

ASAHI VALVE AND PIPING SYSTEMS

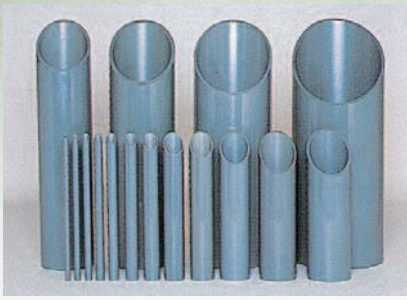
ASAHI AV PIPE FITTING AND OTHERS

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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PVC PIPE



● Unplasticized Polyvinyl 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 ± 10 mm.
- 5.Pipe VM350 400mm long conforms to the AS24 standard.
- 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

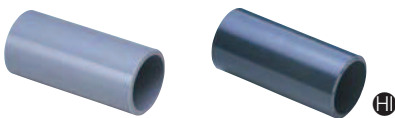
● TS FITTING(JIS K6743) (PVC:13 to 150mm,HI-PVC:13 to150mm)



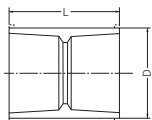
SPECIFICATIONS

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

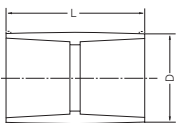
● Socket



Nominal Size 13mm~50mm



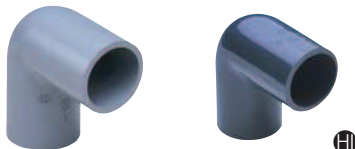
Nominal Size 65mm~150mm



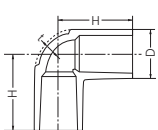
Nominal Size	D	L ±4.0	HI
13	24.0	57	●
16	29.0	67	●
20	33.0	77	●
25	40.0	87	●
30	46.0	95	●
40	57.0	117	●
50	70.0	133	●
※65	87.0	145	●
75	102.0	155	●
100	130.0	200	●
※125	157.0	240	●
150	186.0	300	●

※AS-Standard

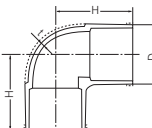
● Elbow



Nominal Size 13mm~50mm

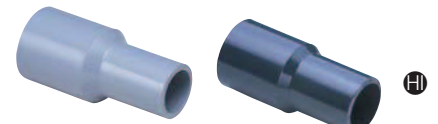


Nominal Size 65mm~150mm

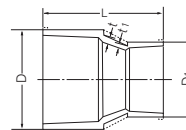


Nominal Size	D	t	H ^{+5.0} _{-1.0}	HI
13	24.0	3.0	36	●
16	29.0	3.5	43	●
20	33.0	3.5	50	●
25	40.0	4.0	58	●
30	46.0	4.0	65	●
40	57.0	4.5	82	●
50	70.0	5.0	96	●
※65	87.0	6.6	110	●
※75	102.0	8.0	120	●
※100	130.0	10.0	153	●
※125	157.0	11.0	188	●
※150	186.0	13.0	230	●

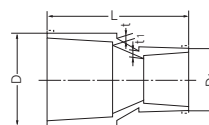
● Reducing Socket



Nominal Size 13mm~50mm



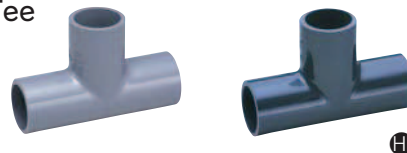
Nominal Size 65mm~150mm



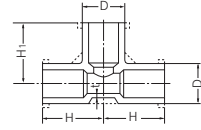
Nominal Size	D	t	D ₁	t ₁	L ±4.0	HI
16×13	29.0	3.5	24.0	3.0	61	●
20×13	33.0	3.5	24.0	3.0	68	●
20×16	33.0	3.5	29.0	3.5	71	●
25×13	40.0	4.0	24.0	3.0	86	●
25×16	40.0	4.0	29.0	3.5	85	●
25×20	40.0	4.0	33.0	3.5	84	●
30×20	46.0	4.0	33.0	3.5	93	●
30×25	46.0	4.0	40.0	4.0	93	●
※40×20	57.0	4.5	33.0	3.5	113	●
40×25	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

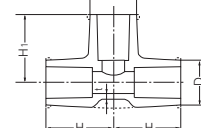
● Tee



Nominal Size 13mm~50mm



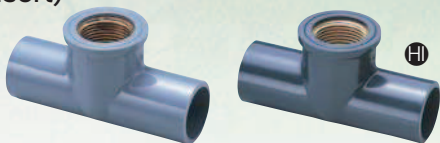
Nominal Size 65mm~150mm



Nominal 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	●

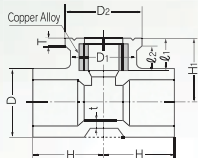
TS FITTINGS

● Faucet Tee (with Metal Insert)

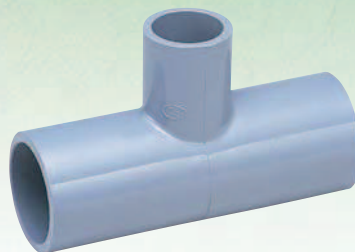


(Unit: mm)

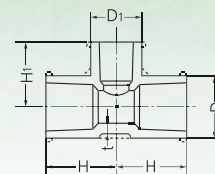
Nominal Size	D	t	D ₁	D ₂	ℓ ₁ ^{+5.0/-1.0}	ℓ ₂ ^{+5.0/-1.0}	T	H ₁ ^{+5.0/-1.0}	H ₂ ^{+5.0/-1.0}	Female THD Size	HI
13	24.0	3.0	30	34	17	14	4	38	29	Rp1/2	●
20	33.0	3.5	37	42	19	16	4	51	36	Rp3/4	●
25	40.0	4.0	46	52	21	18	5	59	42	Rp1	●
16×13	29.0	3.5	30	34	17	14	4	43	32	Rp1/2	●
20×13	33.0	3.5	30	34	17	14	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	●



● Reducing Tee



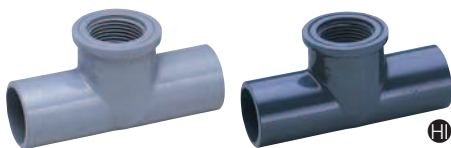
Nomal Size 13mm~50mm



(Unit: mm)

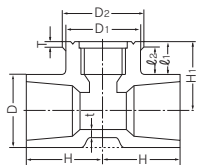
Nominal Size	D	t	H	D ₁	H ₁	HI
16×13	29.0	3.5	41	24.0	38	●
20×13	33.0	3.5	46	24.0	40	●
20×16	33.0	3.5	48	29.0	45	●
25×13	40.0	4.0	51	24.0	43	●
25×16	40.0	4.0	53	29.0	48	●
25×20	40.0	4.0	55	33.0	53	●
30×13	46.0	4.0	55	24.0	46	●
30×16	46.0	4.0	57	29.0	51	●
30×20	46.0	4.0	59	33.0	56	●
30×25	46.0	4.0	62	40.0	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	●

● Faucet Tee



(Unit: mm)

Nominal Size	D	t	D ₁	D ₂	ℓ ₁ ^{+5.0/-1.0}	ℓ ₂ ^{+5.0/-1.0}	T	H ₁ ^{+5.0/-1.0}	H ₂ ^{+5.0/-1.0}	Female 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	●

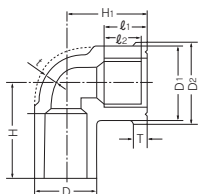


● Faucet Elbow



(Unit: mm)

Nominal Size	D	t	D ₁	D ₂	ℓ ₁ ^{+5.0/-1.0}	ℓ ₂ ^{+5.0/-1.0}	T	H ₁ ^{+5.0/-1.0}	H ₂ ^{+5.0/-1.0}	Female 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	●

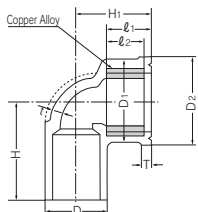


● Faucet Elbow (with Metal Insert)



(Unit: mm)

Nominal Size	D	t	D ₁	D ₂	ℓ ₁ ^{+5.0/-1.0}	ℓ ₂ ^{+5.0/-1.0}	T	H ₁ ^{+5.0/-1.0}	H ₂ ^{+5.0/-1.0}	Female 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	●

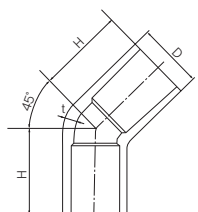


● 45 Elbow

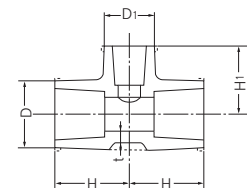


(Unit: mm)

Nominal Size	D	t	H ₁ ^{+5.0/-1.0}	HI
20	33.0	3.5	44	●
25	40.0	4.0	51	●



Nomal Size 65mm~150mm



(Unit: mm)

Nominal Size	D	t	H ₁ ^{+5.0/-1.0}	D ₁	H ₂ ^{+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-Standard

● Faucet Socket



(Unit: mm)

Nominal Size	D	D ₁	D ₂	l ₁	l ₂ ^{±1.0}	T	L ^{+5.0 -1.0}	Female 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

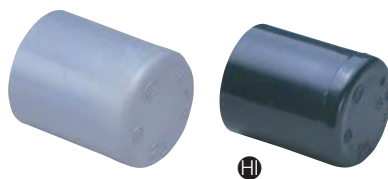
● Faucet Socket (with Metal Insert)



(Unit: mm)

Nominal Size	D	D ₁	D ₂	l ₁	l ₂ ^{±1.0}	T	L ^{+5.0 -1.0}	Female 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	●

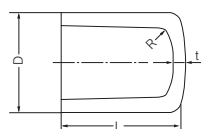
● Cap



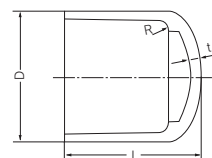
(Unit: mm)

Nominal 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	●

Nominal Size 13~50mm



Nominal Size 65~150mm



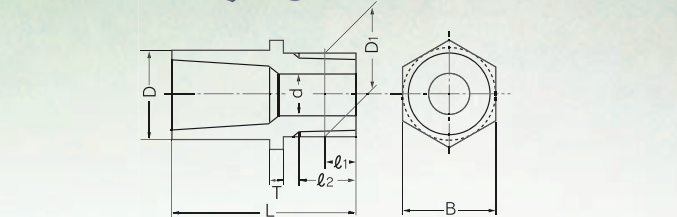
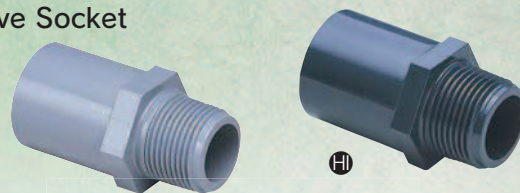
● 90° AV Bend



(単位: mm)

Nominal Size	d ₁	d ₂	l	D ₁	D ₂	d	t	L	R	Hi
75	89.80	88.13	72	101	104	78	6	137	65	—
100	115.00	112.89	92	129	132	100	7.3	172	80	—
125	141.20	138.72	112	156	160	125	7.7	237	125	—
150	166.50	163.39	140	185	189	148	9.8	260	120	—

● Valve Socket

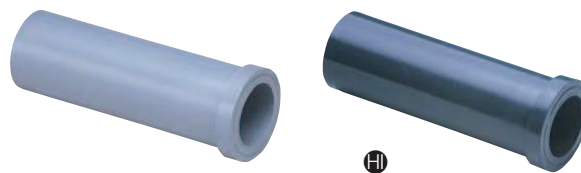


(Unit: mm)

Nominal Size	D	d	Male THD Size	Gauge Dimension 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)

Nominal Size	D	t	D ₁	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	●

● 45° AV Bend



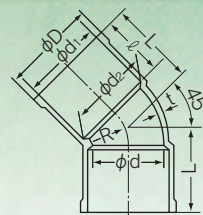
(単位: mm)

Nominal Size	d ₁	d ₂	l	D	D ₁	d	t	Z	L	R	Hi
40	48.70	47.21	55	57	60	40	4.5	14	69	20	●
50	60.80	59.10	63	70	73	51	5	17	80	25.5	●
65	76.60	75.33	61	87	90	67	6.6	20	81	34	●
75	89.80	88.13	72	101	104	78	6	25	97	39	●
100	115.00	112.89	92	129	132	100	7.3	30	122	50	●
125	141.20	138.71	112	156	160	125	7.7	37	149	62.5	●
150	166.50	163.39	140	185	189	148	10	44	184	74	●

PVC LARGE-SIZE FITTINGS



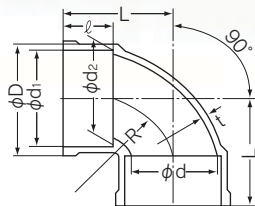
45° AV Bend



Unit:mm

Nominal Size(mm)	d ₁	d ₂	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	●	●

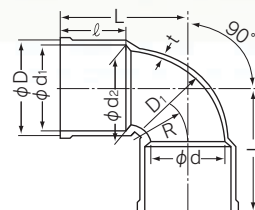
AV Short Elbow



Unit:mm

Nominal Size(mm)	d ₁	d ₂	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	●	●

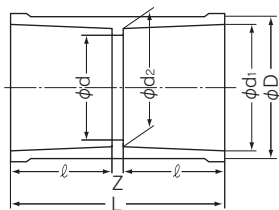
90° AV Bend



Unit:mm

Nominal Size(mm)	d ₁	d ₂	ℓ	D	D ₁	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	●	●

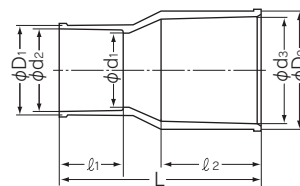
AV Socket



Unit:mm

Nominal Size(mm)	d ₁	d ₂	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	●	●

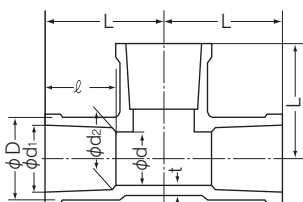
AV Reduced Socket



Unit:mm

Nominal Size(mm)	d ₁	d ₂	ℓ ₁	D ₁	d ₃	ℓ ₂	D ₂	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	●	●

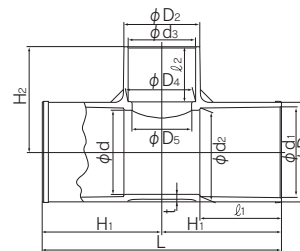
AV Tee



Unit:mm

Nominal Size(mm)	d ₁	d ₂	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)	d ₁	d ₂	ℓ ₁	d ₃	d ₄	ℓ ₂	D ₁	D ₂	d	d ₅	t	L	H ₁	H ₂	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	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°C (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

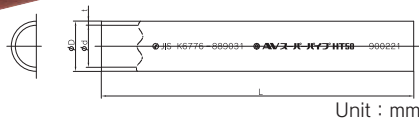
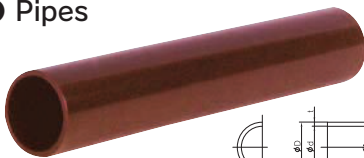
WORKING PRESSURE VS. TEMPERATURE

Nominal Size (mm (inch))	MPa {kgf/cm ² }					
	5 - 30°C	31 - 40°C	41 - 60°C	61 - 70°C	71 - 80°C	81 - 90°C
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}	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 resistant 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.

