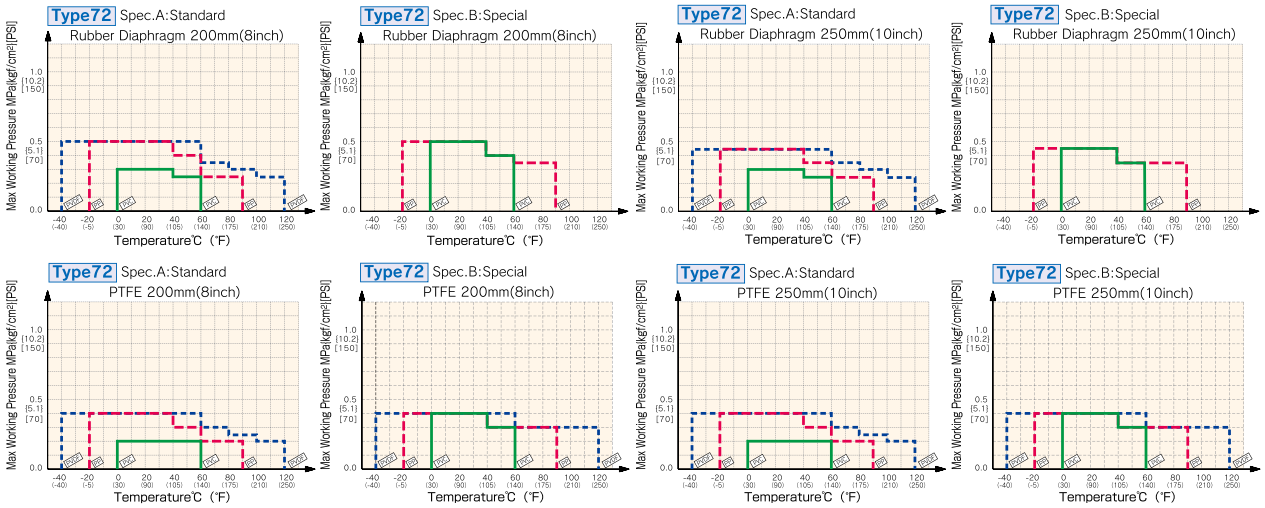
Position Indication

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

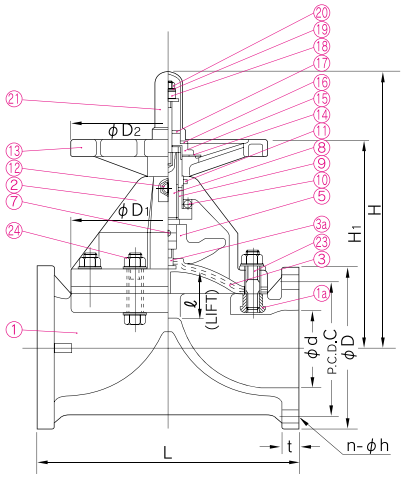
MATERIAL AND WORKING TEMPERATURE

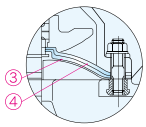
Body material	Nominal size mm(inch)	Working Temperature ℃(°F)	Max. Working Pressure at 20℃(70°F) MPa{kgf/cm²}[PSI]			
			Rubber Diaphragm		PTFE Diaphragm	
			200mm(8inch)	250mm(10inch)	200mm(8inch)	250mm(10inch)
PVC	200(8)·250(10)	0 - 60(30 - 140)	0.3{3.1}[40]	0.3{3.1}[40]	0.2{2.0}[30]	0.2{2.0}[30]
PP	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





With PTFE Diaphragm

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/BONNET PVC/PVC PP/PP PVDF/PPG PVDF/PVDF	⑪	O-RING(A)	1	NBR
				⑫	GREASE NIPPLE	1	COPPER ALLOY(C3604)
②	BONNET	1		⑬	HAND WHEEL	1	PP
				⑭	NAME PLATE	1	PVC
③	DIAPHRAGM	1	EPDM,PTFE,FKM,NBR VIFLON F(FKM-F) VIFLON C(FKM-C)	⑮	CAP	1	PP
				⑯	SEAT GASKET(A)	1	EPDM
				⑰	SEAT RING	1	STAINLESS STEEL304
④	CUSION[1]	1	EPDM	⑱	STOPPER	1	CHROMIZED STEEL(SS400)
⑤	COMPRESSOR	1	GRAY IRON CASTING	⑲	SPRING WASHER	1	STAINLESS STEEL304
⑥	COMPRESSOR NUT	1	COPPER ALLOY(C3604)	⑳	SET NUT	1	STAINLESS STEEL304
⑦	COMPRESSOR PIN	1	STAINLESS STEEL304	㉑	GAUGE COVER	1	POLYCARBONATE
⑧	STEM	1	SUM23	㉓	STUD BOLT·NUT	–	STAINLESS STEEL304
⑨	SLEEVE(A)	1	GRAY IRON CASTING	㉔	BOLT·NUT	–	STAINLESS STEEL304
⑩	THRUST BEARING(A)	1	HIGH CARBON CHROMIUM BEARING(SUJ2)	⑬a	INSERTED NUT	–	COPPER ALLOY(C3604)[2] STAINLESS STEEL304[3]
				③a	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

JIS Unit:mm

Nominal Size mm	Nominal Size inch	※ d	JIS 10K C	JIS 10K ※ D	JIS 10K h	JIS 10K n	※ D_1	D_2	ℓ	L	t PVC	t PP,PVDF	※ H_1	H
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

DIN Unit:mm

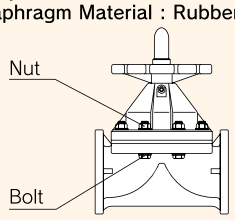
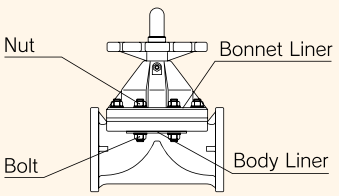
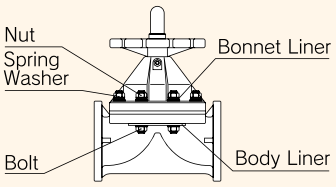
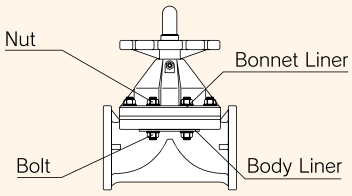
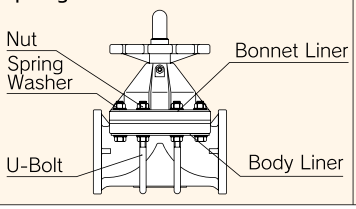
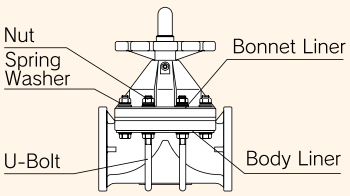
Nominal Size mm	Nominal Size inch	※ d	DIN 2501 PN10 C	DIN 2501 PN10 ※ D	DIN 2501 PN10 h	DIN 2501 PN10 n	※ D_1	D_2	ℓ	L	t PVC	t PP,PVDF	※ H_1	H
200	8	196	295	340	22	8	430	410	95	600	30	34	419	627
250	10	247	350	395	22	12	540	560	128	730	34	36	510	778

※……Standard dimensions based on PVC material

ANSI Unit:inch

Nominal Size inch	Nominal Size mm	※ d	ANSI CLASS 150 C	ANSI CLASS 150 ※ D	ANSI CLASS 150 h	ANSI CLASS 150 n	※ D_1	D_2	ℓ	L	t PVC,PP,PVDF	※ H_1	H
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 

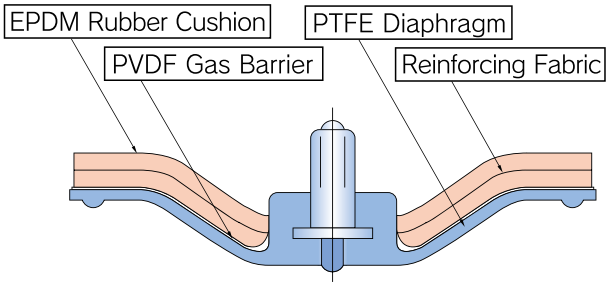
DIAPHRAGM VALVE TYPE 72

- 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 mm(inch)	200 (8)	250 (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 ℃(°F)	Max. Working Pressure at 20℃(70°F) MPa{kgf/cm²}[PSI] Rubber Diaphragm 200mm(8inch)	Rubber Diaphragm 250mm(10inch)	PTFE Diaphragm 200mm(8inch)	PTFE Diaphragm 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]

ASAHI AV VALVE

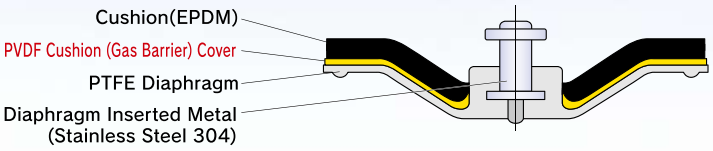
DIAPHRAGM VALVE/Chlor-Alkali Specification & EL Specification

FEATURES

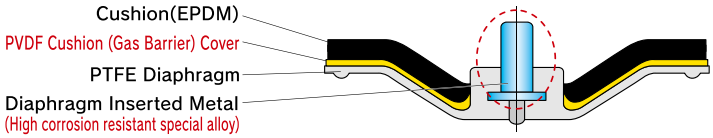
As a solution for blister or crack problem on the surface of the valve body or the diaphragm in the severe working conditions especially for Chlor/Brine application, we prepared a special specification "EL-Specification".
The "EL-Specification", which has EL-PVDF body and EL-PTFE diaphragm, provides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



① PVDF Cushion Cover (Gas Barrier)Specification for corrosive gas



② Chlor-Alkali Specification for Cl_2 gas



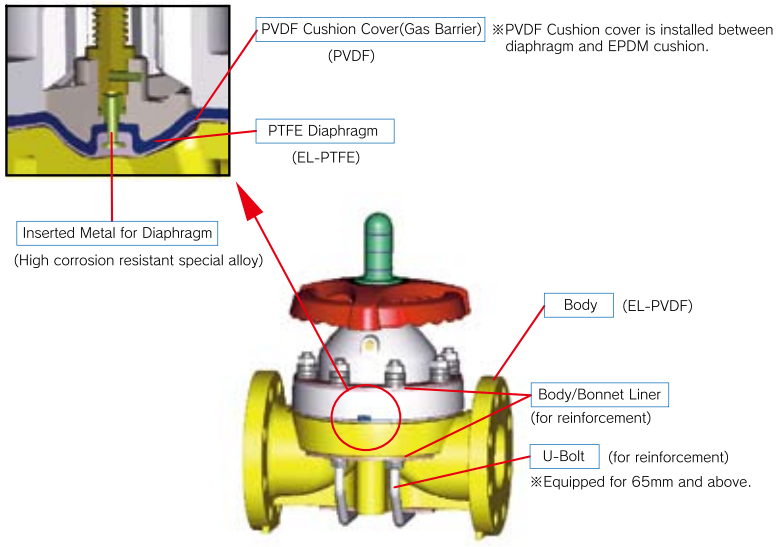
③ EL-Specification

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℃, 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・21α 15mm - 100mm(1/2inch - 4inch)



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)(Option)



Locking Device (Option)

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



NSF Product

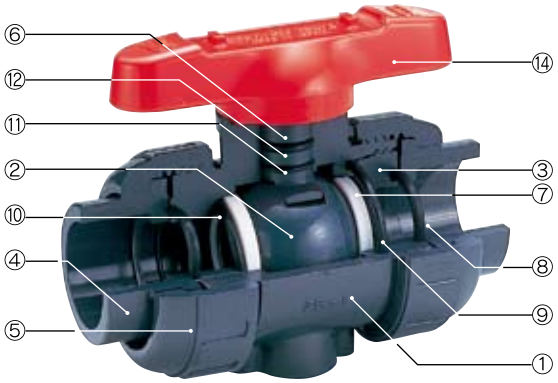
NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.
:BALL VALVE TYPE 21・21 α (Material: PVC+EPDM,FKM)
*Certified products bear an NSF Certification Mark.

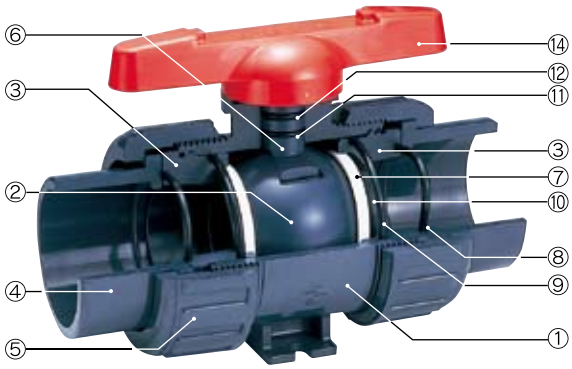
MATERIAL AND WORKING TEMPERATURE

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

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

Notes : 1. There is a dead space in a ball valve. Volatile liquids, such as a hydrogen peroxide(H_2O_2)and Sodium hypochlorite (NaClO) may vaporize in the dead space, thus causing an abnormal pressure increase in the valve.
(Important: Gas is compressible. Thus if pressure rises abnormally, the valve can burst ejecting dangerous fragments.)





PARTS & MATERIALS

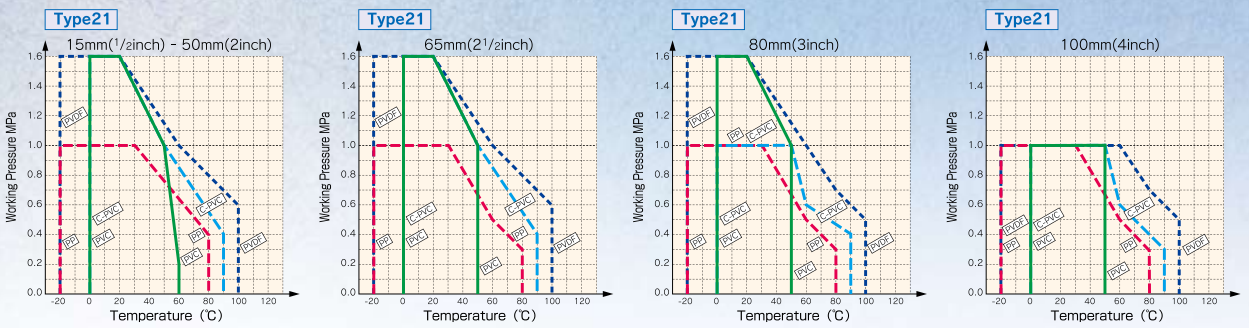
● 15mm(1/2inch) − 50mm(2inch)

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

● 65mm(2 1/2inch) − 100mm(4inch)

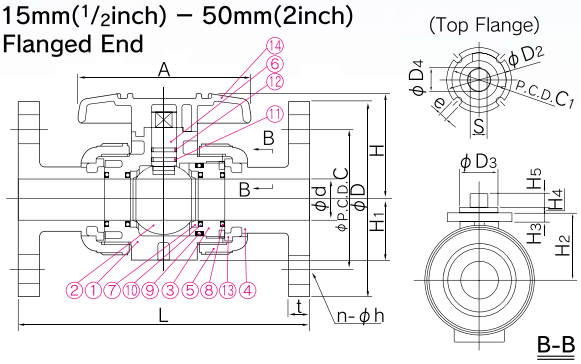
No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC、C-PVC、PP、PVDF	⑨	O-RING(B)	2	EPDM、FKM、etc
②	BALL	1	PVC、C-PVC、PP、PVDF	⑩	CUSHION	2	EPDM、FKM、etc
③	CARRIER	2	PVC、C-PVC、PP、PVDF	⑪	O-RING(D)	1	EPDM、FKM、etc
④	END CONNECTOR	2	PVC、C-PVC、PP、PVDF	⑫	O-RING(E)	1	EPDM、FKM、etc
⑤	UNION NUT	2	PVC、C-PVC、PP、PVDF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

WORKING PRESSURE VS. TEMPERATURE

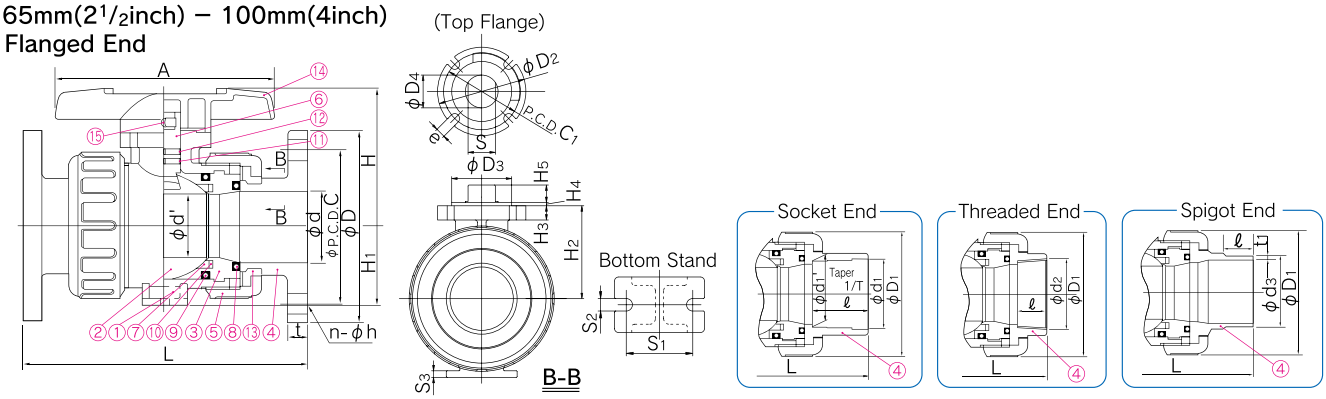


DIMENSION

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



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



DIMENSIONS TABLE

JIS Unit:mm

Nominal Size mm	Nominal Size inch	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			t	PVC, C-PVC				PP				d_2	ℓ	L		
mm	inch	D	C	n	h	D	C	n	h	PVC C-PVC	PP	PVDF		d_1	ℓ	1/T	L	d_1	d_1'	ℓ	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 1/4	22	150	146	146
40	1 1/2	120	95	4	15	140	105	4	19	212	212	212	16	48.21	37	1/37	189	47.0	46.0	28	171	Rc1 1/2	25	163	160	160
50	2	130	105	4	15	155	120	4	19	234	234	234	16	60.25	42	1/37	220	59.0	58.0	28	192	Rc2	28	197	194	194
65	2 1/2	155	130	4	15	175	140	4	19	261	257	256	18	76.60	61	1/48	273	75.0	73.0	35	219	Rc2 1/2	32	215	213	212
80	3	180	145	4	19	185	150	8	19	306	305	302	18	89.60	64	1/49	316	88.0	86.0	35	257	Rc3	35	265	264	261
100	4	200	165	8	19	210	175	8	19	374	374	369	18	114.70	84	1/56	419	113.0	111.0	45	341	Rc4	45	362	362	357

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 DIN PN10/16							t	Socket End PVC、C-PVC			Socket End PP、PVDF					Threaded End				Spigot End PVC			Spigot End PP、PVDF				
						L									L					L						t		L	
mm	inch	D	C	n	h	PVC C-PVC	PP	PVDF		d_1	ℓ	L	d_1	d_1'	ℓ	PP	PVDF	d_2	ℓ	PVC C-PVC	PP	PVDF	d_3	d_3'	ℓ	d_3	ℓ	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 ANSI CLASS 150				L			t	Socket End (IPS) PVC, C-PVC								Socket End (IPS) PP, PVDF				Threaded End				
										ASTM SCH40			L	ASTM SCH80			L			L			L		
inch	mm	D	C	n	h	PVC, C-PVC	PP	PVDF		d_1	d_1'	ℓ		d_1	d_1'	ℓ		d_1	ℓ	PP	PVDF	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 1/2NPT	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 1/2NPT	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 1/2NPT	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 1/2NPT	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 (H_2O_2)and Sodium hypochlorite (NaClO) are adapted will cause the abnormal pressure rising due to their vaporization nature.

BS

Unit:mm

Nominal Size		Socket End																			
		d	d_1	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	ℓ	L
mm	inch																					
15	1/2	15	21.4	48	42	25	13.5	36	51.5	29	30	6	3	8	92	10.5	19	7.3	11	5.5	17	102
20	3/4	20	26.8	60	42	25	15	36	59.5	35	36.5	6	3	10	100	11	19	7.3	11	5.5	20	119
25	1	25	33.6	70	42	25	15	36	68	39	43.5	6	3	10	110	11	19	7.3	11	5.5	23	131
32	1 1/4	32	42.3	82	48	30	19	42	80.5	47	52.5	8	3	10	121	15	30	9	15	5.5	27.5	150
40	1 1/2	40	48.3	100	57	35	23	50	89	55	61	10	3	12	131	18	30	9	15	6.5	30.5	164
50	2	51	60.4	126	57	35	23	50	102.5	66	72.5	10	3	12	159	18	30	9	15	6.5	36.5	197

ASAHI AV VALVE

WATER BV 15mm - 50mm(1/2inch - 2inch)



FEATURES

Most suitable valve for water

Water BV can be used for water, seawater and therefore have reasonable price.
(This valve is not recommended for chemical fruid.)

Easy to Be Automated (No Modification Required)

Featuring a new integral molded top flange. The WATER BV can easily be converted from the manual to automatic without replacing the body.

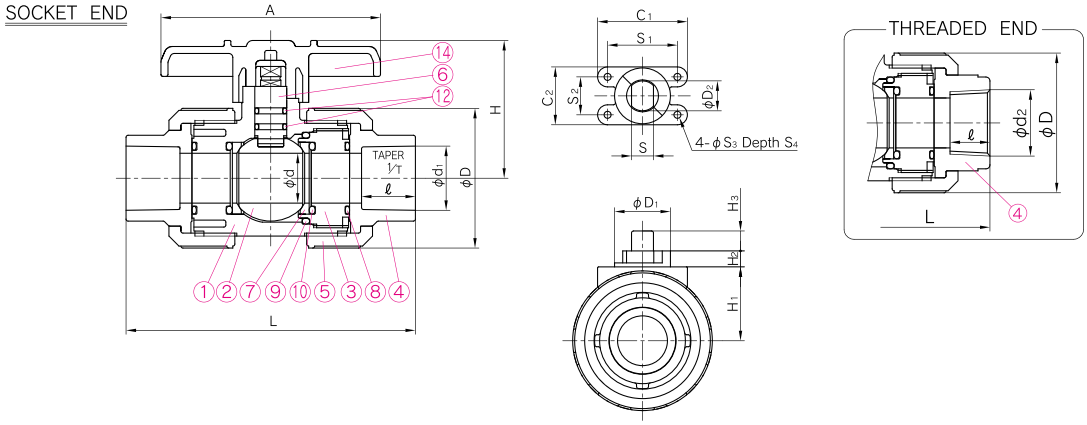
Double-O-ring

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.

DIMENSION



MATERIAL AND WORKING TEMPERATURE

Body Material	Working Temperature ℃ (°F)	Max.Working Pressure(at R.T.) MPa{kgf/cm²}[PSI]	End Connecters	
			Socket End	Threaded End
Unplasticized Polyvinyl Chloride(PVC)	0 - 50(30 - 120)	1.0{10.2}[150]	○	○

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC	⑦	SEAT	2	PTFE
②	BALL	1	PVC	⑧	O-RING(A)	2	EPDM
③	CARRIER	1	PVC	⑨	O-RING(B)	1	EPDM
④	END CONNECTOR	2	PVC	⑩	O-RING(C)	2	EPDM
⑤	UNION NUT	2	PVC	⑫	O-RING(E)	2	EPDM
⑥	STEM	1	PVC	⑭	HANDLE	1	ABS

DIMENSIONS TABLE

JIS — Unit:mm

Nominal Size		Socket End				Threaded End			d	D	D_1	D_2	H	H_1	H_2	H_3	A	S	C_1	C_2	S_1	S_2	S_3	S_4
mm	inch	d_1	ℓ	1/T	L	d_2	ℓ	L																
15	1/2	22.11	20	1/34	104	Rc 1/2	15	98	15	48	24	13.5	54	25	6	7.5	92	10.5	40	25	31.5	15	3.5	12
20	3/4	26.13	24	1/34	128	Rc 3/4	17	119	20	60	27	15	62	31	8	10	100	11	45	29	35	19	3.5	12
25	1	32.16	27	1/34	145	Rc 1	20	135	25	70	28	15	69	38	8	10	100	11	45	29	35	19	3.5	12
32	1 1/4	38.19	30	1/34	162	Rc 1 1/4	22	150	30	80	34	19	79	43	10	10	121	15	58.5	38	45.5	25	4.5	15
40	1 1/2	48.21	37	1/37	189	Rc 1 1/2	25	170	40	96	38	23	88	50	10	12	131	18	58.5	38	45.5	25	4.5	15
50	2	60.25	42	1/37	220	Rc 2	28	198	51	120	40	23	102	56	12	12	159	18	60	40	47	27	4.5	15

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.

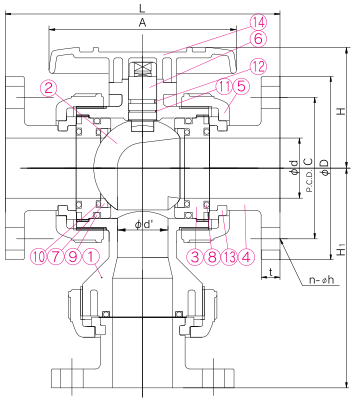
Equipped ISO Mounting Flange
The feature provides for easier mounting of actuators on valves.

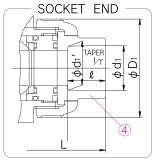
Interchangeable with Ball Valve Type21
The face to face dimensions, as well as the connecting parts, end connectors and union nuts, are the same as the ball valve Type21.

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.

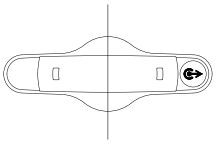
NSF Product
NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.
:3-WAY BALL VALVE TYPE 23(Material:PVC+EPDM,FKM)
*Certified products bear an NSF Certification Mark.

DIMENSION

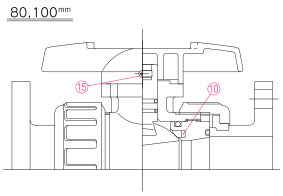


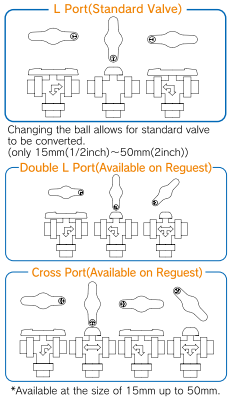


* JIS and DIN Standard only.



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





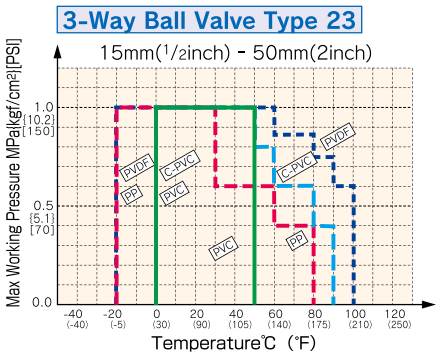
*Available at the size of 15mm up to 50mm.

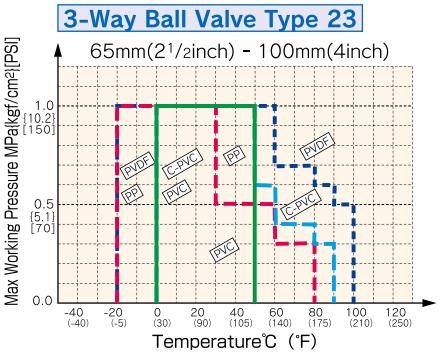
MATERIAL AND WORKING TEMPERATURE

Body Material	Working Temperature ℃ (°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 (H_2O_2) 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.

WORKING PRESSURE VS. TEMPERATURE





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	⑭a	RING	3	STAINLESS STEEL304

Note : The stop ring (⑫) is used for Flanged End valves only.
The ring (⑭a) is used for 15,20,and 25mm C-PVC valves.

DIMENSIONS TABLE

JIS

Unit:mm

Nominal Size		Flanged End										Socket End									Threaded End				d	d'	D_1	D_2	D_3	D_4	C_1	H	H_2	H_3	H_4	H_5	A	S	e
		JIS 5K				JIS 10K				L	t	H_1	PVC , C-PVC				PP				d_2	ℓ	L	H_1															
mm	inch	D	C	n	h	D	C	n	h				d_1	ℓ	1/T	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	21.2	20.2	20	108	77	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	85	65	4	12	100	75	4	15	172	14	115	26.13	24	1/34	128	93	26.2	25.2	23	126	92	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	95	75	4	12	125	90	4	19	187	14	133	32.16	27	1/34	145	112	33.0	32.0	25	141	110	Rc 1	20	131	105	25	25	70	42	25	15	36	68	43.5	6	3	10	110	11	5.5
32	1 1/4	115	90	4	15	135	100	4	19	212	16	165	38.19	30	1/34	174	146.5	—	—	—	—	—	Rc 1 1/4	22	163	141	40	32	100	57	35	23	50	89	61	10	3	12	131	18	6.5
40	1 1/2	120	95	4	15	140	105	4	19	212	16	165	48.21	37	1/37	189	154	47.0	46.0	28	171	145	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	130	105	4	15	155	120	4	19	234	16	187	60.25	42	1/37	220	180	59.0	58.0	28	192	166	Rc 2	28	197	168	51	43	126	57	35	23	50	102.5	72.5	10	3	12	159	18	6.5
65	2 1/2	155	130	4	15	175	140	4	19	304	18	256	76.60	61	1/48	316	261	75.0	73.0	35	264	235	Rc 2 1/2	32	264	235	78	58	152	81	55	30	70	140	94	13	3	19	240	24	9
80	3	180	145	4	19	185	150	8	19	304	18	256	89.60	64	1/49	316	261	88.0	86.0	35	258	232	Rc 3	35	264	235	78	68.5	152	81	55	30	70	140	94	13	3	19	240	24	9
100	4	200	165	8	19	210	175	8	19	372	18	305	114.70	84	1/56	418	328	113.0	111.0	45	340	289	Rc 4	45	338	299	100	90	210	116	70	40	102	178	126	16	3	23	300	34	11

DIN

Unit:mm

Nominal Size		Flanged End							Socket End									Threaded End				Spigot End										
		DIN PN10				L	t	H_1	PVC , C-PVC				PP, PVDF					d_2	ℓ	L	H_1	PVC				PP, PVDF						
																												t				
mm	inch	D	C	n	h				d_1	ℓ	L	H_1	d_1	d_1'	ℓ	L	H1					d_3	d_3'	ℓ	H_1	d_3	ℓ	PP	PVDF	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	20	15	18.5	83	20	18.5	2.5	1.9	124	83		
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	25	20	24	99	25	22	2.7	1.9	144	99		
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	32	25	24.5	115	32	22.5	3.0	2.4	154	115		
32	1 1/4	140	100	4	16	212	16	165	40	26	173	147	39.45	39.2	20.5	148	131	Rp 1 1/4	22	163	141	—	—	—	—	—	—	—	—	—	—		
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	50	40	34	153	50	32	4.6	3.0	194	153		
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	63	51	38	178	63	36	5.8	3.0	224	178		
65	2 1/2	185	145	4	18	304	18	256	75	44	282	245	74.25	73.95	31	256	227	Rp 2 1/2	32	264	235	—	—	—	—	—	—	—	—	—	—		
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	90	80	51	252	90	38	8.2	4.3	295	246		
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	110	93.6	61	308	110	44.5	10.0	5.3	353	301		

Nominal Size		d	d'	D_1	D_2	D_3	D_4	C_1	H	H_2	H_3	H_4	H_5	A	S	e
mm	inch															
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
32	1 1/4	40	32	100	57	35	23	50	89	61	10	3	12	131	18	6.5
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
65	2 1/2	78	58	152	81	55	30	70	140	94	13	3	19	240	24	9
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

ANSI

Unit:inch

Nominal Size		Flanged End							Socket End															Threaded End				d	d'	D_1	D_2	D_3	D_4	C_1	H	H_2	H_3	H_4	H_5	A	S	e
		ASTM Class 150				L	t	H_1	PVC , C-PVC												PP, PVDF				d_2	ℓ	L	H_1													
									ASTM SCH40			L	ASTM SCH80			L	H_1	d_1	ℓ	L	H_1																			
		D	C	n	h				d_1	d_1'	ℓ		d_1	d_1'	ℓ																										
inch	mm																																							
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	0.83	0.870	4.45	3.09	1/2- 14 NPT	0.59	4.02	2.89	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	3.88	2.75	4	0.62	6.77	0.55	4.50	—	—	—	—	1.058	1.046	1.000	5.08	3.56	1.03	1.000	5.08	3.61	3/4- 14 NPT	0.67	4.72	3.48	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	0.43	0.22
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	1.30	1.130	5.75	4.37	1- 11 1/2 NPT	0.79	5.16	4.13	0.98	0.98	2.76	1.65	0.98	0.59	1.42	2.68	1.71	0.24	0.12	0.39	4.33	0.43	0.22
1 1/4	32	4.62	3.50	4	0.62	8.35	0.63	6.50	—	—	—	—	1.670	1.655	1.250	6.85	5.51	1.65	1.250	7.04	5.75	1 1/4- 11 1/2 NPT	0.87	6.42	5.53	1.57	1.26	3.94	2.24	1.38	0.91	1.97	3.50	2.40	0.39	0.12	0.47	5.16	0.71	0.26
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	1.89	1.370	7.24	5.85	1 1/2- 11 1/2 NPT	0.98	6.42	5.53	1.57	1.26	3.94	2.24	1.38	0.91	1.97	3.50	2.40	0.39	0.12	0.47	5.16	0.71	0.26
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	2.36	1.500	8.23	6.76	2- 11 1/2 NPT	1.10	7.76	6.61	2.01	1.69	4.96	2.24	1.38	0.91	1.97	4.04	2.85	0.39	0.12	0.47	6.26	0.71	0.26
65	2 1/2	7.00	5.50	4	0.75	11.97	0.71	10.06	—	—	—	—	2.889	2.868	1.750	11.21	9.65	2.88	1.752	11.21	9.65	2 1/2- 8 NPT	1.26	10.39	9.25	3.07	2.28	5.98	3.19	2.17	1.18	2.76	5.51	3.70	0.51	0.12	0.75	9.45	0.94	0.35
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	3.48	1.874	11.10	11.10	3- 8 NPT	1.38	10.39	9.25	3.07	2.70	5.98	3.19	2.17	1.18	2.76	5.51	3.70	0.51	0.12	0.75	9.45	0.94	0.35
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	4.48	2.252	14.37	14.37	4- 8 NPT	1.77	14.17	11.77	3.94	3.54	8.27	4.57	2.76	1.57	4.02	7.01	4.96	0.63	0.12	0.91	11.81	1.34	0.43

BS

Unit:mm

Nominal Size		Socket End																		
		d_1	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
inch	mm																			
15	1/2	21.4	17	102	72	15	15	48	42	25	13.5	36	51.5	30	6	3	8	92	10.5	5.5
20	3/4	26.8	20	120	85	20	20	60	42	25	15	36	59.5	36.5	6	3	10	100	11	5.5
25	1	33.6	23	131	104	25	25	70	42	25	15	36	68	43.5	6	3	10	110	11	5.5
32	1 1/4	42.3	27.5	173	147	40	32	100	57	35	23	50	89	61	10	3	12	131	18	6.5
40	1 1/2	48.3	30.5	163	142	40	32	100	57	35	23	50	89	61	10	3	12	131	18	6.5
50	2	60.4	36.5	197	170	51	43	126	57	35	23	50	102.5	72.5	10	3	12	159	18	6.5
65	2 1/2	75.1	43.5	282	245	78	58	152	81	55	30	70	140	94	13	3	19	240	24	9
80	3	88.8	50.5	287	248	78	58	152	81	55	30	70	140	94	13	3	19	240	24	9
100	4	114.2	60.3	353	307	100	78	210	116	70	40	102	178	126	16	3	23	300	34	11

3-WAY BALL VALVE TYPE 23H 25mm - 40mm(1inch - 1 1/2inch)

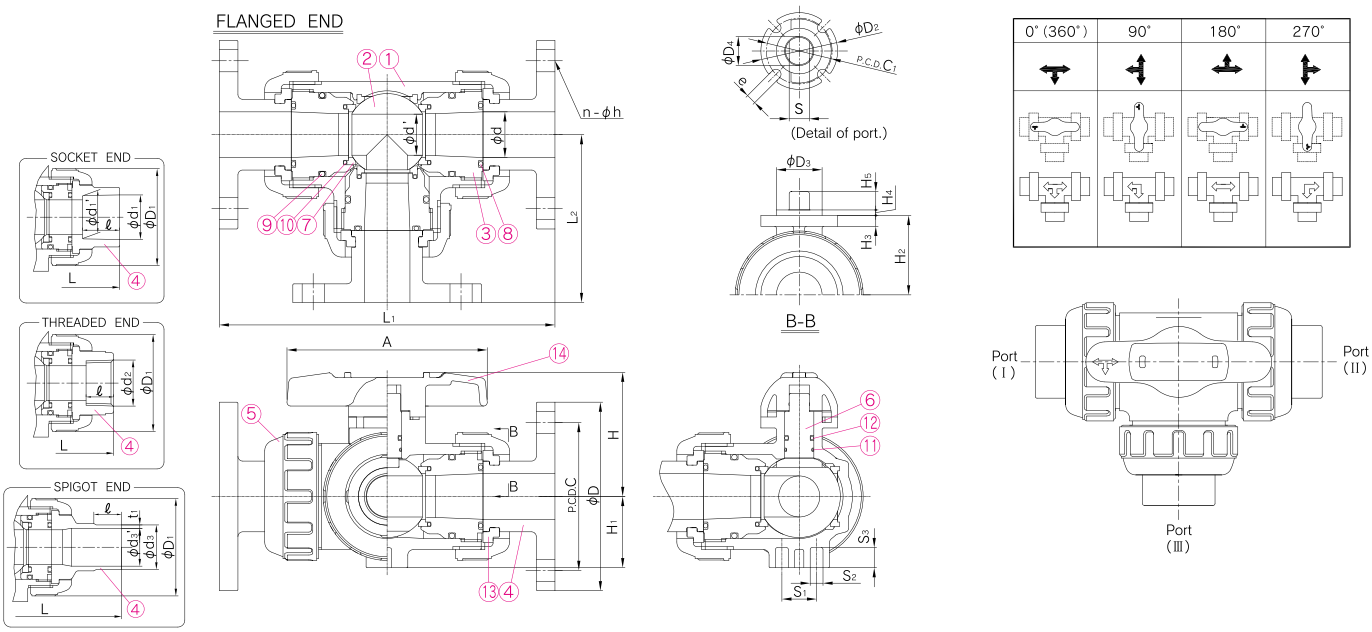


FEATURES

Horizontal Model
The 3-WAY BALL VALVE TYPE 23H is horizontal model(T port).

Same Features as TYPE23
a) Compact and Economic
b) Reversible Flow Direction
c) Equipped ISO Mounting Flange
d) Interchangeable with Ball Valve Type21

DIMENSION



MATERIAL AND WORKING TEMPERATURE

Body Material	Working Temperature ℃ (°F)	Max.Working Pressure(at R.T.) MPa{kgf/cm²}[PSI]	End Connectors			
			Socket End	Threaded End	Flanged End	Spigot End
Polypropylene(PP)	−20 - 80(−5 - 175)	1.0{10.2}[150]	○ ※	○	○	○

＊ PP 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 (H_2O_2) 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	PP	⑧	O-RING(A)	3	EPDM,FKM,others
②	BALL	1	PP (T Port)	⑨	O-RING(B)	3	EPDM,FKM,others
③	CARRIER	3	PP	⑩	O-RING(C)	3	EPDM,FKM,others
④	END CONNECTOR	3	PP	⑪	O-RING(D)	1	EPDM,FKM,others
⑤	UNION NUT	3	PPG	⑫	O-RING(E)	1	EPDM,FKM,others
⑥	STEM	1	PP	⑬	STOP RING	3	PVDF(Used for Flanged End)
⑦	SEAT	4	PTFE	⑭	HANDLE	1	ABS

DIMENSIONS TABLE

JIS

Unit:mm

Nominal Size		Flanged End							Socket End					Threaded End			
		JIS PN10				t	L_1	L_2	d_1	d_1'	ℓ	L_1	L_2	d_2	ℓ	L_1	L_2
mm	inch	D	C	n	h												
25	1	125	90	4	19	14	216	108	33.0	32.0	25	170	85	Rc 1	20	159	79.5
32	$1\frac{1}{4}$	135	100	4	19	16	260	130	—	—	—	—	—	Rc $1\frac{1}{4}$	22	208	104
40	$1\frac{1}{2}$	140	105	4	19	16	260	130	47.0	46.0	28	219	109.5	Rc $1\frac{1}{2}$	25	208	104

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																			
25	1	25	22	70	42	25	15	36	68	39	43.5	6	3	10	110	11	19	7.3	11	5.5
32	$1\frac{1}{4}$	40	34	100	57	35	23	50	89	55	61	10	3	12	131	18	30	9	15	6.5
40	$1\frac{1}{2}$	40	34	100	57	35	23	50	89	55	61	10	3	12	131	18	30	9	15	6.5

DIN

Unit:mm

Nominal Size		Flanged End							Socket End					Threaded End				Spigot End				
		DIN PN10				t	L_1	L_2	d_1	d_1'	ℓ	L_1	L_2	d_2	ℓ	L_1	L_2	d_3	ℓ	t	L_1	L_2
mm	inch	D	C	n	h																	
25	1	115	85	4	14	14	189	94.5	31.5	31.3	18	152	76	Rp 1	20	159	79.5	32	22.5	3.0	183	91.5
32	$1\frac{1}{4}$	140	100	4	16	16	260	130	39.45	39.2	20.5	197	98.5	Rp $1\frac{1}{4}$	22	208	104	—	—	—	—	—
40	$1\frac{1}{2}$	150	110	4	16	16	248	124	49.45	49.2	23.5	197	98.5	Rp $1\frac{1}{2}$	25	208	104	50	32	4.6	242	121

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																			
25	1	25	22	70	42	25	15	36	68	39	43.5	6	3	10	110	11	19	7.3	11	5.5
32	$1\frac{1}{4}$	40	34	100	57	35	23	50	89	55	61	10	3	12	131	18	30	9	15	6.5
40	$1\frac{1}{2}$	40	34	100	57	35	23	50	89	55	61	10	3	12	131	18	30	9	15	6.5

ANSI

Unit:mm

Nominal Size		Flanged End							Socket End				Threaded End			
		ANSI Class150				t	L_1	L_2	d_1	ℓ	L_1	L_2	d_2	ℓ	L_1	L_2
mm	inch	D	C	n	h											
25	1	4.25	3.13	4	0.62	0.55	8.50	4.25	1.30	1.13	6.77	3.39	1-11 $\frac{1}{2}$NPT	0.79	6.26	3.13
32	$1\frac{1}{4}$	4.62	3.50	4	0.62	0.63	10.24	5.12	1.65	1.25	8.74	4.37	$1\frac{1}{4}$-11 $\frac{1}{2}$NPT	0.87	8.19	4.09
40	$1\frac{1}{2}$	5.00	3.88	4	0.62	0.63	10.24	5.12	1.89	1.37	8.94	4.47	$1\frac{1}{2}$-11 $\frac{1}{2}$NPT	0.98	8.19	4.09

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																			
25	1	0.98	0.87	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
32	$1\frac{1}{4}$	1.57	1.34	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
40	$1\frac{1}{2}$	1.57	1.34	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

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

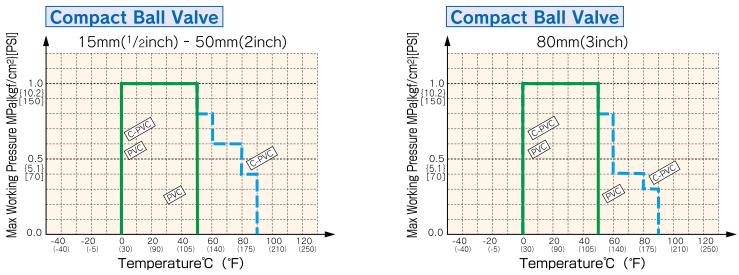
NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.
:Compact BALL VALVE (Material:PVC+EPDM)
*Certified products bear an NSF Certification Mark.

MATERIAL AND WORKING TEMPERATURE

Body material	Working Temperature ℃ (°F)	Max.Working Pressure(at R.T.) MPa{kgf/cm²}[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 (H_2O_2) 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

JIS

Unit:mm

Nominal Size mm	Nominal Size inch	d	Socket End d1	Socket End ℓ	Socket End 1/T	Socket End L	Threaded End JIS B 0203 d1	Threaded End ℓ	Threaded End L	D	H	A
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

DIN

Unit:mm

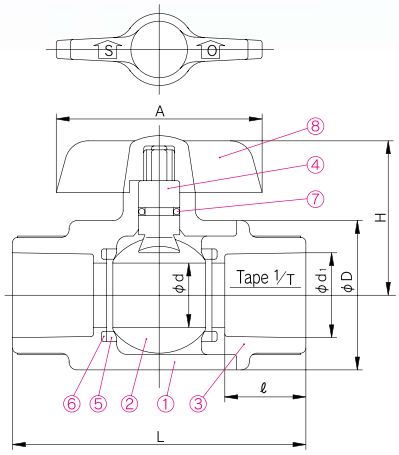
Nominal Size mm	Nominal Size inch	d	Socket End d1	Socket End ℓ	Socket End L	Threaded End DIN 2999 d1	Threaded End ℓ	Threaded End L	D	H	A
13	3/8	13	16	14	85	Rp 3/8	15	85	35	42	60
15	1/2	15	20	16	97	Rp 1/2	15	97	39	44	70
20	3/4	20	25	19	102	Rp 3/4	17	102	48	55	80
25	1	25	32	22	114	Rp 1	20	114	58	60	80
32	1 1/4	31	40	26	127	Rp 1 1/4	22	127	66	70	95
40	1 1/2	35	50	31	152	Rp 1 1/2	25	152	72.5	76	110
50	2	45	63	38	176	Rp 2	28	176	88.5	85	110
80	3	68.5	90	51	236	Rp 3	35	236	130	124	200

ANSI

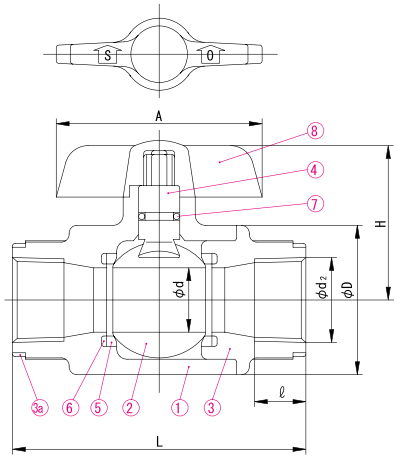
Unit:inch

Nominal Size inch	Nominal Size mm	d	Socket End ASTM SCH40 d1	Socket End ASTM SCH40 d2	Socket End ASTM SCH40 ℓ	Socket End L	Threaded End ANSI/ASME B1.20.1 d1	Threaded End ℓ	Threaded End L	D	H	A
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

▼ SOCKET END



▼ THREADED END



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
③a	RING※	2	STAINLESS STEEL304

Note : The ring (③a)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.

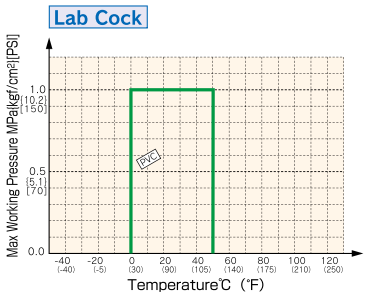
NSF Product

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

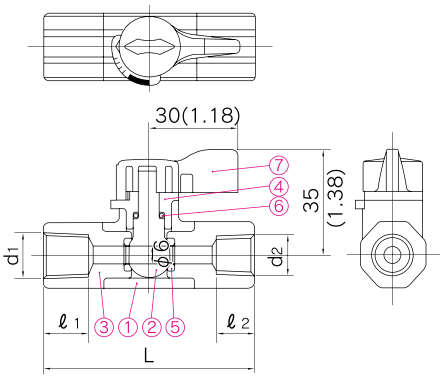
Body material	Unplasticized Polyvinyl Chloride(PVC)
Working Temperature	0℃ - 50℃(30° F - 120° F)
Max.Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI]
End Connectors	Hose, Male thread, Female thread
Nominal Size	●Hose:12 to 15mm(standard hose inner diameter) ●Male thread:1/4,1/2 ●Female thread:1/4,3/8

WORKING PRESSURE VS. TEMPERATURE

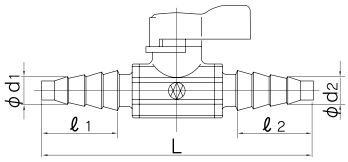


DIMENSION

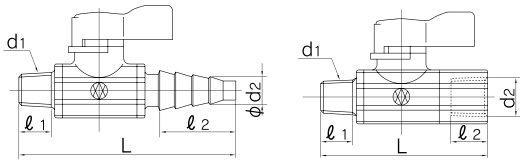
FEMALE THREAD × FEMALE THREAD



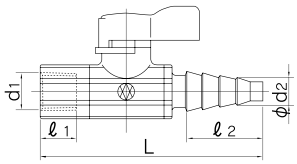
HOSE × HOSE



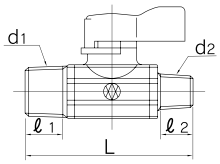
MALE THREAD × HOSE



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

	d1	d2	ℓ1	ℓ2	L		d1	d2	ℓ1	ℓ2	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	MALE THREAD ×MALE THREAD	R 1/4	R 1/4	13	13	66
HOSE×HOSE	10	10	30.5	30.5	111		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
①	FEMALE THREAD ×FEMALE THREAD	Rp 1/4	Rp 1/4	15	15	71
		Rp 3/8	Rp 1/4	15	15	71
		Rp 3/8	Rp 3/8	15	15	71
②	HOSE×HOSE	10	10	30.5	30.5	111
③	FEMALE THREAD ×HOSE	Rp 1/4	10	15	30.5	91
		Rp 3/8	10	15	30.5	91

		d_1	d_2	ℓ_1	ℓ_2	L
④	MALE THREAD ×HOSE	R 1/4	10	13	30.5	88.5
		R 1/2	10	15	30.5	91
⑤	MALE THREAD ×MALE THREAD	R 1/4	R 1/4	13	13	66
		R 1/2	R 1/4	15	13	68.5
		R 1/2	R 1/2	15	15	71
⑥	MALE THREAD ×FEMALE THREAD	R 1/4	Rp 1/4	13	15	68.5
		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

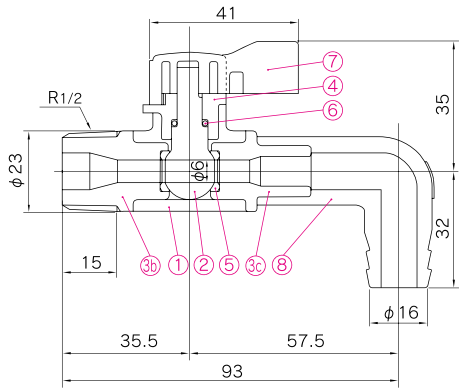
Unit:inch

		d_1	d_2	ℓ_1	ℓ_2	L
①	FEMALE THREAD ×FEMALE THREAD	1/4-18NPT	1/4-18NPT	0.51	0.51	2.80
		3/8-18NPT	1/4-18NPT	0.59	0.51	2.80
		3/8-18NPT	3/8-18NPT	0.59	0.59	2.80
②	HOSE×HOSE	0.39	0.39	1.20	1.20	4.37
③	FEMALE THREAD ×HOSE	1/4-18NPT	0.39	0.51	1.20	3.58
		3/8-18NPT	0.39	0.59	1.20	3.58

		d_1	d_2	ℓ_1	ℓ_2	L
④	MALE THREAD ×HOSE	1/4-18NPT	0.39	0.51	1.20	3.48
		1/2-14NPT	0.39	0.59	1.20	3.58
⑤	MALE THREAD ×MALE THREAD	1/4-18NPT	1/4-18NPT	0.51	0.51	2.60
		1/2-14NPT	1/4-18NPT	0.59	0.51	2.70
		1/2-14NPT	1/2-14NPT	0.59	0.59	2.80
⑥	MALE THREAD ×FEMALE THREAD	1/4-18NPT	1/4-18NPT	0.51	0.51	2.70
		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℃ - 50℃ (30° F - 120° F)
Max.Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI]
End Connectors	R1/2inch Male thread×Elbow16mm

PARTS & MATERIALS

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

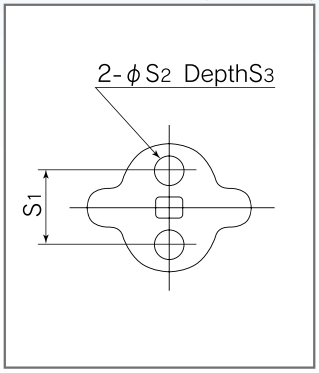
Diaphragm Valve Type14 Unit:mm(inch)

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)

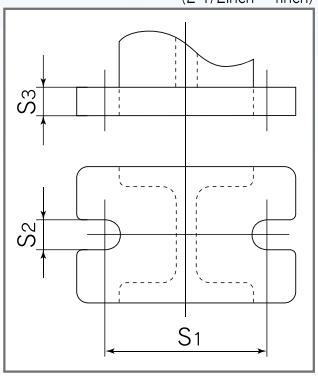
Ball Valve Type21 Unit:mm(inch)

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)

Diaphragm Valve Type14: 15mm - 100mm (1/2inch - 4inch)
Ball Valve Type21: 15mm - 50mm (1/2inch - 2inch)

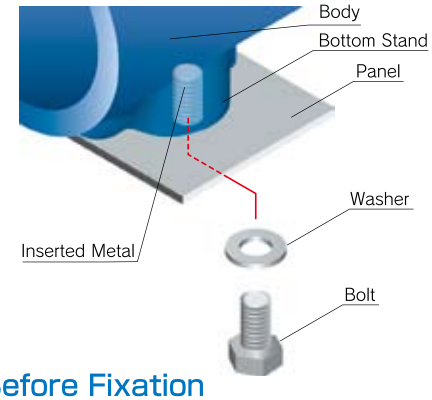


Ball Valve Type21: 65mm - 100mm (2 1/2inch - 4inch)

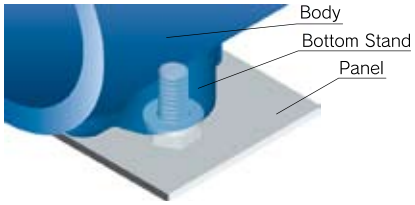


Fixation of Bottom Stand with Panel

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

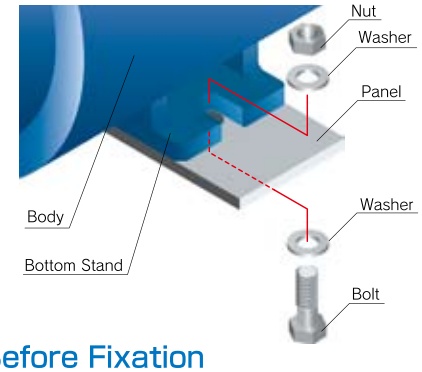


Before Fixation

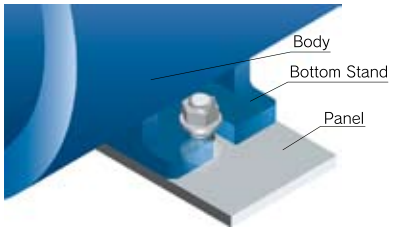


After Fixation

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



Before Fixation



After Fixation

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.

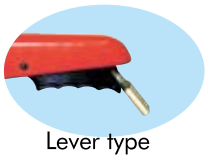
Stem Retainer
Stem retainer allows field automation or accessories preventing the stem from being removed.

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

Wetted Part Lubricants Free
(SPECIAL)

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

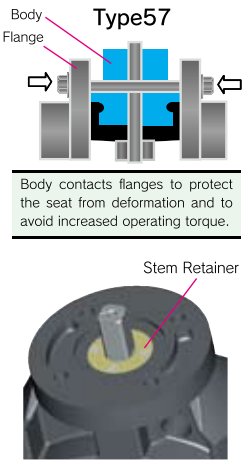
Locking Operation
Locking device of Gear type is available on special request.

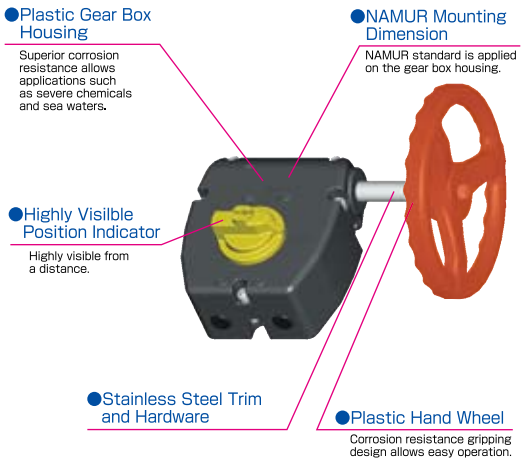


Lever type



Gear type

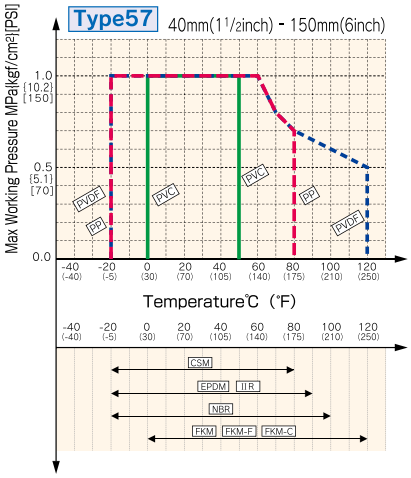


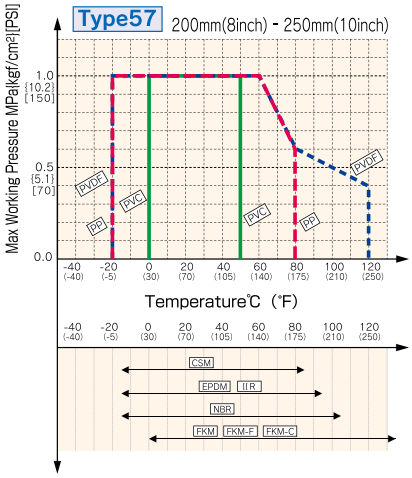


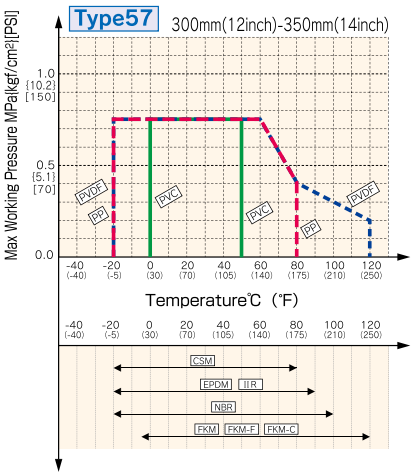
SPECIFICATIONS

Body material	Working Temperature ℃ (°F)	Max. Working Pressure MPa{kgf/cm²}[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)	−20 - 80 (20 - 175)	1.0{10.2}[150]	0.75{7.7}[110]
Polyvinylidene Fluoride(PVDF)	−20 - 120(20 - 250)	1.0{10.2}[150]	0.75{7.7}[110]

WORKING PRESSURE VS. TEMPERATURE



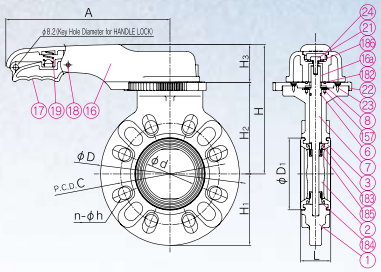




ASAHI AV VALVE

Lever Type ● 40mm(1 1/2inch) – 200mm(8inch)



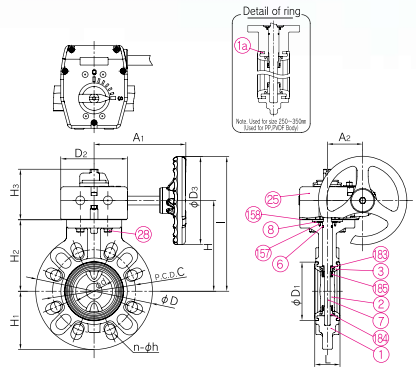


PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/DISC·SEAT BUSH PVC/PP PP/PP PVDF/PVDF	⑰	HANDLE LEVER	1	PPG
②	DISC	1		⑱	PIN	1	PPG
⑬	SEAT BUSH(A)	1		⑲	SPRING	1	STAINLESS STEEL(SUS 304)
⑭	SEAT BUSH(B)	1		㉑	BOLT(B)	1	STAINLESS STEEL(SUS 304)
③	SEAT	1	EPDM FKM Others	㉒	LOCKING PLATE	1	PPG
⑥	O-RING(C)	1		㉓	SCREW(B)	4	STAINLESS STEEL(SUS 304)
⑮	O-RING(I)	4		㉔	CAP(A)	1	PP
⑦	STEM	1	STAINLESS STEEL(SUS 403) STAINLESS STEEL(SUS 316)	⑮	SCREW(F)	4	STAINLESS STEEL(SUS 304)
⑧	STEM HOLER(A)	1	PP	⑫	O-RING(H)	1	EPDM
⑯	HANDLE(A)	1	PP	⑱	RUBBER+WASHER	1	STAINLESS STEEL304 +EPDM
⑯	HANDLE INSERTED METAL	1	STAINLESS STEEL(SUS 316L)				

Gear Type ● 40mm(1 1/2inch) – 350mm(14inch)





PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/DISC·SEAT BUSH PVC/PP PP/PP PVDF/PVDF	⑧	STEM RETAINER(A)	1	PP
②	DISC	1		㉕	GEAR BOX	1	PLASTIC etc.
⑬	SEAT BUSH(A)	1		㉘	BOLT(C)	4	STAINLESS STEEL(SUS 304)
⑭	SEAT BUSH(B)	1		⑮	SCREW(F)	4	STAINLESS STEEL(SUS 304)
③	SEAT	1	EPDM FKM Others	⑮	GASKET(L)	1	EPDM
⑥	O-RING(C)	1		1a	RING	2	STEEL400 (Unichrome coated) PP,PVDF Body used for size 250mm-350mm
⑮	O-RING(I)	4					
⑦	STEM	1	STAINLESS STEEL(SUS 403) STAINLESS STEEL(SUS 316)				

DIMENSIONS TABLE

JIS

Unit:mm

Nominal Size		d	JIS 5K			JIS 10K			D	D_1	D_2	D_3	L	H		H_1	H_2		H_3		I	A	A_1	A_2	Number of handle wheel rotation
mm	inch		C	n	h	C	n	h						LEVER	GEAR		LEVER	GEAR	LEVER	GEAR					
40	1 1/2	45	95	4	15	105	4	19	150	71	122	160	39	156	130	75	100	95	56	92	210	220	167	64	
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	2 1/2	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	9.5
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	–	272	99	
350	14	351	435	12	23	445	16	25	539	393	188	300	129	–	367	270	–	325	–	108	517	–	272	99	

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_1	A_2	Number of handle wheel rotation
mm	inch		C	n	h						LEVER	GEAR		LEVER	GEAR	LEVER	GEAR					
40	1 1/2	45	110	4	18	150	71	122	160	39	156	130	75	100	95	56	92	210	220	167	64	
50	2	56	125	4	18	165	81	122	160	42	166	140	83	110	105	56	92	220	220	167	64	
65	2 1/2	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	9.5
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	–	272	99	
350	14	351	460	16	22	539	393	188	300	129	–	367	270	–	325	–	108	517	–	272	99	

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_1	A_2	Number of handle wheel rotation
inch	mm		C	n	h						LEVER	GEAR		LEVER	GEAR	LEVER	GEAR					
1 1/2	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	
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	
2 1/2	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	–	10.71	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	–	10.71	3.90	9.5

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

Easy Transformation of Operation Devices

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

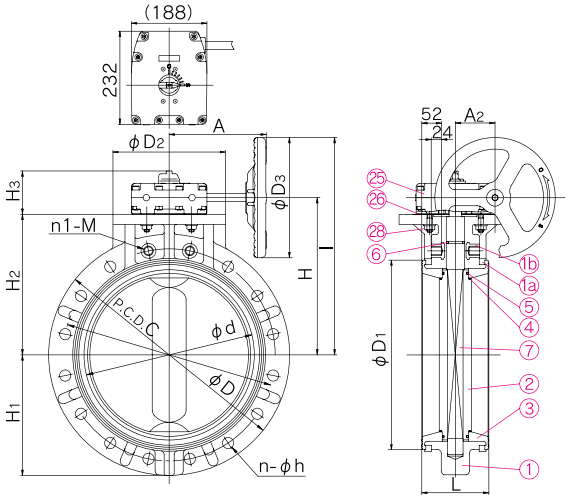
Option

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

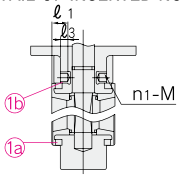
SPECIFICATIONS

Body material	Nominal size mm(inch)	Working Temperature ℃(°F)	Max.Working Pressure (at R.T.) MPa{kgf/cm2}[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



DETAIL OF INSERTED NUTS



NOM. SIZE mm	NOM. SIZE inch	M	BOLT HOLES n	Q"TY OF INSERTED NUT UPPER	Q"TY OF INSERTED NUT TOTAL (2×n1)	ℓ1	ℓ3
400	16	M24	14	2×2	4	52	24

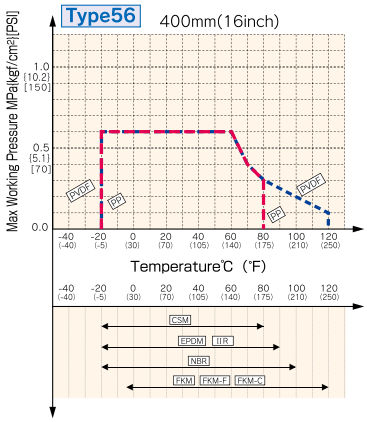
※JIS 10K 400mm(16inch)only

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/DISC PP/PP PVDF/PVDF
②	DISC	1	
③	STEM SEAT	1	EPDM,FKM,OTHERS
④	O-RING(A)	2	EPDM,FKM,OTHERS
⑤	O-RING(B)	2	EPDM,FKM,OTHERS
⑥	O-RING(C)	1	EPDM,FKM,OTHERS
⑦	STEM	1	STAINLESS STEEL(SUS403)
㉕	GEAR BOX	1	PLASTIC etc.
㉘	BOLT(C)	1	STAINLESS STEEL304
⑬	RING[1)]	2	STEEL(SS400)
⑮	INSERTED METAL OF BODY[2)]	4	COPPER ALLOY(C3604)

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

WORKING PRESSURE VS. TEMPERATURE



DIMENSIONS TABLE

JIS Unit:mm

Nominal Size mm	Nominal Size inch	d	JIS 10K C	n	h	n1	M	D	D1	D2	D3	L	H	H1	H2	H3	I	A	A2	Numder of handle rotation
400	16	406	510	14	27	2	24	600	470	235	300	169	390	300	350	108	540	272	99.2	9.5

DIN Unit:mm

Nominal Size mm	Nominal Size inch	d	DIN PN 10 C	n	h	D	D1	D2	D3	L	H	H1	H2	H3	I	A	A2	Numder of handle rotation
400	16	406	515	16	26	600	470	235	300	169	390	300	350	108	540	272	99.2	9.5

ANSI Unit:inch

Nominal Size inch	Nominal Size mm	d	ANSI Class 150 C	n	h	D	D1	D2	D3	L	H	H1	H2	H3	I	A	A2	Numder of handle rotation
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	10.71	3.91	9.5

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

● 450mm(18inch) – 600mm(24inch)

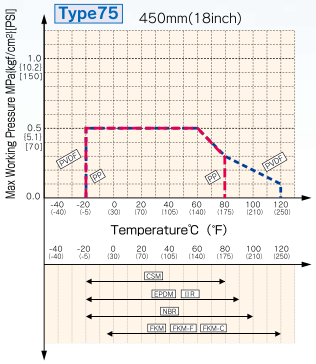


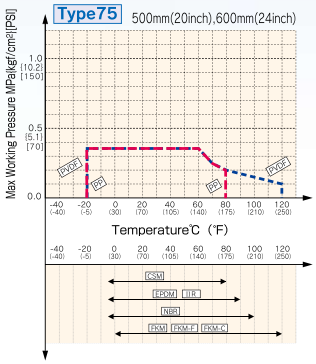
SPECIFICATIONS

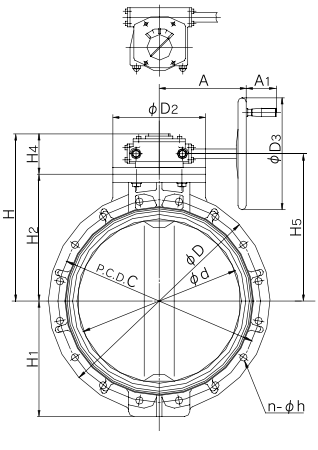
Body material	Nominal size mm(inch)	Working Temperature ℃(°F)	Max.Working Pressure (at R.T.) MPa{kgf/cm²}[PSI]		
			450mm(18inch)	500mm(20inch)	600mm(24inch)
PP	450 - 600(18 - 24)	−20 - 80(−5 - 175)	0.5 {5.1}[73]	0.35{3.6}[51]	0.35{3.6}[51]
PVDF	450 - 600(18 - 24)	−20 - 120(−5 - 250)	0.5 {5.1}[73]	0.35{3.6}[51]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

※R.T.…Room Temperature

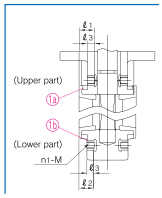
WORKING PRESSURE VS. TEMPERATURE







● DETAIL OF THREADED INSERTS



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY / DISC PP / PP PVDF / PVDF	⑦a	KEY(A)	1	CARBON STEEL(S45C)
②	DISC	1		㉕	GEAR BOX	1	CAST ALMINIUM ALLOY(FC250)
③	SEAT	1	EPDM FKM others	㉘	BOLT(A)	4	STAINLESS STEEL(SUS304)
④	O-RING(A)	2		㉙	BOLT(D)	4	STAINLESS STEEL(SUS304)
⑤	O-RING(B)	2		㉚	STAND	1	CHROMIZED STEEL(SS400)
⑥	O-RING(C)	1		⑦a	RING	2	CHROMIZED STEEL(SS400)
⑦	STEM	2	STAINLESS STEEL(SUS403)	⑮	INSERTED METAL OF BODY	8	COPPER ALLOY(C3604)

1) Used only for JIS 10K.

■ Option

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

DIMENSIONS TABLE

Nominal Size mm	Nominal Size inch	M	BOLT HOLES n	Q'TY OF INSERTED NUT UPPER	Q'TY OF INSERTED NUT LOWER	Q'TY OF INSERTED NUT TOTAL(2×n1)	ℓ1	ℓ2	ℓ3
450	18	M24	16	2×2	2×2	8	49	54	24
500	20	M24	16	2×2	2×2	8	49	59	24
600	24	M30	20	2×2	2×2	8	64	64	30

JIS

Unit:mm

Nominal Size mm	Nominal Size inch	d	JIS 10K C	n	h	n1	M	D PP	D PVDF	D1	D2	D3	L	H1	H2	H3	H	A	A1	A2
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	Nominal Size inch	d	DIN 2501 PN10 C	n	h	D PP	D PVDF	D1	D2	D3	L	H	H1	H2	H4	H5	A	A1	A2
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	Nominal Size mm	d	ANSI Class150 C	n	h	D PP	D PVDF	D1	D2	D3	L	H	H1	H2	H4	H5	A	A1	A2
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 56D,75D

Type56D:400mm(16inch)
Type75D:450mm・600mm(18inch・24inch)



FEATURES

Easy Transformation of Operation Devices

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

■ Option

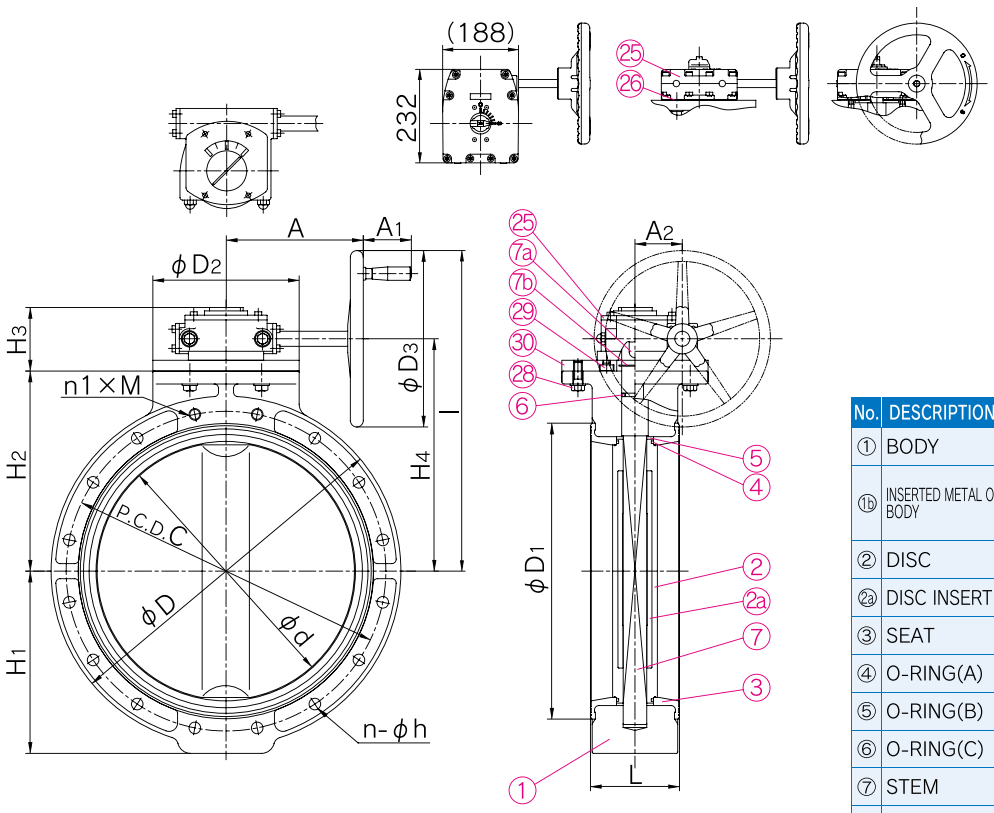
Long stem type and chain drive type are available on special request.

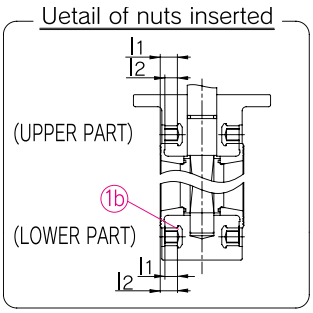
SPECIFICATIONS

Body material	Disc material	Nominal size mm(inch)	Working Temperature ℃(°F)	Max.Working Pressure (at R.T.) MPa{kgf/cm2}[PSI]
PDCPD	PP	400(16)~600(24)	0 - 90(30 - 195)	0.75{7.7}[110]
	PVDF	400(16)~600(24)	0 - 100(30 - 210)	0.75{7.7}[110]

※R.T.…Room Temperature

PARTS & MATERIALS



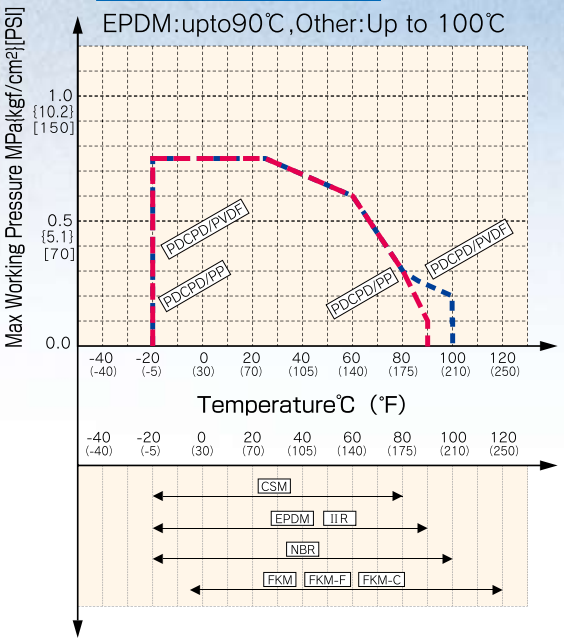


No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	PDCPD	
⑮	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	400mm (used for JIS10K)
		8	COPPER ALLOY(C3604)	450mm~600mm (used for JIS10K)
②	DISC	1	PP,PVDF	
②a	DISC INSERT	1	AC4C	450mm~600mm
③	SEAT	1	EPDM,FKM,Others	
④	O-RING(A)	2		
⑤	O-RING(B)	2		
⑥	O-RING(C)	1		
⑦	STEM	1	STAINLESS STEEL(SUS403)	
⑦a	KEY(A)	1	CARBON STEEL(S45C)	
⑦b	SNAP RING	1	STAINLESS STEEL(SUS304)	450mm
㉕	GEAR BOX	1	PLASTIC etc.	400mm
			CAST ALMINIUM ALLOY FC250(epoxy coat)	450mm~600mm
㉖	GASKET(A)	1	EPDM	400mm
㉘	BOLT(C)	4	STAINLESS STEEL(SUS304)	
㉙	BOLT(D)	4	STAINLESS STEEL(SUS304)	
㉚	STAND	1	STEEL(SS400)	

NOM. SIZE mm	NOM. SIZE inch	M	BOLT HOLES n	Q"TY OF INSERTED NUT UPPER	Q"TY OF INSERTED NUT LOWER	Q"TY OF INSERTED NUT TOTAL (2×n1)	ℓ1	ℓ2
400	16	M24	14	2×2	—	4	36	24
450	18	M24	16	2×2	2×2	8	36	24
500	20	M24	16	2×2	2×2	8	36	24
600	24	M30	20	2×2	2×2	8	43	30

WORKING PRESSURE VS. TEMPERATURE

Type56D,Type75D



DIMENSIONS TABLE

JIS Unit:mm

Nominal Size		d	JIS 10K					D	D_1	D_2	D_3	L	H_1	H_2	H_3	H_4	I	A	A_1	A_2	Number of handle rotation	GEAR BOX MODEL No.
mm	inch		C	n	h	n_1	M															
400	16	406	510	14	27	2	M24	620	470	235	300	169	315	350	108	390	540	272	—	99.2	9.5	TYPE3
450	18	452	565	16	27	4	M24	665	525	340	410	179	335	370	139	445	650	319	85	110	17	BVG-2H
500	20	502	620	16	27	4	M24	720	575	340	410	190	365	400	139	475	680	319	85	110	17	
600	24	603	730	20	33	4	M30	813	686	340	410	209	424	465	139	540	745	319	85	110	17	

DIN Unit:mm

Nominal Size		d	DIN PN 10			D	D_1	D_2	D_3	L	H_1	H_2	H_3	H_4	I	A	A_1	A_2	Number of handle rotation	GEAR BOX MODEL No.
mm	inch		C	n	h															
400	16	406	515	16	26	620	470	235	300	169	315	350	108	390	540	272	—	99.2	9.5	TYPE3
450	18	452	565	20	26	665	525	340	410	179	335	370	139	445	650	319	85	110	17	BVG-2H
500	20	502	620	20	26	720	575	340	410	190	365	400	139	475	680	319	85	110	17	
600	24	603	725	20	30	813	686	340	410	209	424	465	139	540	745	319	85	110	17	

ANSI Unit:inch

Nominal Size		d	ANSI Class 150			D	D_1	D_2	D_3	L	H_1	H_2	H_3	H_4	I	A	A_1	A_2	Number of handle rotation	GEAR BOX MODEL No.
inch	mm		C	n	h															
16	400	15.98	21.26	16	1.12	24.41	18.50	9.25	11.81	6.65	12.40	13.78	4.25	15.35	21.26	10.70	—	3.91	9.5	TYPE3
18	450	17.80	22.76	20	1.26	26.18	20.67	13.39	16.14	7.05	13.19	14.57	5.47	17.52	25.59	12.56	3.35	4.33	17	BVG-2H
20	500	19.76	25.00	20	1.26	28.35	22.64	13.39	16.14	7.48	14.37	15.75	5.47	18.70	26.77	12.56	3.35	4.33	17	
24	600	23.74	29.53	20	1.38	32.01	27.01	13.39	16.14	8.23	16.69	18.31	5.47	21.26	29.33	12.56	3.35	4.33	17	

BUTTERFLY VALVE TYPE 57L (Lug Style)

●PDCPD



FEATURES

Easy Piping Maintenance

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

Strong In Pulsating Pressure

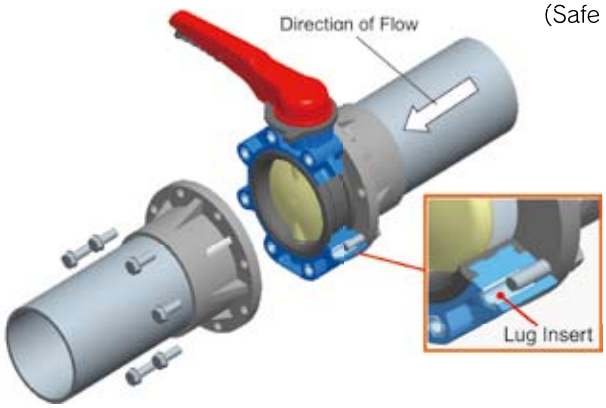
3 Times Stronger than a Major Competitor.

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)

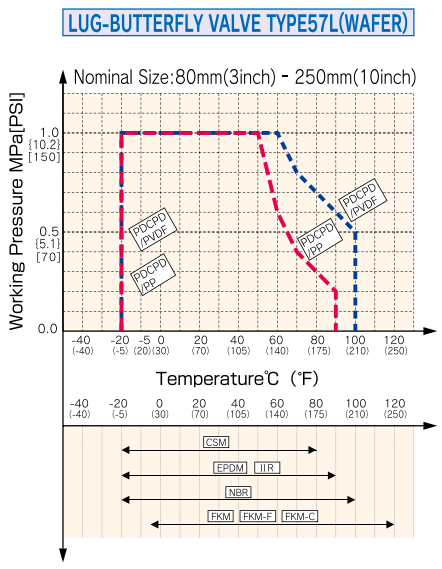


SPECIFICATIONS

- JIS and DIN Standard

Body material	Standard	Working Temperature ℃ (°F)	Max. Working Pressure MPa{kgf/cm²}[PSI] 80mm - 250mm (3inch - 10inch)
Poly dieyclo penta diene (PDCPD)	JIS, DIN	−5 - 100 (20 - 210)	1.0MPa{10.2kgf/cm2}[150PSI]

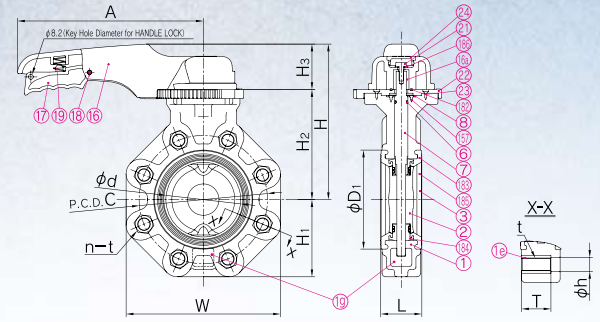
WORKING PRESSURE VS. TEMPERATURE



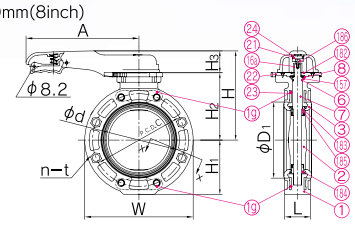
Lever Type

DIMENSION

●80mm(3inch)-150mm(6inch)



●200mm(8inch)



DIMENSIONS TABLE

Unit:mm

Nominal Size mm	inch	d	JIS 10K C	n	h	D_1	L	H	H_1	H_2	H_3	A	W	T	t
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
125	5	129	210	8	23	169	66	237	124	168	69	320	247	50	M20×50 width across fat 30
150	6	150	240	8	23	190	71	252	138	183	69	320	285	50	M20×50 width across fat 30
200	8	195	290	12	23	242	87	283	173	214	69	400	345	60	M20×60 width across fat 30

Unit:mm

Nominal Size mm	inch	d	DIN PN10 C	n	h	D_1	L	H	H_1	H_2	H_3	A	W	T	t
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
125	5	129	210	8	18	169	66	237	124	168	69	320	247	50	M20×50 width across fat 30
150	6	150	240	8	23	190	71	252	138	183	69	320	285	50	M20×50 width across fat 30
200	8	195	295	8	23	242	87	283	173	214	69	400	345	60	M20×50 width across fat 30

PARTS & MATERIALS

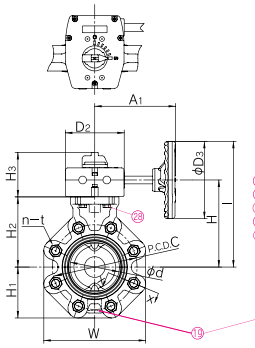
No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	PDCPD	
⑯	LUG-INSERT	8	STAINLESS STEEL(SUS304)	used for 80-150mm
		4	(Antiscoring coat)	used for 200mm
⑲	BODY-INSERT	1	STAINLESS STEEL(SUS304)	used for 125,150mm
		2	STAINLESS STEEL(SCS13)	used for 200mm
②	DISC	1	PP,PVDF	
③	SEAT	1	EPDM,FKM,FKM-F,FKM-C	
⑥	O-RING(C)	1		
⑯S	O-RING(I)			
⑦	STEM	1	STAINLESS STEEL(SUS403)	
⑧	STEM HOLDER(A)	1	PP	
⑯	HANDLE(A)	1	PP	
⑯a	HANDLE INSERTED METAL	1	STAINLESS STEEL(SUS316L)	

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
⑰	HANDLE LEVER	1	PPG	
⑱	PIN	1	PPG	
⑲	SPRING	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	
⑰S	SCREW(F)	4	STAINLESS STEEL(SUS304)	
⑱2	O-RING(H)	1	EPDM	
⑱3	SEAT BUSH(A)	1	PP,PVDF	
⑱4	SEAT BUSH(B)	1		
⑱5	RUBBER+WASHER	1	STAINLESS STEEL(SUS304) +EPDM	

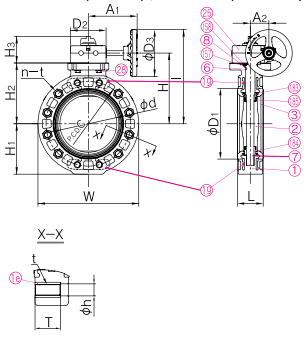
Gear Type

DIMENSION

●80mm(3inch)-150mm(6inch)



●200mm(8inch),250mm(10inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	PDCPD	
⑯	LUG-INSERT	8	STAINLESS STEEL(SUS304)	used for 80-150,250mm
		4	(Antiscoring coat)	used for 200mm
⑲	BODY-INSERT	1	STAINLESS STEEL(SUS304)	used for 125,150mm
		2	STAINLESS STEEL(SCS13)	used for 200,250mm
②	DISC	1	PP,PVDF	
③	SEAT	1	EPDM,FKM,FKM-F,FKM-C	
⑥	O-RING(C)	1		
⑯S	O-RING(I)			
⑦	STEM	1	STAINLESS STEEL(SUS403)	
⑧	STEM HOLDER(A)	1	PP	
㉕	GEAR BOX	1	PLASTIC etc.	
㉘	BOLT(C)	4	STAINLESS STEEL(SUS403)	
⑰S	SCREW(F)	4	STAINLESS STEEL(SUS403)	
⑮S	GASKET(L)	1	EPDM	
⑱3	SEAT BUSH(A)	1	PP,PVDF	
⑱4	SEAT BUSH(B)	1		

DIMENSIONS TABLE

JIS

Nominal Size mm	inch	d	JIS 10K C	n	h	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
80	3	77	150	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		
125	5	129	210	8	23	169	122	160	66	195	124	160	92	275	167	64	247	50	M20×50 width across fat 30		
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		
200	8	195	295	12	23	242	122	160	87	241	173	206	92	321	167	64	345	60	M20×60 width across fat 30		
250	10	250	350	12	25	302	122	160	112	276	208	241	92	356	167	64	415	70	M22×70 width across fat 32		

DIN

Nominal Size mm	inch	d	DIN PN10 C	n	h	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
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		
125	5	129	210	8	18	169	122	160	66	195	124	160	92	275	167	64	247	50	M16×50 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		
200	8	195	295	8	23	242	122	160	87	241	173	206	92	321	167	64	345	60	M20×60 width across fat 30		
250	10	250	350	12	23	302	122	160	112	276	208	241	92	356	167	64	415	70	M20×70 width across fat 30		

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

BUTTERFLY VALVE TYPE 57TL (Lug Style)

●PVC



FEATURES

- ANSI Standard type
- Same Features as Type57L
- Both Directional Installation allowed

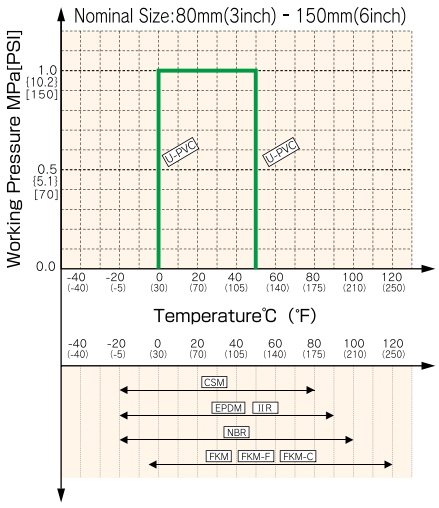
SPECIFICATIONS

- ANSI Standard

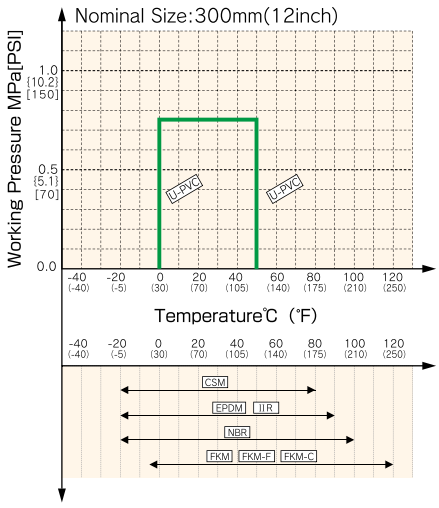
Body material	Standard	Working Temperature ℃ (°F)	Max. Working Pressure MPa{kgf/cm²}[PSI]	
			80mm - 250mm (3inch -10inch)	300mm (12inch)
Polyvinyl Chioride (PVC)	ANSI	0 - 50 (30 - 120)	1.0MPa{10.2kgf/cm2}[150PSI]	0.75MPa{7.7kgf/cm2}[110PSI]

WORKING PRESSURE VS. TEMPERATURE

LUG-BUTTERFLY VALVE TYPE57TL(WAFER)

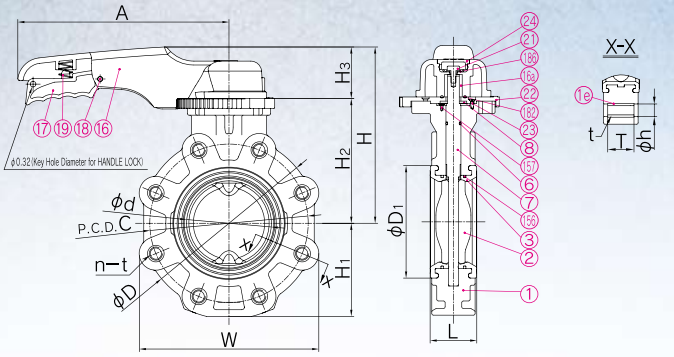


LUG-BUTTERFLY VALVE TYPE57TL(WAFER)



Lever Type

DIMENSION



DIMENSIONS TABLE

Unit:inch

Nominal Size mm	Nominal Size inch	d	ANSI 150lb C	ANSI 150lb n	ANSI 150lb h	D	D_1	L	H	H_1	H_2	H_3	A	W	T	t
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	1.37	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	1.37	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	2.15	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	2.15	3/4-10 UNC

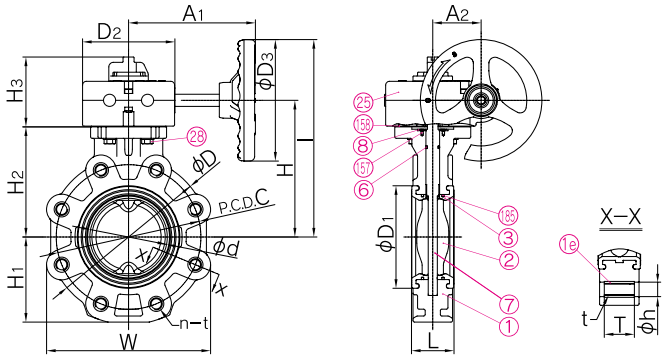
Note : The shape and appearance of assembly differ alittle with nominal size compared to this drawing.

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC	⑲	SPRING	1	STAINLESS STEEL(SUS304)
⑯e	LUG-INSERT	-	STAINLESS STEEL(SUS316)	㉑	BOLT(B)	1	STAINLESS STEEL(SUS304)
②	DISC	1	PP	㉒	LOCKING PLATE	1	PPG
③	SEAT	1	EPDM,FKM,NBR	㉓	SCREW(B)	4	STAINLESS STEEL(SUS304)
⑥	O-RING(C)	1		㉔	CAP(A)	1	PP
⑦	STEM	1	STAINLESS STEEL(SUS403)	⑮⑥	RETAINING RING	2	STAINLESS STEEL(SCS13)
⑧	STEM HOLDER(A)	1	PP	⑮⑦	SCREW(F)	4	STAINLESS STEEL(SUS304)
⑯	HANDLE(A)	1	PP	⑱②	O-RING(H)	1	EPDM
⑯a	HANDLE INSERTED METAL	1	STAINLESS STEEL(SUS316L)	⑱⑥	RUBBER+WASHER	1	STAINLESS STEEL(SUS304) +EPDM
⑰	HANDLE LEVER	1	PPG				
⑱	PIN	1	PPG				

Gear Type

DIMENSION



DIMENSIONS TABLE

Unit:inch

Nominal Size mm	Nominal Size inch	d	ANSI 150lb C	ANSI 150lb n	ANSI 150lb h	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
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	1.37	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	1.37	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	2.15	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	2.15	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	3.14	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	4.25	19.29	9.53	3.90	18.54	3.14	7/8-9 UNC		TYPE3

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

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC
⑯e	LUG-INSERT	-	STAINLESS STEEL(SUS316)
②	DISC	1	PP
③	SEAT	1	EPDM,FKM,NBR
⑥	O-RING(C)	1	
⑦	STEM	1	STAINLESS STEEL(SUS403)
⑧	STEM HOLDER(A)	1	PP
㉕	GEAR BOX	1	PLASTIC etc.
㉘	BOLT(C)	4	STAINLESS STEEL(SUS304)
⑮⑥	RETAINING RING	2	STAINLESS STEEL(SCS13)
⑮⑦	SCREW(F)	4	STAINLESS STEEL(SUS304)
⑮⑧	GASKET(L)	1	EPDM

BUTTERFLY VALVE TYPE 57L-IS



FEATURES

Short Face-to-Face Dimension

The Valves are Designed to Comply ISO5752 Short Face – to-Face dimension and allowed Replacement of Common Metal Valves.