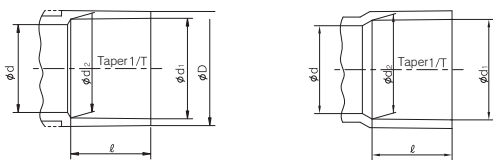
● Pipes



Unit : mm

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

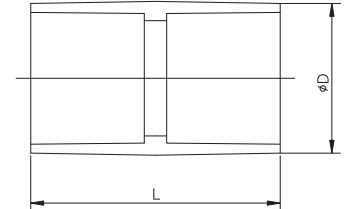
☆ JIS K 6776 ● Special Fitting Dimension



Unit : mm

Nominal 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

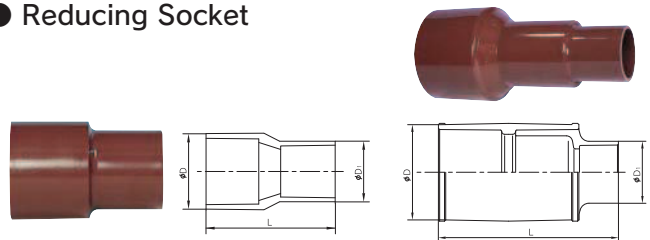


Unit : mm

Nominal 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

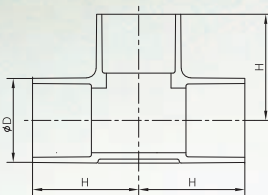


Unit : mm

Nominal Size	D	D1	L	Nominal 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

● Tee

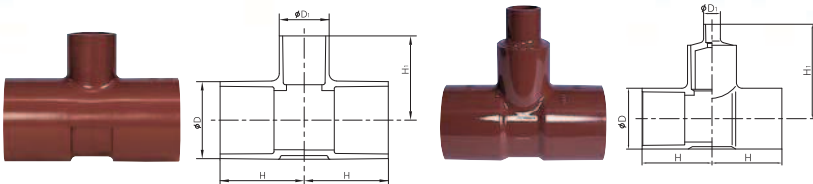


Unit : mm

NominalSize	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



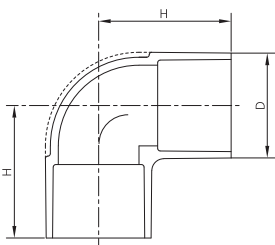
Unit : mm

NominalSize	D	D ₁	H	H ₁	NominalSize	D	D ₁	H	H ₁
☆ 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



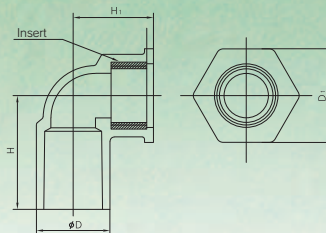
Unit : mm

NominalSize	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

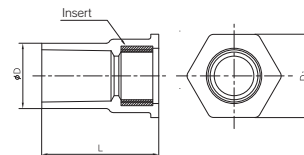


Unit : mm

NominalSize	D Min	H	Thd	D ₁	H ₁
☆ 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

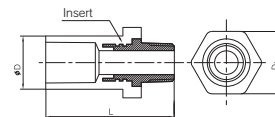


Unit : mm

NominalSize	D Min	Thd	D ₁	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

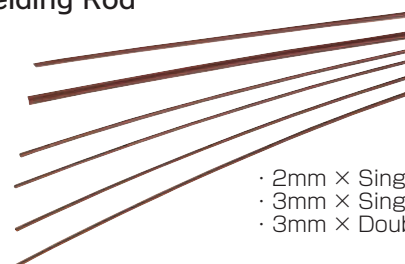


Unit : mm

NominalSize	D Min	Thd	L	D ₁ 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 harmonious 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(1½inch) 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 harmonious 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

PREFAB JOINT (UNION)

● Type B (one-side union)

13mm(³/₈inch) – 100mm(4inch)



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

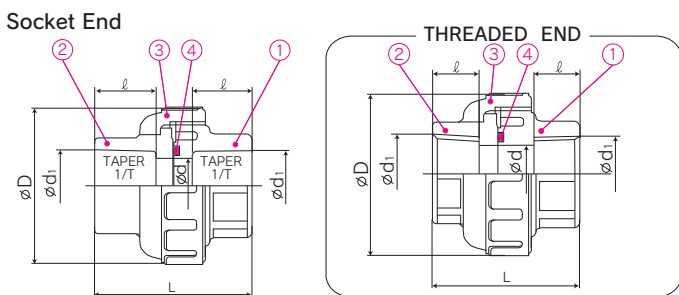
Type	Type B (Single union)
Material	Unplasticized Polyvinyl Chloride(PVC) Chlorinated Polyvinyl Chloride(C-PVC)
Nominal Size	Socket End 13mm(³ / ₈ inch) - 100mm(4inch) Spigot End 13mm(³ / ₈ inch) - 50mm(2inch) Threaded End 13mm(³ / ₈ inch) - 50mm(2inch)
Temperature Range	PVC=0°C - 50°C (30°F - 120°F)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

PREFAB JOINT

Unit:MPa{kgf/cm²}

Nominal Size		Material Temp. °C (°F)	C-PVC				
			PVC	C-PVC			
mm	inch		0 - 50 (30 - 120)	0 - 50 (30 - 120)	51 - 60 (121 - 140)	61 - 80 (141 - 175)	81 - 90 (176 - 195)
13	³ / ₈		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
16	¹ / ₂		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
20	³ / ₄		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
25	1		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
30	1 ¹ / ₄		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
40	1 ¹ / ₂		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
50	2		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
65	2 ¹ / ₂		1.0{10.2}	1.0{10.2}	0.8{8.2}	0.6{6.1}	0.4{4.1}
75	3		1.0{10.2}	1.0{10.2}	0.6{6.1}	0.4{4.1}	0.3{3.1}
100	4		1.0{10.2}	1.0{10.2}	0.6{6.1}	0.4{4.1}	0.3{3.1}

DIMENSIONS



DIMENSIONS TABLE

Nominal Size		d	Socket End				Threaded End			D
mm	inch		PVC, C-PVC				PVC			
			d ₁	ℓ	1/T	L	JIS B 0203			
							d ₁	ℓ	L	
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
75	3	77	89.60	64	1/49	189.5	—	—	—	152
100	4	100	114.70	84	1/56	245	—	—	—	210

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

PARTS & MATERIALS

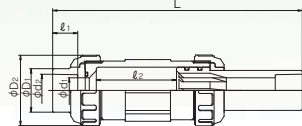
No.	DISCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC,C-PVC
②	END CONNECTOR	1	PVC,C-PVC
③	UNION NUT	1	PVC,C-PVC
④	O-RING	1	EPDM,FKM,Others

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

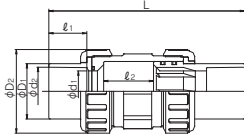
● PVC, C-PVC 20 - 100mm (3/4 inch - 4 inch)



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



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



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/cm ²][PSI]	End Connectors
Unplasticized Polyvinyl Chloride (PVC)	0°C - 50°C (30°F - 120°F)	1.0{10.2}[150]	Socket End
Chlorinated Polyvinyl Chloride (C-PVC)	0°C - 90°C (30°F - 195°F)	1.0{10.2}[150]	Socket End

EXPANSION JOINT

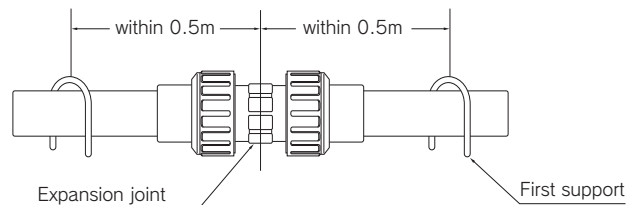
Unit: MPa[kgf/cm²]

Nominal Size	Material		PVC		C-PVC			
	Temp. °C(°F)		0 - 40 (30 - 105)	41 - 50 (106 - 120)	5 - 40 (40 - 105)	41 - 60 (106 - 140)	61 - 70 (141 - 160)	71 - 90 (161 - 195)
	mm	inch						
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	d ₁	d ₂	l ₁	1/T	D ₁	D ₂	L		l ₂
							Max	Min	
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
75 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°C	4	7	14	21	28	35	42	49	56
20°C	7	14	28	42	56	70	84	98	112
30°C	11	21	42	63	84	105	126	147	168
40°C	14	28	56	84	112	140	168	196	224
50°C	18	35	70	105	140	175	210	245	280
60°C	21	42	84	126	168	210	252	294	336
70°C	25	49	98	147	196	245	294	343	392
80°C	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 properly.)

BOLT & NUT and WASHER

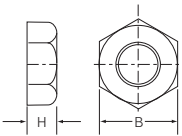
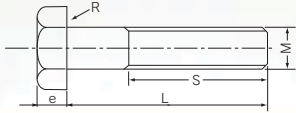
● PVC
Nominal Size : M8 to M20

Unit:mm

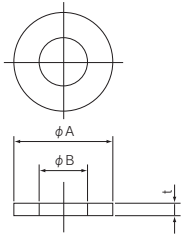


Nominal Size M8		Nominal Size M10		Nominal Size M12		Nominal Size M16		Nominal Size M20	
Lmm	Smm	Lmm	Smm	Lmm	Smm	Lmm	Smm	Lmm	Smm
20	16	14	10	25	21	40	36	55	46
25	22	20	16	30	26	45	38	65	46
32	22	25	21	36	30	50	38	75	46
38	22	28	24	40	30	55	38	80	46
50	22	30	26	45	30	60	38	85	46
55	22	32	26	50	30	65	38	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



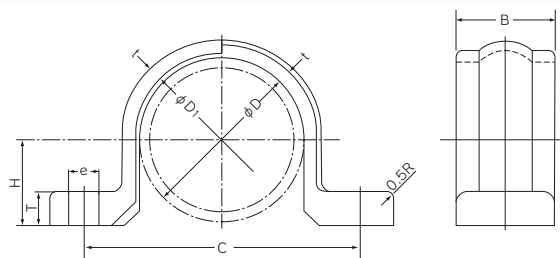
● Washer



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)

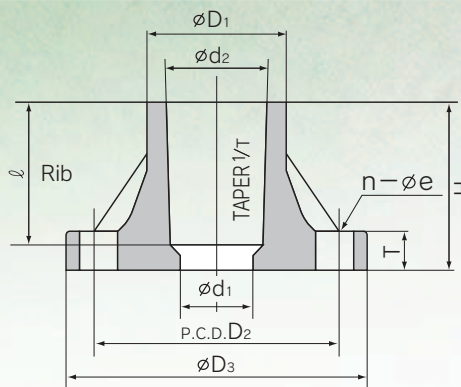
DIMENSIONS TABLE

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
75	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)



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)

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 D₂,D₃,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)

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 D₂,D₃,n,e are accordance with JIS 10K and JIS 5K.

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

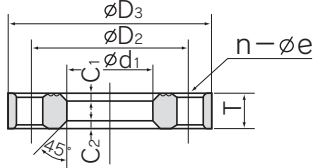
ANSI		Unit:inch										
Nominal Size	mm inch	d ₁	d ₂	Taper 1/T	ℓ	D ₁	ANSI CLASS 150				T	H
							D ₂	D ₃	n	e		
15	1/2	0.71	0.88	1/34	1.61	1.22	2.38	3.50	4	0.62	0.47	1.18
20	3/4	0.87	1.04	1/34	1.89	1.38	2.75	3.88	4	0.62	0.51	2.09
25	1	0.98	1.28	1/34	1.57	1.67	3.12	4.25	4	0.62	0.59	1.97
32	1 1/4	1.18	1.52	1/34	1.73	1.91	3.50	4.62	4	0.62	0.63	2.13
40	1 1/2	1.61	1.92	1/37	2.17	2.38	3.88	5.00	4	0.62	0.71	2.56
50	2	2.05	2.39	1/37	2.48	2.87	4.75	6.00	4	0.75	0.79	2.91
65	2 1/2	2.64	3.02	1/41	2.72	3.54	5.50	7.00	4	0.75	0.91	3.23
80	3	3.07	3.54	1/43	2.83	4.13	6.00	7.50	4	0.75	0.94	3.39
100	4	3.94	4.53	1/44	3.62	5.16	7.50	9.00	8	0.75	0.94	4.21
125	5	4.92	5.56	1/45	4.41	6.22	8.50	10.00	8	0.88	0.94	5.12
150	6	5.75	6.54	1/63	5.20	7.28	9.50	11.00	8	0.88	1.02	5.59
200	8	7.72	8.54	1/50	5.71	9.37	11.75	13.50	8	0.88	1.10	6.14
250	10	9.72	10.56	1/55	6.10	11.81	14.25	16.00	12	1.00	1.18	6.57
300	12	11.73	12.55	1/55	6.10	13.43	17.00	19.00	12	1.00	1.18	6.57

Note : Dimension shown as D₂,D₃,n,e are accordance with ANSI/ASME B 16.5 CLASS 150.
Dimension shown as d₁, R, taper 1/T are accordance with JIS K 6743.

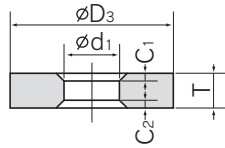
● AV FLANGES(PVC,PP)



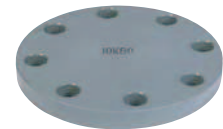
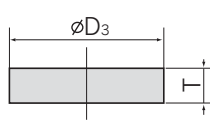
① FLANGES



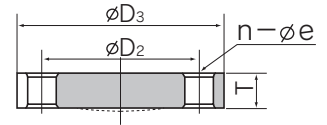
② FLANGES



③ FLANGES



④ 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 ①, ②, ③, ④, FLANGES		PVC	JIS 10K 13mm - 300mm(3/8inch - 12inch)	JIS 5K 13mm - 300mm(3/8inch - 12inch)	Unit:mm									
Nominal Size	mm inch	d ₁	D ₂		D ₃		n		e		T		C ₁	C ₂
			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 D₂,D₃,n,e are accordance with JIS 10K and JIS 5K.

- ① and ② are welded flanges.
- ③ and ④ are blind flanges.

AV GASKET



Full face Type Rubber Gasket



Ring Type Gasket (JIS only)



PTFE coated



PVDF coated

● MATERIAL : EPDM, PTFE, PVDF, CSM, FKM, IIR, Viton 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°C - 90°C (-40°F - 195°F)	15mm - 350mm	1/2inch - 16inch *1	15mm - 350mm
PTFE	-40°C - 120°C (-40°F - 250°F)	15mm - 300mm	1/2inch - 12inch	15mm - 400mm
PVDF	-40°C - 120°C (-40°F - 250°F)	15mm - 300mm	1/2inch - 10inch *2	15mm - 300mm
VIFLON	-5°C - 150°C (-5°F - 280°F)	15mm - 200mm	-	-

Working temperature is different depending on type of fluid.

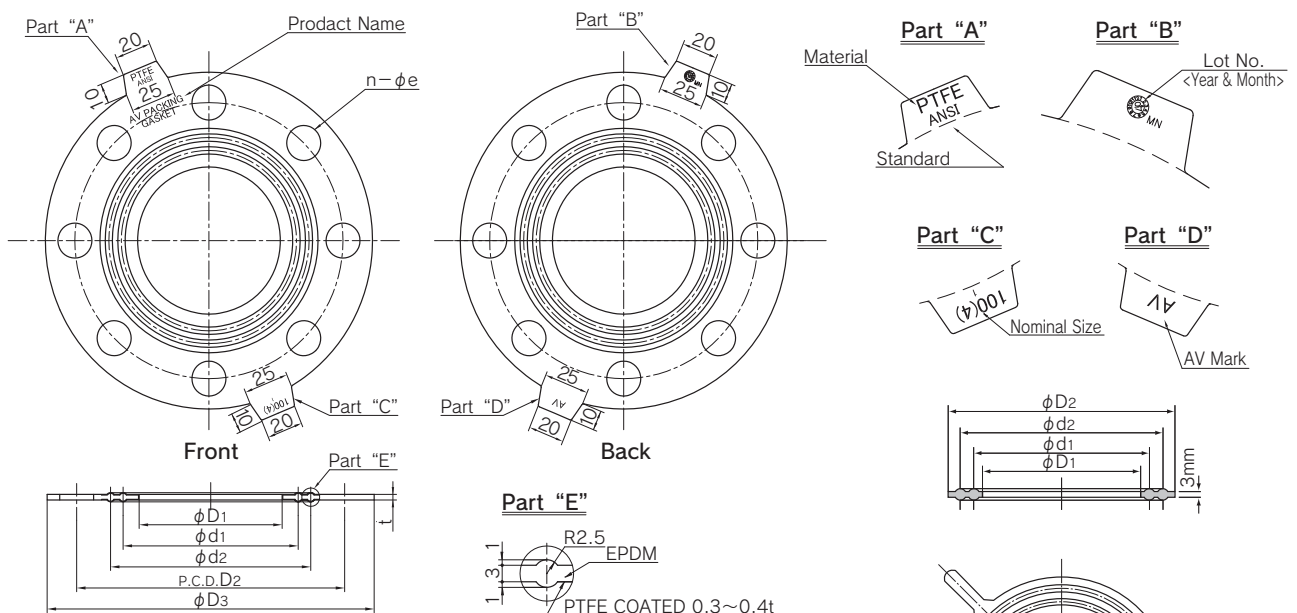
Voflon-F has superior resistance to inorganic acids such as HNO₃, HF and HCl.

Voflon-C has superior resistance to chlorine containing media such as Chlorine Water, NaCl and ClO₂.

* 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)

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 1/4inch, 1 1/2inch: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·1kg



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/cm ²)	
					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°C MAX stretching loading.

Items	1min	3min	5min	10min	15min	30min	1hr	2hr	3hr	6hr	12hr	24hr
● AV No.32	55kg (4kgf/cm ²)	135kg (10kgf/cm ²)	160kg (12kgf/cm ²)	205kg (15kgf/cm ²)	230kg (17kgf/cm ²)	290kg (21kgf/cm ²)	340kg (25kgf/cm ²)	380kg (28kgf/cm ²)	410kg (30kgf/cm ²)	465kg (34kgf/cm ²)	Cracked	—
● AV No.52	128kg (9kgf/cm ²)	180kg (13kgf/cm ²)	220kg (16kgf/cm ²)	256kg (19kgf/cm ²)	285kg (21kgf/cm ²)	340kg (25kgf/cm ²)	380kg (28kgf/cm ²)	420kg (31kgf/cm ²)	445kg (33kgf/cm ²)	490kg (36kgf/cm ²)	Cracked	—
● AV No.62	—	—	—	42kg (3kgf/cm ²)	82kg (6kgf/cm ²)	135kg (10kgf/cm ²)	219kg (16kgf/cm ²)	280kg (21kgf/cm ²)	310kg (23kgf/cm ²)	396kg (29kgf/cm ²)	455kg (34kgf/cm ²)	Cracked

ASAHI 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

TRUE UNION DIAPHRAGM VALVE TYPE14 (LF)	152
BALL VALVE TYPE21 (LF)	154
LAB COCK (LF)	158
HP-PVC PIPE & FITTINGS	160
HP-PVC FITTINGS	160
AV PREFAB JOINT<UNION>	165
AV FLANGE<HP-PVC>	165
MULTI-JOINT	166
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*LF : Lubricant Free



ASAHI AV *High Purity Series*

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 reliability.

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

Nominal Size	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)
	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		○	
250×150	○	○	
Page		162	163

※Except for JIS standard.

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.

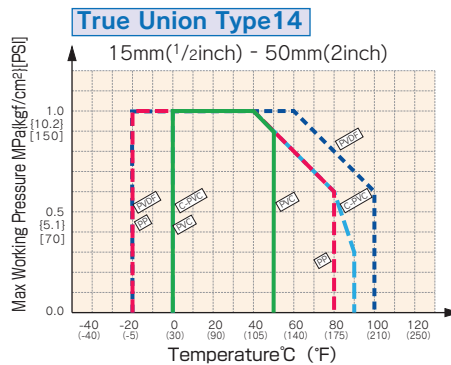
Bottom Stand for Easy Support

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

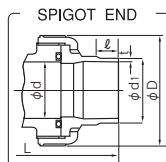
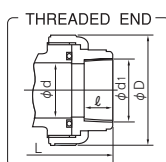
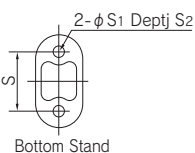
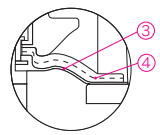
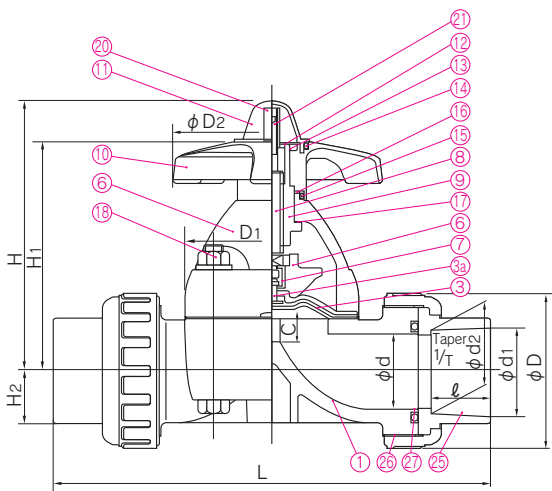
Body material	Nominal size mm(inch)	Working Temperature °C (°F)	Max. Working Pressure at 20°C(70°F) MPa{kgf/cm²} [PSI]	End Connectors
Unplasticized Polyvinyl Chloride(PVC)	15 - 50(1/2 - 2)	0 - 50(30 - 120)	1.0{10.2} [150]	Socket End. Threaded End
Chlorinated Polyvinyl Chloride(C-PVC)	15 - 50(1/2 - 2)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

WORKING PRESSURE VS. TEMPERATURE



DIMENSION

SOCKET END



PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	BODY/BONNET PVC/PVC C-PVC/PP PP/PP PVDF/PPG PVDF/PVDF	⑪	GAUGE COVER	1	PC
②	BONNET			⑫	NAME PLATE	1	PVC
③	DIAPHRAGM	1	EPDM IIR NBR, CSM CPE, FKM VIFLON C (FKM-C) VIFLON F (FKM-F) PTFE	⑬	RETAINING RING-C TYPE	1	STAINLESS STEEL304
				⑭	O-RING(A)	1	EPDM
				⑮	O-RING(B)	1	EPDM
				⑯	THRUST RING(A)	1	UHMWPE
④	CUSHION	1	EPDM*	⑰	THRUST RING(B)	1	UHMWPE
				⑱	BOLT·NUT	4	STAINLESS STEEL304
⑤	COMPRESSOR	1	PVDF	⑲	STOPPER	1	COPPER ALLOY(C3604)
⑥	JOINT	1	STAINLESS STEEL304	⑳	SCREW	1	STAINLESS STEEL304
⑦	STEM	1	COPPER ALLOY(C3604)	㉑	ENDCONNECTOR	2	PVC C-PVC PP PVDF
⑧	SLEEVE	1	COPPER ALLOY(C3604)	㉒	UNION NUT	2	PP PVDF
⑨	HAND WHEEL	1	PP	㉓	O-RING(C)	2	EPDM FKM Others

* With PTFE Diaphragm

DIMENSIONS TABLE

TRUE UNION DIAPHRAGM VALVE TYPE14

Nominal Size		d	Socket End												Threaded End				Spigot End				D	D ₁	D ₂	C (LIFT)	H	H ₁	H ₂	S	S ₁	S ₂
mm inch			PVC, C-PVC				PP				PVDF				JIS B 0203		L		PVDF													
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

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

Nominal Size		d	Socket End						Threaded End				D	D ₁	D ₂	C (LIFT)	H	H ₁	H ₂	S	S ₁	S ₂	
inch mm			PVC, C-PVC			PP, PVDF(IPS)			ANSI/ASME B1·20·1		L												
d ₁	d ₂		ℓ	L	d ₁	ℓ	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 TYPE21

PANEL MOUNTING

LAB COCK

HP-PVC PIPES & FITTINGS

HP-PVC FITTINGS

AV PREFAB JOINT

AV FLANGE

MULTI-JOINT

AV GASKET

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)



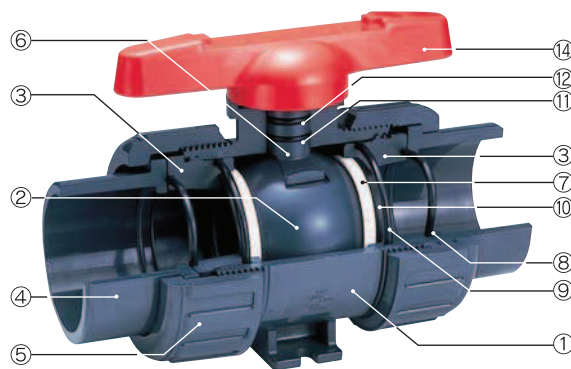
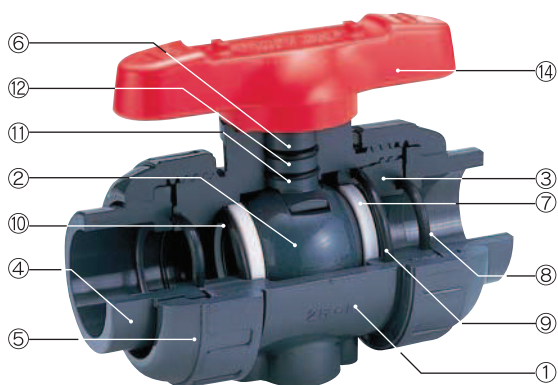
MATERIAL AND WORKING TEMPERATURE

Body material	Working Temperature °C (°F)	Max. Working Pressure(at R.T.) MPa[kgf/cm ²][PSI]	End Connectors			
			Socket End	Threaded End	Flanged End	Spigot End
Unplasticized Polyvinyl Chloride(PVC)	0 - 50(30 - 120)	1.6{16.3}[230]	○	○	○	—
Chlorinated Polyvinyl Chloride(C-PVC)	0 - 90(30 - 195)	1.6{16.3}[230]	○	○	○	—
Polypropylene(PP)	-20 - 80(-5 - 175)	1.0{10.2}[150]	○	○	○	○
Polyvinylidene Fluoride(PVDF)	-20 - 100(-5 - 210)	1.6{16.3}[230]	○	○	○	○

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

Notes : There is a dead space in a ball valve. Volatile liquids, such as a hydrogen peroxide(H₂O₂)and Sodium hypochlorite (NaClO) may vaporize in the dead space, thus causing an abnormal pressure increase in the valve.