Easy Piping Maintenance

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

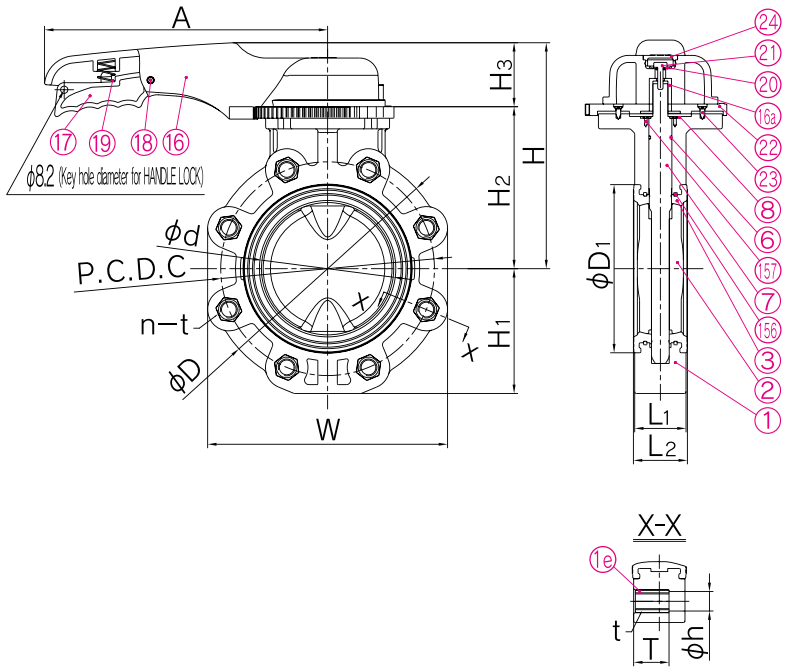
Same Features as Type57L

SPECIFICATIONS

Body material	Standard	Working Temperature ℃(°F)	Max. Working Pressure MPa{kgf/cm²}[PSI]
Polyvinyl Chloride(PVC)	ANSI	0~50 (30~120)	1.0MPa{10.2kgf/cm2}[150PSI]

Lever Type

DIMENSION



PARTS & MATERIALS

No.	DESCRIPTION	QTY.	MATERIAL
①	BODY	1	PVC
⑯e	LUG-INSERT		STAINLESS STEEL(SUS304) (STANDARD) STAINLESS STEEL(SUS316)
②	DISC	1	PP
③	SEAT	1	EPDM,FKM,NBR,Others
⑥	O-RING(C)	1	
⑦	STEM	1	STAINLESS STEEL(SUS403)
⑧	STEM RETAINER(A)	1	PP
⑯	HANDLE(A)	1	PP
⑯a	HANDLE INSERTED METAL	1	STAINLESS STEEL(SUS316L)
⑰	HANDLE LEVER	1	PPG
⑱	PIN	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
⑮⑥	RETAINING RING	2	STAINLESS STEEL(SCS13)
⑮⑦	SCREW(F)	4	STAINLESS STEEL(SUS304)

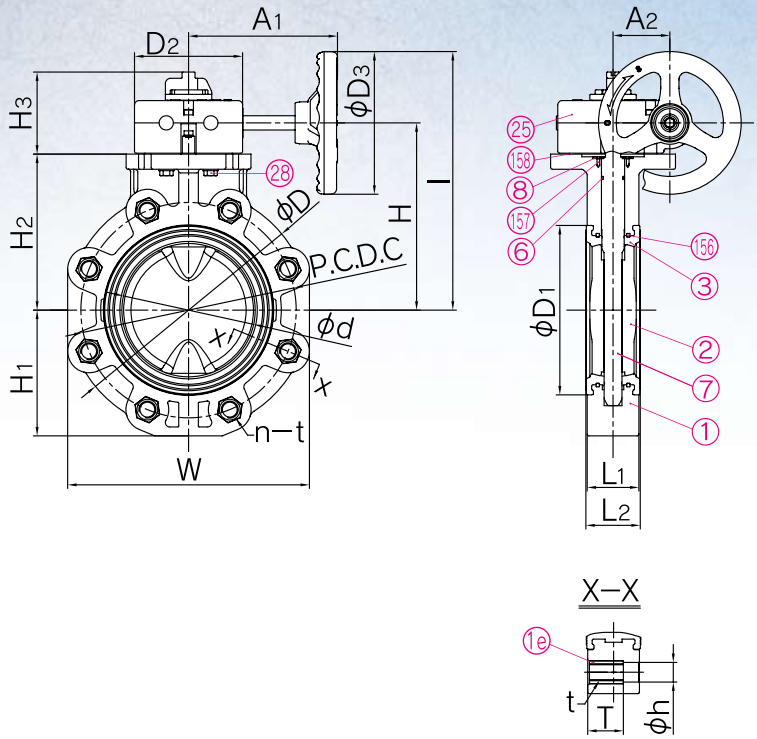
DIMENSIONS TABLE

ANSI UNIT: inch

Nominal Size		d	ANSI150lb			D	D1	L1	L2	H	H1	H2	H3	A	W	T	t
inch	mm		C	n	h												
3	80	3.03	6.00	4	0.75	7.28	4.13	1.73	1.81	7.52	3.82	5.31	2.20	9.84	7.09	1.26	5/8-11 UNC
4	100	4.02	7.50	8	0.75	8.27	5.28	2.05	2.20	8.11	4.41	5.91	2.20	9.84	8.50	1.52	5/8-11 UNC
6	150	5.91	9.50	8	0.87	10.63	7.48	2.20	2.40	9.92	5.55	7.20	2.72	12.60	10.67	1.57	3/4-10 UNC
8	200	7.68	11.75	8	0.87	12.60	9.53	2.36	2.66	11.14	6.61	8.43	2.72	15.75	12.76	1.57	3/4-10 UNC

Gear Type

DIMENSION



PARTS & MATERIALS

No.	DESCRIPTION	QTY.	MATERIAL
①	BODY	1	PVC
⑯	LUG-INSERT		STAINLESS STEEL(SUS304) (STNDARD) STAINLESS STEEL(SUS316)
②	DISC	1	PP
③	SEAT	1	EPDM,FKM,NBR,Others
⑥	O-RING(C)	1	
⑦	STEM	1	STAINLESS STEEL(SUS316)
⑧	STEM RETAINER(A)	1	PP
㉕	GEAR BOX	1	PLASTIC etc.
㉘	BOLT(C)	4	STAINLESS STEEL(SUS304)
㉟	RETAINING RING	2	STAINLESS STEEL(SCS13)
㊲	SCREW(F)	4	STAINLESS STEEL(SUS304)
㊳	GASKET(L)	1	EPDM

DIMENSIONS TABLE

ANSI — UNIT: inch

Nominal Size		d	ANSI 150lb			D	D_1	D_2	D_3	L_1	L_2	H	H_1	H_2	H_3	I	A_1	A_2	W	T	t	Number of handle wheel rotation	GEAR BOX TYPE
inch	mm		C	n	h																		
3	80	3.03	6.00	4	0.75	7.28	4.13	4.80	6.30	1.73	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
4	100	4.02	7.50	8	0.75	8.27	5.28	4.80	6.30	2.05	2.20	7.09	4.41	5.71	3.62	10.24	6.57	2.52	8.50	1.52	5/8-11 UNC		
6	150	5.91	9.50	8	0.87	10.63	7.48	4.80	6.30	2.20	2.40	8.27	5.55	6.89	3.62	11.42	6.57	2.52	10.67	1.57	3/4-10 UNC		
8	200	7.68	11.75	8	0.87	12.60	6.53	4.80	6.30	2.36	2.66	9.49	6.61	8.11	3.62	12.64	6.57	2.52	12.76	1.57	3/4-10 UNC		

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



APPLICATIONS

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

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℃ to 100℃ (-5°F to 210°F)

Simple Structure for Stem Sealing

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

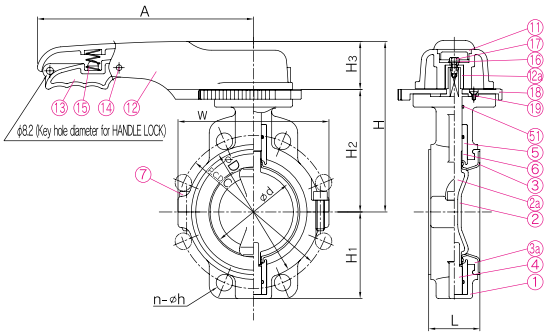
SPECIFICATIONS

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/cm²}[150PS1]
		Working Temperature	−20℃ - 100℃(−5° F - 210° F)

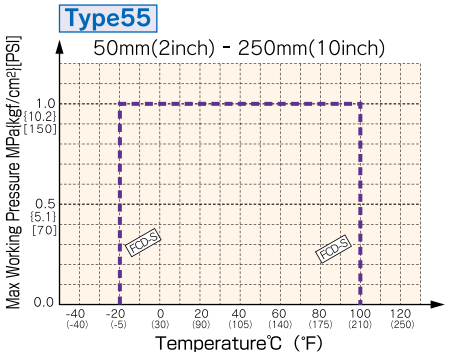
DIMENSION

Lever





WORKING PRESSURE VS. TEMPERATURE



PARTS & MATERIALS

No.	DESCRIPTION	QTY.	MATERIAL	REMARKS
①	BODY	1	DUCTILE CAST IRON (FCD-S)	epoxy powder coat
②	DISC	1	PTFE	
②a	INSERTED METAL OF DISC	1	STAINLESS STEEL (SUS304)	
③	SEAT	1	PTFE	
③a	SEAT CUSHION	1	CR	
④	STEM	1	STAINLESS STEEL (SUS304)	
⑤	BUSH	2	STAINLESS STEEL (SUS304)	
⑥	O-RING(A)	2	EPDM	
⑦	BOLT(A)	2	STAINLESS STEEL (SUS304)	
⑪	CAP	1	PP	
⑫	HANDLE	1	PP	
⑫a	HANDLE INSERTED METAL	1	STAINLESS STEEL (SUS304)	
⑬	HANDLE LEVER	1	PPG	
⑭	PIN	1	PPG	
⑮	SPRING	1	STAINLESS STEEL (SUS304)	
⑯	WASHER	1	STAINLESS STEEL (SUS304)	
⑰	BOLT(C)	1	STAINLESS STEEL (SUS304)	
⑱	LOCKING PLATE	1	PPG	
⑲	SCREW	4	STAINLESS STEEL (SUS304)	
㊶	O-RING(B)	1	NBR	

DIMENSIONS TABLE

JIS Unit:mm

Nominal Size mm	Nominal Size inch	d	JIS 10K C	JIS 10K n	JIS 10K h	D	L	H	H1	H2	H3	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

DIN Unit:mm

Nominal Size mm	Nominal Size inch	d	DIN PN 10 C	DIN PN 10 n	DIN PN 10 h	D	L	H	H1	H2	H3	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

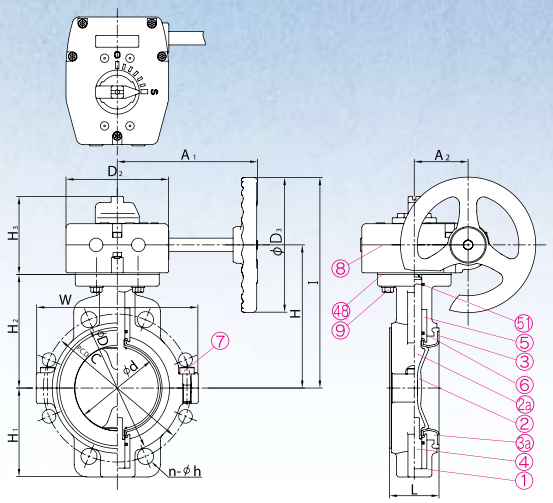
ANSI Unit:inch

Nominal Size inch	Nominal Size mm	d	ANSI Class 150, ANSI Class 125 C	ANSI Class 150, ANSI Class 125 n	ANSI Class 150, ANSI Class 125 h	D	L	H	H1	H2	H3	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	QTY.	MATERIAL	REMARKS	No.	DESCRIPTION	QTY.	MATERIAL	REMARKS
①	BODY	1	DUCTILE CAST IRON (FCD-S)	epoxy powder coat	⑥	O-RING(A)	2	EPDM	
②	DISC	1	PTFE		⑦	BOLT(A)	-	STAINLESS STEEL (SUS304)	Used for size 50～125mm:2 150 over :4
②a	INSERTED METAL OF DISC	1	STAINLESS STEEL (SUS304)						
③	SEAT	1	PTFE		⑧	GEAR BOX	1	STAINLESS STEEL (SUS304)	
③a	SEAT CUSHION	1	CR		⑨	BOLT(B)	4	PPG	
④	STEM	1	STAINLESS STEEL (SUS304)		㊽	GASKET(C)	1	STAINLESS STEEL (SUS304)	
⑤	BUSH	2	STAINLESS STEEL (SUS304)		㊶	O-RING(B)	1	NBR	

DIMENSIONS TABLE

JIS Unit:mm

Nominal Size		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.
mm	inch		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		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.
mm	inch		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		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.
mm	inch		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.

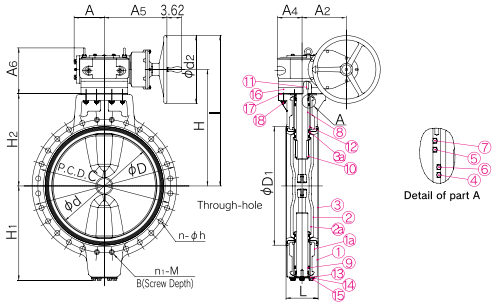
PDCPD BUTTERFLY VALVE 700mm - 1200mm(28inch - 48inch)



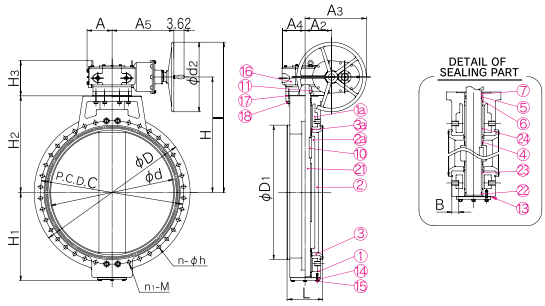
Nominal Size
700mm – 1200mm
(28inch – 48inch)

DIMENSION

● 700mm – 1000mm(28inch – 40inch)



● 1100mm,1200mm(44inch,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.

APPLICATIONS

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

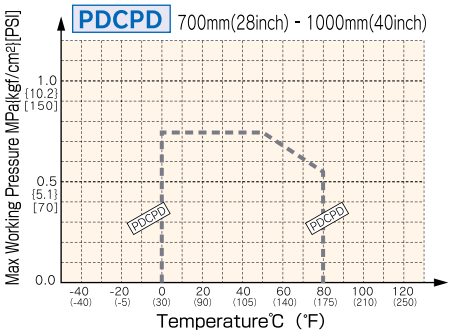
SPECIFICATIONS

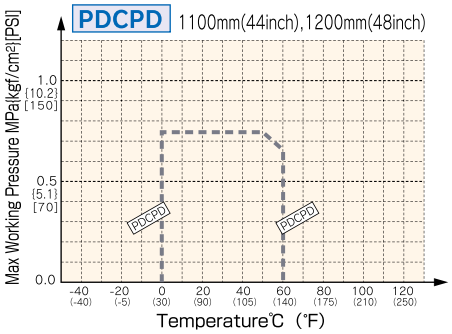
Body material	Body & Disc=PDCPD. Seat=EPDMetc.
Nominal Size	700mm(28inch) - 1200mm(48inch)
Max. Working Pressure	0.75Mpa{7.7kgf/cm²}[110PSI]
Working Temperature	70 - 1000mm(28inch - 40inch) 0 - 80℃(30°F - 176°F) 1100, 1200mm(44inch - 48inch) 0 - 60℃(30°F - 140°F)

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 (SUS403)
⑨	STEM (B)	1	STAINLESS STEEL (SUS403)
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)
㉑	STEM	1	STAINLESS STEEL (SUS304)
㉒	THRUST	1	BRONZE CAST (BC6)
㉓	BUSH (A)	1	BRONZE CAST (BC6)
㉔	BUSH (B)	1	BRONZE CAST (BC6)
①a	INSERT METAL OF BODY	1	CAST IRON (FCD450)
②a	INSERT METAL OF DISC	1	CAST IRON (FCD450)
③a	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/cm²} [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

JIS

Unit:mm

Nominal Size		d	JIS 10K								JWWA							D	D1	D2	L	H	I	H1	H2	A	A2	A4	A5	A6	Gear box Model No.
mm	inch		C	h	N	n	n1 /side	n1 /total	M	B	C	h	N	n	n1 /side	n1 /total	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

DIN

Unit:mm

Nominal Size		d	DIN PN 10								D	D1	D2	L	H	I	H1	H2	A	A2	A4	A5	A6	Gear box Model No.
mm	inch		C	h	N	n	n1 /side	n1 /total	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

ANSI

Unit:mm

Nominal Size		d	ANSI Class 125								ANSI Class 150								D	D1	D2	L	H	I	H1	H2	A	A2	A4	A5	A6	Gear box Model No.
mm	inch		C	h	N	n	n1 /side	n1 /total	M	B	C	h	N	n	n1 /side	n1 /total	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(1 1/2inch - 24inch)



● PVC

FEATURES

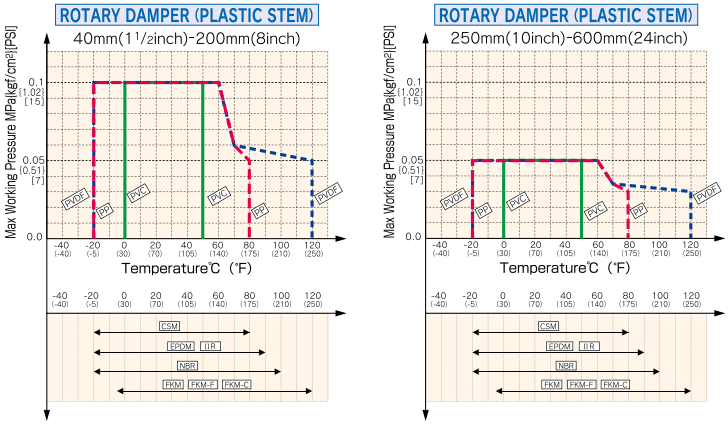
DAMPER STYLE is Designed for Flow Control.

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

SPECIFICATIONS

Body material	Nominal size mm(inch)	Working Temperature ℃(B ℉)	Max. Working Pressure (at R.T.) MPa{kgf/cm²}[PSI]		
			40(1/2inch)~ 200(8inch)	250(10inch)~ 350(14inch)	400(16inch)~ 600(24inch)
PVC	40 - 350 (1 1/2 - 14)	0 - 50 (30 - 120)	0.1 {1.0} [15]	0.05 {0.5} [7]	–
PP	40 - 600 (1 1/2- 24)	−20 - 80 (−5 - 175)	0.1 {1.0} [15]	0.05 {0.5} [7]	0.05 {0.5} [7]
PVDF	40 - 600 (1 1/2 - 24)	−20 - 120 (−5 - 250)	0.1 {1.0} [15]	0.05 {0.5} [7]	0.05 {0.5} [7]

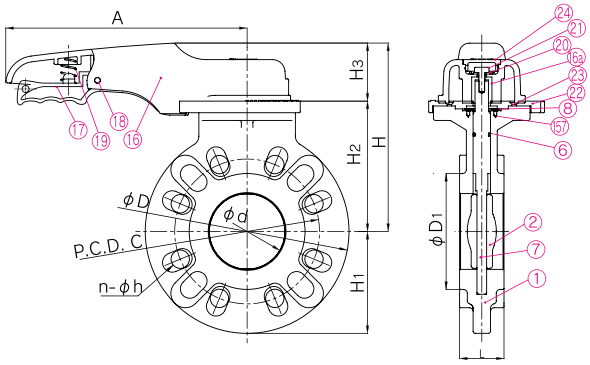
WORKING PRESSURE VS. TEMPERATURE



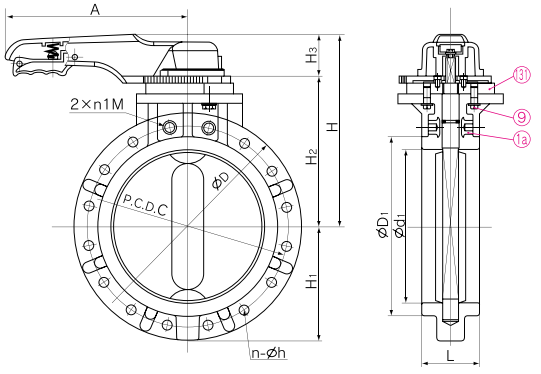
PARTS & MATERIALS

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	40mm - 200mm
			PP	450mm - 600mm
⑨	BOLT(A)	3	STAINLESS STEEL304	250mm - 400mm
⑯	HANDLE(A)	1	PP	
⑯g	INSERTED METAL OF HANDLE	1	STAINLESS STEEL316	40mm - 400mm
⑰	HANDLE LEVER	1	PPG	40mm - 400mm
			STAINLESS STEEL304	450mm - 600mm
⑱	PIN	1	PPG	40mm - 400mm
			STAINLESS STEEL304	450mm - 600mm
⑲	SPRING	1	STAINLESS STEEL304	
⑳	WASHER(A)	1	STAINLESS STEEL304	
㉑	BOLT(B)	1	STAINLESS STEEL304	40mm - 400mm
	NUT(B)	1	STAINLESS STEEL304	450mm - 600mm
㉒	LOCKING PLATE	1	PPG	40mm - 400mm
			STAINLESS STEEL304	450mm - 600mm
㉓	SCREW(B)	4	STAINLESS STEEL304	40mm - 400mm
		3	STAINLESS STEEL304	450mm - 600mm
㉔	CAP(A)	1	PP	40mm - 400mm
㉘	BOLT･NUT(N)	3	STAINLESS STEEL304	450mm - 600mm
㉛	STEM HOLDER(C)	1	PPG	250mm - 400mm
⑯a	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	10k400mm - 600mm

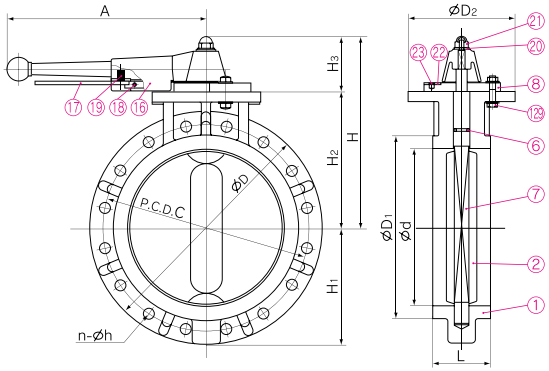
● PVC、PP
40mm – 200mm（1 1/2inch – 8inch）



250mm – 400mm（10inch – 16inch）

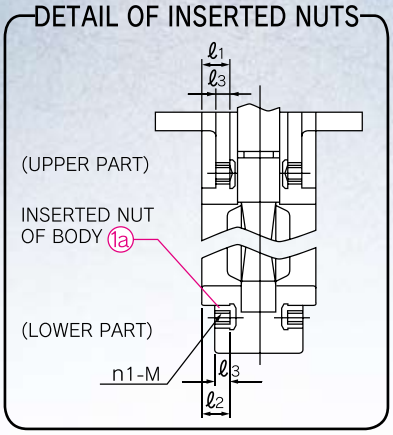


450mm – 600mm（16inch – 24inch）



DIMENSIONS TABLE

DETAIL OF INSERTED NUTS



JIS

Unit:mm

Nominal Size		M	BOLT HOLES	Q'TY OF INSERTED NUT			ℓ1	ℓ2	ℓ3
mm	inch		n	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					D1	D	L	H	H1	H2	H3	A
mm	inch		C	n	h	n1	M	PVC,PP							
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			D1	D	L	H	H1	H2	H3	A
mm	inch		C	n	h	PVC,PP							
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			D1	D	L	H	H1	H2	H3	A
inch	mm		C	n	h	PVC,PP							
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(1 1/2inch - 24inch)



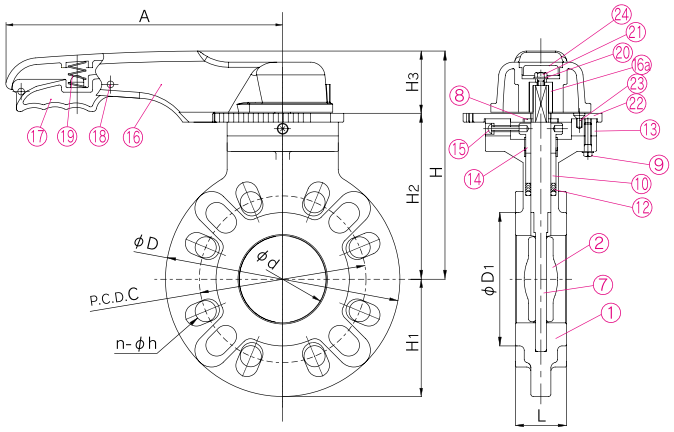
● PVDF

FEATURES

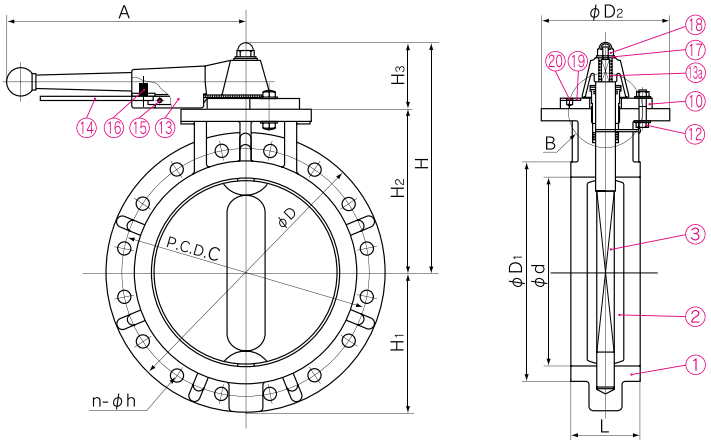
DAMPER STYLE is Designed for Flow Control.

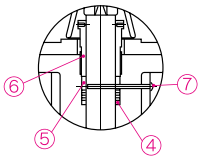
- DAMPER STYLE is not atight shut off valve. Consult us for Leakage rates.
- Low Leakage Model ;PVDF Body / PVDF Disc / Ti-Stem also available as a special for 40mm(11/2") through 350mm(14").

● PVDF
40mm – 200mm (1 1/2inch – 8inch)



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





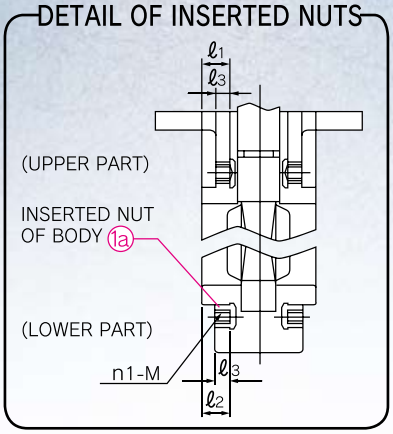
Part"B"

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(1 1/2"-14")
⑨	BOLT(A)	4	STAINLESS STEEL304	
⑩	BUSH(A)	1	PTFE	40mm - 350mm(1 1/2"-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	
⑯a	HANDLE INSERTED METAL	1	STAINLESS STEEL304	
⑰	HANDLE LEVER	1	PPG	
⑱	PIN	1	PPG	
⑲	SPRING	1	STAINLESS STEEL304	
⑳	WASHER(A)	1	STAINLESS STEEL304	
㉑	BOLT(B)	1	STAINLESS STEEL304	
㉒	LOCKING PLATE	1	PPG	
㉓	SCREW(B)	2	STAINLESS STEEL304	
㉔	CAP(A)	1	PP	
⑬	STEM HOLDER(C)	1	PP	300mm - 400mm(12"-16")
⑮	BODY INSERTED METAL	4	COPPER ALLOY	

DIMENSIONS TABLE

DETAIL OF INSERTED NUTS



JIS

Unit:mm

Nominal Size		M	BOLT HOLES	Q'TY OF INSERTED NUT			ℓ1	ℓ2	ℓ3
mm	inch		n	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					D1	D	L	H	H1	H2	H3	A
mm	inch		C	n	h	n1	M	PVDF							
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			D1	D	L	H	H1	H2	H3	A
mm	inch		C	n	h	PVDF							
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			D1	D	L	H	H1	H2	H3	A
inch	mm		C	n	h	PVDF							
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)

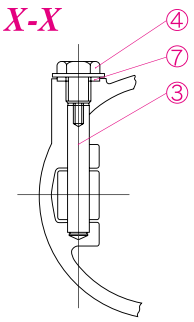
FEATURES

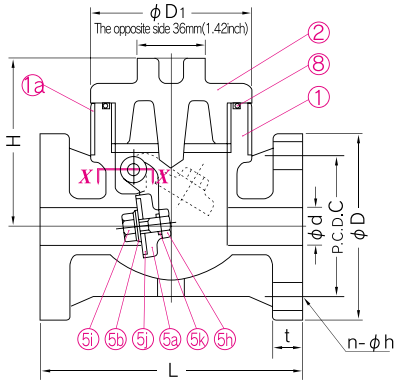
- The SWING CHECK VALVE prevents backflow, thus protecting equipment, such as a pump.
- Being of a swing arm type, the valve gives little resistance to flow.
- The SWING CHECK VALVE is highly resistant to corrosive chemicals, acid and alkaline, because of its plastic construction.
- To maintain the SWING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

MATERIAL AND WORKING TEMPERATURE RANGES

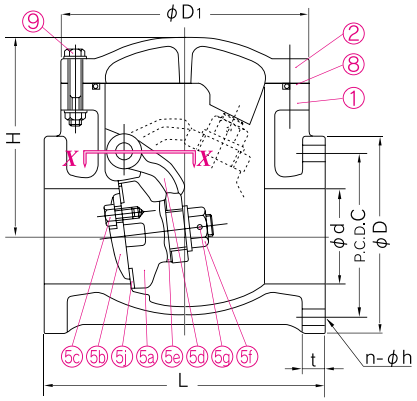
Body material	Working Temperature ℃(°F)	Max. Working Pressure (at R.T.)MPa{kgf/cm²}[PSI]		
		15(1/2inch) - 80(3inch)	100(4inch) - 150(6inch)	200(8inch)
HI-PVC	0 - 50(30 - 120)	1.0{10.2}[150]	0.7{7.1}[100]	0.5{5.1}[70]
PP	−20 - 80(−5 - 175)	1.0{10.2}[150]	0.7{7.1}[100]	0.5{5.1}[70]
PVDF	−20 - 100(−5 - 210)	1.0{10.2}[150]	0.7{7.1}[100]	0.5{5.1}[70]

● 15mm(1/2inch) · 20mm(3/4inch)





● 25mm(1inch) – 200mm(8inch)



PARTS & MATERIALS O-ring Type

● PP

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	PP	
②	BONNET	1	PP	
③	SHAFT	1	PP	
④	PLUG	1	PP	
⑤ 5a	DISC	1	PVDF	
⑤ 5b	SEAT HOLDER	1	PP	
⑤ 5c	BOLT(A)	–	PP	Used for Size 25~200mm
⑤ 5d	ARM	1	PP	Used for Size 25~200mm
⑤ 5e	WASHER	1	PP	Used for Size 25~200mm
⑤ 5f	NUT(A)	1	PVDF	Used for Size 25~200mm
⑤ 5g	PIN	1	PVDF	In Case Material is PVDF, Used for Size 65~200mm
⑤ 5h	BOLT(B)	1	PP	Used for Size 15,20mm
⑤ 5i	NUT(B)	1	PP	Used for Size 15,20mm
⑤ 5j	SEAT	1	GASKET,SEAT, O-RING(A)/O-RING(B) EPDM/EPDM FKM/FKM PTFE/FKM-F※2 PTFE/PFA※1※2	
⑤ 5k	O-RING(A)	1		Used for Size 15,20mm
⑦	GASKET(B)	1		
⑧	O-RING(B)	1		※1 FKM Covered at PFA ※2 Special request
⑨	BOLT·NUT	–	STAINLESS STEEL(SUS304)	Used for Size 25~200mm
⑬a	BODY RING	–	STAINLESS STEEL(SUS304)	Used for Size 15,20mm

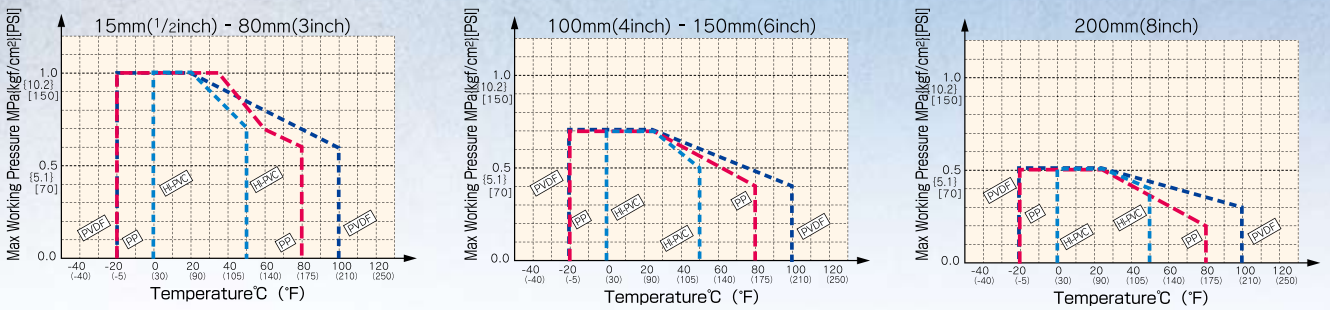
Note : 1) ⑬a Body-ring is available for PP Body 15mm(1/2inch)·20mm(3/4inch).

● HI-PVC,PVDF

No.	DESCRIPTION	Pcs.	MATERIAL	REMARKS
①	BODY	1	HI-PVC,PVDF	
②	BONNET	1	HI-PVC,PVDF	
③	SHAFT	1	HI-PVC,PVDF	
④	PLUG	1	HI-PVC,PVDF	
⑤ 5a	DISC	1	HI-PVC,PVDF	
⑤ 5b	SEAT HOLDER	1	HI-PVC,PVDF	
⑤ 5c	BOLT(A)	–	HI-PVC,PVDF	Used for Size 25~200mm
⑤ 5d	ARM	1	HI-PVC,PVDF	Used for Size 25~200mm
⑤ 5e	WASHER	1	HI-PVC,PVDF	Used for Size 25~200mm
⑤ 5f	NUT(A)	1	HI-PVC,PVDF	Used for Size 25~200mm
⑤ 5g	PIN	1	HI-PVC,PVDF	In Case Material is PVDF, Used for Size 65~200mm
⑤ 5h	BOLT(B)	1	HI-PVC,PVDF	Used for Size 15,20mm
⑤ 5i	NUT(B)	1	HI-PVC,PVDF	Used for Size 15,20mm
⑤ 5j	SEAT	1	GASKET,SEAT, O-RING(A)/O-RING(B) EPDM/EPDM FKM/FKM PTFE/PFA※1 PTFE/FKM-F※2 PTFE/FKM-C※2	
⑤ 5k	O-RING(A)	1		Used for Size 15,20mm
⑦	GASKET(B)	1		※1 FKM Covered at PFA ※2 Special request
⑧	O-RING(B)	1		
⑨	BOLT·NUT	–	STAINLESS STEEL(SUS304)	Used for Size 25~200mm

WORKING PRESSURE VS. TEMPERATURE

SWING CHECK VALVE O-ring Type



DIMENSIONS TABLE

JIS Unit:mm

Nominal Size		d	JIS 5K				JIS 10K				D_1	L	t			H
mm	inch		D	C	n	h	D	C	n	h			HI-PVC	PP	PVDF	
15	1/2	20	80	60	4	12	95	70	4	15	86	140	15	15	15	87
20	3/4	20	85	65	4	12	100	75	4	15	86	140	15	15	15	87
25	1	25	95	75	4	12	125	90	4	19	130	160	16	16	16	117
32	1 1/4	40	–	–	–	–	135	100	4	19	145	180	18	17	18	135
40	1 1/2	40	120	95	4	15	140	105	4	19	145	180	18	17	18	135
50	2	50	130	105	4	15	155	120	4	19	180	200	20	20	21	161
65	2 1/2	65	155	130	4	15	175	140	4	19	200	240	22	22	23	165
80	3	80	180	145	4	19	185	150	8	19	205	260	22	22	23	168
100	4	100	200	165	8	19	210	175	8	19	265	300	24	24	26	210
125	5	125	235	200	8	19	250	210	8	23	330	350	24	25	26	245
150	6	150	265	230	8	19	280	240	8	23	370	400	25	26	27	280
200	8	200	320	280	8	23	330	290	12	23	425	500	30	31	33	333

DIN Unit:mm

Nominal Size		d	DIN PN10				D_1	L	t			H
mm	inch		D	C	n	h			HI-PVC	PP	PVDF	
15	1/2	20	95	65	4	14	86	140	15	15	15	87
20	3/4	20	105	75	4	14	86	140	15	15	15	87
25	1	25	115	85	4	14	130	160	16	16	16	117
32	1 1/4	40	140	100	4	18	145	180	18	17	18	135
40	1 1/2	40	150	110	4	18	145	180	18	17	18	135
50	2	50	165	125	4	18	180	200	20	20	21	161
65	2 1/2	65	185	145	4	18	200	240	22	22	23	165
80	3	80	200	160	8	18	205	260	22	22	23	168
100	4	100	220	180	8	18	265	300	24	24	26	210
125	5	125	250	210	8	18	330	350	24	25	26	245
150	6	150	285	240	8	22	370	400	25	26	27	280
200	8	200	340	295	8	22	425	500	30	31	33	333

ANSI Unit:inch

Nominal Size		d	ANSI CLASS 150				D_1	L	t			H
inch	mm		D	C	n	h			HI-PVC	PP	PVDF	
1/2	15	0.79	3.50	2.38	4	0.62	3.39	5.51	0.59	0.59	0.59	3.43
3/4	20	0.79	3.88	2.75	4	0.62	3.39	5.51	0.59	0.59	0.59	3.43
1	25	0.98	4.25	3.12	4	0.62	5.12	6.30	0.63	0.63	0.63	4.61
1 1/4	32	–	–	–	–	–	–	–	–	–	–	–
1 1/2	40	1.57	5.00	3.88	4	0.62	5.71	7.09	0.71	0.67	0.71	5.32
2	50	1.97	6.00	4.75	4	0.75	7.09	7.87	0.79	0.79	0.83	6.34
2 1/2	65	2.56	7.00	5.50	4	0.75	7.87	9.45	0.87	0.87	0.91	6.50
3	80	3.15	7.50	6.00	4	0.75	8.07	10.24	0.87	0.87	0.91	6.62
4	100	3.94	9.00	7.50	8	0.75	10.43	11.81	0.94	0.94	1.02	8.27
5	125	4.92	10.00	8.50	8	0.88	12.99	13.78	0.94	0.98	1.02	9.65
6	150	5.91	11.00	9.50	8	0.88	14.57	15.75	0.98	1.02	1.06	11.03
8	200	7.87	13.50	11.75	8	0.88	16.73	19.69	1.18	1.22	1.30	13.11

* 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

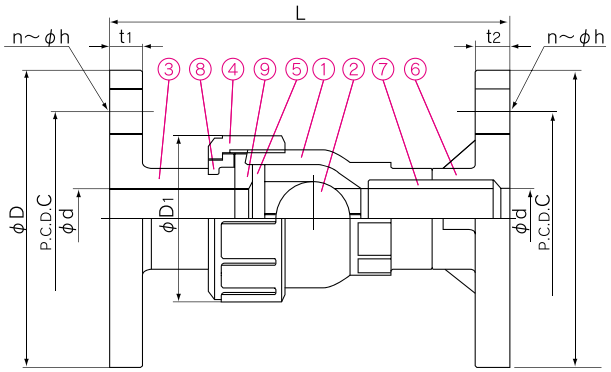
NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.
:Ball CHECK VALVE (Material:PVC+EPDM,FKM)
*Certified products bear an NSF Certification Mark.

SPECIFICATIONS

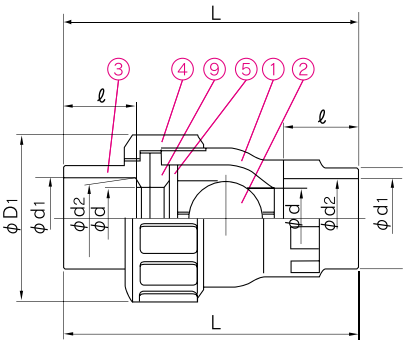
Body material	Unplasticized Polyvinyl Chloride(PVC), Chlorinated Polyvinyl Chloride(C-PVC) Polyvinylidene Fluoride(PVDF), Polypropylene(PP)
End Connectors	Socket End, Threaded End, Flanged End ※PVDF(Flanged End)is not available.
Nominal Size	15mm(1/2inch) - 100mm(4inch)
Working Temperature	PVC:0℃ - 50℃(30°F - 120°F) C-PVC:0℃ - 90℃(30°F - 195°F) PVDF :−20℃ - 100℃(−5°F - 210°F) PP:−20℃ - 80℃(−5°F - 175°F)
Max. Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI](at R.T)……15mm(1/2inch) - 50mm(2inch) 0.7MPa{7.1kgf/cm²}[100PSI](at R.T)……80mm(3inch) - 100mm(4inch)

DIMENSIONS

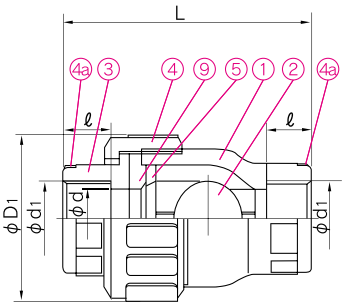
● FLANGED END



● SOCKET END

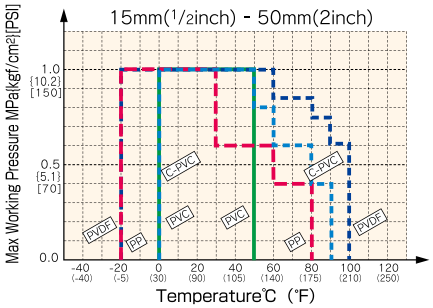


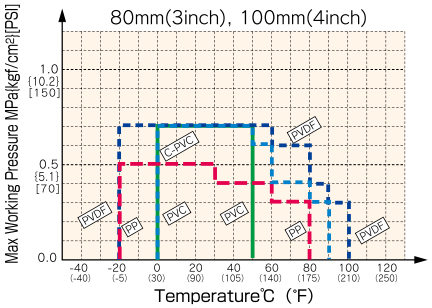
● THREADED END



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 FLANGE2)	1	PVC, C-PVC
⑦	PIPE2)	1	PVC, C-PVC
⑧	STOP RING(B)2)	1	PVDF
⑨	SEAT	1	EPDM,FKM,Others
④a	RING1)	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
mm	inch			D	C	n	h	D	C	n	h	PVC,C-PVC		
15	1/2	15	48	80	60	4	12	95	70	4	15	131	12	14
20	3/4	20	60	85	65	4	12	100	75	4	15	156	14	15
25	1	25	70	95	75	4	12	125	90	4	19	169	14	15
40	1 1/2	40	96	120	95	4	15	140	105	4	19	214	16	16
50	2	51	106	130	105	4	15	155	120	4	19	244	16	20
80	3	78	152	180	145	4	19	185	150	8	19	310	18	22
100	4	100	210	200	165	8	19	210	175	8	19	397	18	22

Nominal Size		Socket End								Threaded End			
		PVC,C-PVC				PP				JIS B 0203		L	
mm	inch	d_1	ℓ	1/T	L	d_1	d_2	ℓ	L	d_1	ℓ	U-PVC,C-PVC	PP,PVDF
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	Rc1 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				L	
mm	inch			d_1	ℓ		d_1	d_2	ℓ		d_1	ℓ	U-PVC,C-PVC	PP,PVDF
15	1/2	15	48	20	16	81	19.50	19.30	14	78	Rp 1/2	15	80	78
20	3/4	20	60	25	19	96	24.50	24.30	16	90	Rp 3/4	17	95	92
25	1	25	70	32	22	107	31.50	31.30	18	99	Rp 1	20	105	102
40	1 1/2	40	96	50	31	150	49.45	49.20	23	135	Rp1 1/2	25	141	137
50	2	51	106	63	38	181	62.50	62.10	27	160	Rp 2	28	164	160
80	3	78	152	90	51	248	89.20	88.85	35	217	Rp 3	35	222	216
100	4	100	210	110	61	330	109.05	108.65	41	291	Rp 4	45	308	301

ANSI

Unit:inch

Nominal Size		d	D_1	Flanged End							Socket End								Threaded End			
				ANSI Class 150				L	t_1	t_2	PVC, C-PVC ASTM SCH40			L	PVDF, PP				ANSI/ASME B 1.20.1	L		
inch	mm			D	C	n	h	PVC			d_1	d_2	ℓ		d_1	d_2	ℓ	L	d_1	ℓ	PVC	PP,PVDF
1/2	15	0.59	1.89	3.50	2.38	4	0.63	5.16	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	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	0.55	0.59	1.325	1.310	0.875	4.33	1.300	–	1.126	4.88	1-11 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	0.63	0.63	1.912	1.894	1.094	5.71	1.890	–	1.374	5.79	1 1/2-11 1/2 NPT	0.98	5.55	5.39
2	50	2.01	4.17	5.98	4.75	4	0.75	9.61	0.63	0.79	2.387	2.369	1.156	6.50	2.360	–	1.500	6.89	2-11 1/2 NPT	1.10	6.46	6.30
3	80	3.07	5.98	7.52	6.00	4	0.75	12.20	0.71	0.87	3.516	3.492	1.875	9.57	3.480	–	1.874	9.57	3-8 NPT	1.38	8.74	8.50
4	100	3.94	8.27	9.02	7.50	8	0.75	15.63	0.71	0.87	4.518	4.491	2.000	12.20	4.480	–	2.252	12.68	4-8 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	Min. Air Pressure to	Min. Air Pressure to	Min. Air Pressure to
mm	inch	open the valve	shut the Disc perfectly	open the valve	shut the Disc perfectly
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

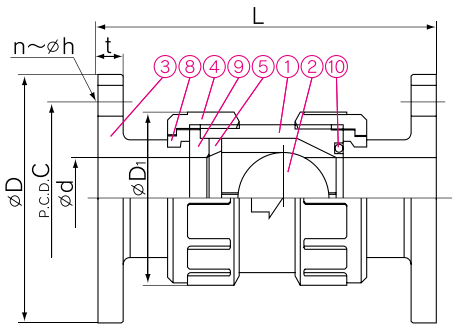
NSF("NSF/ANSI STANDARD 61" Drinking Water System Components-Health Effects)Product.
:TRUE UNION BALL CHECK VALVE (Material:PVC+EPDM,FKM)
*Certified products bear an NSF Certification Mark.

SPECIFICATIONS

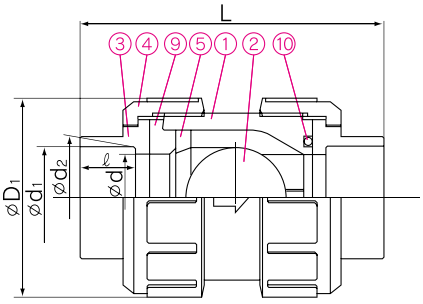
Body material	Unplasticized Polyvinyl Chloride(PVC), Chlorinated Polyvinyl Chloride(C-PVC) Polyvinylidene Fluoride(PVDF)
End Connectors	Socket End, Threaded End, Flanged End
Nominal Size	15mm(1/2inch) - 50mm(2inch)

DIMENSIONS

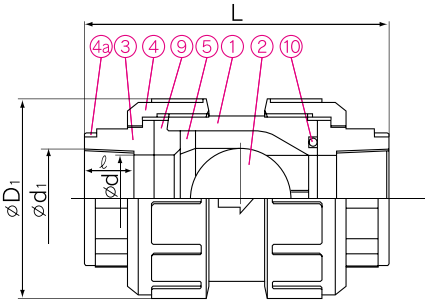
● FLANGED END



● 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
⑧	STOP RING(B) 2)	2	PVDF
⑨	SEAT	1	EPDM,FKM,Others
⑩	O-RING	1	EPDM,FKM,Others
④a	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	D1	Flanged End						t	Socket End							Threaded End			
				DIN PN10				L			PVC, C-PVC			PVDF,PP				DIN 2999		L	
				D	C	n	h	PVC C-PVC	PP		DIN 8063		L	DIN 16962			L	d1	ℓ	PVC C-PVC	PP PVDF
mm	inch										d1	ℓ		d1	d2	ℓ					
15	1/2	15	48	95	65	4	14	130	128	12	20	16	84	19.50	19.30	14	79	Rp 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	Rp 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	Rp 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	Rp 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	Rp 2	28	177	171

ANSI

Unit:inch

Nominal Size		d	D1	Flanged End						t1	Socket End(IPS)								Threaded End			
				ANSI Class 150				L			PVC, C-PVC				PVDF, PP				ANSI/ASME B1.20.1		L	
								PVC C-PVC	PP		ASTM SCH40			L	d1	d1'	ℓ	L			PVC C-PVC	PP PVDF
inch	mm			D	C	n	h				d1	d2	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

ASAHI AV VALVE

● BALL FOOT VALVE



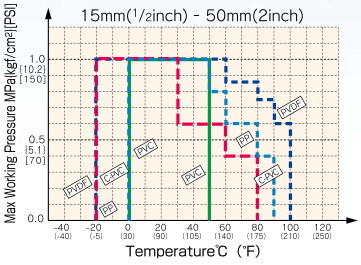
SPECIFICATIONS

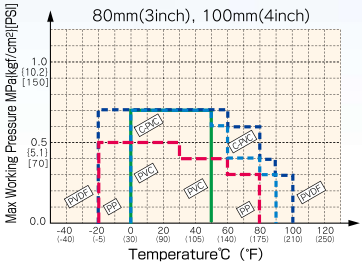
Body material	Unplasticized Polyvinyl Chloride(PVC), Chlorinated Polyvinyl Chloride(C-PVC) Polyvinylidene Fluoride(PVDF),Polypropylene(PP)
End Connectors	Socket End, Threaded End, Flanged End
Nominal Size	15 mm(1/2inch) - 100 mm(4inch)
Working Temperature	PVC:0℃ - 50℃(30℉ - 120℉) C-PVC:0℃ - 90℃(30℉ - 195℉) PVDF:−20℃ - 100℃(−5℉ - 210℉) PP:−20℃ - 80℃(−5℉ - 175℉)
Max. Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI](at R.T)……15mm(1/2inch) - 50mm(2inch) 0.7MPa{7.1kgf/cm²}[100PSI](at R.T)……80mm(3inch) - 100mm(4inch)

R.T.;Room Temperature

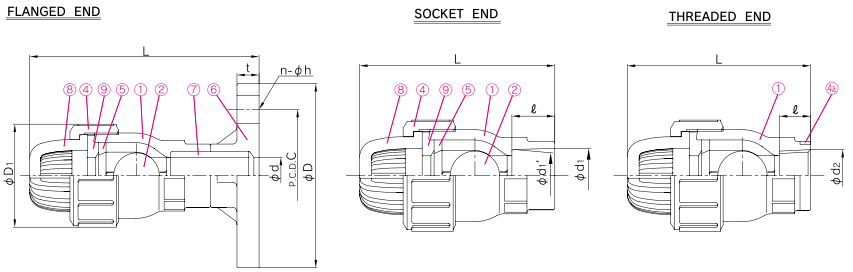
WORKING PRESSURE VS. TEMPERATURE

BALL FOOT VALVE





DIMENSIONS



PARTS & MATERIALS

No.	DESCRIPTION	QTY.	MATERIAL
①	BODY	1	PVC,C-PVC,PP,PVDF
②	BALL	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
④a	RING 1)	1	STAINLESS STEEL (SUS304)

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

DIMENSIONS TABLE

JIS

Unit:mm

Nominal Size		D1	Flanged End											Socket End								Threaded End			
			JIS 5K				JIS 10K				L	d	t	PVC,C-PVC				PP				d1	ℓ	L	
mm	inch		D	C	n	h	D	C	n	h	PVC C-PVC			d1	ℓ	1/T	L	d1	d2	ℓ	L			PVC C-PVC	PVDF PP
15	1/2	48	80	60	4	12	95	70	4	15	130	18	14	22.11	20	1/34	95	21.2	20.2	22	97	Rc 1/2	15	90	88
20	3/4	60	85	65	4	12	100	75	4	15	150	22	15	26.13	24	1/34	110	26.2	25.2	23	108	Rc 3/4	17	103	101
25	1	70	95	75	4	12	125	90	4	19	167	25	15	32.16	27	1/34	121	33.0	32.0	25	118	Rc 1	20	114	111
40	1 1/2	96	120	95	4	15	140	105	4	19	246	41	16	48.21	37	1/37	184	47.0	46.0	28	174	Rc1 1/2	25	172	169
50	2	106	130	105	4	15	155	120	4	19	274	52	20	60.25	42	1/37	203	59.0	58.0	28	188	Rc 2	28	189	185
80	3	152	180	145	4	19	185	150	8	19	396	78	22	89.60	64	1/49	324	88.0	86.0	35	293	Rc 3	35	294	289
100	4	210	200	165	8	19	210	175	8	19	506	100	22	114.70	84	1/56	413	113.0	111.0	45	372	Rc 4	45	374	367

DIN

Unit:mm

Nominal Size		D1	Socket End							Threaded End			
			PVC, C-PVC			PP, PVDF				d2	ℓ	L	
mm	inch		d1	ℓ	L	d1	d1'	ℓ	L			PVC C-PVC	PVDF PP
15	1/2	48	20	16	91	19.50	19.30	14.5	89	Rp 1/2	15	90	88
20	3/4	60	25	19	105	24.50	24.30	16	101	Rp 3/4	17	103	101
25	1	70	32	22	116	31.50	31.30	18	111	Rp 1	20	114	111
40	1 1/2	96	50	31	178	49.45	49.20	23.5	169	Rp1 1/2	25	172	169
50	2	106	63	38	199	62.50	62.10	27.5	187	Rp 2	28	189	184
80	3	152	90	51	310	89.20	38.85	35.5	293	Rp 3	35	294	288
100	4	210	110	61	390	109.05	108.65	41.5	368	Rp 4	45	374	366

ANSI

Unit:mm

Nominal Size		d	D1	Flanged End						Socket End				Threaded End			
				D	C	n	h	L PVC C-PVC	t	d1	d1'	ℓ	L	d2	ℓ	L PVC C-PVC	L PVDF PP
inch	mm																
1/2	15	0.71	1.89	3.50	2.38	4	0.62	5.55	0.47	0.848	0.836	0.69	3.74	1/2- 14 NPT	0.59	3.54	3.46
3/4	20	0.87	2.36	3.86	2.76	4	0.62	6.42	0.51	1.058	1.046	0.72	4.17	3/4- 14 NPT	0.67	4.06	3.98
1	25	0.98	2.76	4.25	3.13	4	0.62	6.73	0.59	1.325	1.310	0.87	4.76	1- 11 1/2 NPT	0.79	4.49	4.37
1 1/2	40	1.61	3.78	5.00	3.88	4	0.62	9.80	0.63	1.912	1.894	1.09	6.97	1 1/2- 11 1/2 NPT	0.98	6.77	6.65
2	50	2.05	4.17	5.98	4.74	4	0.75	10.91	0.79	2.387	2.369	1.16	7.60	2- 11 1/2 NPT	1.10	7.44	7.24
3	80	3.07	5.98	7.52	6.00	4	0.75	16.10	0.87	3.516	3.492	1.87	12.09	3- 8 NPT	1.38	11.57	11.34
4	100	3.94	8.27	9.02	7.50	8	0.75	20.41	0.87	4.518	4.491	2.00	14.96	4- 8 NPT	1.77	14.72	14.41

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



FEATURES

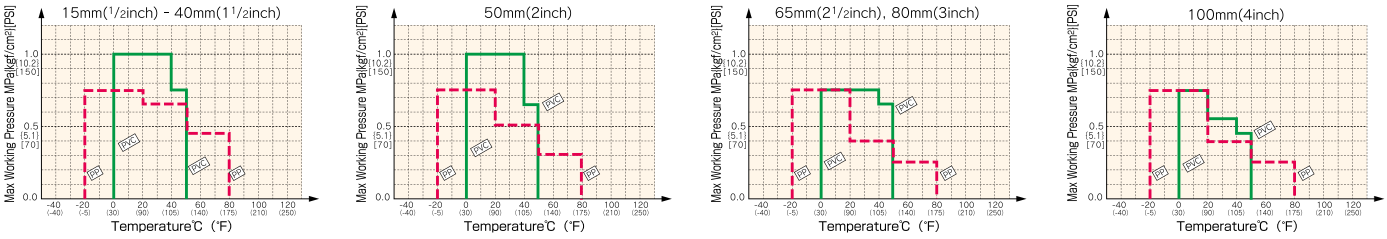
- The STOP VALVE is compact and economical.
- Used for efficient throttling of flow.
- Positive shut-off.
- Displas excellent flow regulating character-istics throughout the entire lift of the disc.

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℃ - 50℃(30°F - 120°F) PP:-20℃ - 80℃(-5°F - 175°F)
Max. Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI](at R.T)……15mm(1/2inch) - 50mm(2inch) 0.7MPa{7.1kgf/cm²}[100PSI](at R.T)……65mm(2 1/2inch) - 100mm(4inch)

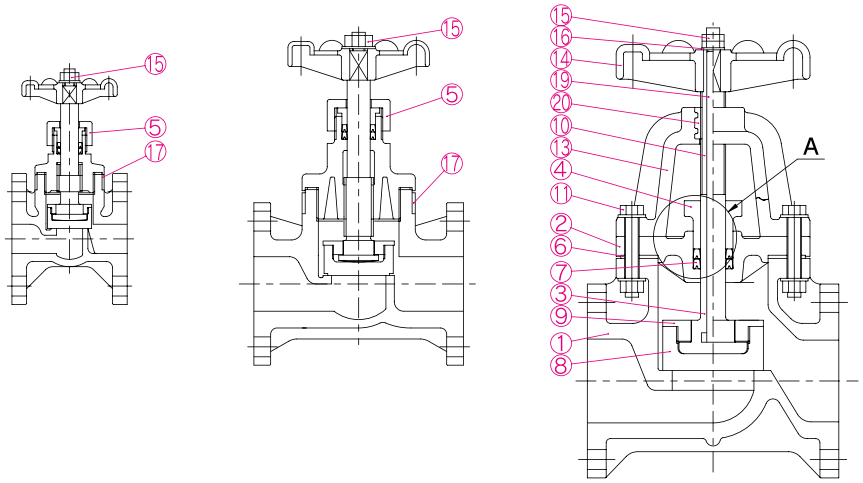
WORKING PRESSURE VS. TEMPERATURE

STOP VALVE



DIMENSIONS

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

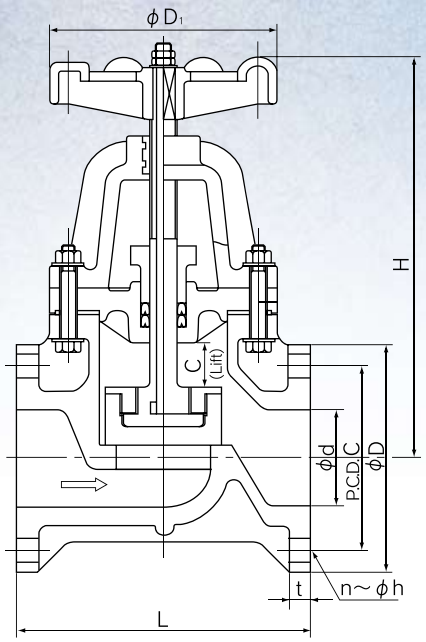


PARTS & MATERIALS

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)
						2	STAINLESS STEEL 304 65mm(2 1/2inch) and over
⑥	SHEET GASKET	1	EPDM, Others	⑯	WASHER	1	PVC Up to 50mm(2inch)
							STAINLESS STEEL 304 65mm(2 1/2inch) and over
⑦	GLAND PACKIKG	2	EPDM, Others	⑰	RING FOR REINFORCING※	1	STAINLESS STEEL PP Body 15mm(1/2inch)~50mm(2inch)
⑧	DISC	1	PP	⑱	INSERTED NUT	1	COPPER ALLOY(C3604) 65mm(2 1/2inch) and over
⑨	STEM HOLDER	1	PP	⑲	INSERTED METAL OF STEM	1	STEEL(SS400) 65mm(2 1/2inch) and over
⑩	STEM WTH TRAPEZOID SCREW	1	COPPER ALLOY(C3604) 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		D1	Working Press. at R.T. MPa{kgf/cm²}[PSI]	
mm	inch		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

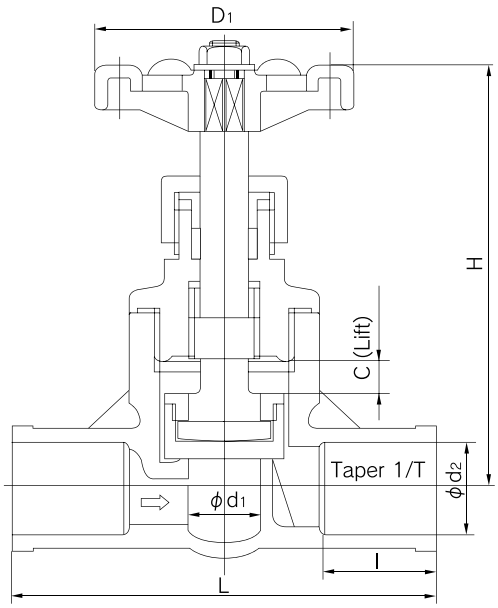
Nominal Size		d	DIN PN10				L	t	Lift C	H		D1	Working Press. at R.T. MPa{kgf/cm²}[PSI]	
mm	inch		D	C	n	h				Shut	Open		PVC	PP
15	1/2	18	95	65	4	14	85	12	8	124	132	66	1.0{10.2}[150]	0.75{7.7}[110]
20	3/4	24	105	75	4	14	95	14	8	132	140	66	1.0{10.2}[150]	0.75{7.7}[110]
25	1	28	115	85	4	14	110	14	11	150	161	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		D1	Working Press. at R.T. MPa{kgf/cm²}[PSI]	
inch	mm		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		d2	d1	ℓ	L	Taper 1/T	Lift C	H		Working Press. at R.T. MPa{kgf/cm²}[PSI]
mm	inch							Shut	Open	PVC
15	1/2	22.4 ±0.2	15	30	110	1/34	8	124	132	1.0{10.2}[150]
20	3/4	26.45±0.2	18	35	130	1/34	8	132	140	1.0{10.2}[150]
25	1	32.55±0.25	25	40	150	1/34	11	150	161	1.0{10.2}[150]

DIN

Unit:mm

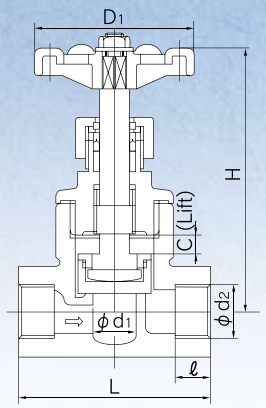
Nominal Size		d2	d1	ℓ	L	Lift C	H		Working Press. at R.T. MPa{kgf/cm²}[PSI]
mm	inch						Shut	Open	PVC
15	1/2	20	15	16	82	8	124	132	1.0{10.2}[150]
20	3/4	25	18	19	98	8	132	140	1.0{10.2}[150]
25	1	32	25	22	114	11	150	161	1.0{10.2}[150]

ANSI

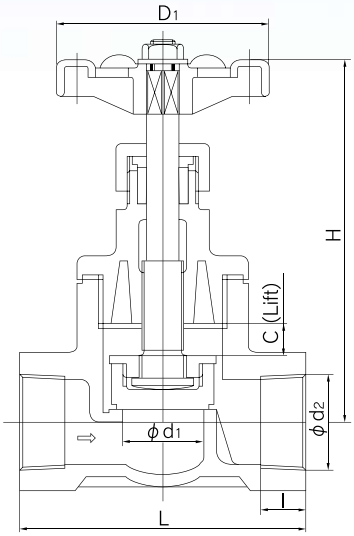
Unit:inch

Nominal Size		d2	d1	ℓ	L	Taper 1/T	Lift C	H		Working Press. at R.T. MPa{kgf/cm²}[PSI]
mm	inch							Shut	Open	PVC
15	1/2	0.848	0.59	1.18	4.33	1/34	0.32	4.88	5.20	1.0{10.2}[150]
20	3/4	1.058	0.71	1.38	5.12	1/34	0.32	5.20	5.51	1.0{10.2}[150]
25	1	1.325	0.98	1.58	5.91	1/34	0.43	5.91	6.34	1.0{10.2}[150]

●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/cm²}[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	Rc1 1/4	35	25	135	13	154	167	91	1.0{10.2}[150]	–
40	1 1/2	Rc1 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/cm²}[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	Rp1 1/4	35	25	135	13	154	167	91	1.0{10.2}[150]	–
40	1 1/2	Rp1 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/cm²}[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

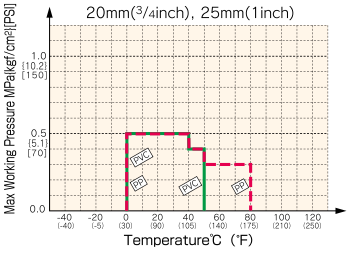
Unit:mm

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℃ - 50℃(30°F - 120°F), PP :−20℃ - 80℃(−5°F - 175°F)
Max. Working Pressure	0.5MPa{5.1kgf/cm²}[70PSI]

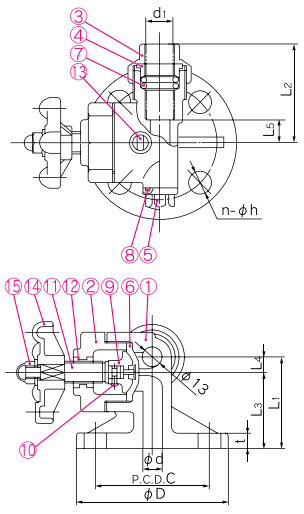
WORKING PRESSURE VS. TEMPERATURE

GAUGE VALVE

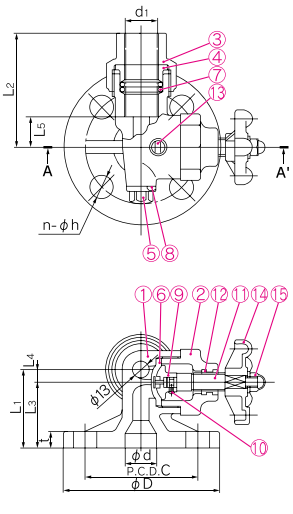


DIMENSIONS

●20mm (3/4inch)

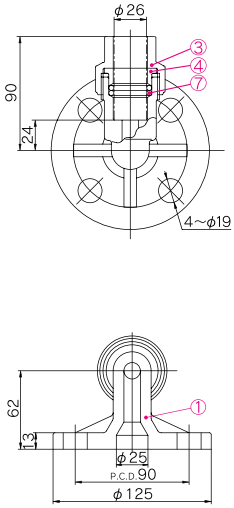


●25mm (1inch)



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				L1	L2	L3	L4	L5	t	d1
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

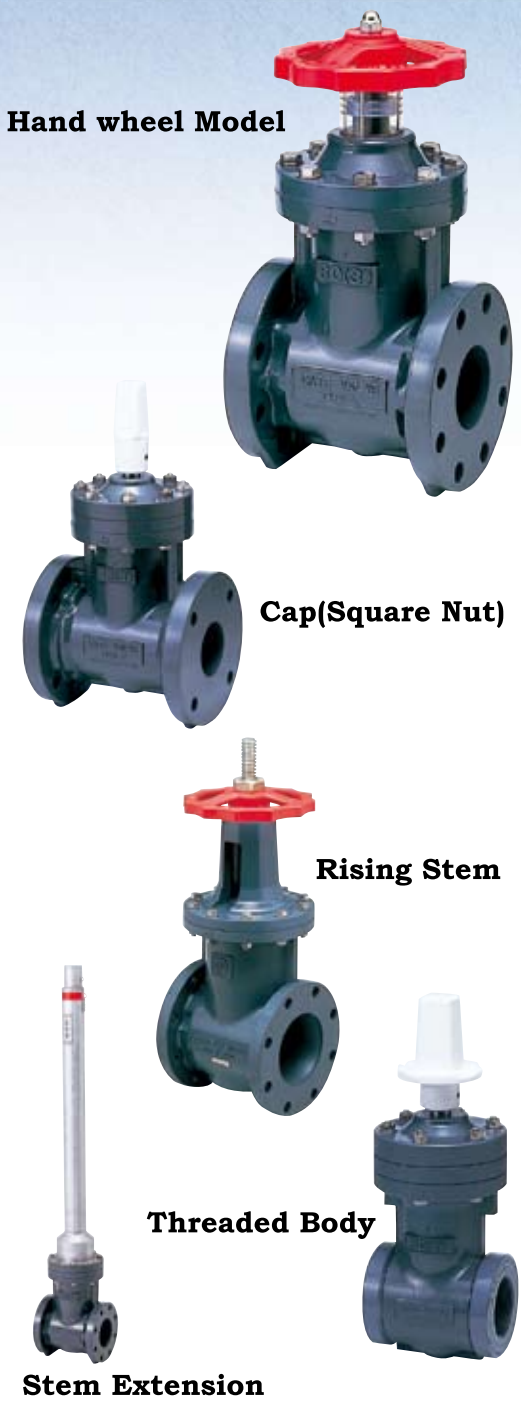
DIN Unit:mm

Nominal Size		d	DIN PN 10				L1	L2	L3	L4	L5	t	d1
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				L1	L2	L3	L4	L5	t	d1
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



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.

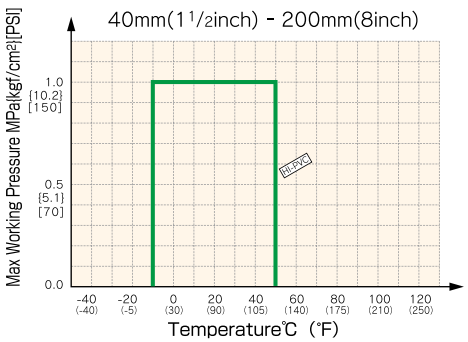
SPECIFICATIONS

Body material	Valve:High Impact Polyvinyl Chloride(HI-PVC)
Gate material	TYPE-P TYPE-S :32mm($1^{1}/_{4}$inch) to 350mm(14inch) ···PP Soft seals:32mm($1^{1}/_{4}$inch) to 150mm(6inch) ·····HI-PVC+SBR 65mm($2^{1}/_{2}$inch), 125mm(5inch) ·····C-PVC+SBR
Nominal size	Popular series (Type P):40 to 350mm($1^{1}/_{2}$inch to 14inch) Resilient series(Type S):40 to 200mm($1^{1}/_{2}$inch to 8inch)
Working Temperature	−10℃ - 50℃(15°F - 120°F)
Max. Working Pressure	40mm($1^{1}/_{2}$inch) - 200mm(8inch) 1.0Mpa{10.2kgf/cm²} [150PSI] 250mm(10inch) 0.75Mpa{7.7kgf/cm²} [110PSI] 300mm(12inch), 350mm(14inch) 0.5Mpa{5.1kgf/cm²} [70PSI]
End Connectors	Flanged End Threaded Type(40mm,50mm)are available.
Mechanism	Round Handle, Cap (Square Nut), Stem Extension

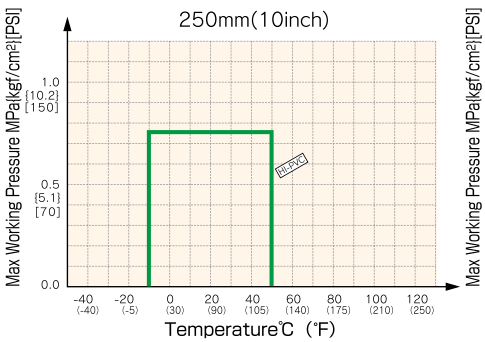
WORKING PRESSURE VS. TEMPERATURE

GATE VALVE

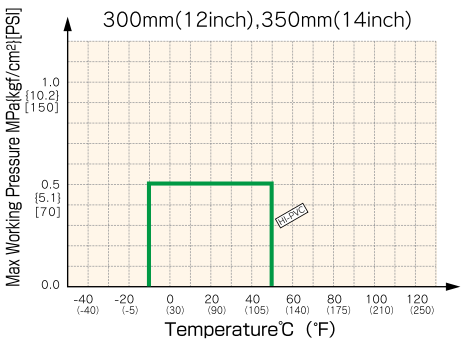
Gate Valve TypeP, Type S



Gate Valve TypeP, Type S

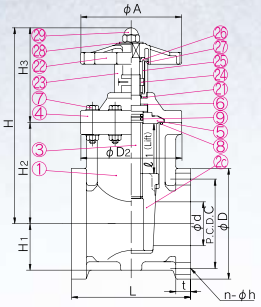


Gate Valve TypeP, Type S

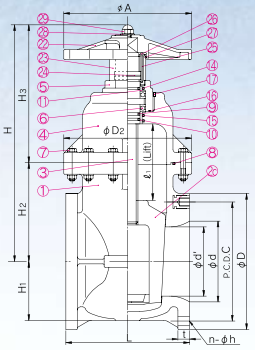


GATE VALVE TYPE-P(Plug) 40mm - 350mm(1 1/2inch - 14inch)

● 40mm (1 1/2inch) – 150mm (6inch)



● 200mm (8inch) – 350mm (14inch)



Gate valves 125mm or more in nominal size have a reduced flow channel.

PARTS & MATERIALS

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

DIMENSIONS TABLE

JIS

Unit:mm

Nominal Size		d	d'	FLANGE END JIS 10K								THREAD END			D2	ℓ1	H	H1	H2	H3	A
mm	inch			D	C	n	h	n1	M	L	t	d2	ℓ	L							
32	1 1/4	40	30	135	100	4	19	–	–	165	22	Rc1 1/4	22	115	120	49	239	50	107	132	120
40	1 1/2	40	40	140	105	4	19	–	–	165	22	Rc1 1/2	25	115	120	49	239	50	107	132	120
50	2	50	50	155	120	4	19	–	–	180	23	Rc2	28	130	130	60	270	58	134	136	130
65	2 1/2	65	–	175	140	4	19	–	–	190	24	–	–	–	155	75	302	68	152	150	155
80	3	75	–	185	150	8	19	–	–	200	25	–	–	–	170	85	325	77	170	155	170
100	4	100	–	210	175	8	19	–	–	230	27	–	–	–	195	110	370	89	207	163	195
125	5	125	110	250	210	8	23	–	–	260	27	–	–	–	235	117	407	89	227	180	235
150	6	150	130	280	240	8	23	–	–	270	28	–	–	–	270	138	445	102	263	182	270
200	8	196	168	330	290	10	23	2	M20	290	28	–	–	–	310	180	577	143	240	337	310
250	10	247	210	400	355	12	25	–	–	380	30	–	–	–	360	226	690	175	270	420	360
300	12	298	255	445	400	14	25	2	M22	400	31	–	–	–	410	273	800	195	320	480	410
350	14	348	297	490	445	12	25	4	M22	430	32	–	–	–	440	319	910	230	310	600	455

DIN

Unit:mm

Nominal Size		d	d'	d'2	FLANGE END DIN PN 10								THREAD END			D2	ℓ1	H	H1	H2	H3	A
mm	inch				D	C	n	h	n1	M	L	t	d2	ℓ	L							
40	1 1/2	40	–	40	150	110	4	18	–	–	165	22	Rp1 1/2	25	115	120	49	239	50	107	132	120
50	2	50	–	50	165	125	4	18	–	–	180	23	Rp2	28	130	130	60	270	58	134	136	130
65	2 1/2	65	–	–	185	145	4	18	–	–	210	24	–	–	–	155	75	302	68	152	150	155
80	3	75	–	–	200	160	8	18	–	–	240	25	–	–	–	170	85	325	77	170	155	170
100	4	100	–	–	220	180	8	18	–	–	250	27	–	–	–	195	110	370	89	207	163	195
125	5	125	110	–	250	210	8	18	–	–	260	27	–	–	–	235	117	407	89	227	180	235
150	6	150	130	–	285	240	8	22	–	–	280	27	–	–	–	270	138	445	102	263	182	270
200	8	196	168	–	340	295	6	22	2	M20	300	28	–	–	–	310	180	577	143	240	337	310
250	10	247	210	–	395	350	12	22	–	–	380	30	–	–	–	360	226	690	175	270	420	360
300	12	298	255	–	445	400	10	22	2	–	400	31	–	–	–	410	273	800	195	320	480	410
350	14	348	297	–	505	460	12	22	4	–	430	32	–	–	–	440	319	910	230	310	600	455

ANSI

Unit:inch

Nominal Size		d	d'	FLANGE END ANSI Class 150								THREAD END			D2	ℓ1	H	H1	H2	H3	A
inch	mm			D	C	n	h	n1	M	L	t	d2	ℓ	L							
1 1/2	40	1.57	1.57	5.00	3.88	4	0.62	–	–	6.50	0.87	1 1/2-11 1/2NPT	0.98	4.53	4.72	1.93	9.41	2.48	4.21	5.20	4.72
2	50	1.97	1.97	6.00	4.75	4	0.75	–	–	7.00	0.91	2-11 1/2NPT	1.10	5.12	5.12	2.36	10.63	2.80	5.28	5.35	5.12
2 1/2	65	2.56	–	7.00	5.50	4	0.75	–	–	7.50	0.94	–	–	–	6.10	2.95	11.89	3.19	5.98	5.91	6.10
3	80	2.95	–	7.00	6.00	4	0.75	–	–	8.00	0.98	–	–	–	6.69	3.35	12.80	3.54	6.69	6.10	6.69
4	100	3.94	–	9.00	7.50	8	0.75	–	–	9.00	1.06	–	–	–	7.68	4.33	14.57	4.02	8.15	6.42	7.68
5	125	4.92	4.33	10.00	8.50	8	0.88	–	–	10.24	1.06	–	–	–	9.25	4.61	16.02	4.17	8.94	7.09	9.25
6	150	5.91	5.12	11.00	9.50	8	0.88	–	–	10.50	1.06	–	–	–	10.63	5.43	17.52	4.69	10.35	7.17	10.63
8	200	7.72	6.61	13.50	11.75	6	0.88	2	W 3/4	11.50	1.30	–	–	–	12.2	7.09	22.72	6.3	9.45	13.27	12.2
10	250	9.72	8.27	16.00	14.25	12	1.00	–	–	14.96	1.18	–	–	–	14.17	8.9	27.17	7.56	10.63	16.54	14.17
12	300	11.73	10.04	19.00	17.00	10	1.00	2	W 7/8	15.75	1.22	–	–	–	16.14	10.75	31.5	8.35	12.6	18.9	16.14
14	350	13.70	11.69	21.00	18.75	8	1.12	4	W1	16.93	1.26	–	–	–	17.32	12.56	35.83	9.72	12.21	23.62	17.91

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

Hand Wheel

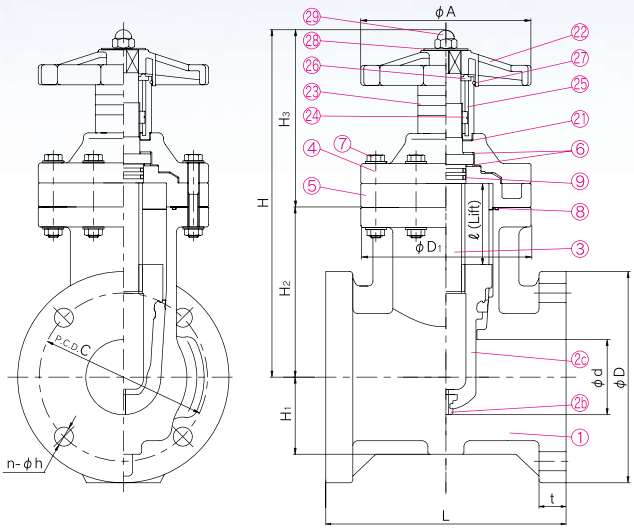
FEATURES

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

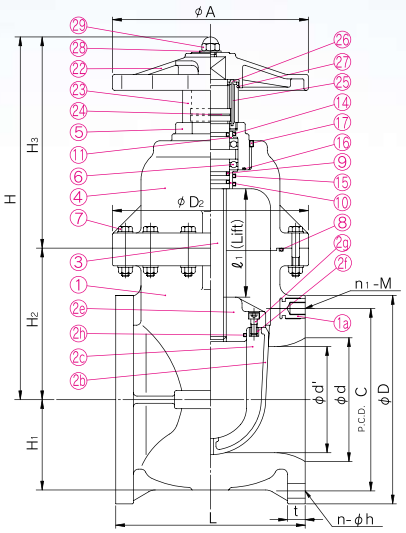
Provides Smooth Flow
Being free of cavities, the valve body has no sand or foreign matter build up in it, thus providing a smooth flow.

※ 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	㉑	PACKING	1	EPDM
㉒	SEAT	1	SBR、NBR	㉑	O-RING(A)	1	EPDM, Others	㉒	HAND WHEEL	1	PP
㉒	GATE(A)	1	HI-PVC、C-PVC	⑧	O-RING(B)	1	EPDM, Others	㉓	INDICATING COVER	1	PC
㉒	GATE(B)	1	PP	⑨	O-RING(C)	2･3	EPDM, Others	㉔	INDICATING RING	1	PVC
㉑	INSERTED METAL OF GATE(A)	4	COPPER ALLOY(C3604)	⑭	O-RING(E)	1	EPDM, Others	㉕	GUIDE PIN	1	STAINLESS STEEL304
㉙	BOLT(A)	4	STAINLESS STEEL304	⑮	O-RING(F)	1	EPDM, Others	㉖	GUIDE PIN HOLDER	1	PVC
③	STEM	1	PVC	⑯	O-RING(D)	1	EPDM, Others	㉗	O-RING(G)	1	EPDM
④	BONNET(A)	1	HI-PVC	⑩	BUSH(A)	1	PP	㉘	WASHER	1	PVC
⑤	BONNET(B)	1	HI-PVC	⑪	BUSH(B)	1	PP	㉙	BOX NUT	1	STAINLESS STEEL304

DIMENSIONS TABLE

JIS Unit:mm

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	293	58	134
65	2½	65	–	175	140	4	19	–	210	24	155	155	67	302	68	152
80	3	75	–	185	150	8	19	–	240	25	170	170	77	350	77	170
100	4	100	–	210	175	8	19	–	250	27	195	195	102	410	89	207
125	5	125	110	250	210	8	23	–	260	27	235	235	112	407	89	227
150	6	150	130	280	240	8	23	–	280	28	270	270	132	487	117	263
200	8	196	168	330	290	10	23	2-M20	290	28	310	310	175	577	143	240

DIN Unit:mm

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	293	58	134
65	2½	65	–	185	145	4	18	–	210	24	155	155	67	302	68	152
80	3	75	–	200	160	8	18	–	240	25	170	170	77	350	77	170
100	4	100	–	220	180	8	18	–	250	27	195	195	102	410	89	207
125	5	125	110	250	210	8	18	–	260	27	235	235	112	407	89	227
150	6	150	130	285	240	8	23	–	280	28	270	270	132	487	117	263
200	8	196	168	340	295	6	23	2-M20	290	28	310	310	175	577	143	240

ANSI Unit:inch

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
2½	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-W¾	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

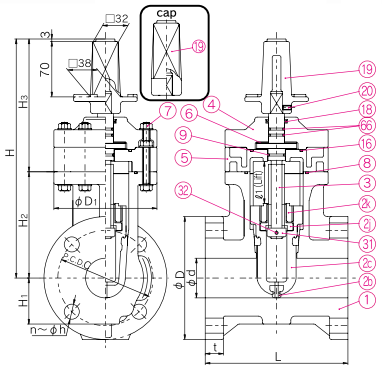
Built-in Stopper
Feeling in the shut, posision.

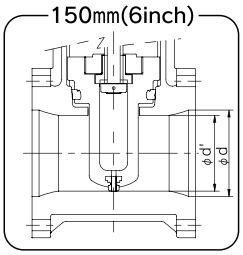
Reliable Watertightness
The rubber valve seat, a soft seal type, offers reliable shut-off.

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.

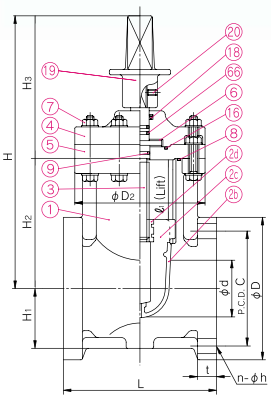
※ Threaded End Type (40mm, 50mm)are available.

● 32mm($1^1/_4$inch) – 150mm(6inch)
(basides 65mm($2^1/_2$inch), 125mm(5inch))

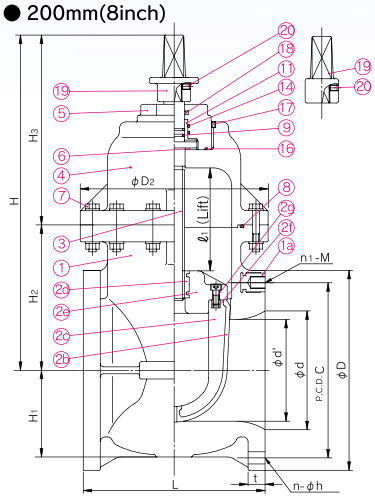




● 65mm($2^1/_2$inch), 125mm(5inch))



● 200mm(8inch)



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	HI-PVC	②k	FEMALE SCREW HOLDER	1	HI-PVC	⑯	O-RING(D)	1	EPDM, Others
①a	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	③	STEM	1	SUS304, Others	⑩	BUSH(A)	1	PP
②b	SEAT	1	SBR､NBR	④	BONNET(A)	1	HI-PVC	⑪	BUSH(B)	1	PP
②c	GATE(A)	1	C-PVC	⑤	BONNET(B)	1	HI-PVC	⑰	SET SCREW(A)	1	STAINLESS STEEL304
②d	INSERTED METAL OF GATE(A)	1	BC6	⑥	THRUST RING	2	PP	⑱	DUST SEAL	1	EPDM
②e	GATE(B)	1	PP	⑦	BOLT･NUT	—	STAINLESS STEEL304	⑲	CAP(A)	1	FCD450, FC200(65,125,200mm)
②f	INSERTED METAL OF GATE(B)	4	COPPER ALLOY(C3604)	⑧	O-RING(B)	1	EPDM, Others				
②g	BOLT(A)	4	STAINLESS STEEL304	⑨	O-RING(C)	1･2	EPDM, Others	⑳	SET SCREW(B)	1	STAINLESS STEEL304
②j	FEMALE SCREW METAL	1	COPPER ALLOY(C3604)	⑭	O-RING(E)	2	EPDM, Others	⑯⑥	O-RING(H)	2	EPDM

DIMENSIONS TABLE

JIS
Unit:mm

Nominal Size mm	Nominal Size inch	d	d_1	JIS 10K D	C	n	h	n_1-M	L	t	D_1	A	ℓ	H	H_1	H_2
50	2	50	–	155	120	4	19	–	180	23	130	130	52	293	58	134
65	$2^1/_2$	65	–	175	140	4	19	–	210	24	155	155	67	302	68	152
80	3	75	–	185	150	8	19	–	240	25	170	170	77	350	77	170
100	4	100	–	210	175	8	19	–	250	27	195	195	102	410	89	207
125	5	125	110	250	210	8	23	–	260	27	235	235	112	407	89	227
150	6	150	130	280	240	8	23	–	280	28	270	270	132	487	117	263
200	8	196	168	330	290	10	23	2-M20	290	28	310	310	175	577	143	240

DIN
Unit:mm

Nominal Size mm	Nominal Size inch	d	d_1	DIN PN10 D	C	n	h	n_1-M	L	t	D_1	A	ℓ	H	H_1	H_2
50	2	50	–	165	125	4	18	–	180	23	130	130	52	293	58	134
65	$2^1/_2$	65	–	185	145	4	18	–	210	24	155	155	67	302	68	152
80	3	75	–	200	160	8	18	–	240	25	170	170	77	350	77	170
100	4	100	–	220	180	8	18	–	250	27	195	195	102	410	89	207
125	5	125	110	250	210	8	18	–	260	27	235	235	112	407	89	227
150	6	150	130	285	240	8	23	–	280	28	270	270	132	487	117	263
200	8	196	168	340	295	6	23	2-M20	290	28	310	310	175	577	143	240

ANSI
Unit:inch

Nominal Size inch	Nominal Size mm	d	d_1	ANSI CLASS 150 D	C	n	h	n_1-M	L	t	D_1	A	ℓ	H	H_1	H_2
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

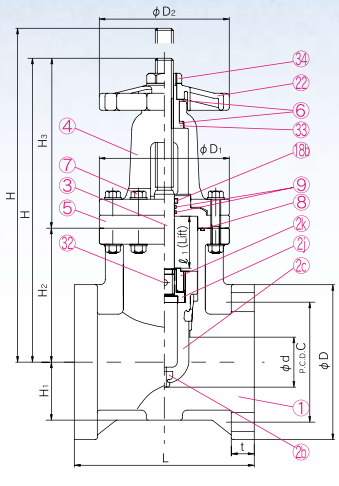
GATE VALVE (Rising Stem) 40mm - 200mm(1 1/2 inch - 8inch)

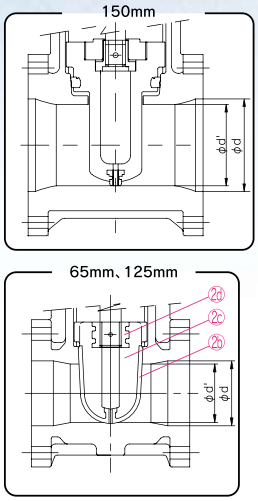
FEATURES

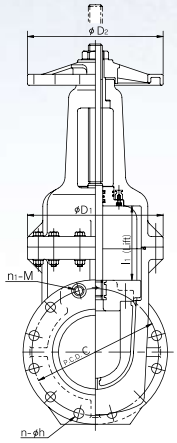
·Externally threaded stem and straight flow channel prevent foreign matter deposits and restrictions through.

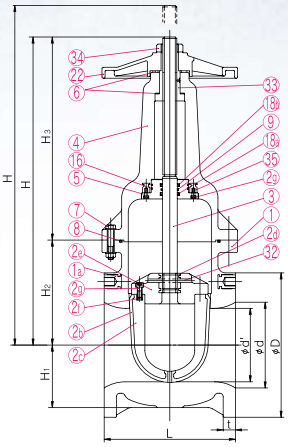
● 40mm(1 1/2inch) – 150mm(6inch) (besides 65mm(2 1/2inch), 125mm(5inch))
● 65mm(2 1/2inch), 125mm(5inch)
● 200mm(8inch)











PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	HI-PVC	㉔	FEMALE SCREW HOLDER	1	HI-PVC、PVC	⑱a	DUST SEAL(A)	1	EPDM, Others
①a	INSERTED METAL OF BODY	4	COPPER ALLOY(C3604)	③	STEM	1	STAINLESS STEEL304	⑱b	DUST SEAL(B)	1	NBR
㉖	SEAT	1	SBR、NBR	④	BONNET(A)	1	HI-PVC	㉒	HAND WHEEL	1	PP
㉔	GATE(A)	1	HI-PVC、C-PVC	⑤	BONNET(B)	1	HI-PVC、PP	㉜	PIN(A)	1	STAINLESS STEEL304
㉔d	INSERTED METAL OF GATE(A)	1	BC6	⑥	THRUST RING	2	PP	㉝	SLEEVE	1	COPPER ALLOY(C3604), BC6
㉔e	GATE(B)	1	HI-PVC	⑦	BOLT·NUT	—	STAINLESS STEEL304	㉞	NUT	1	COPPER ALLOY(C3604), BC6
㉔f	INSERTED METAL OF GATE(B)	4	COPPER ALLOY(C3604)	⑧	O-RING(B)	1	EPDM, Others	㉟	INSERTED METAL OF BONNET	4	COPPER ALLOY(C3604)
㉙	BOLT(A)	4	STAINLESS STEEL304	⑨	O-RING(C)	2·1	EPDM, Others				
㉑	FEMALE SCREW METAL	1	COPPER ALLOY(C3604)	⑯	O-RING(D)	2	EPDM, Others				

DIMENSIONS TABLE

JIS

Unit:mm

Nominal Size mm	Nominal Size inch	d	d_1	JIS 10K D	C	n	h	n_1-M	L	t	D_1	D_2	ℓ	H	H_1	H_2
40	1 1/2	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	2 1/2	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

DIN

Unit:mm

Nominal Size mm	Nominal Size inch	d	d_1	DIN PN10 D	C	n	h	n_1-M	L	t	D_1	D_2	ℓ	H	H_1	H_2
40	1 1/2	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	2 1/2	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

ANSI

Unit:inch

Nominal Size inch	Nominal Size mm	d	d_1	ANSI Class 150 D	C	n	h	n_1-M	L	t	D_1	D_2	ℓ	H	H_1	H_2
1 1/2	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
2 1/2	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-W 3/4	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

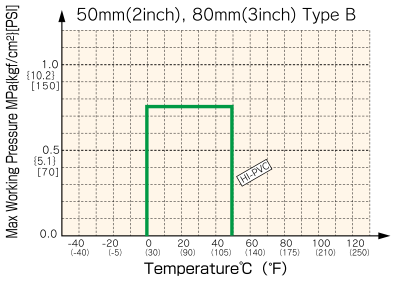
- The AUTOMATIC WATER FEEDING VALVE saves irrigation water, thus relieving water shortage.
- The valve properly controls water supply and reduces labor. This in turn means that working hours are shortened.
- The valve can manually be operated to water fields, orchards, etc.
- The valve can be used in 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.

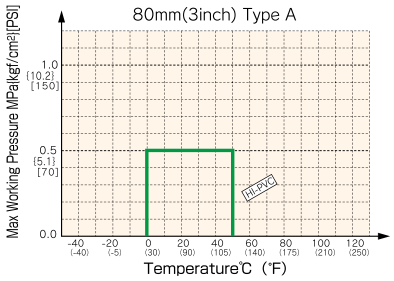
SPECIFICATIONS

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/cm²}	Type A	0.015 - 0.5MPa{0.15 - 5.1kgf/cm²}
		Type B	0.03 - 0.75MPa{0.3 - 7.7kgf/cm²}
Max. Working Pressure	1.0MPa {10.2kgf/cm²}	Type A	0.5MPa{5.1kgf/cm²}
		Type B	1.0MPa{10.2kgf/cm²}
Water Level Adjustment	−6cm - 12cm		
End Connectors	Threaded End, Socket End Flanged End(conforming to City Water Standards and JIS)		

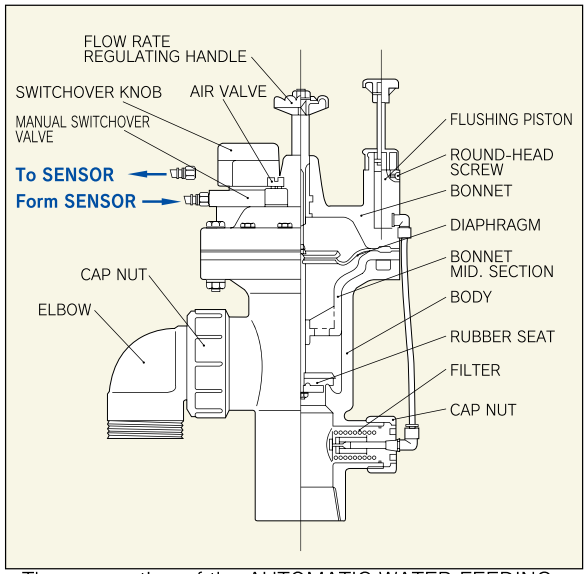
WORKING PRESSURE VS. TEMPERATURE

AUTOMATIC WATER FEEDING VALVE

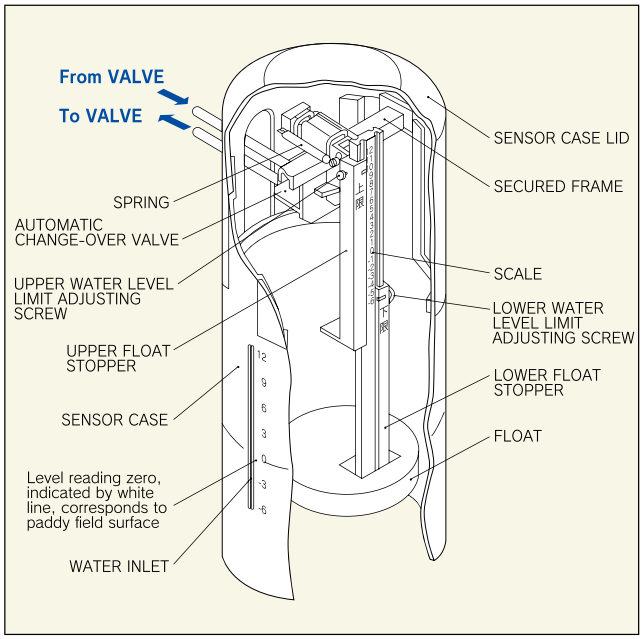




▼ Valve body



▼ Sensor

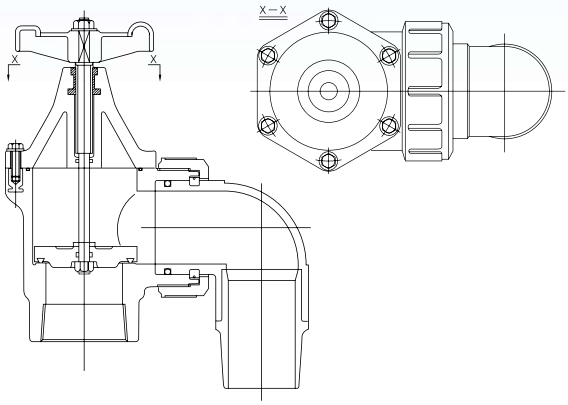


Note : The connection of the AUTOMATIC WATER FEEDING VALVE comes in three types: Threaded End, Socket End, Flanged End (City Water and JIS standards).

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

Secured handle type **T-shaped handle type**



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

FEATURES

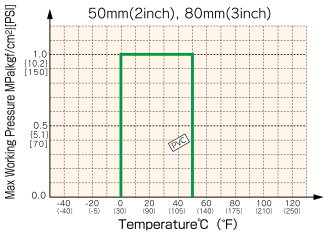
· The ASAHI ROTARY ANGLE VALVE is more compact than conventional angle valves.
Because the ROTARY ANGLE VALVE uses a Machino, elbow, or hose socket type receptacle, it can be installed in a small valve box. Only by replacing its attachment, the valve can easilly be switched between paddy field and field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

SPECIFICATIONS

Body material	PVC
Nominal size	50mm(2inch)、80mm(3inch)
Max. Working Pressure	0.75MPa{7.7kgf/cm²}
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

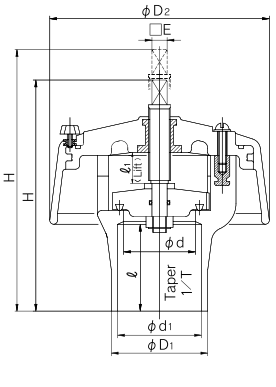
ROTARY ANGLE VALVE

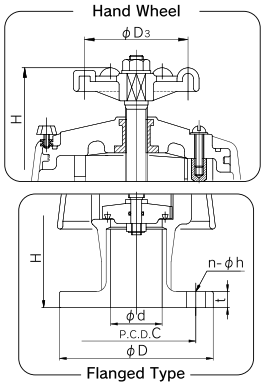


ALFALFA VALVE TYPE 82 50mm - 100mm(2inch - 4inch)

T-shaped handle type **Secured handle type**





FEATURES

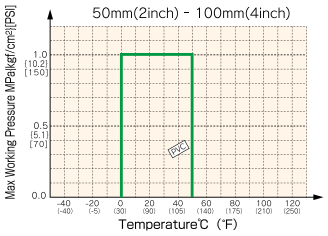
· Taking every effort to obtain satisfactory appearance, watertightness and strength, we have innovatively designed ALFALFA VALVE TYPE 82 to prevent water scattering and damage to surrounding rice plants. TYPE 82 can easily be disassembled at a site because it consists of a reduced number of parts. If 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/cm²}
End Connectors	Socket End, Flanged End
Operation	T-shaped handle, Secured handle

WORKING PRESSURE VS. TEMPERATURE

ALFALFA VALVE



DIMENSIONS TABLE

Nominal Size		d	Flanged Type					Socket Type			D1	D2	D3	E	ℓ1	H				H(full opened)			
			JIS 10K				t	d1	1/T	ℓ						Socket End		Flanged End		Socket End		Flanged End	
mm	inch		D	C	n	h										T-shaped handle	Secured handle	T-shaped handle	Secured handle	T-shaped handle	Secured handle	T-shaped handle	Secured handle
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 cmpletely shuts off the flow.