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



PARTS & MATERIALS

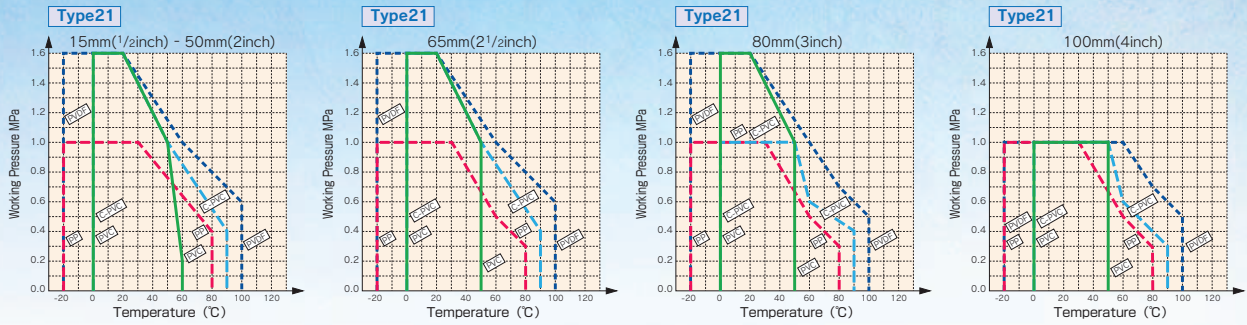
● 15mm(1/2inch) – 50mm(2inch)

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

● 65mm(2 1/2inch) – 100mm(4inch)

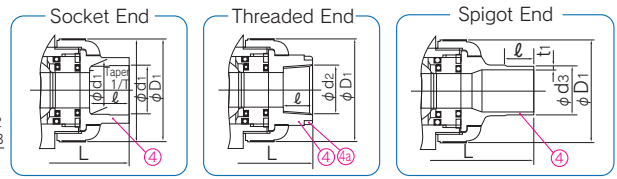
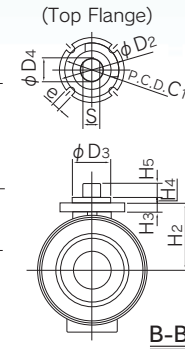
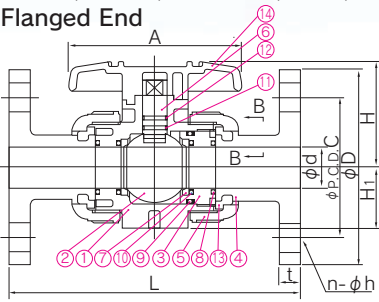
No.	DESCRIPTION	Pcs.	MATERIAL	No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC, C-PVC, PP, PVDF	⑨	O-RING(B)	2	EPDM, FKM, etc
②	BALL	1	PVC, C-PVC, PP, PVDF	⑩	CUSHION	2	EPDM, FKM, etc
③	CARRIER	2	PVC, C-PVC, PP, PVDF	⑪	O-RING(D)	1	EPDM, FKM, etc
④	END CONNECTOR	2	PVC, C-PVC, PP, PVDF	⑫	O-RING(E)	1	EPDM, FKM,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

WORKING PRESSURE VS. TEMPERATURE

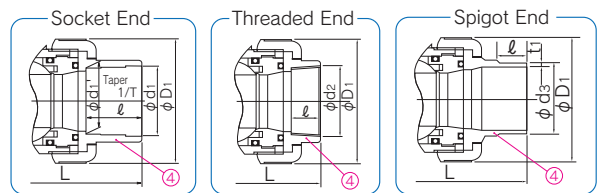
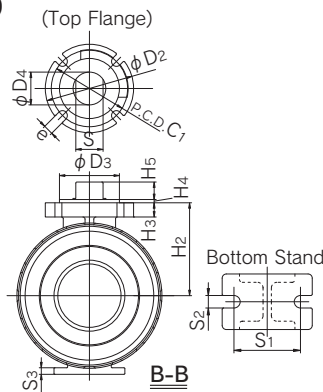
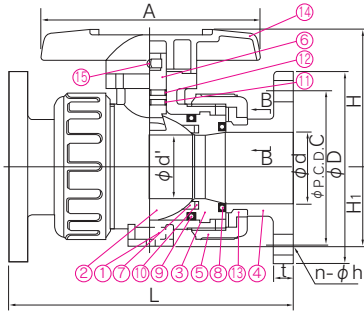


DIMENSION

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



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



DIMENSIONS TABLE

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

Nominal Size	Flanged End										Socket End								Threaded End										
	JIS 5K				JIS 10K				L		PVC, C-PVC				PP				PVDF				L						
	D	C	n	h	D	C	n	h	PVC C-PVC	PP	PVDF	t	d ₁	ℓ	1/T	L	d ₁	d ₁ '	ℓ	L	d ₁	d ₁ '	ℓ	L	d ₂	ℓ	PVC C-PVC	PP	PVDF
mm inch																													
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

TRUE UNION DIAPHRAGM VALVE TYPE14
 BALL VALVE TYPE21
 PANEL MOUNTING
 LAB COCK
 HP-PVC PIPES & FITTINGS
 HP-PVC FITTINGS
 AV PREFAB JOINT
 AV FLANGE
 MULTI-JOINT
 AV GASKET

DIN																				Unit:mm
Nominal Size	d	d'	D ₁	D ₂	D ₃	D ₄	C ₁	H	H ₁	H ₂	H ₃	H ₄	H ₅	A	S	S ₁	S ₂	S ₃	e	
	mm	inch																		
10	3/8	13	—	46	—	—	—	43.5	—	—	—	—	—	80	—	—	—	—	—	—
15	1/2	15	—	48	42	25	13.5	36	51.5	29	30	6	3	8	92	10.5	19	7.3	11	5.5
20	3/4	20	—	60	42	25	15	36	59.5	35	36.5	6	3	10	100	11	19	7.3	11	5.5
25	1	25	—	70	42	25	15	36	68	39	43.5	6	3	10	110	11	19	7.3	11	5.5
32	1 1/4	32	—	82	48	30	19	42	80.5	47	52.5	8	3	10	121	15	30	9	15	5.5
40	1 1/2	40	—	100	57	35	23	50	89	55	61	10	3	12	131	18	30	9	15	6.5
50	2	51	—	126	57	35	23	50	102.5	66	72.5	10	3	12	159	18	30	9	15	6.5
65	2 1/2	65	58	133	81	55	30	70	126	72	85	13	3	16	200	24	48	9	6	9
80	3	78	68.5	152	81	55	30	70	140	85	94	13	3	19	240	24	55	11	7	9
100	4	100	90	210	116	70	40	102	178	110	126	16	3	23	300	34	65	11	8	11

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

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

Nominal Size	Flanged End								Socket End (IPS)								Threaded End											
	ANSI CLASS 150				L				PVC, C-PVC				PP, PVDF				L		PVC		PP, PVDF							
	D	C	n	h	PVC, C-PVC	PP	PVDF	t	ASTM SCH40	ASTM SCH80	L	d ₁	d ₁ '	ℓ	L	d ₁	ℓ	PP	PVDF	L	d ₂	ℓ	PVC, C-PVC	PP	PVDF			
1/2	15	3.50	2.38	4	0.62	5.63	5.63	5.63	0.47	—	—	—	—	0.848	0.836	0.875	4.45	0.83	0.87	4.45	4.45	1/2-14 NPT	0.59	4.02	4.02	4.02		
3/4	20	3.88	2.75	4	0.62	6.77	6.77	6.77	0.55	—	—	—	—	1.058	1.046	1.000	5.08	1.03	1.00	5.08	5.08	3/4-14 NPT	0.67	4.72	4.72	4.72		
1	25	4.25	3.12	4	0.62	7.36	7.36	7.36	0.55	—	—	—	—	1.325	1.310	1.125	5.75	1.30	1.13	5.75	5.75	1-11 1/2 NPT	0.79	5.16	5.16	5.16		
1 1/4	32	4.62	3.50	4	0.62	7.48	7.48	7.48	0.63	—	—	—	—	1.670	1.655	1.250	6.46	1.65	1.25	6.46	6.46	1 1/4-11 1/2 NPT	0.87	5.91	5.91	5.91		
1 1/2	40	5.00	3.88	4	0.62	8.35	8.35	8.35	0.63	—	—	—	—	1.912	1.894	1.375	7.24	1.89	1.37	7.24	7.24	1 1/2-11 1/2 NPT	0.98	6.42	6.42	6.42		
2	50	6.00	4.75	4	0.75	9.21	9.21	9.21	0.63	—	—	—	—	2.387	2.369	1.500	8.23	2.36	1.50	8.23	8.23	2-11 1/2 NPT	1.10	7.76	7.76	7.76		
2 1/2	65	7.00	5.50	4	0.75	10.20	10.12	10.08	0.71	—	—	—	—	2.889	2.868	1.750	9.45	2.880	1.752	9.37	9.33	1/2-8 NPT	1.26	8.46	8.39	8.35		
3	80	7.50	6.00	4	0.75	12.05	12.01	11.89	0.71	—	—	—	—	3.516	3.492	1.875	11.14	3.480	1.874	11.10	10.98	3-8 NPT	1.38	10.43	10.39	10.28		
4	100	9.00	7.50	8	0.75	14.72	14.72	14.53	0.71	4.518	4.491	2.000	13.86	—	—	—	—	—	—	4.480	2.252	14.37	14.13	4-8 NPT	1.77	14.25	14.25	14.06

Note : Pay attention that the following chemicals such as Hydrgen Peroxide (H₂O₂) and Sodium hypochlorite (NaClO) are adapt to be occurred the abnormal pressure rising due to their vaporization nature.

Panel Mounting

- Diaphragm Valve Type14
- Ball Valve Type21

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

Proceduce

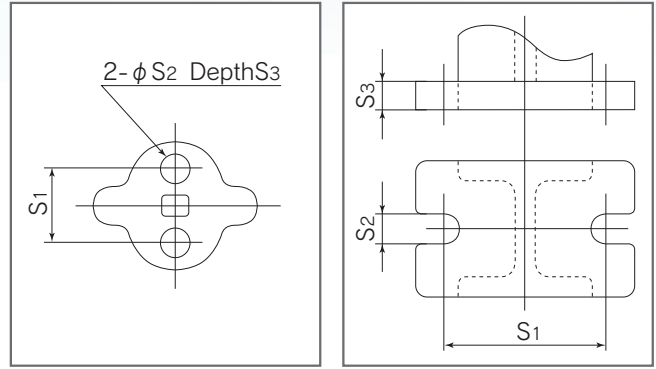
Refer to the User's Manual for Metal Insert (Ensat) by the Maker.

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)

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)

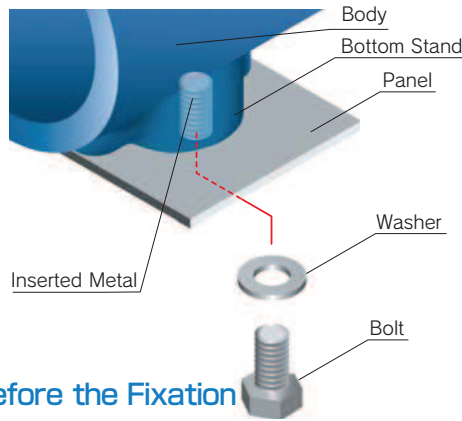


Ball Valve Type21 Unit:mm(inch)

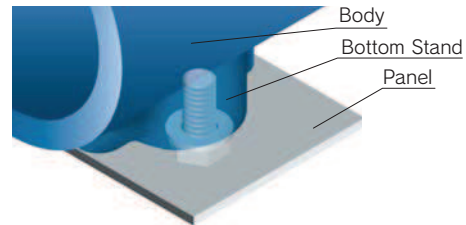
Nominal Size mm (inch)	S1	S2	S3
15mm - 25mm (1/2 - 1)	19 (0.75)	7.3 (0.29)	11 (0.43)
32mm - 50mm (1 1/4 - 2)	30 (1.18)	9 (0.35)	15 (0.59)
65mm (2 1/2)	48 (1.89)	9 (0.35)	6 (0.24)
80mm (3)	55 (2.17)	11 (0.43)	7 (0.28)
100mm (4)	65 (2.56)	11 (0.43)	8 (0.31)

Fixation of Bottom Stand with Panel

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

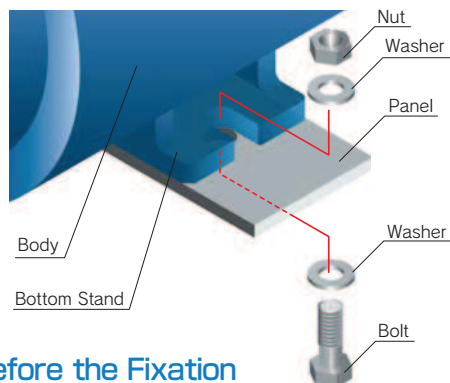


Before the Fixation

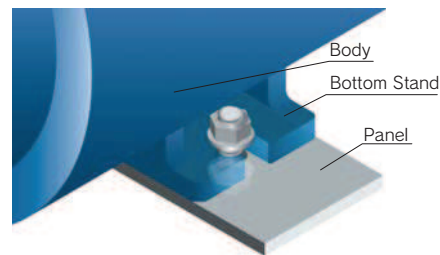


After the Fixation

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.

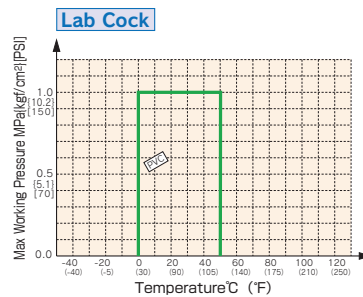
:LAB COCK(Material:PVC+EPDM)

*Certified products bear an NSF Certification Mark.

MATERIAL AND WORKING TEMPERATURE

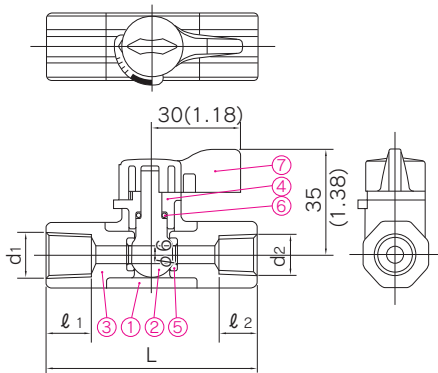
Body material	Unplasticized Polyvinyl Chloride(PVC)
Working Temperature	0°C - 50°C (30° F - 120° F)
Max.Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI]
End Connectors	Hose, Male thread, Female thread
Nominal Size	●Hose:12 to 15mm(standard hose inner diameter) ●Male thread:1/4,1/2 ●Female thread:1/4,3/8

WORKING PRESSURE VS. TEMPERATURE

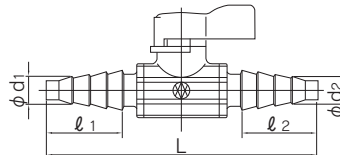


DIMENSION

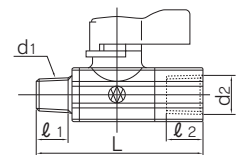
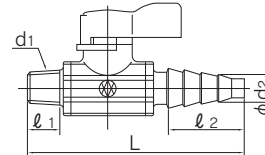
FEMALE THREAD × FEMALE THREAD



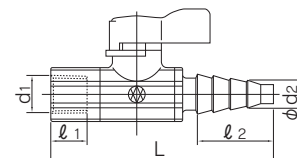
HOSE × HOSE



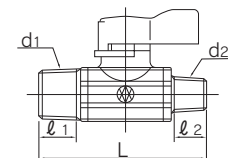
MALE THREAD × HOSE



FEMALE THREAD × HOSE



MALE THREAD × MALE THREAD



PARTS & MATERIALS

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

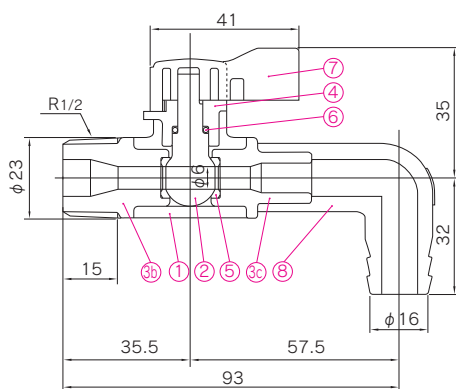
DIMENSIONS TABLE

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

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

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

■ LAB COCK 1/2inch MALE THREAD × ELBOW16mm



MATERIAL AND WORKING TEMPERATURE

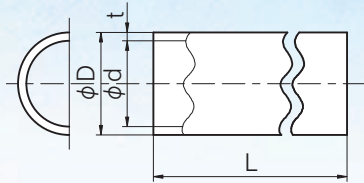
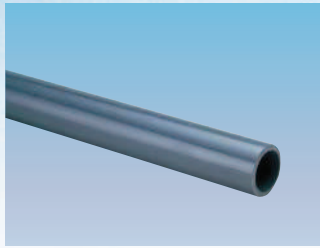
Body material	Unplasticized Polyvinyl Chloride(PVC)
Working Temperature	0°C - 50°C (30° F - 120° F)
Max.Working Pressure	1.0MPa{10.2kgf/cm ² }[150PSI]
End Connectors	R1/2inch Male thread × Elbow16mm

PARTS & MATERIALS

No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	PVC
②	BALL & STEM	1	PVC
③	END CONNECTOR	1	PVC
④	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

Nom. Size	Temp.	MPa (kgf/cm ²)			
		20°C	30°C	40°C	50°C
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.

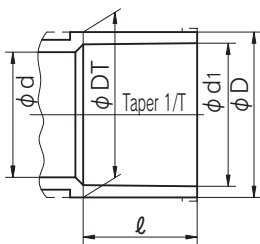
●HP-PVC Pipe <CLASS VP:JIS K6741> Unit:mm

Nominal Size (mm)	D			t		d	L
	Outer diameter			Wall Thickness			
	Basic Dimension (mm)	Maximum and Minimum tolerances	Average tolerances	Minimum	Tolerance		
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

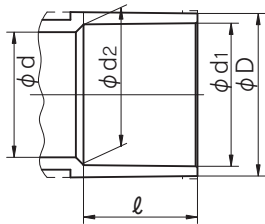
- (Note)
- The tolerances of lengths are ± 10mm.
 - The maximum and minimum tolerances on outside diameters are the tolerances on O.D. measurements taken at randomly selected spots.
 - The average tolerances on outside diameters are the tolerances on the arithmetical mean of O.D. measurements taken at 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

Nom. Size	Temp.	MPa (kgf/cm ²)			
		20°C	30°C	40°C	50°C
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 Common 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.
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

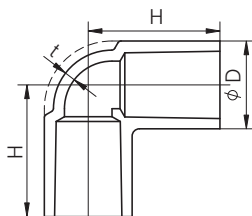
- (Note)
- The tolerances on ℓ are +4/-0.5mm.
 - The Nominal Size marked with ※ conform to the AV standard and the JPPFA standard.

Fittings in size 200, 250mm are available on request by FRP reinforcement.
 Max working pressure
 200mm : 1.0MPa{10.2kgf/cm²} at 20°C
 250mm : 1.0MPa{10.2kgf/cm²} at 20°C

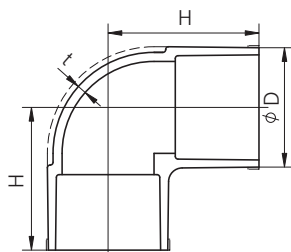
Elbow(L)



▼13mm - 50mm



▼65mm - 300mm



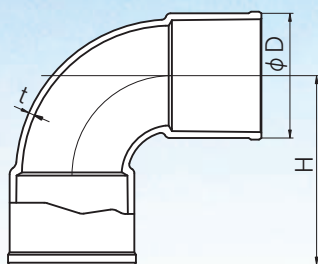
●Elbow(L) Unit:mm

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)
- The tolerances on H are +5/-1mm.
 - The Nominal Size marked with ※ conform to the JPPFA standard.
 - The Nominal Size marked with □ conform to the AV standard.

HP-PVC PIPE & FITTINGS

90° AV Bend

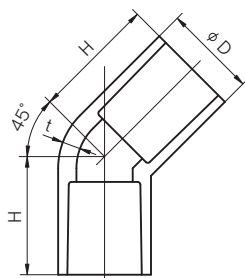


●90° AV Bend Unit:mm

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.

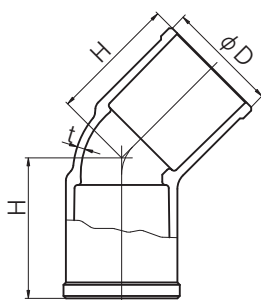
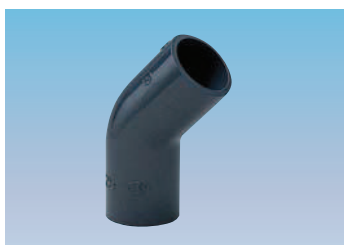
45° Elbow(45L)



●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.

BALL VALVE TYPE21

PANEL MOUNTING

LAB COCK

HP-PVC PIPES & FITTINGS

HP-PVC FITTINGS

AV PREFAB JOINT

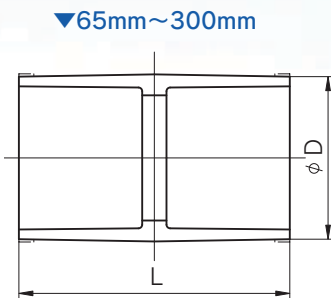
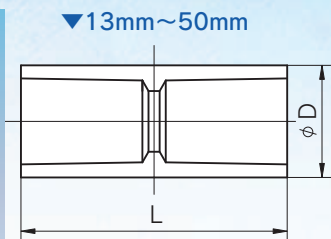
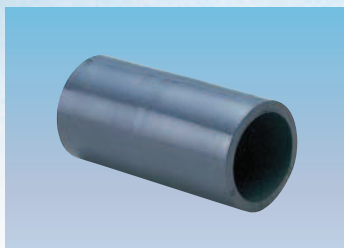
AV FLANGE

MULTI-JOINT

AV GASKET

HP-PVC FITTINGS

Socket(S)



●Socket(S)

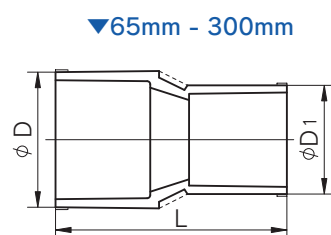
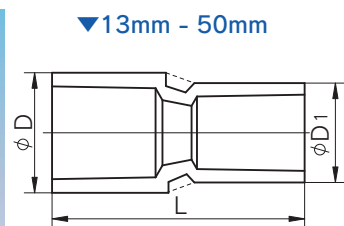
Unit:mm

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)



●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)

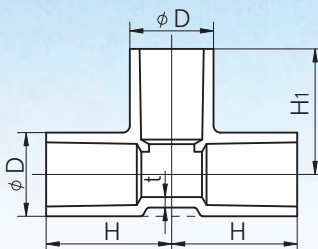
1. The tolerances on L are ±4.0mm.
2. The Nominal Size marked with ※ conform to the JPPFA standard.
3. The Nominal Size marked with □ conform to the AV standard.
4. ○ There sizes are not in accordance with JISK 6743 and therefore welding arrangement is not available.

HP-PVC FITTINGS

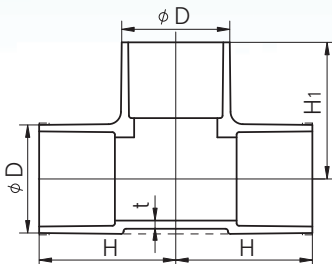
Tee(T)



▼13mm - 50mm



▼65mm - 300mm



●Tee(T) Unit:mm

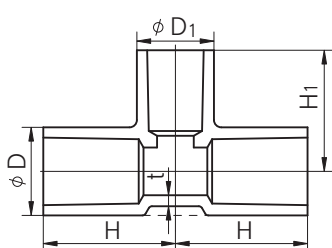
Nominal Size (mm)	D	t	H	H ₁
13	24	3.0	36	36
16	29	3.5	43	43
20	33	3.5	50	50
25	40	4.0	58	58
30	46	4.0	65	65
40	57	4.5	82	82
50	70	5.0	96	96
※ 65	87	6.6	110	110
75	102	8.0	120	120
100	130	10.0	152	152
※ 125	157	11.0	187	187
150	186	13.0	230	230
□ 200	240	15	266	266
□ 250	295	16	331	331
300	337	10	340	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.

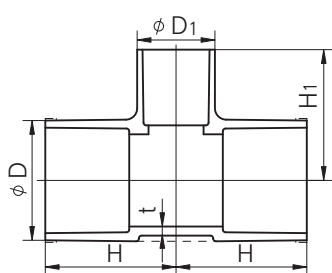
Reducing Tee(RT)



▼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.

BALL VALVE TYPE21

PANEL MOUNTING

LAB COCK

HP-PVC PIPES & FITTINGS

HP-PVC FITTINGS

AV PREFAB JOINT

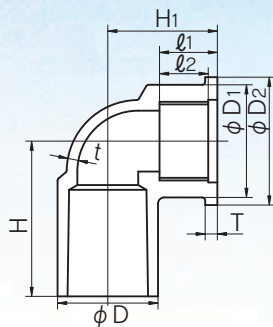
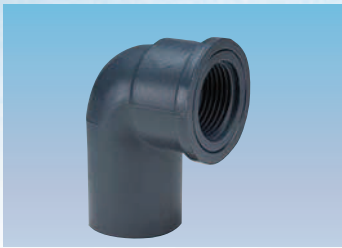
AV FLANGE

MULTI-JOINT

AV GASKET

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

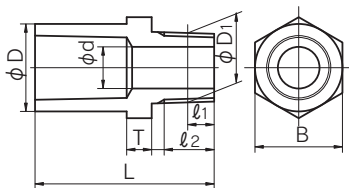
(Note)

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 H₁ are +5/-2mm.
4. The Nominal Size marked with □ conform to the AV standard.
5. The tolerances on l₂ 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 (Minimum)	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

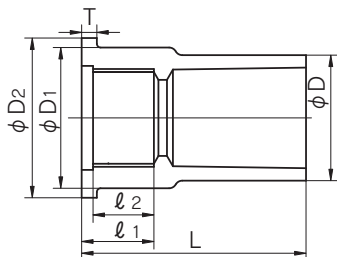
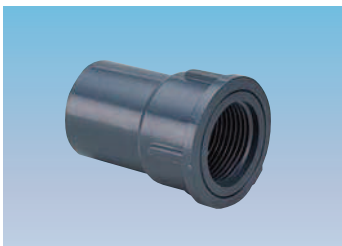
(Note)

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	14	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 l₂ are ± 1mm.
4. The Nominal Size marked with □ conform to the AV standard.

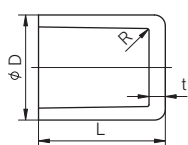
Precautions in use

- 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.

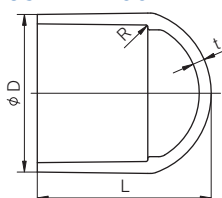
Cap (C)



▼ 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

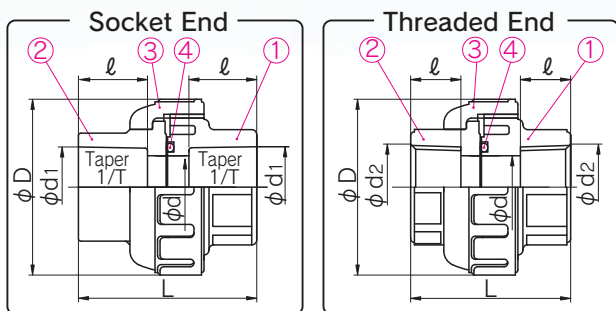
AV PREFAB JOINT <UNION>



SPECIFICATIONS

Material	Working temperature	Working pressure MPa{kgf/cm ² }	Nominal Size (mm)	Connection
Unplasticized Polyvinyl Chloride (U-PVC)	0°C~50°C	1.0{10.2}	13~100	Socket End
			13~50	Threaded End
Chlorinated Polyvinyl Chloride (C-PVC)	0°C~90°C	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.



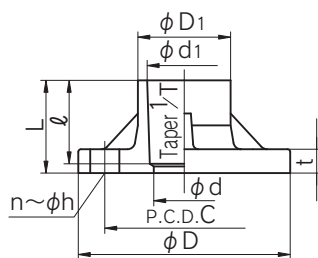
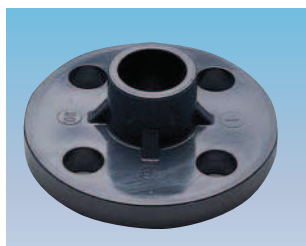
Nominal Size		d	Socket End				Threaded End			D
mm	inch		U-PVC, C-PVC				U-PVC			
			d ₁	ℓ	1/T	L	d ₁	ℓ	L	
13	3/8	13	18.13	18	1/34	46.0	RC3/8	15	43	48
16	1/2	15	22.11	20	1/34	46.0	Rc1/2	15	43	48
20	3/4	20	26.13	24	1/34	61.0	RC3/4	17	57	60
25	1	25	32.16	27	1/34	70.0	Rc1	20	63	70
30	1 1/4	31	38.19	30	1/34	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

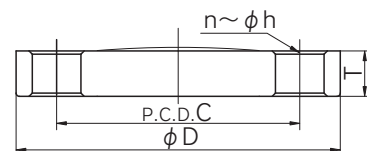
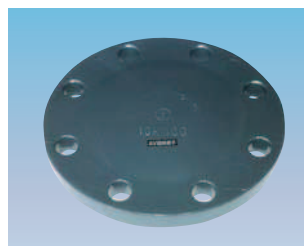
No.	DESCRIPTION	Pcs.	MATERIAL
①	BODY	1	U-PVC, C-PVC
②	END CONNECTOR	1	U-PVC, C-PVC
③	UNION NUT	1	U-PVC, C-PVC
④	O-RING	1	EPDM, FKM, others

AV FLANGE <HP-PVC>

AV TS FLANGE (JIS 10K 13mm - 300mm)



AV Q FLANGE (JIS 10K 15mm - 150mm)



※The figure described by broken (dashed) line shows shape of Q-flange applied for dead end service of piping.

Nominal Size		d	JIS 10K				d ₁	Taper 1/T	D ₁	t	T	ℓ ^{+0.0} _{-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 details 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 available.