Opening Degree Indicator

The CONSTANT FLOW VALVE has indicator showing opening degree which reads the flow rate (m^3/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 reguest.
Nominal Size	15mm(1/2inch)、20mm(3/4inch)、25mm(1inch)、50mm(2inch)、80mm(3inch)、100mm(4inch)
End Connectors	Flanged End
Working Temperature	0℃ - 50℃(30°F - 120°F)
Upstream Working Pressure range	0.25MPa or less {2.6kgf/cm²}·0.25 to 0.5 MPa {2.6 - 5.1kgf/cm²} 0.5 to 0.75MPa {5.1 - 7.7kgf/cm²}·0.75 to 1.0 MPa {7.7 - 10.2kgf/cm²}
Accuracy	Full scale value ±6%(reference: water at ambient temperature)

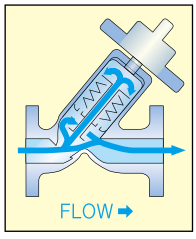
WORKING PRESSURE VS. TEMPERATURE

Unit:MPa{kgf/cm²}

Nominal Size mm	Nominal Size inch	Temp.℃(°F) / Type 0~50(30~120) 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}

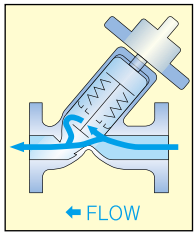
Type-A 25mm(1inch) - 80mm(3inch)

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



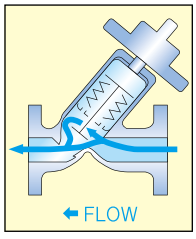
Type-B 15mm(1/2inch) - 80mm(3inch)

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



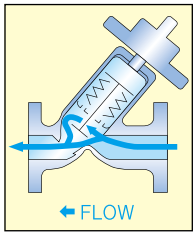
Type-C 15mm(1/2inch) - 100mm(4inch)

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



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

A large flow rate can be set

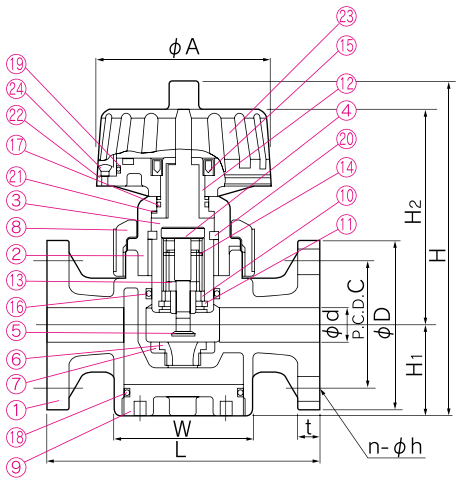


Range for preset flow rate and working differential pressure

Nominal Size	TYPE	Flow rate		Rangeability	Working differential pressure	
		GAL/min	m^3/hr		PSI	MPa{kgf/cm²}
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

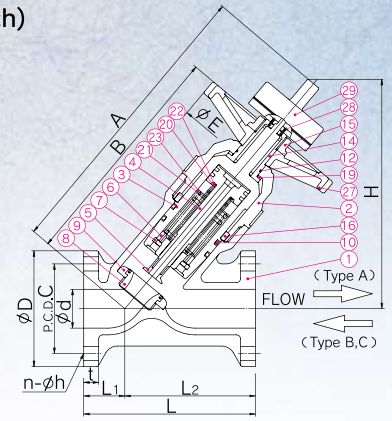
Nominal Size		d	DIN PN10				t	L	W	A	H_1	H_2	H
mm	inch		D	C	n	h							
15	1/2	16	95	65	4	14	12	160	82×82	103	51	129	197
20	3/4	20	100	75	4	14	13	160	82×82	103	53	127	197

ANSI Unit:inch

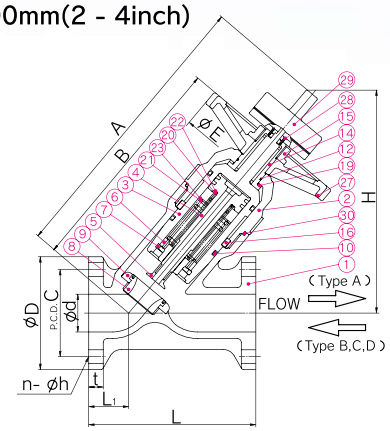
Nominal Size		d	ANSI CLASS 150				t	L	W	A	H_1	H_2	H
inch	mm		D	C	n	h							
1/2	15	0.63	3.50	2.38	4	0.63	0.47	6.30	3.23×3.23	4.06	2.01	5.08	7.76
3/4	20	0.79	3.86	2.76	4	0.63	0.51	6.30	3.23×3.23	4.06	2.09	5.08	7.76

ASAHI AV VALVE

● 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	⑲	THRUST RING	1	PP
⑤	PLUG	1	PVC	⑳	SPRING(A)	1	STAINLESS STEEL304 (With PCTFE Coated)
⑥	SPRING BASE	1	PVC	㉑	SPRING(B)	1	STAINLESS STEEL304 (With PCTFE Coated)
⑦	STOP RING	1	PVDF	㉒	WASHER(A)	1	PVC
⑧	ORIFICE	1	EPDM	㉓	WASHER(B)	1	PVC
⑨	SEAT	1	EPDM, Others	㉗	HAND WHEEL	1	PP
⑩	O-RING(A)	2	EPDM, Others	㉘	MACHINE SCREW	4	COPPER ALLOY(C3604)
⑪	O-RING(B)	1	EPDM	㉙	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.
25mm-100mm(FKM)can't shut totally.

DIMENSIONS TABLE

JIS Unit:mm

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

DIN Unit:mm

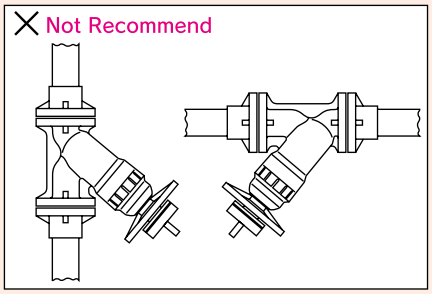
Nominal Size		d	DIN PN10				L	L_1	E	t	A	B	H
mm	inch		D	C	n	h							
25	1	25	115	85	4	14	160	40	150	14	272	201	218
50	2	52	165	125	4	18	230	55	210	20	390	309	307
80	3	78	200	160	8	18	280	70	210	22	484	387	377
100	4	100	220	180	8	18	400	85	250	22	623	483	446

ANSI Unit:inch

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	8.66	7.50	8	0.75	15.74	3.35	9.84	0.87	24.50	19.00	17.56

Note :
1) 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.

2) 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)



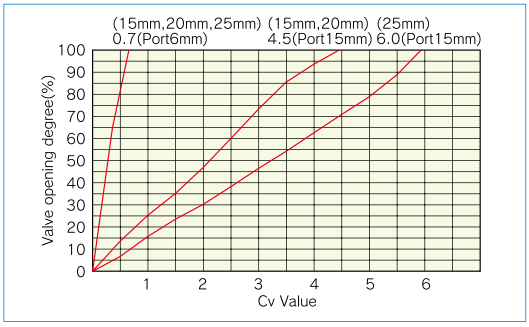
FEATURES

- 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

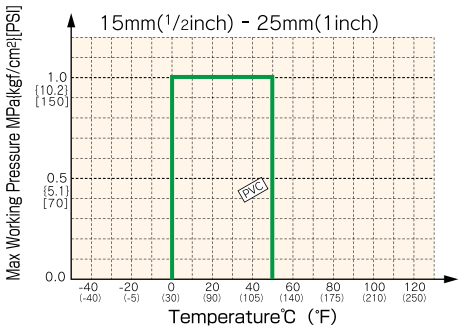
Nominal Size	15mm(1/2inch), 20mm(3/4inch)		25mm(1inch)	
Port Size(mm)	6	15	6	15
Maximum CV Value	0.7	4.5	0.7	6.0
End Connectors	Flanged End			
Type of Rubber	EPDM, Others			
Body material	PVC			
Max. Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI]			
Working Temperature	0 - 50℃(30°F - 120°F)			

SPECIFICATIONS

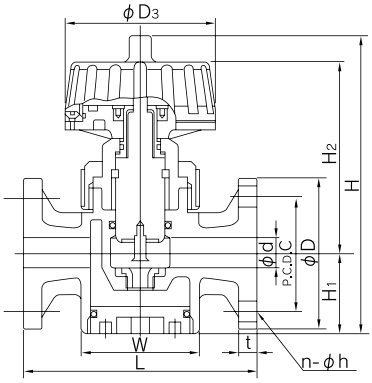


WORKING PRESSURE VS. TEMPERATURE

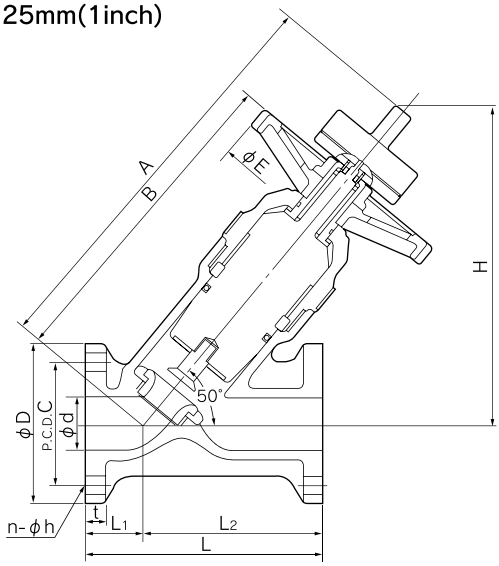
NEEDLE VALVE



● 15mm(1/2inch) ~ 20mm(3/4inch)



● 25mm(1inch)



DIMENSIONS TABLE

JIS Unit:mm

Nominal Size		d	JIS 10K				L	t	W	D3	H1	H2	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	D3	H1	H2	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	D3	H1	H2	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				L1	L2	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				L1	L2	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				L1	L2	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)



FEATURES

- Because of its plastic body, the sediment STRAINER (Y) is higly 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.

Note : Volatile liquids such as a hydrogen peroxide (H_2O_2) 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.

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/inch), 50mm(2inch),80mm(3inch),100mm(4inch)
End Connectors	Socket End, Threaded End, Flanged End
Working Temperature	0 - 50℃ (30˚F - 120˚F)
Mesh	20 mesh (30,40 & 60 Mesh Available)
Max. Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI]···15 - 50mm(1/2inch - 2inch) 0.6MPa{6.1kgf/cm²}[85PSI] ···80、100mm(3inch - 4inch)

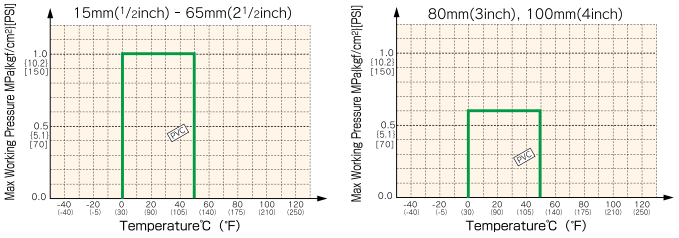
PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC	⑥	RETAINING RING	1	PVC
②	FILTER SCREEN	1	PVC	⑦	SPLIT RING	1	PVC
③	SCREEN SUPPORT	1	PVC	⑧	O-RING(A)	2	EPDM,FKM,Others
④	END CONNECTOR	2	PVC	⑨	O-RING(B)	1	EPDM,FKM,Others
⑤	UNION NUT	3	PVC	⑩	STOP RING1)	2	PVDF

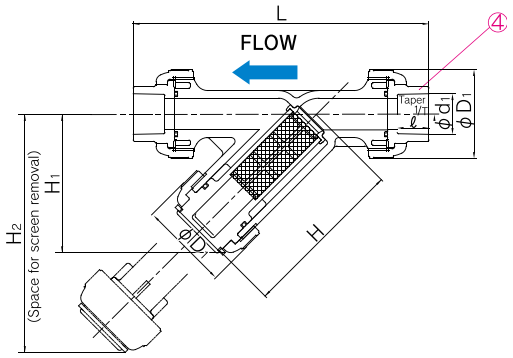
1) Used for Flanged End

WORKING PRESSURE VS. TEMPERATURE

STRAINER(Y)



DIMENSIONS (Socket End)



DIN 8063

Unit:mm

Nominal Size mm	Nominal Size inch	d	d1	ℓ	D1	L	H	H1
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
32	1 1/4	40	40	26	96	298	177	149
40	1 1/2	40	50	31	96	288	177	149
50	2	51	63	38	106	337	190	160
65	2 1/2	78	75	44	152	455	271	234
80	3	78	90	51	152	457	271	234
100	4	100	110	61	210	607	361	316

DIMENSIONS TABLE (Socket End)

JIS

Unit:mm

Nominal Size mm	Nominal Size inch	d	d1	ℓ	1/T	D1	L	H	H1	H2
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
32	1 1/4	40	38.19	30	1/34	100	298	177	149	256
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
65	2 1/2	78	76.60	61	1/48	140	487	271	234	399
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

BS

Unit:mm

Nominal Size mm	Nominal Size inch	d	d1	ℓ	D1	L	H	H1	H2
15	1/2	15	21.4	17	48	165	97	78	134
20	3/4	20	26.8	20	60	201	120	98	168
25	1	25	33.6	23	70	224	133	111	189
32	1 1/4	40	42.3	27.5	96	298	177	149	256
40	1 1/2	40	48.3	30.5	96	288	177	149	256
50	2	51	60.4	36.5	106	337	190	160	277
65	2 1/2	78	75.1	43.5	152	455	271	234	399
80	3	78	88.8	50.5	152	455	271	234	399
100	4	100	114.2	63	210	607	361	316	537

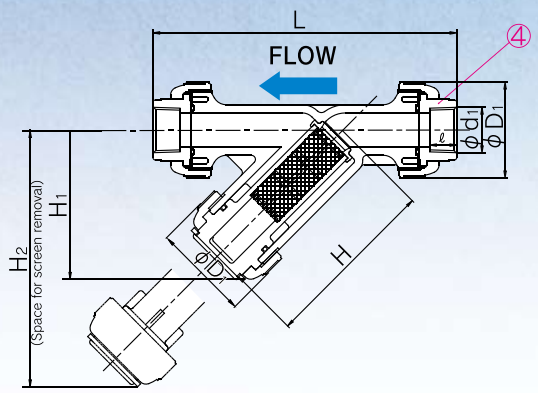
ANSI ASTM SCH80

Unit:inch

Nominal Size inch	Nominal Size mm	d	d1	d1'	ℓ	D1	L	H	H1	H2
1/2	15	0.59	0.848	0.836	0.875	1.89	6.93	3.82	3.07	5.28
3/4	20	0.79	1.058	1.046	1.000	2.36	8.31	4.72	3.86	6.61
1	25	0.98	1.325	1.310	1.125	2.76	9.37	5.24	4.37	7.44
1 1/4	32	1.57	1.670	1.655	1.250	3.94	11.73	6.97	5.87	10.08
1 1/2	40	1.57	1.912	1.894	1.375	3.94	12.13	6.97	5.87	10.08
2	50	2.01	2.387	2.369	1.500	4.17	13.31	7.48	6.30	10.91
2 1/2	65	3.07	2.889	2.868	1.752	5.98	17.95	10.67	9.21	15.71
3	80	3.07	3.516	3.492	1.875	5.98	17.83	10.67	9.21	15.71
4※	100	3.94	4.518	4.491	2.000	8.27	23.07	14.21	12.44	21.14

※ only ASTM SCH40

DIMENSIONS (Threaded End)



DIN 2999 Unit:mm

Nominal Size mm	Nominal Size inch	d	d1	ℓ	D1	L	H	H1	H2
15	1/2	15	Rp 1/2	15	48	165	97	78	134
20	3/4	20	Rp 3/4	17	60	202	120	98	168
25	1	25	Rp 1	20	70	224	133	111	189
32	1 1/4	40	Rp 1 1/4	22	96	287	177	149	256
40	1 1/2	40	Rp 1 1/2	25	96	287	177	149	256
50	2	51	Rp 2	28	106	324	190	160	277
65	2 1/2	78	Rp 2 1/2	32	152	436	271	234	399
80	3	78	Rp 3	35	152	436	271	234	399
100	4	100	Rp 4	45	210	596	361	316	537

DIMENSIONS TABLE (Threaded End)

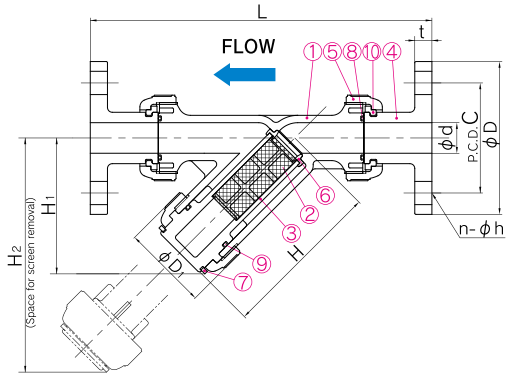
JIS B0203 Unit:mm

Nominal Size mm	Nominal Size inch	d	d2	ℓ	D1	L	H	H1	H2
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
32	1 1/4	40	Rc 1 1/4	22	100	287	177	149	256
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
65	2 1/2	78	Rc 2 1/2	32	152	436	271	234	399
80	3	78	Rc 3	35	152	436	271	234	399
100	4	100	Rc 4	45	210	596	361	316	537

ANSI/ASME BI.20.1 Unit:inch

Nominal Size inch	Nominal Size mm	d	d2	ℓ	D1	L	H	H1	H2
1/2	15	0.59	1/2-14 NPT	0.59	1.89	6.50	3.82	3.07	5.28
3/4	20	0.79	3/4-14 NPT	0.67	2.36	7.95	4.72	3.86	6.61
1	25	0.98	1-11 1/2 NPT	0.79	2.76	8.82	5.24	4.37	7.44
1 1/4	32	1.57	1 1/4-11 1/2 NPT	0.87	3.94	11.30	6.97	5.87	10.08
1 1/2	40	1.57	1 1/2-11 1/2 NPT	0.98	3.94	11.30	6.97	5.87	10.08
2	50	2.01	2-11 1/2 NPT	1.10	4.17	12.76	7.48	6.30	10.91
2 1/2	65	3.07	2 1/2-8 NPT	1.26	5.98	17.17	10.67	9.21	15.71
3	80	3.07	3-8 NPT	1.38	5.98	17.17	10.67	9.21	15.71
4	100	3.94	4-8 NPT	1.77	8.27	23.46	14.21	12.44	21.14

DIMENSIONS (Flanged End)



DIN 2501 Unit:mm

Nominal Size mm	Nominal Size inch	d	C	D	n	h	D1	L	H	H1	H2
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
32	1 1/4	40	100	140	4	16	96	336	177	149	256
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
65	2 1/2	78	145	185	4	18	152	477	271	234	399
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)

JIS 10K Unit:mm

Nominal Size mm	Nominal Size inch	d	C	D	n	h	D1	L	H	H1	H2
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
32	1 1/4	40	100	135	4	19	100	336	177	149	256
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
65	2 1/2	78	140	175	4	19	152	477	271	234	399
80	3	78	150	185	8	19	152	477	271	234	399
100	4	100	175	210	8	19	210	608	361	316	537

ANSI 150 lbs. Unit:inch

Nominal Size inch	Nominal Size mm	d	C	D	n	h	D1	L	t	H	H1	H2
1/2	15	0.59	2.38	3.50	4	0.62	1.89	8.11	0.47	3.82	3.07	5.28
3/4	20	0.79	2.75	3.88	4	0.62	2.36	10.00	0.55	4.72	3.86	6.61
1	25	0.98	3.12	4.25	4	0.62	2.76	11.02	0.55	5.24	4.37	7.44
1 1/4	32	1.57	3.50	4.61	4	0.63	3.94	13.23	0.63	6.97	5.87	10.08
1 1/2	40	1.57	3.88	5.00	4	0.62	3.94	13.23	0.63	6.97	5.87	10.08
2	50	2.01	4.75	6.00	4	0.75	4.17	14.21	0.63	7.48	6.30	10.91
2 1/2	65	3.07	5.49	7.01	4	0.75	5.98	18.78	0.71	10.67	9.21	15.71
3	80	3.07	6.00	7.50	4	0.75	5.98	18.78	0.71	10.67	9.21	15.71
4	100	3.94	7.50	9.00	8	0.75	8.27	23.94	0.71	14.21	12.44	21.14

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 (H_2O_2). 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

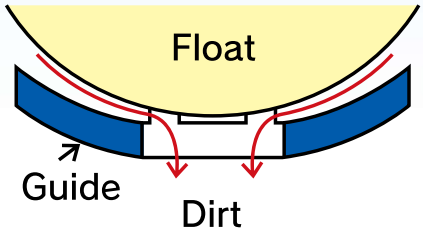
Superior Exhaust Performance
1.5 Times Larger than Cast Iron Type

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

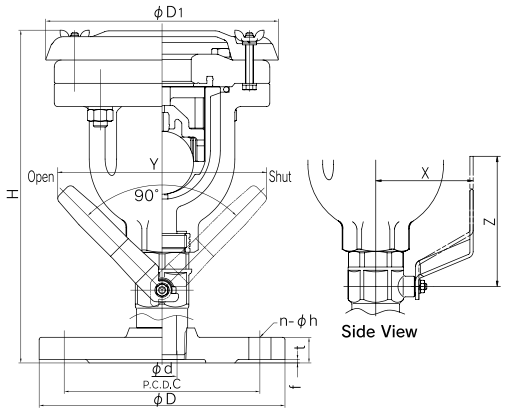
Top Bonnet Entry
Easy Inline Access to Internal Parts



■25mm (1inch)

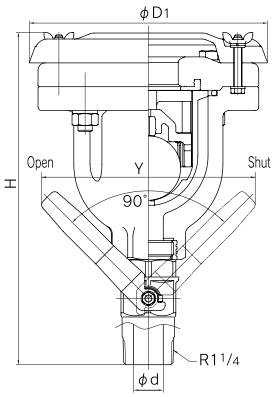


●Flanged





●Threaded



DIMENSION TABLE

Nominal Size 25mm (1inch) Unit:mm(inch)

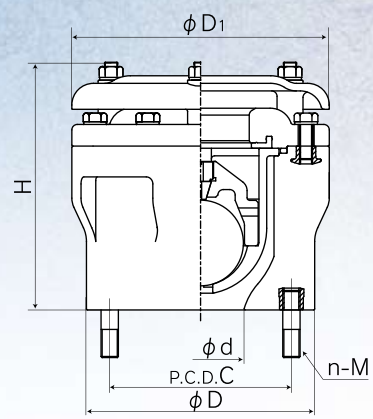
Nominal Size mm	Nominal Size inch	End Connectors	D1	H	d	D	n-φh	P.C.D.C	f	t	X	Y	Z	Weight kg	Weight Lb
25	1	Flanged (JIS 10K)	200 (7.87	298 (11.73)	25 (0.98)	211 (8.31)	4-φ19 (4-φ0.75inch)	168 (6.61)	3 (0.12)	22 (0.87)	112 (4.41)	178 (7.01)	150 (5.91)	8.8	19.4
		Male Threaded	200 (7.87)	281 (11.06)	25 (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 mm	Nominal size inch	End Connectors	Working Pressure(at R.T.) MPa{kgf/cm²}[PSI]	Max. Working Pressure MPa{kgf/cm²}[PSI]	Body material	Isalating Valve Material
25	1	Flanged Male Threaded	0.75 {7.7}	1.3 {13.3}[109]	PDCPD	C3771BE

■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	150	8-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/cm²}[PSI]	Max. Working Pressure MPa{kgf/cm²}[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

ASAHI AV VALVE AND PIPING SYSTEMS

ASAHI AV AUTOMATIC VALVES & SENSOR AND FLOW METERS

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

Asahi AV Automatic Valves

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Asahi AV sensor

Ultra Sonic Voltex Flow meter 126
Inpella Flow meter 128

ASAHI AV

AV AUTOMATIC VALVES

ASAHI AV AUTOMATIC VALVES are ideal monobloc valves that combine light-weight, compact and rigid actuators with valve body made of thermo plastic with superior corrosion and chemical resistance. Opening adjustment and proportional control are possible by use of positioners. Various optional equipments are available and can be combined to suit your piping applications.

Features

Actuators

◆ Light-Weight and Compact ◆

Reduced piping space and less labor for installation.

◆ Simple Construction ◆

High structural reliability, less maintenance and inspection.

◆ Appropriate Output Torque ◆

Energy saving by providing output that meets torque requirements for valve operation the best.

Valve Body

◆ Superior Corrosion and Chemical Resistance ◆

Usable even with strong acids or alkalis due to monobloc structure of synthetic resin.

◆ Light Weight ◆

1/5 weight of metallic valves, easy to handle.

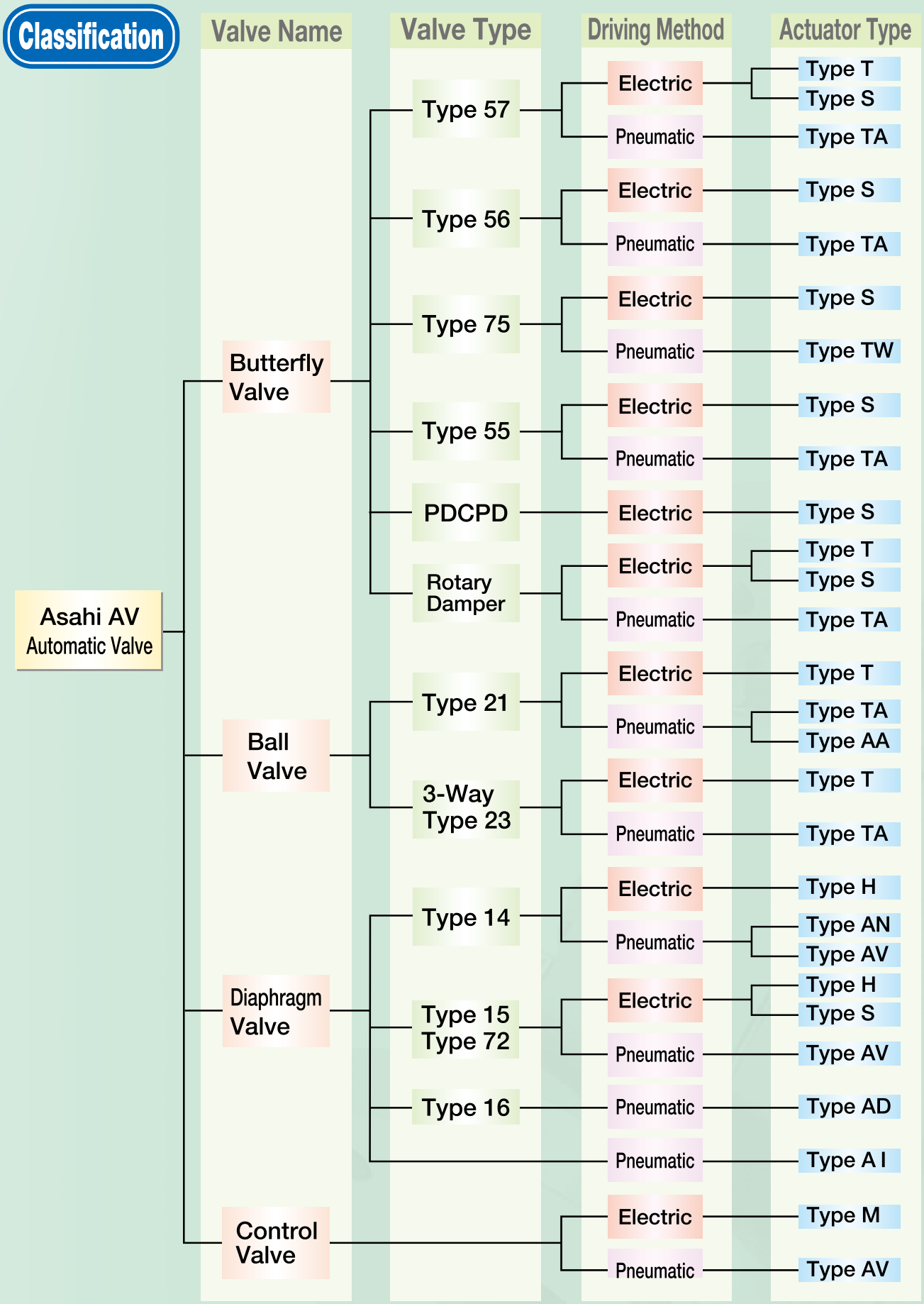
◆ Less Flow Resistance, Higher Wear Resistance ◆

Less flow resistance and good anti-abrasion property due to use of synthetic resin materials.

Application

Recommended for factory automation of piping lines
for various types of plants such as Chemical, Steel, Food, Fishery, Marine,
Hot spring, Water, Sewage, Irrigation, Semi-Conductor,
Bio-chemical, Pharmaceutical and so on.

AV AUTOMATIC VALVES



*Note) Type H is available only with single-phase source.
Ball Valve Electric Actuated Type T is available only with single-phase source.
Type TW are available only as double acting model.
Butterfly Valve and Diaphragm Valve of the electric actuated type S are available only with three-phase source.



Diaphragm Valve Type 14, Electric Actuated Model Type H (Page 86)



True Union Diaphragm Valve Type 14, Electric Actuated Model Type H (Page 87)



Diaphragm Valve Type 15, Electric Actuated Model Type H(125-150mm) (Page 88)



Diaphragm Valve Type 15, 72, Electric Actuated Model Type S (Page 89)



Diaphragm Valve Type AI, Pneumatic Actuated Model Type AI (Page 94)



True Union Diaphragm Valve Type AI, Pneumatic Actuated Model Type AI (Page 95)



Diaphragm Valve Type 16, Pneumatic Actuated Model Type AD (Page 96)



Ball Valve Type 21, Electric Actuated Model Type T (15-50mm) (Page 98)



3-Way Ball True Union Ball Valve Type 23, Pneumatic Actuated Model Type TA (Page 106)



Butterfly Valve Type 57, Electric Actuated Model Type T (Page 108)



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Diaphragm Valve Type 14, Pneumatic Actuated Model Type AV (Page 91)



True Union Diaphragm Valve Type 14, Pneumatic Actuated Model Type AN (Page 92)



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Ball Valve Type 21, Electric Actuated Model Type T (65-100mm) (Page 99)



3-Way Ball True Union Ball Valve Type 23, Electric Actuated Model Type T (Page 100)



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Ball Valve Type 21, Pneumatic Actuated Model Type AA (Page 104)



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PDCPD Butterfly Valve, Electric Actuated Model Type S (700-1200mm) (Page 112)



Butterfly Valve Type 55, Electric Actuated Model Type T (Page 113)



Butterfly Valve Type 55, Electric Actuated Model Type S (Page 114)



Rotary Damper Type 57, Electric Actuated Model Type S (Page 119)



Rotary Damper Type 57, Pneumatic Actuated Actuated Model TA (Page 120)



Control Valve, Electric Actuated Model Type M (Page 121)



Control Valve, Electric Actuated Model Type M (Page 122)

Product Table

Butterfly Valves

Valve Type		Type 57									Type 56			
Driving Method		Electric Actuator						Pneumatic Actuator			Electric Actuator		Pneumatic Actuator	
		1 ϕ AC100V/AC200V			3 ϕ AC200V/AC400V			Double Acting Air to Open Air to Close			3 ϕ AC200V/AC400V		Double Acting Air to Open Air to Close	
Actuator Type		Type T			Type S			Type TA			Type S		Type TA	
Body Material		PVC	PP	PVDF	PVC	PP	PVDF	PVC	PP	PVDF	PP	PVDF	PP	PVDF
Disc Material		PP	PP	PVDF	PP	PP	PVDF	PP	PP	PVDF	PP	PVDF	PP	PVDF
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		108			109			115			110		115	

Valve Type		Type 75				Type 55		
Driving Method		Electric Actuator		Pneumatic Actuator		Electric Actuator		Pneumatic Actuator
		3 ϕ AC200V/ AC400V		Double Acting		1 ϕ AC100V/ AC200V	3 ϕ AC200V/ AC400V	Double Acting Air to Open Air to Close
Actuator Type		Type S		Type TW		Type T	Type S	Type TA
Body Material		PP	PVDF	PP	PVDF	FCD-S		
Disc Material		PP	PVDF	PP	PVDF	PTFE		
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		110		116		113	114	117

Valve Type		Rotary Damper								
Driving Method		Electric Actuator						Pneumatic Actuator		
		1 ϕ AC100V/AC200V			3 ϕ AC200V/AC400V			Double Acting Air to Open Air to Close		
Actuator Type		Type T			Type S			Type TA		
Body Material		PVC	PP	PVDF	PVC	PP	PVDF	PVC	PP	PVDF
Disc Material		PP	PP	PVDF	PP	PP	PVDF	PP	PP	PVDF
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		118			119			120		

Valve Type		PDCPD Butterfly Valve
Driving Method		Electric Actuator
		3 ϕ AC200V/AC400V
Actuator Type		Type S
Body Material		PDCPD
Disc Material		PDCPD
Nominal Size mm (inch)	700 (28)	○
	800 (32)	○
	900 (36)	○
	1000 (40)	○
	1100 (44)	○
	1200 (48)	○
Page		112

Note : Single Phase = 1 ϕ /Three Phase = 3 ϕ

Product Table

Diaphragm Valves

Valve Type		Type 14						True Union Type 14						Type 15, Type 72							
Driving Method		Electric Actuator		Pneumatic Actuator				Electric Actuator		Electric Actuator		Pneumatic Actuator		Electric Actuator				Pneumatic Actuator			
		1 ϕ AC100V/ AC200V		Double Acting Air to Open Air to Close				1 ϕ AC100V/ AC200V		3 ϕ AC200V/ AC400V		Double Acting Air to Open Air to Close		1 ϕ AC100V/ AC200V		3 ϕ AC200V/ AC400V		Double Acting		Air to Open Air to Close	
Actuator Type		Type H		Type AN		Type AV		Type H		Type H		Type AN		Type H		Type S		Type AV		Type AV	
Body Material		PVC, C-PVC, PP, PVDF		PVC, C-PVC, PP, PVDF		PVC, C-PVC, PP, PVDF		PVC, C-PVC, PP, PVDF		PVC, C-PVC, PP, PVDF		PVC, C-PVC, PP, PVDF		PVC, PP, PVDF		PVC, PP, PVDF		PVC, PP, PVDF		PVC, PP, PVDF	
Disc Material		Rubber	PTFE	Rubber	PTFE	Rubber	PTFE	Rubber	PTFE	Rubber	PTFE	Rubber	PTFE	Rubber	PTFE	Rubber	PTFE	Rubber	PTFE	Rubber	PTFE
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)※1	–	–	–	–	–	–	–	–	–	–	–	–	○	○	○	○	○	○	○	○
	150 (6)※1	–	–	–	–	–	–	–	–	–	–	–	–	○	○	○	○	○	○	○	○
	200 (8)※2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	○	○	○	○		
	250 (10)※2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	○	○	○	○	–	–
Page		86		90		91		87		87		92		88		89		93		93	

Note : ※1 is Diaphragm valve Type 15.
※2 is Diaphragm valve Type 72.

Diaphragm Valves

Valve Type		Type AI	True Union Type AI	Type 16
Driving Method		Pneumatic Actuator	Pneumatic Actuator	Pneumatic Actuator
		Double Acting Air to Open Air to Close	Double Acting Air to Open Air to Close	Double Acting Air to Open
Actuator Type		Type AI	Type AI	Type AD
Type of Connection		Flanged End	Threaded End Socket End	Flanged End Threaded End Socket End
Body Material		PVC, C-PVC, PP, PVDF	PVC, C-PVC, PP, PVDF	PVC
Nominal Size mm (inch)	15 (1/2)	○	○	○
	20 (3/4)	○	○	○
	25 (1)	○	○	○
	40 (1 1/2)	○	○	○
	50 (2)	○	○	○
Page		94	95	96 · 97

Ball Valves Type 21

Driving Method		Electric Actuator			Pneumatic Actuator						Pneumatic Actuator					
		1 ϕ AC100V/AC200V			Double Acting			Air to Open · Air to Close			Double Acting			Air to Open · Air to Close		
Actuator Type		Type T			Type TA						Type AA					
Type of Connection		Flanged End Threaded End	Socket End		Flanged End Threaded End	Socket End		Flanged End Threaded End	Socket End		Flanged End Threaded End	Socket End		Flanged End Threaded End	Socket End	
Body material		PVC, C-PVC, PP, PVDF	PVC, C-PVC, PVDF	PP	PVC, C-PVC, PP, PVDF	PVC, C-PVC, PVDF	PP	PVC, C-PVC, PP, PVDF	PVC, C-PVC, PVDF	PP	PVC, C-PVC, PP, PVDF	PVC, C-PVC, PVDF	PP	PVC, C-PVC, PP, PVDF	PVC, C-PVC, PVDF	PP
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		98 · 99			102 · 103						104 · 105					

3-Way Ball Valves Type 23

Driving Method	Electric Actuator	Pneumatic Actuator
	1 ϕ AC100V/AC200V	Double Acting Air to Open Air to Close
Actuator Type	Type T	Type TA
Type of Connection	Flanged End Threaded End Socket End	Flanged End Threaded End Socket End
Body Material	PVC, C-PVC, PP, PVDF	PVC, C-PVC, PP, PVDF
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	100 · 101	106 · 107

Control Valves

Driving Method		Electric Actuator		Pneumatic Actuator	
		1 ϕ AC100V/ AC200V/DC24V		Air to Open/ Double Acting	
Actuator Type		Type M		Type AV	
Type of Connection		Flanged End		Flanged End	
Body Material		PVC	PVDF	PVC	PVDF
Nominal Size mm (inch)	15 (1/2)	○	○	○	○
	25 (1)	○	○	○	○
	50 (2)	○	–	○	–
	80 (3)	○	–	○	–
	100 (4)	○	–	○	–
Page		121 · 122		123 · 124	

Note : Single Phase = 1 ϕ ,Three Phase = 3 ϕ

Outline of Asahi AV Valve

⚠PRECAUTIONS FOR PIPING WORKS

①Install AV Automatic valve with valve supports. Otherwise, valves may be damaged due to application of excess force.

②Use AV gasket to prevent leakage from flange surfaces

③Do not use electrical connections that enable simultaneous operation of multiple electric actuated valves arranged in parallel using one on/off switch (or contact relay) (See Figure-2). Provide on/off switches (or contact relays) for each valve (See Figure-1).

④Asahi AV automatic valves are not of the immersion type. They cannot be used in locations where they may be immersed in water.

⑤Keep sufficient space for maintenance and manual operation.

⑥If piping is installed out-door, prepare the roof to prevent rain from penetrating the valves

⑦For other details of valve installation, please refer to "Mounting Procedure for Asahi AV Products" and "Technical information on Asahi AV Valves"

⚠MAINTENANCE

①Asahi AV automatic valves need regular inspection at least once a year to ensure accurate operation and long life.
Please refer to the provided Operation Manual.

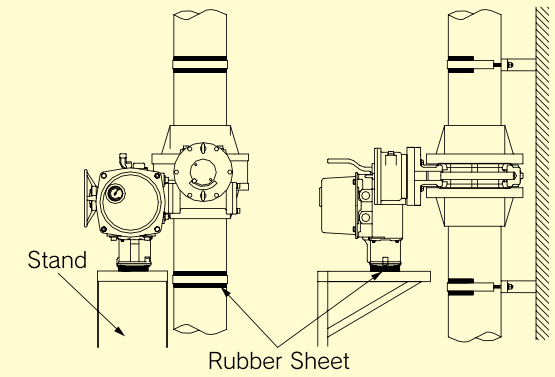
②Do not disassemble the actuator. We are unable to assume any responsibility in the case that human injury or property damage is caused due to disassemble or repair of an actuator conducted without our consent. Therefore, if any abnormality is found, please consult us.

⚠SPECIAL SPECIFICATIONS

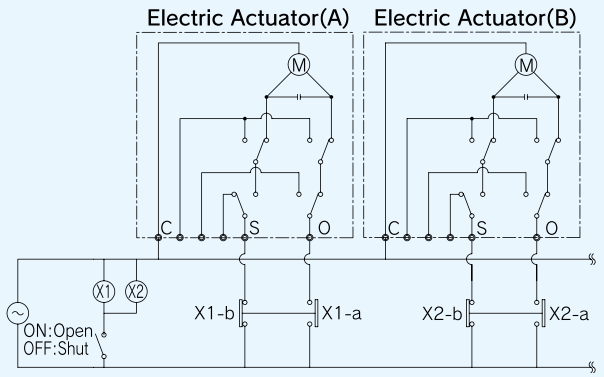
①We select the correct materials for valve body, diaphragm, seat, O-ring etc. depending on the operating conditions.
Please indicate the operating conditions including type of fluid, temperature, pressure and slurry.

②Asahi AV automatic valves can be provided to meet other special specifications than those specified in this catalog.

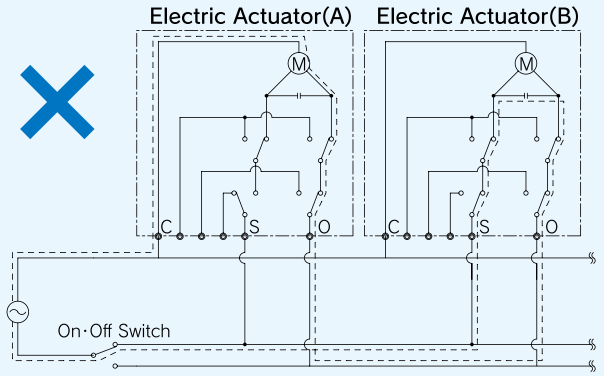
■Sample Installation with Support



[Figure-1]Correct Example



[Figure-2]Incorrect Example



※·····Indicates the current flow when electric actuated valve B is not fully opened due to failure.

Applicable electric actuated valves···Type T, Type S, Type H, Type M

Reason·····Unless all electric actuated valves are fully opened or closed simultaneously, current will flow through the condensers, which will generate hunting or keep the current flowing without actuating the limit switch and thus heat up the motors.

Outline of Asahi AV Valve

For Pneumatic Actuated Valves



*Photo shows Type TA



①

▲Solenoid Valve

Changes supply direction of the air by use of electric signals and controls open & close action of the actuator.



②

▲Filter Regulator

Removes dust and moisture in compressed air and reduces the pressure to the operating pressure level.



③

▲Speed Controller

Adjusts the open/close speed of the valve.



④

▲Limit Switch Box

Detects the open & close position of the valve, turns on display lamps for the control system and actuates other actions by relay.



⑤

▲Positioner

Controls the opening degree of the valve in response to the air signal or electric signal.



⑥

▲Manual Override

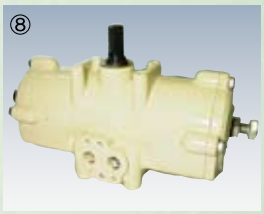
Provided on regular/reverse operation actuators. If the compressed air supply is suspended, enables open & close valve operation to be performed manually.



⑦

▲Adjustment Mechanism for Opening Position

Adjusts the opening position.



⑧

▲Special Painting

Protects the actuator from causticity atmosphere.

For Electric Actuated Valves (Reference)



*Photo Shows Type S



①

▲Potentiometer

Converts the degree of valve opening into a resistance value, which is fed back to an electrically operated positioner etc.



②

▲E-E Positioner

Provided on valves used as control valves for temperature, flow rate, PH etc. Receives resistance value from the potentiometer.



③

▲Space Heater

Used to prevent the actuator from freezing.



④

▲Output Contact Limit Switches

Fitted in addition to the ordinary limit switch. Picks up the signal and actuates other operations.

ASAHI AV VALVE

Diaphragm Valve Type14 (Electric Actuated Type H)15mm-100mm(1/2inch-4inch)

Body Material
PVC
C-PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM
Viflon C (FKM-C)
Viflon F (FKM-F)

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Power Source
Single-Phase
AC100V/200V

Equipment
Manual Operation Mechanism
(Handle is sold separately.)
Space Heater
Output Contact Limit Switches
Indicator



FEATURES

- In addition to the ordinary Open/Close Limit Switches, additional limit Switch is built in for double safety.
- Large Opening Indicator is easy to read.

OPTIONAL EQUIPMENT

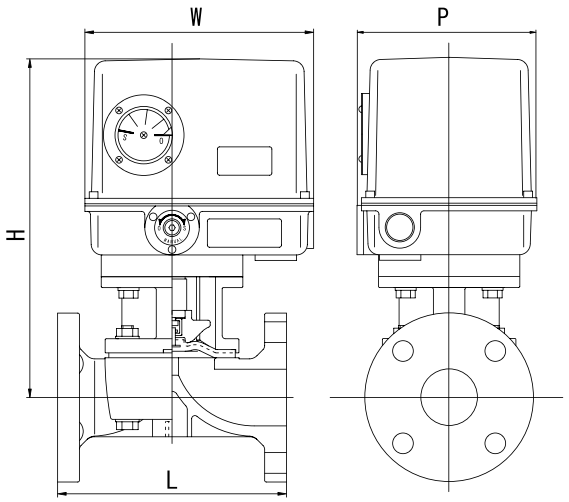
Combination No.	1
Space Heater	●
Output Contact Limit Swiches	●

ACTUATOR SPECIFICATION

Nominal Size mm(inch)		15 (1/2inch)	20 (3/4inch)	25 (1inch)	32 (1 1/4inch)	40 (1 1/2inch)	50 (2inch)	65 (2 1/2inch)	80 (3inch)	100 (4inch)
Actuator Type		ED-11H						ED-21H		
Cycle Time 50/60Hz(seconds)		20/16		24/20		43/36	51/43	38/32	47/39	56/47
Motor Output(W)		20						60		
Motor Starting Current(A) 50/60Hz	100V	0.69/0.7						2.3/2.2		
	200V	0.3/0.3						1.15/1.1		
Motor Rated Current(A) 50/60Hz	100V	0.5/0.5						1.5/1.8		
	200V	0.25/0.25						0.8/0.8		
Number of revolutions of manual operating handle		21		25		44	50	76	94	112
Limit Switch Capacity		AC 250V 10A								
Protective Structure		JIS C 0920 Waterjet-proof Type								
Cable Connector Nominal Size		2-G 3/4								
Motor Pole(P)		4								
Motor Insulation		E Class								
Motor Time Rating(minute)		30								

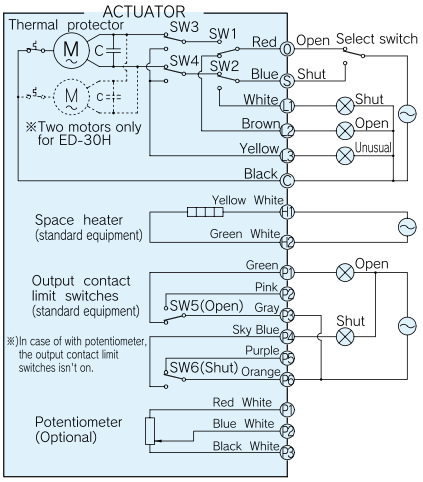
* for the actuator with lubricant free valves with a positioner or a potentiometer consult near Asahi dealer.

DIMENSIONS FIGURE

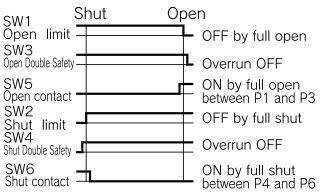


SCHEMATIC DIAGRAM

WIRING DIAGRAM

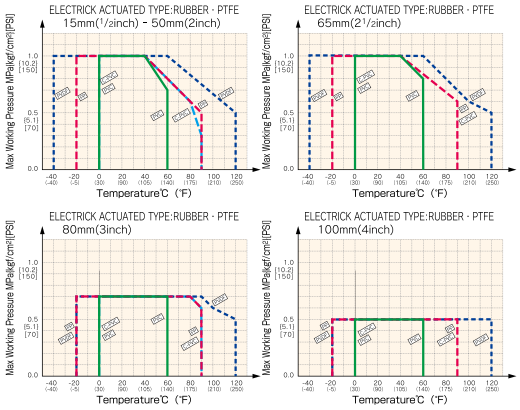


Switching Chart



NOTE. This circuit diagram shows that the position of the opening action has come to an end.

WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size			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)
L	JIS		110 (4.33)	120 (4.72)	130 (5.12)	142 (5.59)	180 (7.09)	210 (8.27)	250 (9.84)	280 (11.02)	340 (13.39)
	DIN		130 (5.12)	150 (5.91)	160 (6.3)	180 (7.09)	200 (7.87)	230 (9.06)	290 (11.42)	310 (12.2)	350 (13.78)
	ANSI	A Standard	110 (4.33)	120 (4.72)	130 (5.12)	– –	180 (7.09)	210 (8.27)	250 (9.84)	280 (11.02)	340 (13.39)
		G Standard	108 (4.25)	149 (5.88)	149 (5.88)	213 (8.38)	176 (6.94)	202 (7.94)	– –	263 (10.37)	328 (12.93)
H			284 (11.18)	286 (11.26)	291 (11.46)	294.5 (11.59)	302.2 (11.90)	311.2 (12.25)	371 (14.61)	388 (15.28)	418 (16.46)
W			210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	240 (9.45)	240 (9.45)	240 (9.45)
P			164 (6.46)	164 (6.46)	164 (6.46)	164 (6.46)	164 (6.46)	164 (6.46)	184 (7.24)	184 (7.24)	184 (7.24)

True Union Diaphragm Valve Type14 (Electric Actuated Type H)15mm-50mm(1/2inch-2inch)

Body Material
PVC
C-PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM
Viflon C (FKM-C)
Viflon F (FKM-F)

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp

Power Source
Single-Phase
AC100V/200V

Equipment
Manual Operation Mechanism
(Handle is sold separately.)
Space Heater
Output Contact Limit Switches
Indicator



FEATURES

- In addition to the ordinary On-Off Limit Switch, additional Limit Switch is built in for safety.
- Manual Operating Handle is provided as a Standard Equipment. The Handle cannot be turned during electric operation due to the planetary Gear Mechanism.

OPTIONAL EQUIPMENT

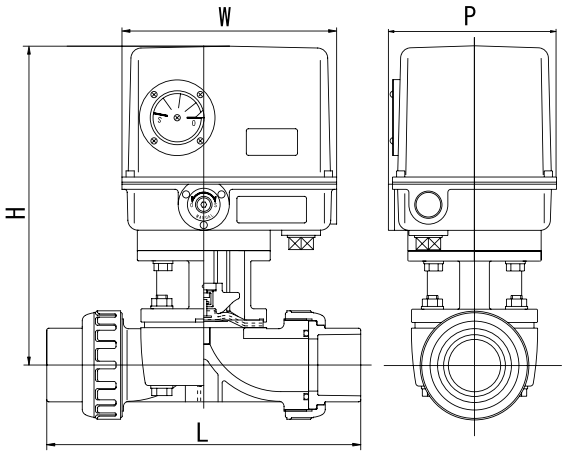
Combination No.	1
Space Heater	●
Output Contact Limit Swiches	●

ACTUATOR SPECIFICATION

Nominal Size mm(inch)		15 (1/2inch)	20 (3/4inch)	25 (1inch)	32 (1 1/4inch)	40 (1 1/2inch)	50 (2inch)
Actuator Type		ED-11H					
Cycle Time 50/60Hz(seconds)		20/16		24/20		43/36	51/43
Motor Output(W)		20					
Motor Starting Current(A) 50/60Hz	100V	0.69/0.7					
	200V	0.3/0.3					
Motor Rated Current(A) 50/60Hz	100V	0.5/0.5					
	200V	0.25/0.25					
Number of revolutions of manual operating handle		21		25		44	50
Limit Switch Capacity		AC 250V 10A					
Protective Structure		JIS C 0920 Waterjet-proof Type					
Cable Connector Nominal Size		2-G 3/4					
Motor Pole(P)		4					
Motor Insulation		E Class					
Motor Time Rating(minute)		30					

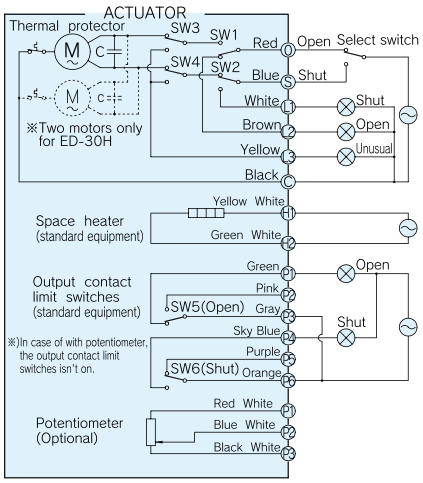
* for the actuator with lubricant free valves with a positioner or a potentiometer consult near Asahi dealer.

DIMENSIONS FIGURE

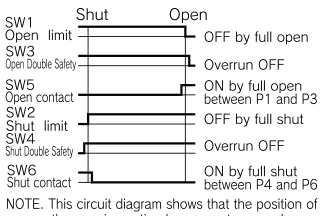


SCHEMATIC DIAGRAM

WIRING DIAGRAM

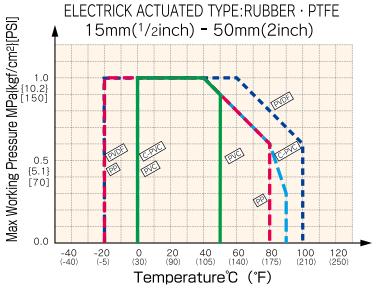


Switching Chart



NOTE. This circuit diagram shows that the position of the opening action has come to an end.

WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size				15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
Threaded End	L	PVC, C-PVC	JIS	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	281 (11.06)
			DIN	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	281 (11.06)
			ANSI	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	281 (11.06)
		PP, PVDF	JIS	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	278 (10.95)
			DIN	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	278 (10.95)
			ANSI	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	278 (10.95)
Socket End		PVC, C-PVC	JIS	134 (5.28)	156 (6.14)	186 (7.32)	200 (7.87)	271 (10.67)	303 (11.93)
			DIN	128 (5.04)	147 (5.79)	172 (6.77)	188 (7.4)	246 (9.69)	294 (11.57)
			ANSI	139 (5.47)	157 (6.18)	186 (7.32)	202 (7.95)	266 (10.47)	293 (11.54)

Nominal Size				15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
Socket End	L	PP	JIS	134 (5.28)	154 (6.06)	182 (7.17)	– –	253 (9.96)	275 (10.83)
			DIN	125 (4.92)	141 (5.55)	164 (6.46)	177 (6.97)	231 (9.09)	274 (10.79)
			ANSI	138 (5.43)	155 (6.09)	184 (7.24)	198 (7.80)	261 (10.28)	293 (11.54)
		PVDF	DIN	125 (4.92)	141 (5.55)	164 (6.46)	177 (6.97)	231 (9.09)	274 (10.79)
			ANSI	138 (5.43)	155 (6.09)	184 (7.24)	198 (7.80)	261 (10.28)	293 (11.54)
Common			H	284 (11.18)	286 (11.26)	291 (11.46)	295 (11.59)	302.2 (11.90)	311.2 (12.25)
			W	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)
			P	164 (6.46)	164 (6.46)	164 (6.46)	164 (6.46)	164 (6.46)	164 (6.46)

ASAHI AV VALVE

Diaphragm Valve Type15 (Electric Actuated Type H)125mm,150mm(5inch,6inch)

Body Material
PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Power Source
Single-Phase
AC100V/110V/200V/220V

Equipment
Manual Operation Mechanism
Space Heater
Output Contact Limit Switches
Indicator



FEATURES

- In addition to the ordinary On-Off Limit Switch, additional Limit Switch is built in for safety.
- Manual Operating Handle is provided as a Standard Equipment. The Handle cannot be turned during electric operation due to the planetary Gear Mechanism.

OPTIONAL EQUIPMENT

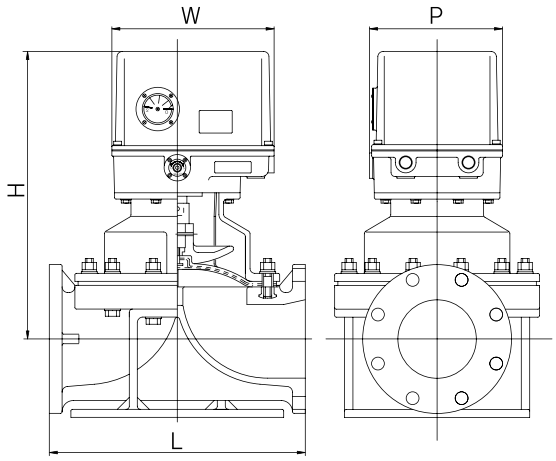
Combination No.	1
Space Heater	●
Output Contact Limit Swiches	●

●Standard Equipment

ACTUATOR SPECIFICATION

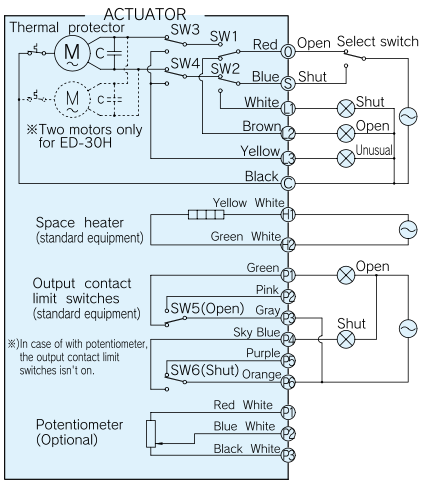
Nominal Size mm(inch)		125(5inch)	150(6inch)
Actuator Type		ED-30H	
Cycle Time 50/60Hz(seconds)		48/40	
Motor Output(W)		140	
Motor Starting Current(A) 50/60Hz	100V	5.00/4.80	
	110V	1.40/1.46	
	200V	2.50/2.40	
	220V	0.70/0.70	
Motor Rated Current(A) 50/60Hz	100V	3.00/3.00	
	110V	2.63/2.40	
	200V	1.50/1.50	
	220V	1.10/1.10	
Number of revolutions of manual operating handle		128	
Limit Switch Capacity		AC 250V 3A	
Protective Structure		JIS C 0920 drip-proof type	
Cable Connector Nominal Size		4-G 3/4	
Motor Pole(P)		4	
Motor Insulation		E Class	
Motor Time Rating(minute)		30	

DIMENSIONS FIGURE

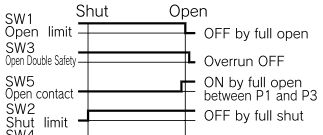


SCHEMATIC DIAGRAM

WIRING DIAGRAM

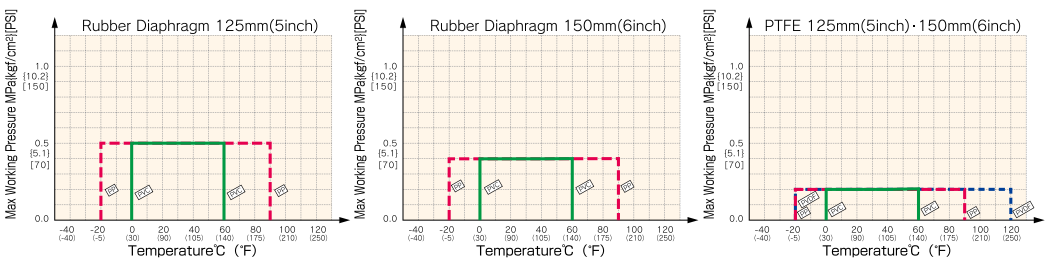


Switching Chart



NOTE. This circuit diagram shows that the position of the opening action has come to an end.

WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size		125 (5)	150 (6)
L	JIS	410 (16.14)	480 (18.90)
	DIN	400 (15.75)	480 (18.90)
	ANSI	410 (16.14)	480 (18.90)
H		510 (20.08)	550 (21.65)
W		310 (12.20)	310 (12.20)
P		254 (10.00)	254 (10.00)

Diaphragm Valve Type 15,72(Electric Actuated Type S)

Type15:125mm,150mm(5inch,6inch)
Type72:200mm,250mm(8inch,10inch)

Body Material
PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Power Source
Three-Phase
AC200V/400V

Equipment
Manual Operation Mechanism
(Handle is sold separately.)
Torque Swiches
Space Heater
Indicator

Option
Output Contact Limit Swiches
Potentiometer
E-E Positioner
R/I Transmitter



FEATURES

- Standard Torque Switch protects valves from Overload.
- Automatic return does not require Clutch Operation after Manual Operation.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4
Space Heater	●	●	●	●
Output Contact Limit Swiches	○	–	–	–
Potentiometer	–	○	○	○
R-I Transmitter	–	–	○	○
E-E Positioner	–	–	–	○

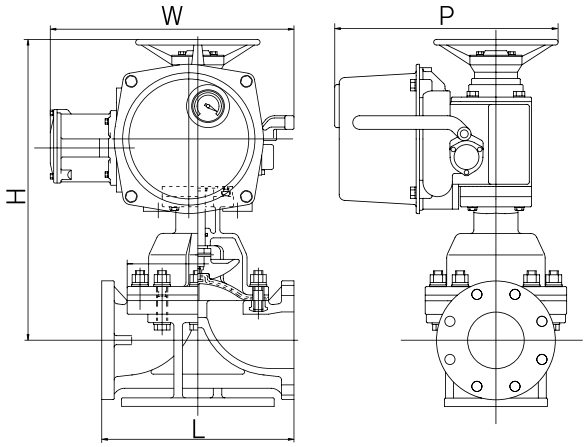
●Standard Equipment
※Actuator Type is to be changed.

ACTUATOR SPECIFICATION

Nominal Size mm(inch)		125 (5inch)	150 (6inch)	200 (8inch)	250 (10inch)
Actuator Type		LTRM-01	LTMD-01		LTMD-02
Cycle Time 50/60Hz(seconds)		29/24	54/46.5	75.5/63	90/75
Motor Output(W)		400	400		750
Motor Starting Current(A) 50/60Hz	200V	8.8/8.3	8.0/7.4		15.6/15.2
	400V	4.4/4.1	4.0/3.7		7.8/7.6
Motor Rated Current(A) 50/60Hz	200V	3.0/2.4	2.5/2.2		4.4/4.0
	400V	1.5/1.2	1.3/1.1		2.2/2.0
Number of revolutions of manual operating handle		10	10	16	18
Limit Switch Capacity		AC 250V 5A			
Protective Structure		IP55			
Cable Connector Nominal Size		2-G1	Operating circuit:2G1 Motor circuit:G3/4		
Motor Pole(P)		4			
Motor Insulation		E Class			
Motor Time Rating(minute)		15			

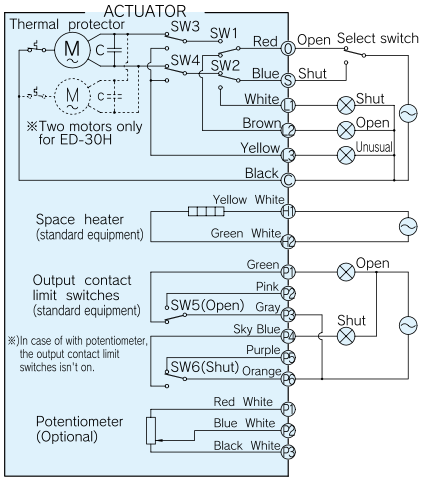
※In the case of Actuator with Electric Positioner, the model number is followed by "Z".

DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

WIRING DIAGRAM

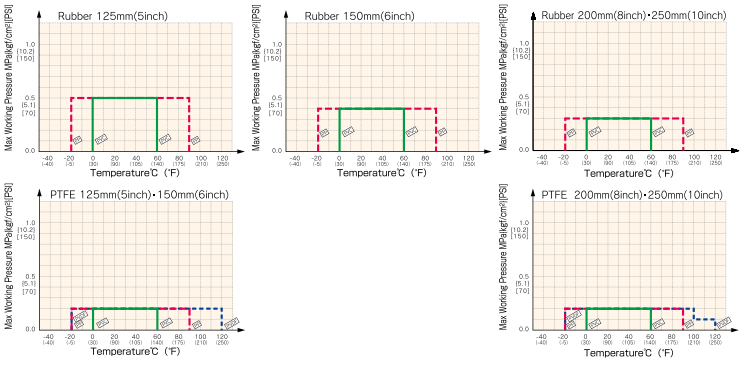


Switching Chart

	Shut	Open
SW1 Open limit		OFF by full open
SW3 Open Double Safety		Overrun OFF
SW5 Open contact		ON by full open between P1 and P3
SW2 Shut limit		OFF by full shut
SW4 Shut Double Safety		Overrun OFF
SW6 Shut contact		ON by full shut between P4 and P6

NOTE. This circuit diagram shows that the position of the opening action has come to an end.

WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size		125 (5)	150 (6)	200 (8)	250 (10)
L	JIS	410 (16.14)	480 (18.90)	570 (22.44)	680 (26.77)
	DIN	400 (15.75)	480 (18.90)	600 (23.62)	730 (28.74)
	ANSI	410 (16.14)	480 (18.90)	570 (22.44)	680 (26.77)
H		590 (23.23)	714 (28.11)	802 (31.57)	969 (38.15)
W		430 (16.93)	635 (25.00)	635 (25.00)	675 (26.57)
P		395 (15.55)	522 (20.55)	522 (20.55)	557 (21.93)

ASAHI AV VALVE

Diaphragm Valve Type 14 (Pneumatic Actuated Type AN)15mm-50mm(1/2inch-2inch)

Body Material
PVC
C-PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM
Viflon C (FKM-C)
Viflon F (FKM-F)

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
Indicator

Option
- Filter Regulator
- Solenoid Valve
- Limit Switch ※1
- Speed Controller
- Manual Override (for only air to open)
- Positioner

※1:Working Pressurt with Limit Switch is 0.6MPa at maximum.



FEATURES
- The Actuator made of resin is Light and Compact.
- NAMUR Standard is applied for Air Piping.
- All optional Equipment (except positioner) can easily be added or removed in the field.
- A Closing Travel Stop Mechanism is Standard.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (electric-air, air-air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Actuator Type	AN-1DA		AN-2DA		AN-3DA	AN-4DA
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	2.6	2.6	2.7	2.7	9.6	9.8
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Open]

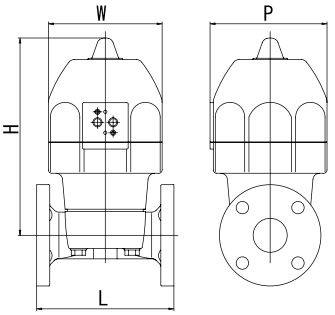
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Actuator Type	AN-1AO		AN-2AO		AN-3AO	AN-4AO
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	0.8	0.8	0.8	0.8	3.4	3.4
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Close]

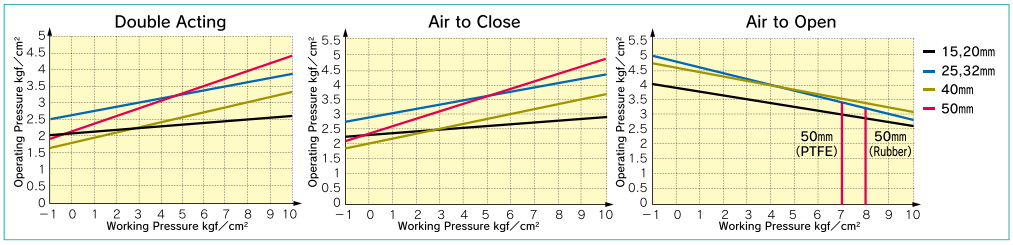
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Actuator Type	AN-1AS		AN-2AS		AN-3AS	AN-4AS
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	1.8	1.8	1.9	1.9	6.1	6.3
Air Supply Bore	Rc 1/4					

* for the actuator with lubricant free valves consult near Asahi dealer.

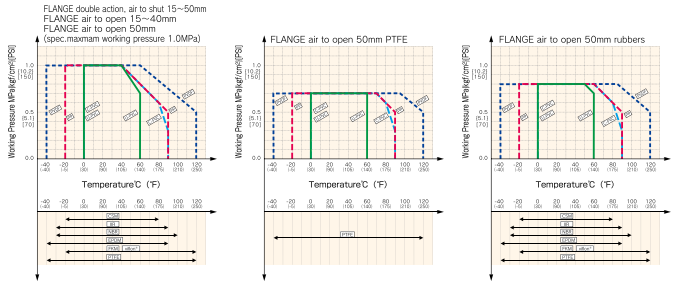
DIMENSIONS FIGURE



OPERATION PRESSURE vs WORKING PRESSURE



WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size			15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
L	JIS		110(4.33)	120(4.72)	130(5.12)	142(5.59)	180(7.09)	210(8.27)
	DIN		130 (5.12)	150 (5.91)	160 (6.30)	180 (7.09)	200 (7.87)	230 (9.06)
	ANSI	A Standard	110 (4.33)	120 (4.72)	130 (5.12)	– –	180 (7.09)	210 (8.27)
		G Standard	108 (4.25)	149 (5.88)	149 (5.88)	213 (6.38)	176 (6.94)	202 (7.94)
H			186 (7.32)	188 (7.4)	193 (7.6)	197 (7.76)	293 (11.54)	302 (11.89)
W			130 (5.12)	130 (5.12)	130 (5.12)	130 (5.12)	174 (6.85)	174 (6.85)
P			133 (5.24)	133 (5.24)	133 (5.24)	133 (5.24)	179 (7.05)	179 (7.05)

Diaphragm Valve Type 14 (Pneumatic Actuated Type AV)65mm-100mm(2½inch-4inch)

Body Material
PVC
C-PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM
Viflon C (FKM-C)
Viflon F (FKM-F)

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
Indicator

Option
· Filter Regulator
· Solenoid Valve
· Limit Switch
· Speed Controller
· Manual Override
※ for air to open
· Positioner



FEATURES

- A Closing Travel Stop mechanism is standard.
- NAMUR Standard is applied for air piping.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	○	○	–	○	○	○	○	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	65(2½inch)	80(3inch)	100(4inch)
Actuator Type	–	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}		
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	10.3	11.9	20.7
Air Supply Bore	Rc 1/4		

ACTUATOR SPECIFICATION [Air to Open]

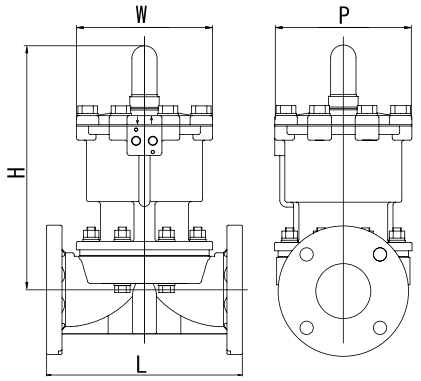
Nominal Size mm(inch)	65(2½inch)	80(3inch)	100(4inch)
Actuator Type	–	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}		
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	10.6	15.9	34.3
Air Supply Bore	Rc 1/4		

ACTUATOR SPECIFICATION [Air to Close]

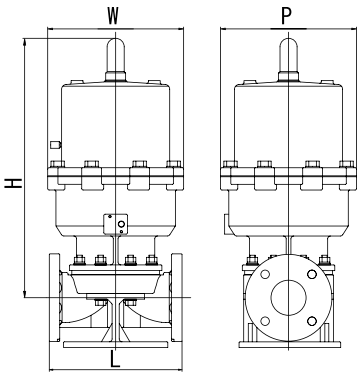
Nominal Size mm(inch)	65(2½inch)	80(3inch)	100(4inch)
Actuator Type	–	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}		
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	9.4	11.7	26.5
Air Supply Bore	Rc 1/4		

DIMENSIONS FIGURE

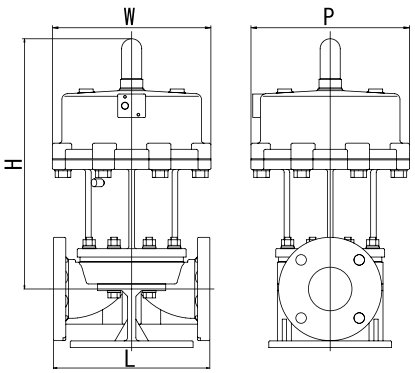
Double Acting



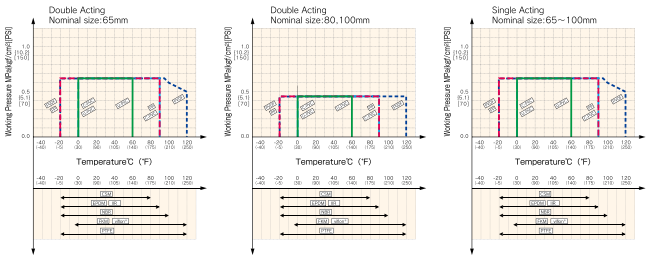
Air to Open



Air to Close



WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size				65 (2 1/2)	80 (3)	100 (4)	Nominal Size		65 (2 1/2)	80 (3)	100 (4)
Commom	L	JIS		250 (9.84)	280 (11.02)	340 (13.39)	Air to Open	H	473 (18.62)	550 (21.65)	601 (23.66)
		DIN		290 (11.42)	310 (12.2)	350 (13.78)		W	280 (11.02)	305 (12.01)	385 (15.16)
		ANSI	A Standard	250 (9.84)	280 (11.02)	340 (13.39)		P	280 (11.02)	305 (12.01)	385 (15.16)
			G Standard	– –	263 (10.37)	328 (12.93)	Air to Close	H	423 (16.65)	455 (17.91)	509 (20.04)
Double Acting	H			323 (12.72)	354 (13.94)	417 (16.42)		W	280 (11.02)	305 (12.01)	385 (15.16)
	W			208 (8.19)	208 (8.19)	250 (9.84)		P	280 (11.02)	305 (12.01)	385 (15.16)
	P			208 (8.19)	208 (8.19)	250 (9.84)					

ASAHI AV VALVE

True Union Diaphragm Valve Type14 (Pneumatic Actuated Type AN) 15mm-50mm(1/2inch-2inch)

Body Material
PVC
C-PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM
Viflon C (FKM-C)
Viflon F (FKM-F)

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp

Action
Double Acting
Air to Open
Air to Close

Equipment
Indicator

Option
· Filter Regulator
· Solenoid Valve
· Limit Switch
· Speed Controller
· Manual Override
※ for air to open
· Positioner



FEATURES
- The Actuator made of Resin is Light and Compact.
- NAMUR Standard is applied for air piping.
- All Optional Equipment(except positioner) can easily be added or removed in the Field.
- A Closing Travel Stop mechanism is standard.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Actuator Type	AN-1DA		AN-2DA		AN-3DA	AN-4DA
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	2.6	2.6	2.7	2.7	9.6	9.8
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Open]

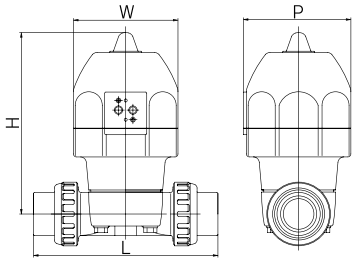
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Actuator Type	AN-1AO		AN-2AO		AN-3AO	AN-4AO
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.8	0.8	0.8	0.8	3.4	3.4
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Close]

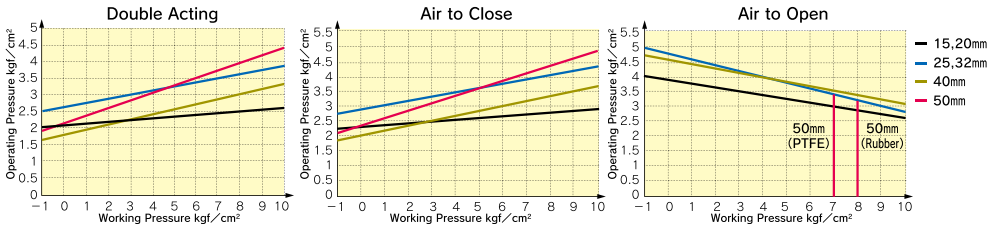
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Actuator Type	AN-1AS		AN-2AS		AN-3AS	AN-4AS
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	1.8	1.8	1.9	1.9	6.1	6.3
Air Supply Bore	Rc 1/4					

* for the actuator with lubricant free valves consult near Asahi dealer.

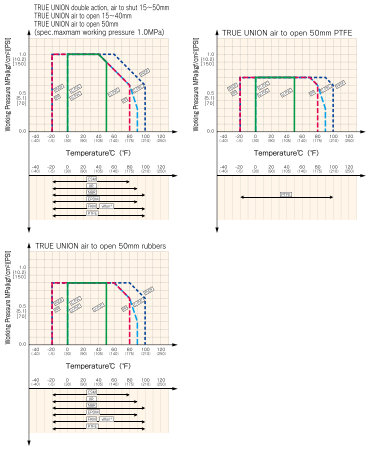
DIMENSIONS FIGURE



OPERATION PRESSURE vs WORKING PRESSURE



WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size				15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
Threaded End	L	PVC, C-PVC	JIS	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	281 (11.06)
			DIN	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	281 (11.06)
			ANSI	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	281 (11.06)
		PP, PVDF	JIS	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	278 (10.95)
			DIN	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	278 (10.95)
			ANSI	128 (5.04)	148 (5.83)	172 (6.77)	188 (7.4)	245 (9.65)	278 (10.95)
Socket End		PVC, C-PVC	JIS	134 (5.28)	156 (6.14)	186 (7.32)	200 (7.87)	271 (10.67)	303 (11.93)
			DIN	128 (5.04)	147 (5.79)	172 (6.77)	188 (7.4)	246 (9.69)	294 (11.57)
			ANSI	139 (5.47)	157 (6.18)	186 (7.32)	202 (7.95)	266 (10.47)	293 (11.54)

Nominal Size				15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
Socket End	L	PP	JIS	134 (5.28)	154 (6.06)	182 (7.17)	– –	253 (9.96)	275 (10.83)
			DIN	125 (4.92)	141 (5.55)	164 (6.46)	177 (6.97)	231 (9.09)	274 (10.79)
			ANSI	138 (5.43)	155 (6.09)	184 (7.24)	198 (7.80)	261 (10.28)	293 (11.54)
		PVDF	DIN	125 (4.92)	141 (5.55)	164 (6.46)	177 (6.97)	231 (9.09)	274 (10.79)
			ANSI	138 (5.43)	155 (6.09)	184 (7.24)	198 (7.80)	261 (10.28)	293 (11.54)
Common			H	186 (7.32)	188 (7.4)	193 (7.6)	197 (7.76)	293 (11.54)	302 (11.89)
			W	130 (5.12)	130 (5.12)	130 (5.12)	130 (5.12)	174 (6.85)	174 (6.85)
			P	133 (5.24)	133 (5.24)	133 (5.24)	133 (5.24)	179 (7.05)	179 (7.05)

Diaphragm Valve Type 15,72(Pneumatic Actuated Type AV)

Type15:125mm,150mm(5inch,6inch)
Type72:200mm,250mm(8inch,10inch)

Body Material
PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
Opening Indicator
(Gauge Cover)

Option
· Filter Regulator
· Solenoid Valve
· Speed Controller
· Positioner



FEATURES

■ Stopper provided to adjust to Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Solenoid Valve ※	○	–	–	○	○	○	–	○	○	○	○	–	–
Filter Regulator	–	–	–	○	–	–	–	○	○	–	○	–	○
Speed Controller	–	○	–	–	○	–	○	○	–	○	○	–	–
Limit Switch	–	–	○	–	–	○	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	–	–	–	–	○	○

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	125(5inch)	150(6inch)	200(8inch)	250(10inch)
Actuator Type	–	–	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}			
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	36.6	67.3	87.3	214
Air Supply Bore	Rc 3/8			

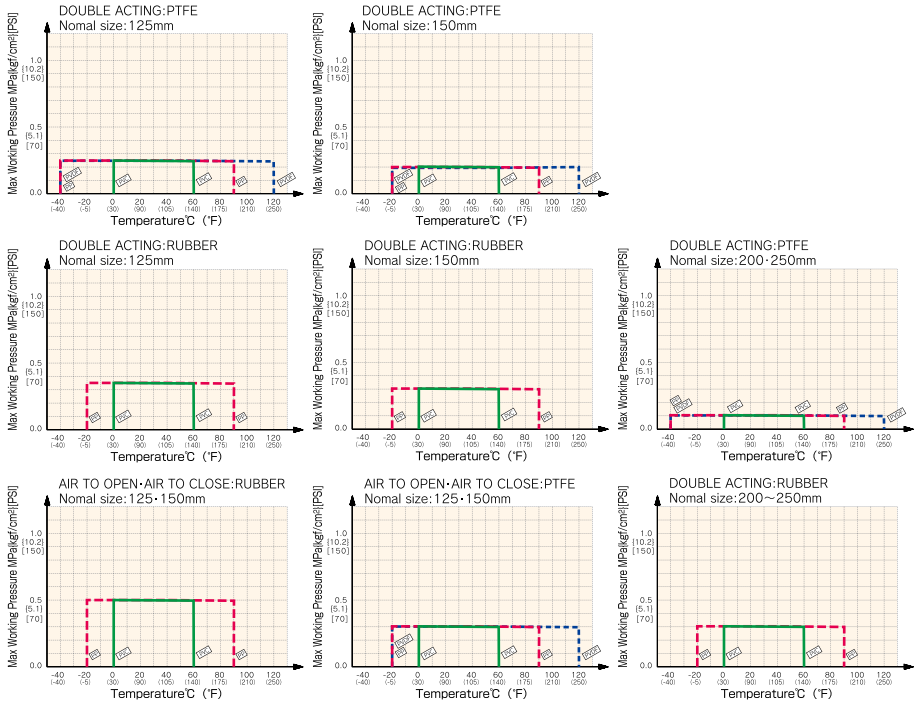
ACTUATOR SPECIFICATION [Air to Open]

Nominal Size mm(inch)	125(5inch)	150(6inch)
Actuator Type	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}	
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	55.6	84.2
Air Supply Bore	Rc 3/8	

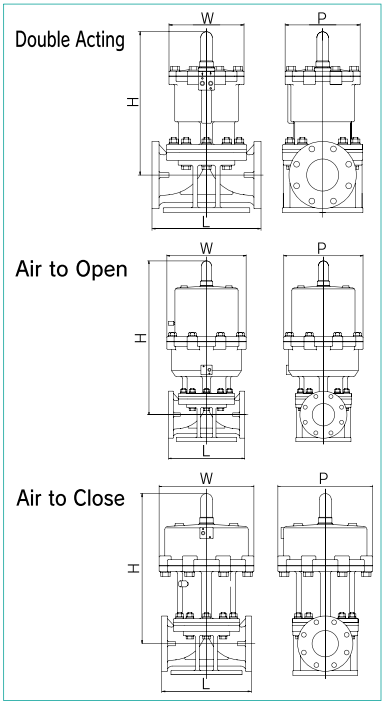
ACTUATOR SPECIFICATION [Air to Close]

Nominal Size mm(inch)	125(5inch)	150(6inch)
Actuator Type	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}	
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	38.4	60.5
Air Supply Bore	Rc 3/8	

WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS FIGURE



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size			125 (5)	150 (6)	200 (8)	250 (10)
Common	L	JIS	410 (16.14)	480 (18.90)	570 (22.44)	680 (26.77)
		DIN	400 (15.75)	480 (18.90)	600 (23.62)	730 (28.74)
		ANSI	410 (16.14)	480 (18.90)	570 (22.44)	680 (26.77)
Double Acting	H		508 (20.00)	566 (22.28)	742 (29.21)	890 (35.04)
	W		305 (12.01)	385 (15.16)	387.5 (15.26)	520 (20.47)
	P		302.5 (11.91)	387.5 (15.26)	385 (15.16)	520 (20.47)
Air to Open	H		690 (27.17)	790 (31.10)	– –	– –
	W		455 (17.91)	520 (20.47)	– –	– –
	P		455 (17.91)	520 (20.47)	– –	– –
Air to Close	H		653 (25.71)	722 (28.43)	– –	– –
	W		455 (17.91)	520 (20.47)	– –	– –
	P		455 (17.91)	520 (20.47)	– –	– –

ASAHI AV VALVE

Diaphragm Valve Type AI (Pneumatic Actuated Type AI)15mm-50mm(1/2inch-2inch)

Body Material
PVC
C-PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM
Viflon C (FKM-C)
Viflon F (FKM-F)

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
Indicator

Option
· Filter Regulator
· Solenoid Valve
· Limit Switch
· Speed Controller
· Positioner





FEATURES

Excellent Durability
More than 500,000 times Open and Close.

Compact Design
Light Weight and Minimal Overall Height.

Excellent Corrosion Resistance
All Wetted Parts are made of Corrosion Resistant Thermoplastics.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (electric-air, ait-air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	0.89	0.89	1.29	1.29	4.35	4.80
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Open]

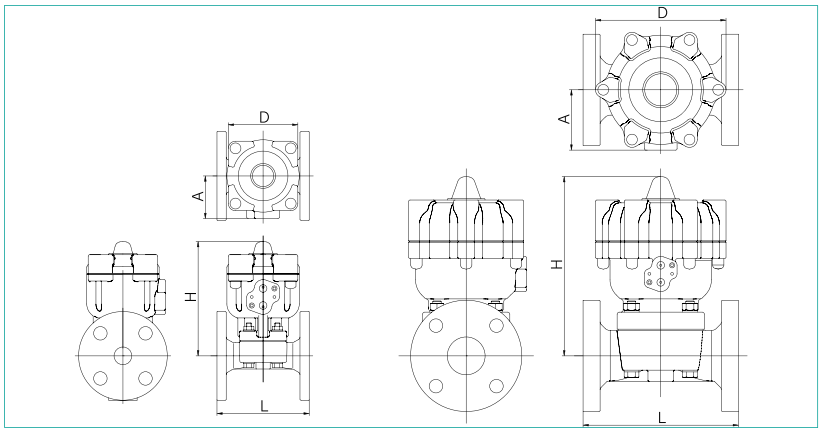
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	0.35	0.35	0.49	0.49	1.73	1.98
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Close]

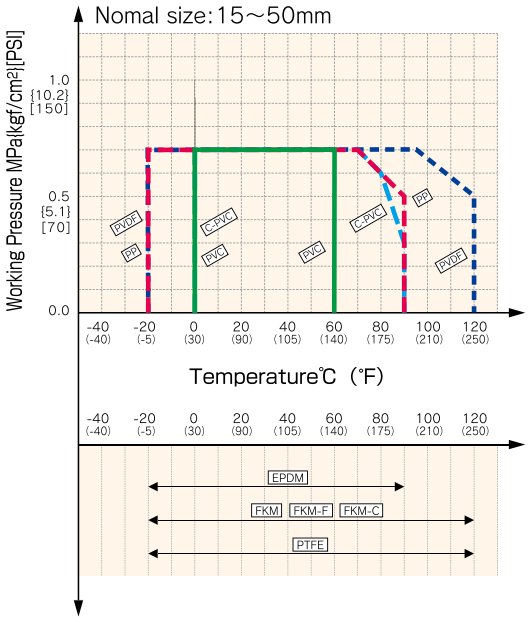
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	0.54	0.54	0.79	0.79	2.63	2.82
Air Supply Bore	Rc 1/4					

* for the actuator with lubricant free valves consult near Asahi dealer.

DIMENSIONS FIGURE



WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(JIS,DIN) inch(ANSI)

Nominal Size			15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
D	JIS,DIN		91	91	100	100	184	184
	ANSI		3.58	3.58	3.94	3.94	7.24	7.24
A	JIS,DIN		55	55	60	60	85	85
	ANSI		2.17	2.17	2.36	2.36	3.35	3.35
H	JIS,DIN		145	153	161	165	238	254
	ANSI		5.71	6.02	6.34	6.50	9.37	10.00
L	JIS		110	120	130	142	180	210
	DIN		130	150	160	180	200	230
	ANSI	A Standard	4.33	4.72	5.12	–	7.09	8.27
		G Standard	4.25	5.88	5.88	6.38	6.94	7.94

True Union Diaphragm Valve Type AI (Pneumatic Actuated Type AI) 15mm-50mm(1/2inch-2inch)

Body Material
PVC
C-PVC
PP
PVDF

Diaphragm Material
PTFE
EPDM
FKM
Viflon C (FKM-C)
Viflon F (FKM-F)

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp

Action
Double Acting
Air to Open
Air to Close

Equipment
Indicator

Option
· Filter Regulator
· Solenoid Valve
· Limit Switch
· Speed Controller
· Positioner



FEATURES

Excellent Durability
More than 500,000 times Open and Close.

Compact Design
Light Weight and Minimal Overall Height.

Excellent Corrosion Resistance
All Wetted Parts are made of Corrosion Resistant Thermoplastics.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.89	0.89	1.29	1.29	4.35	4.80
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Open]

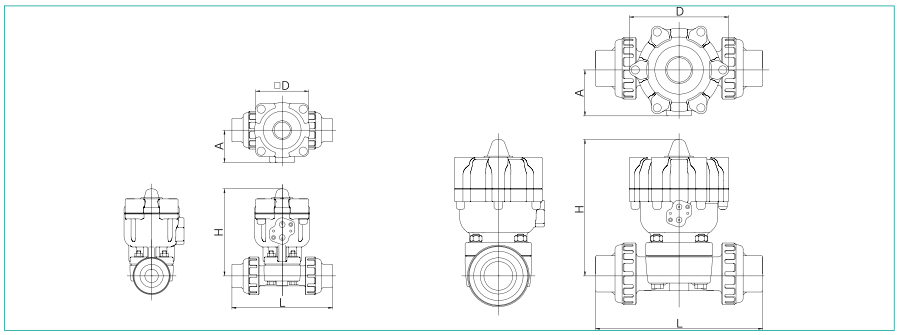
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.35	0.35	0.49	0.49	1.73	1.98
Air Supply Bore	Rc 1/4					

ACTUATOR SPECIFICATION [Air to Close]

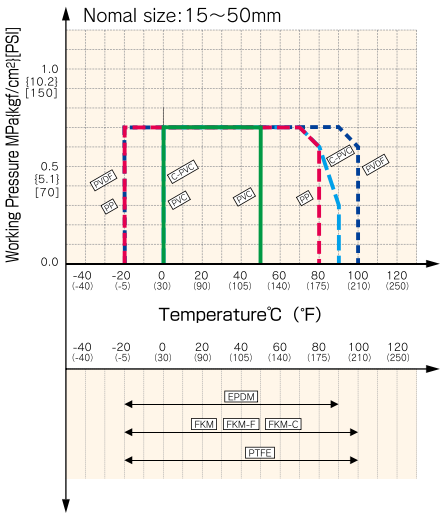
Nominal Size mm(inch)	15(1/2inch)	20(3/4inch)	25(1inch)	32(1 1/4inch)	40(1 1/2inch)	50(2inch)
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}					
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.54	0.54	0.79	0.79	2.63	2.82
Air Supply Bore	Rc 1/4					

* for the actuator with lubricant free valves consult near Asahi dealer.

DIMENSIONS FIGURE



WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(JIS,DIN) inch(ANSI)

Nominal Size				15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
D	Common		JIS, DIN	91	91	100	100	184	184
			ANSI	3.58	3.58	3.94	3.94	7.24	7.24
A	Common		JIS, DIN	55	55	60	60	85	85
			ANSI	2.17	2.17	2.36	2.36	3.35	3.35
H	Common		JIS, DIN	145	153	161	165	238	254
			ANSI	5.71	6.02	6.34	6.50	9.37	10.00
L	Threaded End	PVC, C-PVC	JIS	128	148	172	188	245	281
			DIN	128	148	172	188	245	281
			ANSI	5.04	5.83	6.77	7.40	9.65	11.06
		PP, PVDF	JIS	128	148	172	188	245	278

Nominal Size				15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
L	Threaded End	PP, PVDF	DIN	128	148	172	188	245	278
			ANSI	5.04	5.83	6.77	7.40	9.65	10.95
	Socket End	PVC, C-PVC	JIS	134	156	186	200	271	303
			DIN	128	147	172	188	246	294
			ANSI	5.47	6.18	7.32	7.95	10.47	11.54
		PP	JIS	134	154	182	–	253	275
		PP, PVDF(15~32m)	DIN	125	141	164	177	231	274
		PP, PVDF	ANSI	5.43	6.09	7.24	7.80	10.28	11.54
	Spigot End	PVC	DIN	150	172	195	212	276	308
		PP, PVDF		150	172	195	212	276	307

ASAHI AV VALVE

Diaphragm Valve Type 16 (Pneumatic Actuated Type AD) 15mm-50mm(1/2inch-2inch)

Body Material
PVC

Diaphragm Material
PTFE
EPDM

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp
Flanged End JIS 10K
Flanged End ANSI CLASS150
Flanged End DIN PN10

Action
Double Acting
Air to Open

Option
Speed Controller
Full Opening Adjustment Mechanism
Indicator



FEATURES

Compact & Light Weight
The most suitable for limited piping space or parallel piping lines.

Excellent corrosion resistance
All parts are made of thermoplastics and rubber.

Excellent Durability.
More than 1 million times open and close.

※ Type16 Diaphragm Valve is only arailable with lubricant free.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5※	6※
Speed Controller	–	○	–	○	–	○
Full Opening Adjustment Mechanism	–	–	○	○	○	○
Indicator	●	●	–	–	◎	◎

●Standard Equipment
◎Special Indicator
※Nominal Size 15mm(1/2"), 25mm(1") Only


▲Speed Controller


▲Full Opening Adjustment Mechanism

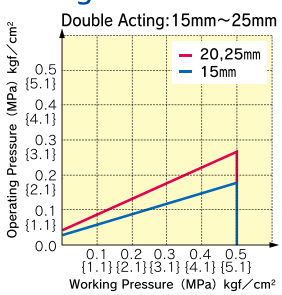

▲Full Opening Adjustment Mechanism ·Indicator

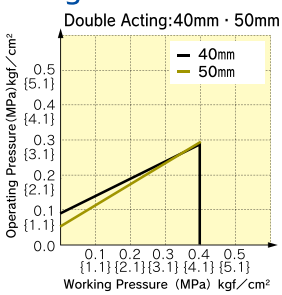
ACTUATOR SPECIFICATION

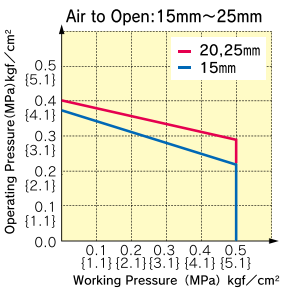
Nominal Size mm(inch)		15 (1/2inch)	20 (3/4inch)	25 (1inch)	40 (1 1/2inch)	50 (2inch)
Action		Air to Open, Double Acting				
Fluid		Pure water, Chemical				
Fluid Temperature		0-50℃(30-122°F)				
Working Pressure Range		0-0.5MPa [72.5PSI]			0-0.4MPa [58PSI]	
Back Pressure Range		0-0.2MPa [29PSI]				
Ambient Temperature		0-50℃(30-122°F)				
Frequency of Opening and Closing		With in 20 times/min			With in 15 times/min	
Connection		Socket End, Threaded End, Flange End				
Standard		JIS, DIN, ANSI				
Orifice Diameter		16mm(0.63inch)	22mm(0.87inch)	22mm(0.87inch)	40mm(1.57inch)	50mm(1.97inch)
Cv Value		4.8	8	9.5	26	44
Operating Pressure	Air to Open	0.4-0.5MPa [58-72.5PSI]				
	Double Acting	0.3-0.4MPa [43.5-58PSI]				
Air Supply Port Size		Rc1/8				
Installation Direction		Any direction				

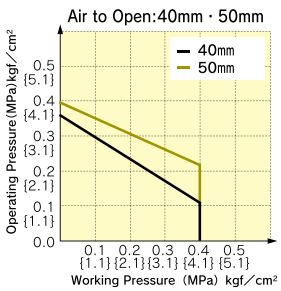
note: Pay attention to Fluid temperature & Working pressure range.

Working Pressure vs. Operating Pressure

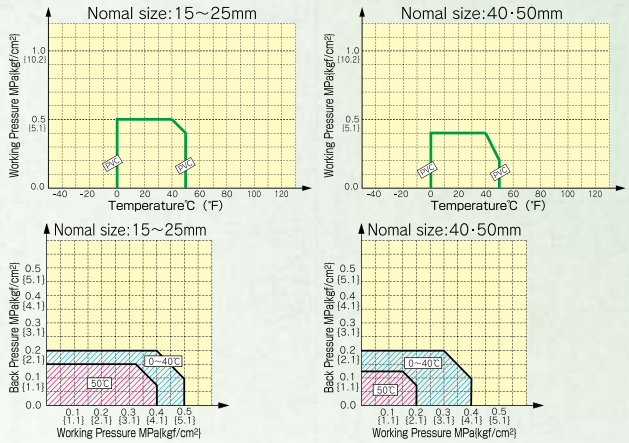




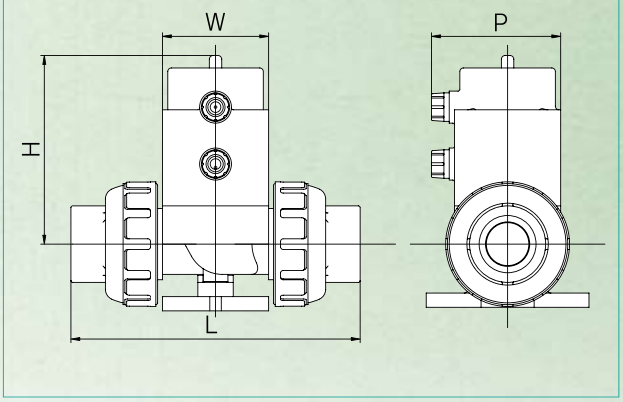




WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS FIGURE



DIMENSIONS TABLE

Unit:mm(inch)

Nominal Size			15(1/2)	20(3/4)	25(1)	40(1 1/2)	50(2)
Flanged End	L	JIS	158.0(6.22)	191.0(7.52)	205.5(8.09)	264.0(10.39)	297.0(11.69)
		ANSI	158.0(6.22)	191.0(7.52)	205.5(8.09)	263.9(10.39)	296.9(11.69)
		DIN	145.0(5.71)	169.0(6.65)	178.5(7.03)	252.0(9.92)	293.0(11.54)
Threaded End		JIS	117.0(4.61)	139.0(5.47)	149.0(5.87)	215.0(8.46)	260.0(10.24)
		ANSI	117.0(4.61)	139.0(5.47)	149.0(5.87)	215.0(8.46)	260.0(10.24)
		DIN	117.0(4.61)	139.0(5.47)	149.0(5.87)	215.0(8.46)	260.0(10.24)
Socket End		JIS	118.0(4.65)	138.0(5.43)	149.5(5.89)	216.0(8.50)	260.0(10.24)
		ANSI	118.0(4.65)	138.0(5.43)	149.5(5.89)	216.0(8.50)	260.0(10.24)
		DIN	118.0(4.65)	138.0(5.43)	149.5(5.89)	216.0(8.50)	260.0(10.24)
Common	H	–	79.0(3.11)	108.0(4.25)	109.0(4.29)	161.5(6.36)	188.5(7.42)
	W	–	50.0(1.97)	60.0(2.36)	60.0(2.36)	95.0(3.74)	115.0(4.53)
	P	–	63.0(2.48)	73.0(2.87)	73.0(2.87)	107.5(4.23)	128.0(5.04)

MODEL SELECTION TABLE

A16 [ ] **U** [ ] [ ] [ ] [ ] [ ] [ ]

Acting	
DG	Air to Open
DF	Double Acting

Body Material	
U	PVC

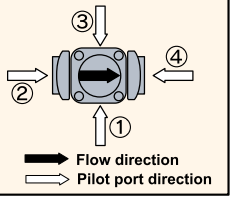
Nominal Size	
015	15mm(1/2")
020	20mm(3/4")
025	25mm(1")
040	40mm(1 1/2")
050	50mm(2")

Option	
1	No Option
2	Speed Controller
3	Travel Stop
4	Travel Stop Speed Controller
5※	Travel Stop Indicator
6※	Travel Stop Speed Controller Indicator

※:Nominal Size 40mm and 50mm are not available.