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

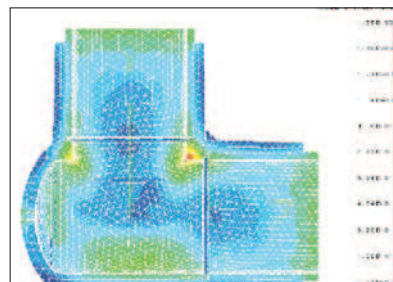
Types : Type "L", Type "T"

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°C
Max. Working Pressure	1.0MPa

SOCKET Type L · T

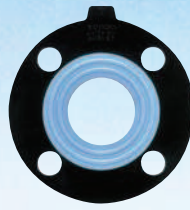
Nominal Size (mm)	Type	16	20	25	40	50	65	75	100	125
		40	L	○	○	○				
	T	○	●	●						
50	L	○	○	○						
	T	●	●	●						
65	L	○	○	○	○					
	T	○	○	○	●					
75	L	○	○	○	○	○				
	T	○	○	●	●	●				
100	L	○	○	○	○	○	○			
	T	○	○	○	○	●	○			
125	L	○	○	○	○	○	○	○		
	T	○	○	○	○	○	○	●		
150	L	○	○	○	○	○	○	○	○	
	T	○	○	○	○	○	○	●	●	
200	L	○	○	○	○	○	○	○	○	○
	T	○	○	○	○	○	○	●	●	○

※ ● This product can correspond with ASAHI AV TS FITTINGS.

AV GASKET



Full face Type Rubber Gasket



PTFE coated



PVDF coated

● MATERIAL : EPDM, PTFE, PVDF, CSM, FKM, IIR, Viton 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°C - 90°C (-40°F - 195°F)	15mm - 350mm	1/2inch - 14inch	15mm - 350mm
PTFE	-40°C - 120°C (-40°F - 250°F)	15mm - 300mm	1/2inch - 12inch	15mm - 400mm
PVDF	-40°C - 120°C (-40°F - 250°F)	15mm - 300mm	1/2inch - 10inch *1	15mm - 300mm
VIFLON	-5°C - 150°C (-5°F - 280°F)	15mm - 200mm	-	-

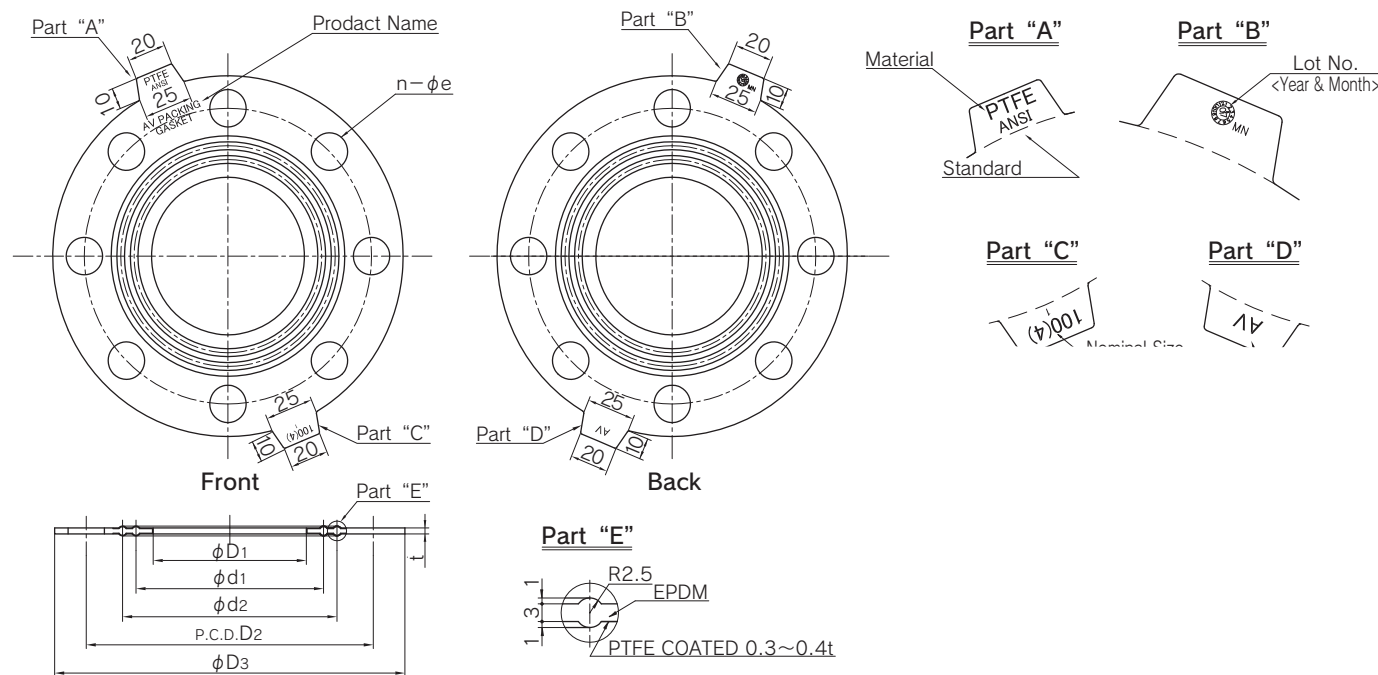
Working temperature is different depending on type of fluid.

*1 Except for 1 1/4inch and 2 1/2inch

Voflon-F has superior resistance to inorganic acids such as HNO₃, HF and HCl.

Voflon-C has superior resistance to chlorine containing media such as Chlorine Water, NaCl and ClO₂.

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	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	

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 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

Features	171
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Fittings	174
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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°C 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 perfect insulator, eliminating any worry about electrolytic corrosion.

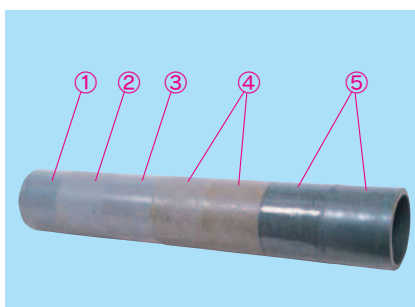
6. Lightweight

Made of plastic, AV Pipe is far lighter than metal pipes, which makes piping work at high elevations easier.

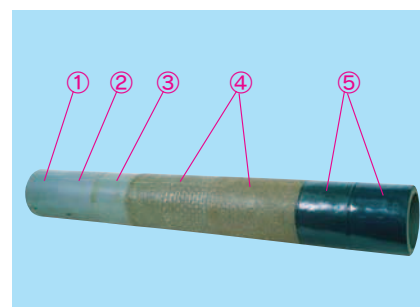
7. Ease of installation

TS joining of PVC can be used for on-site installation. FRP lamination can be formed easily at the junctions.

Structure



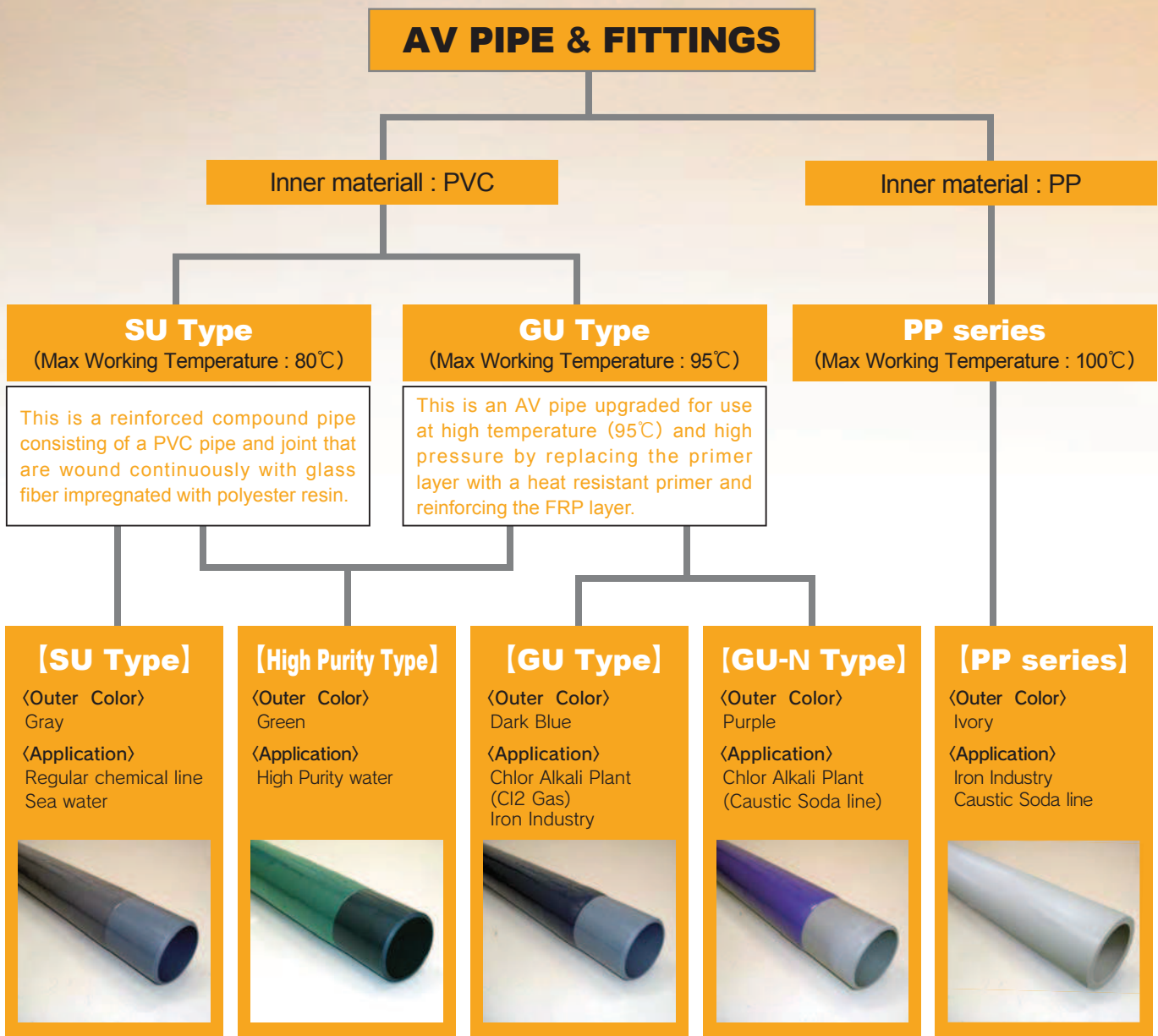
AV Pipe (SU type)



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) **Surface-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.

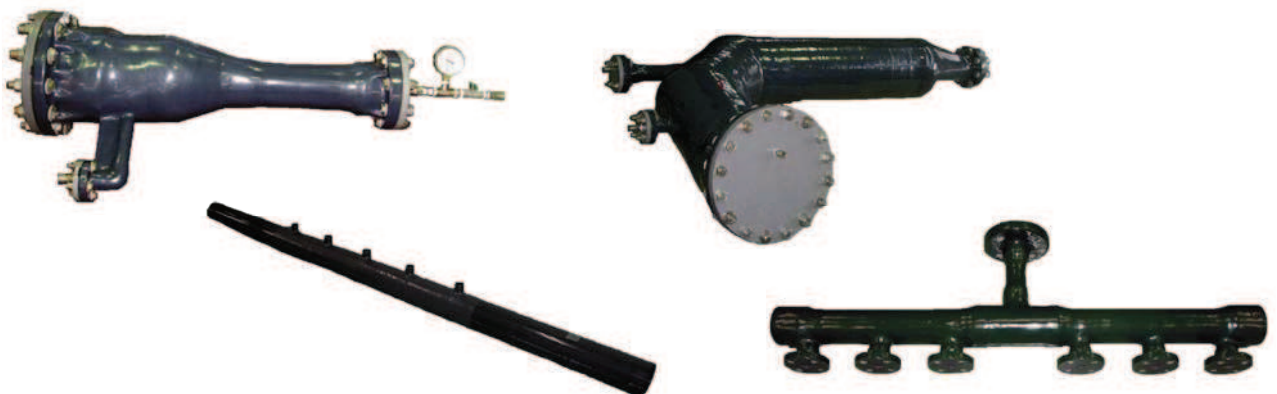
Types



※Color is changable on customer's requests.
 ※Applicable sizes are different in types.

Special Fabrication on Customer's Request

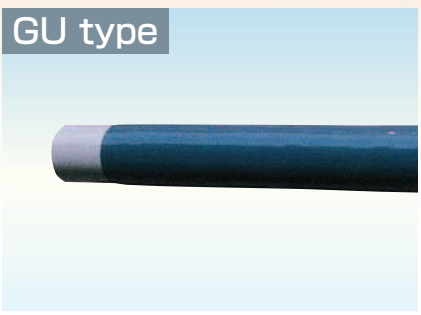
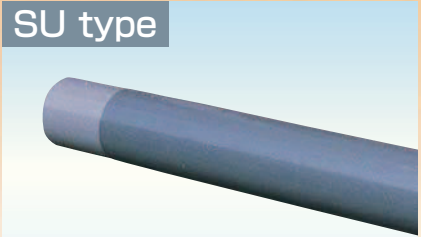
※PP+FRP piping system can be provided by only fabrication.



Standard

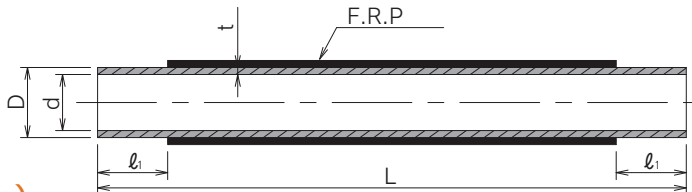
Pipe (Plane end type)

(Unit : mm)



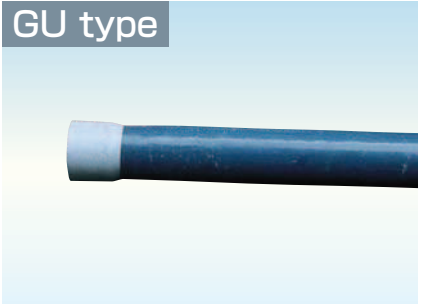
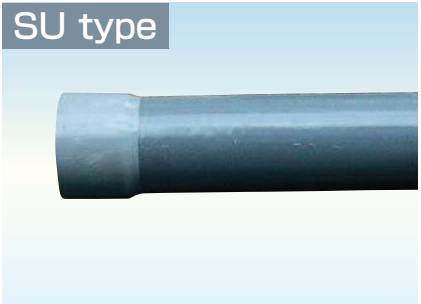
Size		L	ℓ ₁	D	d	t
mm	inch					
13	3/8	4000	45	18	13	2.5
15	1/2	4000	50	22	16	3.0
20	3/4	4000	55	26	20	3.0
25	1	4000	60	32	25	3.5
30	1 1/4	4000	65	38	31	3.5
40	1 1/2	4000	80	48	40	4.0
50	2	4000	90	60	51	4.5
65	2 1/2	4000	95	76	67	4.5
75	3	4000	100	89	77	6.0
100	4	4000	120	114	100	7.0
125	5	4000	150	140	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 nominal size 300mm.



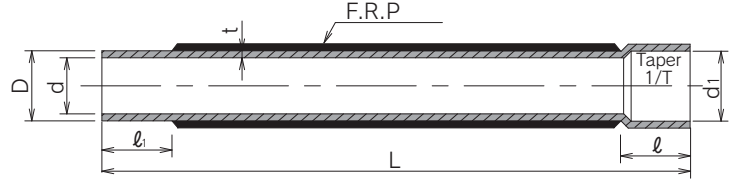
Pipe (Sleeve type)

(Unit : mm)



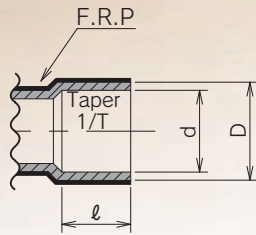
Size		L	ℓ ₁	ℓ	d ₁	1/T	D	d	t
mm	inch								
13	3/8	4000	45	26	18.40	1/30	18	13	2.5
15	1/2	4000	50	30	22.40	1/34	22	16	3.0
20	3/4	4000	55	35	26.45	1/34	26	20	3.0
25	1	4000	60	40	32.55	1/34	32	25	3.5
30	1 1/4	4000	65	44	38.60	1/34	38	31	3.5
40	1 1/2	4000	80	55	48.70	1/37	48	40	4.0
50	2	4000	90	63	60.80	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 nominal 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

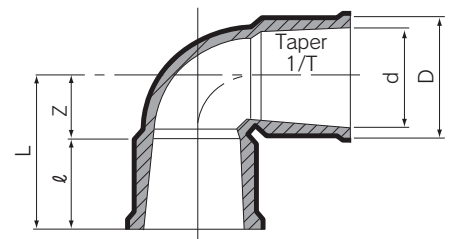
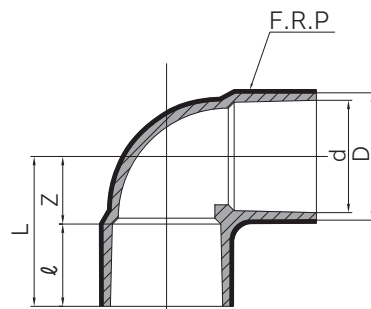
(Unit : mm)

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

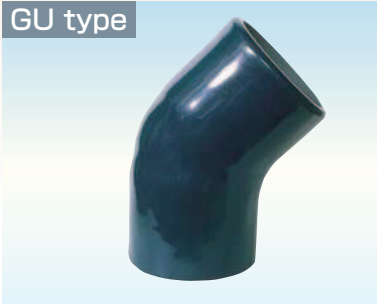


Elbow, Bend (45°)

SU type



GU type



Elbow 20~25mm

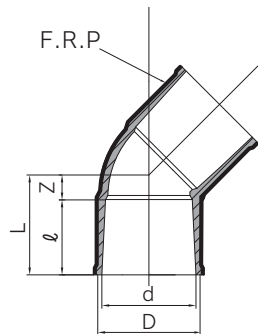
(Unit : mm)

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

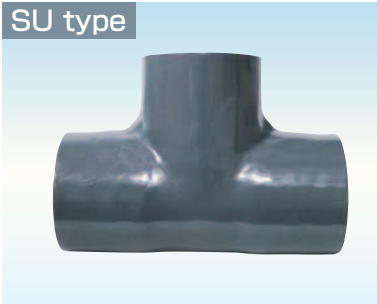
(Unit : mm)

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

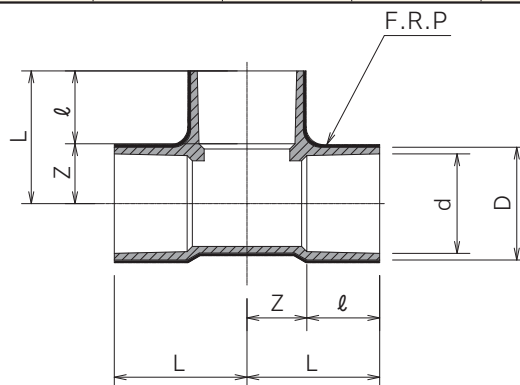


GU type



(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

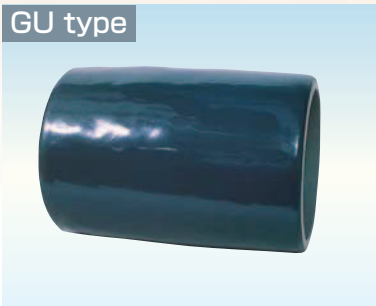


Socket

SU type

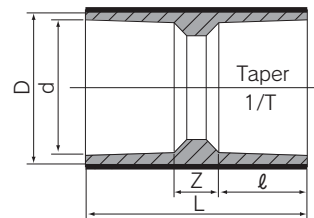


GU type



(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

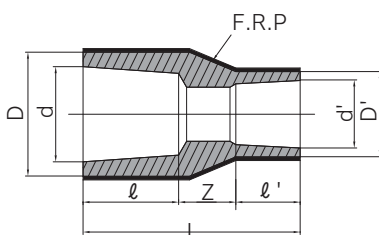


GU type



(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



TS Flanges (JIS 10kgf/cm² Type)

SU type 13A~125A



GU type 13A~125A



SU type 150A~300A



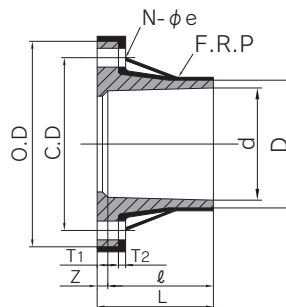
GU type 150A~300A



(Unit : mm)

Size		L	ℓ	Z	O.D	C.D	D	d	T ₁	T ₂		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



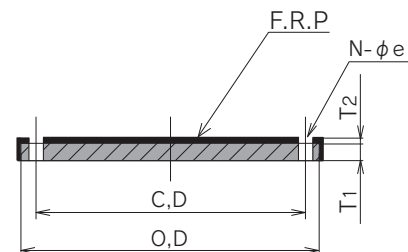
(Unit : mm)

Size		O.D	C.D	T ₁		T ₂		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 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°C .
- 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.

 <p>PP PIPE PN10</p>	 <p>PP PIPE PN4</p>	 <p>SOCKET</p>	 <p>90° ELBOW</p>
 <p>45° ELBOW</p>	 <p>TEE</p>	 <p>REDUCER BUSHING</p>	 <p>END CAP</p>
 <p>SOCKET FLANGE</p>	 <p>FLANGE ADAPTER</p>	 <p>FLANGE ADAPTER</p>	 <p>LOOSE FLANGE</p>
 <p>WELDED FLANGE</p>	 <p>BLIND FLANGE(P)</p>	 <p>BLIND FLANGE(Q)</p>	 <p>PREFAB JOINT</p>
 <p>MALE ADAPTER</p>	 <p>FEMALE ADAPTER</p>	 <p>EF-SOCKET</p>	 <p>WELDING ROD</p>

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	⊙	⊙	⊙	—	—	—	—	—	⊙	

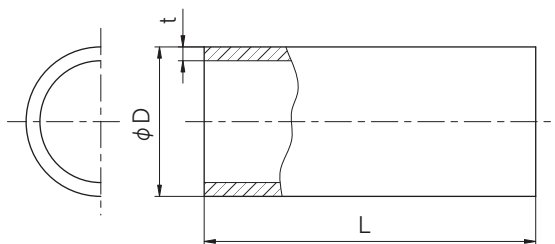
Welding Rod	Shape	Diameter	Unit	
	Single	3	3	2kg (Stick type1m)
				4kg (Scroll type)
		4	4	2kg (Stick type1m)
				4kg (Scroll type)
5	5	2kg (Stick type1m)		
		4kg (Scroll type)		
Double	3	3	2kg (Stick type1m)	

■ PP pipe (PN10/SDR11)

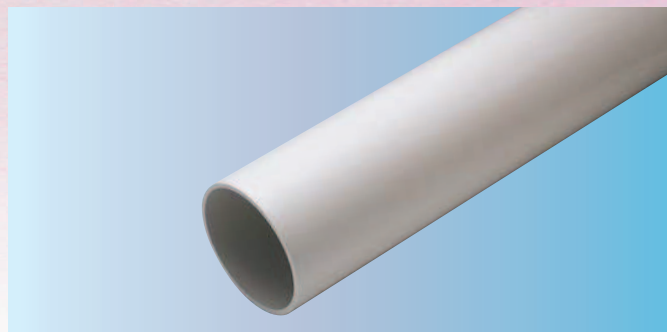
■ PP pipe (PN4/SDR26)



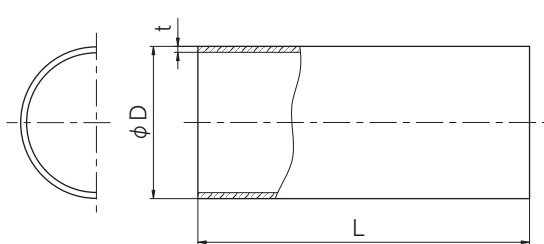
PP pipe (PN10/SDR11)



(Unit : mm)



PP pipe (PN4/SDR26)



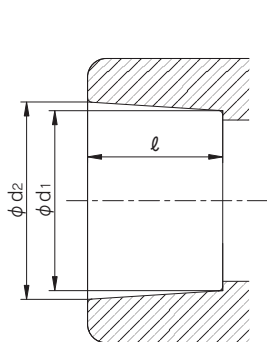
PN10/SDR11									
Nominal Size (mm)	Product Indication	D		t		Approximate I.D. (for reference)	L		Weight (kg/m)
		Basic Dimension	Average O.D. Tolerances	Basic Dimension	Tolerance		Basic Dimension	Tolerance	
15	d20	20	+0.3 0	1.9	+0.4 0	16.2	4000	±10	0.110
20	d25	25	+0.3 0	2.3	+0.5 0	20.4			0.166
25	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		t		Approximate I.D. (for reference)	L		Weight (kg/m)
		Basic Dimension	Average O.D. Tolerances	Basic Dimension	Tolerance		Basic Dimension	Tolerance	
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

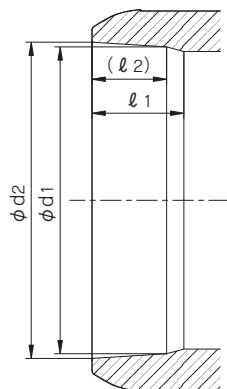
- (Note) 1. 15mm~200mm : DIN8077
 2. SDR (Standard Dimension Ratio) : (D/t)
 3. PN10 : Working Pressure 1.0MPa(20°C)
 4. PN4 : Working Pressure 0.4MPa(20°C)

■ PP Fitting Dimension Common

(Unit : mm)



15mm~100mm
(d20~d110)

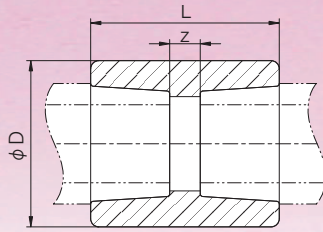


125mm~200mm
(d140~d225)

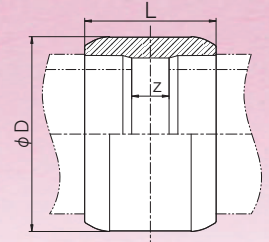
Nominal Size (mm)	Product Indication	d1			d2			ℓ (minimum)	ℓ 1	ℓ 2 (for reference)
		Basic Dimension	Average I.D. Tolerances	Circularity (Max)	Basic Dimension	Average I.D. Tolerances	Circularity (Max)			
15	d20	19.3	-0.3 0	0.4	19.5	-0.3 0	0.4	14.5	—	—
20	d25	24.3	-0.4 0	0.4	24.5	-0.3 0	0.4	16	—	—
25	d32	31.3	-0.4 0	0.5	31.5	-0.4 0	0.5	18	—	—
32	d40	39.2	-0.4 0	0.5	39.45	-0.4 0	0.5	20.5	—	—
40	d50	49.2	-0.5 0	0.6	49.45	-0.5 0	0.6	23.5	—	—
50	d63	62.1	-0.5 0	0.6	62.5	-0.6 0	0.6	27.5	—	—
65	d75	73.95	-0.5 0	1	74.25	-0.5 0	1	31	—	—
80	d90	88.85	-0.6 0	1	89.2	-0.6 0	1	35.5	—	—
100	d110	108.65	-0.6 0	1	109.05	-0.6 0	1	41.5	—	—
125	d140	139.1	-2.0 0	2.0	139.4	-2.0 0	2.0	—	41.5	32.7
150	d180	178.7	-2.0 0	2.0	179.1	-2.0 0	2.0	—	50.5	41.7
200	d225	223.2	-2.0 0	2.0	223.7	-2.0 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)



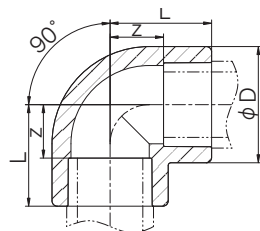
125mm~200mm (d140~d225)

(Unit : mm)

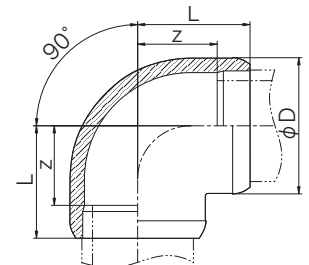
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30.5	35	6	0.015
20	d25	35.5	39	7	0.019
25	d32	43.5	43	7	0.030
32	d40	53.5	48	7	0.047
40	d50	66	55	8	0.079
50	d63	82	62	7	0.131
65	d75	92.5	70	8	0.161
80	d90	110	81	10	0.253
100	d110	134	96	13	0.431
125	d140	172	116	33	0.821
150	d180	221	140	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)



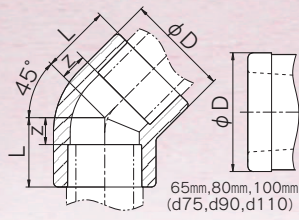
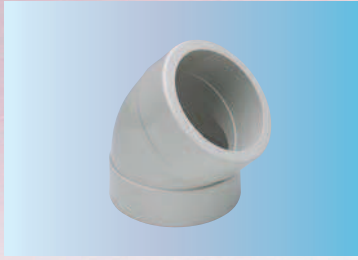
125mm~200mm (d140~d225)