Sheet / O-ring Material	
1	PTFE/EPDM
2	PTFE/FKM
3	PTFE/Vifron®F
E	EPDM/EPDM

Connection Standard	
SJ	Socket End JIS
S8	Socket End ASTM SCH80
SD	Socket End DIN
NJ	Threaded End Rc
NA	Threaded End NPT
ND	Threaded End Rp
F1	Flanged End JIS10K
FA	Flanged End ANSI CLASS150
FD	Flanged End DIN PN10

Air Supply Position	
1	
2	
3	
4	

ASAHI AV VALVE

Ball Valve Type 21 (Electric actuated Type T) 15mm - 50mm (1/2inch - 2inch)

Body Material
PVC
C-PVC
PP
PVDF

O-ring Material
EPDM
FKM

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp
Flanged End JIS10K
Flanged End ANSI CLASS150
Flanged End DIN PN10

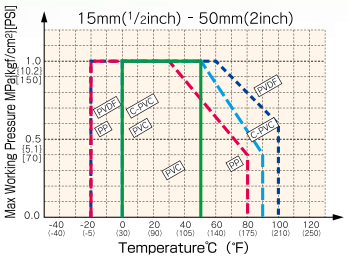
Power Source
Single-Phase
AC100V
AC200V

Equipment
Manual Operation Mechanism
Output Contact Limit Switches
Indicator

Option
·Space heater



WORKING PRESSURE VS.TEMPERATURE



FEATURES

- Motor is built into the body. Light-weight and Compact with high torque.
- Stopper enables adjustment of an angle of ±5 degree at fully-Opened or Fully-Closed position.
- Opening Indicator is easy to read.

OPTIONAL EQUIPMENT

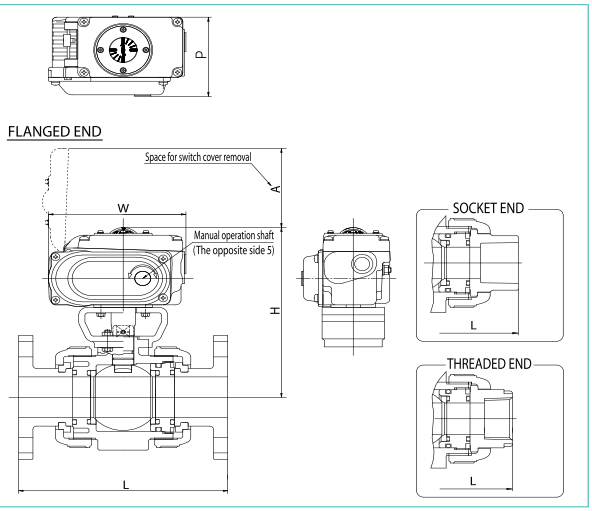
Combination No.	1	2	3
Space Heater	○	—	○
Manual Operation Mechanism	—	○	○

ACTUATOR SPECIFICATION

Nominal Size mm(inch)		15 - 50(1/2inch - 2inch)
Actuator Type		AOC-00
Cycle Time 50/60Hz(seconds)		10/8
Motor Output(W)		8
Motor Starting Current(A) 50/60Hz	100V	0.80/0.80
	110V	1.0/1.0
	200V	0.5/0.5
	220V	0.7/0.7
Motor Rated Current(A) 50/60Hz	100V	0.4/0.4
	110V	0.5/0.5
	200V	0.25/0.25
	220V	0.3/0.3
Number of Revolutions of Manual Operating Handle		7.5
Limit Switch Capacity		AC 250V 5A (Min.0.1A)
Protective Structure		JIS C 0920 Waterjet-proof type
Cable Connector Nominal Size		G1/2
Motor Pole(P)		4
Motor Insulation		E Class
Motor Time Rating(minute)		30

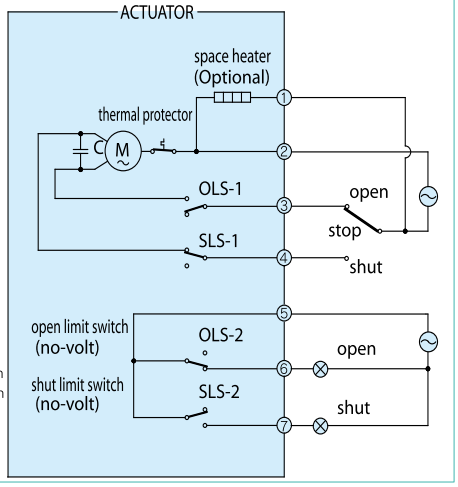
* for the actuator with lubricant free valves consult near Asahi dealer.

DIMENSIONS FIGURE

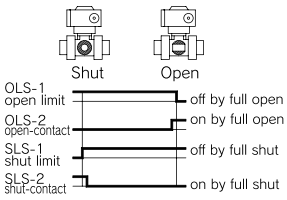


SCHEMATIC DIAGRAM

WIRING DIAGRAM



Switching Chart



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size				15(1/2)	20(3/4)	25(1)	32(1 1/4)	40(1 1/2)	50(2)
Flanged End	L	Common	JIS	143(5.63)	172(6.77)	187(7.36)	190(7.48)	212(8.35)	234(9.21)
			DIN	130(5.12)	150(5.91)	160(6.30)	180(7.09)	200(7.87)	230(9.06)
			ANSI	143(5.63)	172(6.77)	187(7.36)	190(7.48)	212(8.35)	234(9.21)
Threaded End			JIS	102(4.02)	120(4.72)	131(5.16)	150(5.91)	163(6.42)	197(7.76)
			DIN	102(4.02)	120(4.72)	131(5.16)	150(5.91)	163(6.42)	197(7.76)
			ANSI	113(4.45)	129(5.08)	146(5.75)	164(6.46)	184(7.24)	209(8.23)
Socket End		PVC, C-PVC	JIS	108(4.25)	128(5.04)	145(5.71)	162(6.38)	189(7.44)	220(8.66)
			DIN	102(4.02)	120(4.72)	131(5.16)	150(5.91)	163(6.42)	197(7.76)
			ANSI	113(4.45)	129(5.08)	146(5.75)	164(6.46)	184(7.24)	209(8.23)
		PP	JIS	108(4.25)	126(4.96)	141(5.55)	–	171(6.73)	192(7.56)
			DIN	99(3.90)	114(4.49)	123(4.84)	139(5.47)	148(5.83)	176(6.93)
			ANSI	113(4.45)	129(5.08)	146(5.75)	164(6.46)	184(7.24)	209(8.23)
		PVDF	DIN	99(3.90)	114(4.49)	123(4.84)	139(5.47)	148(5.83)	176(6.93)
			ANSI	113(4.45)	129(5.08)	146(5.75)	164(6.46)	184(7.24)	209(8.23)
Common		H		169.5(6.67)	176(6.93)	183(7.21)	192(7.56)	200.5(7.89)	212(8.35)
		W		154.5(6.08)	154.5(6.08)	154.5(6.08)	154.5(6.08)	154.5(6.08)	154.5(6.08)
		P		99(3.90)	99(3.90)	99(3.90)	99(3.90)	99(3.90)	99(3.90)
		A		100(3.94)	100(3.94)	100(3.94)	100(3.94)	100(3.94)	100(3.94)

Ball Valve Type 21 (Electric actuated Type T) 65mm - 100mm(2 1/2inch - 4inch)

Body Material
PVC
C-PVC
PP
PVDF

O-ring Material
EPDM
FKM

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp
Flanged End JIS10K
Flanged End ANSI CLASS150
Flanged End DIN PN10

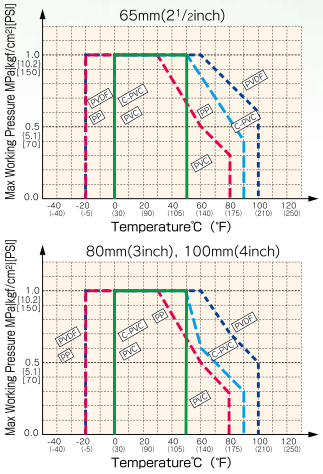
Power Source
Single-Phase
AC100V
AC200V

Equipment
Manual Operation Mechanism
Space Heater
Output Contact Limit Switches
Indicator

Option
·Intermediate Limit Switch(no-volt)
·Speed Controller
·Potentiometer
·E-E Positioner



WORKING PRESSURE VS.TEMPERATURE



FEATURES

- Motor is built into the body. Light-Qeight and Compact with High Torque.
- Stopper enables adjustment of an angle of ±5 degree at fully-Opened or Fully-Closed position.
- Opening Indicator is easy to read.

OPTIONAL EQUIPMENT

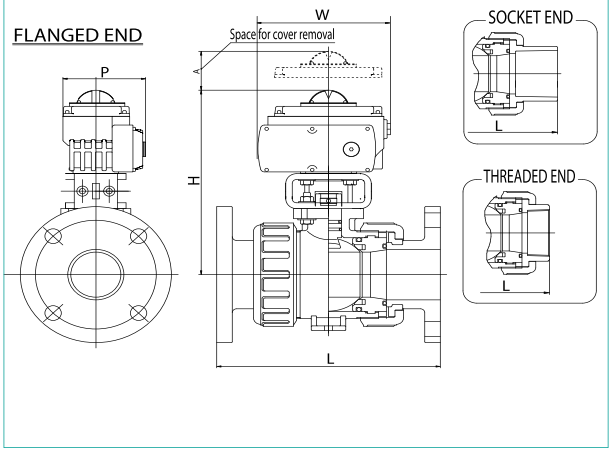
Combination No.	1	2	3	4	5	6	7
Space Heater	●	●	○	●	○	●	○
Output Contact Limit Switches	●	●	●	–	●	–	●
Potentiometer	–	○	–	–	–	○	○
E-E positioner	–	–	○	–	–	–	–
Intermediate Limit Switch (no-Volt)	–	–	–	○	–	○	–
Speed Controller	–	○	–	–	○	–	○

ACTUATOR SPECIFICATION

Nominal Size mm(inch)		65 - 100 (2 1/2inch - 4inch)
Actuator Type		AOC-0
Cycle Time 50/60Hz(seconds)		25/20
Motor Output(W)		8
Motor Starting Current(A) 50/60Hz	100V	1.2/1.2
	110V	1.4/1.4
	200V	0.5/0.5
	220V	0.7/0.7
Motor Rated Current(A) 50/60Hz	100V	0.5/0.5
	110V	0.6/0.6
	200V	0.25/0.25
	220V	0.3/0.3
Number of Revolutions of Manual Operating Handle		6.7
Limit Switch Capacity		AC 250V 10A (Min 0.1A)
Protective Structure		JIS C 0920 Waterjet-proof type IP65
Cable Connector Nominal Size		G1/2
Motor Pole(P)		4
Motor Insulation		E Class
Motor Time Rating(minute)		30

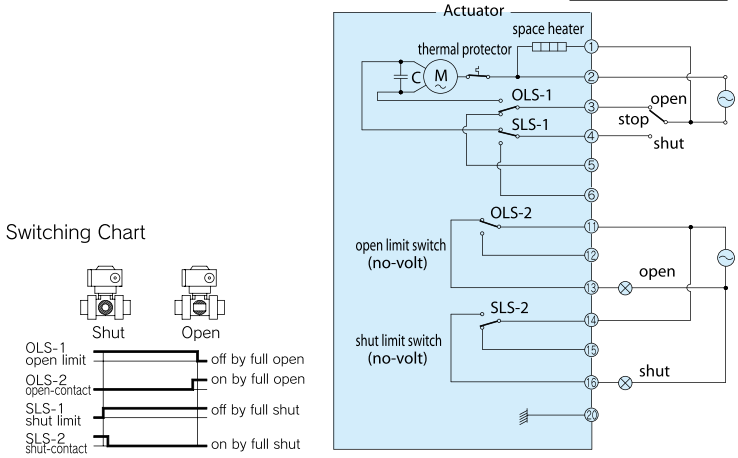
* for the actuator with lubricant free valves consult near Asahi dealer.

DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

WIRING DIAGRAM



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size				65(2 1/2)	80(3)	100(4)
Flanged End	L	PVC, C-PVC	JIS	261(10.28)	306(12.05)	374(14.72)
			DIN	290(11.42)	312(12.28)	352(13.86)
			ANSI	259(10.20)	306(12.05)	374(14.72)
		PP	JIS	257(10.12)	305(12.01)	374(14.72)
			DIN	288(11.34)	311(12.24)	352(13.86)
			ANSI	257(10.12)	306(12.05)	374(14.72)
		PVDF	JIS	256(10.08)	302(11.89)	369(14.53)
			DIN	287(11.30)	308(12.13)	347(13.60)
			ANSI	256(10.08)	302(11.89)	369(14.53)
Socket End		PVC, C-PVC	JIS	273(10.75)	316(12.44)	419(16.50)
			DIN	233(9.17)	284(11.18)	351(13.82)
			ANSI	240(9.45)	283(11.14)	352(13.86)
		PP	JIS	219(8.62)	257(10.12)	341(13.43)
			DIN	205(8.07)	252(9.92)	312(12.28)
			ANSI	238(9.37)	282(11.10)	365(14.37)

Nominal Size				65(2 1/2)	80(3)	100(4)
Socket End	L	PVDF	DIN	204(8.03)	249(9.80)	307(12.09)
			ANSI	237(9.33)	279(10.98)	359(14.13)
Threaded End		PVC, C-PVC	JIS	215(8.46)	265(10.43)	362(14.25)
			DIN	215(8.46)	265(10.43)	340(13.39)
			ANSI	215(8.46)	265(10.43)	362(14.25)
		PP	JIS	213(8.39)	264(10.39)	362(14.25)
			DIN	213(8.39)	264(10.39)	340(13.39)
			ANSI	213(8.39)	264(10.39)	362(14.25)
		PVDF	JIS	212(8.35)	261(10.28)	357(14.06)
			DIN	212(8.35)	261(10.28)	335(13.19)
			ANSI	212(8.35)	261(10.28)	357(14.06)
Common		H		280(11.03)	289(11.38)	327(12.88)
		W		202(7.95)	202(7.95)	202(7.95)
		P		138.8(5.47)	138.8(5.47)	138.8(5.47)
		A		100(3.94)	100(3.94)	100(3.94)

ASAHI AV VALVE

3-Way Ball Valve Type 23(Electric actuated Type T)15mm-100mm(1/2inch-4inch)

Body Material
PVC
C-PVC
PP
PVDF

O-ring Material
EPDM
FKM

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp
Flanged End JIS10K
Flanged End ANSI CLASS150
Flanged End DIN PN10

Power Source
Single-Phase
AC100V/110V
AC200V/220V

Equipment
〈AOC-00〉
Manual Operation Mechanism
Output Contact Limit Switches
Indicator
〈AOC-0〉
Manual Operation Mechanism
Space Heater
Output Contact Limit Switches
Indicator

Option
〈AOC-00〉
Space Heater
〈AOC-0〉
Intermediate Limit Switch(no-volt)
Space Heater
Potentiometer
E-E Positioner





Left Side Open



Middle Position



Right Side Open

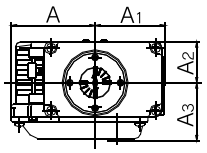
FEATURES

- Motor is built into the body. Light-Weight and Compact with high Torque.
- Stopper enables adjustment of an angle of ±5 degree at Full-Right Open or Full Left Open position on right/left side.
- Opening Indicator is easy to read.

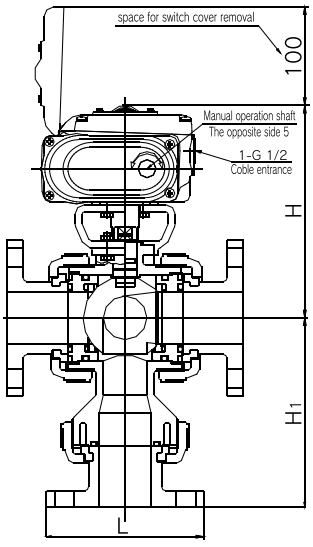
ACTUATOR SPECIFICATION

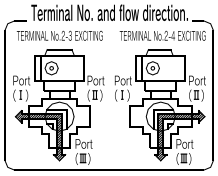
Nominal Size mm(inch)		15-50 (1/2inch - 2inch)	65-100 (2 1/2inch - 4inch)
Actuator Type		AOC-00	AOC-0
Cycle Time 50/60Hz(seconds)		10/8	25/20
Motor Output(W)		8	8
Motor Starting Current(A) 50/60Hz	100V	0.8/0.8	1.2/1.2
	110V	1.0/1.0	1.4/1.4
	200V	0.5/0.5	0.5/0.5
	220V	0.7/0.7	0.7/0.7
Motor Rated Current(A) 50/60Hz	100V	0.4/0.4	0.5/0.5
	110V	0.5/0.5	0.6/0.6
	200V	0.25/0.25	0.25/0.25
	220V	0.30/0.30	0.3/0.3
Number of Revolutions of Manual Operating Handle		7.5	6.7
Limit Switch Capacity		AC 250V 5A	AC 250V 10A
Protective Structure		JIS C 0920 Waterjet proof type (IP65)	
Cable Connector Nominal Size		G1/2	
Motor Pole(P)		4	
Motor Insulation		E Class	
Motor Time Rating(minute)		30	

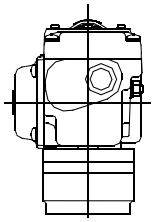
DIMENSIONS FIGURE



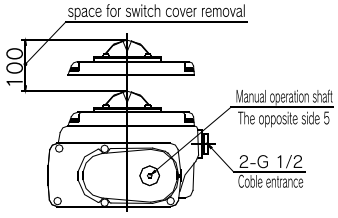
FLANGED END



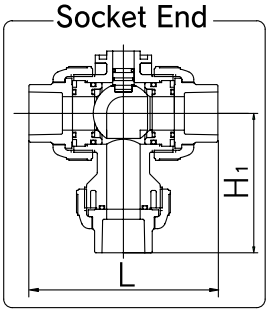




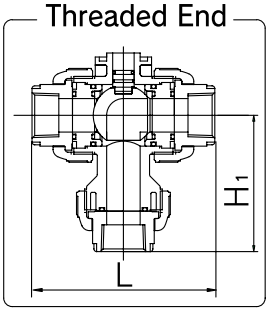
used for size 80,100mm



Socket End



Threaded End

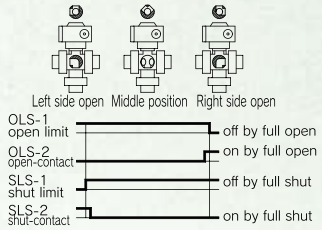


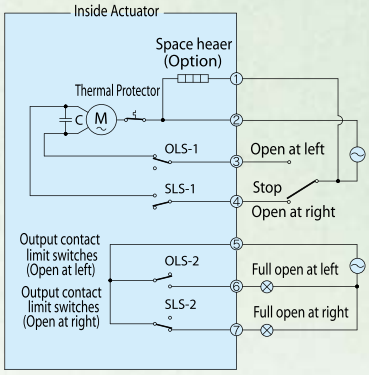
SCHEMATIC DIAGRAM

WIRING DIAGRAM

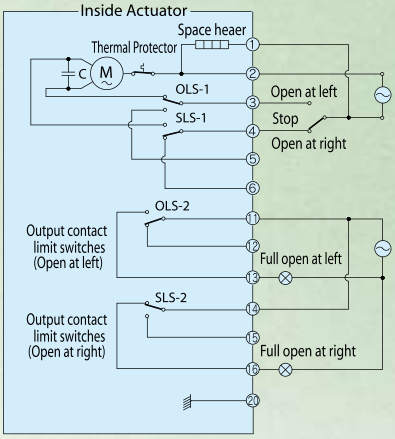
15mm-50mm

Switching Chart





65mm-100mm

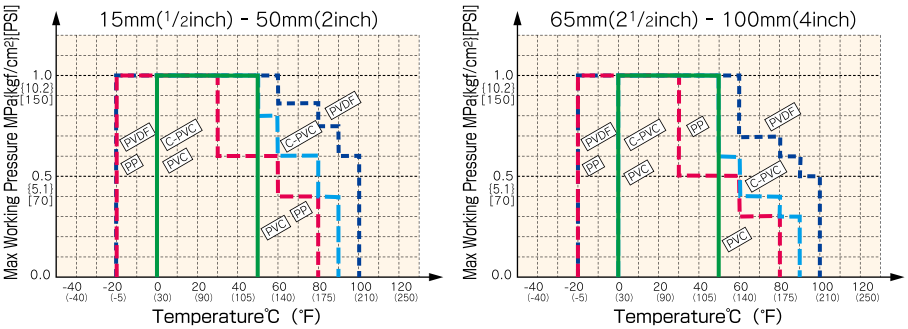


DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size				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)
Flanged End	L	Common	JIS	143 (5.63)	172 (6.77)	187 (7.36)	212 (8.35)	212 (8.35)	234 (9.21)	304(11.97)	304(11.97)	372(14.65)
			DIN	130 (5.12)	150 (5.91)	160 (6.3)	212 (8.35)	200 (7.87)	230 (9.06)	304(11.97)	310 (12.2)	350(13.78)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	212 (8.35)	212 (8.35)	234 (9.21)	304(11.97)	304(11.97)	372(14.65)
	H_1		JIS	94 (3.7)	115 (4.53)	133 (5.24)	165 (6.5)	165 (6.5)	187 (7.36)	256(10.08)	256(10.08)	305(12.01)
			DIN	88 (3.46)	104 (4.09)	120 (4.72)	165 (6.5)	159 (6.26)	185 (7.28)	256(10.08)	259 (10.2)	305(12.01)
			ANSI	94 (3.7)	114 (4.5)	133 (5.24)	165 (6.5)	165 (6.5)	186 (7.34)	256(10.06)	256(10.06)	305(12.01)
Threaded End	L	Common	JIS	102 (4.02)	120 (4.72)	131 (5.16)	163 (6.42)	163 (6.42)	197 (7.76)	264(10.39)	264(10.39)	360(14.17)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	163 (6.42)	163 (6.42)	197 (7.76)	264(10.39)	264(10.39)	338(13.31)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	163 (6.42)	163 (6.42)	197 (7.76)	264(10.39)	264(10.39)	360(14.17)
	H_1		JIS	74 (2.91)	89 (3.5)	105 (4.13)	141 (5.55)	141 (5.55)	168 (6.61)	235 (9.25)	235 (9.25)	299(11.77)
			DIN	74 (2.91)	89 (3.5)	105 (4.13)	141 (5.55)	141 (5.55)	168 (6.61)	235 (9.25)	235 (9.25)	299(11.77)
			ANSI	73 (2.89)	88 (3.48)	105 (4.13)	140 (5.53)	140 (5.53)	168 (6.61)	235 (9.25)	235 (9.25)	299(11.77)
Socket End	L	PVC, C-PVC	JIS	108 (4.25)	128 (5.04)	145 (5.71)	174 (6.85)	189 (7.44)	220 (8.66)	316(12.44)	316(12.44)	418(16.46)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	173 (6.81)	163 (6.42)	197 (7.76)	282 (11.1)	282 (11.1)	349(13.74)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	174 (6.85)	184 (7.24)	209 (8.23)	285 (11.21)	282 (11.1)	– (–)
		PP	JIS	108 (4.25)	124 (4.88)	139 (5.47)	– (–)	171 (6.73)	196 (7.72)	264(10.40)	260(10.24)	332(13.07)
			DIN	99 (3.9)	114 (4.49)	123 (4.84)	148 (5.83)	148 (5.83)	176 (6.93)	256 (10.08)	251 (9.88)	310 (12.2)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	179 (7.04)	184 (7.24)	209 (8.23)	285 (11.21)	282 (11.1)	365(14.37)
		PVDF	DIN	99 (3.9)	114 (4.49)	123 (4.84)	148 (5.83)	148 (5.83)	176 (6.93)	256 (10.08)	251 (9.88)	310 (12.2)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	179 (7.04)	184 (7.24)	209 (8.23)	285 (11.21)	282 (11.1)	365(14.37)
	H_1	PVC, C-PVC	JIS	77 (3.03)	90 (3.54)	110 (4.33)	146.5 (5.77)	145 (5.71)	169 (6.65)	261 (10.28)	244 (9.61)	294(11.57)
			DIN	72 (2.83)	85 (3.35)	104 (4.09)	147 (5.80)	142 (5.59)	170 (6.69)	245 (9.65)	245 (9.65)	305(12.01)
			ANSI	78 (3.07)	129 (5.08)	146 (5.75)	140 (5.51)	184 (7.24)	209 (8.23)	245 (9.65)	282 (11.1)	– (–)
		PP	JIS	77 (3.03)	92 (3.62)	110 (4.33)	– (–)	145 (5.71)	166 (6.54)	235 (9.25)	232 (9.13)	289(11.38)
			DIN	71 (2.80)	83 (3.27)	100 (3.94)	131 (5.16)	131 (5.16)	154 (6.06)	227 (8.94)	224 (8.82)	279(10.98)
			ANSI	78 (3.07)	92 (3.62)	111 (4.37)	146 (5.75)	149 (5.87)	172 (6.77)	245(9.65)	282(11.10)	365(14.37)
		PVDF	DIN	71 (2.80)	83 (3.27)	100 (3.94)	131 (5.16)	131 (5.16)	154 (6.06)	227 (8.94)	224 (8.82)	279(10.98)
			ANSI	78 (3.07)	92 (3.62)	111 (4.37)	146 (5.75)	149 (5.87)	172 (6.77)	245(9.65)	282(11.10)	365(14.37)
Common		H		169.5(6.67)	176 (6.93)	183 (7.21)	200.5 (7.89)	200.5(7.89)	212 (8.35)	289(11.38)	289(11.38)	327(12.88)
		A		84 (3.31)	84 (3.31)	84 (3.31)	84 (3.31)	84 (3.31)	84 (3.31)	100 (3.94)	100 (3.94)	100 (3.94)
		A_1		70.5 (2.78)	70.5 (2.78)	70.5 (2.78)	70.5 (2.78)	70.5 (2.78)	70.5 (2.78)	102 (4.02)	102 (4.02)	102 (4.02)
		A_2		41 (1.61)	41 (1.61)	41 (1.61)	41 (1.61)	41 (1.61)	41 (1.61)	53.8 (2.12)	53.8 (2.12)	53.8 (2.12)
		A_3		58 (2.28)	58 (2.28)	58 (2.28)	58 (2.28)	58 (2.28)	58 (2.28)	85 (3.35)	85 (3.35)	85 (3.35)

WORKING PRESSURE VS.TEMPERATURE



ASAHI AV VALVE

Ball Valve Type 21 (Pneumatic actuated Type TA)15mm - 100mm(1/2inch - 2inch)

Body Material
PVC
C-PVC
PP
PVDF

O-ring Material
EPDM
FKM

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp
Flanged End JIS10K
Flanged End ANSI CLASS150
Flanged End DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
Opening Adjustment Stopper
(± 5 degree)
Indicator

Option
·Filter Regulator
·Solenoid Valve
·Limit Switch
·Speed Controller
·Manual Operation Mechanism
※only for Air to Open & Close
·Full Opening Adjustment Mechanism
·Positioner


(15mm - 32mm)


(40mm - 50mm)


(65mm - 100mm)

FEATURES

- Horizontal Type Actuator saves piping space.
- Spring unit for Air to Open & Close is detachable so that changeover between Double-Acting and Air to Open & Close can be done easily.
- Various options can be easily installed or removed and can be mounted later(except positioners).
- Stopper enables adjustment of an angle of ±5 degree at fully-Opened or Fully-Closed position. (for valve sizes larger than 40mm)

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

* for the actuator with lubricant free valves consult near Asahi dealer.

ACTUATOR SPECIFICATION [Double Acting]

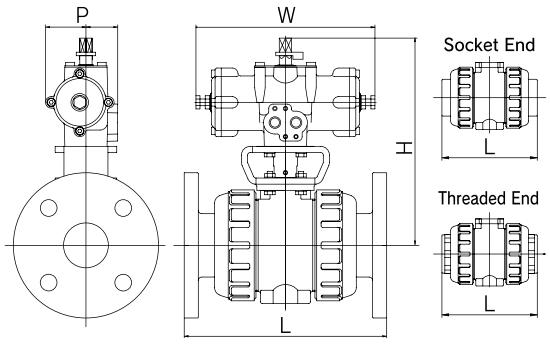
Nominal Size mm(inch)	15 - 32 (1/2inch - 1 1/4inch)	40·50 (1 1/2inch·2inch)	65·80 (2 1/2inch·3inch)	100(4inch)
Actuator Type	TA2A-0402D	TA2A-050D	TA2A-063D	TA2A-080D
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}			
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.5	0.9	1.7	3.2
Air Supply Bore	Rc 1/8	Rc 1/4		

ACTUATOR SPECIFICATION [Air to Open,Air to Close]

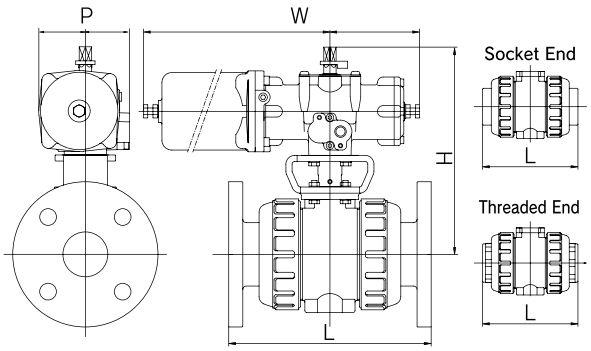
Nominal Size mm(inch)	15 - 32 (1/2inch - 1 1/4inch)	40·50 (1 1/2inch·2inch)	65·80 (2 1/2inch·3inch)	100(4inch)
Actuator Type	TA2A-0402R	TA2A-050R	TA2A-063R	TA2A-080R
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}			
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.8	1.7	3.3	6.1
Air Supply Bore	Rc 1/4			

DIMENSIONS FIGURE

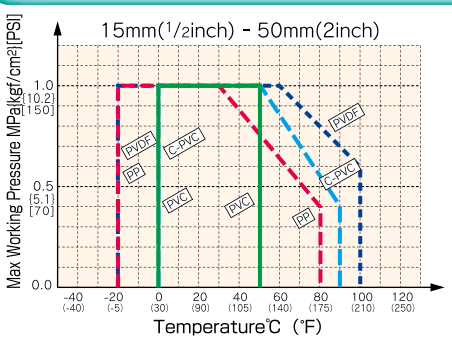
Double Acting
Flanged End

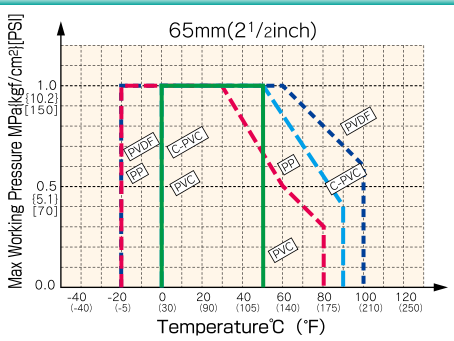


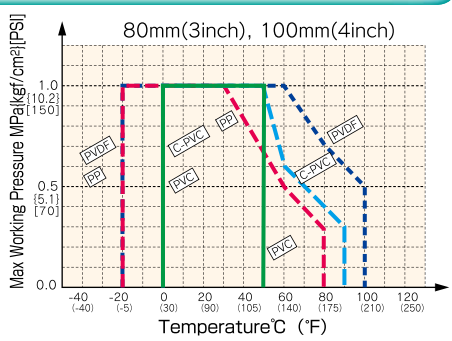
Air to Open, Air to Close
Flanged End



WORKING PRESSURE VS.TEMPERATURE







DIMENSIONS TABLE

JIS, ANSI, DIN

Unit:mm(inch)

Nominal Size				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)
Flanged End	L	PVC, C-PVC	JIS	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)	261 (10.28)	306 (12.05)	374 (14.72)
			DIN	130 (5.12)	150 (5.91)	160 (6.3)	180 (7.09)	200 (7.87)	230 (9.06)	290 (11.42)	312 (12.28)	352 (13.86)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)	259 (10.20)	306 (12.05)	374 (14.72)
		PP	JIS	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)	257 (10.12)	305 (12.01)	374 (14.72)
			DIN	130 (5.12)	150 (5.91)	160 (6.30)	180 (7.09)	200 (7.87)	230 (9.06)	288 (11.34)	311 (12.24)	352 (13.86)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)	257 (10.12)	306 (12.05)	374 (14.72)
		PVDF	JIS	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)	256 (10.08)	302 (11.89)	369 (14.53)
			DIN	130 (5.12)	150 (5.91)	160 (6.30)	180 (7.09)	200 (7.87)	230 (9.06)	287 (11.30)	308 (12.13)	347 (13.66)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)	256 (10.08)	302 (11.89)	369 (14.53)
Socket End		PVC, C-PVC	JIS	108 (4.25)	128 (5.04)	145 (5.71)	162 (6.38)	189 (7.44)	220 (8.66)	273 (10.75)	316 (12.44)	419 (16.50)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	233 (9.17)	284 (11.18)	351 (13.82)
			ANSI	113.0 (4.45)	129.0 (5.08)	146.1 (5.75)	164.1 (6.46)	184 (7.24)	209 (8.23)	240 (9.45)	283 (11.14)	352 (13.86)
		PP	JIS	108 (4.25)	126 (4.96)	141 (5.55)	– –	171 (6.73)	192 (7.56)	219 (8.62)	257 (10.12)	341 (13.43)
			DIN	99 (3.90)	114 (4.49)	123 (4.84)	139 (5.47)	148 (5.83)	176 (6.93)	205 (8.07)	252 (9.92)	312 (12.28)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	164 (6.46)	184 (7.24)	209 (8.23)	238 (9.37)	282 (11.10)	365 (14.37)
		PVDF	DIN	99 (3.90)	114 (4.49)	123 (4.84)	139 (5.47)	148 (5.83)	176 (6.93)	204 (8.03)	249 (9.80)	307 (12.09)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	164 (6.46)	184 (7.24)	209 (8.23)	237 (9.33)	279 (10.98)	359 (14.13)
Threaded End		PVC, C-PVC	JIS	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	215 (8.46)	265 (10.43)	362 (14.25)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	215 (8.46)	265 (10.43)	340 (13.39)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	215 (8.46)	265 (10.43)	362 (14.25)
		PP	JIS	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	213 (8.39)	264 (10.39)	362 (14.25)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	213 (8.39)	264 (10.39)	340 (13.39)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	213 (8.39)	264 (10.39)	362 (14.25)
		PVDF	JIS	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	212 (8.35)	261 (10.28)	357 (14.06)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	212 (8.35)	261 (10.28)	335 (13.19)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)	212 (8.35)	261 (10.28)	357 (14.06)
Spigot End		PP	DIN	124 (4.84)	144 (5.62)	154 (6.01)	174 (6.79)	194 (7.57)	224 (8.74)	245 (9.56)	296 (11.54)	355 (13.85)
		PVDF		124 (4.84)	144 (5.62)	154 (6.01)	174 (6.79)	194 (7.57)	224 (8.74)	245 (9.56)	293 (11.43)	350 (13.65)
Common		H		159.5 (6.28)	166 (6.54)	173 (6.81)	182 (7.17)	224 (8.82)	235.5 (9.27)	268 (10.55)	277 (10.91)	348 (13.70)
Double Acting		W		110 (4.33)	110 (4.33)	110 (4.33)	110 (4.33)	210 (8.27)	210 (8.27)	250 (9.84)	250 (9.84)	292 (11.50)
		P		57 (2.24)	57 (2.24)	57 (2.24)	57 (2.24)	82 (3.23)	82 (3.23)	95 (3.74)	95 (3.74)	116 (4.57)
Air to Open, Air to Close		W		249 (9.81)	249 (9.81)	249 (9.81)	249 (9.81)	345 (13.58)	345 (13.58)	413 (16.26)	413 (16.26)	487 (19.17)
		P		92 (3.62)	92 (3.62)	92 (3.62)	92 (3.62)	103 (4.06)	103 (4.06)	119 (4.69)	119 (4.69)	141.5 (5.57)

ASAHI AV VALVE

Ball Valve Type 21 (Pneumatic actuated Type AA) 15mm - 50mm(1/2inch - 2inch)

Body Material
PVC
C-PVC
PP
PVDF

O-ring Material
EPDM
FKM

Connection Standard
Socket End JIS
Socket End ASTM SCH80
Socket End DIN
Threaded End Rc
Threaded End NPT
Threaded End Rp
Flanged End JIS10K
Flanged End ANSI CLASS150
Flanged End DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
Indicator

Option
·Filter Regulator
·Solenoid Valve
·Limit Switch
·Speed Controller
·Manual Operation Mechanism
※only for Air to Open & Close
·Full Opening Adjustment Mechanism
·Positioner



Air to Open



Double Acting

FEATURES

- Actuator made of resin is Light and Compact.
- NAMUR Standard is applied for air piping.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.
* for the actuator with lubricant free valves consult near Asahi dealer.

ACTUATOR SPECIFICATION [Double Acting]

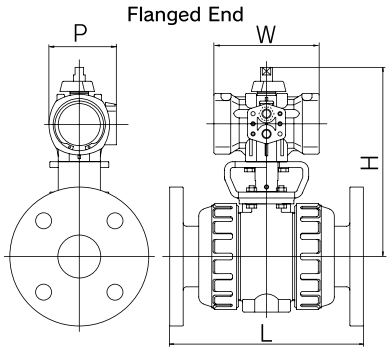
Nominal Size mm(inch)	15 - 32 (1/2inch - 1 1/4inch)	40·50 (1 1/2inch·2inch)
Actuator Type	PPW	PP00
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}	
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.6	1.3
Air Supply Bore	Rc 1/4	

ACTUATOR SPECIFICATION [Air to Open,Air to Close]

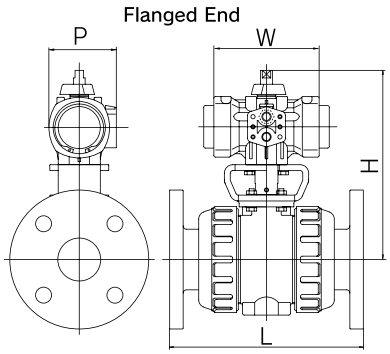
Nominal Size mm(inch)	15 - 32 (1/2inch - 1 1/4inch)	40·50 (1 1/2inch·2inch)
Actuator Type	PP00S	PP10S
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}	
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.7	1.7
Air Supply Bore	Rc 1/4	

DIMENSIONS FIGURE

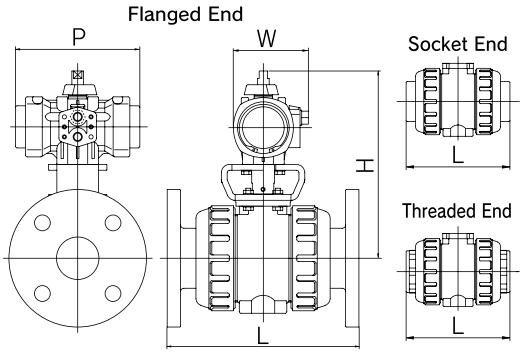
Double Acting



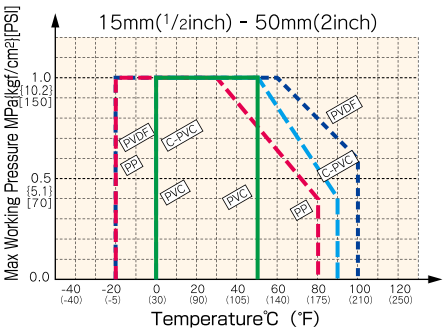
Air to Open



Air to Close



WORKING PRESSURE VS.TEMPERATURE



DIMENSIONS TABLE

JIS, ANSI, DIN

Unit:mm(inch)

Nominal Size				15 (1/2)	20 (3/4)	25 (1)	32 (1 1/4)	40 (1 1/2)	50 (2)
Flanged End	L	PVC, C-PVC	JIS	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)
			DIN	130 (5.12)	150 (5.91)	160 (6.30)	180 (7.09)	200 (7.87)	230 (9.06)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)
		PP	JIS	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)
			DIN	130 (5.12)	150 (5.91)	160 (6.30)	180 (7.09)	200 (7.87)	230 (9.06)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)
		PVDF	JIS	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)
			DIN	130 (5.12)	150 (5.91)	160 (6.30)	180 (7.09)	200 (7.87)	230 (9.06)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	190 (7.48)	212 (8.35)	234 (9.21)
Socket End		PVC, C-PVC	JIS	108 (4.25)	128 (5.04)	145 (5.71)	162 (6.38)	189 (7.44)	220 (8.66)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
			ANSI	113.0 (4.45)	129.0 (5.08)	146.1 (5.75)	164.1 (6.46)	184 (7.24)	209 (8.23)
		PP	JIS	108 (4.25)	126 (4.96)	141 (5.55)	– –	171 (6.73)	192 (7.56)
			DIN	99 (3.90)	114 (4.49)	123 (4.84)	139 (5.47)	148 (5.83)	176 (6.93)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	164 (6.46)	184 (7.24)	209 (8.23)
		PVDF	DIN	99 (3.90)	114 (4.49)	123 (4.84)	139 (5.47)	148 (5.83)	176 (6.93)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	164 (6.46)	184 (7.24)	209 (8.23)
Threaded End		PVC, C-PVC	JIS	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
		PP	JIS	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
		PVDF	JIS	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	150 (5.91)	163 (6.42)	197 (7.76)
Double Acting		H		155 (6.1)	162 (6.38)	169 (6.65)	178 (7.01)	211 (8.31)	223 (8.78)
		W		107 (4.21)	107 (4.21)	107 (4.21)	107 (4.21)	125 (4.92)	125 (4.92)
		P		69 (2.72)	69 (2.72)	69 (2.72)	69 (2.72)	80 (3.15)	80 (3.15)
Air to Open		H		180 (7.09)	187 (7.36)	194 (7.64)	203 (7.99)	228 (8.98)	240 (9.45)
		W		149 (5.87)	149 (5.87)	149 (5.87)	149 (5.87)	222 (8.74)	222 (8.74)
		P		89 (3.50)	89 (3.50)	89 (3.50)	89 (3.50)	106 (4.17)	106 (4.17)
Air to Close		H		180 (7.09)	187 (7.36)	194 (7.64)	203 (7.99)	228 (8.98)	240 (9.45)
		W		89 (3.50)	89 (3.50)	89 (3.50)	89 (3.50)	106 (4.17)	106 (4.17)
		P		149 (5.87)	149 (5.87)	149 (5.87)	149 (5.87)	222 (8.74)	222 (8.74)

ASAHI AV VALVE

3-Way Ball Valve Type 23(Pneumatic actuated Type TA)15mm-100mm(1/2inch-4inch)

Body Material
PVC
C-PVC
PP
PVDF

O-ring Material
EPDM
FKM

Connection Standard
Flanged End
(JIS, ANSI, DIN)
Threaded End
Socket End

Action
Double Acting
Air to Open
Air to Close

Equipment
Opening Adjustment Stopper
(± 5 degree)
Indicator

Option
·Filter Regulator
·Solenoid Valve
·Limit Switch
·Speed Controller
·Full Opening Adjustment Mechanism
·Positioner



Air to Open, Air to Close



Double Acting



Left Side Open



Middle Position



Right Side Open

FEATURES

- Horizontal Type Actuator saves piping space.
- Spring unit for Air to Open & Close is detachable so that change-over between Double-Acting and Air to Open & Close can be done easily.
- Various options can be easily installed or removed and can be mounted later(except positioners).
- Stopper enables adjustment of angle of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.
* for the actuator with lubricant free valves consult near Asahi dealer.

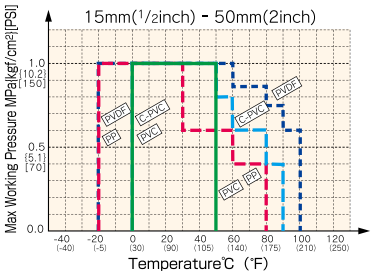
ACTUATOR SPECIFICATION [Double Acting]

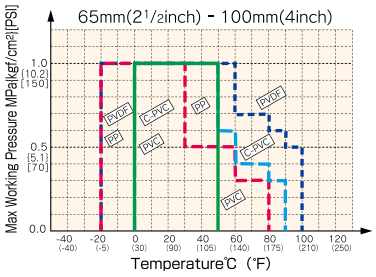
Nominal Size mm(inch)	15 - 25 (1/2inch - 1inch)	32 - 50 (1 1/4inch·2inch)	65, 80 (2 1/2inch,3inch)	100(4inch)
Actuator Type	TA2A-0402D	TA2A-050D	TA2A-063D	TA2A-080D
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}			
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.5	0.9	1.7	3.2
Air Supply Bore	Rc 1/8	Rc 1/4		

ACTUATOR SPECIFICATION [Air to Open,Air to Close]

Nominal Size mm(inch)	15 - 25 (1/2inch - 1inch)	32 - 50 (1 1/4inch·2inch)	65, 80 (2 1/2inch,3inch)	100(4inch)
Actuator Type	TA2A-0402R	TA2A-050R	TA2A-063R	TA2A-080R
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}			
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.8	1.7	3.3	6.1
Air Supply Bore	Rc 1/4			

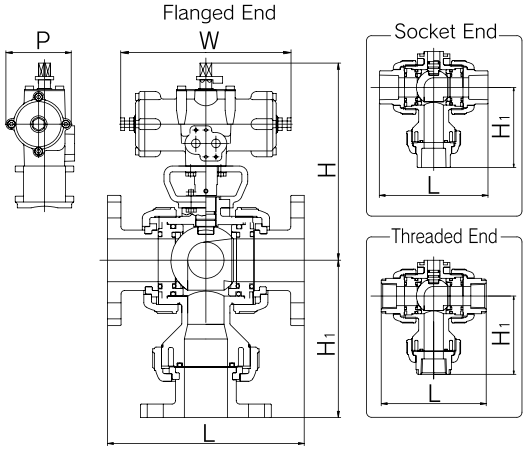
WORKING PRESSURE VS.TEMPERATURE



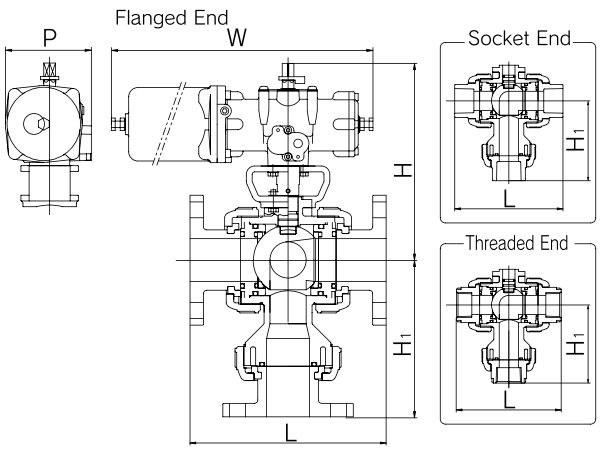


DIMENSIONS FIGURE

Double Acting



Air to Open, Air to Close



DIMENSIONS TABLE

JIS, ANSI, DIN

Unit:mm(inch)

Nominal Size				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)
Flanged End	L	Common	JIS	143 (5.63)	172 (6.77)	187 (7.36)	212 (8.35)	212 (8.35)	234 (9.21)	304 (11.97)	304 (11.97)	372 (14.65)
			DIN	130 (5.12)	150 (5.91)	160 (6.3)	212 (8.35)	200 (7.87)	230 (9.06)	304 (11.97)	310 (12.2)	350 (13.78)
			ANSI	143 (5.63)	172 (6.77)	187 (7.36)	212 (8.35)	212 (8.35)	234 (9.21)	304 (11.97)	304 (11.97)	372 (14.65)
	H_1		JIS	94 (3.7)	115 (4.53)	133 (5.24)	165 (6.5)	165 (6.5)	187 (7.36)	256 (10.08)	256 (10.08)	305 (12.01)
			DIN	88 (3.46)	104 (4.09)	120 (4.72)	165 (6.5)	159 (6.26)	185 (7.28)	256 (10.08)	259 (10.2)	305 (12.01)
			ANSI	94 (3.7)	114 (4.5)	133 (5.24)	165 (6.5)	165 (6.5)	186 (7.34)	256 (10.06)	256 (10.06)	305 (12.01)
Threaded End	L	Common	JIS	102 (4.02)	120 (4.72)	131 (5.16)	163 (6.42)	163 (6.42)	197 (7.76)	264 (10.39)	264 (10.39)	360 (14.17)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	163 (6.42)	163 (6.42)	197 (7.76)	264 (10.39)	264 (10.39)	338 (13.31)
			ANSI	102 (4.02)	120 (4.72)	131 (5.16)	163 (6.42)	163 (6.42)	197 (7.76)	264 (10.39)	264 (10.39)	360 (14.17)
	H_1		JIS	74 (2.91)	89 (3.5)	105 (4.13)	141 (5.55)	141 (5.55)	168 (6.61)	235 (9.25)	235 (9.25)	299 (11.77)
			DIN	74 (2.91)	89 (3.5)	105 (4.13)	141 (5.55)	141 (5.55)	168 (6.61)	235 (9.25)	235 (9.25)	299 (11.77)
			ANSI	73 (2.89)	88 (3.48)	105 (4.13)	141 (5.55)	140 (5.53)	168 (6.61)	235 (9.25)	235 (9.25)	299 (11.77)
Socket End	L	PVC, C-PVC	JIS	108 (4.25)	128 (5.04)	145 (5.71)	174 (6.85)	189 (7.44)	220 (8.66)	316 (12.44)	316 (12.44)	418 (16.46)
			DIN	102 (4.02)	120 (4.72)	131 (5.16)	173 (6.81)	163 (6.42)	197 (7.76)	282 (11.1)	282 (11.1)	349 (13.74)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	174 (6.85)	184 (7.24)	209 (8.23)	285 (11.23)	282 (11.1)	– –
		PP	JIS	108 (4.25)	126 (4.96)	141 (5.55)	– –	171 (6.73)	192 (7.56)	264 (10.40)	258 (10.16)	340 (13.39)
			DIN	99 (3.9)	114 (4.49)	123 (4.84)	148 (5.83)	148 (5.83)	176 (6.93)	256 (10.08)	251 (9.88)	310 (12.2)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	179 (7.05)	184 (7.24)	209 (8.23)	285 (11.23)	282 (11.1)	365 (14.37)
		PVDF	DIN	99 (3.9)	114 (4.49)	123 (4.84)	148 (5.83)	148 (5.83)	176 (6.93)	256 (10.08)	251 (9.88)	310 (12.2)
			ANSI	113 (4.45)	129 (5.08)	146 (5.75)	179 (7.05)	184 (7.24)	209 (8.23)	285 (11.23)	282 (11.1)	365 (14.37)
	H_1	PVC, C-PVC	JIS	77 (3.03)	90 (3.54)	110 (4.33)	146.5 (5.77)	145 (5.71)	169 (6.65)	261 (10.28)	244 (9.61)	294 (11.57)
			DIN	72 (2.83)	85 (3.35)	104 (4.09)	147 (5.80)	142 (5.59)	170 (6.69)	245 (9.65)	245 (9.65)	305 (12.01)
			ANSI	78 (3.07)	129 (5.08)	146 (5.75)	140 (5.51)	184 (7.24)	209 (8.23)	246 (9.69)	282 (11.1)	– –
		PP	JIS	77 (3.03)	92 (3.62)	110 (4.33)	– –	145 (5.71)	166 (6.54)	235 (9.26)	232 (9.13)	289 (11.38)
			DIN	71 (2.80)	83 (3.27)	100 (3.94)	– –	131 (5.16)	154 (6.06)	227 (8.94)	224 (8.82)	279 (10.98)
			ANSI	78 (3.07)	92 (3.62)	111 (4.37)	147 (5.80)	149 (5.87)	172 (6.77)	246 (9.69)	282 (11.10)	365 (14.37)
		PVDF	JIS	78 (3.07)	90 (3.54)	108 (4.25)	– –	142 (5.59)	166 (6.54)	– –	233 (9.17)	285 (11.22)
			DIN	71 (2.80)	83 (3.27)	100 (3.94)	131 (5.16)	131 (5.16)	154 (6.06)	227 (8.94)	224 (8.82)	279 (10.98)
			ANSI	78 (3.07)	92 (3.62)	111 (4.37)	147 (5.80)	149 (5.87)	172 (6.77)	246 (9.69)	282 (11.10)	365 (14.37)
Common		H		159.5 (6.28)	166 (6.54)	173 (6.81)	224 (8.82)	224 (8.82)	235.5 (9.27)	277 (10.91)	277 (10.91)	348 (13.7)
Double Acting		W		110 (4.33)	110 (4.33)	110 (4.33)	210 (8.27)	210 (8.27)	210 (8.27)	250 (9.84)	250 (9.84)	292 (11.5)
		P		57 (2.24)	57 (2.24)	57 (2.24)	82 (3.23)	82 (3.23)	82 (3.23)	95 (3.74)	95 (3.74)	116 (4.57)
Air to Open, Air to Close		W		249 (9.8)	249 (9.8)	249 (9.8)	345 (13.58)	345 (13.58)	345 (13.58)	413 (16.26)	413 (16.26)	487 (19.17)
		P		92 (3.62)	92 (3.62)	92 (3.62)	103 (4.06)	103 (4.06)	103 (4.06)	119 (4.69)	119 (4.69)	141.5 (5.57)

ASAHI AV VALVE

Butterfly Valve Type 57(Electric Actuated Type T)40mm-350mm(1 1/2inch-14inch)

Body Material
PVC
PP
PVDF

Seat & O-ring Material
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Power Source
Single-phase
AC100V/110V/200V/220V

Equipment
Space Heater
Output Contact Limit Switches
Indicator
Manual Operation Mechanism

Option
E-E Positioner
Intermediate Limit Swirch (no-volt)
Speedcontrol Unit



FEATURES

- Lightweight and Compact with High-Torque
- Manual Operation Handle is equipped normally and operativeness has improved.
- Indicator can be seen easily.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7
Space Heater	●	●	○	●	○	●	○
Output Contact Limit Swiches	●	●	●	–	●	–	●
Potentiometer	–	○	–	–	–	○	○
E-E Positioner	–	–	○	–	–	–	–
Intermediate Limit Swirch (no-volt)	–	–	–	○	–	○	–
Speedcontrol Unit	–	–	–	–	○	–	○

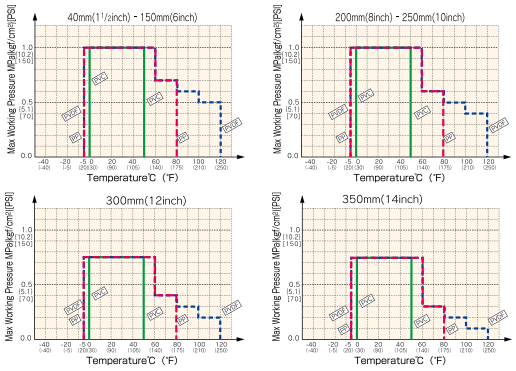
●Standard Equipment

ACTUATOR SPECIFICATION

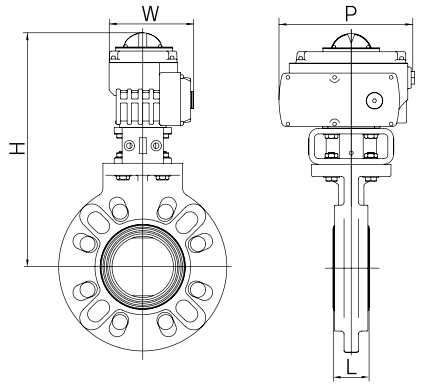
Nominal Size mm(inch)		40-100(1 1/2inch-4inch)	125(5inch)	150(6inch)	200(8inch)	250-350(10inch-14inch)
Actuator Type		AOC-0	AOC-1	AOC-2	AOC-2.5	AOC-3
Cycle Time 50/60Hz(seconds)		25/20			37/30	55/50
Motor Output(W)		8	20	30		90
Motor Starting Current(A) 50/60Hz	100V	1.20/1.20	1.60/1.40	2.40/2.40		5.1/4.8
	110V	1.40/1.40	1.70/1.70	2.50/2.50		6.1/6.6
	200V	0.50/0.50	0.70/0.70	1.10/1.10		2.6/2.4
	220V	0.70/0.70	0.80/0.90	1.20/1.20		3.1/3.0
Motor Rated Current(A) 50/60Hz	100V	0.50/0.50	0.70/0.60	0.90/1.20		1.60/1.70
	110V	0.60/0.60	0.90/0.70	1.00/1.20		1.70/1.80
	200V	0.25/0.25	0.40/0.30	0.50/0.80		0.80/1.00
	220V	0.30/0.30	0.50/0.40	0.60/0.80		0.90/1.00
Number of revolutions of Manual Operating Handle		6.7	16.5			
Limit Switch Capacity		AC 250V 10A				
Protective Structure		JIS C 0920 Waterjet-proof type (IEC IP65)				
Cable Connector Nominal Size		2-G1/2				
Motor Pole(P)		4				
Motor Insulation		E Class				
Motor Time Rating(minute)		30				
Space Heater Output(W)		5				

* for the actuator with lubricant free valves consult near Asahi dealer.

WORKING PRESSURE VS.TEMPERATURE

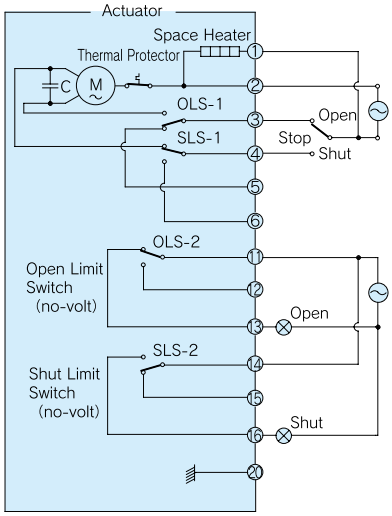


DIMENSIONS FIGURE

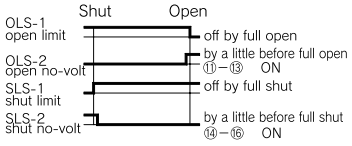


SCHEMATIC DIAGRAM

WIRING DIAGRAM



Switching Chart



DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size	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)
L	39 (1.54)	42 (1.65)	46 (1.81)	46 (1.81)	56 (2.20)	66 (2.60)	71 (2.80)	87 (3.43)	112 (4.40)	129 (5.08)	129 (5.08)
H	290 (11.42)	300 (11.81)	310 (12.20)	325 (12.80)	340 (13.39)	376 (14.80)	424 (16.69)	455 (17.91)	541 (1.61)	598 (23.54)	625 (24.61)
W	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	191 (7.52)	239 (9.41)	239 (9.41)	381.5 (15.02)	381.5 (15.02)	381.5 (15.02)
P	202 (7.95)	202 (7.95)	202 (7.95)	202 (7.95)	202 (7.95)	252 (9.92)	310 (12.20)	310 (12.20)	388 (15.28)	388 (15.28)	388 (15.28)

Butterfly Valve Type 57(Electric Actuated Type S)40mm-350mm(1 1/2inch-14inch)

Body Material
PVC
PP
PVDF

Seat & O-ring Material
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Power Source
Three-phase
AC200V/220V/400V/440V

Equipment
Manual Operation Mechanism
Torque Switches
Output Contact-
Limit Switches
Space Heater
Indicator

Option
Potentiometer
R/I Transmitter
E-E Positioner



FEATURES

- Speedy, exact operation by motor with direct current brake.
- Standard torque switch protects valves from overload.
- Stopper enables adjustment of an angle of ±5degree when fully-opened or fully-closed.

OPTIONAL EQUIPMENT

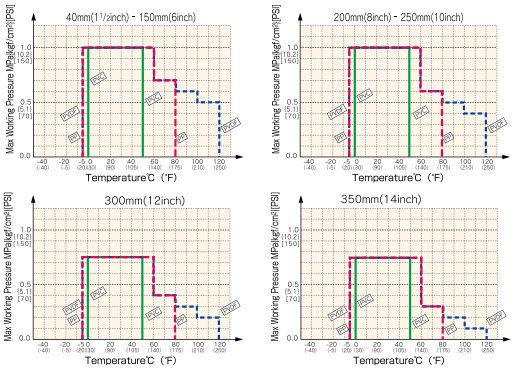
Combination No.	1	2	3
Space Heater	●	●	●
Output Contact Limit Swiches	●	●	●
Potentiometer	○	○	○
R-I Transmitter	–	○	○
E-E Positioner	–	–	○

●Standard Equipment

ACTUATOR SPECIFICATION

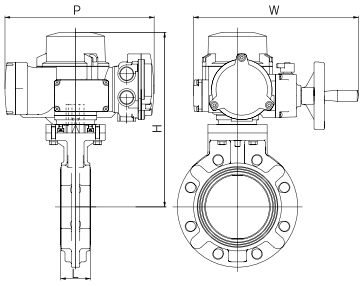
Nominal Size mm(inch)		40-100(1 1/2inch-4inch)	125 · 150(5inch,6inch)	200 · 250(8inch,10inch)	300 · 350(12inch,14inch)
Actuator Type		SRJ-010	SRJ-020	SRJ-060	LTRM-01/BRL-1
Cycle Time 50/60Hz(seconds)		18/15	36/30	36/30	42/36
Motor Output(W)		40	40	100	200
Motor Starting Current(A) 50/60Hz	200V	0.58/0.57	0.58/0.57	1.20/1.10	6.08/5.56
	220V	0.64/0.61	0.64/0.61	1.20/1.10	5.30/6.10
	400V	0.30/0.26	0.30/0.26	0.47/0.44	3.04/2.78
	440V	0.33/0.29	0.33/0.29	0.51/0.48	2.70/3.05
Motor Rated Current(A) 50/60Hz	200V	0.42/0.35	0.42/0.35	0.70/0.55	1.80/1.40
	220V	0.50/0.39	0.50/0.39	0.90/0.63	1.96/1.50
	400V	0.19/0.15	0.19/0.15	0.35/0.27	0.90/0.70
	440V	0.23/0.18	0.23/0.18	0.45/0.32	1.00/0.77
Number of revolutions of manual operating handle		21	21	26	15
Limit Switch Capacity		AC 250V 2A			AC 250V 5A
Protective Structure		IP68			IP55
Cable Connector Nominal Size		3-G1			2-G1
Motor Pole(P)		4			4
Motor Insulation		B Class			E Class
Motor Time Rating(minute)		15			15

WORKING PRESSURE VS.TEMPERATURE

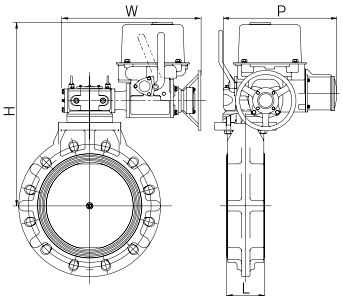


DIMENSIONS FIGURE

●40mm-250mm
(1 1/2inch-10inch)



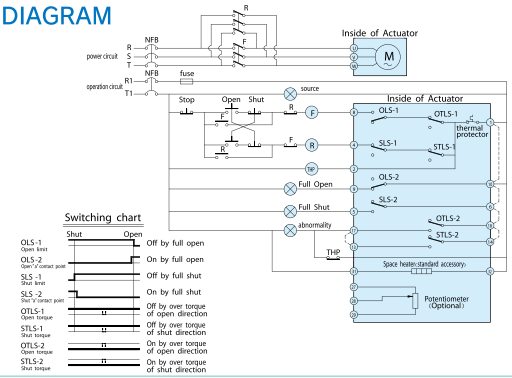
●300mm,350mm
(12inch, 14inch)



SCHEMATIC DIAGRAM

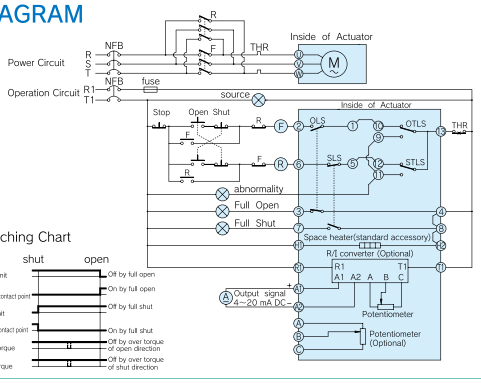
WIRING DIAGRAM

●SRJ



WIRING DIAGRAM

●LTRM-01



DIMENSIONS TABLE

JIS, ANSI, DIN Unit:mm(inch)

Nominal Size	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)
L	39(1.54)	42(1.65)	46(1.81)	46(1.81)	56(2.21)	66(2.60)	71(2.80)	87(3.43)	112(4.41)	129(5.08)	129(5.08)
H	313(12.32)	323(12.72)	333(13.11)	348(13.70)	363(14.29)	398(15.67)	413(16.26)	441(17.36)	476(18.74)	666(26.22)	693(27.29)
W	99(3.90)	390(15.36)	390(15.36)	390(15.36)	390(15.36)	390(15.36)	390(15.36)	460(18.11)	460(18.11)	516(20.32)	516(20.32)
P	100(3.94)	353(13.90)	353(13.90)	353(13.90)	353(13.90)	353(13.90)	353(13.90)	393(15.47)	393(15.47)	430(16.93)	430(16.93)

ASAHI AV VALVE

Butterfly Valve Type 56 (Electric Actuated Type S) 400mm(16inch)

Body Material
PP
PVDF

Seat & O-ring Material
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Power Source
Three-Phase
AC200V/220V/400V/440V

Equipment
Manual Operation Mechanism (with handle)
Torque Switches
Space Heater
Indicator

Option
Output Contact Limit Switches
Potentiometer
R/I Transmitter
E-E Positioner
※ Actuator type is to be changed



FEATURES

- Standard Torque Switch protects Valves from Overload.
- Automatic Return does not require Clutch Operation after Manual Operation.
- Stopper enables Adjustment of an Angle of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4
Space Heater	●	●	●	●
Output Contact Limit Swiches	○	–	–	–
Potentiometer	–	○	○	○
R-I Transmitter	–	–	○	○
E-E Positioner	–	–	–	○

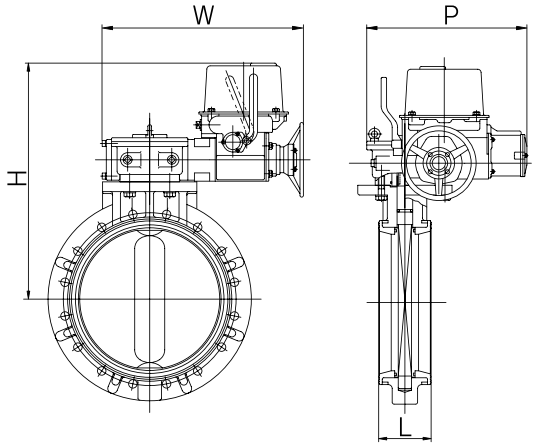
●Standard Equipment
※Actuator type is to be changed.

ACTUATOR SPECIFICATION [Double acting]

Nominal Size mm(inch)		400(16)
Actuator Type		LTRM-01/BRL-3
Cycle Time 50/60Hz(seconds)		43/36
Motor Output(W)		400
Motor Starting Current(A) 50/60Hz	200V	8.8/8.3
	400V	4.4/4.1
Motor Rated Current(A) 50/60Hz	200V	3.0/2.4
	400V	1.5/1.2
Number of revolutions of manual operating handle		15
Limit Switch Capacity		AC 250V 5A
Protective Structure		IP55
Cable Connector Nominal Size		2-G1
Motor Pole(P)		4
Motor Insulation		E Class
Motor Time Rating(minute)		15min.

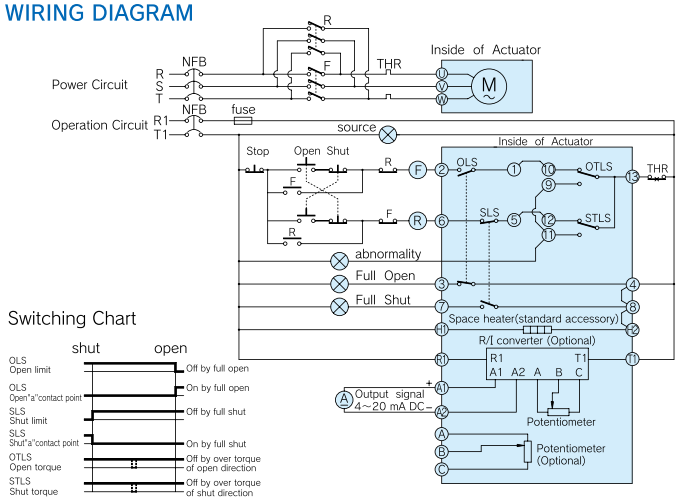
※In the case of actuator with electric positioner, the model number is changed to LTMD-01Z/BRL-1, LTMD-01Z/BRL-3

DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

WIRING DIAGRAM

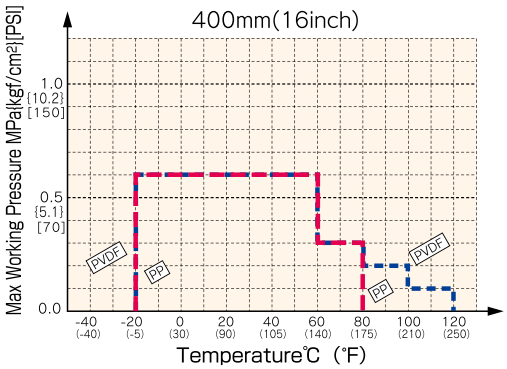


Switching Chart

DIMENSIONS TABLE

JIS, ANSI, DIN	Unit:mm(inch)
Nominal Size	400 (16)
L	169 (6.65)
H	689 (27.13)
W	592 (23.31)
P	430 (16.93)

WORKING PRESSURE VS.TEMPERATURE



Butterfly Valve Type 75 (Electric Actuated Type S)450mm - 600mm(18inch - 24inch)

Body Material
PP
PVDF

Seat & O-ring Material
EPDM
FKM

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Power Source
Three-Phase
AC200V/220V/400V/440V

Equipment
Manual Operation Mechanism (with handle)
Torque Switches
Space Heater
Indicator

Option
Output Contact Limit Switches
Potentiometer
R/I Transmitter
E-E Positioner
※ Actuator type is to be changed



FEATURES

- Standard Torque Switch protects Valves from Overload.
- Automatic return does not require Clutch Operation after Manual Operation.
- Stopper enables Adjustment of Angle of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4
Space Heater	●	●	●	●
Output Contact Limit Swiches	○	–	–	–
Potentiometer	–	○	○	○
R-I Transmitter	–	–	○	○
E-E Positioner	–	–	–	○

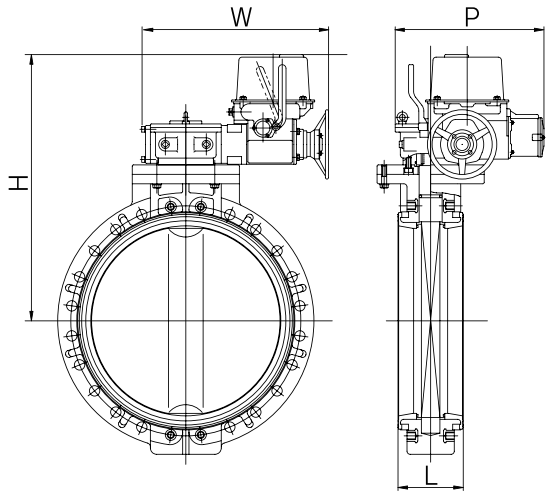
●Standard Equipment
※Actuator Type is to be changed.

ACTUATOR SPECIFICATION [Double acting]

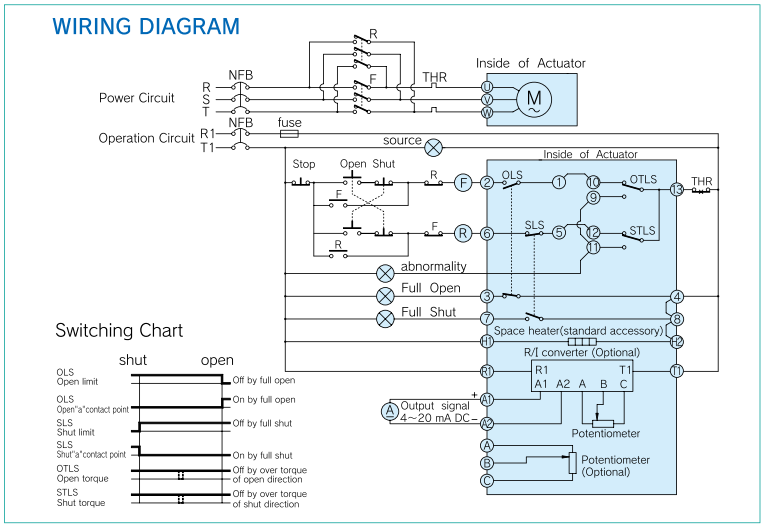
Nominal Size mm(inch)		450 - 600 (18inch - 24inch)
Actuator Type		LTRM-01/BRL-3
Cycle Time 50/60Hz(seconds)		43/36
Motor Output(W)		400
Motor Starting Current(A) 50/60Hz	200V	8.8/8.3
	220V	8.0/9.1
	400V	4.4/4.1
	440V	4.0/4.5
Motor Rated Current(A) 50/60Hz	200V	3.0/2.4
	220V	2.7/2.5
	400V	1.5/1.2
	440V	1.4/1.3
Number of revolutions of manual operating handle		15
Limit Switch Capacity		AC 250V 5A
Protective Structure		IP55
Cable Connector Nominal Size		2-G1
Motor Pole(P)		4
Motor Insulation		E Class
Motor Time Rating(minute)		15min.

※In the case of actuator with electric positioner, the model number is changed to LTMD-01Z/BRL-3

DIMENSIONS FIGURE



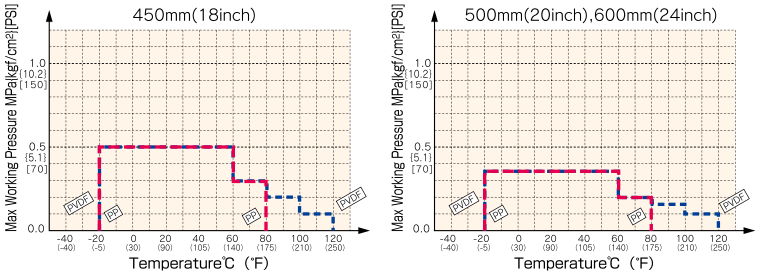
SCHEMATIC DIAGRAM



DIMENSIONS TABLE

JIS, ANSI, DIN			Unit:mm(inch)
Nominal Size	450 (18)	500 (20)	600 (24)
L	179 (7.05)	190 (7.48)	209 (8.23)
H	750 (29.53)	780 (30.71)	845 (33.27)
W	592 (23.31)	592 (23.31)	592 (23.31)
P	464 (18.27)	464 (18.27)	464 (18.27)

WORKING PRESSURE VS.TEMPERATURE



ASAHI AV VALVE

PDCPD Butterfly Valve (Electric Actuated Type S) 700mm - 1200mm(28inch - 48inch)

Body Material
PDCPD

Seat & O-ring Material
EPDM

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Power Source
Three-Phase
AC200V/400V

Equipment
Manual Operation Mechanism (with handle)
Torque Switches
Space Heater
Indicator

Option
Output Contact Limit Switches
Potentiometer
R/I Transmitter
E-E Positioner
※ Actuator type is to be changed



FEATURES

- As the Specific Qravity of PDCPD is less than 1/4 that of Iron the Valve Weighs Significantly lighter than Metal Butterfly Valves.
- Superior Watertightness using Seat Packing made of Synthetic Rubber.
- Standard Torque Switch protects Valves from Overload.
- Automatic Return does not require Clutch Operation after Manual Operation.
- Stopper enables Adjustment of an angle of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4
Space Heater	●	●	●	●
Output Contact Limit Swiches	○	–	–	–
Potentiometer	–	○	○	○
R-I Transmitter	–	–	○	○
E-E Positioner	–	–	–	○

●Standard Equipment ※Actuator Type is to be changed.

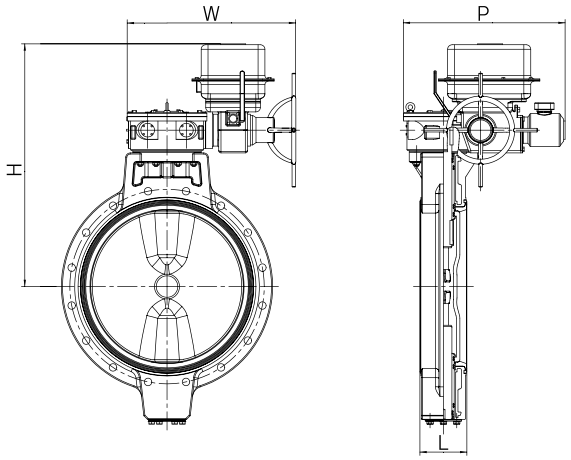
ACTUATOR SPECIFICATION

Nominal Size mm		700 (28inch)	800·900(32inch·36inch)	1000 (40inch)	1100 - 1200(44inch - 48inch)
Actuator Type		LTMD-02/BRL-10	LTMD-05/BRL-10	LTMD-1/BRL-20	LTMD-1/BRL-20
Cycle Time 50/60Hz(seconds)		74/61	71/75	46/51	59/59
Motor Output(W)		750	750	2200	2200
Motor Starting Current(A) 50/60Hz	200V	15.6/15.2	15.6/15.2	49.0/45.0	49.0/45.0
	400V	7.8/7.6	7.8/7.6	24.5/22.5	24.5/22.5
Motor Rated Current(A) 50/60Hz	200V	4.4/4.0	4.4/4.0	11.4/10.4	11.4/10.4
	400V	2.2/2.0	2.2/2.0	5.7/5.2	5.7/5.2
Number of revolutions of manual operating handle		15	333	333	618
Limit Switch Capacity		AC 250V 5A			
Protective Structure		IP55			
Cable Connector Nominal Size		Operation Circuit: 2-G1 Motor Circuit: G3/4			
Motor Pole(P)		4			
Motor Insulation		E Class			
Motor Time Rating(minute)		15min.			

※In the case of actuator with electric positioner, the model number is followed by "Z". Example:LTMD-02Z/BRL-10

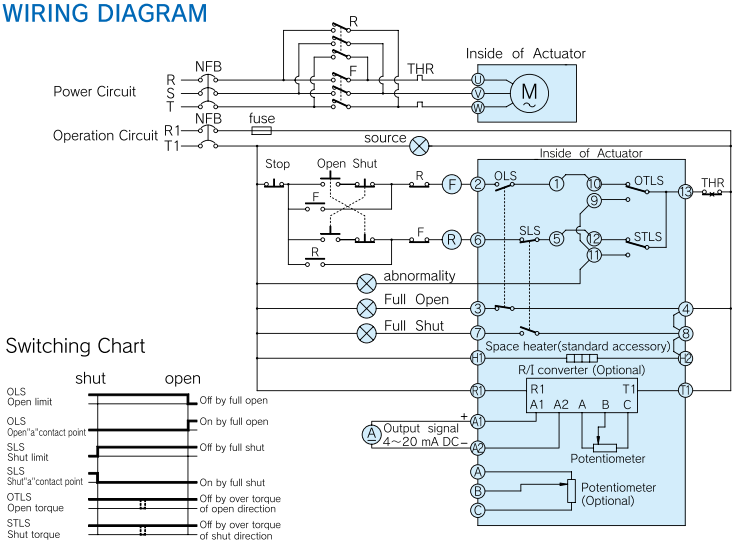
Applications
Irrigation water, city water and sewage, thermal accumulators in buildings, various pipings such as for sea water, chemicals and air, and so on.

DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

WIRING DIAGRAM



Switching Chart

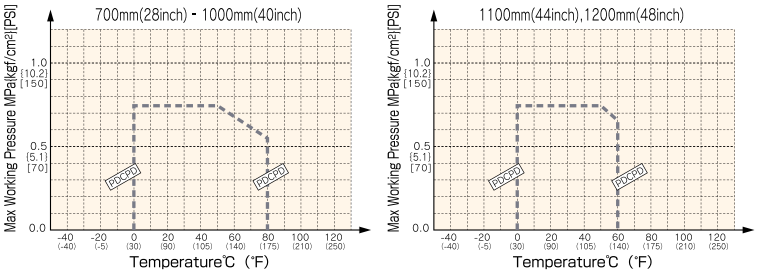
DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size	700 (28)	800 (32)	900 (36)	1000 (40)	1100 (44)	1200 (48)
L	206 (8.11)	240 (9.45)	240 (9.45)	300 (11.81)	300 (11.81)	350 (13.78)
H	1075 (42.32)	1155 (45.47)	1240 (48.82)	1300 (51.18)	1429 (56.26)	1479 (58.23)
W	852 (33.54)	952 (37.48)	952 (37.48)	989 (38.94)	1079 (42.48)	1079 (42.48)
P	722 (28.43)	897 (35.31)	897 (35.31)	1007 (39.65)	1072 (42.20)	1072 (42.20)

※1100mm(44inch) DIN not Available.

WORKING PRESSURE VS.TEMPERATURE



Butterfly Valve Type 55 (Electric Actuated Type T) 50mm - 250mm(2inch - 10inch)

Body Material
FCD-S

Seat & O-ring Material
PTFE
(Cushion:CR)

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Power Source
Single-Phase
AC100V/110V/200V/220V

Equipment
Space Heater
Output Contact Limit Switches
Manual Operation Mechanism
Indicator

Option
E-E Positioner
Intermediate Limit Switch(no-volt)
Speedcontrol Unit



FEATURES

- Lightweight and Compact with High-Torque
- Manual Operation Handle is equipped normally and operativeness has improved.
- Indicator that can be seen easily.

OPTIONAL EQUIPMENT

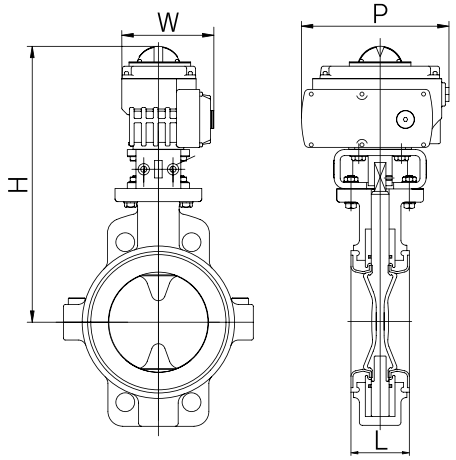
Combination No.	1	2	3	4	5	6	7
Space Heater	●	●	○	●	○	●	○
Output Contact Limit Swiches	●	●	●	–	●	–	●
Potentiometer	–	○	–	–	–	○	○
E-E Positioner	–	–	○	–	–	–	–
Intermediate Limit Swirch (no-volt)	–	–	–	○	–	○	–
Speedcontrol Unit	–	–	–	–	○	–	○

●Standard Equipment

ACTUATOR SPECIFICATION

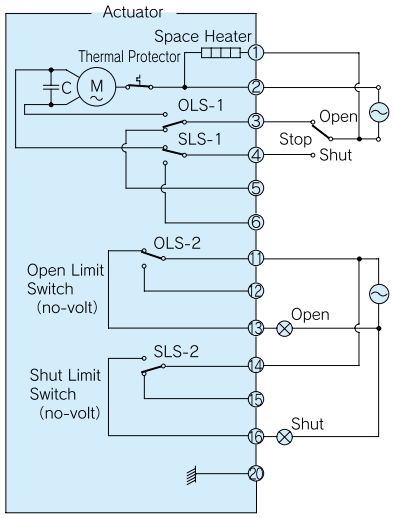
Nominal Size mm(inch)		50-100(2inch-4inch)	125(5inch)	150(6inch)	200(8inch)	250-350(10inch-14inch)
Actuator Type		AOC-0	AOC-1	AOC-2	AOC-2.5	AOC-3
Cycle Time 50/60Hz(seconds)		25/20			37/30	55/50
Motor Output(W)		8	20	30		90
Motor Starting Current(A) 50/60Hz	100V	1.20/1.20	1.60/1.40	2.40/2.40		5.1/4.8
	110V	1.40/1.40	1.70/1.70	2.50/2.50		6.1/6.6
	200V	0.50/0.50	0.70/0.70	1.10/1.10		2.6/2.4
	220V	0.70/0.70	0.80/0.90	1.20/1.20		3.1/3.0
Motor Rated Current(A) 50/60Hz	100V	0.50/0.50	0.70/0.60	0.90/1.20		1.60/1.70
	110V	0.60/0.60	0.90/0.70	1.00/1.20		1.70/1.80
	200V	0.25/0.25	0.40/0.30	0.50/0.80		0.80/1.00
	220V	0.30/0.30	0.50/0.40	0.60/0.80		0.90/1.00
Number of revolutions of Manual Operating Handle		6.7	16.5			
Limit Switch Capacity		AC 250V 10A				
Protective Structure		JIS C 0920 Waterjet-proof type (IEC IP65)				
Cable Connector Nominal Size		G1/2				
Motor Pole(P)		4				
Motor Insulation		E Class				
Motor Time Rating(minute)		30				
Space Heater Output(W)		5				

DIMENSIONS FIGURE

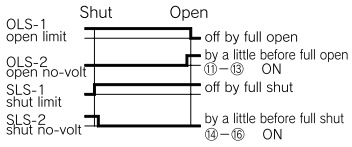


SCHEMATIC DIAGRAM

WIRING DIAGRAM



Switching Chart

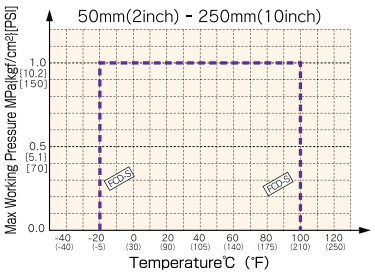


DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size	50 (2)	80 (3)	100 (4)	125 (5)	150 (6)	200 (8)	250 (10)
L	44 (1.74)	54 (2.13)	59 (2.33)	64 (2.52)	75 (2.96)	85 (3.35)	96 (3.78)
H	295 (11.7)	314 (12.4)	330 (13.0)	374 (14.8)	424 (16.7)	445 (17.5)	540 (21.3)
W	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	191 (7.52)	239 (9.41)	239 (9.41)	381.5 (15.02)
P	202 (7.95)	202 (7.95)	202 (7.95)	252 (9.92)	310 (12.20)	310 (12.20)	388 (15.28)

WORKING PRESSURE VS.TEMPERATURE



ASAHI AV VALVE

Butterfly Valve Type 55 (Electric Actuated Type S) 50mm·80mm - 250mm(2·3inch - 10inch)

Body Material
FCD-S

Seat & O-ring Material
PTFE
(Cushion:CR)

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Power Source
Three-Phase
AC200V/400V

Equipment
Manual Operation Mechanism
Torque Switches
Output Contact-
Limit Switches
Space Heater
Indicator

Option
Potentiometer
R/I Transmitter
E-E Positioner



FEATURES

- Speedy, exact operation due to a Motor with Direct Current Brake.
- Standard Torque Switch protects Valves from Overload.
- Stopper enables Adjustment of an angle of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

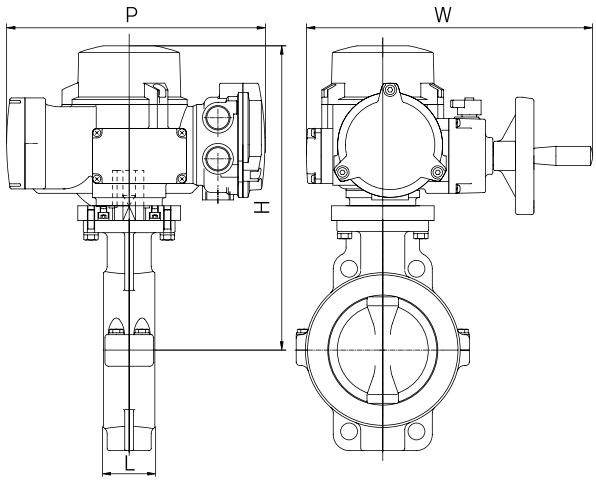
Combination No.	1	2	3
Space Heater	●	●	●
Output Contact Limit Swiches	●	●	●
Potentiometer	○	○	○
R-I Transmitter	–	○	○
E-E Positioner	–	–	○

●Standard Equipments

ACTUATOR SPECIFICATION

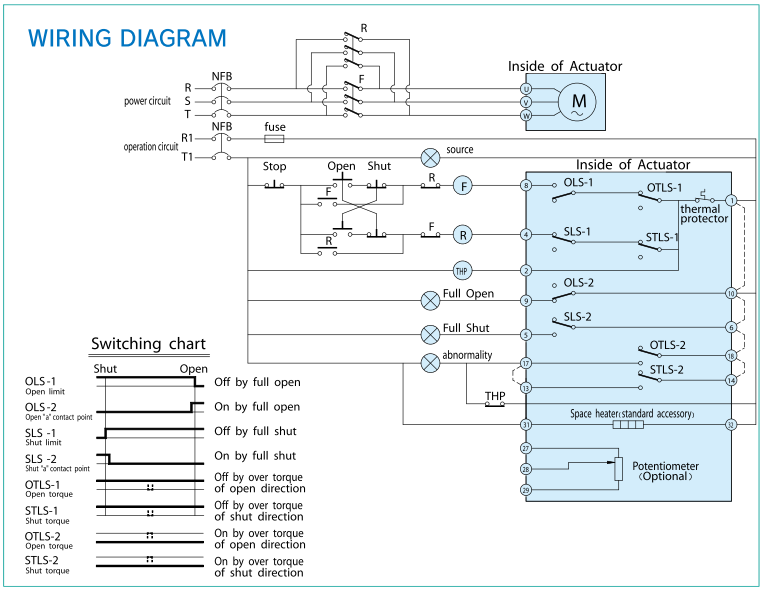
Nominal Size mm(inch)		50-100(2inch-4inch)	125·150(5inch·6inch)	200·250(8inch·10inch)
Actuator Type		SRJ-010	SRJ-020	SRJ-060
Cycle Time 50/60Hz(seconds)		18/15	36/30	36/30
Motor Output(W)		40	40	100
Motor Starting Current(A) 50/60Hz	200V	1.27/1.19	1.27/1.19	1.89/1.77
	400V	0.63/0.58	0.63/0.58	0.94/0.90
Motor Rated Current(A) 50/60Hz	200V	0.53/0.45	0.53/0.45	0.74/0.67
	400V	0.26/0.22	0.26/0.22	0.37/0.34
Number of revolutions of manual operating handle		21	21	26
Limit Switch Capacity		AC 250V 2A		
Protective Structure		IP68		
Cable Connector Nominal Size		3-G1		
Motor Pole(P)		4		
Motor Insulation		B Class		
Motor Time Rating(minute)		15		

DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

WIRING DIAGRAM



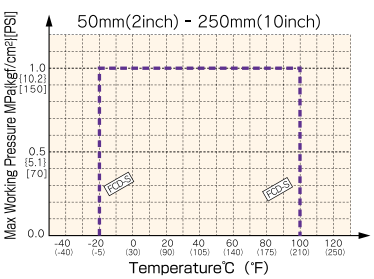
Switching chart

DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size	50 (2)	80 (3)	100 (4)	125 (5)	150 (6)	200 (8)	250 (10)
L	44 (1.73)	54 (2.13)	59 (2.32)	64 (2.52)	75 (2.95)	85 (3.35)	96 (3.78)
H	318 (12.52)	337 (13.27)	353 (13.90)	396 (15.59)	413 (16.26)	440 (17.33)	475 (18.70)
W	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	460 (18.11)	460 (18.11)
P	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	393 (15.47)	393 (15.47)

WORKING PRESSURE VS.TEMPERATURE



Butterfly Valve Type 57,56 (Pneumatic Actuated Type TA)40mm-400mm(1 1/2inch-16inch)

Type 57:40mm-350mm(1 1/2inch-16inch),Type 56:400mm(16inch)

Body Material
PVC
PP
PVDF

Seat & O-ring Material
EPDM
FKM
Others

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
· Opening Adjustment Stopper (± 5 degree)
· Indicator

Option
· Filter Regulator
· Solenoid Valve
※ with built-in specialized speed controller and bypass valve.
· Limit Switch
· Speed Controller
· Manual Operation Mechanism
※ Only for air to open & close.
· Full Opening Adjustment Mechanism
· Positioner



Air to Open
Air to Close

Double Acting

FEATURES

- Horizontal Type Actuator saves Piping Space.
- Spring unit for Air to Open & Close is detachable so Change-Over between Double-acting and Air to Open & Close can be done Easily.
- Various Options can be Easily installed or removed, and can be mounted later (except Positioners).
- Stopper enables Adjustment of ±5 Degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

ACTUATOR SPECIFICATION [Double Acting]

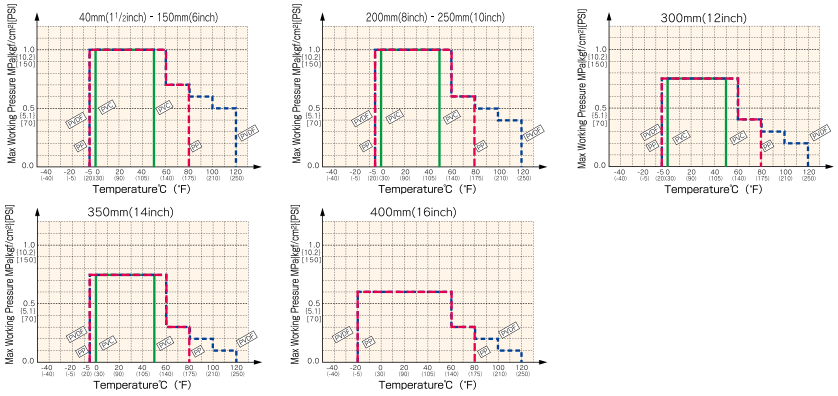
Nominal Size mm(inch)	40-50(1 1/2inch,2inch)	65-80(2 1/2inch-3inch)	100(4inch)	125-150(5inch-6inch)	200(8inch)	200-300(10inch-12inch)	350(14inch)	400(16inch)
Actuator Type	TA2A-050D	TA2A-063D	TA2A-080D	TA2A-100D	TA2A-125D	TA2A-160D	TA-200D	TA-200D
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}							
Air Consumption Nl /Open & Close (at Operating Pressure 0.4NPa)	0.9	1.7	3.2	6.6	13.3	27.1	56.8	56.8
Air Supply Bore	Rc 1/4						Rc 3/8	Rc 3/8

ACTUATOR SPECIFICATION [Air to Open, Air to Close]

Nominal Size mm(inch)	40-50(1 1/2inch,2inch)	65-80(2 1/2inch-3inch)	100(4inch)	125-150(5inch-6inch)	200(8inch)	200-300(10inch-12inch)	350(14inch)	400(16inch)
Actuator Type	TA2A-050R	TA2A-063R	TA2A-080R	TA2A-100R2	TA2A-125R2	TA2A-160R2	TA-200R	TA-200R
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}							
Air Consumption Nl /Open & Close (at Operating Pressure 0.4NPa)	1.7	3.3	6.1	12.8	21.6	42.7	68.4	56.8
Air Supply Bore	Rc 1/4						Rc 3/8	Rc 3/8

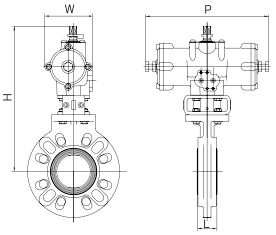
* for the actuator with lubricant free valves consult near Asahi dealer.