(Unit : mm)

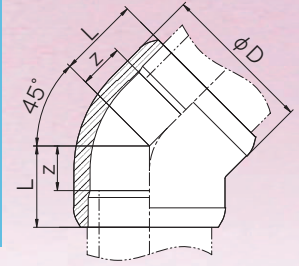
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30.5	28	13.5	0.023
20	d25	35.5	32	16	0.032
25	d32	43.5	38	20	0.052
32	d40	53.5	44	23.5	0.084
40	d50	66	51	27.5	0.136
50	d63	82	62	34.5	0.250
65	d75	92.5	75.5	44.5	0.340
80	d90	110	88	52.5	0.526
100	d110	134	106	64.5	0.953
125	d140	172	142	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)



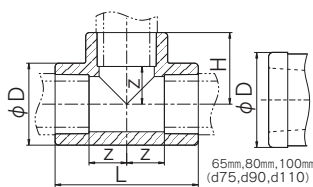
125mm~200mm (d140~d225)

(Unit : mm)

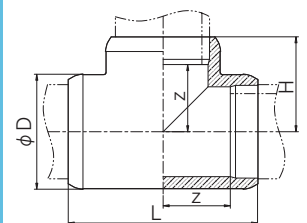
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	31	21.5	7	0.018
20	d25	36	24.5	8.5	0.025
25	d32	44	28	10	0.037
32	d40	55	34	13.5	0.070
40	d50	66	37	13.5	0.102
50	d63	82	48	20.5	0.180
65	d75	92	51.5	20.5	0.203
80	d90	111	59	23.5	0.340
100	d110	135.5	69	27.5	0.605
125	d140	172	92	50.5	1.299
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)

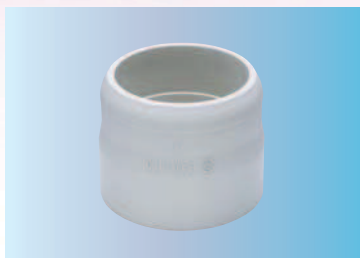
Nominal Size (mm)	Product Indication	D	L	H	z	Weight (kg)
15	d20	30.5	57	28.5	14	0.029
20	d25	35.5	65	32.5	16.5	0.041
25	d32	43.5	76	38	20	0.060
32	d40	55	88	44	23.5	0.108
40	d50	66	103	51.5	28	0.163
50	d63	82	126	63	35.5	0.292
65	d75	92.5	152	76	45	0.358
80	d90	111	176	88	52.5	0.625
100	d110	135	213	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

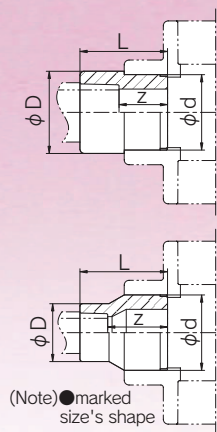
Reducer Bushing



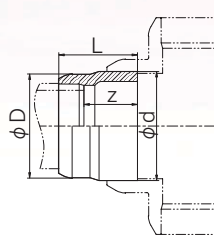
20mm×15mm~100mm×80mm
(d25×d20~d110×d90)



125mm×100mm~200mm×150mm
(d140×d110~d225×d180)



(Note) ● marked size's shape



(Unit : mm)

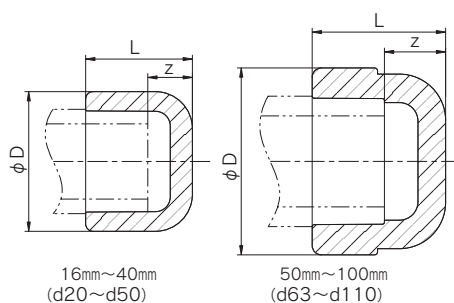
Nominal Size (mm)	Product Indication	D	d	L	Z	Weight (kg)
● 20×15	d25×d20	30	25	35	20.5	0.011
25×15	d32×d20	30	32	43	28.5	0.016
● 25×20	d32×d25	35	32	38	22	0.016
32×15	d40×d20	30	40	50	35.5	0.022
32×20	d40×d25	35	40	50	34	0.024
● 32×25	d40×d32	43	40	48	30	0.029
40×15	d50×d20	31	50	54	39.5	0.034
40×20	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)

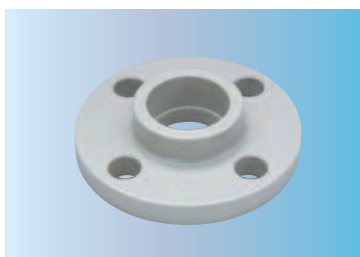
50mm~100mm
(d63~d110)

(Unit : mm)

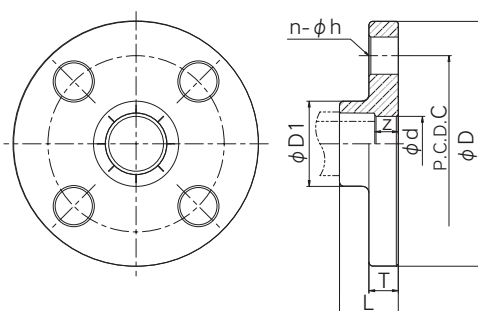
Nominal Size (mm)	Product Indication	D	L	z	Weight (kg)
15	d20	30	27	12.5	0.013
20	d25	36	30	14	0.019
25	d32	44	32	14	0.028
32	d40	55	36	15.5	0.039
40	d50	66	43	19.5	0.076
50	d63	85	47	19.5	0.129
65	d75	92	63	32	0.165
80	d90	111	74	38.5	0.296
100	d110	133.5	91	49.5	0.430

(Note) DIN16962-8

Socket Flange



15mm~50mm (d20~d63)



(Unit : mm)

Nominal Size (mm)	Product Indication	D1	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

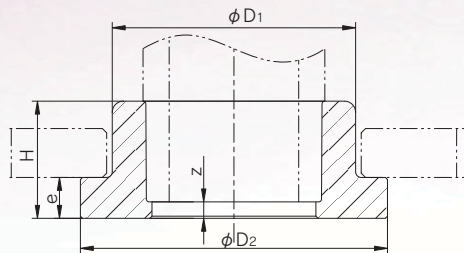
(Note) Flange Standard is available only JIS 10K.

Flange Adapter

(unit : mm)



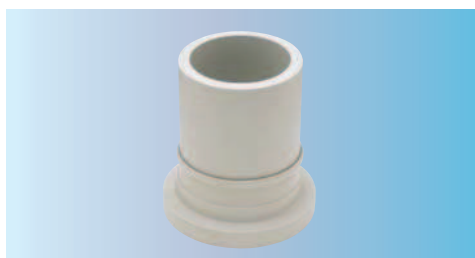
15mm~100mm (d20~d110)



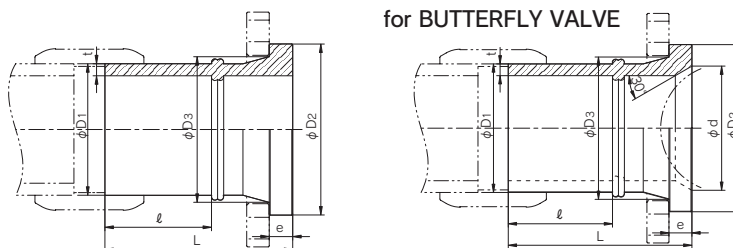
Nominal Size (mm)	Product Indication	D1	D2	e	H	z	Weight (kg)
15	d20	27.5	45	10	21.5	7	0.015
20	d25	33.5	56	10	22	6	0.023
25	d32	41.5	62	10	24.5	6.5	0.029
32	d40	50	74	11	28.5	8	0.044
40	d50	61	78	12	32	8.5	0.052
50	d63	76	93	14	36	8.5	0.081
65	d75	90	106	10.5	35	4	0.091
80	d90	109	125	11	43	7.5	0.156
100	d110	131	150	12.5	51	9.5	0.254

(Note) DIN16962-12

Flange Adapter



125mm~200mm (d140~d225)



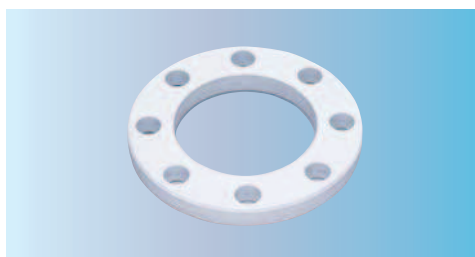
(unit : mm)

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

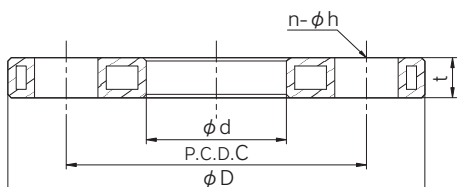
(Note) The dimension of "D1""t"are based on DIN8077(PIN10/SDR11)

Loose Flange

(unit : mm)



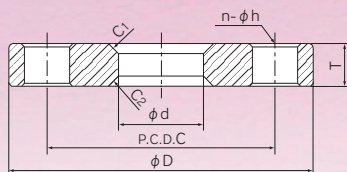
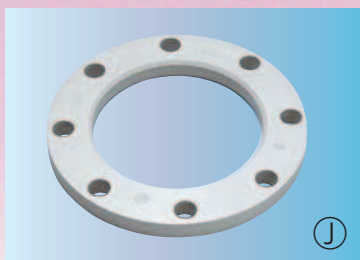
15mm~200mm (d20~d225)



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.

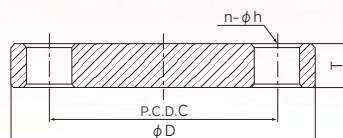
Welded Flange



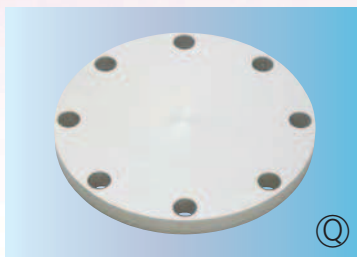
(unit : mm)

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.



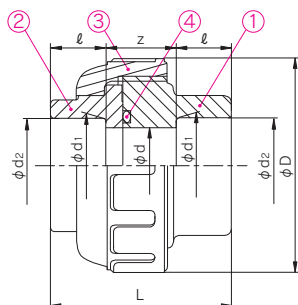
Blind Flange



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.

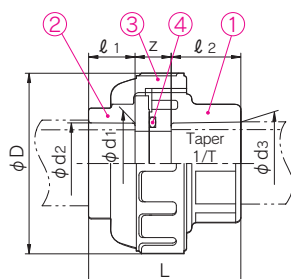
Parts & Materials

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

(unit : mm)



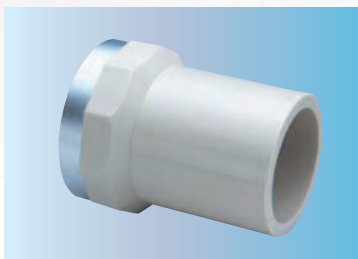
15mm~50mm (d20~d63)

Nominal Size (mm)	Product Indication	D	t	d	R	L	ℓ ₁	ℓ ₂	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

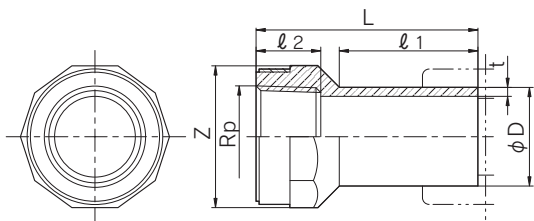
(unit : mm)



15mm~50mm (d20~d63)

Nominal Size (mm)	Product Indication	D	t	Rp	L	ℓ ₁	ℓ ₂	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.



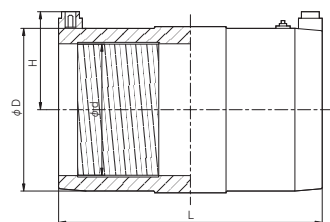
EF-Socket

(unit : mm)

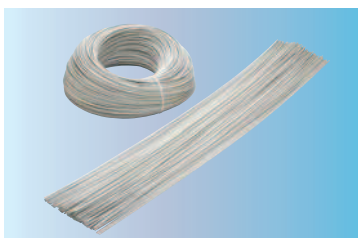


15mm~200mm (d20~d225)

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)

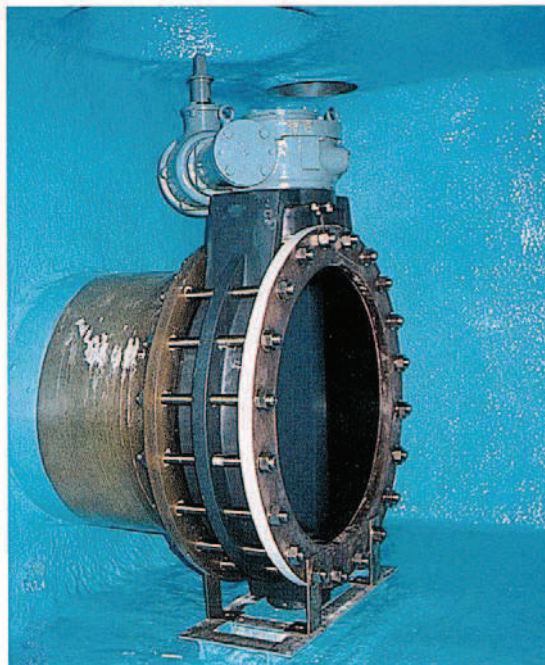
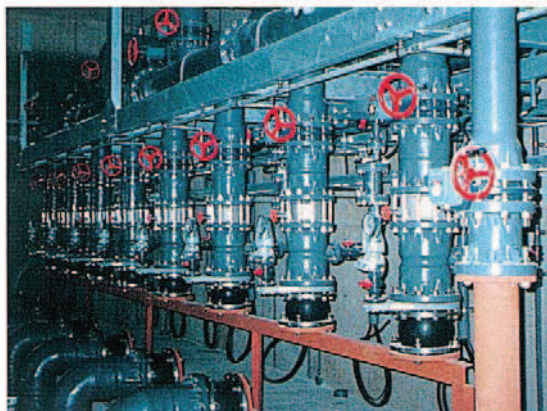
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- For installation and maintenance procedure refer to the appropriate manual for the product being used.
- Do not drop or toss pipe and fitting material.
- Do not step on a valve.
- Do not put anything heavy on a valve.
- Do not put anything burning 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 contact 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.

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ISO14001:2004

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