WORKING PRESSURE VS.TEMPERATURE

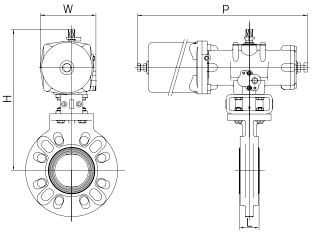


DIMENSIONS FIGURE

Double Acting



Air to Open
Air to Close



DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size		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)
Common	L	39 (1.54)	42 (1.65)	46 (1.81)	46 (1.81)	56 (2.20)	66 (2.60)	71 (2.80)	87 (3.43)	112 (4.40)	129 (5.08)	129 (5.08)	169 (6.65)
	H	263 (10.35)	273 (10.75)	298 (11.73)	313 (12.32)	361 (14.21)	382 (15.04)	428 (16.85)	493 (19.41)	541 (1.61)	598 (23.54)	625 (24.61)	751 (29.57)
Double Acting	W	82 (3.23)	82 (3.23)	95 (3.74)	95 (3.74)	116 (4.57)	116 (4.57)	143 (5.63)	150 (5.90)	181 (7.13)	181 (7.13)	224 (8.82)	214 (8.43)
	P	210 (8.27)	210 (8.27)	250 (9.84)	250 (9.84)	292 (11.50)	292 (11.50)	362 (14.25)	440 (17.32)	532 (20.94)	532 (20.94)	664 (26.14)	664 (26.14)
Air to Open, Air to Close	W	103 (4.06)	103 (4.06)	119 (4.69)	119 (4.69)	142 (5.59)	142 (5.59)	174 (6.86)	193 (7.60)	231 (9.09)	231 (9.09)	292 (11.50)	292 (11.50)
	P	345 (13.58)	345 (13.58)	413 (16.26)	413 (16.26)	487 (19.18)	487 (19.18)	598 (23.55)	762 (30.00)	924 (36.38)	924 (36.38)	1275 (50.20)	1275 (50.20)

ASAHI AV VALVE

Butterfly Valve Type 75 (Pneumatic Actuated Type TW)450mm - 600mm(18inch - 24inch)

Body Material
PP
PVDF

Seat & O-ring Material
EPDM
FKM
Others

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Action
Double Acting

Equipment
· Opening Adjustment Stopper (± 5 degree)
· Indicator

Option
· Filter Regulator
· Solenoid Valve
※ with built-in specialized speed controller and bypass valve.
· Limit Switch
· Speed Controller
· Manual Operation Mechanism
※ for air to open & close only.
· Full Opening Adjustment Mechanism
· Positioner



FEATURES

- Horizontal Type Actuator saves Piping Space.
- Stopper enables Adjustment of an Angle of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

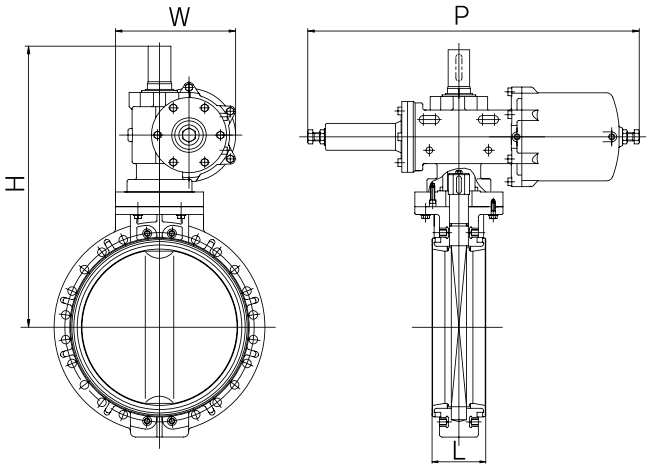
Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (electric-air, ait-air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

ACTUATOR SPECIFICATION [Double acting]

Nominal Size mm(inch)	450 - 600(18inch - 24inch)
Actuator Type	TW-250D
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	99
Air Supply Bore	Rc 3/8

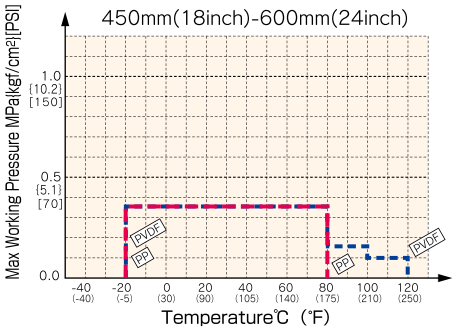
DIMENSIONS FIGURE



DIMENSIONS TABLE

JIS, ANSI, DIN			Unit:mm(inch)
Nominal Size	450 (18)	500 (20)	600 (24)
L	179 (7.05)	190 (7.48)	209 (8.23)
H	825 (32.48)	855 (33.66)	920 (36.22)
W	384 (15.12)	384 (15.12)	384 (15.12)
P	987 (38.86)	987 (38.86)	987 (38.86)

WORKING PRESSURE VS.TEMPERATURE



Butterfly Valve Type 55 (Pneumatic Actuated Type TA)50mm·80mm - 250mm(2·3inch - 10inch)

Body Material
FCD-S

Seat & O-ring Material
PTFE
(Cushion:CR)

Connection Standard
JIS 10K
ANSI CLASS150
DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
· Opening Adjustment Stopper (± 5 degree)
· Indicator

Option
· Filter Regulator
· Solenoid Valve
※ with built-in specialized speed controller and bypass valve.
· Limit Switch
· Speed Controller
· Manual Operation Mechanism
※ Only for air to open & close.
· Full Opening Adjustment Mechanism
· Positioner



Double Acting



Air to Open
Air to Close

FEATURES

- Horizontal Type Actuator saves Piping Space.
- Spring unit for Air to Open & Shut is detachable so that Change-over between Double-Acting and Air to Open & Shut can be done easily.
- Various Options can be easily installed or removed and can be mounted later(except Positioners).
- Stopper enables Adjustment of angle of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

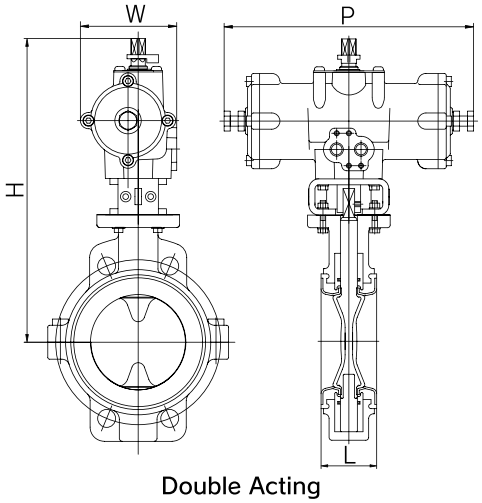
ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	50(2inch)	80(3inch)	100·125(4inch·5inch)	150(6inch)	200(8inch)	250(10inch)
Actuator Type	TA2A-050D	TA2A-063D	TA2A-080D	TA2A-100D	TA2A-125D	TA2A-160D
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	0.9	1.7	3.2	6.6	13.3	27.1
Air Supply Bore	Rc 1/4					

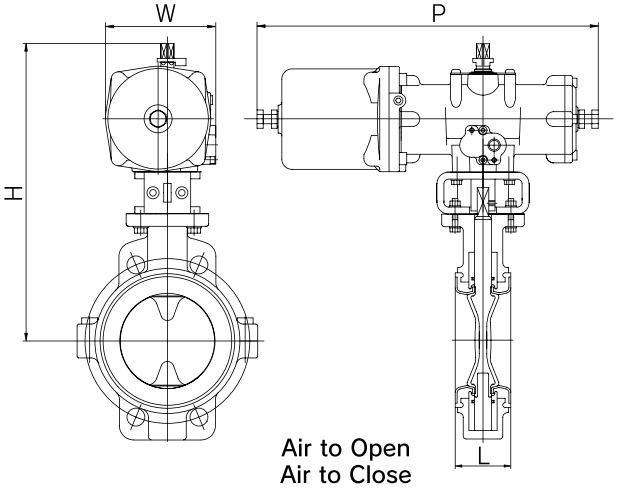
ACTUATOR SPECIFICATION [Air to Open, Air to Close]

Nominal Size mm(inch)	50(2inch)	80(3inch)	100·125(4inch·5inch)	150(6inch)	200(8inch)	250(10inch)
Actuator Type	TA2A-050R	TA2A-063R	TA2A-080R	TA2A-100R	TA2A-125R	TA2A-160R
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}					
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	1.7	3.3	6.1	12.8	21.6	42.7
Air Supply Bore	Rc 1/4					

DIMENSIONS FIGURE



Double Acting



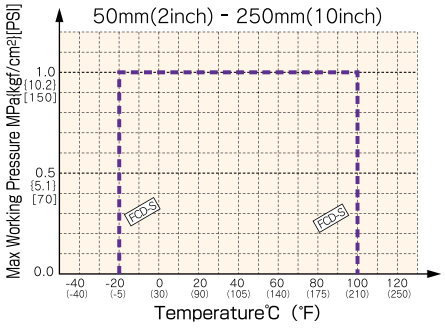
Air to Open
Air to Close

DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size		50 (2)	80 (3)	100 (4)	125 (5)	150 (6)	200 (8)	250 (10)
Common	L	44 (1.73)	54 (2.13)	59 (2.32)	64 (2.52)	75 (2.95)	85 (3.35)	96 (3.78)
	H	268 (10.55)	302 (11.89)	346 (13.62)	375 (14.76)	428 (16.85)	502 (19.76)	583 (22.95)
Double acting	W	82 (3.23)	95 (3.74)	116 (4.57)	116 (4.57)	142.5 (5.61)	150 (5.90)	181 (7.13)
	P	210 (8.27)	250 (9.84)	292 (11.50)	292 (11.50)	362 (14.25)	440 (17.32)	532 (20.94)
Air to open, Air to close	W	103 (4.06)	118.5 (4.67)	141.5 (5.57)	141.5 (5.57)	174 (6.86)	192.5 (7.58)	231 (9.10)
	P	345 (13.58)	413 (16.26)	487 (19.17)	487 (19.17)	598 (23.54)	762 (30.00)	924 (36.38)

WORKING PRESSURE VS.TEMPERATURE



ASAHI AV VALVE

Rotary Damper Type 57,56 (Electric Actuated Type T) 40mm - 400mm(1 1/2inch - 16inch)

Type57:40-350mm(1 1/2inch-14inch),Type56:400mm(16inch)

Body Material
PVC
PP
PVDF

O-ring Material
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Power Source
Single-Phase
AC100V/110V/200V/220V

Equipment
Space Heater
Output Contact Limit Switches
Indicator
Manual Operation-Mechanism

Option
E-E Positioner
Intermediate Limit Switch (no-volt)
Speedcontrol Unit



FEATURES

- Damper Style is Designed for Flow Control.(Damper Style is not a tight off Valve.)
- Lightweight and Compact with High-Torque.
- Manual Operation Handle is equipped normally and operativeness has improved.
- Indicator that can be seen easily.

OPTIONAL EQUIPMENT

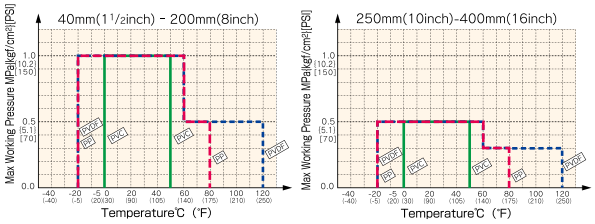
Combination No.	1	2	3	4	5	6	7
Space Heater	●	●	○	●	○	●	○
Output Contact Limit Swiches	●	●	●	–	●	–	●
Potentiometer	–	○	–	–	–	○	○
E-E Positioner	–	–	○	–	–	–	–
Intermediate Limit Swirch (no-volt)	–	–	–	○	–	○	–
Speedcontrol Unit	–	–	–	–	○	–	○

●Standard Equipment

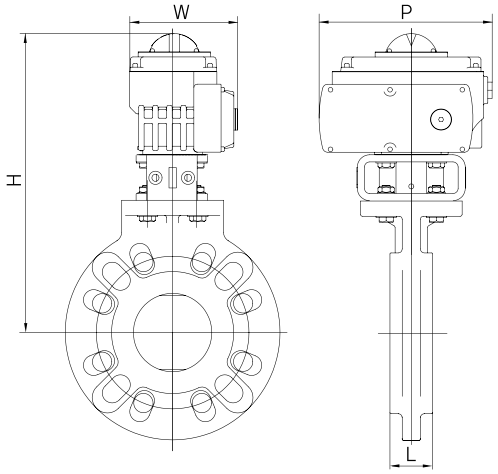
ACTUATOR SPECIFICATION

Nominal Size mm(inch)		40-150(1 1/2inch-6inch)	200-350(8inch-14inch)	400(16inch)
Actuator Type		AOC-0	AOC-2	AOC-3
Cycle Time 50/60Hz(seconds)		25/20		55/50
Motor Output(W)		8	30	90
Motor Starting Current(A) 50/60Hz	100V	1.20/1.20	2.40/2.40	5.1/4.8
	110V	1.40/1.40	2.50/2.50	6.1/6.6
	200V	0.50/0.50	1.10/1.10	2.6/2.4
	220V	0.70/0.70	1.20/1.20	3.1/3.0
Motor Rated Current(A) 50/60Hz	100V	0.50/0.50	0.90/1.20	1.6/1.7
	110V	0.60/0.60	1.00/1.20	1.7/1.8
	200V	0.25/0.25	0.50/0.80	0.8/1.0
	220V	0.30/0.30	0.60/0.80	0.9/1.0
Number of revolutions of manual operating handle		6.7	16.5	16.5
Limit Switch Capacity		AC 250V 10A		
Protective Structure		JIS C 0920 Waterjet-proof type (IEC IP65)		
Cable Connector Nominal Size		G1/2		
Motor Pole(P)		4		
Motor Insulation		E Class		
Motor Time Rating(minute)		30		
Space Heater Output(W)		5		

WORKING PRESSURE VS.TEMPERATURE

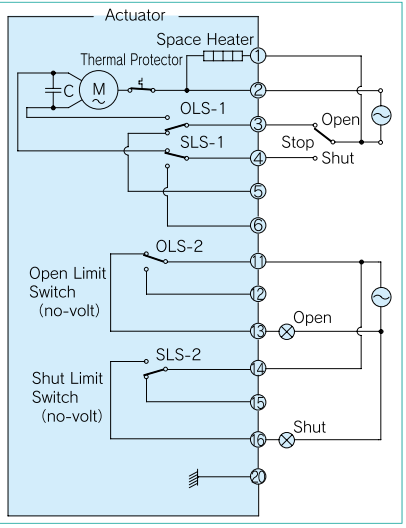


DIMENSIONS FIGURE

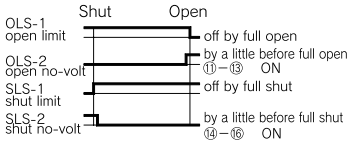


SCHEMATIC DIAGRAM

WIRING DIAGRAM



Switching Chart



DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size		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)
L		32 (1.26)	35 (1.38)	37 (1.46)	37 (1.46)	47 (1.85)	57 (2.24)	62 (2.44)	76 (2.99)	96 (3.78)	116 (4.57)	116 (4.57)	157 (6.12)
H	PVC, PP	290 (11.42)	300 (11.81)	310 (12.20)	325 (12.80)	340 (13.39)	361 (14.21)	376 (14.80)	455 (17.91)	490 (19.29)	566 (22.28)	593 (23.37)	650 (25.35)
	PVDF	310 (12.20)	320 (12.60)	330 (12.99)	345 (13.58)	360 (14.17)	381 (15.00)	396 (15.59)	475 (18.70)	510 (20.08)	586 (23.07)	613 (24.13)	670 (26.13)
W		138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	138.8 (5.47)	239 (9.42)	239 (9.42)	239 (9.42)	239 (9.42)	381.5 (14.88)
P		202 (7.96)	202 (7.96)	202 (7.96)	202 (7.96)	202 (7.95)	202 (7.96)	202 (7.96)	310 (12.20)	310 (12.20)	310 (12.20)	310 (12.20)	388 (15.13)

Rotary Damper (Electric Actuated Type S) 40mm - 600mm(1 1/2inch - 24inch)

Body Material
PVC
PP
PVDF

Seat & O-ring Material
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Power Source
Three-Phase
AC200V/220V/400V/440V

Equipment
Manual Operation Mechanism
Torque Switches
Output Contact
Limit Switches
Space Heater
Indicator

Option
Potentiometer
R/I Transmitter
E-E Positioner



FEATURES

- Speedy, exact operation by Motor with Direct Current Brake.
- Standard Torque Switch protects Valves from overload.
- Stopper enables Adjustment of an angle of ±5degree when fully-opened or fully-closed.

OPTIONAL EQUIPMENT

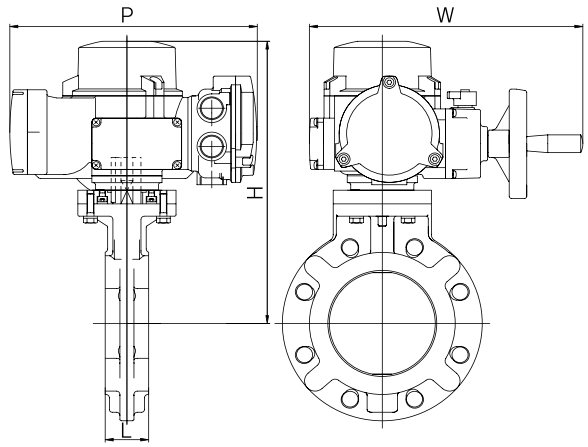
Combination No.	1	2	3
Space Heater	●	●	●
Output Contact Limit Swiches	●	●	●
Potentiometer	○	○	○
R-I Transmitter	–	○	○
E-E Positioner	–	–	○

●Standard Equipment

ACTUATOR SPECIFICATION

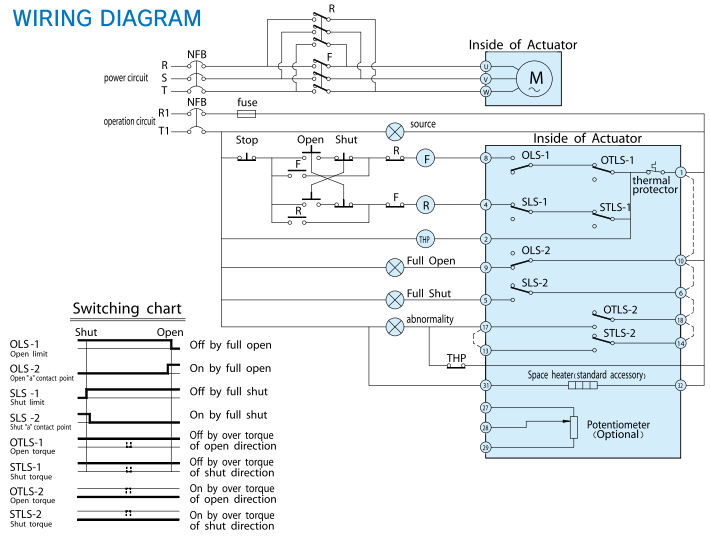
Nominal Size mm(inch)		40-150(1 1/2inch-6inch)	200-350(8inch-14inch)	400(16inch)	450-600(18inch-24inch)
Valve Type		Type 57		Type 56	Type 75
Actuator Type		SRJ-010	SRJ-020	SRJ-060	
Cycle Time 50/60Hz(seconds)		18/15	36/30	36/30	
Motor Output(W)		40		100	
Motor Starting Current(A) 50/60Hz	200V	1.27/1.19		1.89/1.77	
	400V	0.63/0.58		0.94/0.90	
Motor Rated Current(A) 50/60Hz	200V	0.53/0.45		0.74/0.67	
	400V	0.26/0.22		0.37/0.34	
Number of revolutions of manual operating handle		21		26	
Limit Switch Capacity		AC 250V 2A			
Protective Structure		IP68			
Cable Connector Nominal Size		3-G1			
Motor Pole(P)		4			
Motor Insulation		B Class			
Motor Time Rating(minute)		15			

DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

WIRING DIAGRAM

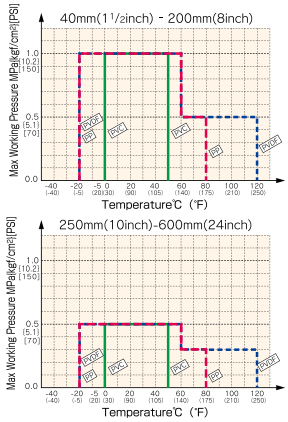


DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size		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)	400 (16)	450 (18)	500 (20)	600 (24)
L		32 (1.26)	35 (1.38)	37 (1.46)	37 (1.46)	47 (1.85)	57 (2.24)	62 (2.44)	76 (2.99)	96 (3.78)	116 (4.57)	116 (4.57)	157 (6.18)	167 (6.58)	177 (6.97)	197 (7.76)
H	U-PVC, PP	313 (12.32)	323 (12.72)	333 (13.11)	348 (13.70)	363 (14.29)	398 (15.67)	413 (16.26)	444 (17.48)	486 (19.14)	543 (21.38)	570 (22.44)	612 (24.10)	623 (24.53)	653 (25.71)	717 (28.23)
	PVDF	333 (13.11)	343 (13.51)	353 (13.90)	368 (14.49)	383 (15.08)	418 (16.46)	433 (17.05)	464 (18.27)	506 (19.92)	563 (22.17)	590 (23.23)	632 (24.89)	648 (25.52)	678 (26.70)	742 (29.22)
W		390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	390 (15.36)	460 (18.11)	460 (18.11)	460 (18.11)	460 (18.11)
P		353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	353 (13.90)	393 (15.47)	393 (15.47)	393 (15.47)	393 (15.47)

WORKING PRESSURE VS.TEMPERATURE



ASAHI AV VALVE

Rotary Damper (Pneumatic Actuated Type TA)40mm - 600mm(1 1/2inch - 24inch)

Type57:40mm-350mm(1 1/2inch-14inch),Type56:400mm(16inch),Type75:450-600mm(18inch-24inch)

Body Material
PVC
PP
PVDF

Seat & O-ring Material
EPDM
FKM

Connection Standard
JIS 10K · JIS 5K
ANSI CLASS150
DIN PN10

Action
Double Acting
Air to Open
Air to Close

Equipment
· Opening Adjustment Stopper (± 5 degree)
· Indicator
· Speed Controller

Option
· Filter Regulator
· Solenoid Valve
※ with built-in specialized speed controller and bypass valve.
· Limit Switch
· Manual Operation Mechanism
※ Only for air to open & close.
· Full Opening Adjustment Mechanism
· Positioner



FEATURES

- Horizontal Type Actuator saves Piping Space.
- Spring unit for Air to Open & Close is detachable so Change-Over between Double-Acting and Air to Open & Close can be done easily.
- Various Options can be easily installed or removed, and can be mounted later (except positioners).
- Stopper enables Adjustment of ±5 degree at fully-Opened or Fully-Closed position.

OPTIONAL EQUIPMENT

Combination No.	1	2	3	4	5	6	7	8	9
Solenoid Valve ※	○	–	–	○	○	–	○	–	–
Filter Regulator	–	–	–	○	–	–	○	–	○
Speed Controller	◎	○	–	◎	◎	○	◎	–	–
Limit Switch	–	–	○	–	○	○	○	–	–
Positioner (Electric-Air, Air-Air)	–	–	–	–	–	–	–	○	○

◎Indicates specialized for Solenoid Valve.
※With built-in speed controller and bypass valve.

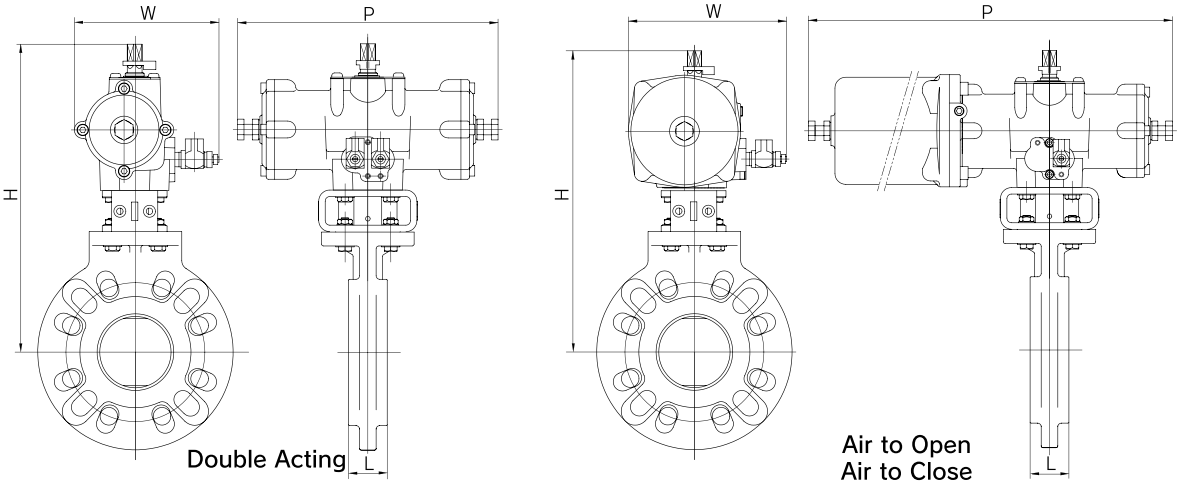
ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	40~100(1 1/2inch~4inch)	125·150(5inch·6inch)	200·300(8inch·12inch)	350(14inch)	400·600(16inch·24inch)
Actuator Type	TA2A-050D	TA2A-080D	TA2A-100D	TA2A-125D	TA2A-160D
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}				
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	0.9	3.2	6.6	13.3	27.1
Air Supply Bore	Rc 1/4				

ACTUATOR SPECIFICATION [Air to Open, Air to Close]

Nominal Size mm(inch)	40~100(1 1/2inch~4inch)	125·150(5inch·6inch)	200·300(8inch·12inch)	350(14inch)	400·600(16inch·24inch)
Actuator Type	TA2A-050R	TA2A-080R	TA2A-100R2	TA2A-125R2	TA2A-160R2
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.7{7.1}				
Air Consumption Nl /open & close (at operating pressure 0.4NPa)	1.7	6.1	12.8	21.6	42.7
Air Supply Bore	Rc 1/4				

DIMENSIONS FIGURE

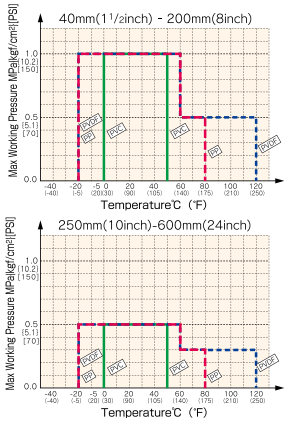


DIMENSIONS TABLE

JIS, ANSI, DIN — Unit:mm(inch)

Nominal Size		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)
L	PVC,PP	32(1.26)	35(1.38)	37(1.46)	37(1.46)	47(1.85)	57(2.24)	62(2.44)	76(2.99)	96(3.78)	116(4.57)	116(4.57)	157(6.18)	167(6.57)	177(6.97)	197(7.76)
	PVDF	32(1.26)	35(1.38)	37(1.46)	37(1.46)	47(1.85)	57(2.24)	62(2.44)	82(3.23)	96(3.78)	116(4.57)	116(4.57)	153(6.02)	167(6.57)	177(6.97)	197(7.76)
H	PVC,PP	270(10.63)	280(11.02)	290(11.42)	306(12.05)	321(12.64)	395(15.55)	410(16.14)	470(18.50)	503(19.83)	570(22.47)	603(23.77)	693(27.28)	671(26.42)	701(27.60)	766(30.16)
	PVDF	283(11.14)	293(11.54)	303(11.93)	318(12.52)	333(13.11)	402(15.83)	417(16.42)	448(17.64)	508(20.02)	580(22.86)	614(24.20)	709(27.91)	680(26.77)	709(27.91)	772(30.39)
Double acting	W	130(5.12)	130(5.12)	130(5.12)	130(5.12)	130(5.12)	164(6.46)	164(6.46)	191(7.52)	191(7.53)	191(7.53)	198(7.80)	229(9.02)	229(9.02)	229(9.02)	229(9.02)
	P	210(8.27)	210(8.27)	210(8.27)	210(8.27)	210(8.27)	292(11.50)	292(11.50)	362(14.25)	362(14.27)	362(14.27)	440(17.34)	532(20.94)	532(20.94)	532(20.94)	532(20.94)
Air to Open, Air to Close	W	151(5.94)	151(5.94)	151(5.94)	151(5.94)	151(5.94)	192(7.56)	192(7.56)	222(8.74)	222(8.75)	222(8.75)	241(9.50)	279(10.98)	279(10.98)	279(10.98)	279(10.98)
	P	345(13.58)	345(13.58)	345(13.58)	345(13.58)	345(13.58)	487(19.17)	487(19.17)	598(23.54)	598(23.57)	598(23.57)	752(29.64)	924(36.38)	924(36.38)	924(36.38)	924(36.38)

WORKING PRESSURE VS.TEMPERATURE



Control Valve (Electric actuated Type M) 15mm, 25mm(1/2inch, 3/4inch)

Body Material
PVC
PVDF

Seat & O-ring Material
EPDM
FKM
Viflon C(FKM-C)
Viflon F(FKM-F)

Connection Standard
JIS10K, DIN, ANSI

Action
Single-Phase
AC100V
AC200V
DC24V

Equipment
Indicator
Opening Output Signal
E-E Positioner



※PVDF body has only JIS10k TYPE.

FEATURES

- This Valve provides High-Precision Flow Control by applying original unique shaped plug less affected by Fluid Viscosity.
- Application of Electronic Servo-Actuator with High Performance.
- Electronic limiter and Overload Protection Circuit at fully-Opened or Fully-Closed position are built into the valve.

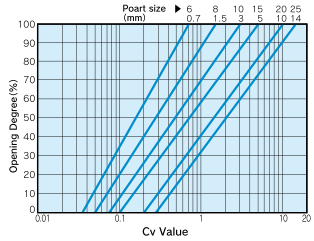
ACTUATOR SPECIFICATION

Nominal Size mm(inch)		15(1/2inch)	25(2inch)
Actuator Type		MSP-6	
Cycle Time 50/60Hz(seconds)		8	15
Motor Output(W)		3.8	
Motor Rated Current(A) 50/60Hz	AC100V	0.24	
	AC200V	0.15	
	DC24V	0.36	
Protective Structure		Outdoor drop-proof Type	
Cable Connector Nominal Size		G1/2 (Cable accessory)	
Motor Pole(P)		5	
Motor Insulation		E Class	
Motor Time Rating		Continuous	

General flow control

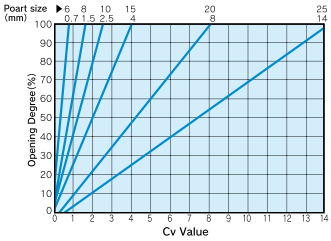
Equal Percentage

Nominal Size (mm)		25					
		15					
Poat Size (mm)		6	8	10	15	20	25
Cv		0.7	1.5	3	5	10	14
Range Ability		20:1	30:1	40:1	50:1	50:1	50:1
Stroke (mm)	15mm	17	16	17	18	–	–
	25mm	16.5	16	16	16	22	24



Linear

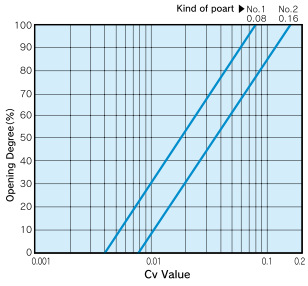
Nominal Size (mm)		25					
		15					
Poat Size (mm)		6	8	10	15	20	25
Cv		0.7	1.5	2.5	4	8	14
Range Ability		20:1	25:1	30:1	40:1	40:1	50:1
Stroke (mm)	15mm	16	16	15	16	–	–
	25mm	16	16	14	15	19.5	25



Precise flow control

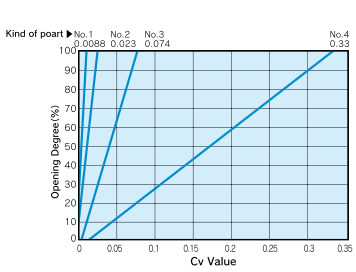
Equal Percentage

Nominal Size (mm)	15	
Kind of Poat	No.1	No.2
Cv	0.08	0.16
Range Ability	20:1	20:1
Stroke(mm)	16	16

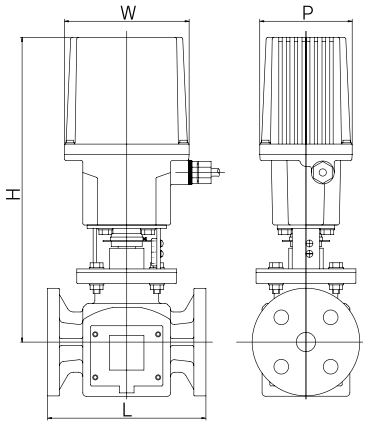


Linear

Nominal Size (mm)	15			
Kind of Poat	No.1	No.2	No.3	No.4
Cv	0.0088	0.023	0.074	0.33
Range Ability	15:1	15:1	15:1	20:1
Stroke(mm)	16	16	16	16

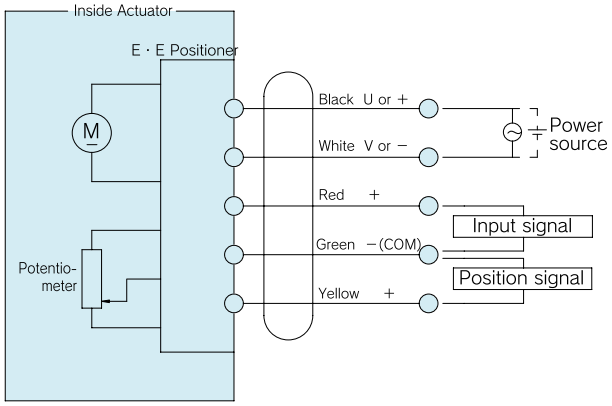


DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

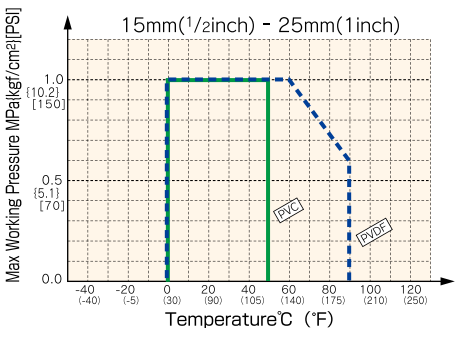
WIRING DIAGRAM



DIMENSIONS TABLE

JIS, ANSI, DIN		Unit:mm(inch)	
Nominal Size		15 (1/2)	25 (1)
L		160 (6.30)	184 (7.24)
H	PVC	335 (13.19)	354 (13.94)
	PVDF	372.5 (14.67)	366 (14.41)
W		145 (5.71)	145 (5.71)
P		110 (4.33)	110 (4.33)

WORKING PRESSURE VS.TEMPERATURE



ASAHI AV VALVE

Control Valve (Electric actuated Type M) 50mm - 100mm(2inch - 4inch)

Body Material
PVC

Seat & O-ring Material
EPDM
FKM
Viflon C(FKM-C)
Viflon F(FKM-F)

Connection Standard
JIS10K, ANSI

Action
Single-Phase
AC100V
AC200V
DC24V

Equipment
Indicator
Opening Output Signal
E-E Positioner



FEATURES

- This valve provides High-Precision flow control by applying original unique shaped plug less affected by fluid viscosity.
- Application of electronic Servo-Actuator with high performance.
- Electronic limiter and Overload Protection circuit at fully-Opened or Fully-Closed position are built into the valve.

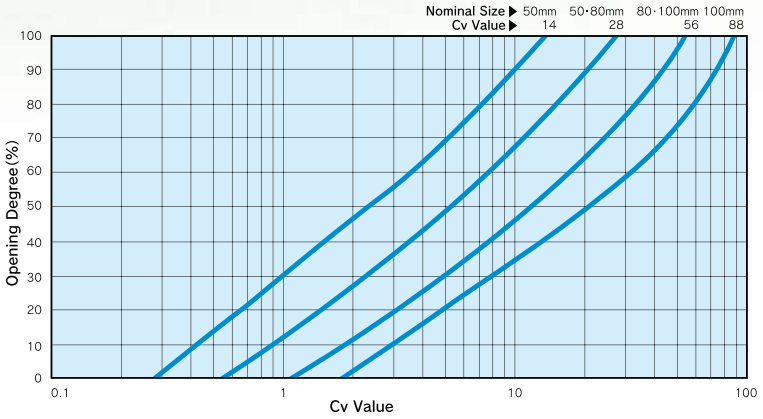
ACTUATOR SPECIFICATION

Nominal Size mm(inch)	50(2inch)	80(3inch)	100(4inch)
Actuator Type	PSN1		PSN3
Cycle Time 50/60Hz(seconds)	5	15	28 - 32
Protective Structure	IP55		
Cable Connector Nominal Size	3.0		
Motor Pole(P)	67	72	77
Motor Insulation	G1/2×2		
Motor Time Rating	E Class		

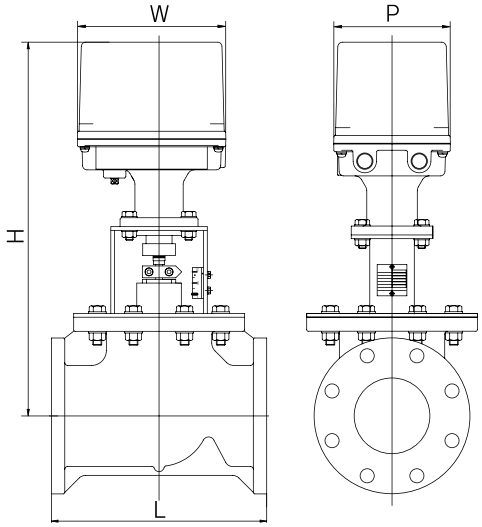
Cv Value

Equal Percentage

Nominal Size mm(inch)	50(2″)		80(3″)		100(4″)	
Kind of Poat	S	L	S	L	S	L
Cv	14	28	28	56	56	88
Range Ability	50:1	50:1	50:1	50:1	50:1	50:1
Stroke(mm)	26	28	30	28	32	28

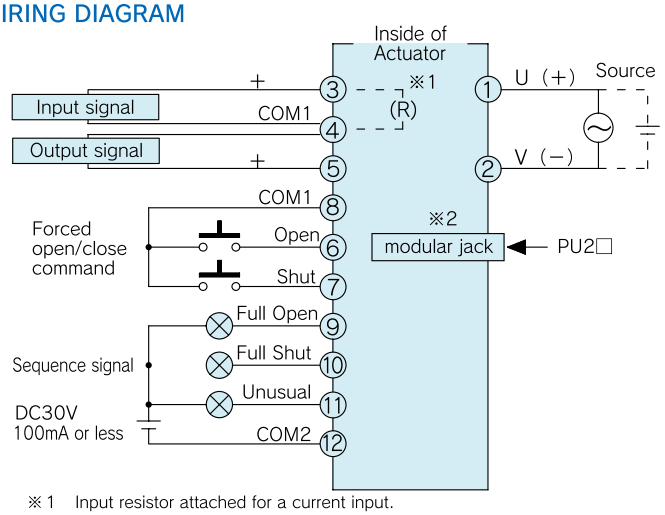


DIMENSIONS FIGURE



SCHEMATIC DIAGRAM

WIRING DIAGRAM

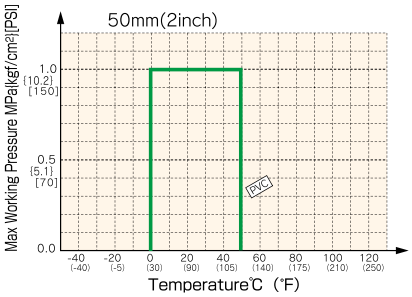


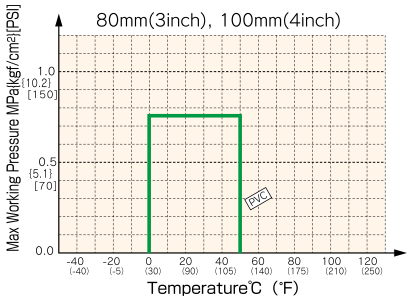
※1 Input resistor attached for a current input.
※2 A modular jack is not usually used.

DIMENSIONS TABLE

JIS, ANSI			Unit:mm(inch)
Nominal Size	50 (2)	80 (3)	100 (4)
L	200 (7.87)	240 (9.45)	290 (11.42)
H	433.5 (17.07)	450.5 (17.74)	503.5 (19.82)
W	182 (7.17)	182 (7.17)	200 (7.87)
P	140 (5.51)	140 (5.51)	150 (5.91)

WORKING PRESSURE VS.TEMPERATURE





Control Valve (Pneumatic actuated Type AV) 15mm, 25mm(1/2inch, 3/4inch)

Body Material
PVC
PVDF

Seat & O-ring Material
EPDM
FKM
Viflon C(FKM-C)
Viflon F(FKM-F)

Connection Standard
JIS10K, DIN, ANSI

Action
Double Acting
Air to Open

Equipment
E-A positioner
A-A positioner

Option
Filter Regulator



※PVDF body has only JIS10k TYPE.

FEATURES

■ This Valve provides High-Precision Flow Control by applying original unique sraped plug less affected by Fluid Viscosity.

OPTIONAL EQUIPMENT

Combination No.	1	2
Positioner (Electric-Air)	●	–
Positioner (Air-Air)	–	●
Filter Regulator	○	○

● Standard Equipment

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	15 (1/2inch)	25 (1inch)
Actuator Type	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}	
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	0.6	0.7
Air Supply Bore	Rc 1/4	

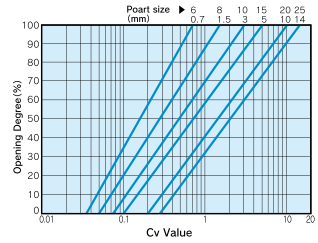
ACTUATOR SPECIFICATION [Air to Open]

Nominal Size mm(inch)	15 (1/2inch)	25 (1inch)
Actuator Type	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}	
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	1.3	1.5
Air Supply Bore	Rc 1/4	

■ General flow control

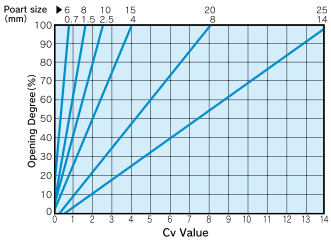
Equal Percentage

Nominal Size (mm)		25					
		15					
Poat Size (mm)		6	8	10	15	20	25
Cv		0.7	1.5	3	5	10	14
Range Ability		20:1	30:1	40:1	50:1	50:1	50:1
Stroke (mm)	15mm	17	16	17	18	–	–
	25mm	16.5	16	16	16	22	24



Linear

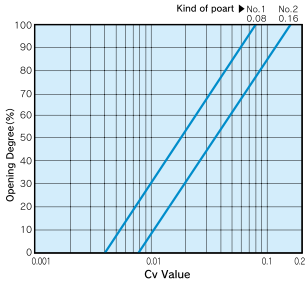
Nominal Size (mm)		25					
		15					
Poat Size (mm)		6	8	10	15	20	25
Cv		0.7	1.5	2.5	4	8	14
Range Ability		20:1	25:1	30:1	40:1	40:1	50:1
Stroke (mm)	15mm	16	16	15	16	–	–
	25mm	16	16	14	15	19.5	25



■ Precise flow control

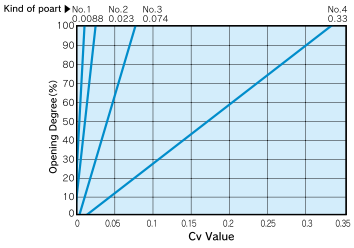
Equal Percentage

Nominal Size (mm)	15	
Kind of Poat	No.1	No.2
Cv	0.08	0.16
Range Ability	20:1	20:1
Stroke (mm)	16	16



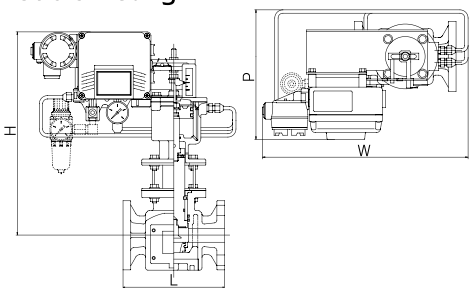
Linear

Nominal Size (mm)	15			
Kind of Poat	No.1	No.2	No.3	No.4
Cv	0.0088	0.023	0.074	0.33
Range Ability	15:1	15:1	15:1	20:1
Stroke (mm)	16	16	16	16

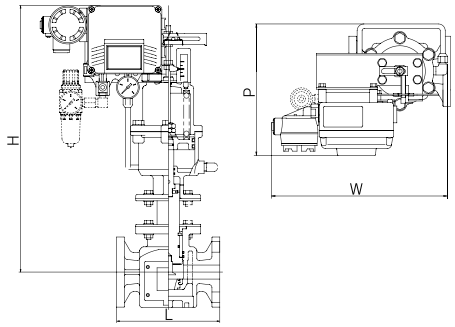


DIMENSIONS FIGURE

Double Acting



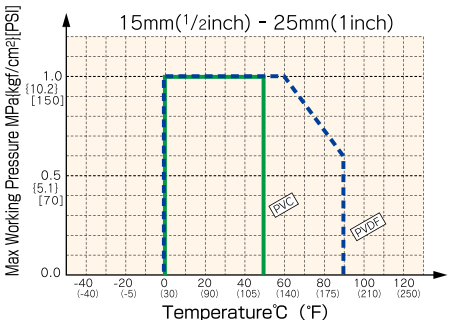
Air to Open



DIMENSIONS TABLE

JIS, ANSI, DIN			Unit:mm(inch)	
Nominal Size			15(1/2)	25(1)
L			160 (6.30)	184 (7.24)
Double Acting	H	PVC	337(13.27)	368(14.49)
		PVDF	325(12.80)	354(13.94)
	W		389(15.32)	389(15.32)
	P		220 (8.66)	220 (8.66)
Air to Open	H	PVC	438(17.25)	475(18.70)
		PVDF	426(16.77)	461(18.15)
	W		323(12.72)	323(12.72)
	P		240 (9.45)	240 (9.45)

WORKING PRESSURE VS.TEMPERATURE



ASAHI AV VALVE

Control Valve (Pneumatic actuated Type AV) 50mm - 100mm(2inch - 4inch)

Body Material
PVC

Seat & O-ring Material
EPDM
FKM
Viflon C(FKM-C)
Viflon F(FKM-F)

Connection Standard
JIS10K, ANSI

Action
Double Acting
Air to Open

Equipment
E-A Positioner
A-A Positioner

Option
·Filter Regulator



FEATURES

This Valve provides High-Precision Flow Control by applying Original unique sraped plug less affected by Fluid Viscosity.

OPTIONAL EQUIPMENT

Combination No.	1	2
Positioner (Electric-Air)	●	–
Positioner (Air-Air)	–	●
Filter Regulator	○	○

● Standard Equipment

ACTUATOR SPECIFICATION [Double Acting]

Nominal Size mm(inch)	50(2inch)	80(3inch)	100(4inch)
Actuator Type	–	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}		
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	2.1	2.1	6.3
Air Supply Bore	Rc 1/4		

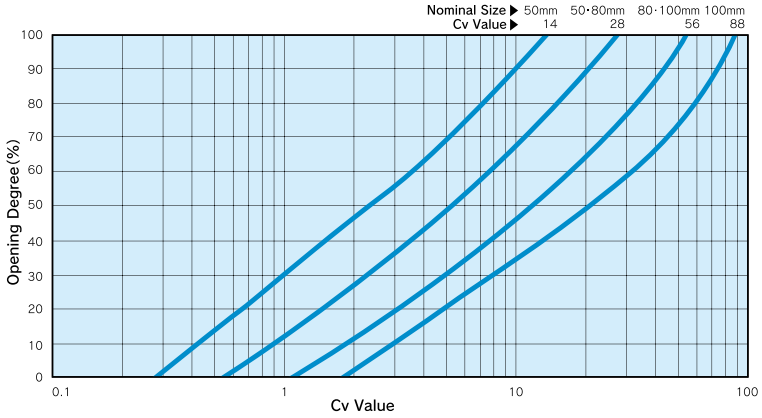
ACTUATOR SPECIFICATION [Air to Open]

Nominal Size mm(inch)	50(2inch)	80(3inch)	100(4inch)
Actuator Type	–	–	–
Operating Pressure Mpa{kgf/cm²}	0.4{4.1} - 0.6{6.1}		
Air Consumption Nl /Open & Close (at operating pressure 0.4NPa)	2.7	5.5	7.9
Air Supply Bore	Rc 1/4		

Cv Value

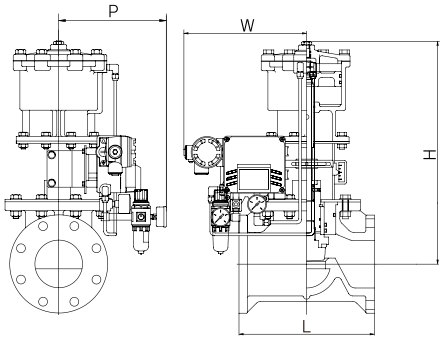
Equal Percentage

Nominal Size mm(inch)	50(2″)		80(3″)		100(4″)	
Kind of Poat	S	L	S	L	S	L
Cv	14	28	28	56	56	88
Range Ability	50:1	50:1	50:1	50:1	50:1	50:1
Stroke(mm)	26	28	30	28	32	28

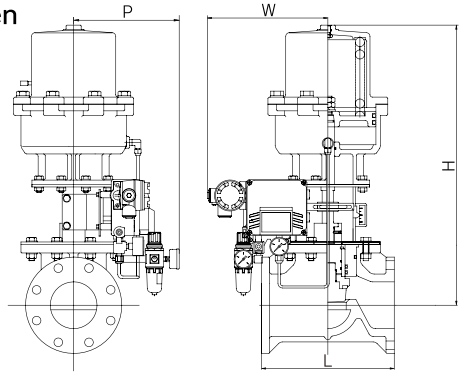


DIMENSIONS FIGURE

Double Acting



Air to Open

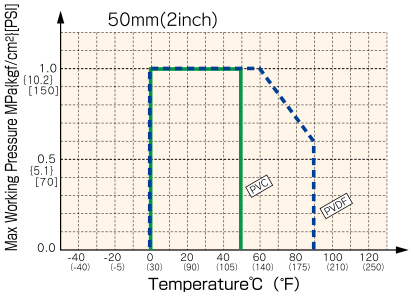


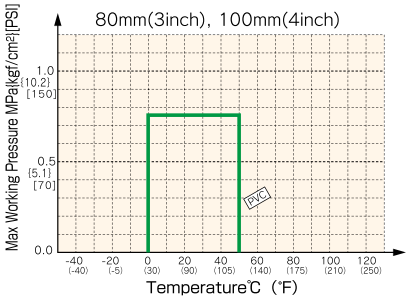
DIMENSIONS TABLE

JIS, ANSI Unit:mm(inch)

Nominal Size		50(2)	80(3)	100(4)
L		200 (7.87)	240 (9.45)	290 (11.42)
Double Acting	H	381 (15)	420 (16.54)	477 (18.78)
	W	256 (10.08)	261 (10.28)	266 (10.48)
	P	229 (9.02)	230 (9.06)	230 (9.06)
Air to Open	H	469 (18.47)	562 (22.13)	611 (24.06)
	W	256 (10.08)	261 (10.28)	266 (10.48)
	P	229 (9.02)	230 (9.06)	230 (9.06)

WORKING PRESSURE VS.TEMPERATURE





Asahi AV Sensor and Flow Meter



Ultrasonic-Vortex Flow Meter

- ASUSV Series



Inpella Flow Meter

- ASIP80 Series
- ASSPX Series
- Flow Indicator

Classification

Classification	Measure	Name	Model Number	Type of Connection
Asahi AV Flow Meter				
Karman Vortex	Ultrasonic Method	Ultrasonic-Vortex Flow Meter	ASUSV	Wafer / Flange
Vane	Inpella Method	Inpella Flow Meter	ASIP81	Socket / Flange
			ASIP82	Socket / Flange
			ASSPX	Threded

ASAHI AV VALVE

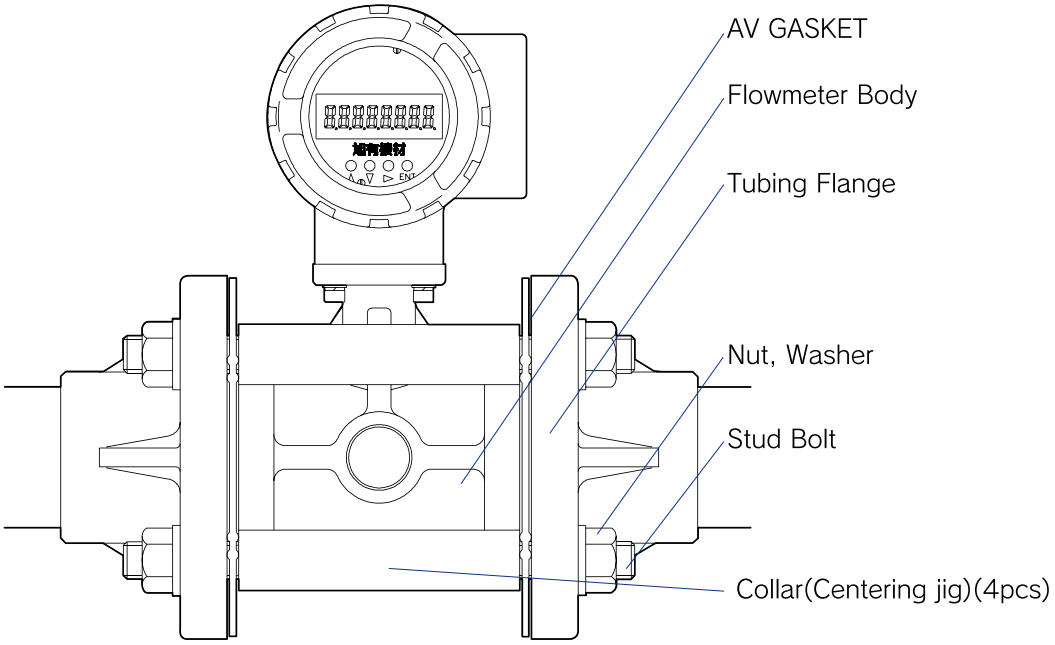
Ultrasonic-Vortex Flow Meter ASUSV Series



FEATURES

- No Corrosion (All Plastic)
- Suitable for Diw & Mixed Acids Compared to Magnetic Flowmeters Prone to Corrosion or Leachables
- Light Weight
  1/2 - 1/4 The Weight of Metallics
- High Accuracy (±1.0%RD)
  Compare to other Vortex Designs (±1.0-3.0%)

INSTALLATION METHOD



RECOMMENDED TIGHTENING TORQUE

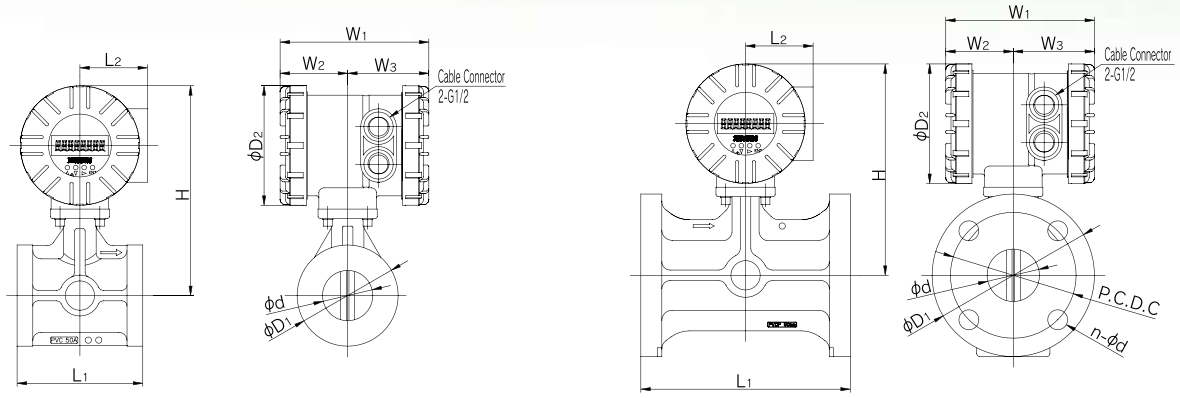
N·m{kgf-cm}

Nominal Size mm(inch)	20(3/4)	25(1)	40(1 1/2)	50(2)	80(3)	100(4)
P V C	15	15	20	25	30	30
P V D F	15	15	20	25	30	30

SPECIFICATIONS

Diameter & Tubing connection	Wafer : 20-100mm(3/4″-4″) Flange : 20-50mm (3/4″-2″)					
Measuring range	About 0.5 to 5m/sec(For more details, see [Range of Flowrate Measurement] on page 4.)					
Measurement accuracy	±1%R.D. (±0.5% R.D. also accommodated)					
Wetted material	Wafer : PVC, PVDF Flange : PVDF					
Fluid temperature	0 to 55℃ (PVC), − 10 to 100℃ (PVDF)					
Ambient temperature	0 to 55℃ (PVC), − 10 to 60℃ (PVDF)					
Maximum working fluid pressure	1.0MPa					
Display	Total integrating/Instantaneous flowrate/% flowrate/reset integrating flowrate (The display mode is externally selectable using the accessory magnet.) Unit, Equipment alarm					
Analog output	4-20 mA two-wire load resistance up to 300 Ω					
Pulse output	Open collector output: One-shot width					
	20A	25A	40A	50A	80A	100A
	1.3ms	1.82ms	2.86ms	3.90ms	5.98ms	9.62ms
Alarm output	Open collector output: Upper and lower limit output/alarm output Open collector output concurrently with pulse output is not available, though.					
Case material	PC					
Supply voltage	24VDC±10%					
Protective structure	IP66 equivalent (avoid exposure to direct sunlight)					

DIMENSIONS TABLE



DIMENSIONS TABLE

Unit:mm(inch)

Nominal Size		L2	W1	W2	W3	ϕD2	Wafer				Flange (JIS 10K)						
mm	inch						L1	H	ϕD1	ϕd	L1	H	ϕD1	ϕd	C	n	e
20	3/4	64.5 (2.54)	138 (5.43)	62.5 (2.46)	75.5 (2.97)	144 (5.67)	85 (3.35)	187.5 (7.38)	53 (2.09)	19 (0.75)	200 (7.87)	180 (7.08)	100 (3.94)	19 (0.75)	75 (2.95)	4	15 (0.59)
25	1	64.5 (2.54)	138 (5.43)	62.5 (2.46)	75.5 (2.97)	144 (5.67)	93 (3.66)	190 (7.48)	62 (2.44)	24 (0.94)	200 (7.87)	190 (7.48)	125 (4.92)	24 (0.94)	90 (3.54)		19 (0.75)
40	1 1/2	64.5 (2.54)	138 (5.43)	62.5 (2.46)	75.5 (2.97)	144 (5.67)	106 (4.17)	197.5 (7.77)	77 (3.03)	38.5 (1.52)	200 (7.87)	197 (7.75)	140 (5.51)	38.5 (1.52)	105 (4.13)		19 (0.75)
50	2	64.5 (2.54)	138 (5.43)	62.5 (2.46)	75.5 (2.97)	144 (5.67)	120 (4.72)	202.5 (7.97)	96.5 (3.80)	48.5 (1.91)	200 (7.87)	204 (8.03)	155 (6.10)	48.5 (1.91)	120 (4.72)		19 (0.75)
80	3	64.5 (2.54)	138 (5.43)	62.5 (2.46)	75.5 (2.97)	144 (5.67)	160 (6.30)	225 (8.86)	127 (5.00)	72.5 (2.85)	—	—	—	—	—	—	—
100	4	64.5 (2.54)	138 (5.43)	62.5 (2.46)	75.5 (2.97)	144 (5.67)	180 (7.08)	239.5 (9.43)	155.5 (6.12)	94 (3.70)	—	—	—	—	—	—	—

FLOW RATE

Nominal Size (mm)	Min. Flowrate (m³/h) Kinematic Viscosity×10⁻⁶ m²/s (cst)					Max. Flowrate (m³/h)
	1	2	3	4	5	
20	0.9	1.8	2.7	3.6	4.5	5.4
25	1.4	2.8	4.2	5.6	7.0	8.5
40	3.6	7.2	10.8	14.4	18.0	22.0
50	5.9	11.8	17.7	23.6	29.5	34.0
80	13.4	26.8	40.2	53.6	67.0	88.0
100	22.6	45.2	67.8	90.4	113.0	137.0
Flowrate	0.8m/sec	1.6m/sec	2.4m/sec	3.2m/sec	4.0m/sec	5.0m/sec

ASAHI AV VALVE

Inpella Flow Meter ASIP80 Series



FEATURES

- The ASIP80 Series is a Flow Meter of the Insertion Type that uses a Special Fitting.
- No Corrosion (All Plastic)

SPECIFICATIONS

Model			ASIP81(P/Y/K)	ASIP82(P/Y/K)
Nominal Size			15mm(1/2")-80mm(3")	100mm(4")-150mm(6")
Type of Connection			Socket, Flange	
Material	Body	Working Temperature℃ (°F)	HI-PVC: 50℃ (120°F) PP : 60℃ (140°F) PVDF : 90℃ (194°F)	
		Max. Working Pressure(at r.t.) MPa{kgf/cm²}[PSI]	1.0MPa (10.2kgf/cm²) [150]	
	Inpella		PVDF	
	Shaft		Zirconium, Silicon-Carbide	
	Bearing		Ruby	
	O-ring		FKM (EPDM)	
	Special Fitting		PVC, HI-PVC, C-PVC	
Measurement fluid			Fluid (High viscosity fluid and slurry is excluded.)	
Max. Working Temperature			0-90℃ (32-194°F)	
Flowrate			0.2-9 m/s	
Range Ability			1 : 45	
Measurement accuracy			± 1.5% (FS)	
Power Source			DC6V-24V (Current Consumption: 8mA)	
Output Signal			Current Sinking Pulse (NPN) 20mA maximum	
Cable			3-con (3.6m)	
Fitting Installation			Straight pipe of at least ten times the diameter upstream of the meter, and five diameters down stream are strongly recommended.	

Figure. 1 Max.Working Pressure and Working Temprerature of Special Fitting.

Temperature (℃)	Pressure MPa(kgf/cm²)[PSI]		
	PVC, HI-PVC	C-PVC	
	15mm-150mm (1/2"-6")	15mm-50mm (1/2"-2")	65mm-150mm (2 1/2"-6")
20	1.0(10.2)[150]	1.0(10.2)[150]	1.0(10.2)[150]
30	0.9(9.8)[130]	1.0(10.2)[150]	0.8(8.2)[115]
40	0.7(7.1)[100]	1.0(10.2)[150]	0.8(8.2)[115]
50	0.3(3.1)[45]	0.6(6.1)[90]	0.6(6.1)[90]
60	–	0.6(6.1)[90]	0.6(6.1)[90]
70	–	0.4(4.1)[60]	0.4(4.1)[60]
80	–	0.2(2.0)[30]	0.2(2.0)[30]
90	–	0.2(2.9)[30]	0.2(2.9)[30]

Figure. 2 Flow Rate and K-Factor

Nominal Size		Flow Rate(m³/h)	K-Factor
mm	inch	Min - Max	(cc/Pulse)
15	1/2	0.14 - 6.51	7.1
20	3/4	0.23 - 10.18	10.9
25	1	0.35 - 15.89	16.1
32	1 1/4	0.54 - 24.44	26.8
40	1 1/2	0.90 - 40.69	47.2
50	2	1.47 - 66.16	66.2
65	2 1/2	2.54 - 114.17	102.2
80	3	3.35 - 150.80	139.7
100	4	5.65 - 254.34	213.0
125	5	8.83 - 397.40	355.4
150	6	12.05 - 542.15	465.0

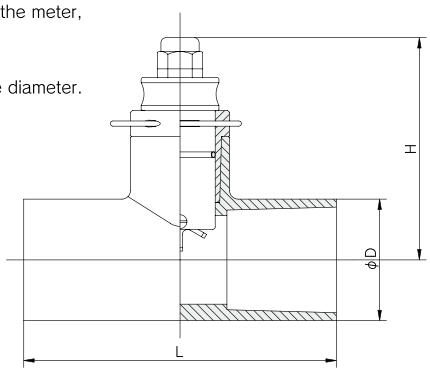
*1. Calculate the Maximum Frequency of Each Size by the Following Calculation method.
Maximam Frequency(Hz) = Maximam Flow Rate(cc/s) / K-Factor(cc/Pulse)

DIMENSIONS TABLE

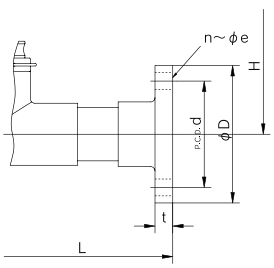
Unit:mm

Nominal Size		Socket End						Flanged End											
		PVC/HI-PVC			C-PVC			L	H	JIS10K					JIS5K				
mm	inch	L	H	D	L	H	D			D	d	t	n	e	D	d	t	n	e
15	1/2	164	119	57	150	119	56	500	119	95	70	14	4	15	80	60	9	4	12
20	3/4	164	121	57	150	121	56	500	121	100	75	15	4	15	85	65	10	4	12
25	1	164	121	57	150	121	56	500	121	125	90	15	4	19	95	75	10	4	12
32	1 1/4	164	122	57	150	122	56	500	122	135	100	16	4	19	115	90	12	4	15
40	1 1/2	164	125	57	150	125	56	500	125	140	105	16	4	19	120	95	12	4	15
50	2	180	128	70	164	128	69	500	128	155	120	20	4	19	130	105	14	4	15
65	2 1/2	190	133	87	190	133	87	500	133	175	140	22	4	19	155	130	14	4	15
80	3	200	136	102	200	136	102	500	136	185	150	22	8	19	180	145	14	4	19
100	4	250	168	130	250	168	130	700	168	210	175	22	8	19	200	165	16	8	19
125	5	322	176	157	–	–	–	700	176	250	210	24	8	23	235	200	16	8	19
150	6	390	182	186	–	–	–	700	182	280	240	26	8	23	265	230	18	8	19

*1. Piping Condition: Straight pipe of at least ten times the diameter upstream of the meter, and five diameters down stream are strongly recommended.
Wiring Condition: Use the Shield line when you extend wiring.
*2. When flowing quantity is displayed, the Special Indicator is needed.
*3. Some externals and the shape of the Flow meter are different according to the diameter.



●Flanged End



Inpella Flow Meter ASSPX Series



FEATURES

- The ASSPX Series excelled in corrosion resistance, and the flow meter for low flowing quantity.
- The best for piping in the device because of its compact design.

SPECIFICATIONS

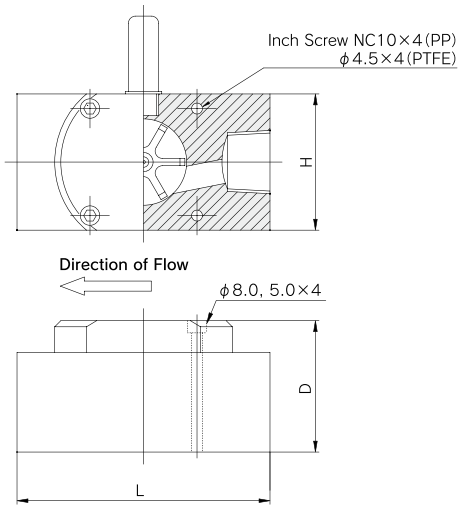
Model		ASSPX-3/8inch	ASSPX-1/2inch	ASSPX-3/4inch	ASSPX-1inch
Type of Connection		Rc 3/8	Rc 1/2	Rc 3/4	Rc 1
Material	Body	PP, PTFE			
	Cover	PP, PTFE			
	Rotor	PVDF			
	Shaft	Zirconium, Silicon-Carbide			
	Bearing	Ruby			
	O-ring	FKM (EPDM)			
Measurement fluid		Fluid (High viscosity fluid and slurry is excluded.)			
Max. Working Temperature		-10-70℃ (14-158˚F)			
Max. Working Pressure MPa{kgf/cm^2}[PSI]		1.0(10.2)[150]			
Flowrate		See Fig.1			
Measurement Accuracy		±1.5% (FS)			
Power Source		DC6V-24V (Current Consumption: 8mA)			
Output Signal		Current Sinking Pulse (NPN) 20mA maximum			
Cable		3-con (3.6m)			

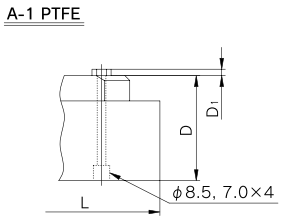
Figure. 1 Flow Rate and K-Factor

Type of connection and Nominal Size	Installation Posture	Flow Rate(m3/h) Min - Max	Range Ability	K-Factor (cc/Pulse)
3/8 inch	Piping is horizontal and Shaft is vertical	0.2 - 20	1 : 100	1.122
	The Others	0.4 - 20	1 : 50	
1/2 inch	Piping is horizontal and Shaft is vertical	0.4 - 40	1 : 100	2.133
	The Others	0.6 - 40	1 : 65	
3/4 inch	Piping is horizontal and Shaft is vertical	0.8 - 80	1 : 100	2.871
	The Others	1.2 - 80	1 : 65	
1 inch	Piping is horizontal and Shaft is vertical	2.0 - 200	1 : 100	5.287
	The Others	3.0 - 300	1 : 65	

*1. Calculate the Maximum Frequency of Each Size by the Following Calculation method.
Maximam Frequency(Hz) = Maximam Flow Rate(cc/s) / K-Factor(cc/Pulse)

DIMENSIONS TABLE





*1. Use the Shield line when you extend wiring.
*2. When flowing quantity is displayed, the Special Indicator is needed.

Unit:mm

Nominal Size	Common			PTFE
	L	H	D	D_1
RC3/8	104	56	54	3.0
RC1/2	104	56	54	3.0
RC3/4	104	56	54	3.0
RC1	104	56	54	3.0

Inpella Flow Meter Flow Indicator

SPECIFICATIONS

FT415 Specifications

Model		ASFT415-W (with Wall Mount Brackets Type)	ASFT415-M (Sensor-Mount Type)
Display	Rate	6-digit autorange, 1/2inch charater height	
	Tatal	8-digit, 5/16inch charater height	
Temperature		0-70℃(32-158˚F)	
Pulse Output		·0.1 second solid state relay (scaled)	
		·sensor pulse (unscaled)	
Battery Type		Lithium "C", 3V, replaceable	
Nominal Battery Life		3-5 years	
Environmental		NEMA 4X (Correspondance of IP66)	

*1. The Mount Type can install only IP80 Series.





ASAHI AV VALVE AND PIPING SYSTEMS

ASAHI AV PIPE FITTING AND OTHERS

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

ASAHI AV PIPES AND FITTINGS

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ASAHI AV VALVE

PVC PIPE



● Unplasticized Polyviny Chloride Pipes

VP JIS K6741
VU JIS K6741

●VP (JIS K6741) Pipe

Unit:mm

Nominal Size (mm)	Identification	Outer diameter			Thickness		Approximate Inner diameter	Length	Calculated Weight (kg/m)	HI-VP PIPE
		Basic Dimension (mm)	Max. Min. Tolerance	Average Tolerance	Min. Dimension	Tolerance				
13	VP 13	18	±0.2	±0.2	2.2	±0.6	13	4,000	0.174	●
16	VP 16	22	±0.2	±0.2	2.7	±0.6	16	4,000	0.256	●
20	VP 20	26	±0.2	±0.2	2.7	±0.6	20	4,000	0.310	●
25	VP 25	32	±0.2	±0.2	3.1	±0.8	25	4,000	0.448	●
30	VP 30	38	±0.3	±0.2	3.1	±0.8	31	4,000	0.542	●
40	VP 40	48	±0.3	±0.2	3.6	±0.8	40	4,000	0.791	●
50	VP 50	60	±0.4	±0.2	4.1	±0.8	51	4,000	1.122	●
65	VP 65	76	±0.5	±0.3	4.1	±0.8	67	4,000	1.445	●
75	VP 75	89	±0.5	±0.3	5.5	±0.8	77	4,000	2.202	●
100	VP100	114	±0.6	±0.4	6.6	±1.0	100	4,000	3.409	●
125	VP125	140	±0.8	±0.5	7.0	±1.0	125	4,000	4.464	●
150	VP150	165	±1.0	±0.5	8.9	±1.4	146	4,000	6.701	●
200	VP200	216	±1.3	±0.7	10.3	±1.4	194	4,000	10.129	●
250	VP250	267	±1.6	±0.9	12.7	±1.8	240	4,000	15.481	●
300	VP300	318	±1.9	±1.0	15.1	±2.2	286	4,000	21.962	●
350	VM350	370		±1.2	14.3	±2.0	339	4,000	24.378	–
400	VM400	420		±1.3	16.2	±2.2	385	4,000	31.294	–



VP-Straight Pipe



HI-VP-Straight Pipe

●VU (JIS K6741) Pipe

Unit:mm

Nominal Size (mm)	Identification	Outer diameter		Thickness		Approximate Inner diameter	Length	Calculated Weight (kg/m)
		Basic Dimension (mm)	Average Tolerance	Min. Dimension	Tolerance			
40	VU 40	48	±0.2	1.8	±0.4	44	4,000	0.413
50	VU 50	60	±0.2	1.8	±0.4	56	4,000	0.521
65	VU 65	76	±0.3	2.2	±0.6	71	4,000	0.825
75	VU 75	89	±0.3	2.7	±0.6	83	4,000	1.159
100	VU100	114	±0.4	3.1	±0.8	107	4,000	1.737
125	VU125	140	±0.5	4.1	±0.8	131	4,000	2.739
150	VU150	165	±0.5	5.1	±0.8	154	4,000	3.941
200	VU200	216	±0.7	6.5	±1.0	202	4,000	6.572
250	VU250	267	±0.9	7.8	±1.2	250	4,000	9.758
300	VU300	318	±1.0	9.2	±1.4	298	4,000	13.701
350	VU350	370	±1.2	10.5	±1.4	348	4,000	18.051
400	VU400	420	±1.3	11.8	±1.6	395	4,000	23.059
450	VU450	470	±1.5	13.2	±1.8	442	4,000	28.875
500	VU500	520	±1.6	14.6	±2.0	489	4,000	35.346

Notes:
1. The maximum outer diameter (minimum outer diameter) is the largest(smallest) of outer diameter measurement at a location.
2. The average outer diameter is the average for outer diameter measurements made in a direction other than two parallel directions or a circumference measurement divided by 3.142.
3. The mass per unit length (m) in the table, which was calculated using a specific gravity of 1.43, is only for information, not part of the standards.
4. The length tolerance is ± 10mm.
5. Pipe VM350 400mm long conforms to the AS24 stan-dard.
6. Pipe HI-VP conform to the JIS K6742 standard.

※ Water Pipes (JIS K6742) are available.



Single-adhesion receptacle straight Pipe



Single-rubber ring receptacle straight Pipe

TS FITTINGS

● TS FITTING(JIS K6743)

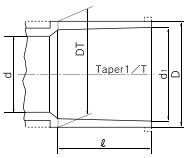
(PVC:13 to 150mm,HI-PVC:13 to150mm)



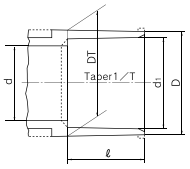
SPECIFICATIONS

Elbow	(L)	13 - 150mm
Tee	(T)	13 - 150×125mm
Water Feeding Elbow	(FL)	13 - 25mm
Metal-containing Water Feeding Elbow		13 - 25mm
Water Feeding Socket	(FS)	13 - 25mm
Metal-containing Water Feeding Socket		13 - 25mm
Water Feeding Tee	(FT)	13 - 25×20mm
Metal-containing Water Feeding Tee		13 - 25×20mm
Valve Socket	(VS)	13 - 150mm
Union Socket	(US)	13 - 50mm
Socket	(S)	13 - 150×125mm
Cap	(C)	13 - 150mm

Nomal Size13mm~50mm



Nomal Size 65mm~150mm



(Unit:mm)

Nomal Size	d_1	d_1(Tolerance)	$\ell^{+4}_{-0.5}$	1／T	D	DT	D,DT(Tolerance)	d(Min)	P,PeOD
※10	15.40	±0.20	22.0	1／25	21.0	21.0	−0.5	10	15
13	18.40	±0.20	26.0	1／30	24.0	24.0	−0.6	13	18
16	22.40	±0.20	30.0	1／34	29.0	29.0	−0.7	16	22
20	26.45	±0.20	35.0	1／34	33.0	33.0	−0.8	20	26
25	32.55	±0.25	40.0	1／34	40.0	40.0	−1.0	25	32
30	38.60	±0.25	44.0	1／34	46.0	46.0	−1.0	31	38
40	48.70	±0.30	55.0	1／37	57.0	57.0	−1.2	40	48
50	60.80	±0.30	63.0	1／37	70.0	70.0	−1.5	51	60
※65	76.60	±0.30	61.0	1／48	87.0	88.5	−1.5	67	76
75	89.60	±0.30	64.0	1／49	102.0	104.5	−1.5	77	89
100	114.70	±0.30	84.0	1／56	130.0	133.5	−1.8	100	114
※125	140.80	±0.30	104.0	1／58	157.0	161.0	−1.8	125	140
150	166.00	±0.40	132.0	1／63	186.0	190.0	−2.0	146	165

※AS-Standard

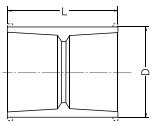
● Socket



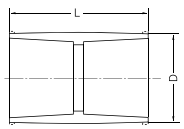


(Unit:mm)

Nomal Size 13mm~50mm



Nomal Size 65mm~150mm



Nomal Size	D	L ±4.0	HI
13	24.0	57	●
16	29.0	67	●
20	33.0	77	●
25	40.0	87	●
30	46.0	95	●
40	57.0	117	●
50	70.0	133	●
※65	87.0	145	●
75	102.0	155	●
100	130.0	200	●
※125	157.0	240	●
150	186.0	300	●

※AS-Standard

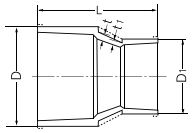
● Reducing Socket



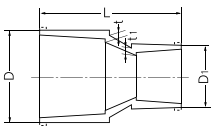


(Unit:mm)

Nomal Size 13mm~50mm



Nomal Size 65mm~150mm



Nomal Size	D	t	D_1	t_1	L ±4.0	HI
16×13	29.0	3.5	24.0	3.0	61	●
20×13	33.0	3.5	24.0	3.0	68	●
20×16	33.0	3.5	29.0	3.5	71	●
25×13	40.0	4.0	24.0	3.0	86	●
25×16	40.0	4.0	29.0	3.5	85	●
25×20	40.0	4.0	33.0	3.5	84	●
30×20	46.0	4.0	33.0	3.5	93	●
30×25	46.0	4.0	40.0	4.0	93	●
※40×20	57.0	4.5	33.0	3.5	113	●
40×25	57.0	4.5	40.0	4.0	114	●
40×30	57.0	4.5	46.0	4.0	114	●
※50×20	70.0	5.0	33.0	3.5	116	●
※50×25	70.0	5.0	40.0	4.0	140	●
50×30	70.0	5.0	46.0	4.0	136	●
50×40	70.0	5.0	57.0	4.5	136	●
※65×40	87.0	6.6	57.0	4.5	145	●
※65×50	87.0	6.6	70.0	5.0	149	●
※75×40	102.0	8.0	57.0	5.0	153	●
75×50	102.0	8.0	70.0	5.0	165	●
※75×65	102.0	8.0	87.0	6.6	159	●
100×75	130.0	10.0	102.0	8.0	190	●
※125×100	157.0	11.0	130.0	10.0	229	●
150×100	186.0	13.0	130.0	10.0	295	●
※150×125	186.0	13.0	157.0	11.0	272	●

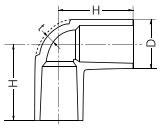
※AS-Standard

● Elbow

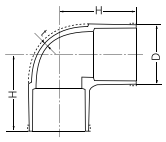




Nomal Size 13mm~50mm



Nomal Size 65mm~150mm



(Unit:mm)

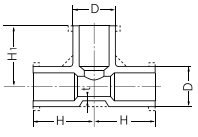
Nomal Size	D	t	H +5.0 −1.0	HI
13	24.0	3.0	36	●
16	29.0	3.5	43	●
20	33.0	3.5	50	●
25	40.0	4.0	58	●
30	46.0	4.0	65	●
40	57.0	4.5	82	●
50	70.0	5.0	96	●
※ 65	87.0	6.6	110	●
※ 75	102.0	8.0	120	●
※100	130.0	10.0	153	●
※125	157.0	11.0	188	●
※150	186.0	13.0	230	●

● Tee

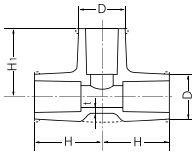




Nomal Size 13mm~50mm



Nomal Size 65mm~150mm



(Unit:mm)

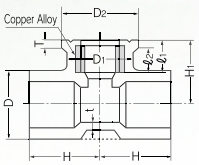
Nomal Size	D	t	H +5.0 −1.0	H_1	HI
13	24.0	3.0	36	36	●
16	29.0	3.5	43	43	●
20	33.0	3.5	50	50	●
25	40.0	4.0	58	58	●
30	46.0	4.0	65	65	●
40	57.0	4.5	82	82	●
50	70.0	5.0	96	96	●
※65	87.0	6.6	110	110	●
75	102.0	8.0	120	120	●
100	130.0	10.0	152	152	●
※125	157.0	11.0	187	187	●
150	186.0	13.0	230	230	●

ASAHI AV VALVE

TS FITTINGS

● Faucet Tee (with Metal Insert)



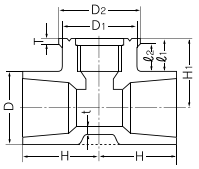


(Unit:mm)

Nomal Size	D	t	D1	D2	ℓ1 +5.0 −1.0	ℓ2 +5.0 −1.0	T	H +5.0 −1.0	H1 +5.0 −1.0	Fevale THD Size	HI
13	24.0	3.0	30	34	17	14	4	38	29	Rp1/2	●
20	33.0	3.5	37	42	19	16	4	51	36	Rp3/4	●
25	40.0	4.0	46	52	21	18	5	59	42	Rp1	●
16×13	29.0	3.5	30	34	17	14	4	43	32	Rp1/2	●
20×13	33.0	3.5	30	34	17	14	4	47	34	Rp1/2	●
25×13	40.0	4.0	30	34	17	14	4	52	38	Rp1/2	●
25×20	40.0	4.0	37	42	19	16	4	56	40	Rp3/4	●

● Faucet Tee



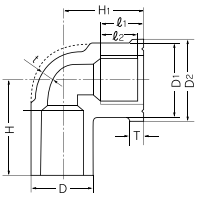


(Unit:mm)

Nomal Size	D	t	D1	D2	ℓ1 +5.0 −1.0	ℓ2 +5.0 −1.0	T	H +5.0 −1.0	H1 +5.0 −1.0	Fevale THD Size	HI
□ 13	24.0	3.0	30	34	17	14	4	38	29	Rp1/2	●
□ 20	33.0	3.5	37	42	19	16	4	51	36	Rp3/4	●
□ 25	40.0	4.0	46	52	21	18	5	59	42	Rp1	●
□16×13	29.0	3.5	30	34	17	14	4	43	32	Rp1/2	●
□20×13	33.0	3.5	30	34	17	14	4	47	34	Rp1/2	●
□25×13	40.0	4.0	30	34	17	14	4	52	38	Rp1/2	●
□25×20	40.0	4.0	37	42	19	16	4	56	40	Rp3/4	●

● Faucet Elbow



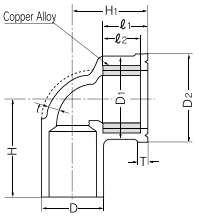


(Unit:mm)

Nomal Size	D	t	D1	D2	ℓ1 +5.0 −1.0	ℓ2 +5.0 −1.0	T	H +5.0 −1.0	H1 +5.0 −1.0	Fevale THD Size	HI
□13	24.0	3.0	30	34	17	14	4	38	29	Rp1/2	●
□16	29.0	3.5	30	34	17	14	4	43	32	Rp1/2	●
□20	33.0	3.5	37	42	19	16	4	51	36	Rp3/4	●
□25	40.0	4.0	46	52	21	18	5	59	40	Rp1	●

● Faucet Elbow (with Metal Insert)



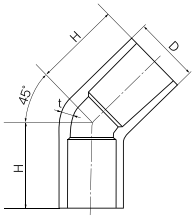


(Unit:mm)

Nomal Size	D	t	D1	D2	ℓ1 +5.0 −1.0	ℓ2 +5.0 −1.0	T	H +5.0 −1.0	H1 +5.0 −1.0	Fevale THD Size	HI
13	24.0	3.0	30	34	17	14	4	38	29	Rp1/2	●
16×13	29.0	3.0	30	34	17	14	4	43	32	Rp1/2	●
20	33.0	3.5	37	42	19	16	4	51	36	Rp3/4	●
25	40.0	4.0	46	52	21	18	5	59	40	Rp1	●
20×13	33.0	3.5	30	34	17	14	4	47	33	Rp1/2	●

● 45 Elbow





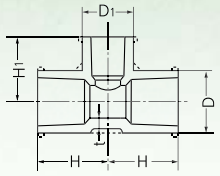
(Unit:mm)

Nomal Size	D	t	H +5.0 −1.0	HI
20	33.0	3.5	44	●
25	40.0	4.0	51	●

● Reducing Tee



Nomal Size 13mm~50mm

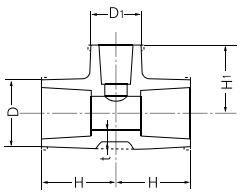


(Unit:mm)

Nomal Size	D	t	H	D1	H1	HI
16×13	29.0	3.5	41	24.0	38	●
20×13	33.0	3.5	46	24.0	40	●
20×16	33.0	3.5	48	29.0	45	●
25×13	40.0	4.0	51	24.0	43	●
25×16	40.0	4.0	53	29.0	48	●
25×20	40.0	4.0	55	33.0	53	●
30×13	46.0	4.0	55	24.0	46	●
30×16	46.0	4.0	57	29.0	51	●
30×20	46.0	4.0	59	33.0	56	●
30×25	46.0	4.0	62	40.0	61	●
40×13	57.0	4.5	66	24.0	52	●
40×16	57.0	4.5	68	29.0	57	●
40×20	57.0	4.5	70	33.0	62	●
40×25	57.0	4.5	73	40.0	67	●
40×30	57.0	4.5	76	46.0	71	●
50×13	70.0	5.0	74	24.0	58	●
50×16	70.0	5.0	76	29.0	63	●
50×20	70.0	5.0	78	33.0	68	●
50×25	70.0	5.0	81	40.0	73	●
50×30	70.0	5.0	84	46.0	77	●
50×40	70.0	5.0	90	57.0	88	●



Nomal Size 65mm~150mm



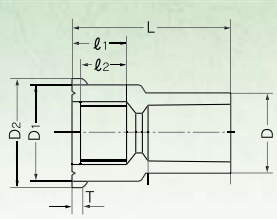
(Unit:mm)

Nomal Size	D	t	H +5.0 −1.0	D1	H1 +5.0 −1.0	HI
※65× 40	87.0	6.6	100	57.0	95	●
※65× 50	87.0	6.6	101	70.0	104	●
75× 25	102.0	8.0	93	40.0	88	●
75× 40	102.0	8.0	100	57.0	102	●
75× 50	102.0	8.0	105	70.0	110	●
※75× 65	102.0	8.0	113	87.0	117	●
100× 50	130.0	10.0	125	75.0	122	●
100× 75	130.0	10.0	140	102.0	132	●
※125× 75	157.0	11.0	160	102.0	147	●
※125×100	157.0	11.0	173	130.0	167	●
150× 75	186.0	13.0	195	102.0	158	●
150×100	186.0	13.0	208	130.0	182	●
※150×125	186.0	13.0	217	157.0	201	●

※AS-Standerd

● Faucet Socket





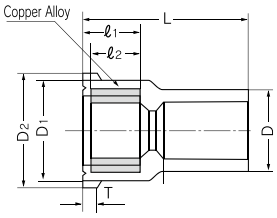
(Unit:mm)

Nomal Size	D	D_1	D_2	ℓ_1	$\ell_2^{\pm 1.0}$	T	$L^{+5.0}_{-1.0}$	Fenale THD Size	HI
□13	24.0	30	34	17	14	4	47	Rp1/2	●
□16	29.0	30	34	17	14	4	52	Rp1/2	●
□20	33.0	37	42	19	16	4	59	Rp3/4	●
□25	40.0	46	52	21	18	5	68	Rp1	●

□ASAHI AV Standard

● Faucet Socket (with Metal Insert)





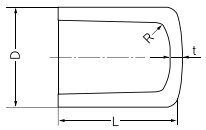
(Unit:mm)

Nomal Size	D	D_1	D_2	ℓ_1	$\ell_2^{\pm 1.0}$	T	$L^{+5.0}_{-1.0}$	Fenale THD Size	HI
13	24.0	30	34	17	14	4	47	Rp1/2	●
16×13	29.0	30	34	17	14	4	52	Rp1/2	●
20	33.0	37	42	19	16	4	59	RD3/4	●
25	40.0	46	52	21	18	5	68	Rp1	●
20×13	33.0	30	36	17	14	4	57	Rp1/2	●

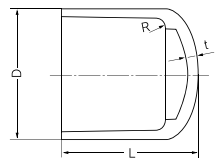
● Cap



Nomal Size 13~50mm



Nomal Size 65~150mm

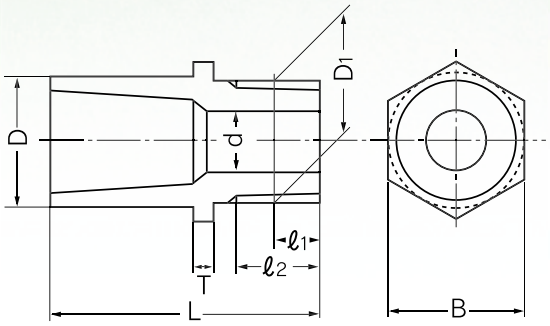


(Unit:mm)

Nomal Size	D	t	$L^{+5.0}_{-1.0}$	HI
13	24.0	3.0	29.0	●
16	29.0	3.5	33.5	●
20	33.0	3.5	38.5	●
25	40.0	4.0	44.0	●
30	46.0	4.0	48.0	●
40	57.0	4.5	59.5	●
50	70.0	5.0	68.0	●
※65	87.0	6.6	96.0	●
75	102.0	8.0	105.0	●
100	130.0	10.0	138.0	●
150	186.0	13.0	205.0	●

● Valve Socket





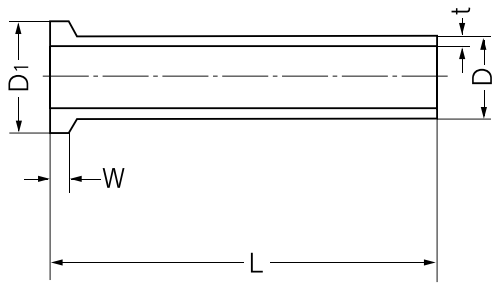
(Unit:mm)

Nomal Size	D	d	Male THD Size	Gauge Dimention D_1	Number of threads (Per 25.4mm)	Position of gauge diameter ℓ_1	ℓ_2 (Min)	T	$L^{+5.0}_{-1.0}$	B	HI
※ 10	21.0	10	3/8	16.662	19	6.35	12	6	43	21	—
13	24.0	13	1/2	20.955	14	8.16	13.16	6	50	24	●
16	29.0	13	1/2	20.955	14	8.20	15	6	54	29	●
20	33.0	18	3/4	26.441	14	9.53	14.53	8	64	33	●
25	40.0	23	1	33.249	11	10.39	16.79	8	71	40	●
30	46.0	31	1 1/4	41.910	11	12.70	19.10	10	80	46	●
40	57.0	37	1 1/2	47.803	11	12.70	19.10	10	92	57	●
50	70.0	48	2	59.614	11	15.88	23.38	12	106	70	●
□ 65	87.0	62	2 1/2	75.184	11	17.46	30	15	118	87	●
□ 75	102.0	72	3	87.884	11	20.64	34	16	127	102	●
□100	130.0	96	4	113.030	11	25.40	40	18	157	130	●
□125	157.0	119	5	138.430	11	28.58	44	20	186	157	—
□150	186.0	140	6	163.830	11	28.58	44	25	220	186	—

□ASAHI AV Standard

● Union Socket





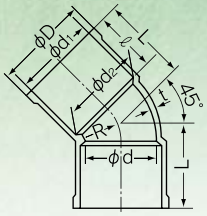
(Unit:mm)

Nomal Size	D	t	D1	W	$L^{+5.0}_{-1.0}$	HI
13	18.0	2.5	23.0	5	80	●
16	22.0	3.0	27.5	5	85	●
20	26.0	3.0	29.5	6	90	●
25	32.0	3.5	36.5	7	100	●
30	38.0	3.5	42.0	8	110	●
40	48.0	4.0	53.0	8	120	●
50	60.0	4.5	71.0	9	130	●

PVC LARGE-SIZE FITTINGS



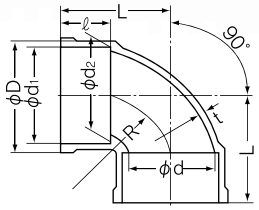
45° AV Bend



Unit:mm

Nominal Size(mm)	d1	d2	ℓ	D	d	t	L	R	PVC	HI-PVC
200	217.00	214.10	145	240	196	15	193	98	●	●
250	268.20	265.00	155	293	247	16	213	123.5	●	●
300	318.70	315.88	155	337	298	10	225	149	●	●

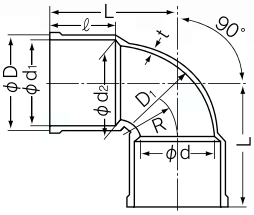
AV Short Elbow



Unit:mm

Nominal Size(mm)	d1	d2	ℓ	D	d	t	L	R	PVC	HI-PVC
200	217.0	214.1	145	240	196	15	265	190	●	●
250	268.2	265.0	155	295	247	16	310	235	●	●
300	319.6	315.5	175	347	298	18	350	170	●	●

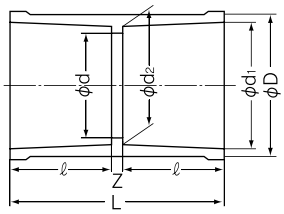
90° AV Bend



Unit:mm

Nominal Size(mm)	d1	d2	ℓ	D	D1	d	t	L	R	PVC	HI-PVC
200	217.00	214.10	145	240	216	196	15	341	196	●	●
250	268.20	265.00	155	293	267	247	16	402	247	●	●
300	318.70	315.88	155	337	318	298	10	395	240	●	●

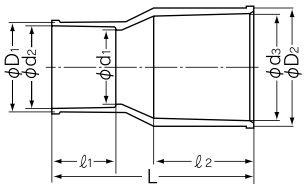
AV Socket



Unit:mm

Nominal Size(mm)	d1	d2	ℓ	D	d	Z	L	PVC	HI-PVC
200	217.0	214.10	145	238	202	10	300	●	●
250	268.2	265.00	155	295	247	43	353	●	●
300	319.6	315.52	175	336	298	10	360	●	●

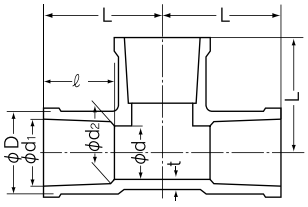
AV Reduced Socket



Unit:mm

Nominal Size(mm)	d1	d2	ℓ1	D1	d3	ℓ2	D2	L	PVC	HI-PVC
200×150	146	166.0	132	188	217.0	145	240	356	●	●
250×200	194	217.0	145	240	268.2	155	293	380	●	●
300×250	247	268.2	155	295	319.6	175	347	405	●	●

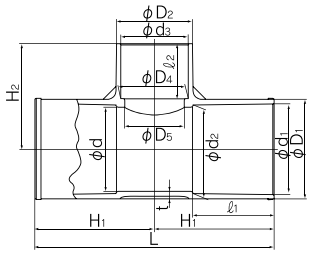
AV Tee



Unit:mm

Nominal Size(mm)	d1	d2	ℓ	D	d	t	L	PVC	HI-PVC
200	217.0	214.10	145	240	196	15	266	●	●
250	268.2	265.00	155	295	247	16	331	●	●
300	319.6	315.52	175	337	298	10	340	●	●

AV Reduced Tee



Unit:mm

Nominal Size(mm)	d1	d2	ℓ1	d3	d4	ℓ2	D1	D2	d	d5	t	L	H1	H2	PVC	HI-PVC
200×75	217.0	214.1	145	89.60	88.29	64	240	102	194	77	15	402	201	180	●	●
200×100	217.0	214.1	145	114.70	113.20	84	240	130	194	100	15	430	215	200	●	●
200×150	217.0	214.1	145	166.00	163.91	132	240	188	194	146	15	476	238	253	●	●
250×75	268.20	265.00	155	89.60	88.29	64	295	108	247	77	16	452	226	210	●	●
250×100	268.20	265.00	155	114.70	113.20	84	295	136	247	100	16	492	246	225	●	●
250×200	268.20	265.00	155	217.00	214.10	200	295	245	247	194	16	608	304	310	●	●
300×75	320.70	314.70	300	89.60	88.29	64	343	102	298	77	17	722	361	236	●	●

We also produce LARGE-SIZE VU FITTINGS.

Max. Working Pressure

Unit:MPa{Kgf/cm²}

Items / Nominal Size	AV90° Bends	AV45° Bends	AV Short Elbows	AV Sockets	AV Reduced Sockets	AV Tees	AV Reduced Tees
200mm	0.75{7.7}	0.75{7.7}	0.75{7.7}	0.75{7.7}	0.75{7.7}	0.75{7.7}	0.75{7.7}
250mm	0.5{5.1}	0.5{5.1}	0.5{5.1}	0.5{5.1}	0.5{5.1}	0.5{5.1}	0.5{5.1}
300mm	0.4{4.1}	0.4{4.1}	0.6{6.1}	0.6{6.1}	0.6{6.1}	0.4{4.1}	0.4{4.1}

·The pressure limit includes water hammer pressure. Do not exceed the limit.

C-PVC PIPE & FITTINGS

● JIS K 6776 (pipe),JIS K 6777 (fittings) and AV standard.



FEATURES

High Heat Resistance

Being made of C-PVC,the super pipe and fitting withstand high temperatures up to 90℃ . (195 ° F)

High Chemical Resistance

Being made of C-PVC,the super pipe and fitting are highly resistant to chemicals.

Easy to Install

The super pipe and fitting are easy to install because the Socket method can be used for connecting.

Available in Various Types of Fittings

WORKING PRESSURE VS. TEMPERATURE

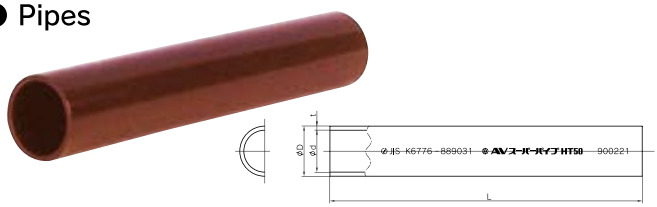
MPa{kgf/cm²}

Nominal Sizemm (inch)	5 - 30℃	31 - 40℃	41 - 60℃	61 - 70℃	71 - 80℃	81 - 90℃
13 - 50 (3/8 - 2)	1.0{10.2}		0.6{6.1}	0.4{4.1}	0.2{2.0}	0.2{2.0}
65 - 150 (2 1/2 - 3)	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	0.2{2.1}	0.2{2.0}
200 (8)	0.7{7.1}		0.4{4.1}	0.2{2.0}	0.1{1.0}	0.05{0.5}

APPLICATIONS

·Being highly heat and chemical resis-tant and offering high heat insulation performance, c-pvc pipe and fitting are suitable for piping for water supply, air-conditioning, hot springs and chemical media.

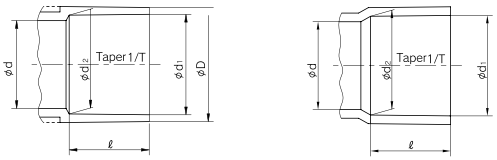
● Pipes



Unit : mm

Nomal Size	D			t		L		d	Weight (kg / m)
	OD	OD		Thickness		Length		Approximate Inner Diameter	
		Max Min	Average	Basic Dimension	Tolerance	Basic Dimension	Tolerance		
☆13	18	± 0.20	± 0.20	2.5	± 0.2	4000	+ 30 − 10	13	0.180
☆16	22	± 0.20	± 0.20	3.0	± 0.3			16	0.265
☆20	26	± 0.20	± 0.20	3.0	± 0.3			20	0.321
☆25	32	± 0.20	± 0.20	3.5	± 0.3			25	0.464
☆30	38	± 0.30	± 0.20	3.5	± 0.3			31	0.561
☆40	48	± 0.30	± 0.20	4.0	± 0.3			40	0.818
☆50	60	± 0.40	± 0.20	4.5	± 0.4			51	1.161
65	76	± 0.50	± 0.30	4.5	± 0.4		+ 10	67	1.506
75	89	± 0.50	± 0.30	5.9	± 0.4			77	2.294
100	114	± 0.60	± 0.40	7.1	± 0.5			100	3.552
125	140	± 0.80	± 0.50	7.5	± 0.5			125	4.651
150	165	± 1.00	± 0.50	9.6	± 0.7			146	6.982
●200	216	± 1.30	± 0.70	11.0	± 0.7			194	10.554

☆ JIS K 6776 ● Special Fitting Dimension

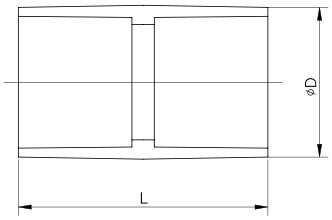


Unit : mm

Nomal Size	d1		1/ T	ℓ		d2		d Min	D	
	Basic Dimension	Tolerance		Basic Dimension	Tolerance	Basic Dimension	Tolerance		Basic Dimension	Tolerance
13	18.30	± 0.20	—	22	± 4	17.55	± 0.25	14	26	− 0
16	22.35	± 0.20	—	27	± 4	21.55	± 0.25	17	29	− 0
20	26.35	± 0.20	—	33	± 4	25.50	± 0.25	21	34	− 0
25	32.50	± 0.30	—	38	± 4	31.40	± 0.35	26	41	− 0
30	38.50	± 0.30	—	42	± 4	37.45	± 0.35	34	46	− 0
40	48.50	± 0.30	—	47	± 4	47.45	± 0.35	40	56	− 0
50	60.50	± 0.30	—	52	± 4	59.45	± 0.35	50	69	− 0
65	76.60	± 0.30	1/48	61	+4 −0.5	—	—	67	87	− 1.5
75	89.60	± 0.30	1/49	64	+4 −0.5	—	—	77	102	− 1.5
100	114.70	± 0.30	1/56	84	+4 −0.5	—	—	100	130	− 1.8
125	140.80	± 0.30	1/58	104	+4 −0.5	—	—	125	157	− 1.8
150	166.00	± 0.40	1/63	132	+4 −0.5	—	—	146	186	− 2

● Socket





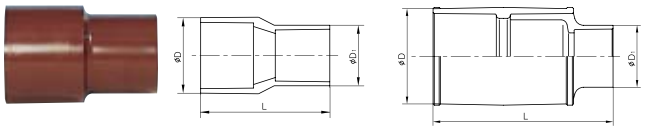
Unit : mm

Nomal Size	D	L
☆ 13	26	49
☆ 16	29	59
☆ 20	34	71
☆ 25	41	82
☆ 30	46	89
☆ 40	56	99
☆ 50	69	109
65	87	145
75	102	155
100	130	200
125	157	231
150	186	300
● 200	236	300

☆ JIS K 6777 ● Special Fitting Dimension

● Reducing Socket





Unit : mm

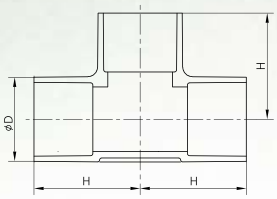
Nomal Size	D	D1	L	Nomal Size	D	D1	L
☆ 16 × 13	29	26	53.0	▪ 65 × 30	87	46	194.0
☆ 20 × 13	34	26	61.5	▪ 65 × 40	87	57	205.0
☆ 20 × 16	34	29	66.0	65 × 50	87	70	149.0
☆ 25 × 13	41	26	73.0	▪ 75 × 40	102	57	221.0
☆ 25 × 16	41	29	76.0	75 × 50	102	70	165.0
☆ 25 × 20	41	34	80.5	75 × 65	102	87	163.0
☆ 30 × 13	46	26	75.0	▪ 100 × 40	130	57	246.0
☆ 30 × 20	46	34	85.0	▪ 100 × 50	130	70	252.0
☆ 30 × 25	46	41	90.0	▪ 100 × 65	134	87	250.0
☆ 40 × 20	56	34	98.0	100 × 75	134	102	190.0
☆ 40 × 25	56	41	100.0	▪ 125 × 75	157	102	296.0
☆ 40 × 30	56	46	97.0	▪ 125 × 100	157	130	316.0
☆ 50 × 25	69	41	110.0	▪ 150 × 75	186	102	365.0
☆ 50 × 30	69	46	110.0	▪ 150 × 100	186	130	385.0
☆ 50 × 40	69	56	110.0	▪ 150 × 125	186	157	404.0

☆ JIS K 6777 ▪ Combination Type

ASAHI AV VALVE

● Tee



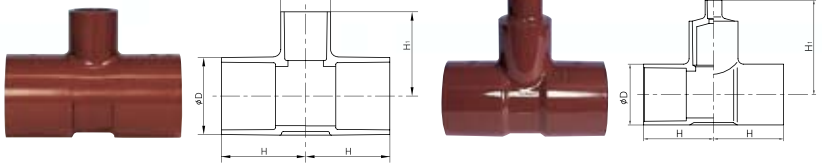


Unit : mm

NomalSize	D	H
☆ 13	26	34
☆ 16	29	41
☆ 20	34	53
☆ 25	41	58
☆ 30	46	64
☆ 40	56	75
☆ 50	69	87
65	87	110
75	102	120
100	130	152
125	157	187
150	186	230

☆ JIS K 6777

● Reducing Tee



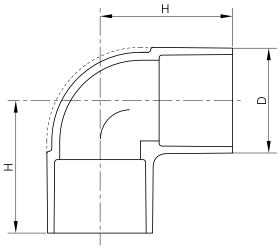
Unit : mm

NomalSize	D	D₁	H	H₁	NomalSize	D	D₁	H	H₁
☆ 16 × 13	29	26	39	36	▪ 65 × 16	87	29	100	137
☆ 20 × 13	34	26	45	38	▪ 65 × 20	87	33	100	142
☆ 20 × 16	34	29	47	43	▪ 65 × 25	87	40	100	147
☆ 25 × 13	41	26	49	41	▪ 65 × 30	87	46	100	150
☆ 25 × 16	41	29	52	46	65 × 40	87	57	95	95
☆ 25 × 20	41	34	54	52	65 × 50	87	70	100	105
☆ 30 × 13	46	26	54	44	▪ 75 × 20	102	33	105	147
☆ 30 × 16	46	29	56	49	75 × 25	102	40	93	88
☆ 30 × 20	46	34	58	55	▪ 75 × 30	102	46	105	155
☆ 35 × 25	46	41	60	60	75 × 40	102	56	100	102
☆ 40 × 13	56	26	62	49	75 × 50	102	70	105	110
☆ 40 × 16	56	29	63	54	▪ 100 × 20	130	33	125	159
☆ 40 × 20	56	34	65	60	▪ 100 × 25	130	40	125	164
☆ 40 × 25	56	41	68	65	▪ 100 × 30	130	46	125	167
☆ 40 × 30	56	46	72	69	▪ 100 × 40	130	57	125	178
☆ 50 × 13	69	26	69	55	100 × 50	130	75	125	122
☆ 50 × 16	69	29	70	60	100 × 75	130	102	140	132
☆ 50 × 20	69	34	72	70	125 × 75	157	102	161	147
☆ 50 × 25	69	41	75	75	125 × 100	157	130	175	167
☆ 50 × 30	69	46	79	75	150 × 75	186	102	195	158
☆ 50 × 40	69	56	82	80	150 × 100	186	130	208	182
65 × 13	87	24	100	135	150 × 125	186	157	218	202

☆ JIS K 6777
▪ Combination Type

● Elbow



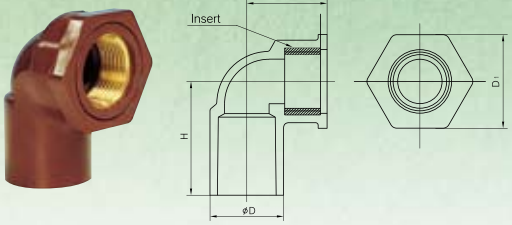


Unit : mm

NomalSize	D	H
☆ 13	26	34
☆ 16	29	41
☆ 20	34	53
☆ 25	41	58
☆ 30	46	64
☆ 40	56	74
☆ 50	69	85
65	87	110
75	102	120
100	130	155
125	157	188
150	186	228
● 200	236	265

☆ JIS K 6777
● Special Fitting Dimension

● Faucet Elbow

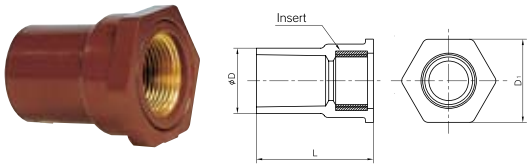


Unit : mm

NomalSize	D Min	H	Thd	D₁	H₁
☆ 13	26	35	Rp1/2	35	29
☆ 16	29	42	Rp1/2	35	33
☆ 20	34	51	Rp3/4	44	36
☆ 25	41	60	Rp1	54	40
20×13	33	47	Rp1/2	34	33

☆ JIS K 6777

● Faucet Socket

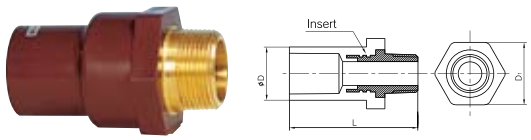


Unit : mm

NomalSize	D Min	Thd	D₁	L
☆ 13	26	Rp1/2	35	47
☆ 16	29	Rp1/2	35	52
☆ 20	34	Rp3/4	44	61
☆ 25	41	Rp1	54	69
20×13	33	Rp1/2	34	57

☆ JIS K 6777

● Valve Socket

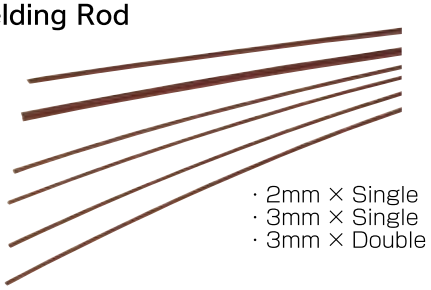


Unit : mm

NomalSize	D Min	Thd	L	D₁ Min
☆13× 1/2	26	R 1/2	64	34
☆16× 1/2	29	R 1/2	70	34
☆20× 3/4	34	R 3/4	85	40
☆25× 1	41	R 1	99	45
☆30×1 1/4	46	R 1 1/4	109	62
☆40×1 1/2	56	R 1 1/2	114	68
☆50× 2	69	R 2	132	84

☆ JIS K 6777

● Welding Rod



· 2mm × Single
· 3mm × Single
· 3mm × Double

COLOR PIPE & FITTINGS



FEATURES

- Being made of PVC, the colored pipe and fitting are light and easy to install.
- The colored pipe and fitting, using high quality pigment,are colorful and hamonious with buildings. The pipe and fitting are available in three colors: silver gray, light ivory and white.
- VP and VU pipes and DV sockets ranging in nominal diameter from 40mm($1^{1}/_{2}$inch) to 150mm(6inch) and pipe holddown bands are also available.

No	Color	Munsell value
1	White	N9.5
1	Light ivory	2.5Y8/2
1	Silver gray	2.5Y7.5/1

APPLICATIONS

- Piping for the chemical industry, water supply,building.
(rainwater drainage, water supply and sewage), interior, ventilation, etc.

※ Silver gray: Designated as a standard color by the Japanese Housing Corporation.

AIR-CONDITIONING DRAIN PIPE & FITTINGS



FEATURES

- Being made of PVC,the colored pipe and fitting are light and easy to install.
- The colored pipe and fitting, using high quality pigment are colorful and hamonious with buildings.
- We have VP pipes ranging in nominal size from 16 to 40mm, VU pipes 20 and 25mm in nominal size and various fittings.

PIPE	VP	16 - 40mm	VU	20 - 25mm
FITTING	90° Elbows	16 - 40mm	45° Elbows	20 - 40mm
	Tees	16 - 40mm	Reducing tees	25 × 20 - 40 × 30mm
	Sockets	16 - 40mm	Reducing sockets	20 × 16 - 40 × 30mm

Color	Munsell value
Ivory white	5Y9/07

ASAHI AV VALVE

PREFAB JOINT (UNION)

● Type B (one-side union)
13mm(3/8inch) – 100mm(4inch)





● Pipes can be disconnected only loosening the union nut.

FEATURES

- The PREFAB JOINT can be installed easily, fast and securely.
- The PREFAB JOINT, when placed in a pipeline, facilitates the cleaning of the pipeline.
- The body of the PREFAB JOINT can be removed from a pipeline only by loosening its union nut. Thus it is suitable for pipelines which are frequently disconnected, such as temporary pipelines and slurry pipelines.

SPECIFICATIONS

Type	Type B (Single union)
Material	Unplasticized Polyvinyl Chloride(PVC) Chlorinated Polyvinyl Chloride(C-PVC) Polyvinylidene Fluoride(PVDF)
Nominal Size	Socket End 13mm(3/8inch) - 100mm(4inch) Spigot End 13mm(3/8inch) - 50mm(2inch) Threaded End 13mm(3/8inch) - 50mm(2inch)
Temperature Range	PVC=0℃ - 50℃(30°F - 120°F) C-PVC=0℃ - 90℃(30°F - 195°F) PVDF=-40℃ - 120℃(-40°F - 250°F)
Max. Working Pressure	1.0MPa{10.2kgf/cm²} [150PSI]

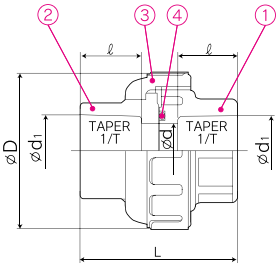
PREFAB JOINT

Unit:MPa{kgf/cm²}

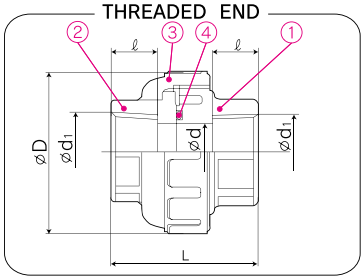
Nominal Size mm	Nominal Size inch	Material / Temp. ℃(°F) PVC 0 - 50 (30 - 120)	C-PVC 0 - 50 (30 - 120)	C-PVC 51 - 60 (121 - 140)	C-PVC 61 - 80 (141 - 175)	C-PVC 81 - 90 (176 - 195)	PVDF −40 - 60 (−40 - 140)	PVDF 61 - 80 (141 - 175)	PVDF 81 - 90 (176 - 195)	PVDF 91 - 100 (196 - 210)	PVDF 101 - 120 (211 - 250)
13	3/8	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
16	1/2	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
20	3/4	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
25	1	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
30	1 1/4	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
40	1 1/2	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
50	2	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
65	2 1/2	1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}	1.0{10.2}	0.85{8.7}	0.75{7.7}	0.6{6.1}	0.5{5.1}
80	3	1.0{10.2}	1.0{10.2}	0.6{6.1}	0.4{4.1}	0.3{3.1}	1.0{10.2}	0.7 {7.1}	0.6 {6.1}	0.5{5.1}	0.4{4.1}
100	4	1.0{10.2}	1.0{10.2}	0.6{6.1}	0.4{4.1}	0.3{3.1}	1.0{10.2}	0.7 {7.1}	0.6 {6.1}	0.5{5.1}	0.4{4.1}

DIMENSIONS

Socket End



THREADED END



PARTS & MATERIALS

No.	DISCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC,C-PVC,PVDF
②	END CONNECTOR	1	PVC,C-PVC,PVDF
③	UNION NUT	1	PVC,C-PVC,PVDF
④	O-RING	1	EPDM,FKM,Others

DIMENSIONS TABLE

JIS

Nominal Size mm	Nominal Size inch	d	Socket End PVC, C-PVC d1	Socket End PVC, C-PVC ℓ	Socket End PVC, C-PVC 1/T	Socket End PVC, C-PVC L	Threaded End PVC JIS B 0203 d1	Threaded End PVC JIS B 0203 ℓ	Threaded End PVC JIS B 0203 L	D
13	3/8	13	18.13	18	1/30	46	Rc 3/8	15	43	48
16	1/2	15	22.11	20	1/34	46	Rc 1/2	15	43	48
20	3/4	20	26.13	24	1/34	61	Rc 3/4	17	57	60
25	1	25	32.16	27	1/34	70	Rc 1	20	63	70
30	1 1/4	31	38.19	30	1/34	77	Rc1 1/4	22	71	82
40	1 1/2	40	48.21	37	1/37	95	Rc1 1/2	25	82	100
50	2	51	60.25	42	1/37	107	Rc 2	28	96	106
65	2 1/2	65	76.60	61	1/48	164	—	—	—	133
80	3	77	89.60	64	1/49	189.5	—	—	—	152
100	4	100	114.70	84	1/56	245	—	—	—	210

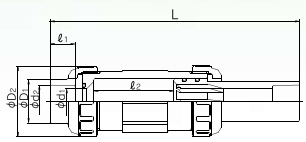
Note : The shape and appearane of the valve differ a little with nominal size compared to the drawing.

EXPANSION JOINT 20mm - 100mm (3/4 inch - 4 inch)

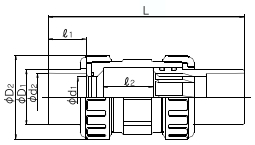
● PVC, C-PVC 20 – 100mm (3/4 inch – 4 inch)



20mm(3/4inch) ~ 50mm(2inch)



65mm(2 1/2inch) ~ 100mm(4inch)



FEATURES

- Thermal stress of pipe line is to be absorbed due to its sufficient allowable axial movement on elongation and contraction.
- With union type end connection, it allows fast disassembly, loosening the union nut only.
- With simplified design, it requires minimum, systems space in the piping systems, and there is no need of expansion U-bend.
- Earthquake resistant design; Allowable axial movement-Elongation contraction.
- Internal stop design prevents the expansion portion from being removed.

SPECIFICATIONS

Material	Working Temperature	Max. Working Pressure MPa{kgf/cm²}[PSI]	End Connectors
Unplasticized Polyvinyl Chloride (PVC)	0℃ - 50℃ (30˚F - 120˚F)	1.0{10.2}[150]	Socket End
Chlorinated Polyvinyl Chloride (C-PVC)	0℃ - 90℃ (30˚F - 195˚F)	1.0{10.2}[150]	Socket End

EXPANSION JOINT

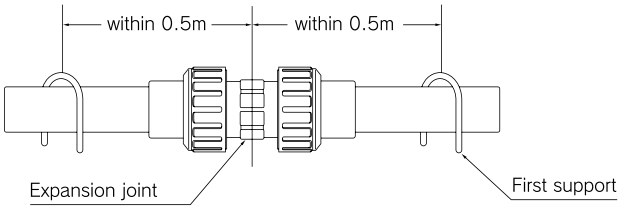
Unit:MPa{kgf/cm²}

Material / Temp.℃(˚F) / Nominal Size		PVC		C-PVC			
mm	inch	0 - 40 (30 - 105)	41 - 50 (106 - 120)	5 - 40 (40 - 105)	41 - 60 (106 - 140)	61 - 70 (141 - 160)	71 - 90 (161 - 195)
20 - 100	3/4 - 4	1.0{10.2}	0.6{6.1}	1.0{10.2}	0.6{6.1}	0.4{4.1}	0.2{2.0}

DIMENSIONS TABLE

JIS Unit:mm

Nominal Size mm	Nominal Size inch	d_1	d_2	ℓ_1	1/T	D_1	D_2	L Max	L Min	ℓ_2
20	3/4	20	26.13	24	1/34	35	60	243	163	80
25	1	25	32.16	27	1/34	43	70	250	170	80
30	1 1/4	31	38.19	30	1/34	50	82	258	178	80
40	1 1/2	40	48.21	37	1/37	59	100	272	192	80
50	2	51	60.25	42	1/37	72	106	285	205	80
65	2 1/2	65	76.60	61	1/48	88	133	314	234	80
80	3	78	89.60	64	1/49	105	152	330	250	80
100	4	100	114.70	84	1/56	132	210	422	322	100



☆ Volume of thermal expansion on C-PVC pipe and PVC pipe

A; Dimension of pipe line
B; Temperature

Unit:mm

B \ A	5 m	10 m	20 m	30 m	40 m	50 m	60 m	70 m	80 m
10℃	4	7	14	21	28	35	42	49	56
20℃	7	14	28	42	56	70	84	98	112
30℃	11	21	42	63	84	105	126	147	168
40℃	14	28	56	84	112	140	168	196	224
50℃	18	35	70	105	140	175	210	245	280
60℃	21	42	84	126	168	210	252	294	336
70℃	25	49	98	147	196	245	294	343	392
80℃	28	56	112	168	224	280	336	392	448

Caution

First supports on both side of AV Expansion joint should be located within 0.5m from the middle of this joint.
(Setting of first supports at the location beyond 0.5m could cause pipeline to bend by internal pressure and AV Expansion joints do not work properlly.)

BOLT & NUT and WASHER



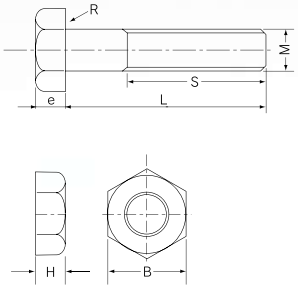
● PVC

Nominal Size : M8 to M20

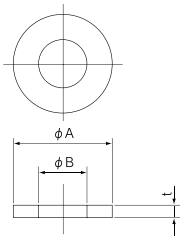
Unit:mm

Nominal Size M8		Nominal Size M10		Nominal Size M12		Nominal Size M16		Nominal Size M20	
Lmm	Smm	Lmm	Smm	Lmm	Smm	Lmm	Smm	Lmm	Smm
20	16	14	10	25	21	40	36	55	46
25	22	20	16	30	26	45	38	65	46
32	22	25	21	36	30	50	38	75	46
38	22	28	24	40	30	55	38	80	46
50	22	30	26	45	30	60	38	85	46
55	22	32	26	50	30	65	38	90	46
		36	26	56	30	70	38		
		40	26	60	30	75	38		
		45	26	65	30	80	38		
		50	26	70	30	85	38		
		55	26			95	38		
		60	26						
		65	26						
Pitch	1.25	Pitch	1.50	Pitch	1.75	Pitch	2.00	Pitch	2.50
H 6.5mm		H 8mm		H 10mm		H 13mm		H 16mm	
B 13		B 17		B 19		B 24		B 30	
M 8		M 10		M 12		M 16		M 20	
e 5.5		e 7		e 8		e 10		e 13	
R 0.2r		R 0.2r		R 0.3r		R 0.4r		R 0.4r	

● Bolt and Nut



● Washer

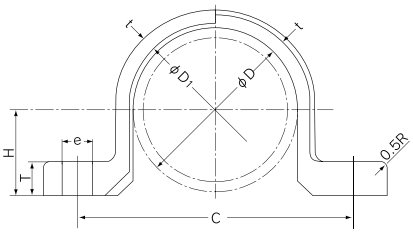


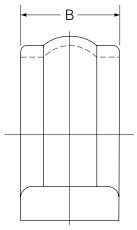
Unit:mm

Nominal Size	A	B	t
M 8	$18.2\ ^{0}_{0.8}$	$8.4\ ^{+0.4}_{0}$	2
M10	$22.0\ ^{0}_{0.8}$	$10.5\ ^{+0.4}_{0}$	2
M12	$26.0\ ^{0}_{1.0}$	$13.5\ ^{+0.5}_{0}$	3
M16	$32.0\ ^{0}_{1.0}$	$17.0\ ^{+0.5}_{0}$	3
M20	$40.0\ ^{0}_{1.0}$	$21.0\ ^{+0.6}_{0}$	3

SADDLE







● PVC

Nominal Size:16mm(1/2inch) – 200mm(8inch)

DIMENSIONS TABLE

Unit:mm

Nominal Size		D	D_1	C	H	T	t	B	e
mm	inch								
16	1/2	22	24	42	11	5	3	15	5.8
20	3/4	26	29	48	13	5	3	18	5.8
25	1	32	35	54	16	6	3	18	5.8
30	1 1/4	38	41	66	19	7	3.5	20	7
35	1 1/4	42	46	70	21	8	3.5	22	7
40	1 1/2	48	52	90	24	9	4	24	10
50	2	60	64	97	30	9	4	28	10
65	2 1/2	76	81	114	38	10	4	30	10
80	3	89	94	134	44.5	11	4	38	12
100	4	114	120	160	57	12	4.5	42	12
125	5	140	150	192	70	12	5	46	12
150	6	165	177	238	82.5	14	8	50	17
200	8	216	236	316	108	20	10	70	19

AV FLANGE

● TS FLANGES(PVC,HI-PVC,C-PVC)



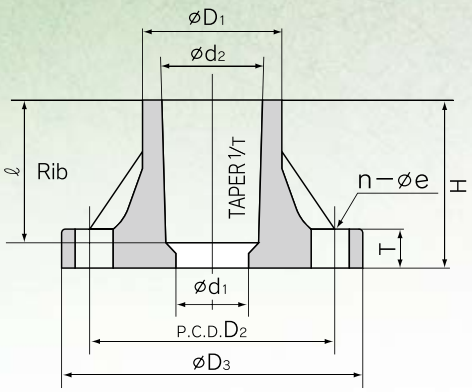
PVC



HI-PVC



C-PVC



DIMENSIONS TABLE

AV TS FLANGES PVC JIS 10K 13mm - 350mm(3/8inch - 14inch) JIS 5K 13mm - 350mm(3/8inch - 14inch)
HI-PVC JIS 10K 13mm - 300mm(3/8inch - 12inch) JIS 5K 13mm - 150mm(3/8inch - 6inch)

JIS Unit:mm

Nominal Size		d_1	d_2		Taper 1/T		ℓ		D_1		D_2		D_3		n		e		T		H	
mm	inch		10K	5K	10K	5K	10K	5K	10K	5K	10K	5K	10K	5K	10K	5K	10K	5K	10K	5K	10K	5K
13	3/8	15	18.40		1/30		26		25.5	24	65	55	90	75	4	4	15	12	14	9	30	30
15	1/2	18	22.40		1/34		30		31	29	70	60	95	80	4	4	15	12	14	9	35	35
20	3/4	22	26.45		1/34		35		35	33	75	65	100	85	4	4	15	12	15	10	40	40
25	1	25	32.55		1/34		40		42.5	40	90	75	125	95	4	4	19	12	15	10	46	45
32	1 1/4	30	38.60		1/34		44		48.5	46	100	90	135	115	4	4	19	15	16	12	50.5	50
40	1 1/2	41	48.70		1/37		55		60.5	59	105	95	140	120	4	4	19	15	16	12	61.5	61
50	2	52	60.80		1/37		63		73	70	120	105	155	130	4	4	19	15	20	14	71	72
65	2 1/2	67	76.60	76.80	1/48	1/41	61	69	90	86	140	130	175	155	4	4	19	15	22	14	70	76
80	3	78	89.60	89.80	1/49	1/43	64	72	105	101	150	145	185	180	8	4	19	19	22	14	73	80
100	4	100	114.70	115.00	1/56	1/44	84	92	131	129	175	165	210	200	8	8	19	19	22	16	93	105
125	5	125	140.85	141.20	1/58	1/45	104	112	158	156	210	200	250	235	8	8	23	19	24	16	114	126
150	6	146	166.00	166.50	1/63	1/45	132	140	185	185	240	230	280	265	8	8	23	19	26	18	142	150
200	8	196	217.00		1/50		145		238	238	290	280	330	320	12	8	23	23	28	28	156	156
250	10	247	268.00		1/55		155		289	289	355	345	400	385	12	12	25	23	30	30	167	167
300	12	298	318.70		1/55		155		341	341	400	390	445	430	16	12	25	23	30	30	167	167
350	14	348	371.00		1/60		230		398	398	445	435	490	480	16	12	25	23	34	34	300	300

Note : Dimensions shown as D_2,D_3,n,e are accordance with JIS 10K and JIS 5K.
Dimeter sizes of bolt holes for 5K 300mm(12inch)are different from JIS 5K.

AV TS FLANGES C-PVC JIS 10K 13mm - 150mm(3/8inch - 6inch), JIS 5K 13mm - 65mm(3/8inch - 2 1/2inch)

JIS Unit:mm

Nominal Size		d_1	d_2	Taper 1/T	ℓ	D_1		D_2		D_3		n		e		T		H	
mm	inch					10K	5K	10K	5K	10K	5K	10K	5K	10K	5K	10K	5K	10K	5K
13	3/8	15	18.40	1/30	26	28	24	65	55	90	75	4	4	15	12	14	9	30	30
15	1/2	18	22.40	1/34	30	33	31	70	60	95	80	4	4	15	12	14	9	35	35
20	3/4	22	26.45	1/34	35	36	33	75	65	100	85	4	4	15	12	14	10	40	40
25	1	25	32.55	1/34	40	43	43	90	75	125	95	4	4	19	12	16	10	50	45
32	1 1/4	30	38.60	1/34	44	51	51	100	90	135	115	4	4	19	15	16	12	50.5	50
40	1 1/2	41	48.70	1/37	55	65	65	105	95	140	120	4	4	19	15	16	12	65	61
50	2	52	60.80	1/37	63	76	76	120	105	155	130	4	4	19	15	20	14	74	72
65	2 1/2	67	76.80	1/41	69	92	86	140	130	175	155	4	4	19	15	22	14	82	76
80	3	78	89.80	1/43	72	108	—	150	—	185	—	8	—	19	—	22	—	86	—
100	4	100	115.00	1/44	92	138	—	175	—	210	—	8	—	19	—	22	—	105	—
125	5	125	141.20	1/45	112	165	—	210	—	250	—	8	—	23	—	22	—	126	—
150	6	146	166.00	1/63	132	185	—	240	—	280	—	8	—	23	—	26	—	142	—

Note : Dimension shown as D_2,D_3,n,e are accordance with JIS 10K and JIS 5K.

ASAHI AV VALVE

AV TS FLANGES PVC ANSI 1/2 inch - 12inch(15mm - 300mm)

ANSI Unit:inch

Nominal Size		d_1	d_2	Taper 1/T	ℓ	D_1	ANSI CLASS 150				T	H
inch	mm						D_2	D_3	n	e		
1/2	15	18	22.40	1/34	41	31	60.5	89	4	16	12	46
3/4	20	22	26.45	1/34	48	35	70	98	4	16	13	53
1	25	25	32.55	1/34	40	42.5	79.5	108	4	16	15	50
1 1/4	32	30	38.60	1/34	44	48.5	89	117.5	4	16	16	54
1 1/2	40	41	48.70	1/37	55	60.5	98.5	127	4	16	18	65
2	50	52	60.80	1/37	63	73	120.5	152	4	16	20	74
2 1/2	65	67	76.80	1/41	69	90	139.5	178	4	19	23	82
3	80	78	89.80	1/43	72	105	152.5	190.5	4	19	24	86
4	100	100	115.00	1/44	92	131	190.5	229	8	19	24	107
5	125	125	141.20	1/45	112	158	216	254	8	19	24	130
6	150	146	166.50	1/45	140	185	241.5	280	8	22	26	150
8	200	196	217.00	1/50	145	238	298.5	343	8	22	28	156
10	250	247	267.70	1/55	155	289	362	406	12	25	30	167
12	300	298	318.70	1/55	155	341	432	483	12	25	30	167

Note :Dimension shown as D_2,D_3,n,e are accordance with ANSI/ASME B 16.5 CLASS 150.
Dimension shown as d_1. R, taper 1/T are accordance with JIS K 6743.

● AV FLANGES(PVC,PP)



Ⓙ FLANGES



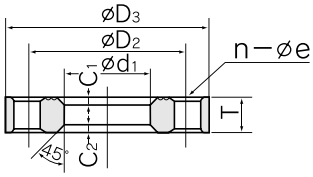
Ⓢ FLANGES

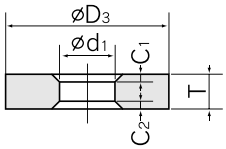


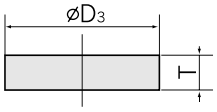
Ⓟ FLANGES

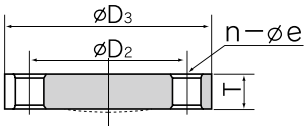


Ⓠ FLANGES









Nominal Size 13mm(3/8inch) - 300mm(12inch)

※ The figure described by broken(dashed) line shows shape of Q-flanges applied for dead end service of piping.
15(1/2inch) - 150mm(6inch)

DIMENSIONS TABLE

AV Ⓙ , Ⓢ , Ⓟ , Ⓠ , FLANGES PVC JIS 10K 13mm - 300mm(3/8inch - 12inch) JIS 5K 13mm - 300mm(3/8inch - 12inch)
PP JIS 10K 13mm - 300mm(3/8inch - 12inch) JIS 5K 13mm - 300mm(3/8inch - 12inch) Unit:mm

Nominal Size		d_1	D_2		D_3		n		e		T		C_1	C_2
mm	inch		10K	5K	10K	5K	10K	5K	10K	5K	10K	5K		
13	3/8	18	65	55	90	75	4	4	15	12	12	9	3	3
15	1/2	22	70	60	95	80	4	4	15	12	12	9	3	3
20	3/4	26	75	65	100	85	4	4	15	12	14	10	3	3
25	1	32	90	75	125	95	4	4	19	12	14	10	3	3
32	1 1/4	38	100	90	135	115	4	4	19	15	16	12	3	3
40	1 1/2	48	105	95	140	120	4	4	19	15	16	12	3	3
50	2	60	120	105	155	130	4	4	19	15	16	14	3	4
65	2 1/2	76	140	130	175	155	4	4	19	15	18	14	3	4
80	3	89	150	145	185	180	8	4	19	19	18	14	3	4
100	4	114	175	165	210	200	8	8	19	19	18	16	3	4
125	5	140	210	200	250	235	8	8	23	19	20	16	4	4
150	6	165	240	230	280	265	8	8	23	19	22	18	4	4
200	8	216	290	280	330	320	12	8	23	23	22	20	4	4
250	10	267	355	345	400	385	12	12	25	23	24	22	4	4
300	12	318	400	390	445	430	16	12	25	23	24	22	4	4

Note : Dimension shown as D_2,D_3,n,e are accordance with JIS 10K and JIS 5K.
Ⓙ and Ⓢ are welded flanges.
Ⓟ and Ⓠ are blind flanges.

AV GASKET


Full face Type Rubber Gasket


Ring Type Gasket (JIS ouly)


PTFE coated


PVDF coated

● **MATERIAL** : EPDM, PTFE, PVDF, CSM, FKM, IIR, Viflon F, C

FEATURES

- AV GASKETS offer Similar sealing performance with 1/3 bolt tightening torque, compared to flat or envelope style gaskets.
- Uniform dimension, fine surface, suitable hardness.
- Long service life.
- Unique Convex Design.

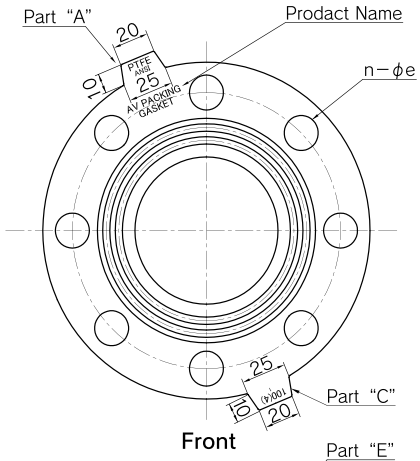
SPECIFICATIONS

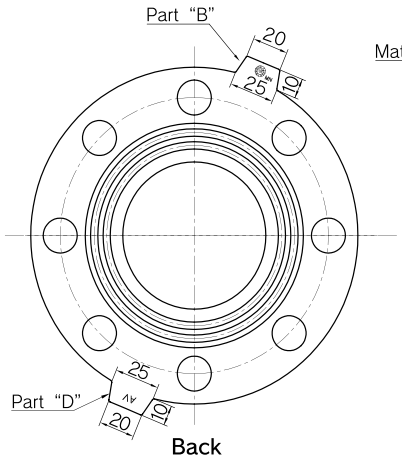
Material	Working Temperature	SIZE AVAILABILITY BY STANDARD		
		JIS	ANSI	DIN
EPDM	−40℃ - 90℃ (−40°F - 195°F)	15mm - 350mm	1/2inch - 16inch *1	15mm - 350mm
PTFE	−40℃ - 120℃ (−40°F - 250°F)	15mm - 300mm	1/2inch - 12inch	15mm - 400mm
PVDF	−40℃ - 120℃ (−40°F - 250°F)	15mm - 300mm	1/2inch - 10inch *2	15mm - 300mm
VIFLON	−5℃ - 150℃ (−5°F - 280°F)	15mm - 200mm	–	–

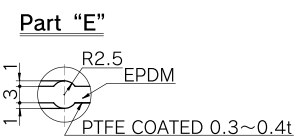
Working temperature is different depending on type of fluid.
Voflon-F has superior resistance to inorganic acids such as HNO_3, HF and HCl.
Voflon-C has superior resistance to chlorine containing media such as Chlorine Water, NaCl and ClO_2.

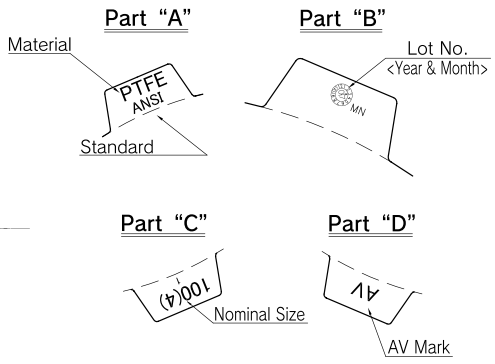
*1 14inch, 16inch:FLAT FULL FACE
*2 Except for 1 1/4inch and 2 1/2inch

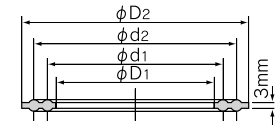
DIMENSIONS

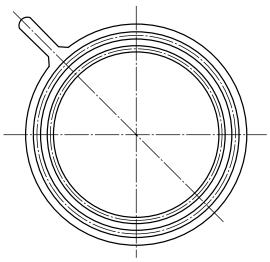












Type	Nominal Size	Thickness
PTFE	15mm(1/2inch) to 400mm(16inch)	0.3-0.4mm(0.012-0.016inch)
PVDF	15mm(1/2inch) to 65mm(2 1/2inch) 80mm(3inch) to 300mm(12inch)	0.4-0.5mm(0.016-0.020inch)

ASAHI AV VALVE

DIMENSIONS TABLE

Full-Face Type (JIS 10K)

Unit:mm

Nominal Size		D_1	D_2	D_3	n	e	d_1	d_2
mm	inch							
13	3/8	15	65	88	4	15	22	37
15	1/2	18	70	93	4	15	26	41
20	3/4	22	75	98	4	15	32	47
25	1	30	90	123	4	19	38	53
32	1 1/4	37	100	133	4	19	50	65
40	1 1/2	43	105	138	4	19	54	69
50	2	54	120	153	4	19	68	83
65	2 1/2	69	140	173	4	19	86	101
80(75)	3	80	150	183	8	19	98	112
100	4	102	175	208	8	19	120	138
125	5	127	210	248	8	23	145	166
150	6	150	240	278	8	23	168	190
200	8	198	290	328	12	23	216	247
250	10	249	355	398	12	25	270	306
300	12	300	400	443	16	25	324	352
350	14	350	445	488	16	25	370	390

Ring Type (JIS 10K)

Unit:mm

Nominal Size		D_1	D_2	d_1	d_2
mm	inch				
15	1/2	18	54	26	41
20	3/4	22	59	32	47
25	1	30	70	38	53
32	1 1/4	37	80	50	65
40	1 1/2	43	85	54	69
50	2	54	100	68	83
65	2 1/2	69	120	86	101
80(75)	3	80	130	98	112
100	4	102	155	120	138
125	5	127	187	145	166
150	6	150	217	168	190
200	8	198	267	216	247
250	10	249	329	270	306
300	12	300	374	324	352

Full-Face Type (DIN 2501)

Unit:mm

Nominal Size		D_1	D_2	D_3	n	e	d_1	d_2
mm	inch							
15	1/2	18	65	93	4	14	26	41
20	3/4	22	75	103	4	14	32	47
25	1	30	85	113	4	14	38	53
32	1 1/4	37	100	138	8	18	50	65
40	1 1/2	43	110	148	4	18	54	69
50	2	54	125	163	4	18	68	83
65	2 1/2	69	145	183	4	18	86	101
80(75)	3	80	160	198	8	18	98	112
100	4	102	180	218	8	18	120	138
125	5	127	210	248	8	18	145	166
150	6	150	240	283	8	23	168	190
200	8	198	295	338	8	23	216	247
250	10	249	350	393	12	23	270	306
300	12	300	400	443	12	23	324	352
350	14	350	460	503	16	25	370	390
400	16	407	515	563	16	26	442	472

Full-Face Type (ANSI CLASS150)

Unit:inch

Nominal Size		D_1	D_2	D_3	n	e	d_1	d_2
inch	mm							
1/2	15	0.7	2.4	3.4	4	0.6	1.0	1.6
3/4	20	0.9	2.8	3.8	4	0.6	1.3	1.9
1	25	1.2	3.1	4.2	4	0.6	1.5	2.1
1 1/4	32	1.5	3.5	4.5	4	0.6	2.0	2.6
1 1/2	40	1.7	3.9	4.9	4	0.6	2.1	2.7
2	50	2.1	4.7	5.9	4	0.8	2.7	3.3
2 1/2	65	2.7	5.5	6.9	4	0.8	3.4	4.0
3	80(75)	3.2	6.0	7.4	4	0.8	3.9	4.4
4	100	4.0	7.5	8.9	8	0.8	4.7	5.4
5	125	5.0	8.5	9.9	8	0.9	5.7	6.5
6	150	5.9	9.5	10.9	8	0.9	6.6	7.5
8	200	7.8	11.8	13.4	8	0.9	8.5	9.7
10	250	9.8	14.3	15.9	12	1.0	10.6	12.1
12	300	11.8	17.0	18.9	12	1.0	12.8	13.9
14	350	13.9	18.7	20.9	12	1.14	14.6	15.4
16	400	15.6	21.2	23.4	16	1.14	17.3	18.5

＊1 14inch, 16inch:FLAT FULL FACE

RECOMMENDED TIGHTENING TORQUE 〈ALL MATERIALS / FULL FACE TYPE〉

mm(inch)	N·m	FT-LB	mm(inch)	N·m	FT-LB	mm(inch)	N·m	FT-LB
15 (1/2)	17.5	13	65 (2 1/2)	22.5	16	200 (8)	55	40
20 (3/4)	17.5	13	80 (3)	30	22	250(10)	55	40
25 (1)	20	14	100(4)	30	22	300(12)	60	43
40 (1 1/2)	20	14	125(5)	40	29	350(14)	60	43
50 (2)	22.5	16	150(6)	45	32	400(16)	80	58

DV FITTINGS

● DV FITTING(JIS K6739)
(Nominal Size:40 to 150mm)



SPECIFICATIONS

90° Elbow	(DL)	30 - 150mm
90° Large-curvature Elbow	(LL)	40 - 150mm
45° Elbow	(45L)	30 - 150mm
90° Y	(DT)	30 - 150×100mm
90° Large-curvature Y		40 - 150×125mm
90° Large-curvature Both-sided Y	(WLT)	65 - 125×100mm
45° Y	(Y)	40 - 150×100mm
Socket	(DS)	40 - 150mm
Increase	(IN)	40×30 - 150×125mm

※We also produce VU FITTINGS

CEMENT



AV Cement No.32
(Blue Can)
100g·500g·1kg



AV Cement No.52
(Red Can)
500g



AV Cement No.62
(Yellow Can)
1kg



AV Cement No.88
(Brown Can)
250g·500g



AV HI Cement No.90
(Dark blue Can)
500g



AV HI Cement No.100
White Cement
(Light Blue Can)1kg



AV HI Cement No.102
White Cement
(Dark Green Can)1kg
(no brush)

※ These adhesives are classified under Dangerous Substance Class 4,the First Oil-Based Material specified in Article 2 of the Japanese Fire Prevention Act. Use utmost care when storing the adhesives.

FEATURES

- AV Cement No.32 and No.52 are suitable for small AV TS flanges and FITTINGS.
- AV Cement No.62 is suitable for large AV FITTINGS and AV DV FITTINGS.
- AV Cement No.100 and No.102 are suitable for AV HI-PVC and HP-PVC FITTINGS.

SPECIFICATIONS

Items	Feature	Color of Can	Viscosity (cp)	Reduction by drying(%)	Cementing Strength(kgf/cm²)	
					After 15min.	After 2 hours
AV No.32	Low viscosity,quick drying	Blue	100 - 250	30 - 50	over 12.5	over 25
AV No.52	High viscosity,quick drying	Red	800 - 1,500	30 - 50	over 12.5	over 25
AV No.62	High viscosity,slow drying	Yellow	500 - 1,500	10 - 30	—	over 15
AV No.88	Low viscosity,quick drying	Brown	200 - 700	—	—	—
AV No.90	Low viscosity,quick drying	Dark blue	500 - 800	30 - 50	over 12.5	over 25
AV No.100	Low viscosity,quick drying	Light blue	500 - 800	30 - 50	over 12.5	over 25
AV No.102	High viscosity,slow drying	Dark green	400 - 1,000	10 - 30	—	over 15

Standard Quantity of "AV CEMENT" required for connecting "PVC PIPE" with "PVC FITTINGS."

Unit:g

Nominal Size(mm)	13	16	20	25	30	40	50	65	75	100	125	150	200	250	300
Applying Quantity at one point	0.9	1.2	1.7	2.0	3.1	5.0	7.1	9.9	12.0	20	30	44	59	78	104
Application	● No. 32 or No. 52 or No. 90 or No. 100												● No. 62 or No. 102		

ADHESIVE STRENGTH BASED ON PASSING TIME 13mm 20℃ MAX stretching loading.

Items	1min	3min	5min	10min	15min	30min	1hr	2hr	3hr	6hr	12hr	24hr
● AV No.32	55kg (4kgf/cm²)	135kg (10kgf/cm²)	160kg (12kgf/cm²)	205kg (15kgf/cm²)	230kg (17kgf/cm²)	290kg (21kgf/cm²)	340kg (25kgf/cm²)	380kg (28kgf/cm²)	410kg (30kgf/cm²)	465kg (34kgf/cm²)	Cracked	—
● AV No.52	128kg (9kgf/cm²)	180kg (13kgf/cm²)	220kg (16kgf/cm²)	256kg (19kgf/cm²)	285kg (21kgf/cm²)	340kg (25kgf/cm²)	380kg (28kgf/cm²)	420kg (31kgf/cm²)	445kg (33kgf/cm²)	490kg (36kgf/cm²)	Cracked	—
● AV No.62	—	—	—	42kg (3kgf/cm²)	82kg (6kgf/cm²)	135kg (10kgf/cm²)	219kg (16kgf/cm²)	280kg (21kgf/cm²)	310kg (23kgf/cm²)	396kg (29kgf/cm²)	455kg (34kgf/cm²)	Cracked

ASAHI AV VALVE

RR-MF JOINTS

● RR-MF JOINT



SPECIFICATIONS

Nominal Size	40mm(1 1/2inch) - 150mm(2inch)
Material	Body:HI-PVC、PVC Rubber ring:SBR

● RR-MF JOINT(FRP)



SPECIFICATIONS

Nominal Size	350mm(14inch) - 500mm(20inch)
Material	Body:FRP Rubber ring:SBR Ring:STAINLESS STEEL 403

※Only joints conforming to the JWWA standards are available.

● RR-N-MF JOINT(Fabricated)



SPECIFICATIONS

Nominal Size	40mm(1 1/2inch) - 150mm(6inch)
Material	Body:HI-PVC、PVC Rubber ring:SBR

Nominal Size	200mm(8inch) - 350mm(14inch)
Material	Body:PVC Rubber ring:SBR

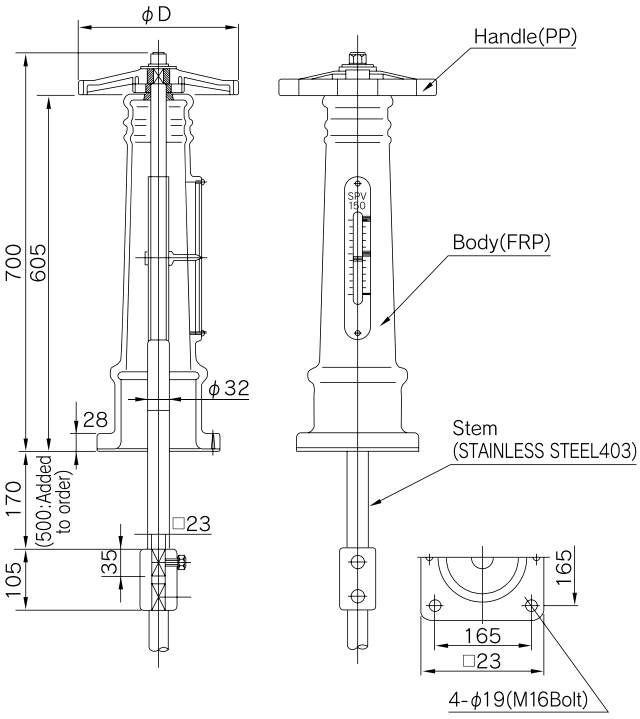
※ joints conforming to the JWWA (JAPAN WATER WORKS ASSOCIATION) standards range in nominal size from 200 to 300mm(8inch to 12inch)

FRP FLOOR STAND



SPECIFICATIONS

Nominal Size	50mm - 350mm(2inch - 14inch)
Material	Body:FRP Spindle:Stem STAINLESS STEEL403 Handle:PP



ASAHI AV VALVE AND PIPING SYSTEMS

ASAHI AV
HIGH PURITY SERIES(HP-PVC)

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

Asahi AV HIGH PURITY SERIES

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*LF : Lubricant Free



Ultrapure Water

Recently along with the increasingly high integration of semiconductors, stricter cleanliness is required of wafer surfaces from the viewpoint of product yield. Consequently, the role of cleaning processes is becoming more and more important.

Since the final washing of wafers of waters uses ultrapure water the cleanliness of wafers depends heavily on the quality of the ultrapure water. There fore, it is essential to improve the process lines used for the production of ultrapure water. We have an assortment of plastic piping materials that elute fewer metal ions and TOC and have finer inner surfaces. They fully accommodate the requirements of semiconductor manufacture, such as for 1MD-RAM, 4MD-RAM, and 16MD-RAM.

FEATURES

- Minimized Leachable.
- Mirror-smooth inner surfaces.
- Dead space minimized to prevent residence of liquid.
- Purified articles controlled under strict rules: degreasing and washing, forced drying with nitrogen, assembly, and packaging are carried out in a clean room.
- Easy, dependable installation and removal. Easy to maintain and clean.
- Unrivaled mechanical strength and reliabillity.

Range of Nominal Size and Materials

●AV Valves

Type			TRUE UNION DIAPHRAGM VALVE TYPE 14								
Body Materials			PVC		C-PVC		PP		PVDF		
End Connectors			Threaded	Socket	Threaded	Socket※ (welded)	Threaded	Socket	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	○	○	○	○	○	○	○	○	○
Page			152 - 153								

Type			BALL VALVE TYPE 21											
Body Materials			PVC			C-PVC			PP			PVDF		
End Connectors			Flanged	Threaded	Socket	Flanged	Threaded	Socket※ (welded)	Flanged	Threaded	Socket	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			154 - 157												

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	158 - 159

●Pipe & Fittings

	mm	inch	Pipe	Elbow (L)	90° AV Bend	45° Elbow (45L)	45° AV Bend	Socket (S)	Tee(T)	Faucet Elbow(FL)	Valve Socket(VS)	Faucet Socket(FS)	Cap (C)
Nominal Size	13	1 1/2	○	○	○	–	–	–	–	○	○	○	–
	16	2	○	○	○	–	–	–	–	○	○	○	○
	20	2 1/2	○	○	○	–	–	–	–	○	○	○	–
	25	3	○	○	○	–	–	–	–	○	○	○	○
	30	4	○	○	○	–	–	–	–	○	○	○	○
	40	5	○	○	○	–	–	–	–	○	○	○	○
	50	6	○	○	○	–	–	–	–	○	○	○	○
	65	8	○	○	○	–	–	–	–	○	○	○	○
	75	10	○	○	○	–	–	–	–	○	○	○	○
	100	12	○	○	○	–	–	–	–	○	○	○	–
	125	14	○	○	○	–	–	–	–	○	○	○	–
	150	16	–	–	–	○	○	–	–	–	○	○	–
	200	18	–	–	–	–	–	○	○	–	○	○	–
	250	20	–	–	–	–	–	○	○	–	○	○	–
Page			160			161		162-163		164			

Nominal Size mm	Reducing Socket(RS)	Reducing Tee(RT)
16×13		○
20×13	○	○
20×16	○	○
25×13	○	○
25×16	○	○
25×20	○	○
30×16		○
30×25	○	○
40×13		○
40×20	○	○
40×25	○	○
40×30	○	○
50×13		○
50×20	○	○
50×25	○	○
50×40	○	○
65×40		○
65×50	○	○
75×25		○
75×40		○
75×50	○	○
75×65	○	
100×75	○	○
125×75		○
125×100	○	○
150×75		○
150×100		○
150×125	○	○
200×75		○
200×100		○
200×150	○	○
250×75		○
250×100		○
250×100	○	○
Page	162	163

※Except for JIS standard.

ASAHI AV HIGH PURITY SERIES

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 its ends.

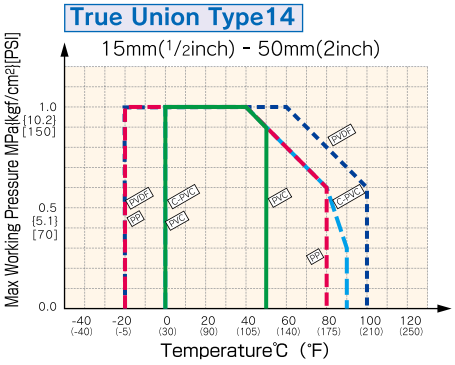
Bottom Stand for Easy Support

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

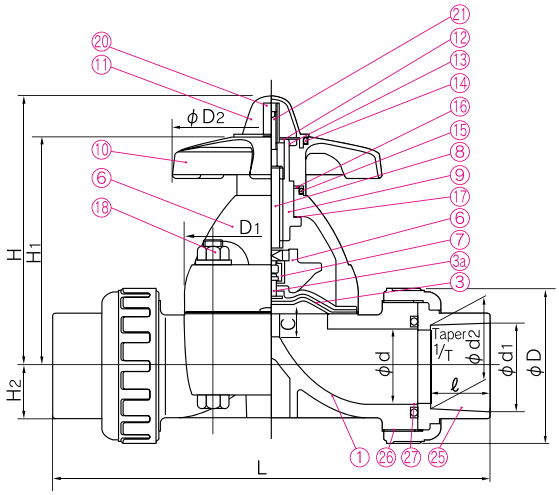
Body material	Nominal size mm(inch)	Working Temperature ℃(°F)	Max. Working Pressure at 20℃(70°F) MPa{kgf/cm²}[PSI]	End Connectors
Unplasticized Polyvinyl Chloride(PVC)	15 - 50(1/2 - 2)	0 - 50(30 - 120)	1.0{10.2}[150]	Socket End. Threaded End
Chlorinated Polyvinyl Chloride(C-PVC)	15 - 50(1/2 - 2)	0 - 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

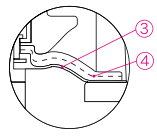
WORKING PRESSURE VS. TEMPERATURE

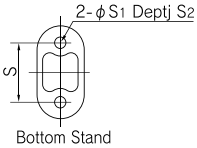


DIMENSION

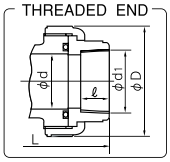
SOCKET END




With PTFE Diaphragm



Bottom Stand



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
				⑫	NAME PLATE	1	PVC
②	BONNET			⑬	RETAINING RING-C TYPE	1	STAINLESS STEEL304
				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
				⑯	THRUST RING(A)	1	UHMWPE
				⑰	THRUST RING(B)	1	UHMWPE
				⑱	BOLT·NUT	4	STAINLESS STEEL304
③a	INSERTED METAL OF DIAPHRAGM	1	STAINLESS STEEL304	⑳	STOPPER	1	COPPER ALLOY(C3604)
				㉑	SCREW	1	STAINLESS STEEL304
④	CUSHION	1	EPDM*	㉕	ENDCONNECTOR	2	PVC C-PVC PP PVDF
⑥	COMPRESSOR	1	PVDF				
⑦	JOINT	1	STAINLESS STEEL304	㉖	UNION NUT	2	
⑧	STEM	1	COPPER ALLOY(C3604)	㉗	O-RING(C)	2	EPDM FKM Others
⑨	SLEEVE	1	COPPER ALLOY(C3604)				
⑩	HAND WHEEL	1	PP				

*With PTFE Diaphragm

DIMENTIONS TABLE

JIS

Unit:mm

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
			PVC, C-PVC				PP				PVDF				JIS B 0203		L		PVDF														
mm	inch		d_1	ℓ	1/T	L	d_1	d_2	ℓ	L	d_1	d_2	ℓ	L	d_1	ℓ	PVC, C-PVC	PP, PVDF	d_1	t	ℓ	L											
15	1/2	16	22.11	20	1/34	134	21.2	20.2	20	134	21.50	21.30	20	134	Rc 1/2	15	128	128	22	1.9	20	173	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	25.50	25.30	22	152	Rc 3/4	17	148	148	26	1.9	20	193	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	31.50	31.30	24	180	Rc 1	20	172	172	32	2.4	20	218	70	67×80	100	12	111	93	18.5	25	7	13
32	1 1/4	32	38.19	30	1/34	200	–	–	–	–	37.45	37.20	25	190	Rc 1 1/4	22	188	188	38	2.4	20	229	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	47.45	47.20	28	253	Rc 1 1/2	25	245	245	48	3	20	286	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	59.45	59.10	30	279	Rc 2	28	281	278	60	3	20	311	106	123×123	156	25	191	158	36	45	9	15

DIN

Unit:mm

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
			PVC, C-PVC			PP, PVDF				DIN 2999		L		PVC			PP, PVDF															
			DIN 8063		L	DIN 16962(PP)			L					DIN 3441		L	DIN 3442		PP	PVDF	L											
mm	inch		d_1	ℓ		d_1	d_2	ℓ		d_1	ℓ	PVC, C-PVC	PP, PVDF	d_1	ℓ		d_1	ℓ	t	t												
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

ANSI

Unit:inch

Nominal Size		d	Socket End							Threaded End				D	D_1	D_2	C (LIFT)	H	H_1	H_2	S	S_1	S_2
			PVC, C-PVC				PP, PVDF(IPS)			ANSI/ASME B1·20·1		L											
			ASTM SCH80			L	d_1	ℓ	L														
inch	mm		d_1	d_2	ℓ					d_1	ℓ	PVC, C-PVC	PP, PVDF										
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 1/2NPT	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 1/2NPT	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 1/2NPT	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 1/2NPT	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

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



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)(Option)



Locking Device (Option)

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

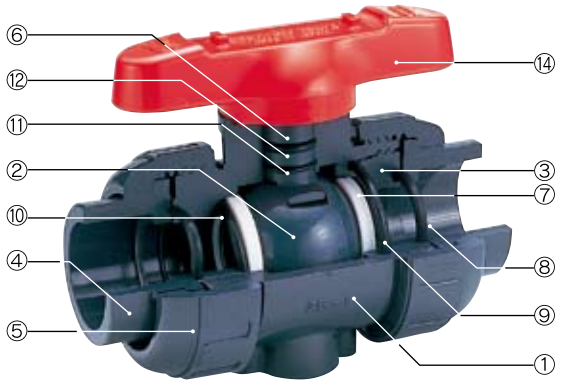


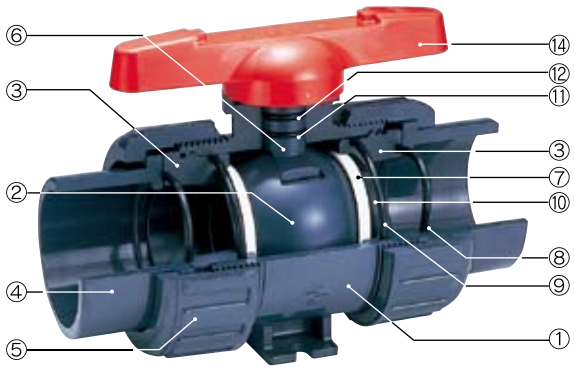
MATERIAL AND WORKING TEMPERATURE

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

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

Notes : There is a dead space in a ball valve. Volatile liquids, such as a hydrogen peroxide(H_2O_2)and Sodium hypochlorite (NaClO) may vaporize in the dead space, thus causing an abnormal pressure increase in the valve.
(Important: Gas is compressible. Thus if pressure rises abnormally, the valve can burst ejecting dangerous fragments.)





PARTS & MATERIALS

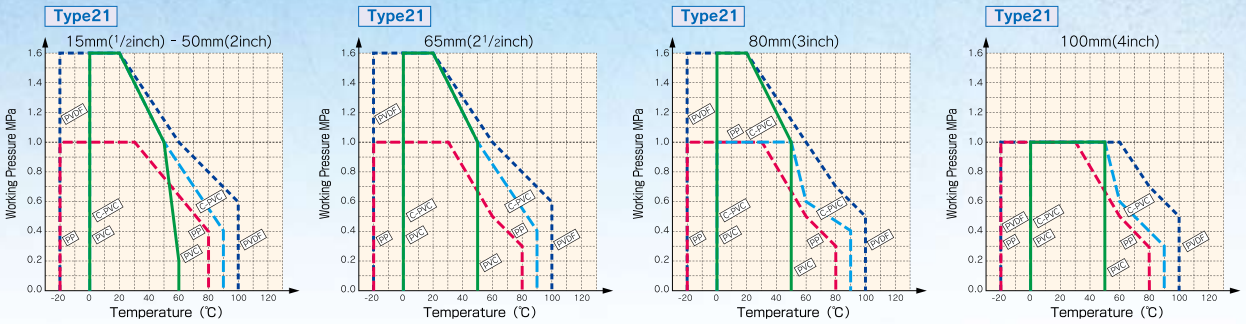
● 15mm(1/2inch) − 50mm(2inch)

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

● 65mm(2 1/2inch) − 100mm(4inch)

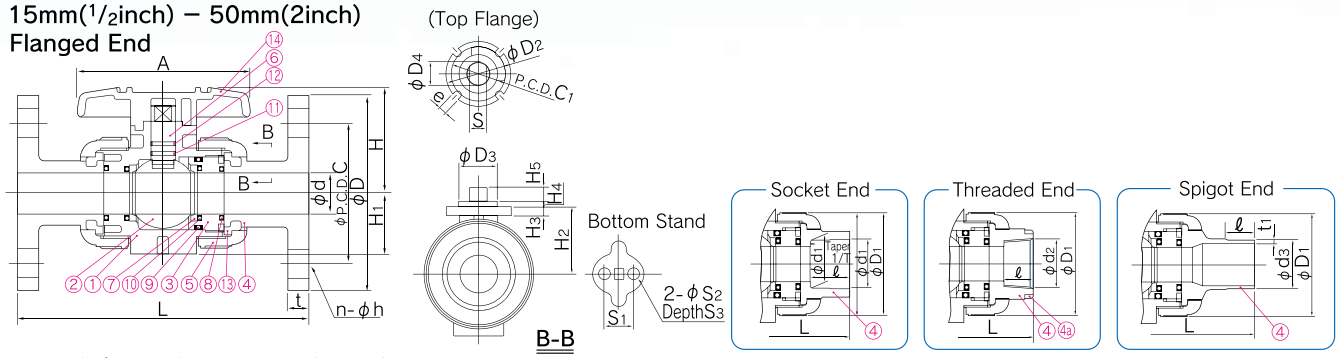
No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC、C-PVC、PP、PVDF	⑨	O-RING(B)	2	EPDM、FKM、etc
②	BALL	1	PVC、C-PVC、PP、PVDF	⑩	CUSHION	2	EPDM、FKM、etc
③	CARRIER	2	PVC、C-PVC、PP、PVDF	⑪	O-RING(D)	1	EPDM、FKM、etc
④	END CONNECTOR	2	PVC、C-PVC、PP、PVDF	⑫	O-RING(E)	1	EPDM、FKM、etc
⑤	UNION NUT	2	PVC、C-PVC、PP、PVDF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

WORKING PRESSURE VS. TEMPERATURE

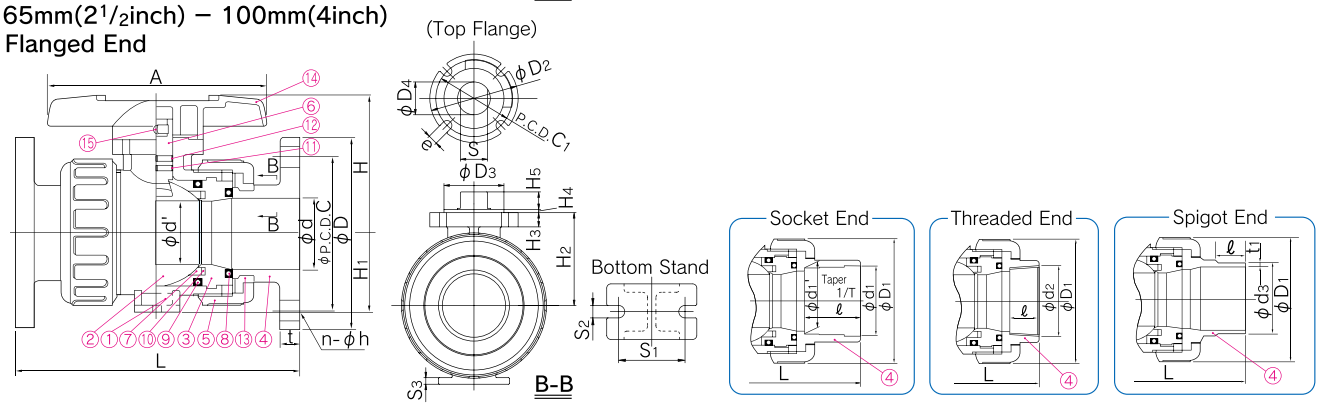


DIMENSION

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



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



DIMENSIONS TABLE

JIS Unit:mm

Nominal Size mm	Nominal Size inch	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 mm	Nominal Size inch	Flanged End: JIS 5K D	C	n	h	JIS 10K D	C	n	h	L: PVC C-PVC	PP	PVDF	t	Socket End: PVC、C-PVC d_1	ℓ	1/T	L	PP d_1	d_1'	ℓ	L	PVDF d_1	d_1'	ℓ	L	Threaded End: d_2	ℓ	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	21.50	21.30	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	25.50	25.30	22	124	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	31.50	31.30	24	139	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	—	—	—	—	37.45	37.20	25	152	Rc1 1/4	22	150	146	146
40	1 1/2	120	95	4	15	140	105	4	19	212	212	212	16	48.21	37	1/37	189	47.0	46.0	28	171	47.45	47.20	28	171	Rc1 1/2	25	163	160	160
50	2	130	105	4	15	155	120	4	19	234	234	234	16	60.25	42	1/37	220	59.0	58.0	28	192	59.45	59.10	30	196	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	75.25	74.95	33	214	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	88.00	87.65	36	256	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	113.05	112.65	41	328	Rc4	45	362	362	357

ASAHI AV HIGH PURITY SERIES

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 DIN PN10							t	Socket End PVC、C-PVC			Socket End PP、PVDF					Threaded End				Spigot End PVC			Spigot End PP、PVDF					
		D	C	n	h	L				d_1	ℓ	L	d_1	d_1'	ℓ	L		d_2	ℓ	L			d_3	d_3'	ℓ	d_3	I	t		L	
mm	inch					PVC C-PVC	PP	PVDF								PP	PVDF			PVC C-PVC	PP	PVDF						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 ANSI CLASS 150				L			t	Socket End (IPS) PVC, C-PVC								Socket End (IPS) PP, PVDF				Threaded End				
		D	C	n	h	PVC, C-PVC	PP	PVDF		ASTM SCH40			L	ASTM SCH80			L	d_1	ℓ	L		d_2	ℓ	L		
inch	mm									d_1	d_1'	ℓ		d_1	d_1'	ℓ				PP	PVDF			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 1/2NPT	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 1/2NPT	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 1/2NPT	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 1/2NPT	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 follwing chemicals such as Hydrgen Peroxide (H_2O_2)and Sodium hypochlorite (NaClO) are adapt to be occured the abnormal pressure rising due to their vaporization nature.

Panel Mounting

●Diaphragm Valve Type14	15mm - 50mm(1/2inch - 2inch)
●Ball Valve Type21	15mm - 100mm(1/2inch - 4inch)

■Proceduce

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

■Bottom Stand Dimension

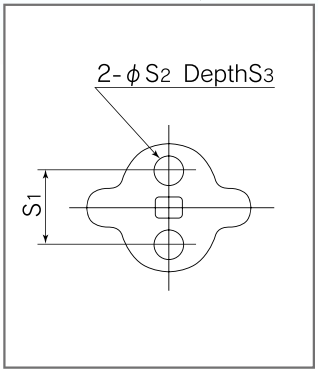
Diaphragm Valve Type14 Unit:mm(inch)

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)

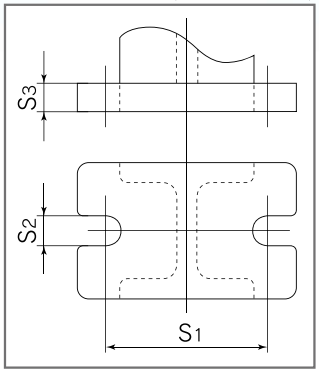
Ball Valve Type21 Unit:mm(inch)

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)

Diaphragm Valve Type14: 15mm - 50mm (1/2inch - 2inch)
Ball Valve Type21: 15mm - 50mm (1/2inch - 2inch)

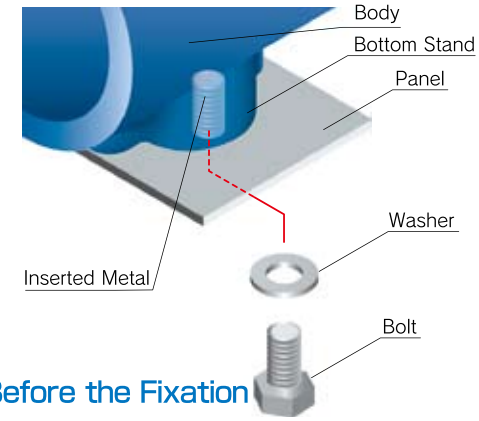


Ball Valve Type21: 65mm - 100mm (2 1/2inch - 4inch)

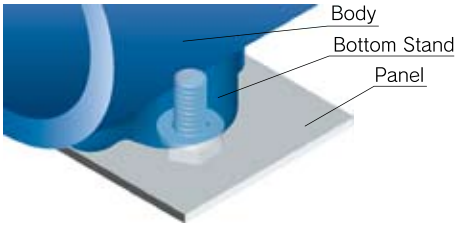


■Fixation of Bottom Stand with Panel

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

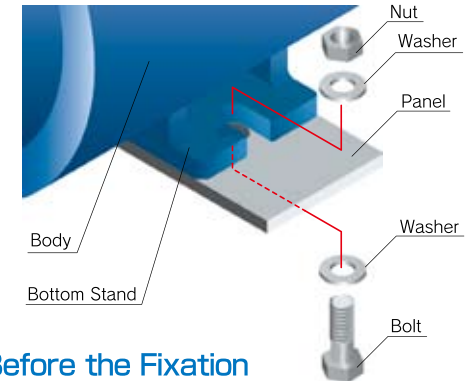


Before the Fixation

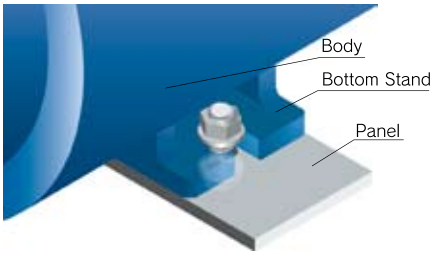


After the Fixation

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



Before the Fixation



After the Fixation

LAB COCK







FEATURES

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

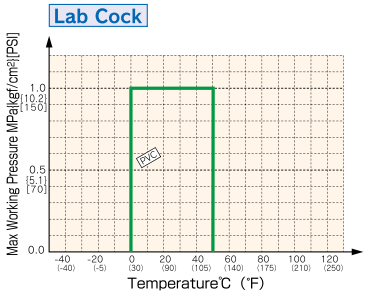
NSF Product

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

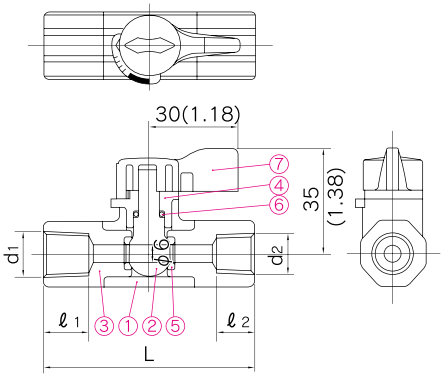
Body material	Unplasticized Polyvinyl Chloride(PVC)
Working Temperature	0℃ - 50℃ (30° F - 120° F)
Max.Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI]
End Connectors	Hose, Male thread, Female thread
Nominal Size	●Hose:12 to 15mm(standard hose inner diameter) ●Male thread:1/4,1/2 ●Female thread:1/4,3/8

WORKING PRESSURE VS. TEMPERATURE

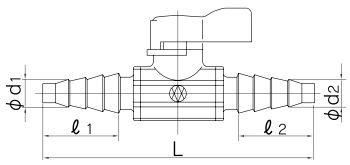


DIMENSION

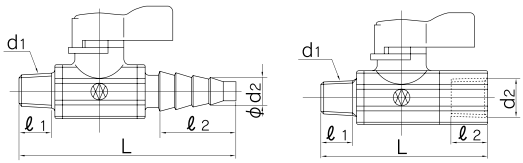
FEMALE THREAD × FEMALE THREAD



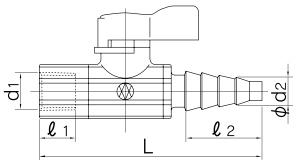
HOSE × HOSE



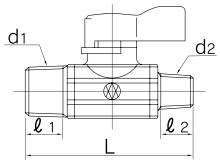
MALE THREAD × HOSE



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

	d1	d2	ℓ1	ℓ2	L
FEMALE THREAD ×FEMALE THREAD	Rc 1/4	Rc 1/4	15	15	71
	Rc 3/8	Rc 1/4	15	15	71
	Rc 3/8	Rc 3/8	15	15	71
HOSE×HOSE	10	10	30.5	30.5	111
FEMALE THREAD ×HOSE	Rc 1/4	10	15	30.5	91
	Rc 3/8	10	15	30.5	91

	d1	d2	ℓ1	ℓ2	L
MALE THREAD ×HOSE	R 1/4	10	13	30.5	88.5
	R 1/2	10	15	30.5	91
MALE THREAD ×MALE THREAD	R 1/4	R 1/4	13	13	66
	R 1/2	R 1/4	15	13	68.5
	R 1/2	R 1/2	15	15	71
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
①	FEMALE THREAD ×FEMALE THREAD	Rp 1/4	Rp 1/4	15	15	71
		Rp 3/8	Rp 1/4	15	15	71
		Rp 3/8	Rp 3/8	15	15	71
②	HOSE×HOSE	10	10	30.5	30.5	111
③	FEMALE THREAD ×HOSE	Rp 1/4	10	15	30.5	91
		Rp 3/8	10	15	30.5	91

		d_1	d_2	ℓ_1	ℓ_2	L
④	MALE THREAD ×HOSE	R 1/4	10	13	30.5	88.5
		R 1/2	10	15	30.5	91
⑤	MALE THREAD ×MALE THREAD	R 1/4	R 1/4	13	13	66
		R 1/2	R 1/4	15	13	68.5
		R 1/2	R 1/2	15	15	71
⑥	MALE THREAD ×FEMALE THREAD	R 1/4	Rp 1/4	13	15	68.5
		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
①	FEMALE THREAD ×FEMALE THREAD	1/4-18NPT	1/4-18NPT	0.51	0.51	2.80
		3/8-18NPT	1/4-18NPT	0.59	0.51	2.80
		3/8-18NPT	3/8-18NPT	0.59	0.59	2.80
②	HOSE×HOSE	0.39	0.39	1.20	1.20	4.37
③	FEMALE THREAD ×HOSE	1/4-18NPT	0.39	0.51	1.20	3.58
		3/8-18NPT	0.39	0.59	1.20	3.58

		d_1	d_2	ℓ_1	ℓ_2	L
④	MALE THREAD ×HOSE	1/4-18NPT	0.39	0.51	1.20	3.48
		1/2-14NPT	0.39	0.59	1.20	3.58
⑤	MALE THREAD ×MALE THREAD	1/4-18NPT	1/4-18NPT	0.51	0.51	2.60
		1/2-14NPT	1/4-18NPT	0.59	0.51	2.70
		1/2-14NPT	1/2-14NPT	0.59	0.59	2.80
⑥	MALE THREAD ×FEMALE THREAD	1/4-18NPT	1/4-18NPT	0.51	0.51	2.70
		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

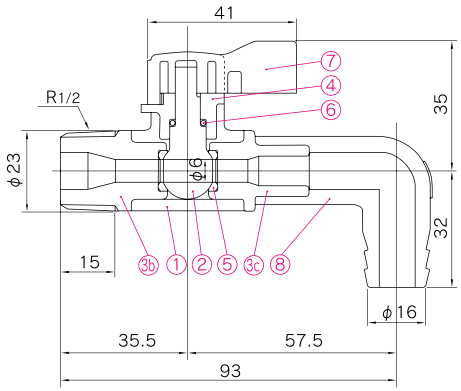


MATERIAL AND WORKING TEMPERATURE

Body material	Unplasticized Polyvinyl Chloride(PVC)
Working Temperature	0℃ - 50℃ (30° F - 120° F)
Max.Working Pressure	1.0MPa{10.2kgf/cm²}[150PSI]
End Connectors	R1/2inch Male thread×Elbow16mm

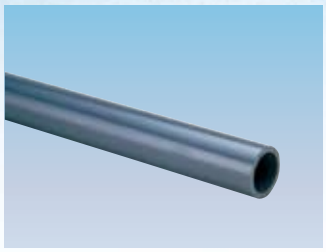
PARTS & MATERIALS

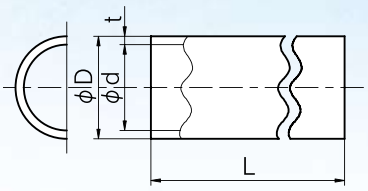
No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC
②	BALL&STEM	1	PVC
③b	END CONNECTOR	1	PVC
③c	END CONNECTOR	1	PVC
④	GLAND	1	PVC
⑤	SEAT	2	PTFE
⑥	O-RING	1	EPDM, Others
⑦	HANDLE	1	ABS
⑧	ELBOW	1	PVC



HP-PVC PIPE & FITTINGS

HP-PVC Pipe <CLASS VP:JIS K6741>





Working Pressure with Temperature

MPa{kgf/cm²}

Nom. Size \ Temp.	20℃	30℃	40℃	50℃
13mm - 300mm	1.0{10.2}	0.9{9.2}	0.7{7.1}	0.3{3.1}

Note:This data is applicable for ultrapure water.

●HP-PVC Pipe <CLASS VP:JIS K6741>

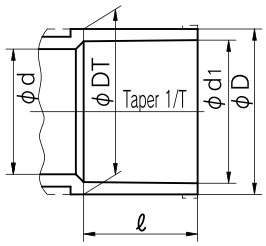
Unit:mm

Nominal Size (mm)	D Outer diameter Basic Dimension (mm)	D Outer diameter Maximum and Minimum tolerances	D Outer diameter Average tolerances	t Wall Thickness Minimum	t Wall Thickness Tolerance	d Approximate I.D. (for reference)	L Length
13	18	±0.2	±0.2	2.2	+0.6	13	4,000±10
16	22	±0.2	±0.2	2.7	+0.6	16	4,000±10
20	26	±0.2	±0.2	2.7	+0.6	20	4,000±10
25	32	±0.2	±0.2	3.1	+0.8	25	4,000±10
30	38	±0.3	±0.2	3.1	+0.8	31	4,000±10
40	48	±0.3	±0.2	3.0	+0.8	40	4,000±10
50	60	±0.4	±0.2	4.1	+0.8	51	4,000±10
65	76	±0.5	±0.3	4.1	+0.8	67	4,000±10
75	89	±0.5	±0.3	5.5	+0.8	77	4,000±10
100	114	±0.6	±0.4	6.6	+1.0	100	4,000±10
125	140	±0.8	±0.5	7.0	+1.0	125	4,000±10
150	165	±1.0	±0.5	8.9	+1.4	146	4,000±10
200	216	±1.3	±0.7	10.3	+1.4	194	4,000±10
250	267	±1.6	±0.9	12.7	+1.8	240	4,000±10
300	318	±1.9	±1.0	15.1	±2.2	286	4,000±10

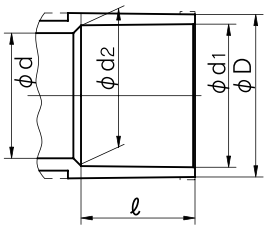
(Note)
1.The tolerances of lengths are ± 10mm.
2.The maximum and minimum tolerances on outside diameters are the tolerances on O.D. measurements taken at randomly selected spots.
3.The average tolerances on outside diameters are the tolerances on the arithmetical mean of O.D. measurements taken at randomly selected spots in two directions at a right angle to each other.

Dimensions Common All of AV TS Socket. JIS K6743

▼13mm - 150mm



▼200mm - 300mm



Working Pressure with Temperature

MPa{kgf/cm²}

Nom. Size \ Temp.	20℃	30℃	40℃	50℃
13mm - 150mm	1.0{10.2}	0.9{9.2}	0.7{7.1}	0.3 {3.1}
200mm	0.75{7.7}	0.6{6.1}	0.5{5.1}	0.25{2.6}
250mm	0.6{6.1}	0.5{5.1}	0.4{4.1}	0.2{2.0}
300mm Elbow, Reducing Socket, Socket	0.6{6.1}	0.5{5.1}	0.4{4.1}	0.2{2.1}
300mm Other Fitting	0.4{4.1}	0.4{4.1}	0.3{3.1}	0.1{1.1}

Note:This data is applicable for ultrapure water.

●Dimensions Commom All of AV TS Socket. JIS K6743

Unit:mm

Nominal Size (mm)	d_1	Tolerance on d_1	d_2	ℓ	1/T	D	DT	Tolerance on D&DT	d (minimum value)	Pipe O.D.
13	18.40	±0.20	–	26	1/30	24	24.0	−0.6	13	18
16	22.40	±0.20	–	30	1/34	29	29.0	−0.7	16	22
20	26.45	±0.20	–	35	1/34	33	33.0	−0.8	20	26
25	32.55	±0.25	–	40	1/34	40	40.0	−1.0	25	32
30	38.60	±0.25	–	44	1/34	46	46.0	−1.0	31	38
40	48.70	±0.30	–	55	1/37	57	57.0	−1.2	40	48
50	60.80	±0.30	–	63	1/37	70	70.0	−1.5	51	60
※ 65	76.60	±0.30	–	61	1/48	87	88.5	−1.5	67	76
75	89.60	±0.30	–	64	1/49	102	104.5	−1.5	77	89
100	114.70	±0.30	–	84	1/56	130	133.5	−1.8	100	114
※125	140.85	±0.35	–	104	1/58	157	161.0	−1.8	125	140
150	166.00	±0.40	–	132	1/63	186	190.0	−2.0	146	165
※200	217.00	–	214.10	145	–	240	–	–	194	216
※250	268.20	–	265.00	155	–	295	–	–	247	267
※300	319.6	–	315.50	175	–	347	–	–	298	318

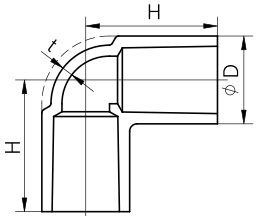
(Note)
1.The tolerances on l are +4/-0.5mm.
2.The Nominal Size marked with ※ conform to the AV standard and the JPPFA standard.

Fittings in size 200, 250mm are available on request by FRP reinforcement.
Max working pressure
200mm : 1.0MPa{10.2kgf/cm²} at 20℃
250mm : 1.0MPa{10.2kgf/cm²} at 20℃

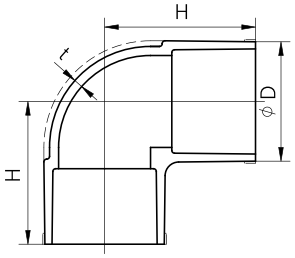
Elbow(L)



▼13mm - 50mm



▼65mm - 300mm



●Elbow(L)

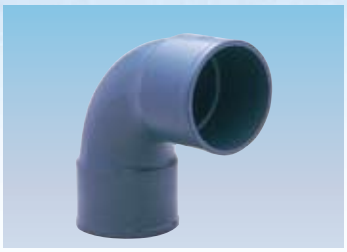
Unit:mm

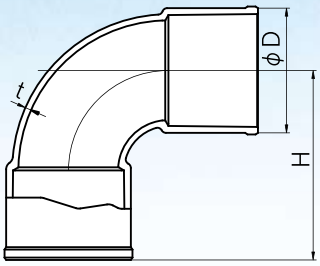
Nominal Size (mm)	D	t	H
13	24	3.0	36
16	29	3.5	43
20	33	3.5	50
25	40	4.0	58
30	46	4.0	65
40	57	4.5	82
50	70	5.0	96
※ 65	87	6.6	110
※ 75	102	8.0	120
※ 100	130	10.0	153
※ 125	157	11.0	188
※ 150	186	13.0	230
□ 200	240	15	265
□ 250	295	16	310
300	347	18	350

(Note)
1.The tolerances on H are +5/-1mm.
2.The Nominal Size marked with ※ conform to the JPPFA standard.
3.The Nominal Size marked with □ conform to the AV standard.

HP-PVC PIPE & FITTINGS

90˚ AV Bend



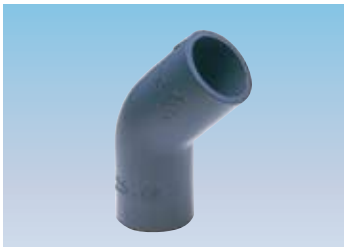


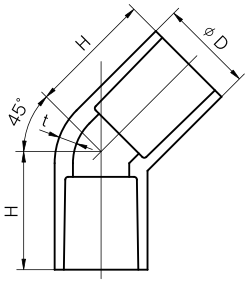
●90˚ AV Bend Unit:mm

Nominal Size(mm)	D	t	H
□ 200	240	15	341
□ 250	293	16	402
300	337	10	395

(Note)
1.The Nominal Size marked with □ conform to the AV standard.

45˚ Elbow(45L)



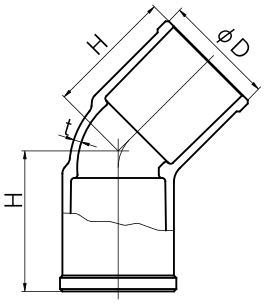


●45˚ Elbow(45L) Unit:mm

Nominal Size(mm)	D	t	H
20	33	3.5	44
25	40	4.0	51

45˚ AV Bend





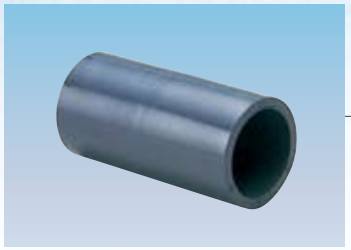
●45˚ AV Bend Unit:mm

Nominal Size(mm)	D	t	H
40	57	4.5	69
50	70	5.0	80
65	87	6.0	81
□ 75	101	6.6	97
□ 100	129	7.3	122
□ 125	156	7.7	149
□ 150	185	10.0	184
□ 200	240	15.0	193
□ 250	293	16.0	213
300	337	10.0	225

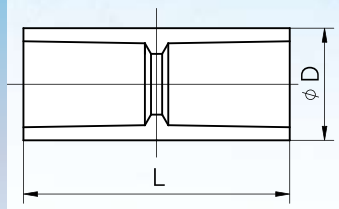
(Note)
1.The Nominal Size marked with □ conform to the AV standard.

HP-PVC FITTINGS

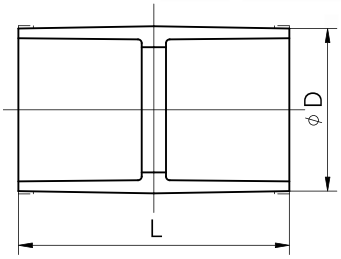
Socket(S)



▼13mm～50mm



▼65mm～300mm



●Socket(S) Unit:mm

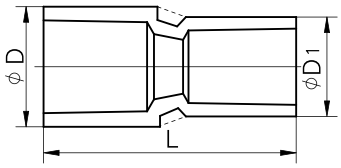
Nominal Size (mm)	D	L
13	24	57
16	29	67
20	33	77
25	40	87
30	46	95
40	57	117
50	70	133
※ 65	87	145
75	102	155
100	130	200
※ 125	157	240
150	186	300
□ 200	238	305
□ 250	295	352
300	336	360

(Note)
1.The tolerances on L are ±4mm.
2.The Nominal Size marked with ※ conform to the JPPFA standard.
3.The Nominal Size marked with □ conform to the AV standard.

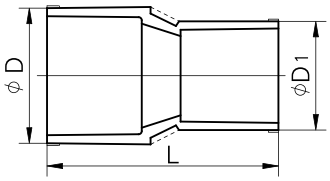
Reducing Socket(RS)



▼13mm - 50mm



▼65mm - 300mm



●Reducing Socket(RS) Unit:mm

Nominal Size (mm)	D	D1	L
20×13	33	24	68
20×16	33	29	71
25×13	40	24	86
25×16	40	29	85
25×20	40	33	84
○ 30×13	48.2	28.2	73.2
○ 30×20	48.2	36.2	83
30×25	46	40	93
※ 40×20	57	33	113
40×25	57	40	114
40×30	57	46	114
※ 50×20	70	33	116
※ 50×25	70	40	140
50×40	70	57	136
※ 65×50	87	70	149
75×50	102	70	165
※ 75×65	102	87	159
100×75	130	102	190
※ 125×100	157	130	229
※ 150×125	186	157	272
□ 200×150	240	188	356
□ 250×200	293	240	380
300×250	347	295	405

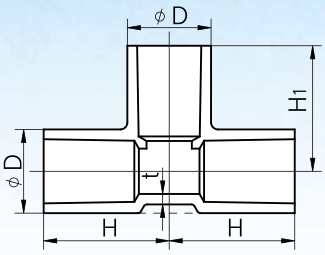
(Note)
1.The tolerances on L are ±4.0mm.
2.The Nominal Size marked with ※ conform to the JPPFA standard.
3.The Nominal Size marked with □ conform to the AV standard.
4.○ There sizes are not in accordance with JISK 6743 and therefore welding arrangement is not available.

HP-PVC FITTINGS

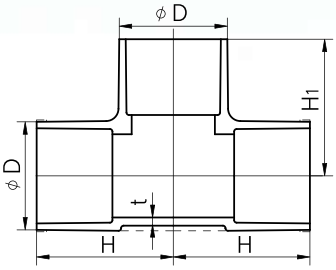
Tee(T)



▼13mm - 50mm



▼65mm - 300mm



●Tee(T) Unit:mm

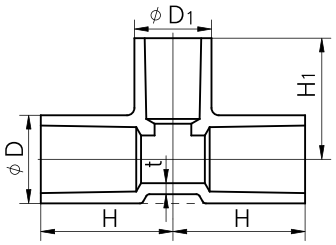
Nominal Size (mm)	D	t	H	H_1
13	24	3.0	36	36
16	29	3.5	43	43
20	33	3.5	50	50
25	40	4.0	58	58
30	46	4.0	65	65
40	57	4.5	82	82
50	70	5.0	96	96
※ 65	87	6.6	110	110
75	102	8.0	120	120
100	130	10.0	152	152
※ 125	157	11.0	187	187
150	186	13.0	230	230
□ 200	240	15	266	266
□ 250	295	16	331	331
300	337	10	340	340

(Note)
1.The tolerances on H are +5/-1mm.
2.The Nominal Size marked with ※ conform to the JPPFA standard.
3.The Nominal Size marked with □ conform to the AV standard.

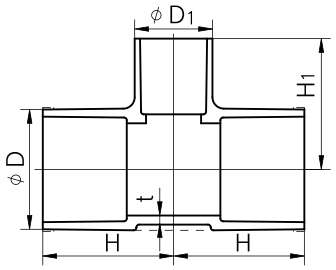
Reducing Tee(RT)



▼13mm - 50mm



▼65mm - 300mm



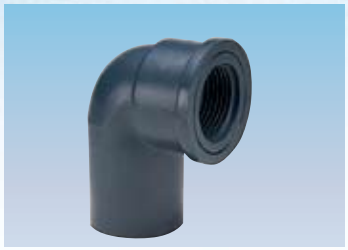
●Reducing Tee(RT) Unit:mm

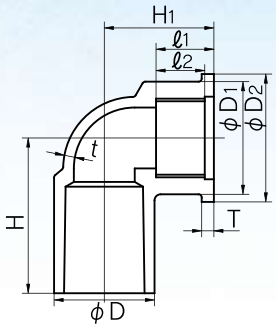
Nominal Size (mm)	D	t	H	D_1	H_1
16× 13	29	3.5	41	24	38
20× 13	33	3.5	46	24	40
20× 16	33	3.5	48	29	45
25× 13	40	4.0	51	24	43
25× 16	40	4.0	53	29	48
25× 20	40	4.0	55	33	53
○30× 13	48.2	6.5	54.7	28.2	44
30× 16	46	4.0	57	29	51
30× 20	46	4.0	59	33	56
30× 25	46	4.0	62	40	61
40× 13	57	4.5	66	24	52
○40× 16	58.4	5.2	62.4	30.9	52.5
40× 20	57	4.5	70	33	62
40× 25	57	4.5	73	40	67
40× 30	57	4.5	76	46	71
50× 13	70	5.0	74	24	58
50× 16	70	5.0	76	29	63
50× 20	70	5.0	78	33	68
50× 25	70	5.0	81	40	73
50× 30	70	5.0	84	46	77
50× 40	70	5.0	90	57	88
※ 65× 40	87	6.6	100	57	95
※ 65× 50	87	6.6	101	70	104
75× 25	102	8.0	93	40	88
75× 40	102	8.0	100	57	102
75× 50	102	8.0	105	70	110
100× 50	130	10.0	125	75	122
100× 75	130	10.0	140	102	132
※ 125× 75	157	11.0	160	102	147
※ 125×100	157	11.0	173	130	167
150× 75	186	13.0	195	102	158
150×100	186	13.0	208	130	182
※ 150×125	186	13.0	217	157	201
□ 200× 75	240	15	201	102	180
□ 200×100	240	15	215	130	200
□ 200×150	240	15	238	188	253
□ 250× 75	295	16	226	108	210
□ 250×100	295	16	246	136	225
□ 250×200	295	16	304	245	310
□ 300× 75	343	17	361	102	236

(Note)
1.The tolerances on H are +5/-1mm.
2.The Nominal Size marked with ※ conform to the JPPFA standard.
3.The Nominal Size marked with □ conform to the AV standard.
4.○ There sizes are not in accordance with JISK 6743 and therefore welding arrangement is not available.

HP-PVC FITTINGS

Faucet Elbow(FL)





●Faucet Elbow(FL) Unit:mm

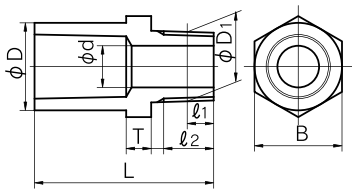
Nominal Size (mm)	D	t	D_1	D_2	ℓ_1	ℓ_2	T	H	H_1 S形	Nominal size of female threads
□ 13	24	3.0	30	34	17	14	4	38	29	Rp1/2
□ 16	29	3.5	30	34	17	14	4	43	32	Rp1/2
□ 20	33	3.5	37	42	19	16	4	51	36	Rp3/4
□ 25	40	4.0	46	52	21	18	5	59	40	Rp1

(Note)
1.The threaded portions employ parallel female threads specified in JIS B 0203(Taper Pipe Threads).
2.The tolerances on H are +5/-2mm.
3.The tolerances on H_1 are +5/-2mm.
4.The Nominal Size marked with □ conform to the AV standard.
5.The tolerances on ℓ_2 are ±1mm.

Precautions in use
·when connecting threaded portions, use both sealing tape and gaskets jointly.
·Do not use HP-PVC Faucet Elbows to connect steel pipes and PVC pipes.
·Secure the elbows with fixtures.

Valve Socket(VS)





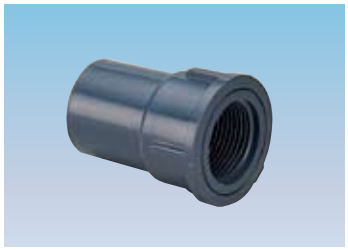
●Valve Socket(VS) Unit:mm

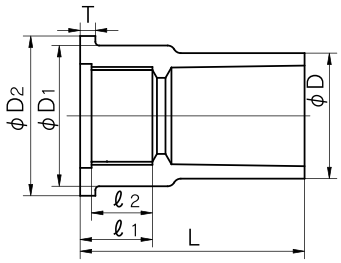
Nominal Size (mm)	D	d	O.D. of basic form D_1	Number of threads per inch	Location of basic diameter ℓ_1	ℓ_2 (Minimun)	T	L	B
13×1/2	24	13	20.955	14	8.16	13.16	6	50	24
16×1/2	29	13	20.955	14	8.20	15	6	54	29
20×3/4	33	18	26.441	14	9.53	14.53	8	64	33
25×1	40	23	33.249	11	10.39	16.79	8	71	40
30×1 1/4	46	31	41.910	11	12.70	19.10	10	80	46
40×1 1/2	57	37	47.803	11	12.70	19.10	10	92	57
50×2	70	48	59.614	11	15.88	23.38	12	106	70
□ 65×2 1/2	87	62	75.184	11	17.46	26	14	118	87
□ 75×3	102	72	87.884	11	20.64	30	16	128	102
□ 100×4	130	96	113.030	11	25.40	36	18	157	130

(Note)
1.The threaded portions employ parallel female threads specified in JIS B 0203(Taper Pipe Threads).
2.The tolerances on L are +5/-2mm.
3.The Nominal Size marked with ※ conform to the JPPFA standard.
4.The Nominal Size marked with □ conform to the AV standard.

Precautions in use
·Do not repeat screw-in and removal.
·when connecting threaded portions, use sealing tape.

Faucet Socket(FS)





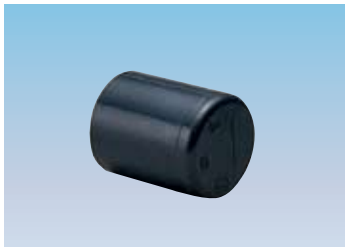
●Faucet Socket(FS) Unit:mm

Nominal Size (mm)	D	D_1	D_2	ℓ_1	ℓ_2	T	L	Nominal size of female threads
□ 13	24	30	34	17	14	4	47	Rp1/2
□ 16	29	30	34	17	24	4	52	Rp1/2
□ 20	33	37	42	19	16	4	59	Rp3/4
□ 25	40	46	52	21	18	5	68	Rp1

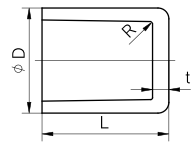
(Note)
1.The threaded portions employ parallel female threads specified in JIS B 0203(Taper Pipe Threads).
2.The tolerances on L are +5/-1mm.
3.The tolerances on ℓ_2 are ±1mm.
4.The Nominal Size marked with □ conform to the AV standard.

Precautions in use
·when connecting threaded portions, use both sealing tape and gaskets jointly.
·Do not use HP-PVC Faucet Elbows to connect steel pipes and PVC pipes.
·Secure the elbows with fixtures.

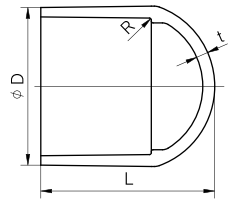
Cap(C)



▼13mm - 50mm



▼65mm - 100mm



●Cap(C) Unit:mm

Nominal Size (mm)	D	t	L
13	24	3.0	29.0
16	29	3.5	33.5
20	33	3.5	38.5
25	40	4.0	44.0
40	57	4.5	59.5
50	70	5.0	68.0
※ 65	87	6.6	96.0
75	102	8.0	105.0
100	130	10.0	138.0

(Note)
1.The tolerances on L are +5/-20mm.
2.The Nominal Size marked with ※ conform to the JPPFA standard.
3.R is 1 to 5mm

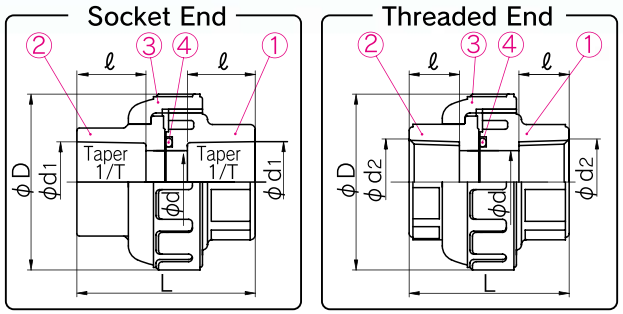
AV PREFAB JOINT <UNION>



SPECIFICATIONS

Material	Working temperature	Working pressure MPa{kgf/cm²}	Nominal Size (mm)	Connection
Unplasticized Polyvinyl Chloride (U-PVC)	0℃～50℃	1.0{10.2}	13～100	Socket End
			13～50	Threaded End
Chlorinated Polyvinyl Chloride (C-PVC)	0℃～90℃	1.0{10.2}	13～100	Socket End

(Note)
For pressure limits by working temperature ranges and materials, see "WORKING PRESSURE VS. TEMPERATURE" in this catalog.



Unit:mm

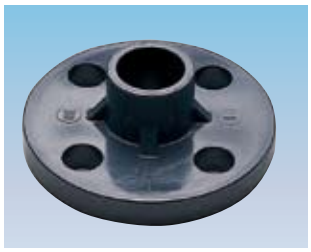
Nominal Size		d	Socket End U-PVC、C-PVC				Threaded End U-PVC			D
mm	inch		d_1	ℓ	1/T	L	d_1	ℓ	L	
13	3/8	13	18.13	18	1/34	46.0	RC3/8	15	43	48
16	1/2	15	22.11	20	1/34	46.0	Rc1/2	15	43	48
20	3/4	20	26.13	24	1/34	61.0	RC3/4	17	57	60
25	1	25	32.16	27	1/34	70.0	Rc1	20	63	70
30	1 1/4	31	38.19	30	1/34	77.0	Rc1 1/4	22	71	82
40	1 1/2	40	48.21	37	1/37	95.0	Rc1 1/2	25	82	100
50	2	51	60.25	42	1/37	107.0	Rc2	28	96	106
65	2 1/2	65	76.60	61	1/48	164.0	—	—	—	133
75	3	77	89.60	64	1/49	189.5	—	—	—	152
100	4	100	114.70	84	1/56	245.0	—	—	—	210

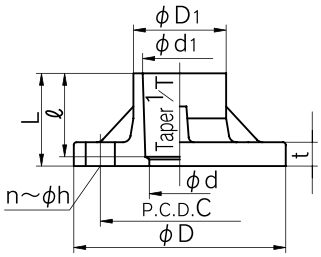
PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	U-PVC, C-PVC
②	END CONNECTOR	1	U-PVC, C-PVC
③	UNION NUT	1	U-PVC, C-PVC
④	O-RING	1	EPDM, FKM, others

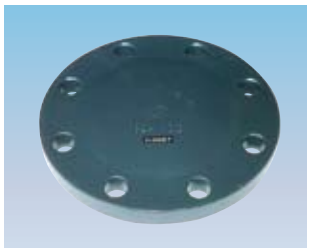
AV FLANGE <HP-PVC>

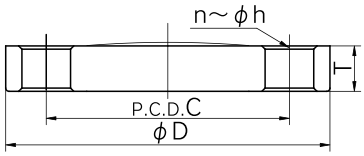
AV TS FLANGE(JIS 10K 13mm - 300mm)





AV Ⓠ FLANGE(JIS 10K 15mm - 150mm)





※The figure described by broken (dashed) line shows shape of Q-flange applied for dead end service of piping.

Unit:mm

Nominal Size		d	JIS 10K				d_1	Taper 1/T	D_1	t	T	ℓ +4.0 −0.5	L
mm	inch		D	C	n	h							
13	3/8	15	90	65	4	15	18.40±0.20	1/30	25.5	14	–	26	30.0
15	1/2	18	95	70	4	15	22.40±0.20	1/34	31.0	14	12	30	35.0
20	3/4	22	100	75	4	15	26.45±0.20	1/34	35.0	15	14	35	40.0
25	1	25	125	90	4	19	32.55±0.25	1/34	42.5	15	14	40	46.0
32	1 1/4	30	135	100	4	19	38.60±0.25	1/34	48.5	16	16	44	50.5
40	1 1/2	41	140	105	4	19	48.70±0.30	1/37	60.5	16	16	55	61.5
50	2	52	155	120	4	19	60.80±0.30	1/37	73.0	20	16	63	71.0
65	2 1/2	67	175	140	4	19	76.60±0.30	1/48	90.0	22	18	61	70.0
80(75)	3	78	185	150	8	19	89.60±0.30	1/49	105.0	22	18	64	73.0
100	4	100	210	175	8	19	114.70±0.30	1/56	131.0	22	18	84	93.0
125	5	125	250	210	8	23	140.85±0.35	1/58	158.0	24	20	104	114.0
150	6	146	280	240	8	23	166.00±0.40	1/63	185.0	26	22	132	142.0
200	8	196	330	290	12	23	217.00±1.00	1/50	238.0	28	–	145	156.0
250	10	247	400	355	12	25	268.00±1.50	1/55	300.0	30	–	155	167.0
300	12	298	445	400	16	25	318.70±1.80	1/55	341.0	30	–	155	167.0

(Note)
1.For detaols of AV Flanges, refer to the individual catalogs of appropriate AV Flanges.
2.Products compliant with the clean water standard or ANSI standard are also avaliable.

MULTI-JOINT



FEATURES

High Safety Factor By A Molding

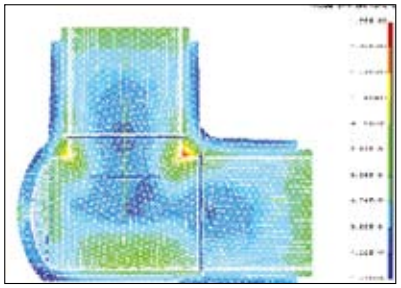
(Multi-Joint Type "L" with Female connection 40mm - 150mm) They are produced by "Injection molding" which provides customers with complete reliability and durability.

Specifications

Types : Type "L", Type"T"
Sizes : 20mm - 200mm (JIS standard)
Connection: Both types are classified by female and socket connection respectively, which enable users to have multiple selections in connection with sensors, sampling valves, etc.

Designed By CAE Analysis

Multi-Joint is designed in a way to optimize many factors relating to piping stress by "CAE Hydromechanical Analysis".



High Performance

Such unique design as above gives customers not only high pressure resistance in short term but also resistance against periodic pressure change in long term.
And the Multi-Joint made by machining are all passed through tough tests in our factory and then delivered to our customers.

Chemical Resistance & High Purity

Since the material is "High Purity PVC", the "Joint" has excellent chemical resistance and extremely low leaching performance.
And almost all the processes are controlled in our clean room to keep their performance as perfect as possible.


THREADED TYPE L


THREADED TYPE T


SOCKET TYPE L


SOCKET TYPE T

THREADED Type L

Nominal Size (mm)	Rc				NPT			
	1/4	3/8	1/2	3/4	1/4	3/8	1/2	3/4
20 × 20	○	○	–	–	○	○	–	–
25 × 25	○	○	–	–	○	○	–	–
30 × 30	○	○	–	–	○	○	–	–
40 × 40	○	○	○	○	○	○	○	○
50 × 50	○	○	○	○	○	○	○	○
65 × 65	○	○	○	○	○	○	○	○
75 × 75	○	○	○	○	○	○	○	○
100 × 100	○	○	○	○	○	○	○	○
125 × 125	○	○	○	○	○	○	○	○
150 × 150	○	○	○	○	○	○	○	○
200 × 200	○	○	○	○	○	○	○	○

THREADED Type T

Nominal Size (mm)	Rc				NPT			
	1/4	3/8	1/2	3/4	1/4	3/8	1/2	3/4
20 × 20	○	○	–	–	○	○	–	–
25 × 25	○	○	–	–	○	○	–	–
30 × 30	○	○	–	–	○	○	–	–
40 × 40	○	○	○	○	○	○	○	○
50 × 40	○	○	○	○	○	○	○	○
65 × 40	○	○	○	○	○	○	○	○
75 × 40	○	○	○	○	○	○	○	○
100 × 75	○	○	○	○	○	○	○	○
125 × 75	○	○	○	○	○	○	○	○
150 × 75	○	○	○	○	○	○	○	○
200 × 75	○	○	○	○	○	○	○	○

SPECIFICATIONS

Body material	High purity polyvinyl chloride
End Connectors	Threaded, Socket
Nominal Size	20mm - 200mm
Working Temperature	50℃
Max. Working Pressure	1.0MPa

SOCKET Type L · T

Nominal Size (mm)	Type	16	20	25	40	50	65	75	100	125
40	L	○	○	○						
	T	○	●	●						
50	L	○	○	○						
	T	●	●	●						
65	L	○	○	○	○					
	T	○	○	○	●					
75	L	○	○	○	○	○				
	T	○	○	●	●	●				
100	L	○	○	○	○	○	○			
	T	○	○	○	○	●	○			
125	L	○	○	○	○	○	○	○		
	T	○	○	○	○	○	○	●		
150	L	○	○	○	○	○	○	○	○	
	T	○	○	○	○	○	○	●	●	
200	L	○	○	○	○	○	○	○	○	○
	T	○	○	○	○	○	○	●	●	○

※ ● This product can correspomd with ASAHI AV TS FITTINGS.

AV GASKET



Full face Type
Rubber Gasket



PTFE coated



PVDF coated

● **MATERIAL** : EPDM, PTFE, PVDF, CSM, FKM, IIR, Viflon F, C

FEATURES

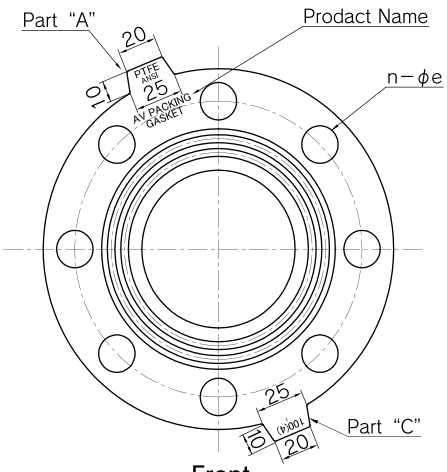
- AV GASKETS offer Similar sealing performance with 1/3 bolt tightening torque, compared to flat or envelope style gaskets.
- Uniform dimension, fine surface, suitable hardness.
- Long service life.
- Unique Convex Design.

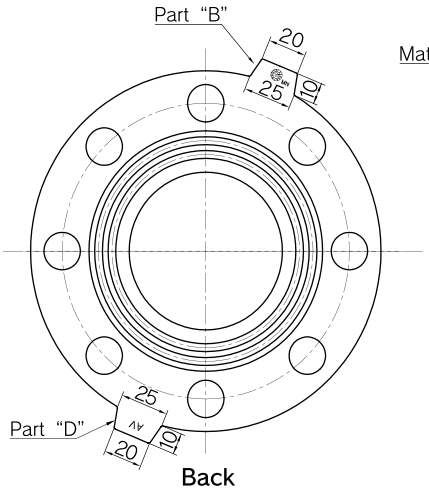
SPECIFICATIONS

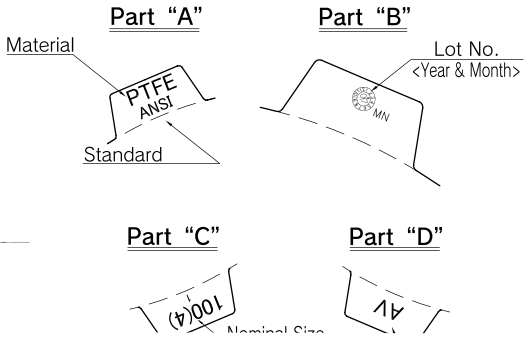
Material	Working Temperature	SIZE AVAILABILITY BY STANDARD		
		JIS	ANSI	DIN
EPDM	−40℃ - 90℃ (−40°F - 195°F)	15mm - 350mm	1/2inch - 14inch	15mm - 350mm
PTFE	−40℃ - 120℃ (−40°F - 250°F)	15mm - 300mm	1/2inch - 12inch	15mm - 400mm
PVDF	−40℃ - 120℃ (−40°F - 250°F)	15mm - 300mm	1/2inch - 10inch *1	15mm - 300mm
VIFLON	−5℃ - 150℃ (−5°F - 280°F)	15mm - 200mm	–	–

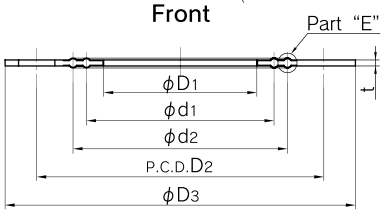
Working temperature is different depending on type of fluid.
*1 Except for 1 1/4inch and 2 1/2inc
Voflon-F has superior resistance to inorganic acids such as HNO_3, HF and HCl.
Voflon-C has superior resistance to chlorine containing media such as Chlorine Water, NaCl and ClO_2.

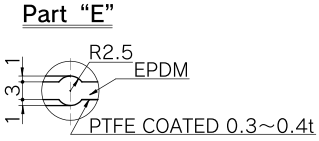
DIMENSIONS











Type	Nominal Size	Thickness
PTFE	15mm(1/2inch) to 400mm(16inch)	0.3-0.4mm(0.012-0.016inch)
PVDF	15mm(1/2inch) to 65mm(2 1/2inch) 80mm(3inch) to 300mm(12inch)	0.4-0.5mm(0.016-0.020inch)

DIMENSIONS TABLE

Full-Face Type (JIS 10K)

Unit:mm

Nominal Size mm	Nominal Size inch	D_1	D_2	D_3	n	e	d_1	d_2
13	3/8	15	65	88	4	15	22	37
15	1/2	18	70	93	4	15	26	41
20	3/4	22	75	98	4	15	32	47
25	1	30	90	123	4	19	38	53
32	1 1/4	37	100	133	4	19	50	65
40	1 1/2	43	105	138	4	19	54	69
50	2	54	120	153	4	19	68	83
65	2 1/2	69	140	173	4	19	86	101
80(75)	3	80	150	183	8	19	98	112
100	4	102	175	208	8	19	120	138
125	5	127	210	248	8	23	145	166
150	6	150	240	278	8	23	168	190
200	8	198	290	328	12	23	216	247
250	10	249	355	398	12	25	270	306
300	12	300	400	443	16	25	324	352
350	14	350	445	488	16	25	370	390

RECOMMENDED TIGHTENING TORQUE with Flat Face Flange and regular sus Bolt 〈ALL MATERIALS / FULL FACE TYPE〉

mm(inch)	N·m	FT-LB	mm(inch)	N·m	FT-LB	mm(inch)	N·m	FT-LB
15 (1/2)	17.5	13	65 (2 1/2)	22.5	16	200 (8)	55	40
20 (3/4)	17.5	13	80 (3)	30	22	250(10)	55	40
25 (1)	20	14	100(4)	30	22	300(12)	60	43
40 (1 1/2)	20	14	125(5)	40	29	350(14)	60	43
50 (2)	22.5	16	150(6)	45	32	400(16)	80	58

ASAHI AV VALVE AND PIPING SYSTEMS

ASAHI AV

AV PIPE & FITTINGS

FRP-REINFORCED COMPOSITE PVC

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

Asahi AV AV Pipe & Fittings

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AV PIPE & FITTINGS

FRP-REINFORCED COMPOSITE PVC

INFORMATION

As an all-around maker of plastic piping materials, Asahi Organic Chemicals Industry has been developing and marketing AV Pipes since 1963. As PVC pipes whose external surfaces are reinforced with FRP, AV Pipes have been enjoying great popularity.

With the rapid advance of chemical technologies, piping conditions at various types of plants are becoming increasingly sophisticated. Pipes are required to withstand higher temperature and highly corrosive chemicals are used more frequently. To meet these needs, we have made improvements to our products for many years. And we now produce AV pipes that are capable of service at temperature up to 95℃ with higher durability, safety, and reliability to satisfy diverse needs of the customers.

We hope you will favor our AV Pipes, AV valves and Vinyl Pipes with your continued patronage for your piping needs in various fields.

Features

1. Excellent chemical resistance

Since the inner anticorrosion layer is made of rigid PVC, AV Pipes excel in corrosion resistance and are ideally suited for plants that handle acids, alkalis, and halogens.

2. Great mechanical strength

Since the external surfaces are reinforced with FRP, AV Pipes have great pressure resistance and excellent impact resistance.

3. Good heat resistance

Since the external surfaces are reinforced with FRP, AV Pipes are capable of long service at high temperature.

4. Low coefficient of expansion

Since the PVC and FRP are integrated by special technology,the adhesive strength between the PVC and FRP is high, making the coefficient of linear expansion 1/2 that of PVC.

5. No worry about external or electrolytic corrosion

Since the external layer employs FRP, AV Pipe can be used without anxiety even under corrosive environments. Besides, it is a perfact insulator, eliminating any worry about electrolytic corrosion.

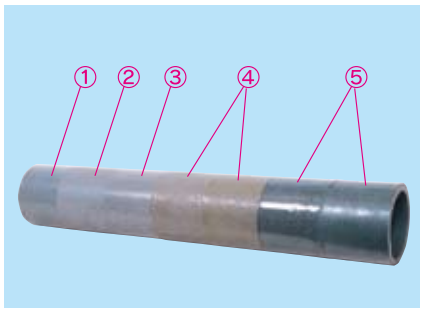
6. Lightweight

Made of plastic, AV Pipe is far lighter than metal pipes, which makes piping work at high elevations easier.

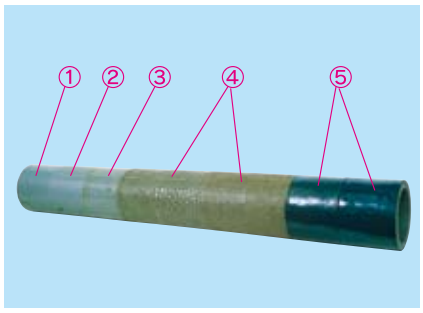
7. Ease of installation

TS joining of PVC can be used for on－site installation. FRP lamination can be formed easily at the junctions.

Structure



AV Pipe（SU type）



AV Pipe（GU type）

(1) Rigid PVC pipe
The residual stress in the pipe has been removed by a special method unique to AV Pipes.

(2) Surhface-treated portion
The surfaces of the pipe have been treated specially to enhance the adhesive effect of the primer.

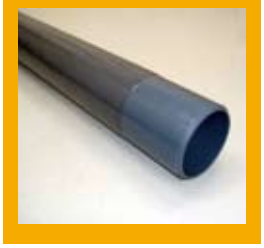
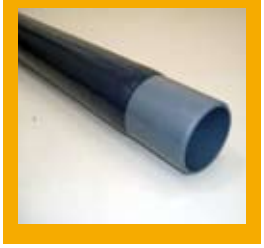
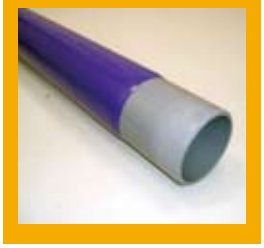
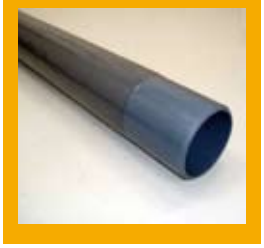
(3) Special primer
A special primer is used to bond the rigid PVC pipe and FRP layer.

(4) FRP layer
A reinforced layer consisting of a lamination of glass fiber impregnated with polyester resin.

(5) Finished surface layer
A layer finished with anticorrosion polyester resin.

Types

AV PIPE & FITTINGS

- Inner materiall : PVC
  - **SU Type** (Max Working Temperature : 80℃)
    - This is a reinforced compound pipe consisting of a PVC pipe and joint that are wound continuously with glass fiber impregnated with polyester resin.
    - **【SU Type】**
      〈Outer Color〉 Gray
      〈Application〉 Regular chemical line, Sea water
      
  - **GU Type** (Max Working Temperature : 95℃)
    - This is an AV pipe upgraded for use at high temperature (95℃) and high pressure by replacing the primer layer with a heat resistant primer and reinforcing the FRP layer.
    - **【GU Type】**
      〈Outer Color〉 Dark Blue
      〈Application〉 Chlor Alkali Plant (Cl2 Gas), Iron Industry
      
    - **【GU-N Type】**
      〈Outer Color〉 Dark
      〈Application〉 Chlor Alkali Plant (Caustic Soda line)
      
    - **【High Purity Type】**
      〈Outer Color〉 Dark Gray
      〈Application〉 High Purity water
      
- Inner material : PP
  - **PP series** (Max Working Temperature : 100℃)
    - **【PP series】**
      〈Outer Color〉 Ivory
      〈Application〉 Iron Industry, Caustic Soda line
      

※Color is changable on customer's requests.
※Applicable sizes are different in types.

Special Fabrication on Customer's Request

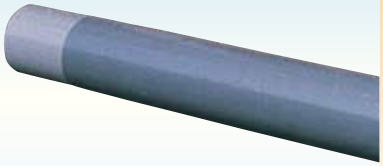
※PP+FRP piping system can be provided by only fabrication.



Standard

■Pipe (Plane end type)

SU type



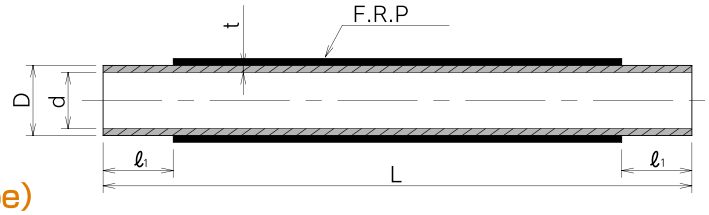
GU type



(Unit : mm)

Size		L	ℓ1	D	d	t
mm	inch					
13	3/8	4000	45	18	13	2.5
15	1/2	4000	50	22	16	3.0
20	3/4	4000	55	26	20	3.0
25	1	4000	60	32	25	3.5
30	1 1/4	4000	65	38	31	3.5
40	1 1/2	4000	80	48	40	4.0
50	2	4000	90	60	51	4.5
65	2 1/2	4000	95	76	67	4.5
75	3	4000	100	89	77	6.0
100	4	4000	120	114	100	7.0
125	5	4000	150	140	125	7.5
150	6	4000	180	165	146	9.5
200	8	4000	190	216	196	10.0
250	10	4000	200	267	247	10.0
＊300(SU)	12	4000	200	318	298	10.0
＊300(GU)	12	4000	200	318	286	16.0
350	14	4000	330	370	347	11.5
400	16	4000	370	420	394	13.0
450	18	4000	400	470	441	14.5
500	20	4000	410	520	488	16.0
600	24	4000	480	630	592	19.0

Note: The dimensions of "d" and "t" are different between "SU Type" and "GU Type"at norminal size 300mm.



■Pipe (Sleeve type)

SU type



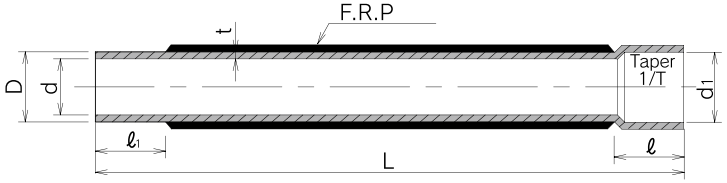
GU type



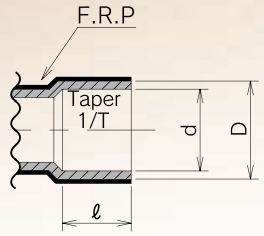
(Unit : mm)

Size		L	ℓ1	ℓ	d1	1/T	D	d	t
mm	inch								
13	3/8	4000	45	26	18.40	1/30	18	13	2.5
15	1/2	4000	50	30	22.40	1/34	22	16	3.0
20	3/4	4000	55	35	26.45	1/34	26	20	3.0
25	1	4000	60	40	32.55	1/34	32	25	3.5
30	1 1/4	4000	65	44	38.60	1/34	38	31	3.5
40	1 1/2	4000	80	55	48.70	1/37	48	40	4.0
50	2	4000	90	63	60.80	1/37	60	51	4.5
65	2 1/2	4000	95	61	76.60	1/48	76	67	4.5
75	3	4000	100	64	89.60	1/49	89	77	6.0
100	4	4000	120	84	114.70	1/56	114	100	7.0
125	5	4000	150	104	140.80	1/58	140	125	7.5
150	6	4000	180	132	166.00	1/63	165	146	9.5
200	8	4000	190	145	217.00	1/50	216	196	10.0
250	10	4000	200	155	267.70	1/55	267	247	10.0
＊300(SU)	12	4000	200	155	318.70	1/55	318	298	10.0
＊300(GU)	12	4000	200	155	318.70	1/55	318	286	16.0
350	14	4000	330	280	373.00	1/43	370	347	11.5
400	16	4000	370	320	423.00	1/48	420	394	13.0
450	18	4000	400	350	474.00	1/45	470	441	14.5
500	20	4000	410	350	524.50	1/50	520	488	16.0
600	24	4000	480	410	630.00	—	630	592	19.0

Note: The dimensions of "d" and "t" are different between "SU Type" and "GU Type"at norminal size 300mm.



Common Dimensions for AV-TS Fittings



(Unit : mm)

Size		D	d	ℓ	1/T
mm	inch				
13	3/8	24	18.40	26	1/30
15	1/2	29	22.40	30	1/34
20	3/4	33	26.45	35	1/34
25	1	40	32.55	40	1/34
30	1 1/4	46	38.60	44	1/34
40	1 1/2	57	48.70	55	1/37
50	2	70	60.80	63	1/37
65	2 1/2	87	76.60	61	1/48
75	3	102	89.60	64	1/49
100	4	130	114.70	84	1/56
125	5	157	140.80	104	1/58
150	6	186	166.00	132	1/63
200	8	236	217.00	145	1/50
250	10	287	267.70	155	1/55
300	12	337	318.70	155	1/55

Note: The ℓ dimensions of some fittings differ. Please refer to individual dimension table for each fittings.

■Elbow(90°), Bend(90°)

SU type



Elbow

GU type



Elbow

SU type



Bend

GU type



Bend

Elbow

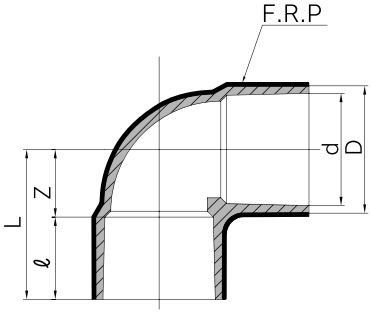
(Unit : mm)

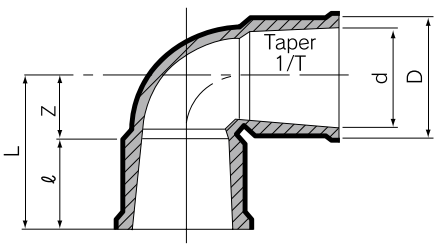
Size		L	ℓ	Z	D	d
mm	inch					
13	3/8	36	26	10	24	18.40
15	1/2	43	30	13	29	22.40
20	3/4	50	35	15	33	26.45
25	1	58	40	18	40	32.55
30	1 1/4	65	44	21	46	38.60
40	1 1/2	82	55	27	57	48.70
50	2	96	63	33	70	60.80
65	2 1/2	110	61	49	87	76.60
75	3	120	64	56	102	89.60
100	4	153	84	69	130	114.70
125	5	187	104	83	157	140.80
150	6	230	132	98	186	166.00
200	8	265	145	120	240	217.00
250	10	280	140	140	287	267.00

Bend

(Unit : mm)

Size		L	ℓ	Z	D	d
mm	inch					
75	3	137	72	65	101	89.80
100	4	172	92	80	129	115.00
125	5	237	112	125	156	141.20
150	6	260	140	120	185	166.50
200	8	341	145	196	236	217.00
250	10	402	155	247	287	267.00
300	12	385	155	230	337	318.00





■Elbow, Bend (45°)

SU type



GU type



Elbow 20~25mm

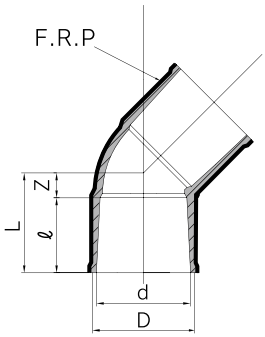
(Unit : mm)

Size		L	ℓ	Z	D	d
mm	inch					
20	3/4	44	35	9	33	26.45
25	1	51	40	11	40	32.55

Bend 40~300mm

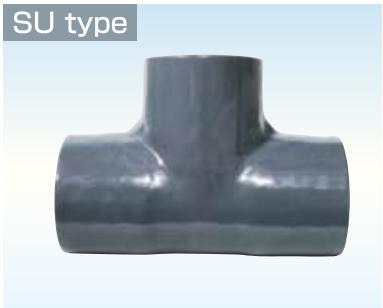
(Unit : mm)

Size		L	ℓ	Z	D	d
mm	inch					
40	1 1/2	69	55	14	57	48.70
50	2	80	63	17	70	60.80
65	2 1/2	81	61	20	87	76.60
75	3	97	72	25	101	89.80
100	4	122	92	30	129	115.00
125	5	149	112	37	156	141.20
150	6	184	140	44	185	166.50
200	8	196	145	51	240	217.00
250	10	213	155	58	287	267.00
300	12	225	155	70	337	318.00



■Tee

SU type

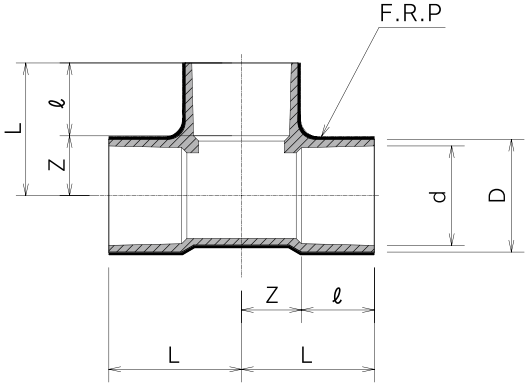


GU type



(Unit : mm)

Size		L	ℓ	Z	D	d
mm	inch					
13	3/8	36	26	10	24	18.40
15	1/2	43	30	13	29	22.40
20	3/4	50	35	15	33	26.45
25	1	58	40	18	40	32.55
30	1 1/4	65	44	21	46	38.60
40	1 1/2	82	55	27	57	48.70
50	2	96	63	33	70	60.80
65	2 1/2	110	61	49	87	76.60
75	3	120	64	56	102	89.60
100	4	152	84	68	130	114.70
125	5	187	104	83	157	140.80
150	6	230	132	98	166	166.00
200	8	266	145	121	240	217.00
250	10	295	155	140	287	267.70
300	12	340	175	165	337	318.70



■Reducing Tee

SU type

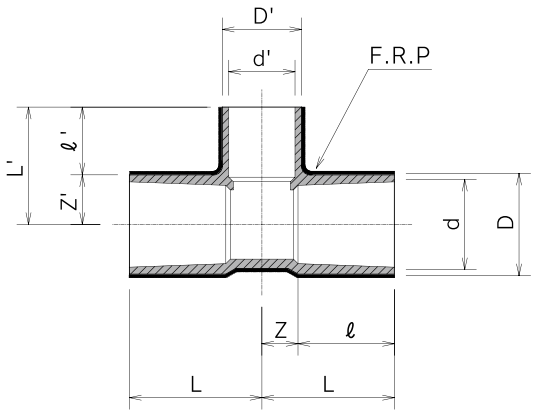


GU type



(Unit : mm)

Size		L	ℓ	Z	D	d	L'	ℓ'	Z'	D'	d'
mm	inch										
15× 13	1/2×3/8	41	30	11	29	22.40	38	26	12	24	18.40
20× 13	3/4×3/8	46	35	11	33	26.45	40	26	14	24	18.40
20× 15	3/4×1/2	48	35	13	33	26.45	45	30	15	29	22.40
25× 13	1×3/8	51	40	11	40	32.55	43	26	17	24	18.40
25× 15	1×1/2	53	40	13	40	32.55	48	30	18	29	22.40
25× 20	1×3/4	55	40	15	40	32.55	53	35	18	33	26.45
30× 13	1 1/4×3/8	55	44	11	46	38.60	46	26	20	24	18.40
30× 15	1 1/4×1/2	57	44	13	46	38.60	51	30	21	29	22.40
30× 20	1 1/4×3/4	59	44	15	46	38.60	56	35	21	33	26.45
30× 25	1 1/4×1	62	44	18	46	38.60	61	40	21	40	32.55
40× 13	1 1/2×3/8	66	55	11	57	48.70	52	26	26	24	18.40
40× 15	1 1/2×1/2	68	55	13	57	48.70	57	30	27	29	22.40
40× 20	1 1/2×3/4	70	55	15	57	48.70	62	35	27	33	26.45
40× 25	1 1/2×1	73	55	18	57	48.70	67	40	27	40	32.55
40× 30	1 1/2×1 1/4	76	55	21	57	48.70	71	44	27	46	38.60
50× 13	2×3/8	74	63	11	70	60.80	58	26	32	24	18.40
50× 15	2×1/2	76	63	13	70	60.80	63	30	33	29	22.40
50× 20	2×3/4	78	63	15	70	60.80	68	35	33	33	26.45
50× 25	2×1	81	63	18	70	60.80	73	40	33	40	32.55
50× 30	2×1 1/4	84	63	21	70	60.80	77	44	33	46	38.60
50× 40	2×1 1/2	90	63	27	70	60.80	88	55	33	57	48.70
65× 40	2 1/2×1 1/2	100	61	39	87	76.60	95	55	40	57	48.70
65× 50	2 1/2×2	101	61	40	87	76.60	104	63	41	70	60.80
75× 25	3×1	93	64	29	102	89.6	88	40	48	40	32.55
75× 40	3×1 1/2	100	64	36	102	89.6	102	55	47	57	48.70
75× 50	3×2	105	64	41	102	89.6	110	63	47	70	60.80
75× 65	3×2 1/2	113	64	49	102	89.6	117	61	56	87	76.60
100× 50	4×2	125	84	41	130	114.7	122	63	59	70	60.80
100× 75	4×3	140	84	56	130	114.7	132	64	68	102	89.60
125×100	5×4	173	104	69	157	140.8	167	84	83	130	114.70
150× 75	6×3	195	132	63	186	166.0	158	64	94	102	89.60
150×100	6×4	208	132	76	186	166.0	182	84	98	130	114.70
150×125	6×5	217	132	85	186	166.0	201	104	97	157	140.80
200× 75	8×3	201	145	56	240	217.0	180	64	116	102	89.60
200×100	8×4	215	145	70	240	217.0	200	84	116	130	114.70
200×150	8×6	238	145	93	240	217.0	253	132	121	186	166.00
250× 75	10×3	227	155	72	295	269.3	213	65	148	108	89.60
250×100	10×4	246.5	155	91.5	295	269.3	226	84	142	136	114.70
250×200	10×8	305	155	150	295	269.3	310	146.5	163.5	246	217.90
300× 75	12×3	361	300	60	343	320.7	236	64	172	102	89.60



Socket

SU type

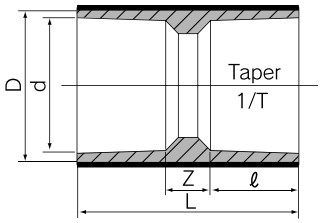


GU type



(Unit : mm)

Size		L	ℓ	Z	D	d
mm	inch					
13	3/8	57	26	5	24	18.40
15	1/2	67	30	7	29	22.40
20	3/4	77	35	7	33	26.45
25	1	87	40	7	40	32.55
30	1 1/4	95	44	7	46	38.60
40	1 1/2	117	55	7	57	48.70
50	2	133	63	7	70	60.80
65	2 1/2	145	61	23	87	76.60
75	3	155	64	27	102	89.60
100	4	200	84	32	130	114.70
125	5	231	104	23	157	140.80
150	6	300	132	36	186	166.00
200	8	300	145	10	236	217.00
250	10	353	155	43	295	267.00
300	12	360	175	10	337	318.00



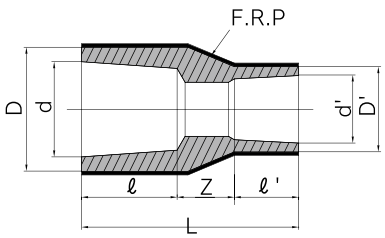
Reducing Socket

SU type



GU type





(Unit : mm)

Size		L	ℓ	D	d	ℓ'	D'	d'	Z
mm	inch								
15×13	1/2×3/8	61	30	29	22.40	26	24	18.40	5
20×13	3/4×3/8	68	35	33	26.45	26	24	18.40	7
20×15	3/4×1/2	71	35	33	26.45	30	29	22.40	6
25×13	1×3/8	86	40	40	32.55	26	24	18.40	20
25×15	1×1/2	85	40	40	32.55	30	29	22.40	15
25×20	1×3/4	84	40	40	32.55	35	33	26.45	9
30×20	1 1/4×3/4	93	44	46	38.60	35	33	26.45	14
30×25	1 1/4×1	93	44	46	38.60	40	40	32.55	9
40×20	1 1/2×3/4	113	55	57	48.70	35	33	26.45	23
40×25	1 1/2×1	114	55	57	48.70	40	40	32.55	19
40×30	1 1/2×1 1/4	114	55	57	48.70	44	46	38.60	15
50×20	2×3/4	116	63	70	60.80	35	33	26.45	18
50×25	2×1	140	63	70	60.80	40	40	32.55	37
50×30	2×1 1/4	136	63	70	60.80	44	46	38.60	29
50×40	2×1 1/2	136	63	70	60.80	55	57	48.70	18
65×40	2 1/2×1 1/2	145	61	87	76.60	55	57	48.70	29
65×50	2 1/2×2	149	61	87	76.60	63	70	60.80	25
75×40	3×1 1/2	153	64	102	89.60	55	57	48.70	34
75×50	3×2	165	64	102	89.60	63	70	60.80	38
75×65	3×2 1/2	159	64	102	89.60	61	87	76.60	34
100×75	4×3	190	84	130	114.70	64	102	89.60	42
125×100	5×4	229	104	157	140.80	84	130	114.70	41
150×100	6×4	295	132	186	166.00	84	130	114.70	79
150×125	6×5	272	132	186	166.00	104	157	140.80	36
200×150	8×6	356	145	240	217.00	132	186	166.00	79
250×200	10×8	383	155	295	269.30	146	240	217.00	82

ASAHI AV PIPE & FITTINGS

■TS Flanges (JIS 10kgf/cm² Type)

SU type 13A~125A



GU type 13A~125A



SU type 150A~300A



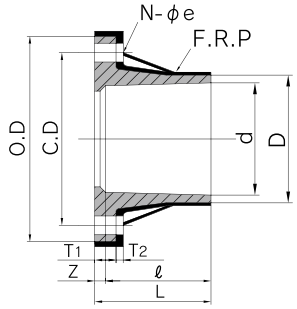
GU type 150A~300A



(Unit : mm)

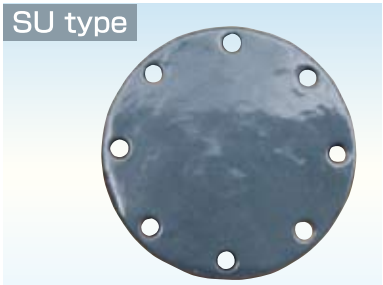
Size		L	ℓ	Z	O.D	C.D	D	d	T1	T2		N-φe
mm	inch									SU	GU	
13	3/8	30.0	26	4.0	90	65	25.5	18.40	14	2	2.0	4-15
15	1/2	35.0	30	5.0	95	70	31.0	22.40	14	5	5.0	4-15
20	3/4	40.0	35	5.0	100	75	35.0	26.45	15	5	5.0	4-15
25	1	46.0	40	6.0	125	90	42.5	32.55	15	5	5.0	4-19
30	1 1/4	50.5	44	6.5	135	100	48.5	38.60	16	5	5.0	4-19
40	1 1/2	61.5	55	6.5	140	105	60.5	48.70	16	6	6.0	4-19
50	2	71.0	63	8.0	155	120	73.0	60.80	20	8	8.0	4-19
65	2 1/2	70.0	61	9.0	175	140	90.0	76.60	22	8	8.0	4-19
75	3	73.0	64	9.0	185	150	105.0	89.60	22	8	8.0	8-19
100	4	93.0	84	9.0	210	175	131.0	114.7	22	10	10.0	8-19
125	5	114.0	104	10.0	250	210	158.0	140.8	24	12	12.0	8-23
150	6	142.0	132	10.0	280	240	185.0	166.0	26	2	3.5	8-23
200	8	156.0	145	11.0	330	290	238.0	217.0	28	2	3.5	12-23
250	10	167.0	155	12.0	400	355	289.0	268.0	30	2	3.5	12-25
300	12	167.0	155	12.0	445	400	341.0	318.7	30	2	4.3	16-25

Note: Products conforming to the JIS 5K and ANSI 150 LBS are also available.



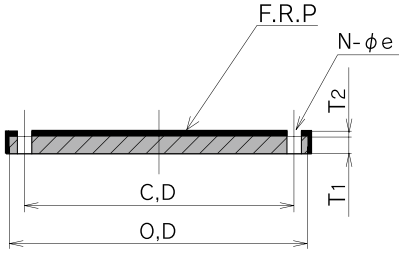
■Flanges (JIS 10kgf/cm² Type)

SU type



GU type





(Unit : mm)

Size		O.D	C.D	T1		T2		N-φe
mm	inch			SU	GU	SU	GU	
13	3/8	90	65	12	12	2.5	3	4-15
15	1/2	95	70	12	12	2.5	3	4-15
20	3/4	100	75	14	14	2.5	3	4-15
25	1	125	90	14	14	2.5	3	4-19
30	1 1/4	135	100	16	16	2.5	3	4-19
40	1 1/2	140	105	16	16	2.5	3	4-19
50	2	155	120	16	16	2.5	3	4-19
65	2 1/2	175	140	18	18	2.5	3	4-19
75	3	185	150	18	18	2.5	3	8-19
100	4	210	175	18	18	2.5	5	8-19
125	5	250	210	20	20	3.0	6	8-23
150	6	280	240	22	22	4.0	8	8-23
200	8	330	290	22	22	5.0	10	12-23
250	10	400	355	24	24	7.0	13	12-25
300	12	445	400	24	24	9.0	15	16-25
350	14	490	445	25	20	13.0	25	16-25
400	16	560	510	25	20	13.0	25	16-27
450	18	620	565	25	20	13.0	25	20-27
500	20	675	620	25	20	15.0	25	20-27
600	24	795	730	30	20	15.0	30	24-33

Note: Products conforming to the JIS 5K and ANSI 150 LBS are also available.

Additional notes

We can also deliver products prefabricated at our factory.
Consider this method for piping with complex shapes.
Detailed technical data and installation instructions are available.

ASAHI AV VALVE AND PIPING SYSTEMS

ASAHI AV
PP PIPE & FITTINGS

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

FEATURES

- Low leaching into medium.
- High corrosion resistance to acid/alkali application.
- High temperature resistance up to 90℃ .
- Due to superior impact resistance at low temperature, PP piping material is suitable piping material to low temperature application.
- Since PP piping material has small specific gravity (0.91) and simple welding procedure, it provides easier field work at site.
- No dioxin is generated at waste procedure even it would be burnt.

 PP PIPE PN10	 PP PIPE PN4	 SOCKET	 90° ELBOW
 45° ELBOW	 TEE	 REDUCER BUSHING	 END CAP
 SOCKET FLANGE	 FLANGE ADAPTER	 FLANGE ADAPTER	 LOOSE FLANGE
 Ⓙ WELDED FLANGE	 Ⓟ BLIND FLANGE(P)	 Ⓠ BLIND FLANGE(Q)	 PREFAB JOINT
 MALE ADAPTER	 FEMALE ADAPTER	 EF-SOCKET	 WELDING ROD

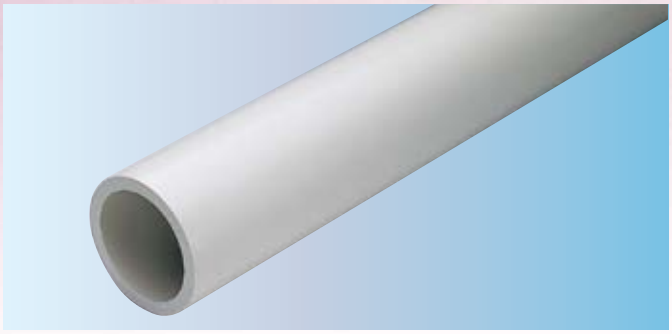
Range of Nominal Size

Nominal Size (mm)	Indication	Pipe		Socket	90° Elbow	45° Elbow	Tee	Reducer Bushing	End Cap	Socket Flange	Flange Adapter	Loose Flange
		PN10	PN4									
15	d20	◎	–	◎	◎	◎	◎	–	◎	◎	◎	◎
20	d25	◎	–	◎	◎	◎	◎	15	◎	◎	◎	◎
25	d32	◎	–	◎	◎	◎	◎	15 20	◎	◎	◎	◎
32	d40	◎	–	◎	◎	◎	◎	15 20 25	◎	◎	◎	◎
40	d50	◎	–	◎	◎	◎	◎	15 20 25 32	◎	◎	◎	◎
50	d63	◎	–	◎	◎	◎	◎	20 25 32 40	◎	◎	◎	◎
65	d75	◎	–	◎	◎	◎	◎	50	◎	◎	◎	◎
80	d90	◎	–	◎	◎	◎	◎	50 65	◎	◎	◎	◎
100	d110	◎	–	◎	◎	◎	◎	80	◎	◎	◎	◎
125	d140	◎	◎	◎	◎	◎	◎	100	–	–	◎	◎
150	d180	◎	◎	◎	◎	◎	◎	125	–	–	◎	◎
200	d225	◎	◎	◎	◎	◎	◎	150	–	–	◎	◎

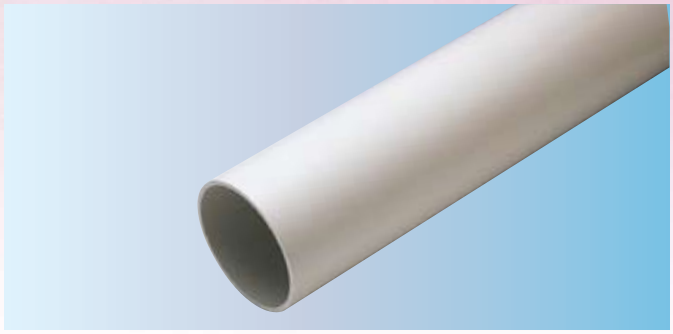
Nominal Size (mm)	Indication	Welded Flange	Blind Flange		Prefab Joint			Male Adapter	Female Adapter	EF-Socket
		Ⓙ	Ⓟ	Ⓠ	PP-PP	PP×PVC	PP× C-PVC			
15	d20	◎	◎	◎	◎	◎	◎	◎	◎	◎
20	d25	◎	◎	◎	◎	◎	◎	◎	◎	◎
25	d32	◎	◎	◎	◎	◎	◎	◎	◎	◎
32	d40	◎	◎	◎	◎	◎	◎	◎	◎	◎
40	d50	◎	◎	◎	◎	◎	◎	◎	◎	◎
50	d63	◎	◎	◎	◎	◎	◎	◎	◎	◎
65	d75	◎	◎	◎	–	–	–	–	–	◎
80	d90	◎	◎	◎	–	–	–	–	–	◎
100	d110	◎	◎	◎	–	–	–	–	–	◎
125	d140	◎	◎	◎	–	–	–	–	–	◎
150	d180	◎	◎	◎	–	–	–	–	–	◎
200	d225	◎	◎	◎	–	–	–	–	–	◎

	Shape	Diameter	Unit
Welding Rod	Single	3	2kg (Stick type1m)
			4kg (Scroll type)
		4	2kg (Stick type1m)
			4kg (Scroll type)
		5	2kg (Stick type1m)
			4kg (Scroll type)
	Double	3	2kg (Stick type1m)

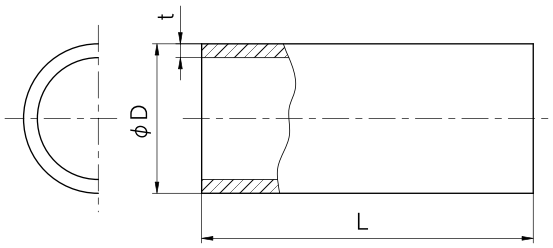
■ PPpipe (PN10/SDR11)
■ PPpipe (PN4/SDR26)

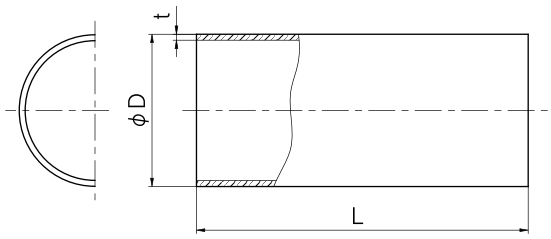


PPpipe (PN10/SDR11)



PPpipe (PN4/SDR26)





(Unit : mm)

PN10/SDR11

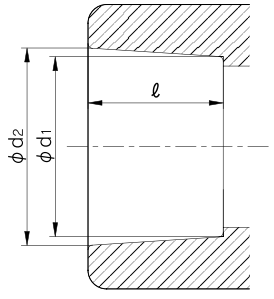
Nominal Size (mm)	Product Indication	D Basic Dimension	D Average O.D. Tolerances	t Basic Dimension	t Tolerance	Approximate I.D. (for reference)	L Basic Dimension	L Tolerance	Weight (kg/m)
15	d20	20	$^{+0.3}_{0}$	1.9	$^{+0.4}_{0}$	16.2	4000	±10	0.110
20	d25	25	$^{+0.3}_{0}$	2.3	$^{+0.5}_{0}$	20.4			0.166
25	d32	32	$^{+0.3}_{0}$	3.0	$^{+0.5}_{0}$	26.2			0.271
32	d40	40	$^{+0.4}_{0}$	3.7	$^{+0.6}_{0}$	32.6			0.421
40	d50	50	$^{+0.5}_{0}$	4.6	$^{+0.7}_{0}$	40.8			0.649
50	d63	63	$^{+0.6}_{0}$	5.8	$^{+0.8}_{0}$	51.4			1.028
65	d75	75	$^{+0.7}_{0}$	6.9	$^{+0.9}_{0}$	61.4			1.447
80	d90	90	$^{+0.9}_{0}$	8.2	$^{+1.1}_{0}$	73.6			2.083
100	d110	110	$^{+1.0}_{0}$	10.0	$^{+1.2}_{0}$	90.0			3.099
125	d140	140	$^{+1.3}_{0}$	12.8	$^{+1.5}_{0}$	114.6			5.008
150	d180	180	$^{+1.7}_{0}$	16.4	$^{+1.9}_{0}$	147.2			8.250
200	d225	225	$^{+2.1}_{0}$	20.5	$^{+2.3}_{0}$	184.0			12.864

PN4/SDR26

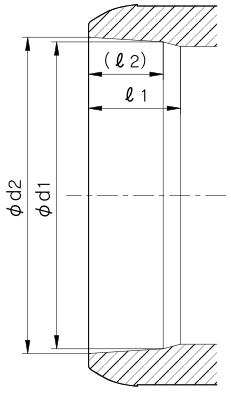
Nominal Size (mm)	Product Indication	D Basic Dimension	D Average O.D. Tolerances	t Basic Dimension	t Tolerance	Approximate I.D. (for reference)	L Basic Dimension	L Tolerance	Weight (kg/m)
125	d140	140	$^{+1.3}_{0}$	5.4	$^{+0.8}_{0}$	129.2	4000	±10	2.224
150	d180	180	$^{+1.7}_{0}$	7.0	$^{+1.0}_{0}$	166.0			3.697
200	d225	225	$^{+2.1}_{0}$	8.7	$^{+1.1}_{0}$	207.6			5.702

(Note) 1. 15mm~200mm : DIN8077
2. SDR (Standard Dimension Ratio) : (D/t)
3. PN10 : Working Pressure 1.0MPa(20℃)
4. PN4 : Working Pressure 0.4MPa(20℃)

■ PP Fitting Dimension Common



15mm~100mm
(d20~d110)



125mm~200mm
(d140~d225)

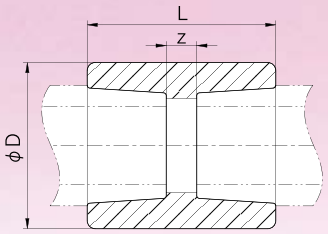
(Unit : mm)

Nominal Size (mm)	Product Indication	d1 Basic Dimension	d1 Average I.D. Tolerances	d1 Circularity (Max)	d2 Basic Dimension	d2 Average I.D. Tolerances	d2 Circularity (Max)	ℓ (minimum)	ℓ1	ℓ2 (for reference)
15	d20	19.3	$^{0}_{-0.3}$	0.4	19.5	$^{0}_{-0.3}$	0.4	14.5	–	–
20	d25	24.3	$^{0}_{-0.4}$	0.4	24.5	$^{0}_{-0.3}$	0.4	16	–	–
25	d32	31.3	$^{0}_{-0.4}$	0.5	31.5	$^{0}_{-0.4}$	0.5	18	–	–
32	d40	39.2	$^{0}_{-0.4}$	0.5	39.45	$^{0}_{-0.4}$	0.5	20.5	–	–
40	d50	49.2	$^{0}_{-0.5}$	0.6	49.45	$^{0}_{-0.5}$	0.6	23.5	–	–
50	d63	62.1	$^{0}_{-0.5}$	0.6	62.5	$^{0}_{-0.6}$	0.6	27.5	–	–
65	d75	73.95	$^{0}_{-0.5}$	1	74.25	$^{0}_{-0.5}$	1	31	–	–
80	d90	88.85	$^{0}_{-0.6}$	1	89.2	$^{0}_{-0.6}$	1	35.5	–	–
100	d110	108.65	$^{0}_{-0.6}$	1	109.05	$^{0}_{-0.6}$	1	41.5	–	–
125	d140	139.1	$^{0}_{-2.0}$	2.0	139.4	$^{0}_{-2.0}$	2.0	–	41.5	32.7
150	d180	178.7	$^{0}_{-2.0}$	2.0	179.1	$^{0}_{-2.0}$	2.0	–	50.5	41.7
200	d225	223.2	$^{0}_{-2.0}$	2.0	223.7	$^{0}_{-2.0}$	2.0	–	61.0	52.3

(Note) 1. 15mm~100mm : DIN16962 typeB
2. 125mm~200mm : AV Standard
3. Circularity : The dimension of Max I.D.-Min I.D.

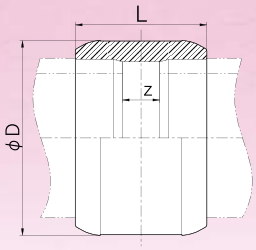
■ Socket





15mm～100mm（d20～d110）





125mm～200mm（d140～d225）

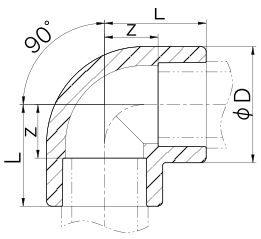
(Unit : mm)

Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30.5	35	6	0.015
20	d25	35.5	39	7	0.019
25	d32	43.5	43	7	0.030
32	d40	53.5	48	7	0.047
40	d50	66	55	8	0.079
50	d63	82	62	7	0.131
65	d75	92.5	70	8	0.161
80	d90	110	81	10	0.253
100	d110	134	96	13	0.431
125	d140	172	116	33	0.821
150	d180	221	140	39	1.562
200	d225	276	167	45	2.820

(Note) 1. 15mm～100mm : DIN16962-8
2. 125mm～200mm : AV Standard

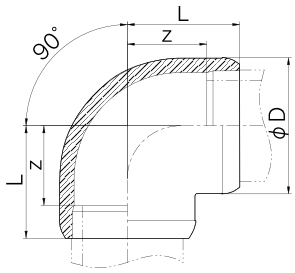
■ 90° Elbow





15mm～100mm（d20～d110）





125mm～200mm（d140～d225）

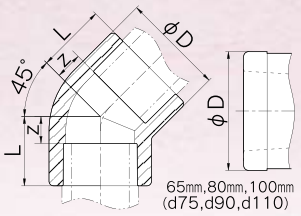
(Unit : mm)

Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30.5	28	13.5	0.023
20	d25	35.5	32	16	0.032
25	d32	43.5	38	20	0.052
32	d40	53.5	44	23.5	0.084
40	d50	66	51	27.5	0.136
50	d63	82	62	34.5	0.250
65	d75	92.5	75.5	44.5	0.340
80	d90	110	88	52.5	0.526
100	d110	134	106	64.5	0.953
125	d140	172	142	100.5	1.922
150	d180	221	179	128.5	4.058
200	d225	276	220	159.0	7.618

(Note) 1. 15mm～100mm : DIN16962-6
2. 125mm～200mm : AV Standard

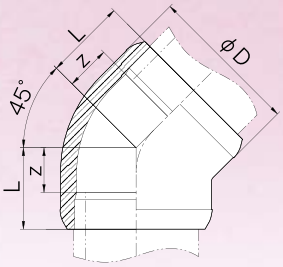
■ 45° Elbow





15mm～100mm（d20～d110）





125mm～200mm（d140～d225）

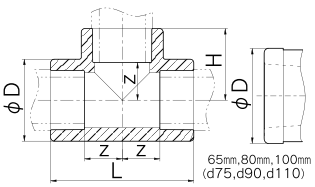
(Unit : mm)

Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	31	21.5	7	0.018
20	d25	36	24.5	8.5	0.025
25	d32	44	28	10	0.037
32	d40	55	34	13.5	0.070
40	d50	66	37	13.5	0.102
50	d63	82	48	20.5	0.180
65	d75	92	51.5	20.5	0.203
80	d90	111	59	23.5	0.340
100	d110	135.5	69	27.5	0.605
125	d140	172	92	50.5	1.299
150	d180	221	114	63.5	2.662
200	d225	276	140	79.0	4.939

(Note) 1. 15mm～100mm : DIN16962-6
2. 125mm～200mm : AV Standard

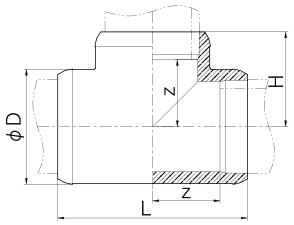
■ Tee





15mm～100mm（d20～d110）





125mm～200mm（d140～d225）

(Unit : mm)

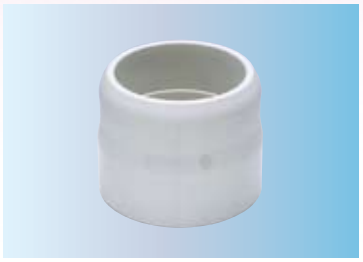
Nominal Size (mm)	Product Indication	D	L	H	z	Weight (kg)
15	d20	30.5	57	28.5	14	0.029
20	d25	35.5	65	32.5	16.5	0.041
25	d32	43.5	76	38	20	0.060
32	d40	55	88	44	23.5	0.108
40	d50	66	103	51.5	28	0.163
50	d63	82	126	63	35.5	0.292
65	d75	92.5	152	76	45	0.358
80	d90	111	176	88	52.5	0.625
100	d110	135	213	106.5	65	1.030
125	d140	172	284	142	100.5	1.317
150	d180	221	358	179	128.5	4.902
200	d225	276	440	220	159.0	9.300

(Note) 1. 15mm～100mm : DIN16962-7
2. 125mm～200mm : AV Standard

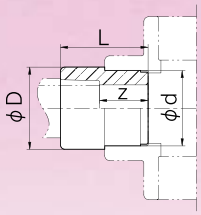
■ Reducer Bushing

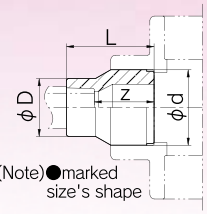


20mm×15mm～100mm×80mm
(d25×d20～d110×d90)

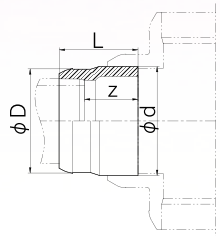


125mm×100mm～200mm×150mm
(d140×d110～d225×d180)





(Note)●marked size's shape



(Unit : mm)

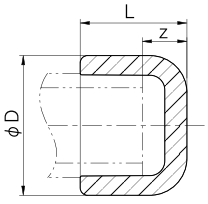
Nominal Size (mm)	Product Indication	D	d	L	Z	Weight (kg)
● 20×15	d25×d20	30	25	35	20.5	0.011
25×15	d32×d20	30	32	43	28.5	0.016
● 25×20	d32×d25	35	32	38	22	0.016
32×15	d40×d20	30	40	50	35.5	0.022
32×20	d40×d25	35	40	50	34	0.024
● 32×25	d40×d32	43	40	48	30	0.029
40×15	d50×d20	31	50	54	39.5	0.034
40×20	d50×d25	36	50	54	38	0.035
40×25	d50×d32	43	50	54	36	0.035
● 40×32	d50×d40	54	50	54	33.5	0.050
50×20	d63×d25	37	63	65	49	0.058
50×25	d63×d32	43	63	65	47	0.056
50×32	d63×d40	54	63	64	43.5	0.068
● 50×40	d63×d50	66	63	64	40.5	0.085
● 65×50	d75×d63	81	75	61	33.5	0.105
80×50	d90×d63	81	90	89	61.5	0.171
● 80×65	d90×d75	92.5	90	70	39	0.148
●100×80	d110×d90	112	110	81	45.5	0.267
125×100	d140×d110	135.5	140	110	68.5	0.502
150×125	d180×d140	172	180	130	88.5	0.971
200×150	d225×d180	221	225	160	109.5	1.868

(Note) 1. 20mm×15mm～100mm×80mm : DIN 16962-9
2. 125mm×100mm～200mm×150mm : AV Standard

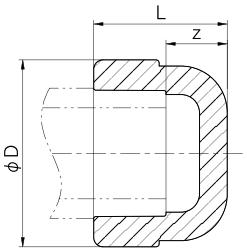
■ End Cap



15mm～100mm (d20～d110)



16mm～40mm
(d20～d50)



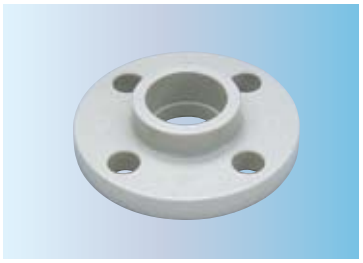
50mm～100mm
(d63～d110)

(Unit : mm)

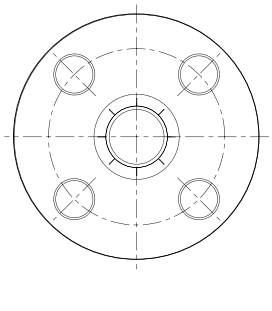
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30	27	12.5	0.013
20	d25	36	30	14	0.019
25	d32	44	32	14	0.028
32	d40	55	36	15.5	0.039
40	d50	66	43	19.5	0.076
50	d63	85	47	19.5	0.129
65	d75	92	63	32	0.165
80	d90	111	74	38.5	0.296
100	d110	133.5	91	49.5	0.430

(Note) DIN16962-8

■ Socket Flange



15mm～50mm (d20～d63)



(Unit : mm)

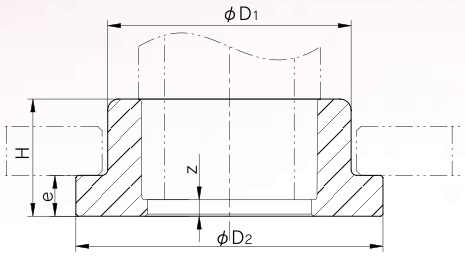
Nominal Size (mm)	Product Indication	D_1	d	Z	T	L	JIS 10K				Weight (kg)
							D	C	n	h	
15	d20	30.5	16	15.5	14	30	95	70	4	15	0.090
20	d25	35.5	21	15.0	15	31	100	75	4	15	0.105
25	d32	43.5	28	13.0	15	31	125	90	4	19	0.161
32	d40	53.5	36	12.5	16	33	135	100	4	19	0.198
40	d50	66.0	45	10.5	16	34	140	105	4	19	0.215
50	d63	82.0	57	9.5	20	37	155	120	4	19	0.317
65	d75	92.5	69	23.0	22	54	175	140	4	19	0.452
80	d90	110.0	84	18.5	22	54	185	150	8	19	0.473
100	d110	134.5	102	12.5	22	54	210	175	8	19	0.613

(Note) Flange Standard is available only JIS 10K.

Flange Adapter



15mm~100mm (d20~d110)



(unit : mm)

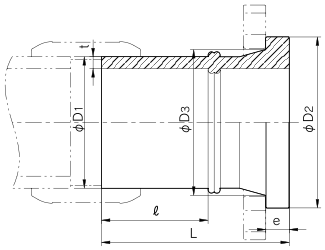
Nominal Size (mm)	Product Indication	D1	D2	e	H	z	Weight (kg)
15	d20	27.5	45	10	21.5	7	0.015
20	d25	33.5	56	10	22	6	0.023
25	d32	41.5	62	10	24.5	6.5	0.029
32	d40	50	74	11	28.5	8	0.044
40	d50	61	78	12	32	8.5	0.052
50	d63	76	93	14	36	8.5	0.081
65	d75	90	106	10.5	35	4	0.091
80	d90	109	125	11	43	7.5	0.156
100	d110	131	150	12.5	51	9.5	0.254

(Note) DIN16962-12

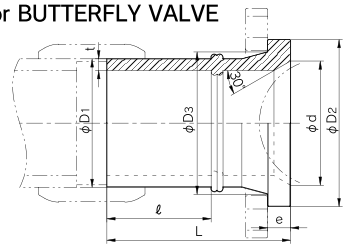
Flange Adapter



125mm~200mm (d140~d225)



for BUTTERFLY VALVE

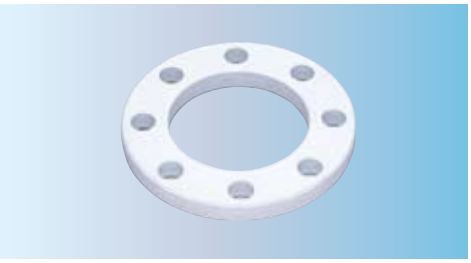


(unit : mm)

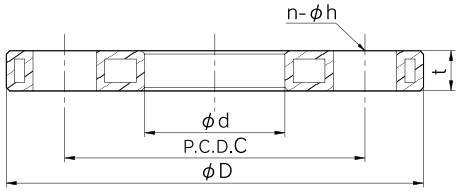
Nominal Size (mm)	Product Indication	D1	t	D2	D3 (for reference)	e	ℓ	L±2	d	Weight (kg)
125	d140	140	12.8	182	155	25	105 (Minimum)	195	125	5.7
150	d180	180	16.4	211	180	30	265 (for reference)	350	–	6.9
200	d225	225	20.5	262	235	32	250 (for reference)	370	200	11.3

(Note) The dimension of "D1""t"are based on DIN8077(PIN10/SDR11)

Loose Flange



15mm~200mm (d20~d225)

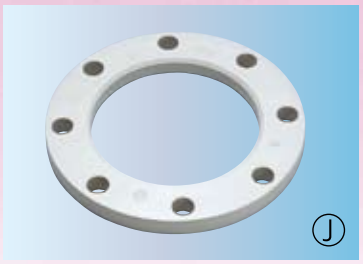


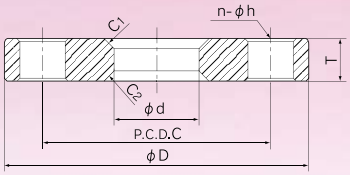
(unit : mm)

Nominal Size (mm)	Product Indication	d	JIS 10K				t	Weight (kg)
			D	C	n	h		
15	d20	28	95	70	4	15	12	0.243
20	d25	34	100	75	4	15	12	0.305
25	d32	42	125	90	4	19	16	0.470
32	d40	51	135	100	4	19	18	0.708
40	d50	62	140	105	4	19	18	0.785
50	d63	78	155	120	4	19	18	0.895
65	d75	92	175	140	4	19	18	1.165
80	d90	110	185	150	8	19	20	1.360
100	d110	133	210	175	8	19	20	1.695
125	d140	158	250	210	8	23	24	2.335
150	d180	183	280	240	8	23	24	3.220
200	d225	240	330	290	12	23	24	4.230

(Note) 1. material : STEEL+PPG lining.
2. Products conforming to the DIN and ANSI are also available.

Welded Flange





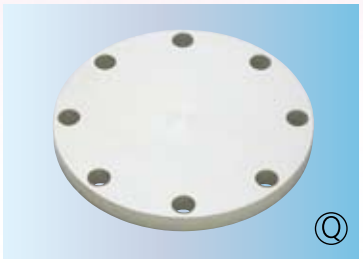
(unit : mm)

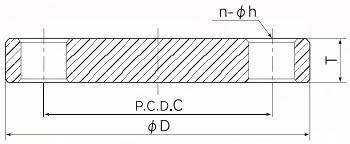
Nominal Size (mm)	Product Indication	d	JIS 10 K				C1	C2	T
			C	D	n	h			
15	d20	20	70	95	4	15	3	3	12
20	d25	25	75	100	4	15	3	3	14
25	d32	32	90	125	4	19	3	3	14
32	d40	40	100	135	4	19	3	3	16
40	d50	50	105	140	4	19	3	3	16
50	d63	63	120	155	4	19	3	4	16
65	d75	75	140	175	4	19	3	4	18
80	d90	90	150	185	8	19	3	4	18
100	d110	110	175	210	8	19	3	4	18
125	d140	140	210	250	8	23	4	4	20
150	d180	180	240	280	8	23	4	4	22
200	d225	225	290	330	12	23	4	4	22
250	d250	250	355	400	12	25	4	4	24
300	d315	315	400	445	16	25	4	4	24

(Note) The dimension of "d" is based on DIN8077 PP pipe O.D.

Blind Flange



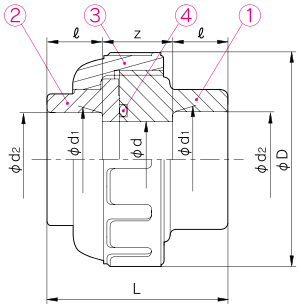




Prefab Joint (21type) DIN Socket



16mm～50mm (d20～d63)



(unit : mm)

Nominal Size (mm)	Product Indication	d	d1	d2	ℓ	D	L	z	Weight (kg)
16(15)	d20	15	19.3	19.5	14.5	46	40	11	0.030
20	d25	20	24.3	24.5	16	57	52	20	0.056
25	d32	25	31.3	31.5	18	67	58	22	0.089
30(32)	d40	31	39.2	39.45	20.5	79	65	24	0.133
40	d50	40	49.2	49.45	23.5	95	74	27	0.216
50	d63	51	62.1	62.5	27.5	104	90.5	35.5	0.262

(Note) The dimension of "d1" "d2" "ℓ"are based on DIN16962.

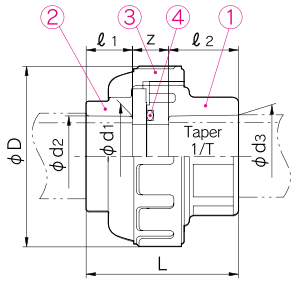
Parts & Materials

No.	Discription	Pcs.	Materials
①	BODY	1	PP
②	END CONNECTOR	1	PP
③	UNION NUT	1	PP
④	O-RING	1	EPDM、FKM

Prefab Joint (21type) DIN-JIS Socket



15mm～50mm



(unit : mm)

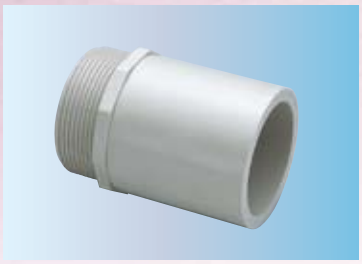
Nominal Size (mm)	DIN Socket(PP)					JIS Socket(U-PVC, C-PVC)		
	d1	d2	ℓ1	L± 1.5	Z	d3	ℓ2	1/T
16(15)	19.3	19.50	14.5	41.5	7	22.11	20	1/34
20	24.3	24.50	16.0	53.0	13	26.13	24	1/34
25	31.3	31.50	18.0	59.0	14	32.16	27	1/34
30(32)	39.2	39.45	20.5	65.5	15	38.19	30	1/34
40	49.2	49.45	23.5	74.5	14	48.21	37	1/37
50	62.1	62.50	27.5	92.0	22.5	60.25	42	1/37

(Note) The dimension of "d1" "d2" "ℓ1"are based on DIN16962.

Parts & Materials

No.	Discription	Pcs.	Materials
①	BODY	1	U-PVC、C-PVC
②	END CONNECTOR	1	PP
③	UNION NUT	1	U-PVC、C-PVC
④	O-RING	1	EPDM、FKM

■ Male Adapter



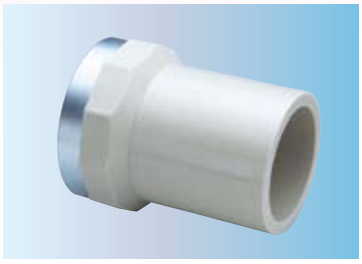
15mm～50mm（d20～d63）

(unit : mm)

Nominal Size (mm)	Product Indication	D	t	d	R	L	ℓ1	ℓ2	Z	Weight (kg)
15	d20	20	1.9	13	R1/2	60	37	15	24	0.009
20	d25	25	2.3	18	R3/4	62	40	15	27	0.012
25	d32	32	3.0	23	R1	70	44	19	36	0.021
32	d40	40	3.7	29	R1 1/4	76	49	20	46	0.037
40	d50	50	4.6	34	R1 1/2	84	55	21	55	0.057
50	d63	63	5.8	45	R2	93	63	22	65	0.095

(Note) 1．R : tapere pipe male threads.
2．Used for only PP pipe not steel pipe.

■ Female Adapter

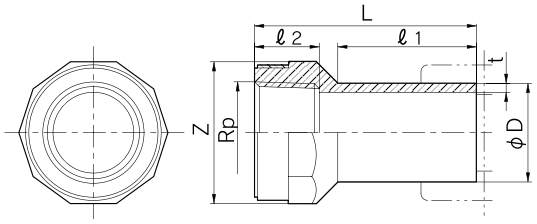


15mm～50mm（d20～d63）

(unit : mm)

Nominal Size (mm)	Product Indication	D	t	Rp	L	ℓ1	ℓ2	Z	Weight (kg)
15	d20	20	1.9	Rp1/2	58	37	16	30	0.016
20	d25	25	2.3	Rp3/4	63	40	18	36	0.022
25	d32	32	3.0	Rp1	71	44	21	46	0.039
32	d40	40	3.7	Rp1 1/4	79	49	23	55	0.056
40	d50	50	4.6	Rp1 1/2	84	55	24	60	0.078
50	d63	63	5.8	Rp2	97	63	29	75	0.138

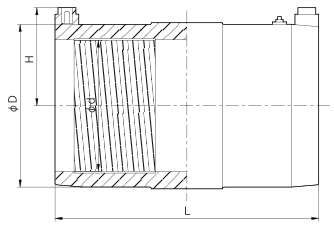
(Note) 1．Rp : Paralle pipe female threads.
2．Used for only PP pipe not steel pipe.



■ EF-Socket



15mm～200mm（d20～d225）



(unit : mm)

Nominal Size (mm)	Product Indication	d	D	H	L	Weight (kg)
15	d20	20	30	36	70	0.042
20	d25	25	36	39	78	0.051
25	d32	32	44	41	80	0.071
32	d40	40	53	46	92	0.098
40	d50	50	64	51	104	0.137
50	d63	63	80	58	118	0.224
65	d75	75	96	64	132	0.342
80	d90	90	120	75	146	0.491
100	d110	110	137	82	162	0.801
125	d140	140	171	100	184	1.344
150	d180	180	220	123	212	2.481
200	d225	225	273	149	212	3.870

■ Welding Rod



Variety	diameter	package unit
Single	3	2kg（1m rod）
		4kg（roll type）
	4	2kg（1m rod）
		4kg（roll type）
	5	2kg（1m rod）
		4kg（roll type）
Double	3	2kg（1m rod）

ENGINEERING

Our engineering department designs, produces and installs pipelines which consist of valves, regular pipes and composite pipes and equipment such as towers and ducts made of plastics.

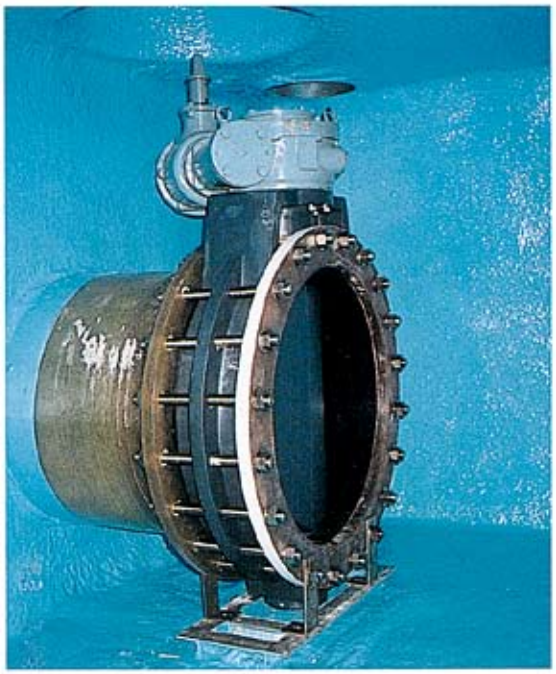
The department has been engaged in piping of many projects for chemical Factories, Steel mills, Aquariums, Cultivation Sites, Semiconductor Factories, Soda Electrolysis, Swimming Pools, Sewerage, etc. throughout the world.

Many users are satisfied with our experienced know-how in piping and reliable, advanced technology.

It is our pleasure to respond to your inquiries including prefabricated products at any time.







ASAHI AV VALVE AND PIPING SYSTEMS

ASAHI AV TECHNICAL DATA

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

TECHNICAL DATA FOR ASAHI AV VALVES

FLOW CHARACTERISTICS 192

WEIGHT LIST 196

TECHNICAL DATA TS Method of " Asahi AV" PVC Pipes 206

TECHNICAL DATA FOR AV PIPES

Installation Method 211

Intervals between Supports for AV PIPE Type SU and Type GU 212

Conversion Table for Pressure Units 213

TECHNICAL DATA FLOW CHARACTERISTICS

1. CAPACITY COEFFICIENT

1. 1 Cv VALUE

The Cv value is a coefficient that expresses quantitatively (in a numerical value) how much fluid flows through a specific value. The concept of the Cv value was first developed by the Fluid Control Institution, USA, in 1958. There are other coefficients (absolute numbers) based on a concept similar to that of the Cv value. They are the Av value and the Kv value. On the mainstream in Japan is the Cv value. Since the Kv value was announced in Germany in 1960, there have been trends toward the international unification of these values into a single one. The Cv value is becoming part of the mainstream not only in Japan but internationally as well, at ISO international conferences.

The concept of the capacity coefficient can be expressed by the following equation :

[General Equation] $C = Q\sqrt{\rho / \triangle P}$ ·····(1)

C;Capacity coefficient
Q;Flow rate
△P;Differential pressure
ρ ,G;Specific gravity

Cv value = 1 means that:
The differential pressure (pressure loss) across the valve is 1PSI{1lb/in^2}(about 0.07kgf/cm^2) and clean water (concentration ρ = 1) at 60° F (about 15.5℃) flows at a flowrate of 1USgal/min (about 0.2271m^3/hr). That is,the relationship between flow rate and differential pressure (pressure loss) is determined by the Cv value.
In Japan, differential pressure (pressure loss) is expressed in kgf/cm^2 instead of PSI. When the flowrate is expressed in m^3/hr, Equation (1) for the capacity coefficient becomes something like the following :

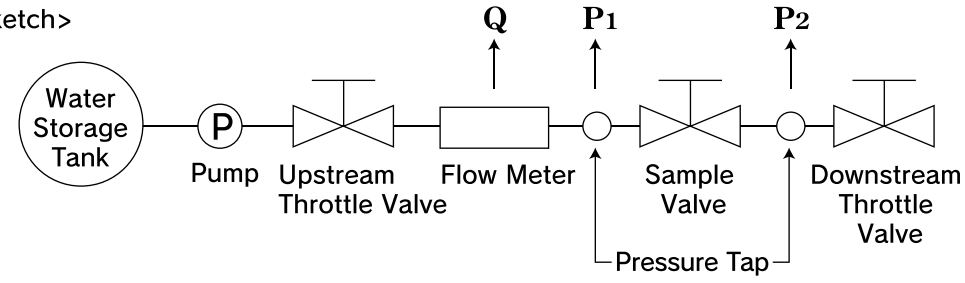
$Cv = 1.17Q\sqrt{G/\triangle P}$ ·····(2)

Cv ; Capacity coefficient
Q ; Flowrate (m^3/hr)
△P ; Differential pressure (kgf/cm^2)
G ; Specific gravity

1. 2 HOW TO MEASURE Cv VALUE

A method of measurement is now available as the standard applicable in JIS B 2005 and IEC 534. An example is outlined below.

<Descriptive sketch>



Set the differential pressure across the sample valve to 0.75kgf/cm^2 and measure the rate of flow at that time. Then, adjust the differential pressure in step from 0.75kgf/cm^2 to 0.07kgf/cm^2 (= 1PSI = 1lbf/in^2), and measure the flow rate(in m^3/hr). For large – diameter valves, it is very difficult (impossible) to set their differential pressure to 0.75kgf/cm^2 *^{2}, begin at the point where the pressure is adjusted progressively, and take measurements up to 0.07kgf/cm^2. Substitute the value at that time in equation (2) shown on the last page, then determine the Cv value.
This is a "table of Cv values when Asahi AV valves are fully open" Also shown is a "table of Cv values by flow qty% us valve opening to" (and subsequent pages), which presents data necessary for valves used for control. The Cv value represent the flow characteristics of each valve.

1. 3 TABLE　Cv VALUE OF "ASAHI AV VALVE" FULLY OPEN

Valve	Nominal Size mm (inch)																			
	13[10] (3/8)	15 (1/2)	20 (3/4)	25 (1)	30[32] (1 1/4)	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)
DIAPHRAGM VALVE TYPE 72 and 15											300	400	700	1000						
DIAPHRAGM VALVE TYPE 14		4.8	5.3	8.5	11	26	43	85	115	185										
BALL VALVE TYPE 21	7.7	14	29	47	72	155	190	365	410	680										
3-WAY BALL VALVE (L-port)		7.4	10	23		43	59		130	260										
3-WAY BALL VALVE (Double-L-port)		6.3	8.5	20		36	45		99	200										
3-WAY BALL VALVE (Closs-port)		7.8	13	23		65	98													
COMPACT BALL VALVE	7.7	14	29	47	72	140	185		410											
BUTTERFLY VALVE TYPE 57, 56 and 75						71	120	250	300	470	830	1100	2500	3860	5700	6440	8340	10890	14060	18500
BUTTERFLY VALVE TYPE 57L (Lug Style)									300	470		1100								
BUTTERFLY VALVE TYPE 55							100		285	600	940	1500	2500	4200						
STOP VALVE "GLOVE VALVE"		4.1	6.4	9.7	18	22	29	57	78	115										
STOP VALVE "GLOVE VALVE"(needle type)		3.3	5.2	7.5		19	28	58	85	109										
GATE VALVE (P-type)						130	180	415	470	690	1000	1400	2900	3700	5200	7000				
GATE VALVE (S-type)						130	180	415	470	690	1000	1400	2900	3700						
BALL CHECK VALVE		6.5	17	25		86	130		280	500										
SWING CHECK VALVE			14	24		81	140	250	280	510	750	1100	1900							
STRAINER (Y)		5.2	7.5	14		34	50		110	165										
BALL FOOT VALVE		6.5	17	25		86	130		280	500										

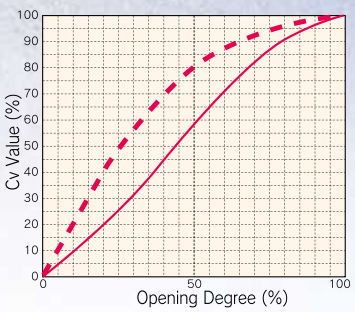
Valve	Nominal Size (mm)						
	1/4, 1/2, 3/8	15 (6mm)	15 (15mm)	20 (6mm)	20 (15mm)	25 (6mm)	25 (15mm)
LAB COCK	1.6	–	–	–	–	–	–
NEEDLE VALVE	–	0.7	4.5	0.7	4.5	0.7	6

PDCPD BUTTERFLY VALVE

Valve (inch)	700(28)	800(32)	900(36)	1,000(40)	1,100(44)	1,200(48)
Cv Value	32,000	43,000	55,000	70,000	86,000	100,000

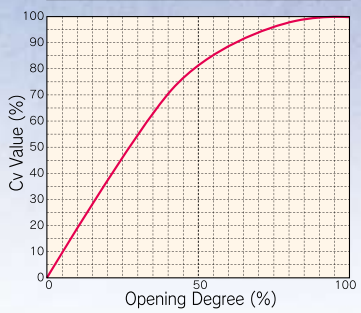
Diaphragm Valve

DIAPHRAGM VALVE TYPE 14



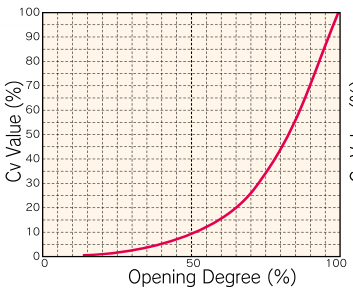
※
…Nom size 15mm~50mm
…Nom size 65mm~100mm

DIAPHRAGM VALVE TYPE 15,72

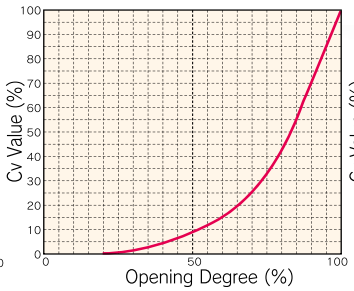


Ball Valve

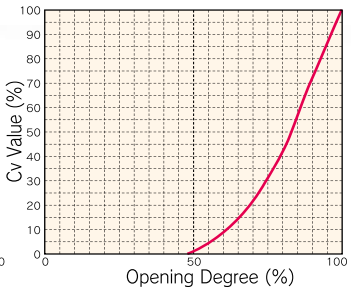
BALL VALVE TYPE 21



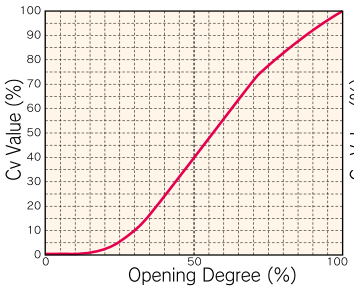
COMPACT BALL VALVE



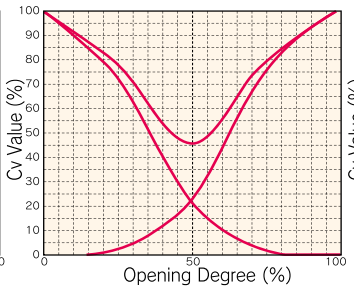
LAB COCK



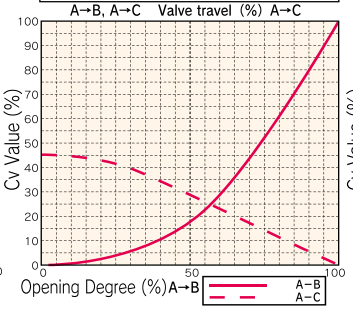
3-WAY BALL VALVE TYPE 23 (L-port)



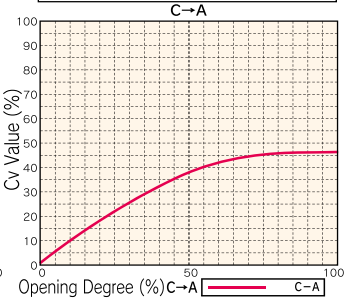
3-WAY BALL VALVE TYPE 23 (Double-L-port)

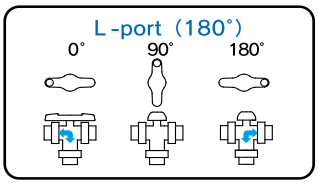


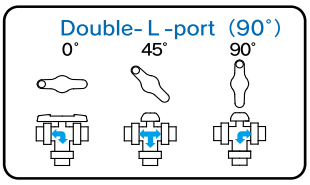
3-WAY BALL VALVE TYPE 23 (Closs-port)

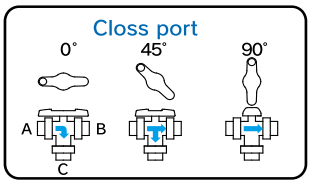


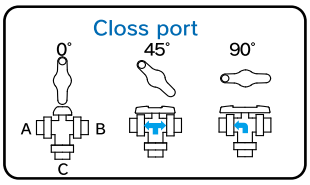
3-WAY BALL VALVE TYPE 23 (Closs-port)





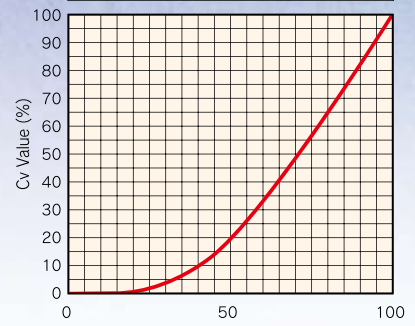




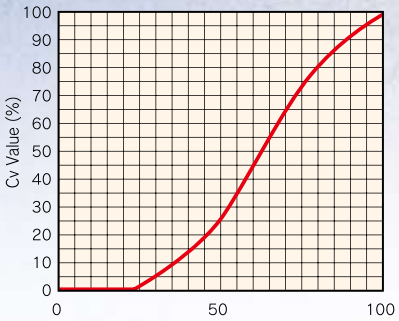


Butterfly Valve

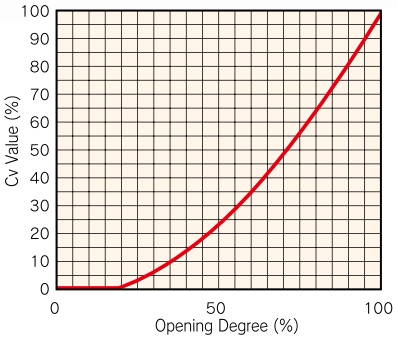
BUTTERFLY VALVE TYPE 57, TYPE 57L (Lug Style)



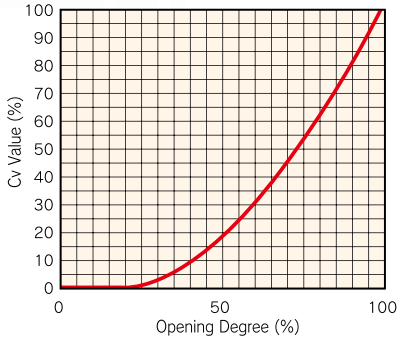
BUTTERFLY VALVE TYPE 56, 75



PDCPD BUTTERFLY VALVE

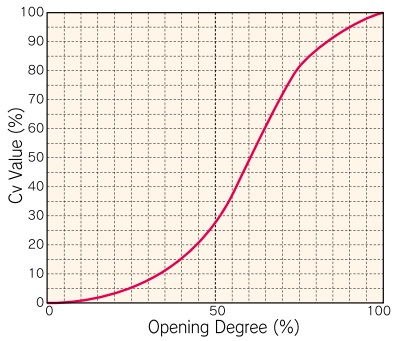


BUTTERFLY VALVE TYPE 55

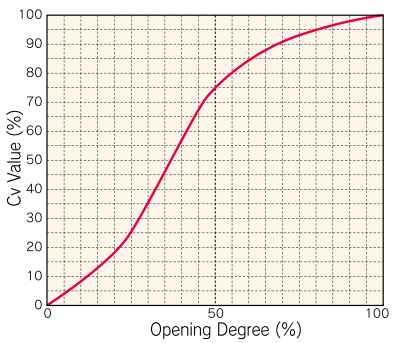


Gate Valve

GATE VALVE (P-Type)



GATE VALVE (S-Type)



TECHNICAL DATA WEIGHT LIST

DIAPHRAGM VALVE

Flanged

Unit:kg, Lb

Body			PVC		C-PVC		PP		PVDF		PVDF		Type
Bonnet			PVC		PP		PP		PPG		PVDF		
Unit			kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	
Nominal Size	15 mm	1/2 inch	0.7	1.5	0.7	1.5	0.6	1.3	0.8	1.8	0.8	1.8	14
	20	3/4	0.8	1.8	0.8	1.8	0.6	1.3	0.9	2.0	0.9	2.0	
	25	1	1.1	2.4	1.1	2.4	0.8	1.8	1.2	2.6	1.3	2.9	
	32	1 1/4	1.4	3.1	1.4	3.1	1.0	2.2	1.5	3.3	1.6	3.5	
	40	1 1/2	2.8	6.2	2.7	6.0	2.2	4.9	2.9	6.4	3.1	6.8	
	50	2	3.6	7.9	3.5	7.7	2.8	6.2	3.9	8.6	4.1	9.0	
	65	2 1/2	5.6	12.3	5.3	11.7	4.2	9.3	6.0	13.2	6.5	14.3	
	80	3	7.4	16.3	7.2	15.9	5.4	11.9	7.4	16.3	8.4	18.5	
	100	4	11.5	25.4	12.6	27.8	8.3	18.3	12.5	27.5	13.1	28.9	
	125	5	22.0	48.5	—	—	19.5	43.0	23.5	51.8	26.3	58.0	15
	150	6	34.5	76.1	—	—	30.5	67.3	35.5	78.3	40.7	89.7	
	200	8	52.6	116.0	—	—	45.0	99.2	57.3	126.3	62.3	137.4	72
	250	12	93.3	205.7	—	—	77.3	170.4	97.6	215.2	110.2	243.0	

True Union (Socket)

Unit:kg, Lb

Body			PVC		C-PVC		PP		PVDF		PVDF		Type
Bonnet			PVC		PP		PP		PPG		PVDF		
Unit			kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	
Nominal Size	15 mm	1/2 inch	0.5	1.1	0.5	1.1	0.4	0.9	0.6	1.3	0.6	1.3	True Union 14
	20	3/4	0.6	1.3	0.6	1.3	0.5	1.1	0.7	1.5	0.7	1.5	
	25	1	0.9	2.0	0.9	2.0	0.7	1.5	1.0	2.2	1.1	2.4	
	32	1 1/4	1.1	2.4	1.1	2.4	0.8	1.8	1.2	2.6	1.3	2.9	
	40	1 1/2	2.6	5.7	2.5	5.5	2.0	4.4	2.7	6.0	2.9	6.4	
	50	2	2.9	6.4	2.8	6.2	2.3	5.1	3.1	6.8	3.3	7.3	

BALL VALVE

Type 21

Unit:kg, Lb

Type		Flanged								Threaded								Socket·Spigot							
Material / Nominal Size	Unit	PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
15mm	1/2 inch	0.4	0.9	0.4	0.9	0.3	0.7	0.5	1.1	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.4
20	3/4	0.6	1.3	0.7	1.5	0.5	1.1	0.7	1.5	0.3	0.7	0.3	0.7	0.3	0.7	0.4	0.9	0.3	0.7	0.3	0.7	0.3	0.7	0.3	0.7
25	1	0.8	1.8	0.9	2.0	0.7	1.5	1.0	2.2	0.4	0.9	0.5	1.1	0.4	0.9	0.5	1.1	0.5	1.1	0.5	1.1	0.4	0.9	0.5	1.1
32	1 1/4	1.2	2.6	1.3	2.9	0.9	2.0	1.5	3.3	0.7	1.5	0.7	1.5	0.6	1.3	0.8	1.8	0.7	1.5	0.7	1.5	0.5	1.1	0.7	1.5
40	1 1/2	1.7	3.7	1.8	4.0	1.2	2.6	2.0	4.4	1.1	2.4	1.2	2.6	0.7	1.5	1.3	2.9	1.0	2.2	1.0	2.2	0.8	1.8	1.2	2.6
50	2	2.5	5.5	2.7	6.0	1.8	4.0	3.7	8.2	1.8	4.0	2.0	4.4	1.2	2.6	2.2	4.9	1.8	3.9	1.8	4.0	1.2	2.6	2.0	4.4
65	2 1/2	3.3	7.3	3.5	7.7	2.4	5.3	4.0	8.8	2.3	5.1	2.5	5.5	1.7	3.7	2.8	6.2	2.4	5.3	2.6	5.7	1.7	3.7	2.8	6.2
80	3	4.9	10.8	5.5	12.1	3.4	7.5	5.7	12.6	3.7	8.2	4.0	8.8	2.5	5.5	4.5	9.9	3.8	8.4	4.1	9.0	2.4	5.3	4.4	9.7
100	4	10.5	23.2	10.6	23.4	7.0	15.4	12.1	26.7	8.8	19.4	9.9	21.8	6.0	13.2	11.3	24.9	9.2	20.3	9.9	21.8	6.0	13.2	10.8	23.8

3-Way Ball Valve Type 23

Unit:kg, Lb

Type		Flanged								Socket								Threaded							
Material / Nominal Size	Unit	PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
15mm	1/2 inch	0.5	1.1	0.5	1.1	0.3	0.7	0.6	1.3	0.2	0.4	0.2	0.4	0.1	0.2	0.2	0.4	0.2	0.4	0.3	0.7	0.2	0.4	0.4	0.9
20	3/4	0.8	1.8	0.9	2.0	0.5	1.1	0.9	2.0	0.4	0.9	0.4	0.9	0.2	0.4	0.4	0.9	0.4	0.9	0.4	0.9	0.2	0.4	0.4	0.9
25	1	1.3	2.9	1.4	3.1	0.8	1.8	1.5	3.3	0.6	1.3	0.6	1.3	0.4	0.9	0.7	1.5	0.6	1.3	0.6	1.3	0.4	0.9	0.7	1.5
32	1 1/4	2.2	4.9	2.4	5.3	1.4	3.1	2.6	5.7	1.3	2.9	1.4	3.1	0.8	1.8	1.5	3.3	1.4	3.1	1.5	3.3	0.9	2.0	1.7	3.7
40	1 1/2	2.2	4.9	2.4	5.3	1.4	3.1	2.6	5.7	1.3	2.9	1.4	3.1	0.8	1.8	1.5	3.3	1.4	3.1	1.5	3.3	0.9	2.0	1.7	3.7
50	2	3.5	7.7	3.7	8.2	2.2	4.9	4.0	8.8	2.5	5.5	2.7	6.0	1.6	3.5	2.9	6.4	2.6	5.7	2.8	6.2	1.7	3.7	3.1	6.8
65	2 1/2	7.0	15.4	7.5	16.5	4.4	9.7	8.5	18.7	5.8	12.9	5.8	12.9	3.5	7.7	6.8	15.0	5.5	12.1	6.0	13.2	3.5	7.7	6.5	14.3
80	3	7.0	15.4	7.5	16.5	4.4	9.7	8.5	18.7	6.0	13.2	6.0	13.2	3.6	7.9	7.0	15.4	5.5	12.1	6.0	13.2	3.5	7.7	6.5	14.3
100	4	14.0	30.9	15.0	33.1	9.0	19.8	16.5	36.4	13.5	29.8	14.0	30.9	8.5	18.7	15.5	34.2	13.0	28.7	14.0	30.9	8.5	18.7	15.5	34.2

Compact Ball Valve

Unit:kg, Lb

Type		Socket·Threaded			
Material / Nominal Size	Unit	PVC		C-PVC	
		kg	Lb	kg	Lb
13 mm	1/2 inch	0.10	0.2	0.10	0.2
15	1/2	0.12	0.3	0.15	0.3
20	3/4	0.21	0.5	0.25	0.6
25	1	0.32	0.7	0.40	0.9
32	1 1/4	0.50	1.1	0.55	1.2
40	1 1/2	0.57	1.3	0.60	1.3
50	2	0.86	1.9	1.00	2.2
80	3	2.50	5.5	3.00	6.6

Lab Cock

Unit:g, Lb

Material / Connection Standard	Unit	PVC	
		g	Lb
1/4inch Male Thread×1/4inch Male Thread		25	0.06
1/2inch Male Thread×1/2inch Male Thread		30	0.07
1/4inch Female Thread×1/4inch Female Thread		30	0.07
3/8inch Female Thread×3/8inch Female Thread		30	0.07
1/4inch Hose×1/4inch Hose		25	0.06
1/2inch Male Thread×Elbow 16mm		55	0.12

BUTTERFLY VALVE

LEVER TYPE/GEAR TYPE

Unit:kg, Lb

Nominal Size mm	Nominal Size inch	Type 57, 56, 75 PVC/PP LEVER kg	PVC/PP LEVER Lb	PVC/PP GEAR kg	PVC/PP GEAR Lb	PP/PP LEVER kg	PP/PP LEVER Lb	PP/PP GEAR kg	PP/PP GEAR Lb	PVDF/PVDF LEVER kg	PVDF/PVDF LEVER Lb	PVDF/PVDF GEAR kg	PVDF/PVDF GEAR Lb	Type 56D, 75D PDCPD GEAR kg	Type 56D, 75D PDCPD GEAR Lb	Type 57L(Lug Style) PDCPD LEVER kg	Type 57L(Lug Style) PDCPD LEVER Lb	Type 57L(Lug Style) PDCPD GEAR kg	Type 57L(Lug Style) PDCPD GEAR Lb	Type 55 FCD-S LEVER kg	Type 55 FCD-S LEVER Lb	Type 55 FCD-S GEAR kg	Type 55 FCD-S GEAR Lb	Damper Style PVC/PP LEVER kg	Damper Style PVC/PP LEVER Lb	Damper Style PVC/PP GEAR kg	Damper Style PVC/PP GEAR Lb	Damper Style PP/PP LEVER kg	Damper Style PP/PP LEVER Lb	Damper Style PP/PP GEAR kg	Damper Style PP/PP GEAR Lb	Damper Style PVDF/PVDF LEVER kg	Damper Style PVDF/PVDF LEVER Lb	Damper Style PVDF/PVDF GEAR kg	Damper Style PVDF/PVDF GEAR Lb
40	1 1/2	1.3	2.9	3.4	7.5	1.1	2.4	3.1	6.8	1.4	3.1	3.5	7.7	–	–	–	–	–	–	–				1.1	2.4	3.1	6.9	0.9	2.0	3.0	6.6	1.4	3.1	3.3	7.3
50	2	1.5	3.3	3.5	7.7	1.2	2.6	3.3	7.3	1.7	3.7	3.8	8.4	–	–	–	–	–	–	3.0	6.6	5.0	11.0	1.3	2.9	3.3	7.3	1.0	2.2	3.1	6.9	1.7	3.7	3.6	8.0
65	2 1/2	1.7	3.7	3.8	8.4	1.4	3.1	3.4	7.5	1.9	4.2	4.0	8.8	–	–	–	–	–	–	–				1.5	3.3	3.5	7.8	1.2	2.6	3.3	7.3	2.0	4.4	3.7	8.1
80	3	1.9	4.2	3.9	8.6	1.6	3.5	3.6	7.9	2.2	4.9	4.2	9.3	–	–	2.8	6.2	4.9	10.8	4.5	9.9	6.5	14.3	1.7	3.7	3.7	8.2	1.3	2.9	3.4	7.5	2.3	5.1	4.0	8.8
100	4	2.5	5.5	4.5	9.9	2.0	4.4	4.0	8.8	2.9	6.4	4.9	10.8	–	–	3.5	7.7	5.6	12.4	6.0	13.2	8.0	17.6	2.2	4.9	4.2	9.3	1.7	3.7	3.8	8.4	3.1	6.9	4.8	10.6
125	5	4.9	10.8	6.5	14.3	4.0	8.8	5.6	12.3	5.7	12.6	7.3	16.1	–	–	6.9	15.2	9.0	19.9	10.5	23.2	11.5	25.4	4.4	9.7	6.0	13.2	3.5	7.7	5.1	11.3	5.3	11.7	6.9	15.3
150	6	5.8	12.8	7.4	16.3	4.6	10.1	6.2	13.7	6.9	15.2	8.5	18.7	–	–	8.1	17.9	9.6	21.2	–		14.5	32.0	5.3	11.7	6.9	15.2	4.2	9.3	5.8	12.8	6.6	14.6	8.1	17.9
200	8	9.3	20.5	10.7	23.6	7.4	16.3	8.9	19.6	11.0	24.3	12.5	27.6	–	–	15.0	33.2	16.5	36.5	–		23.0	50.7	8.4	18.5	9.9	21.8	6.6	14.5	8.1	17.9	10.1	22.3	12.0	26.5
250	10	–		14.7	32.4	–		12.2	26.9	–		18.6	41.0	–	–	–	–	22.7	50.2	–		32.9	72.6	11.2	24.7	13.7	30.2	8.0	17.6	10.5	23.2	22.5	49.6	25.0	55.1
300	12	–		28.0	61.7	–		24.0	52.9	–		34.5	76.1	–	–	–	–	–	–	–				17.0	37.5	22.5	49.6	15.0	33.1	20.5	45.2	32.7	72.1	38.2	84.2
350	14	–		30.2	66.6	–		26.3	58.0	–		36.8	81.1	–	–	–	–	–	–	–				19.0	41.9	24.5	54.0	16.0	35.3	21.5	47.4	35.2	77.6	40.7	89.7
400	16	–				–		36.0	79.4	–		46.0	101.4	47	103	–	–	–	–	–				–				22.0	48.5	27.5	60.6	48.5	106.9	54.0	119.1
450	18	–				–		63.5	140.0	–		103.0	227.1	100	221	–	–	–	–	–				–				28.0	61.7	33.5	73.9	50.0	110.3	55.5	122.4
500	20	–				–		77.0	169.8	–		124.0	273.1	114	252	–	–	–	–	–				–				36.0	79.4	41.5	91.5	57.5	126.8	63.0	138.9
600	24	–				–		114.0	251.4	–		157.0	346.2	140	309	–	–	–	–	–				–				66.0	145.5	71.5	157.7	79.0	174.2	84.5	186.3

Unit:kg, Lb

Name	Nominal Size mm(inch)	700(28) kg	700(28) Lb	800(32) kg	800(32) Lb	900(36) kg	900(36) Lb	1000(40) kg	1000(40) Lb	1100(44) kg	1100(44) Lb	1200(48) kg	1200(48) Lb
PDCPD(Manual)		380	839	460	1013	550	1213	830	1830	1000	2205	1100	2425

GATE VALVE

Flanged

Unit:kg, Lb

Type			40mm (1 1/2inch) kg	40mm (1 1/2inch) Lb	50mm (2inch) kg	50mm (2inch) Lb	65mm (2 1/2inch) kg	65mm (2 1/2inch) Lb	80mm (3inch) kg	80mm (3inch) Lb	100mm (4inch) kg	100mm (4inch) Lb	125mm (5inch) kg	125mm (5inch) Lb	150mm (6inch) kg	150mm (6inch) Lb	200mm (8inch) kg	200mm (8inch) Lb	250mm (10inch) kg	250mm (10inch) Lb	300mm (12inch) kg	300mm (12inch) Lb	350mm (14inch) kg	350mm (14inch) Lb
TYPE-P	Non-Rising	Hand Wheel	2.5	5.5	3.5	7.7	5.5	12.1	7.0	15.4	8.5	18.7	13.5	29.8	19.5	43.0	29.5	65.0	42.0	92.6	68.0	149.9	81.5	179.7
		Cap	3.5	7.7	4.5	9.9	6.0	13.2	8.0	17.6	9.5	20.9	14.5	32.0	20.0	44.1	30.0	66.2	43.0	94.8	68.5	151.0	82.0	180.8
TYPE-S	Non-Rising	Hand Wheel	3.0	6.6	4.0	8.8	5.5	12.1	8.0	17.6	12.5	27.6	15.0	33.1	22.5	49.6	31.5	69.5	–		–		–	
		Cap	4.0	8.8	5.0	11.0	6.0	13.2	9.0	19.8	13.0	28.7	15.5	34.2	23.0	50.7	32.0	70.6	–		–		–	
	Rising	Hand Wheel	3.2	7.1	4.5	9.9	7.5	16.5	8.3	18.3	12.6	27.8	24.0	52.9	24.8	54.7	44.5	98.1	71.0	156.6	–		–	
		Cap	–		–		–		–		13.0	28.7	–		25.7	56.7	35.0	77.2	60.0	132.3	–		–	

SWINGCHECK VALVE

Flanged

Unit:kg, Lb

Nominal Size	Material	HI-PVC		PP		PVDF	
		kg	Lb	kg	Lb	kg	Lb
15mm	1/2 inch	0.8	1.8	0.6	1.3	1	2.2
20	3/4	0.9	2.0	0.6	1.3	1	2.2
25	1	1.7	3.7	1.2	2.6	2	4.4
32	1 1/4	2.6	5.7	1.7	3.7	3	6.6
40	1 1/2	2.6	5.7	1.7	3.7	3	6.6
50	2	4	8.8	2.7	6.0	4.6	10.1
65	2 1/2	5.5	12.1	3.5	7.7	6.5	14.3
80	3	6	13.2	4	8.8	7.5	16.5
100	4	10.5	23.2	7	15.4	12	26.5
125	5	16	35.3	12	26.5	20	44.1
150	6	22	48.5	16	35.3	27	59.5
200	8	34.5	76.1	24.5	54.0	42	92.6

BALLCHECK VALVE

Unit:kg, Lb

Type		Flanged						Threaded								Socket							
Nominal Size	Material	U-PVC		C-PVC		PVDF		U-PVC		C-PVC		PP		PVDF		U-PVC		C-PVC		PP		PVDF	
		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
15mm	1/2 inch	0.3	0.6	0.3	0.7	0.3	0.7	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2
20	3/4	0.4	0.8	0.4	0.9	0.5	1.0	0.2	0.3	0.2	0.4	0.1	0.2	1.2	2.6	0.2	0.4	0.2	0.4	0.1	0.2	0.2	0.4
25	1	0.6	1.3	0.7	1.4	0.7	1.5	0.3	0.6	0.3	0.6	0.2	0.4	0.3	0.7	0.3	0.6	0.3	0.6	0.2	0.3	0.3	0.7
40	1 1/2	1.1	2.4	1.1	2.4	1.3	2.9	0.6	1.3	0.7	1.4	0.4	0.9	0.7	1.5	0.6	1.3	0.6	1.4	0.3	0.7	0.7	1.5
50	2	1.8	3.9	1.6	3.5	1.8	4.0	0.8	1.9	0.9	1.9	0.6	1.3	1	2.2	0.8	1.8	0.9	1.9	0.5	1.1	1.1	2.4
80	3	4	8.8	4.3	9.5	4.9	10.8	2.2	4.9	2.4	5.3	1.5	3.3	2.9	6.4	2.4	5.3	2.6	5.7	1.5	3.3	2.8	6.2
100	4	7.2	15.9	11.0	24.3	12	26.5	5.8	12.8	6.2	13.7	3.7	8.2	7	15.4	5.9	13.0	6.1	13.4	3	6.6	6.5	14.3

Y-SEDIMENT STRAINER

Unit:kg, Lb

Type		Flanged		Threaded		Socket	
Nominal Size	Material	U-PVC		U-PVC		U-PVC	
		kg	Lb	kg	Lb	kg	Lb
15mm	1/2 inch	0.5	1.1	0.3	0.6	0.3	0.6
20	3/4	0.8	1.8	0.5	1.1	0.5	1.0
25	1	1.2	2.6	0.8	1.7	0.7	1.5
32	1 1/4	2.5	5.5	2.0	4.4	2.0	4.4
40	1 1/2	2.2	4.9	1.6	3.5	1.5	3.3
50	2	2.8	6.2	1.9	4.2	1.8	4.0
65	2 1/2	6.3	13.9	5.3	11.7	5.4	11.9
80	3	6.5	14.3	6.0	13.2	5.4	11.9
100	4	20.5	45.2	19.5	43.0	18.0	39.7

CONSTANT FLOW VALVE

Unit:kg, Lb

Type		Flanged	
Nominal Size	Material	U-PVC	
		kg	Lb
15mm	1/2 inch	1.4	30.9
20	3/4	1.5	33
25	1	1.5	33
50	2	5	110.3
80	3	8.5	187.4
100	4	16.5	363.8

TECHNICAL DATA AUTOMATIC VALVES WEIGHT LIST

BALL VALVE

Type 21

Unit:kg, Lb

Driving Method		Electric Actuator																							
Actuator Type		Type T																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5
	20	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5	2.5	5.5
	25	3.0	6.6	3.0	6.6	3.0	6.6	3.0	6.6	2.5	5.5	2.5	5.5	2.5	5.5	3.0	6.6	2.5	5.5	2.5	5.5	2.5	5.5	3.0	6.6
	32	3.0	6.6	3.5	7.7	3.0	6.6	3.5	7.7	3.0	6.6	3.0	6.6	—	—	3.0	6.6	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6
	40	3.5	7.7	3.5	7.7	3.0	6.6	4.0	8.8	3.0	6.6	3.5	7.7	3.0	6.6	3.5	7.7	3.0	6.6	3.5	7.7	3.0	6.6	3.5	7.7
	50	4.0	8.8	4.5	9.9	3.5	7.7	4.5	9.9	4.0	8.8	4.0	8.8	3.5	7.7	4.0	8.8	4.0	8.8	4.0	8.8	3.5	7.7	4.0	8.8
	65	7.0	15.4	7.0	15.4	6.0	13.2	7.5	16.5	6.0	13.2	6.5	15.4	6.0	13.2	6.5	14.3	6.0	13.2	6.5	14.3	6.0	13.2	6.5	14.3
	80	8.0	17.6	8.0	17.6	6.5	14.3	8.5	18.7	7.0	15.4	7.5	19.8	6.0	13.2	7.5	16.5	7.0	15.4	7.5	16.5	6.5	14.3	7.5	16.5
	100	11.5	25.4	12.0	26.5	9.0	19.8	12.5	27.6	11.0	24.3	11.0	33.1	8.5	18.7	12.0	26.5	11.0	24.3	11.0	24.3	8.5	18.7	12.0	26.5

Type 21

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type TA																							
		Double Acting																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	2.0	4.4	2.0	4.4	1.5	3.3	2.0	4.4	1.5	3.3	1.5	3.3	1.5	3.3	1.5	3.3	1.5	3.3	1.5	3.3	1.5	3.3	1.5	3.3
	20	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	1.5	3.3	1.5	3.3	1.5	3.3	2.0	4.4	2.0	4.4	1.5	3.3	1.5	3.3	1.5	3.3
	25	2.5	5.5	2.5	5.5	2.0	4.4	2.5	5.5	2.0	4.4	2.0	4.4	1.5	3.3	2.0	4.4	2.0	4.4	2.0	4.4	1.5	3.3	2.0	4.4
	32	2.5	5.5	3.0	6.6	2.0	4.4	3.0	6.6	2.0	4.4	2.0	4.4	2.0	4.4	2.5	5.5	2.0	4.4	2.0	4.4	—		2.0	4.4
	40	3.5	7.7	3.5	7.7	3.0	6.6	3.5	7.7	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6
	50	4.5	9.9	4.5	9.9	3.5	7.7	4.5	9.9	3.5	7.7	3.5	7.7	3.0	6.6	4.0	8.8	3.5	7.7	3.5	7.7	3.0	6.6	3.5	7.7
	65	6.5	14.3	6.5	14.3	5.5	12.1	7.0	15.4	5.5	12.1	5.5	12.1	5.0	11.0	6.0	13.2	5.5	12.1	5.5	12.1	5.0	11.0	6.0	13.2
	80	9.5	20.9	10.0	22.1	8.0	17.6	10.5	23.2	8.5	18.7	9.0	19.8	7.0	15.4	9.5	20.9	8.5	18.7	9.0	19.8	7.5	16.5	9.5	20.9
	100	15.0	33.1	16.0	35.3	12.0	26.5	17.0	37.5	14.5	32.0	15.0	33.1	12.0	26.5	16.0	35.3	14.5	32.0	15.0	33.1	12.0	26.5	16.0	35.3

Type 21

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type TA																							
		Air to Open, Air to Close																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7
	20	4.0	8.8	4.0	8.8	3.5	7.7	4.0	8..8	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7
	25	4.0	8.8	4.0	8.8	4.0	8.8	4.0	8.8	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	4.0	8.8	3.5	7.7	3.5	7.7
	32	4.5	9.9	4.5	9.9	4.0	8.8	4.5	9.9	4.0	8.8	4.0	8.8	3.5	7.7	4.0	8.8	4.0	8.8	4.0	8.8	—		4.0	8.8
	40	5.0	11.0	5.5	12.1	4.5	9.9	5.5	12.1	4.5	9.9	4.5	9.9	4.0	8.8	5.0	11.0	4.5	9.9	4.5	9.9	4.0	8.8	4.5	9.9
	50	6.0	13.2	6.0	13.2	5.0	11.0	6.0	13.2	5.5	12.1	5.5	12.1	4.5	9.9	5.5	12.1	5.0	11.0	5.0	11.0	4.5	9.9	5.5	12.1
	65	9.5	20.9	9.5	20.9	8.5	18.7	10.0	22.1	8.5	18.7	8.5	18.7	8.0	17.6	9.0	19.8	8.5	18.7	8.5	18.7	8.0	17.6	9.0	19.8
	80	14.5	32.0	15.0	33.1	13.0	28.7	15.5	34.2	13.5	29.8	14.0	30.9	12.0	26.5	14.5	32.0	14.0	30.9	14.0	30.9	12.5	27.6	14.5	32.0
	100	20.0	44.1	21.0	46.3	17.0	37.5	22.0	48.5	19.5	43.0	20.0	44.1	16.5	36.4	21.0	46.3	20.0	44.1	20.0	44.1	16.5	36.4	21.0	46.3

Type 21

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type AA																							
		Double Acting																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	1.0	2.2	1.0	2.2	0.9	2.0	1.1	2.4	0.8	1.8	0.8	1.8	0.7	1.5	0.8	1.8	0.8	1.8	0.8	1.8	0.7	1.5	0.7	1.5
	20	1.2	2.6	1.2	2.6	1.0	2.2	1.2	2.6	0.9	2.0	0.9	2.0	0.9	2.0	1.0	2.2	1.1	2.4	0.9	2.0	0.7	1.5	0.9	2.0
	25	1.5	3.3	1.6	3.5	1.2	2.6	1.5	3.3	1.0	2.2	1.1	2.4	0.9	2.0	1.1	2.4	1.3	2.9	1.2	2.6	0.8	1.8	1.0	2.2
	32	1.9	4.2	2.0	4.4	1.4	3.1	2.0	4.4	1.3	2.9	1.3	2.9	1.0	2.2	1.5	3.3	2.0	4.4	1.3	2.9	—		1.2	2.6
	40	2.6	5.7	2.7	6.0	2.0	4.4	2.7	6.0	1.9	4.2	2.0	4.4	1.6	3.5	2.2	4.9	2.5	5.5	1.9	4.2	1.5	3.3	2.0	4.4
	50	3.4	7.5	3.6	7.9	2.5	5.5	3.6	7.9	2.7	6.0	2.8	6.2	2.0	4.4	3.1	6.8	2.8	6.2	2.6	5.7	1.9	4.2	2.8	6.2

BALL VALVE

Type 21

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type AA																							
		Air to Open, Air to Close																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	1.6	3.5	1.6	3.5	1.5	3.3	1.7	3.7	1.4	3.1	1.4	3.1	1.3	2.9	1.4	3.1	1.4	3.1	1.4	3.1	1.3	2.9	1.4	3.1
	20	1.8	4.0	1.8	4.0	1.6	3.5	1.8	4.0	1.5	3.3	1.5	3.3	1.5	3.3	1.6	3.5	1.7	3.7	1.5	3.3	1.4	3.1	1.5	3.3
	25	2.1	4.6	2.2	4.9	1.8	4.0	2.1	4.6	1.6	3.5	1.7	3.7	1.5	3.3	1.7	3.7	1.7	3.7	1.8	4.0	1.5	3.3	1.7	3.7
	32	2.5	5.5	2.6	5.7	2.0	4.4	2.6	5.7	1.9	4.2	1.9	4.2	1.6	3.5	2.1	4.6	1.9	4.2	1.9	4.2	—		1.9	4.2
	40	4.0	8.8	4.1	9.0	3.4	7.5	4.1	9.0	3.3	7.3	3.4	7.5	3.0	6.6	3.6	7.9	3.3	7.3	3.3	7.3	2.9	6.4	3.4	7.5
	50	4.8	10.6	5.0	11.0	3.9	8.6	5.0	11.0	4.1	9.0	4.2	9.3	3.4	7.5	4.5	9.9	3.9	8.6	4.0	8.8	3.3	7.3	4.2	9.3

3-Way Ball Valve

Unit:kg, Lb

Driving Method		Electric Actuator																							
Actuator Type		Type T																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6	2.5	5.5	2.5	5.5	2.5	5.5	3.0	6.6	2.5	5.5	2.0	4.4	2.5	5.5	2.5	5.5
	20	3.0	6.6	3.5	7.7	3.0	6.6	3.5	7.7	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6
	25	3.5	7.7	4.0	8.8	3.0	6.6	4.0	8.8	3.0	6.6	3.0	6.6	3.0	6.6	3.0	6.6	3.0	6.6	3.0	6.6	3.0	6.6	3.0	6.6
	32	4.5	9.9	5.0	11.0	4.0	8.8	5.0	11.0	3.5	7.7	4.0	8.8	3.0	6.6	4.0	8.8	4.0	8.8	4.0	8.8	3.5	7.7	4.0	8.8
	40	4.5	9.9	5.0	11.0	4.0	8.8	5.0	11.0	4.0	8.8	4.0	8.8	3.5	7.7	4.0	8.8	3.5	7.7	4.0	8.8	3.0	6.6	4.0	8.8
	50	6.0	13.2	6.0	13.2	4.5	9.9	6.5	14.3	5.0	11.0	5.0	11.0	4.0	8.8	5.5	12.1	5.0	11.0	5.0	11.0	4.0	8.8	5.5	12.1
	65	11.5	25.3	12.0	26.4	9.0	19.8	13.0	28.6	10.3	22.7	10.3	22.7	7.9	17.4	11.3	24.9	10.0	22.0	10.5	23.1	8.0	17.6	11.0	24.2
	80	11.5	25.4	12.0	26.5	9.0	19.8	13.0	28.7	10.0	22.1	10.5	23.2	8.0	17.6	11.0	24.3	10.5	23.2	10.5	23.2	8.0	17.6	11.5	25.4
	100	18.5	40.8	19.5	43.0	13.5	29.8	21.0	46.3	17.5	38.6	18.5	40.8	13.0	28.7	20.0	44.1	18.0	39.7	18.5	40.8	13.0	28.7	20.0	44.1

3-Way Ball Valve

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type TA																							
		Double Acting																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	2.0	4.4	2.0	4.4	1.8	4.0	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4
	20	2.5	5.5	2.5	5.5	2.3	5.1	2.5	5.5	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4	2.0	4.4
	25	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6	2.0	4.4	2.0	4.4	2.0	4.4	2.5	5.5	2.0	4.4	2.0	4.4	2.0	4.4	2.5	5.5
	32	4.0	8.8	4.5	9.9	3.2	7.0	5.0	11.0	3.5	7.7	3.5	7.7	3.0	6.6	3.5	7.7	3.5	7.7	3.5	7.7	3.0	6.6	3.5	7.7
	40	4.0	8.8	4.5	9.9	3.2	7.0	5.0	11.0	3.5	7.7	3.5	7.7	3.0	6.6	3.5	7.7	3.5	7.7	3.5	7.7	3.0	6.6	3.5	7.7
	50	5.0	11.0	5.5	12.1	3.7	8.1	5.5	12.1	4.0	8.8	4.0	8.8	3.1	6.8	4.5	9.9	4.0	8.8	4.5	9.9	3.1	6.8	4.5	9.9
	65	12.0	26.4	12.5	27.5	9.4	20.7	13.5	29.7	10.8	23.8	11.0	24.2	8.5	18.7	12.0	26.4	10.8	23.8	10.8	23.8	8.4	18.5	11.3	24.9
	80	12.0	26.5	12.5	27.6	9.4	20.7	13.5	29.8	10.5	23.2	11.0	24.3	8.5	18.7	12.0	26.5	11.0	24.3	11.0	24.3	8.5	18.7	11.5	25.4
	100	20.0	44.1	21.0	46.3	15.0	33.1	23.0	50.7	19.0	41.9	19.5	43.0	14.0	30.8	21.5	47.4	19.0	41.9	19.5	43.0	14.0	30.8	21.0	46.3

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type TA																							
		Air to Open, Air to Close																							
Type of Connection		Flanged End								Threaded End								Socket End							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	4.0	8.8	4.0	8.8	3.8	8.4	4.0	8.8	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.5	7.7	3.4	7.5	3.5	7.7
	20	4.0	8.8	4.5	9.9	3.8	8.4	4.5	9.9	4.0	8.8	4.0	8.8	3.8	8.4	4.0	8.8	4.0	8.8	4.0	8.8	3.8	8.4	4.0	8.8
	25	4.5	9.9	5.0	11.0	4.0	8.8	5.0	11.0	4.0	8.8	4.0	8.8	3.8	8.4	4.0	8.8	4.0	8.8	4.0	8.8	3.8	8.4	4.0	8.8
	32	6.0	13.2	6.0	13.2	5.2	11.4	6.5	14.3	5.0	11.0	5.0	11.0	4.5	9.9	5.5	12.1	5.0	11.0	5.0	11.0	4.5	9.9	5.5	12.1
	40	6.0	13.2	6.0	13.2	5.2	11.4	6.5	14.3	5.0	11.0	5.0	11.0	4.5	8.8	9.9	12.1	5.0	11.0	5.0	11.0	4.5	9.9	5.5	12.1
	50	6.5	14.3	7.0	15.4	5.7	12.5	7.5	16.5	5.5	12.1	6.0	13.2	4.6	8.8	10.1	13.2	5.5	12.1	6.0	13.2	4.6	10.1	6.0	13.2
	65	17.0	37.4	17.0	37.4	14.4	31.7	18.5	40.7	15.3	33.7	16.0	35.2	13.5	29.7	17.0	37.4	15.8	34.8	15.8	34.8	13.5	29.7	16.3	35.9
	80	17.0	37.5	17.5	38.6	14.4	31.8	18.5	40.8	15.5	34.2	16.0	35.3	13.5	32.0	29.8	37.5	16.0	35.3	16.0	35.3	13.5	29.8	16.5	36.4
	100	25.0	55.1	26.0	57.3	20.0	44.1	28.0	61.7	24.0	52.9	24.5	54.0	19.5	45.2	43.0	58.4	24.0	52.9	24.5	54.0	19.0	41.9	26.0	57.3

DIAPHRAGM VALVE

Diaphragm Valve Type 14

Unit:kg, Lb

Driving Method		Electric Actuator								Pneumatic Actuator															
Actuator Type		Type H								Type AN, Type AV															
										Double Acting								Air to Open							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	8.0	17.6	8.0	17.6	7.5	16.5	8.0	17.6	2.5	5.5	2.5	5.5	2.0	4.4	2.5	5.5	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6
	20	8.0	17.6	8.0	17.6	7.5	16.5	8.0	17.6	2.5	5.5	2.5	5.5	2.0	4.4	2.5	5.5	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6
	25	8.0	17.6	8.0	17.6	8.0	17.6	8.5	18.7	2.5	5.5	2.5	5.5	2.5	5.5	3.0	6.6	3.0	6.6	3.0	6.6	3.0	6.6	3.5	7.7
	32	8.5	18.7	8.5	18.7	8.0	17.6	8.5	18.7	3.0	6.6	3.0	6.6	2.5	5.5	3.0	6.6	3.5	7.7	3.5	7.7	3.0	6.6	3.5	7.7
	40	9.5	20.9	9.5	20.9	9.0	19.8	9.5	20.9	5.5	12.1	5.5	12.1	5.0	11.0	5.5	12.1	7.0	15.4	7.0	15.4	6.5	14.3	7.0	15.4
	50	10.5	23.2	10.5	23.2	9.5	20.9	10.5	23.2	6.5	14.3	6.5	14.3	5.5	12.1	6.5	14.3	8.0	17.6	8.0	17.6	7.0	15.4	8.0	17.6
	65	15.0	33.1	15.0	33.1	14.0	30.9	15.5	34.2	10.0	22.1	10.0	22.1	9.0	19.8	10.5	23.2	22.5	49.6	22.5	49.6	21.5	47.4	23.0	50.7
	80	16.5	36.4	16.5	36.4	15.0	33.1	17.0	37.5	12.0	26.5	12.0	26.5	10.5	23.2	12.5	27.6	34.5	76.1	34.5	76.1	33.0	72.8	35.0	77.2
	100	19.5	43.0	19.5	43.0	17.0	37.5	20.0	44.1	19.0	41.9	19.0	41.9	16.5	36.4	19.5	43.0	61.0	134.5	61.0	134.5	58.5	129.0	61.5	135.6

Unit:kg, Lb

Driving Method		Pneumatic Actuator							
Actuator Type		Type AN, Type AV							
		Air to Close							
Body Material		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	2.6	5.7	2.6	5.7	2.1	4.6	2.6	5.7
	20	2.6	5.7	2.6	5.7	2.1	4.6	2.6	5.7
	25	2.6	5.7	2.6	5.7	2.6	5.7	3.1	6.8
	32	3.1	6.8	3.1	6.8	2.6	5.7	3.1	6.8
	40	5.7	12.6	5.7	12.6	5.2	11.5	5.7	12.6
	50	6.7	14.8	6.7	14.8	5.7	12.6	6.7	14.8
	65	17.0	37.5	17.0	37.5	16.0	35.3	17.5	38.6
	80	24.5	54.0	24.5	54.0	23.0	50.7	25.0	55.1
	100	45.5	100.3	45.5	100.3	43.0	94.8	46.0	101.4

* 15mm - 50mm(1/2inch - 2inch) for Type-AN, 65mm - 100mm for Type-AV

True Union Diaphragm Valve Type 14

Unit:kg, Lb

Driving Method		Electric Actuator								Pneumatic Actuator															
Actuator Type		Type H								Type AN															
										Double Acting								Air to Open							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	8.0	17.6	8.0	17.6	7.5	17.6	8.0	18.0	2.3	5.1	2.3	5.1	1.8	4.0	2.3	5.1	2.3	5.1	2.8	6.2	2.3	5.1	2.8	6.2
	20	8.0	17.6	8.0	17.6	7.5	17.6	8.0	18.0	2.3	5.1	2.3	5.1	1.9	4.2	2.3	5.1	2.8	6.2	2.8	6.2	2.4	5.3	2.8	6.2
	25	8.0	17.6	8.0	17.6	8.0	17.6	8.5	19.0	2.3	5.1	2.3	5.1	2.4	5.3	2.8	6.2	2.8	6.2	2.8	6.2	2.9	6.4	2.8	6.2
	32	8.5	18.7	8.5	18.7	8.0	18.7	8.5	19.0	2.7	6.0	2.7	6.0	2.4	5.3	2.8	6.2	3.2	7.1	3.2	7.1	2.9	6.4	3.2	7.1
	40	9.5	20.9	9.5	20.9	9.0	20.0	9.5	20.0	5.3	11.7	5.3	11.7	4.8	10.6	5.3	11.7	6.3	13.9	6.8	15.0	6.3	13.9	6.8	15.0
	50	10.5	23.2	10.5	23.2	9.5	21.0	10.5	21.0	5.8	12.8	5.8	12.8	5.0	11.0	5.7	12.6	6.8	15.0	6.8	15.0	6.5	14.3	7.2	15.9

Unit:kg, Lb

Driving Method		Pneumatic Actuator							
Actuator Type		Type AN							
		Air to Close							
Body Material		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	2.3	5.1	2.4	5.3	1.9	4.2	2.4	5.3
	20	2.3	5.1	2.4	5.3	2.0	4.4	2.4	5.3
	25	2.3	5.1	2.4	5.3	2.5	5.5	2.9	6.4
	32	2.7	6.0	2.7	6.0	2.5	5.5	2.9	6.4
	40	5.5	12.1	5.5	12.1	5.0	11.0	5.5	12.1
	50	6.0	13.2	6.0	13.2	5.2	11.5	5.9	13.0

DIAPHRAGM VALVE

Diaphragm Valve Type 15, Type 72

Unit:kg, Lb

Driving Method		Electric Actuator												Pneumatic Actuator											
Actuator Type		Type H						Type S						Type AV											
														Double Acting						Air to Open					
Body Material		PVC		PP		PVDF		PVC		PP		PVDF		PVC		PP		PVDF		PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	125	45.0	99.2	42.5	93.7	47.0	103.6	62.5	137.8	60.0	132.3	64.5	142.2	31.0	68.4	28.5	62.8	33.0	72.8	138.0	304.3	136.0	299.9	141.0	310.9
	150	54.5	120.2	50.5	111.4	57.0	125.7	94.5	208.4	90.5	199.6	97.5	215.0	82.5	181.9	78.5	173.1	85.0	187.4	158.0	348.4	154.0	339.6	160.0	352.8
	200	—		—		—		118.0	—	113.0	—	123.0	—	113.0	249.2	107.0	235.9	118.0	260.2	—		—		—	
	250	—		—		—		177.0	—	167.0	—	185.0	—	183.0	403.5	173.0	381.5	190.0	419.0	—		—		—	

Unit:kg, Lb

Driving Method		Pneumatic Actuator					
Actuator Type		Type AV					
		Air to Close					
Body Material		PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	*1 125	73.0	161.0	70.5	155.5	75.0	165.4
	*1 150	87.5	192.9	83.5	184.1	90.0	198.5
	*2 200	—		—		—	
	*2 250	—		—		—	

*1 Type 15
*2 Type 72

Diaphragm Valve Type AI

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type AI																							
		Double Acting								Air to Open								Air to Close							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	1.0	2.2	1.1	2.4	0.9	2.0	1.1	2.4	1.2	2.7	1.3	2.9	1.0	2.2	1.3	2.9	1.1	2.4	1.2	2.7	1.0	2.2	1.2	2.7
	20	1.3	2.9	1.3	2.9	1.1	2.4	1.4	3.1	1.4	3.1	1.5	3.3	1.3	2.9	1.6	3.5	1.3	2.9	1.4	3.1	1.2	2.7	1.5	3.3
	25	1.5	3.3	1.7	3.8	1.3	2.9	1.7	3.8	1.8	4.0	1.9	4.2	1.6	3.5	1.9	4.2	1.6	3.5	1.7	3.8	1.4	3.1	1.8	4.0
	32	1.8	4.0	1.9	4.2	1.5	3.3	2.0	4.4	2.0	4.4	2.2	4.9	1.7	3.8	2.2	4.9	1.9	4.2	2.0	4.4	1.6	3.5	2.1	4.6
	40	4.0	8.8	4.2	9.3	3.6	8.0	4.3	9.5	4.9	10.8	5.1	11.3	4.5	9.9	5.2	11.5	4.4	9.7	4.6	10.2	4.0	8.8	4.7	10.4
	50	4.8	10.6	5.1	11.3	4.1	9.1	5.2	11.5	5.7	12.6	6.0	13.3	5.1	11.3	6.2	13.7	5.2	11.5	5.5	12.2	4.6	10.2	5.7	12.6

True Union Diaphragm Valve Type AI

Unit:kg, Lb

Driving Method		Pneumatic Actuator																							
Actuator Type		Type AI																							
		Double Acting								Air to Open								Air to Close							
Body Material		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF		PVC		C-PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	0.9	2.0	0.9	2.0	0.8	1.8	0.9	2.0	1.1	2.4	1.1	2.4	0.9	2.0	1.1	2.4	1.0	2.2	1.0	2.2	0.9	2.0	1.0	2.2
	20	1.1	2.4	1.2	2.7	1.0	2.2	1.2	2.7	1.3	2.9	1.4	3.1	1.2	2.7	1.4	3.1	1.2	2.7	1.3	2.9	1.1	2.4	1.3	2.9
	25	1.4	3.1	1.4	3.1	1.2	2.7	1.5	3.3	1.6	3.5	1.7	3.8	1.5	3.3	1.7	3.8	1.4	3.1	1.5	3.3	1.3	2.9	1.6	3.5
	32	1.6	3.5	1.7	3.8	1.4	3.1	1.8	4.0	1.8	4.0	1.9	4.2	1.6	3.5	2.0	4.4	1.7	3.8	1.8	4.0	1.5	3.3	1.8	4.0
	40	3.7	8.2	3.8	8.4	3.4	7.5	3.9	8.6	4.6	10.2	4.8	10.6	4.3	9.5	4.9	10.8	4.1	9.1	4.3	9.5	3.8	8.4	4.4	9.7
	50	4.5	9.9	4.6	10.2	3.9	8.6	4.7	10.4	5.4	11.9	5.5	12.2	4.8	10.6	5.6	12.4	5.0	11.1	5.0	11.1	4.3	9.5	5.1	11.3

CONTROL VALVE

Control Valve

Unit:kg, Lb

Driving Method		Electric Actuator				Pneumatic Actuator							
						Double Acting				Air to Open			
Body Material		PVC		PVDF		PVC		PVDF		PVC		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	15	4.5	9.9	6.3	13.9	6.1	13.5	6.4	14.1	7.9	17.4	8.2	18.1
	25	5.5	12.1	7.4	16.3	7.3	16.1	7.1	15.7	9.8	21.6	10.0	22.1
	50	16.0	35.3	—		10.0	22.1	—		15.0	33.1	—	
	80	19.0	41.9	—		14.0	30.9	—		24.0	52.9	—	
	100	22.0	48.5	—		19.0	41.9	—		34.0	75.0	—	

BUTTERFLY VALVE

Butterfly Valve

Unit:kg, Lb

Valve Type		Type 57																							
Driving Method		Electric Actuator												Pneumatic Actuator											
Actuator Type		Type T						Type S						Type TA											
														Double Acting						Air to Open, Air to Close					
Body Material		PVC		PP		PVDF		PVC		P P		PVDF		PVC		PP		PVDF		PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	40	5.7	12.6	5.5	12.1	5.9	13.0	15.5	34.2	15.3	33.7	15.7	34.6	2.8	6.2	2.6	5.7	3.0	6.6	4.5	9.9	4.3	9.5	4.7	10.4
	50	5.9	13.0	5.6	12.3	6.1	13.5	15.7	34.6	15.4	33.9	15.9	35.0	3.0	6.6	2.7	6.0	3.2	7.1	4.7	10.4	4.4	9.7	4.9	10.8
	65	6.1	13.5	5.8	12.8	6.4	14.1	15.9	35.0	15.6	34.4	16.2	35.7	4.0	8.8	3.7	8.2	4.3	9.5	6.8	15.0	6.5	14.3	7.1	15.7
	80	6.3	13.9	6.0	13.2	6.6	14.6	16.1	35.5	15.8	34.8	16.4	36.1	4.2	9.3	3.9	8.6	4.5	9.9	7.0	15.4	6.7	14.8	7.3	16.1
	100	6.9	15.2	6.4	14.1	7.4	16.3	16.7	36.8	16.2	35.7	17.2	37.9	6.1	13.5	5.6	12.3	6.6	14.6	11.2	24.7	10.7	23.6	11.7	25.8
	125	11.0	24.3	10.2	22.5	12.1	26.7	18.6	41.0	17.8	39.2	19.7	43.4	11.1	24.4	10.3	22.8	12.2	26.8	21.0	46.3	20.2	44.5	22.1	48.7
	150	16.6	36.6	15.7	34.6	18.0	39.7	19.4	42.8	18.5	40.8	20.8	45.8	11.9	26.2	11.0	24.3	13.3	29.3	21.8	81.7	20.9	46.1	23.2	51.1
	200	20.0	44.1	18.4	40.6	22.5	49.6	27.8	61.3	26.2	57.8	30.3	66.8	18.6	41.0	17.0	37.5	21.1	46.5	36.8	81.1	35.2	77.7	39.3	86.6
	250	38.5	84.9	35.9	79.2	42.1	92.8	32.5	71.7	29.9	65.9	36.1	79.6	32.5	71.7	29.9	65.9	36.1	79.6	64.5	142.2	62.9	138.7	69.1	152.4
	300	47.2	104.1	43.0	94.8	53.0	116.9	94.3	207.9	90.1	198.7	100.1	220.7	41.7	91.9	37.5	82.7	47.5	104.7	74.7	164.7	70.5	155.5	80.5	177.5
	350	49.9	110.0	45.4	100.1	57.0	125.7	97.0	213.9	92.5	204.0	104.1	229.5	96.1	211.9	91.6	202.0	103.2	227.6	196.1	432.4	191.6	422.5	203.2	448.1
	400	—		—		—		—		—		—		—		—		—		—		—		—	
	450	—		—		—		—		—		—		—		—		—		—		—		—	
	500	—		—		—		—		—		—		—		—		—		—		—		—	
	600	—		—		—		—		—		—		—		—		—		—		—		—	

Unit:kg, Lb

Valve Type		Type 56																							
Driving Method		Electric Actuator												Pneumatic Actuator											
Actuator Type		Type H						Type S						Type TA											
														Double Acting						Air to Open, Air to Close					
Body Material		PVC		PP		PVDF		PVC		P P		PVDF		PVC		PP		PVDF		PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	40	—		—		—		—		—		—		—		—		—		—		—		—	
	50	—		—		—		—		—		—		—		—		—		—		—		—	
	65	—		—		—		—		—		—		—		—		—		—		—		—	
	80	—		—		—		—		—		—		—		—		—		—		—		—	
	100	—		—		—		—		—		—		—		—		—		—		—		—	
	125	—		—		—		—		—		—		—		—		—		—		—		—	
	150	—		—		—		—		—		—		—		—		—		—		—		—	
	200	—		—		—		—		—		—		—		—		—		—		—		—	
	400	—		—		—		—		122.0	269.0	154.0	339.6	—		106.0	233.7	138.0	304.3	—		206.0	454.2	238.0	524.8
	450	—		—		—		—		—		—		—		—		—		—		—		—	
	500	—		—		—		—		—		—		—		—		—		—		—		—	
	600	—		—		—		—		—		—		—		—		—		—		—		—	

Unit:kg, Lb

Valve Type		Type 75								Type 55							
Driving Method		Electric Actuator				Pneumatic Actuator				Electric Actuator				Pneumatic Actuator			
Actuator Type		Type S				Type TW				Type H		Type S		Type TA			
						Double Acting								Double Acting		Air to Open, Air to Close	
Body Material		PP		PVDF		PP		PVDF		FCD-S		FCD-S		FCD-S		FCD-S	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	40	—		—		—		—		—		—		—		—	
	50	—		—		—		—		7.5	16.5	16.0	35.3	4.5	9.9	6.0	13.2
	65	—		—		—		—		—		—		—		—	
	80	—		—		—		—		9.0	19.8	17.5	38.6	7.0	15.4	9.5	20.9
	100	—		—		—		—		10.7	23.6	19.0	41.9	10.0	22.1	15.0	33.1
	125	—		—		—		—		17.0	37.5	23.5	51.8	14.0	30.9	19.0	41.9
	150	—		—		—		—		26.2	57.8	27.0	59.5	20.5	45.2	30.1	66.4
	200	—		—		—		—		34.1	75.2	41.5	91.5	33.5	73.9	50.6	111.6
	250	—		—		—		—		55.7	122.8	49.5	109.1	52.0	114.7	84.7	186.8
	300	—		—		—		—		—		—		—		—	
	350	—		—		—		—		—		—		—		—	
	400	—		—		—		—		—		—		—		—	
	450	137.0	302.1	177.0	390.3	146.0	321.9	185.0	407.9	—		—		—		—	
	500	150.0	330.8	201.0	443.2	158.0	348.4	209.0	460.8	—		—		—		—	
	600	178.0	392.5	254.0	560.1	186.0	410.1	263.0	579.9	—		—		—		—	

BUTTERFLY VALVE

Rotary Damper

Unit:kg, Lb

Valve Type		Rotary Damper																					
Driving Method		Electric Actuator												Pneumatic Actuator									
Actuator Type		Type T						Type S						Type TA									
														Double Acting						Air to Open, Air to Close			
Body Material		PVC		PP		PVDF		PVC		PP		PVDF		PVC		PP		PVDF		PVC		PP		PVDF	
Unit		kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb	kg	Lb
Nominal Size (mm)	40	5.6	12.3	5.1	11.2	5.5	12.1	15.4	34.0	15.2	33.5	15.6	34.4	2.4	5.3	2.1	4.6	2.5	5.5	4.1	9.0	3.8	8.4	4.2	9.3
	50	5.7	12.6	5.2	11.5	5.6	12.3	15.6	34.4	15.3	33.7	15.8	34.8	2.5	5.5	2.2	4.9	2.7	6.0	4.2	9.3	3.9	8.6	4.4	9.7
	65	6.0	13.2	5.3	11.7	5.9	13.0	15.8	34.8	15.5	34.2	16.1	35.5	2.8	6.2	2.4	5.3	3.0	6.6	4.5	9.9	4.1	9.0	4.7	10.4
	80	6.1	13.5	5.4	11.9	6.0	13.2	15.9	35.1	15.6	34.4	16.2	35.7	2.9	6.4	2.6	5.7	3.2	7.1	4.6	10.1	4.3	9.5	4.9	10.8
	100	6.7	14.8	5.8	12.8	6.8	15.0	16.4	36.2	15.9	35.1	16.9	37.3	3.5	7.7	3.0	6.6	4.0	8.8	5.2	11.5	4.7	10.4	5.7	12.6
	125	9.0	19.8	7.1	15.7	9.0	19.8	18.2	40.1	17.4	38.4	19.3	42.6	7.2	15.9	6.3	13.9	8.2	18.2	12.3	27.1	11.4	25.1	13.3	29.3
	150	10.5	23.2	8.3	18.3	10.7	23.6	18.8	41.5	17.9	39.5	20.2	44.5	8.2	18.1	6.9	15.2	9.3	20.5	13.3	29.3	12.0	26.5	14.4	31.8
	200	21.1	46.5	17.3	38.1	21.4	47.2	28.0	61.7	26.4	58.2	30.5	67.3	13.8	30.4	11.9	26.2	16.0	35.3	24.1	53.1	22.2	49.0	26.3	58.0
	250	26.9	59.3	21.9	48.3	29.7	65.5	29.8	65.7	27.2	60.0	33.4	73.6	21.4	47.2	18.1	39.9	26.0	57.3	31.7	69.9	28.4	62.6	36.3	80.0
	300	35.6	78.5	25.9	57.1	37.8	83.3	39.2	86.4	35.5	42.4	39.5	87.1	26.1	57.6	21.7	47.8	33.6	74.1	36.4	80.3	32.0	70.6	43.9	96.8
	350	38.3	84.5	27.9	61.5	41.9	92.4	44.6	98.3	42.6	93.9	42.2	93.1	32.7	72.1	27.8	61.3	41.8	92.2	50.5	111.4	45.6	100.5	59.6	131.4
	400	—		46.5	102.5	64.7	142.7	—		49.0	108.0	59.0		—		51.8	114.2	83.8	184.8	—		84.8	187.0	116.8	257.5
	450	—		—		—		—		61.1	134.7	100.1		—		59.3	130.8	98.3	216.8	—		97.2	214.3	136.2	300.3
	500	—		—		—		—		72.1	159.0	123.1		—		70.3	155.0	121.3	267.5	—		109.2	240.8	160.2	353.2
	600	—		—		—		—		99.2	218.7	176.2		—		97.4	214.8	174.4	384.6	—		137.2	302.5	214.2	472.3

PDCPD Butterfly Valve

Unit:kg, Lb

Driving Method		Electric Actuator	
Actuator Type		Type S	
Body Material		PDCPD	
Unit		kg	Lb
Nominal Size (mm)	700	330	727.9
	800	460	1014.4
	900	530	1168.3
	1000	730	1610.4
	1100	1045	2305.3
	1200	1290	2843.5

●The Number of Turns open/close Diaphrangm Valve

Valve Type			Diaphrangm Valve		
			Type14	Type15	Type72
Nominal Size (mm)	15 mm	1/2 inch	5	—	—
	20	3/4	5	—	—
	25	1	6	—	—
	32	1 1/4	6	—	—
	40	1 1/2	5	—	—
	50	2	6	—	—
	65	2 1/2	8	—	—
	80	3	10	—	—
	100	4	10	—	—
	125	5	—	10	—
	150	6	—	11	—
	200	8	—	—	19
	250	12	—	—	25

Gate Valve

Valve Type		Gate Valve						
		Type P			Type S			Rising Stem (Type S)
		CAP	Hand Wheel		CAP	Hand Wheel		Hand Wheel
		SUS stem	PVC stem	SUS stem	SUS stem	PVC stem	SUS stem	SUS stem
Nominal Size (mm)	32	16 1/4	5	16 1/4	12 1/4	—	12 1/4	12 1/4
	40	16 1/4	5	16 1/4	14	—	14	14
	50	15	6	15	13 1/4	5 1/4	13 1/4	13
	65	15	6 1/4	15	13 1/2	5 1/2	13 1/2	13 1/2
	80	17	6	17	15 1/2	5 1/2	15 1/2	15 1/2
	100	18 1/4	7 3/4	18 1/4	17	7 1/4	17	17
	125	23 1/2	7 1/4	23 1/2	22 1/2	7	22 1/2	22 1/2
	150	19 3/4	8 3/4	19 3/4	18 3/4	8 1/4	18 3/4	18 3/4
	200	25 3/4	18	25 3/4	25	17 1/2	25	25
	250	25	18 3/4	25	—	—	—	24 1/4
	300	30 1/4	22 3/4	30 1/4	—	—	—	—
	350	35 1/2	26 1/2	35 1/2	—	—	—	—

Stop Valve

Valve Type		Stop Valve	
Nominal Size (mm)	15	1/2	3.25
	20	3/4	3.75
	25	1	3.5
	32	1 1/4	3.25
	40	1 1/2	3.25
	50	2	3.75
	65	2 1/2	7
	80	3	7.25
	100	4	8.25

TECHNICAL DATA TS Method of "Asahi AV" PVC Pipes

Solvent Welding for PVC, HI-PVC and C-PVC

Ⅰ. Principle

TS method has been widely used in Japan for joining PVC pipes with TS fittings, which utilizes the elasticity of PVC wall and the swelling of PVC surface by solvent cement.

Refer to **Appendix (A)** for details of principle.

Ⅱ. Attention Required During Installation

(1) The worker should use clean tools and wear clean gloves when handling PVC pipe and fittings so as to prevent from sticking foreign materials, such as dust and oils, on both internal and external surfaces.

(2) "Asahi AV" Solvent Cement should be used for joining Asahi AV PVC pipes with TS fittings. Also, it's type should be properly selected depend on surrounding condition (Temperature etc.), material (PVC, HI-PVC or C-PVC) and Nominal Size (refer to **Ⅲ. Preparation of Tools**).

(3) To prevent the solvent cement from coming out onto both external and internal surfaces of pipes and fittings, the worker should strictly follow the procedures described below.

(4) If the solvent cement is not applied directly on PVC surfaces of the joining part, the adhesion of pipes and fittings shall not be attained properly. Therefore, the joining portion should be cleaned with acetone-impregnated gauze, and chips/dust of cutting and chamfering (beveling) should be removed completely prior to applying the solvent cement.

Ⅲ. Preparation of Tools

Tools	Uses
Pipe-Cutter	Cutting of pipe
Chamfering Tool or Knife	Chamfering of pipe edge
Felt-Tipped Pen (Tapered)	Marking of guideline, cutting line etc.
Tape	Scribing of cutting line
Ruler	Measuring of dimensions
Gauze	Cleaning
Acetone	Cleaning
Solvent cement - AV #32 - AV #52 - AV #62 - AV #90 - AV #88	Cementing - Low Viscosity, Quick Dry, for PVC, in Blue Can - High Viscosity, Quick Dry, for PVC, in Red Can - High Viscosity, Slow Dry, for PVC, in Yellow Can - for HI-PVC, in Dark Blue Can - for C-PVC, in Brown Can
Brush	Applying solvent cement
Gloves	Protection of hands, prevention sticking of oil on pipe and fitting
Waste Cloth	Wiping off of solvent cement
Insertion Tool	Insertion of pipe (For Size of 65㎜ and above, Puller or Lever-Block is required)

Ⅳ. Solvent Welding Procedures

Name of Operation	Description of Operation	Notes
1) Cutting of Pipe	Winding the tape around the pipe at right angle to the central axis of the pipe, and draw a cutting line along the tape with the felt-tipped pen.  Cut the pipe along the cutting line.	It is necessary for cutting the pipe at right angle to the central axis of the pipe and also without irregularity.
2) Chamfering (Beveling)	Chamfer the edge of outer surface (at the end of the pipe to be inserted) appropriately in a small R. 	Be sure to keep chips out both inside and outside the pipe.
3) Confirming Insertion Length (a)	Insert the pipe lightly into the socket of the fitting and mark a zero point (Lo : from the end of pipe). Confirm that Lo is within a range of 1/3 - 2/3 of total socket-length (socket-depth) (Ls).	For the size of 40A and below: go next step.
4) Confirming of Insertion Length (b)	Measure the socket-length and draw the guide line (L) on the pipe with the felt-tipped pen. 	For the size of 13A to 40A, L is same as Ls. L = Ls For the size of 50A and above, please add following figures (Li) on the Lo. L = Lo + Li Length to be added on Lo.

Socket-Length of TS Fittings Unit: mm

Size	13	16	20	25	30	40
Ls	26	30	35	40	44	55
Size	50	65	75	100	125	150
Ls	63	61	64	84	104	132

Unit: mm

Size	50	65	75	100	125	150
Li	20	20	25	30	35	45

Name of Operation	Description of Operation	Notes
5) Cleaning	In case any foreign materials are stuck on both internal and external surface of the pipe, remove them with acetone-impregnated gauze.  Clean the cementing surfaces. (The external surface of the pipe and internal surface of the socket of the fitting). [Wipe off dust, foreign materials etc. with acetone-impregnated gauze.]	Be sure not to cause any secondary contamination. Clean surfaces thoroughly and remove any water, foreign materials etc. if on the surfaces, where solvent is applied, prior to proceeding to the next step.
6) Applying Solvent Cement (Socket of Fitting)	Applying the solvent cement on the internal surface of the socket of the fitting.	Apply the solvent cement on the surface a little thin and uniformly so that no excess solvent cement flows onto the portion where media contact.
7) Applying Solvent Cement (Pipe)	Then, applying the solvent cement on external surface of the pipe from the end to the uideline direction.  Select type of solvent cement (#32, #52, 62, #90 & #88) properly depending on Temperature, Nom. Size and Material.	Quantity of solvent cement applied on the pipe and on the fitting: Standard Ratio = 7 : 3 Refer to "Cement" Page for the standard quantity of the solvent cement per each joint and by each Nom. Size.

Name of Operation	Description of Operation	Notes
8) Insertion / Holding	Immediately after applying the solvent cement, insert the pipe into the socket in a stroke.  After complete insertion, hold the pipe and fitting to prevent from coming out. ＊ In case of the Nom. Size of 65A and above, use the insertion tool such as Puller, Lever-Block etc.	Insert watching the guideline as a guide. Don' t strike the pipe into the socket with a hammer, or the like. Don' t twist but insert the pipe straight. Hold the pipe for 1 minute and more in summer, or for 2 minutes and more in winter, because the taper of socket may cause the pipe coming out from the socket.
9) Wiping Off	Wipe off the excess solvent cement pressed out from the joined portion. 	Use waste cloth.
10) Curing	Cure the piping for 24 hours and more in the summer or 72 hours and more in the winter without loading on the joined portion.	Good ventilation on the welded portion is desirable for complete evaporation of the solvent in the solvent cement [to avoid ossible solvent cracking].

Cautions

【Precaution for use】

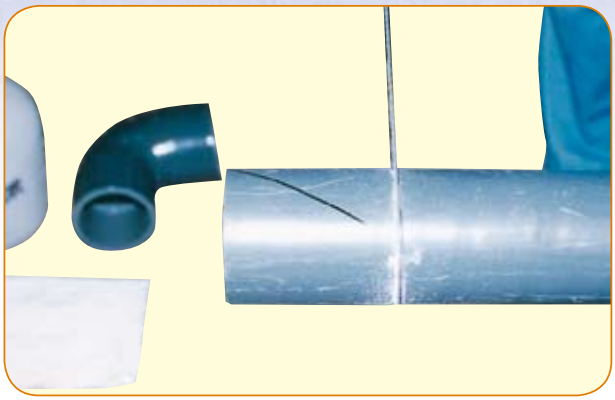
- Solvent cements for pipes and fittings are flammable. Extinguish all flames or other ignition sources in working or storage areas.
- Be sure to work only in a well-ventilated space.
- Avoid any contact with all types of solvent cements on eye and skin. Ingestion or intentional inhalation of solvent vapors can be harmful or fatal to your health.
- For best results, installation should not be done at the temperature 5oC or lower.
- Be sure to use only Asahi AV adhesive.
- Apply adhesive equally with proper amount otherwise evaporation of solvent vapors cause attack internal components.
- After insertion, surfaces of the pipe and fitting should be cleaned by rag.
- After finishing installation of piping, inlet and outlet of piping should be free and open to release evaporation of solvent vapors.
- Don’ t move the pipe and fitting just after jointing. Please leave them free from any stress or impact at least 15 minutes after the installation.
- Any extraordinary stress must be removed from the pipe and fitting when they are installed.
- The piping must be cured more than 24 hours prior to actual operation.

【Precaution for use (only C-PVC products)】

- Be sure that the laying depth under concrete is less than 1m.
- The surface of the pipe will be whitened slightly after long time service under the working temperature range of 80℃ to 90℃ . This phenomenon does not cause any fail of the performance in mechanically.

TECHNICAL DATA FOR AV PIPES

Installation Method



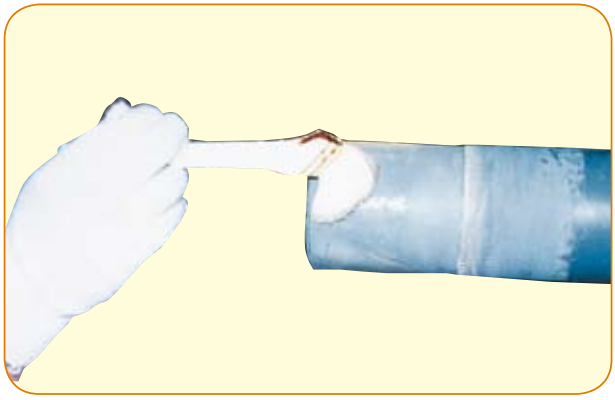
1 Cut the pipe to the required length, mark the external surface of the pipe with reference lines, and cut circumferential and helical notches with a saw or the like.



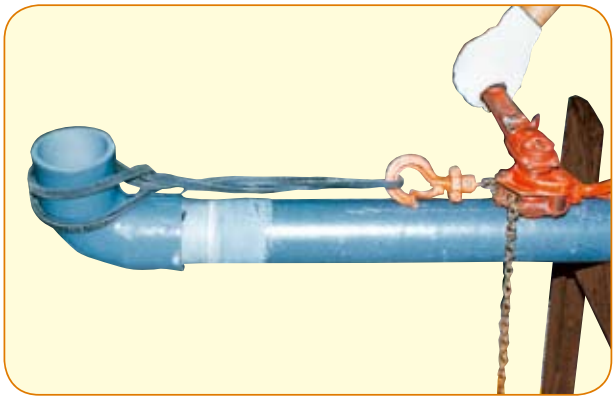
2 Heat the pipe uniformly with a propane gas burner until the FRP layer softens a little.



3 Peel off the FRP layer by pinching it with pliers or the like.



4 Finish the stripped surface with sand paper or the like, chamfer the end to 45° , and apply adhesive uniformly to the mating surfaces of the pipe and fitting.



5 Insert the pipe into the fitting with a lever block or the like.



6 Wipe off any adhesie sticking out, and weld the parts.



7 After applying the primer, fill in Q-coat putty which preliminarily well pug with 1-2% volume ratio of hardener, and apply it to the junction to a smooth finish with spatula.



8 Add a curing agent to polyester resin, apply them to the junction with a spatula or roller, and build a lamination of glass fiber impregnated with polyester resin.

Mixing Ratios and Setting Times

(Volume ratios to 100 of polyester resin)

Outside air temperature	Curing agent		
	0.5%	1%	2%
10℃	–	42min	14min
20℃	45min	20min	7min
30℃	20min	7min	–
40℃	5min	–	–

Intervals between Supports for AV PIPE Type SU and Type GU

It is recommended that piping supports are installed in the straight runs. Refer to the table below to determine the proper spacing distance.

AV Pipe - Type SU

Unit:m

Size / Temperature	13mm~25mm	30mm~50mm	65mm~100mm	125mm~150mm	200mm~300mm	350mm~400mm	450mm~500mm	600mm~700mm
20℃	1.0	1.5	2.0	2.25	2.5	2.75	3.0	3.5
50℃	1.0	1.5	1.75	2.0	2.25	2.5	2.75	3.0
80℃	1.0	1.25	1.5	1.75	2.0	2.25	2.5	2.75

AV Pipe - Type GU

Unit:m

Size / Temperature	13mm~25mm	30mm~40mm	50mm~65mm	80mm~125mm	150mm~250mm	300mm~350mm	400mm~500mm	600mm~700mm
20℃	1.0	1.5	2.0	2.25	2.75	2.75	3.0	3.5
60℃	1.0	1.25	1.75	2.0	2.5	2.5	2.75	3.25
95℃	1.0	1.25	1.5	1.75	2.0	2.0	2.75	3.0

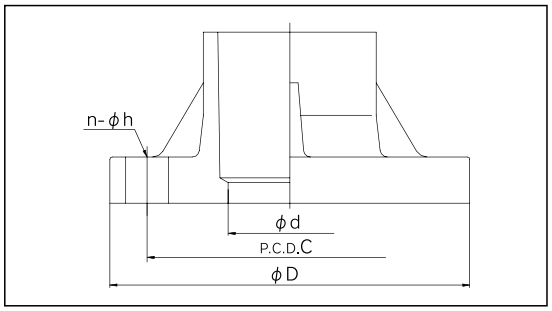
Conversion Table for Pressure Units

Units	MPa	KPa	Kgf/cm^2	bar	psi (Lbf/in^2)	mmH_2O	mmHg (Torr)	atm
1MPa		1000 KPa	1.0197×10 kgf/cm^2	10 bar	145.04 psi	1.0197×10^5 mmH_2O	7.5006×10^3 mmHg	9.8692 atm
1KPa	1.0×10^{-3} MPa		1.0197×10^{-3} kgf/cm^2	1.0×10^{-2} bar	0.14504 psi	1.0197×10^2 mmH_2O	7.5006 mmHg	9.8692×10^{-3} atm
$1Kgf/cm^2$	9.8067×10^{-2} MPa	98.067 KPa		0.98067 bar	14.223 psi	1×10^4 mmH_2O	7.3556×10^2 mmHg	9.6784×10^{-1} atm
1bar	0.1 MPa	100 KPa	1.0197 kgf/cm^2		14.504 psi	1.0197×10^4 mmH_2O	7.5006×10^2 mmHg	0.98692 atm
1psi (Lbf/in^2)	6.8948×10^{-3} MPa	6.8948 KPa	7.0307×10^{-2} kgf/cm^2	6.8948×10^{-2} bar		7.0306×10^2 mmH_2O	51.715 mmHg	6.8046×10^{-2} atm
$1mmH_2O$	9.8067×10^{-6} MPa	9.8067×10^{-3} KPa	1×10^{-5} kgf/cm^2	9.8067×10^{-5} bar	1.4224 psi		7.3556×10^{-2} mmHg	9.6784×10^{-5} atm
1mmHg (Torr)	1.3332×10^{-4} MPa	1.3332×10^{-1} KPa	1.3595×10^{-3} kgf/cm^2	1.3332×10^{-3} bar	1.9337×10^{-2} psi	13.595 mmH_2O		1.3158×10^{-3} atm
1atm	1.0133×10^{-1} MPa	1.0133×10^{-2} KPa	1.0333 kgf/cm^2	1.0133 bar	14.697 psi	1.0333×10^4 mmH_2O	7.6004×10^2 mmHg	

The parameters shown in the table are approximate values for only reference.

Comparison of Flanged End (JIS, ANSI, DIN and BS)

		JIS 10K					ANSI CLASS 125/150							DIN PN10					TABLE-D							
Size		JIS B 2238					ASME B16.5							DIN 2501					BS10							
d	d	D	P.C.D.C	h	n	Bolt	D		P.C.D.C		h		n	Bolt	D	P.C.D.C	h	n	Bolt	D		P.C.D.C		h		n	Bolt
mm	Inch	mm	mm	mm	-	-	Inch	mm	Inch	mm	Inch	mm	-	-	mm	mm	mm	-	-	Inch	mm	Inch	mm	Inch	mm	-	-
10mm	3/8"	90	65	15	4	M12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15mm	1/2"	95	70	15	4	M12	3.5	89	2.4	60	0.6	16	4	UNC1/2	95	65	14	4	M12	3.8	95	2.6	67	0.5	13	4	-
20mm	3/4"	100	75	15	4	M12	3.9	98	2.8	70	0.6	16	4	UNC1/2	105	75	14	4	M12	4	102	2.9	73	0.5	13	4	-
25mm	1"	125	90	19	4	M16	4.3	108	3.1	79	0.6	16	4	UNC1/2	115	85	14	4	M12	4.5	114	3.3	83	0.5	13	4	-
32mm	1-1/4"	135	100	19	4	M16	4.6	117	3.5	89	0.6	16	4	UNC1/2	140	100	18	4	M16	4.8	121	3.4	87	0.5	13	4	-
40mm	1-1/2"	140	105	19	4	M16	5	127	3.9	98	0.6	16	4	UNC1/2	150	110	18	4	M16	5.3	133	3.9	98	0.5	13	4	-
50mm	2"	155	120	19	4	M16	6	152	4.8	121	0.8	19	4	UNC5/8	165	125	18	4	M16	6	152	4.5	114	0.6	16	4	-
65mm	2-1/2"	175	140	19	4	M16	7	178	5.5	140	0.8	19	4	UNC5/8	185	145	18	4	M16	6.5	165	5	127	0.6	16	4	-
80mm	3"	185	150	19	8	M16	7.5	191	6	152	0.8	19	4	UNC5/8	200	160	18	8	M16	7.3	184	5.8	146	0.6	16	4	-
100mm	4"	210	175	19	8	M16	9	229	7.5	191	0.8	19	8	UNC5/8	220	180	18	8	M16	8.5	216	7	178	0.6	16	4	-
125mm	5"	250	210	23	8	M20	10	254	8.5	216	0.9	22	8	UNC3/4	250	210	18	8	M16	10	254	8.3	210	0.6	16	8	-
150mm	6"	280	240	23	8	M20	11	279	9.5	241	0.9	22	8	UNC3/4	285	240	22	8	M20	11	279	9.3	235	0.6	16	8	-
200mm	8"	330	290	23	12	M20	13.5	343	11.8	298	0.9	22	8	UNC3/4	340	295	22	8	M20	13.3	337	11.5	292	0.6	16	8	-
250mm	10"	400	355	25	12	M22	16	406	14.3	362	1	25	12	UNC7/8	395	350	22	12	M20	16	406	14	356	0.8	19	8	-
300mm	12"	445	400	25	16	M22	19	483	17	432	1	25	12	UNC7/8	445	400	22	12	M20	18	457	16	406	0.8	19	12	-
350mm	14"	490	445	25	16	M22	21	533	18.8	476	1.1	29	12	UNC1	505	460	22	16	M20	20.8	527	18.5	470	0.9	22	12	-
400mm	16"	560	510	27	16	M24	23.5	597	21.3	540	1.1	29	16	UNC1	565	515	26	16	M24	22.8	578	20.5	521	0.9	22	12	-
450mm	18"	620	565	27	20	M24	25	635	22.8	578	1.3	32	16	UNC1-1/8	615	565	26	20	M24	25.3	641	23	584	0.9	22	12	-
500mm	20"	675	620	27	20	M24	27.5	699	25	635	1.3	32	20	UNC1-1/8	670	620	26	20	M24	27.8	705	25.3	641	0.9	22	16	-
600mm	24"	795	730	33	24	M30	32	813	29.5	749	1.4	35	20	UNC1-1/4	780	725	30	20	M27	32.5	826	29.8	756	1	25	16	-
700mm	28"	905	840	33	24	M30	36.5	927	34	864	1.4	35	28	-	895	840	30	24	M27	-	-	-	-	-	-	-	-
800mm	32"	1020	950	33	28	M30	41.8	1060	38.5	978	1.6	41	28	-	1015	950	33	24	M30	-	-	-	-	-	-	-	-
900mm	36"	1120	1050	33	28	M30	46	1168	42.8	1086	1.6	41	32	-	1115	1050	33	28	M30	46.3	1175	43	1092	1.3	32	24	-
1,000mm	40"	1235	1160	39	28	M36	50.8	1289	47.3	1200	1.6	41	36	-	1230	1160	36	28	M33	-	-	-	-	-	-	-	-
1,100mm	44"	-	-	-	-	-	55.3	1403	51.8	1314	1.6	41	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,200mm	48"	-	-	-	-	-	59.5	1511	56	1422	1.6	41	44	-	1455	1380	39	32	M36	58.8	1492	55.5	1410	1.3	32	32	-



Comparison of JIS Threads and BS Threads

BS21 Thread

1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Size		Number of Threads in 25.4 mm	Pitch	Depth of Thread	Basic Diameters at Gauge Plane			Gauge Length (See Note1)				Minimum Length of Useful Thread on Pipe End (See Note1)			Fitting Allowance (See Note1)	Wrenching Allowance (See Note1)	Tolerance on Position of Gauge Plane Relative to Face of Internally Threaded Parts (See Note1)	Diametral Tolerance on Parallel Internal Threads
R/Rc					Major (Gauge Diameter)	Pitch	Minor	Basic	Tolerance	Maximum	Minimum	Basic Gauge Length	Max Gauge Length	Minimum Gauge Length				
inch	mm		P	h	d	d_2	d_1		$T_1/2$(+/-)								$T_1/2$(+/-)	(+/-)
1/4		19	1.337	0.856	13.157	12.301	11.445	6.0	1.3	7.3	4.7	9.7	11.0	8.4	3.7	2.0	1.7	0.104
3/8	13	19	1.337	0.856	16.662	15.806	14.950	6.4	1.3	7.7	5.1	10.1	11.4	8.8	3.7	2.0	1.7	0.104
1/2	15	14	1.814	1.162	20.955	19.793	18.631	8.2	1.8	10.0	6.4	13.2	15.0	11.4	5.0	2.7	2.3	0.142
3/4	20	14	1.814	1.162	26.441	25.279	24.117	9.5	1.8	11.3	7.7	14.5	16.3	12.7	5.0	2.7	2.3	0.142
1	25	11	2.309	1.479	33.249	31.770	30.291	10.4	2.3	12.7	8.1	16.8	19.1	14.5	6.4	3.5	2.9	0.180
1-1/4	32	11	2.309	1.479	41.910	40.431	38.952	12.7	2.3	15.0	10.4	19.1	21.4	16.8	6.4	3.5	2.9	0.180
1-1/2	40	11	2.309	1.479	47.803	46.324	44.845	12.7	2.3	15.0	10.4	19.1	21.4	16.8	6.4	3.5	2.9	0.180
2	50	11	2.309	1.479	59.614	58.135	56.656	15.9	2.3	18.2	13.6	23.4	25.7	21.1	7.5	4.6	2.9	0.180
2-1/2	65	11	2.309	1.479	75.184	73.705	72.226	17.5	3.5	21.0	14.0	26.7	30.2	23.2	9.2	5.8	3.5	0.216
3	80	11	2.309	1.479	87.884	86.405	84.926	20.6	3.5	24.1	17.1	29.8	33.3	26.3	9.2	5.8	3.5	0.216
4	100	11	2.309	1.479	113.030	111.551	110.072	25.4	3.5	28.9	21.9	35.8	39.3	32.3	10.4	6.9	3.5	0.216

Note.1; Basic gauge length and limits of size are expressed in turns of threads. Liner equivalents are given in parentheses and are rounded to 0.1mm. Tolerance and fitting allowance are expressed in number of turns of thread and in millimeters.

Unit: mm

JIS B 0203 Thread

1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Size		Number of Threads in 25.4 mm	Pitch	Hight of Thread	Radius of Rounded Crests and Roots	Gauge Diameter			Gauge Plane			Tolerance of Parallel Internal Threads	Minimum Length of Useful Thread			
R/Rc						Basic Major Diameter	Basic Pitch Diameter	Basic Minor Diameter	Gauge Length (Male Thread)	Tolerance (Male Thread)	Tolerance (Female Thread)		Fitting Allowance (Male Thread)	Incomplete Taper Thread Length (Female Thread)	Incomplete Parallel Thread Length (Female Thread)	Complete Parallel and Taper Thread Length (Female Thread)
inch	mm	n	P	h	r or r'	d or D	d_2 or D_2	d_1 or D_1	a	b (+/-)	c (+/-)	(+/-)	f	l	l'	t
1/4		19	1.337	0.856	0.18	13.157	12.301	11.445	6.01	1.34	1.67	0.104	3.7	9.4	11.0	6.7
3/8	13	19	1.337	0.856	0.18	16.662	15.806	14.950	6.35	1.34	1.67	0.104	3.7	9.7	11.4	7.0
1/2	15	14	1.814	1.162	0.25	20.955	19.793	18.631	8.16	1.81	2.27	0.142	5.0	12.7	15.0	9.1
3/4	20	14	1.814	1.162	0.32	26.441	25.279	24.117	9.53	1.81	2.27	0.142	5.0	14.1	16.3	10.2
1	25	11	2.309	1.479	0.32	33.249	31,770	30.291	10.39	2.31	2.89	0.181	6.4	16.2	19.1	11.6
1-1/4	32	11	2.309	1.479	0.32	41.910	40.431	38.952	12.70	2.31	2.89	0.181	6.4	18.5	21.4	13.4
1-1/2	40	11	2.309	1.479	0.32	47.803	46.324	44.845	12.70	2.31	2.89	0.181	6.4	18.5	21.4	13.4
2	50	11	2.309	1.479	0.32	59.614	58.135	56.656	15.88	2.31	2.89	0.181	7.5	22.8	25.7	16.9
2-1/2	65	11	2.309	1.479	0.32	75.184	73.705	72.226	17.46	3.46	3.46	0.216	9.2	26.7	30.1	18.6
3	80	11	2.309	1.479	0.32	87.884	86.405	84.926	20.64	3.46	3.46	0.216	9.2	29.8	33.3	21.1
4	100	11	2.309	1.479	0.32	113.030	111.551	110.072	25.40	3.46	3.46	0.216	10.4	35.8	39.3	25.9

Note; Pursuant to ISO 7-1: 1994, Pipe threads where pressure tight joints are made on the threads - Part1: Dimensions, Tolerance and Designation.

Unit: mm

Comparison of JIS PVC, ASTM PVC, BS PVC, DIN PVC Pipe & Fittings

Size		IPS PVC PIPE AND FITTING																	
		PVC Pipe (Sch80) ASTM D 1785							Fitting (Sch80) : ASTM D 2467										
		Outside Diameter					Wall Thickness		Socket ID										Length
									Socket Entrance Diameter					Socket Bottom Diameter					
									A					B					C
inch	mm	Base OD	Ave OD Tolerance (+/-)	Max Out-Of-Roundness	Min OD	Max OD	Min Thk	Tolerance (+)	Base ID	Tolerance	Max Out-Of-Roundness	Min Enter ID	Max Enter ID	Base ID	Tolerance	Max Out-Of-Roundness	Min Bottom ID	Max Bottom ID	Min
1/8	-	10.29	0.10	0.41	10.19	10.39	2.41	0.51	10.59	0.10	0.41	10.49	10.69	10.18	0.10	0.41	10.08	10.28	12.70
1/4	-	13.72	0.10	0.41	13.62	13.82	3.20	0.51	14.02	0.10	0.41	13.92	14.12	13.61	0.10	0.41	13.51	13.71	15.88
3/8	13	17.14	0.10	0.41	17.04	17.24	3.20	0.51	17.45	0.10	0.41	17.35	17.55	17.04	0.10	0.41	16.94	17.14	19.05
1/2	15	21.34	0.10	0.41	21.24	21.44	3.73	0.51	21.54	0.10	0.41	21.44	21.64	21.23	0.10	0.41	21.13	21.33	22.22
3/4	20	26.67	0.10	0.51	26.57	26.77	3.91	0.51	26.87	0.10	0.51	26.77	26.97	26.57	0.10	0.51	26.47	26.67	25.40
1	25	33.40	0.13	0.51	33.27	33.53	4.55	0.53	33.65	0.13	0.51	33.52	33.78	33.27	0.13	0.51	33.14	33.40	28.58
1 1/4	32	42.16	0.13	0.61	42.03	42.29	4.85	0.58	42.42	0.13	0.61	42.29	42.55	42.04	0.13	0.61	41.91	42.17	31.75
1 1/2	40	48.26	0.15	0.61	48.11	48.41	5.08	0.61	48.56	0.15	0.61	48.41	48.71	48.11	0.15	0.61	47.96	48.26	34.93
2	50	60.32	0.15	0.61	60.17	60.47	5.54	0.66	60.63	0.15	0.61	60.48	60.78	60.17	0.15	0.61	60.02	60.32	38.10
2 1/2	65	73.02	0.18	0.76	72.84	73.20	7.01	0.84	73.38	0.18	0.76	73.20	73.56	72.85	0.18	0.76	72.67	73.03	44.45
3	80	88.90	0.20	0.76	88.70	89.10	7.62	0.91	89.31	0.20	0.76	89.11	89.51	88.70	0.20	0.76	88.50	88.90	47.63
3 1/2	-	101.60	0.20	0.76	101.40	101.80	8.08	1.96	102.10	0.20	0.76	101.90	102.30	101.40	0.20	0.76	101.20	101.60	53.98
4	100	114.30	0.23	0.76	114.07	114.53	8.56	1.02	114.76	0.23	0.76	114.56	114.99	114.10	0.23	0.76	113.87	114.33	57.15
5	125	141.30	0.25	1.52	141.05	141.55	9.52	1.14	141.81	0.25	1.52	141.56	142.06	141.00	0.25	1.52	140.75	141.25	66.68
6	150	168.28	0.28	1.78	168.00	168.56	10.97	1.32	168.83	0.28	1.52	168.55	169.11	168.00	0.28	1.52	167.72	168.28	76.20
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	200	219.08	0.38	3.81	218.70	219.46	12.70	1.52	219.84	0.38	2.29	219.46	220.22	218.70	0.38	2.29	218.32	219.08	101.60
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	250	273.05	0.38	3.81	272.67	273.43	15.06	1.80	273.81	0.38	2.54	273.43	274.19	272.67	0.38	2.54	272.29	273.05	127.00
12	300	323.85	0.38	3.81	323.47	324.23	17.45	2.08	324.61	0.38	3.05	324.23	324.99	323.47	0.38	3.05	323.09	323.85	152.40

Note: 65, 125mm Pipe & Fittings are not standardized on JIS, adhere AS-21by Japan-PVC-Piping Association. 200mm is based on AOC Standard

Size		JIS PVC PIPE AND FITTING																						
		Pipe (VP) JIS K 6741										Fitting JIS K 6743												
		Outside Diameter							Wall Thickness			Socket ID												
												Socket Entrance Diameter		Max Enter ID	Taper (1/T)	Socket Bottom Diameter		Min Bottom ID	Length	Min Bottom ID	Length	S.B.D.	Length	S.B.D.
												d_1				d_2			L		Min Length	Min ID	Max Length	Min ID
inch	mm	Base OD	Max&Min OD Tolerance (+/-)	Ave OD Tolerance (+/-)	Min OD	Ave Min OD	Max OD	Ave Max OD	Min	Tolerance (+)	Approx ID	Base ID	Tolerance (+/-)			Base ID	Tolerance (+/-)		(+4, -0.5)					
1/8	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
1/4	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
3/8	13	18.0	0.2	0.2	17.8	17.8	18.2	18.2	2.2	0.6	13	18.4	0.2	18.6	30	-	-	-	26.0	17.5	25.5	17.5	30.0	17.4
1/2	15	22.0	0.2	0.2	21.8	21.8	22.2	22.2	2.7	0.6	16	22.4	0.2	22.6	34	-	-	-	30.0	21.5	29.5	21.5	34.0	21.4
3/4	20	26.0	0.2	0.2	25.8	25.8	26.2	26.2	2.7	0.6	20	26.4	0.2	26.6	34	-	-	-	35.0	25.4	34.5	25.4	39.0	25.3
1	25	32.0	0.2	0.2	31.8	31.8	32.2	32.2	3.1	0.8	25	32.5	0.3	32.8	34	-	-	-	40.0	31.4	39.5	31.4	44.0	31
1 1/4	32	38.0	0.3	0.2	37.7	37.8	38.3	38.2	3.1	0.8	31	38.6	0.3	38.9	34	-	-	-	44.0	37.3	43.5	37.3	48.0	37.2
1 1/2	40	48.0	0.3	0.2	47.7	47.8	48.3	48.2	3.6	0.8	40	48.7	0.3	49.0	37	-	-	-	55.0	47.2	54.5	47.2	59.0	47.1
2	50	60.0	0.4	0.2	59.6	59.8	60.4	60.2	4.1	0.8	51	60.8	0.3	61.1	37	-	-	-	63.0	59.1	62.5	59.1	67.0	59.0
2 1/2	65	76.0	0.5	0.3	75.5	75.7	76.5	76.3	4.1	0.8	67	76.6	0.3	76.9	48	-	-	-	61.0	75.3	60.5	75.3	65.0	75.2
3	80	89.0	0.5	0.3	88.5	88.7	89.5	89.3	5.5	0.8	77	89.6	0.3	89.9	49	-	-	-	64.0	88.3	63.5	88.3	68.0	88.2
3 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	100	114.0	0.6	0.4	113.4	113.6	114.6	114.4	6.6	1.0	100	114.7	0.3	115.0	56	-	-	-	84.0	113.2	83.5	113.2	88.0	113.1
5	125	140.0	0.8	0.5	139.2	139.5	140.8	140.5	7.0	1.0	125	140.8	0.3	141.1	58	-	-	-	104.0	139.0	103.5	139.0	108.0	138.9
6	150	165.0	1.0	0.5	164.0	164.5	166.0	165.5	8.9	1.4	146	166.0	0.4	166.4	63	-	-	-	132.0	163.9	131.5	163.9	136.0	163.8
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	200	216.0	1.3	0.7	214.7	215.3	217.3	216.7	10.3	1.4	194	217.0	1.0	218.0	-	214.1	1.0	215.1	145.0	-	144.5	-	149.0	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	250	267.0	1.6	0.9	265.4	266.1	268.6	267.9	12.7	1.8	240	267.7	1.0	268.7	-	264.9	1.0	265.9	155.0	-	154.5	-	159.0	-
12	300	318.0	1.9	1.0	316.1	317.0	319.9	319.0	15.1	2.2	286	318.7	1.0	319.7	-	315.5	1.0	316.5	175.0	-	174.5	-	179.0	-

DIN PVC PIPE AND FITTING

Size		PVC Pipe (DIN) DIN 8062 -Metric- PN10							Fitting (DIN) : DIN 8063										
		Outside Diameter					Wall Thickness		Socket ID										Length
									Socket Entrance Diameter					Socket Bottom Diameter					
									A					B					C
inch	DN mm	Base OD d	Max OD Tolerance (+)	Min OD Tolerance (+)	Min OD	Max OD	Min Thk	Tolerance (+)	Base ID	Max Tolerance (+)	Min Tolerance (-)	Min Enter ID	Max Enter ID	Base ID	Tolerance	Max Out-Of-Roundness	Min Bottom ID	Max Bottom ID	Min 12mm
1/8	-	10	0.2	0.0	10.0	10.2	-	-	10	0.3	0.1	10.1	10.3	10	0.3	0.1	10.1	10.3	12
1/4	-	12	0.2	0.0	12.0	12.2	-	-	12	0.3	0.1	12.1	12.3	12	0.3	0.1	12.1	12.3	12
3/8	13	16	0.2	0.0	16.0	16.2	-	-	16	0.3	0.1	16.1	16.3	16	0.3	0.1	16.1	16.3	14
1/2	15	20	0.2	0.0	20.0	20.2	-	-	20	0.3	0.1	20.1	20.3	20	0.3	0.1	20.1	20.3	16
3/4	20	25	0.2	0.0	25.0	25.2	1.5	0.4	25	0.3	0.1	25.1	25.3	25	0.3	0.1	25.1	25.3	19
1	25	32	0.2	0.0	32.0	32.2	1.8	0.4	32	0.3	0.1	32.1	32.3	32	0.3	0.1	32.1	32.3	22
1 1/4	32	40	0.2	0.0	40.0	40.2	1.9	0.4	40	0.3	0.1	40.1	40.3	40	0.3	0.1	40.1	40.3	26
1 1/2	40	50	0.2	0.0	50.0	50.2	2.4	0.5	50	0.3	0.1	50.1	50.3	50	0.3	0.1	50.1	50.3	31
2	50	63	0.2	0.0	63.0	63.2	3	0.5	63	0.3	0.1	63.1	63.3	63	0.3	0.1	63.1	63.3	38
2 1/2	65	75	0.3	0.0	75.0	75.3	3.6	0.6	75	0.3	0.1	75.1	75.3	75	0.3	0.1	75.1	75.3	44
3	80	90	0.3	0.0	90.0	90.3	4.3	0.6	90	0.3	0.1	90.1	90.3	90	0.3	0.1	90.1	90.3	51
3 1/2	-	110	0.3	0.0	110.0	110.3	5.3	0.8	110	0.4	0.1	110.1	110.4	110	0.4	0.1	110.1	110.4	61
4	100	125	0.3	0.0	125.0	125.3	6.0	0.8	-	-	-	-	-	-	-	-	-	-	-
5	125	140	0.3	0.0	140.0	140.3	6.7	0.9	140	0.5	0.2	140.2	140.5	140	0.5	0.2	140.2	140.5	76
6	150	160	0.3	0.0	160.0	160.3	7.7	1.0	160	0.5	0.2	160.2	160.5	160	0.5	0.2	160.2	160.5	86
7	-	180	0.3	0.0	180.0	180.3	8.6	1.1	-	-	-	-	-	-	-	-	-	-	-
8	200	225	0.5	0.0	225.0	225.5	10.8	1.3	225	0.6	0.3	225.3	225.6	225	0.6	0.3	225.3	225.6	119
9	-	250	0.5	0.0	250.0	250.5	11.9	1.4	-	-	-	-	-	-	-	-	-	-	-
10	250	280	0.6	0.0	280.0	280.6	13.4	1.6	-	-	-	-	-	-	-	-	-	-	-
12	300	315	0.6	0.0	315.0	315.6	15	1.7	-	-	-	-	-	-	-	-	-	-	-

BS PIPE AND FITTING

Size		Pipe BS 3506						Fitting BS 4346											
		Outside Diameter			Wall Thickness			Socket ID									Min Socket Depth	Taper	
								Socket Mouth Diameter					Socket Root Diameter						
								d_1			Mid ID	Roundness Tolerance	d_2			Mid ID	Roundness Tolerance	L	
inch	mm	Min OD	Max OD	Variance	Averaged Value (Max)	Individual Value (Min)	Individual Value (Max)	Min ID	Max ID	Variance			Min ID	Max ID	Variance			Length	Min	Max
1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/4	-	13.6	13.9	0.3	1.7	1.3	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-
3/8	13	17.0	17.3	0.3	1.9	1.5	1.9	17.1	17.3	0.2	17.2	0.3	16.8	17.3	0.5	17.1	0.3	14.5	0.0	0.0
1/2	15	21.2	21.5	0.3	2.1	1.7	2.1	21.3	21.5	0.2	21.4	0.4	21.0	21.5	0.5	21.3	0.4	16.5	0.0	0.0
3/4	20	26.6	26.9	0.3	2.5	1.9	2.5	26.7	26.9	0.2	26.8	0.5	26.4	26.9	0.5	26.7	0.5	19.5	0.0	0.0
1	25	33.4	33.7	0.3	2.7	2.2	2.7	33.5	33.7	0.2	33.6	0.7	33.2	33.7	0.5	33.5	0.7	22.5	0.0	0.0
1 1/4	32	42.1	42.4	0.3	3.2	2.7	3.2	42.2	42.5	0.3	42.4	0.8	41.9	42.4	0.5	42.2	0.8	27.0	0.0	0.0
1 1/2	40	48.1	48.4	0.3	3.7	3.1	3.7	48.3	48.5	0.2	48.4	1.0	47.9	48.4	0.5	48.2	1.0	30.0	0.0	0.0
2	50	60.2	60.5	0.3	4.5	3.9	4.5	60.4	60.7	0.3	60.5	1.2	60.0	60.6	0.6	60.3	1.2	36.0	0.0	0.0
2 1/2	65	75.0	75.3	0.3	5.5	4.8	5.5	75.3	75.6	0.3	75.4	1.5	75.0	75.5	0.5	75.3	1.5	43.5	0.0	0.0
3	80	88.7	89.1	0.4	6.5	5.7	6.6	89.0	89.3	0.3	89.2	1.8	88.6	88.9	0.3	88.8	1.8	50.5	0.0	0.0
3 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	100	114.1	114.5	0.4	8.3	7.3	8.4	114.4	114.8	0.4	114.6	2.3	113.9	114.3	0.4	114.1	2.3	63.0	0.0	0.0
5	125	140.0	140.4	0.4	10.1	9.0	10.4	140.3	140.7	0.4	140.5	2.8	139.9	140.2	0.3	140.1	2.8	76.0	0.0	0.0
6	150	168.0	168.5	0.5	12.1	10.8	12.5	168.4	168.8	0.4	168.6	3.4	167.8	168.3	0.5	168.1	3.4	90.0	0.0	0.0
7	-	193.5	194.0	0.5	13.9	12.4	14.3	193.9	194.3	0.4	194.1	3.9	193.3	193.8	0.5	193.6	3.9	103.0	0.0	0.0
8	200	218.8	219.4	0.6	14.1	12.6	14.5	219.3	219.9	0.6	219.6	4.4	218.7	219.1	0.4	218.9	4.4	115.5	0.0	0.0
9	-	244.1	244.8	0.7	15.8	14.1	16.3	244.7	245.3	0.6	245.0	4.9	244.0	244.5	0.5	244.3	4.9	128.0	0.0	0.0
10	250	272.6	273.4	0.8	17.5	15.7	18.1	273.3	273.8	0.5	273.6	5.5	272.6	273.0	0.4	272.8	5.5	142.5	0.0	0.0
12	300	323.4	324.3	0.9	20.8	18.7	21.6	324.2	324.7	0.5	324.4	6.5	323.4	323.9	0.5	323.7	6.5	168.0	0.0	0.0

General operating instructions

- Using a positive-pressure gas with our plastic piping may pose a dangerous condition due to the repellent force particular to compressible fluids even when the gas is under similar pressures used for liquids. Therefore, be sure to take the necessary safety precautions such as covering the piping with protective material. For inquiries, please contact us. For conducting a leak test on newly installed piping, be sure to check for leaks under water pressure. If absolutely necessary to use a gas in testing, please consult your nearest service station beforehand.
- Do not step on or apply excessive weight on valve. (It can be damaged.)
- Do not use the valve in conditions where the fluid may have crystallized.

(The valve will not operate properly.)

- Keep the valve away from excessive heat or fire. (It can be damaged, or destroyed.)
- Always operate the valve within the pressure vs. temperature range.

(The valve can be damaged or deformed by operating beyond the allowable range.)

- Allow sufficient space for maintenance and inspection.
- Select a valve material that is compatible with the media.
- Keep the valve out of direct sunlight, water and dust. Use cover to shield the valve.

(The valve will not operate properly.)

- Perform periodic maintenance. (Leakage may develop due to temperature changes or periods of prolonged storage, rest, or operation.)
- The travel stop may have to be adjusted if media leakage is detected between the upstream & downstream sides of the valve.
- Bonnet bolt torque should be checked before installation, as they may become loose after long-term storage.
- A periodic check of the valve condition as well as bonnet & flange bolt torque should be made part of preventative maintenance program properly re-tightening the bolts as necessary.

It is especially important to re-tighten all bolts during the first shutdown.

General instructions for transportation, unpacking and storage

- When suspending and supporting a valve, take care and do not stand under a suspended valve.
- This valve is not designed to handle impacts of any kind. Avoid throwing or dropping the valve.
- Avoid scratching the valve with any sharp object.
- Do not over-stack cardboard shipping boxes. Excessively stacked packages may collapse.
- Avoid contact with any coal tar creosote, insecticides, vermicides or paint.

(These chemicals may cause damage to the valve.)

- Store products in their corrugated cardboard boxes. Avoid exposing products to direct unlight, and store them indoors (at room temperature). Also avoid storing products in areas with excessive temperatures. (Corrugated cardboard packages become weaker as they become wet with water or other liquid. Take care in storage and handling.)
- After unpacking the products, check that they are defect-free and meet the specifications.

PRODUCT WARRANTY

Be sure to read the following description of our product warranty

- Always observe the specifications of and the precautions and instructions on using our product.
- We always strive to improve product quality and reliability, but cannot guarantee perfection. Therefore, should you intend to use this product with any equipment or machinery that may pose the risk of serious or even fatal injury, or property damage, ensure an appropriate safety design or take other measures with sufficient consideration given to possible problems. We shall assume no responsibility for any inconvenience stemming from any action on your part without our written consent in the form of specifications or other documented approval.
- The related technical documents, operation manuals, and/or other documentation prescribe precautions on selecting, constructing, installing, operating, maintaining, and servicing our products. For details, consult with our nearest distributor or agent.
- Our product warranty extends for one and a half years after the product is shipped from our factory or one year after the product is installed, whichever comes first. Any product abnormality that occurs during the warranty period or which is reported to us will be investigated immediately to identify its cause. Should our product be deemed defective, we shall assume the responsibility to repair or replace it free of charge.
- Any repair or replacement needed after the warranty period ends shall be charged to the customer.
- The warranty does not cover the following cases:
  (1) Using our product under any condition not covered by our defined scope of warranty.
  (2) Failure to observe our defined precautions or instructions regarding the construction, installation, handling, maintenance, or servicing of our product.
  (3) Any inconvenience caused by any product other than ours.
  (4) Remodeling or otherwise modifying our product by anyone other than us.
  (5) Using any part of our product for anything other than the intended use of the product.
  (6) Any abnormality that occurs due to a natural disaster, accident, or other incident not stemming from something inside our product.

【Precautions】

*Using a positive-pressure gas with our plastic piping may pose a dangerous condition due to the repellent force peculiar to compressed fluids, even when the gas is under the same pressure as water. Therefore, be sure to take the necessary safety precautions such as covering the piping with protective material. For inquiries, please contact us.

For conducting a leak test on newly installed piping, be sure to check for leaks under water pressure.
If absolutely necessary to use gas in testing, please consult your nearest service station beforehand.
*Wrap the threaded joints on our plastic piping with sealing tape.
*Using a liquid sealing agent or liquid gasket may cause stress cracks (environmental stress cracking). Our product warranty shall not apply in case of said use, even when said use is unavoidable.

【Export Control】

In an effort to remain compliant with international agreements on security, many countries have instituted export controls for advanced goods and technologies which may be used for the proliferation of weapons of mass destruction. Even in Japan we are sanctioned by the International Export Control Regime and the Chemical Weapons Convention to meet current regulations at home and in countries where we sell our goods and technologies.
In meeting this social and legal obligation, we are asking for your cooperation in providing us information relating to the intended use of our products. Information such as copies of agreements, company organization chart and affidavits of end-use may be required for export permission.
Your cooperation in this endeavor is greatly appreciated and our sales or Asahi distributor people are committed to working with you to continue to provide the best products and services Asahi has to offer.

PRECAUTIONS FOR USE

- For installation and maintenance procedure refer to the appropriate manual for the product being used.
- Do not drop or toss pipe and fitting material.
- Do not step on a valve.
- Do not put anything heavy on a valve.
- Do not put anything burning or hot near a valve.
- Do not scratch or thrust a valve with anything sharp (such as a knife and a hanger).
- Avoid contacting with any coal tar creosote (antiseptic for wood), termite insecticide, vermicides, or paint.
- Secure sufficient space for maintenance and inspection.
- Select pipe and fitting material suitable for your specific needs, using "Chemical Resistance On Asahi AV Valve," as a guide. If you have any questions, please feel free to contach your nearest Asahi dealer.
- Be sure to use water pressure when testing a pipeline including AV pipe and fitting material.
  It is extremely dangerous to use air pressure for testing the pipeline.
- The pressure limit includes water hammer pressure. Do not exceed the limit.
- In discarding a valve, be sure to ask a waste service company.
- Valve should not be used with compressed air or gas.

CONTACT US...

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ISO9001:2000
VALVE & PIPING SYSTEMS ADMINISTRATION is complying with the requirements of the above Quality Management system standard.

ISO14001:2004
Nobeoka Head Office,Nobeoka Works,Engineering Development, Kitakata Factory, Phisical Distribution Control Department(Nobeoka Physical Distribution Center), Aichi Plant, Tochigi Plant and Hiroshima Plant are complying with the requirements of the above Environmental Management System Standard.

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