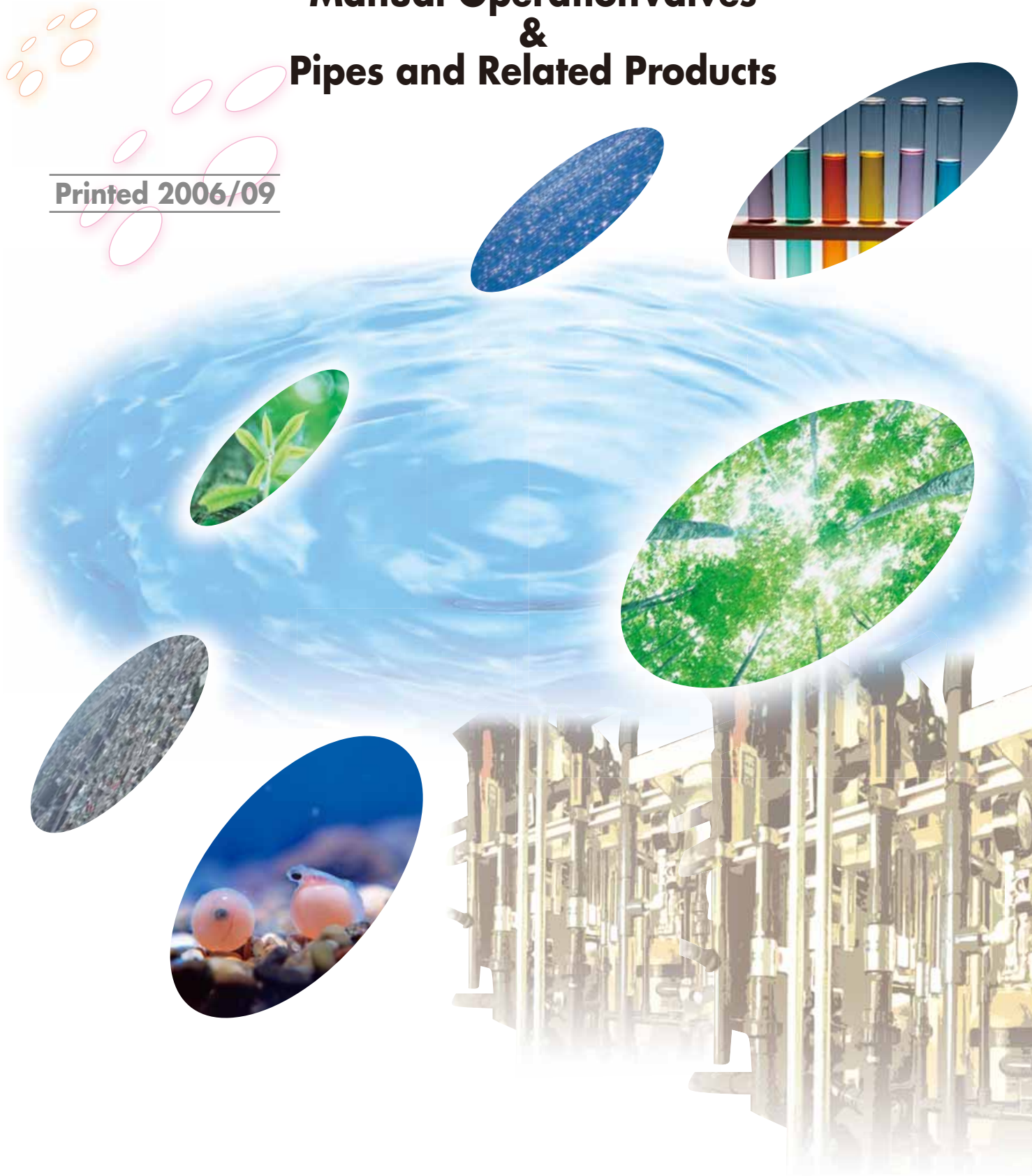


# **ESLON VALVE**

**Manual Operation Valves  
&  
Pipes and Related Products**

Printed 2006/09



# ESLON VALVE

## Manual Operation Valves & Pipes and Related Products

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Size:15~250  
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DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE



Size:20X16~65X40  
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Size:15~100  
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Size:15~50  
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Size:13~50  
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Size:13~50  
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# ESLON VALVE Manual Operation Product List

## DIAPHRAGM VALVE

### DIAPHRAGM VALVE (P. I -1, I -2)

Material	PVC			HT (CPVC)		PP	PVDF		
	Flange	Thread	TS	Flange	TS	Flange	Flange	Thread	Butt
15 ( 1/2)	●	●	●	●	●	●	●	●	●
20 ( 3/4)	●	●	●	●	●	●	●	●	●
25 (1)	●	●	●	●	●	●	●	●	●
32 (1 1/4)	●	—	●	●	—	●	●	—	—
40 (1 1/2)	●	●	●	●	●	●	●	●	●
50 (2)	●	●	●	●	●	●	●	●	●
65 (2 1/2)	●	—	—	●	—	●	●	—	—
80 (3)	●	—	—	●	—	●	●	—	—
100 (4)	●	—	—	●	—	●	●	—	—
125 (5)	●	—	—	—	—	●	●	—	—
150 (6)	●	—	—	—	—	●	●	—	—
200 (8)	●	—	—	—	—	●	●	—	—
250 (10)	●	—	—	—	—	●	●	—	—

### DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE (P. I -3)

Material	PVC			HT (CPVC)			PVDF		
	Flange	True Union TS	TS	Flange	True Union TS	TS	Flange	True Union Butt	Butt
20X16	●	●	●	●	●	●	—	—	●
25X25	●	●	—	●	●	—	●	●	—
50X25	●	●	—	●	●	—	●	●	—
65X40	●	●	—	●	●	—	●	●	—

## BALL VALVE

### BALL VALVE (P. I -4)

Material	PVC			HT (CPVC)		PP	PVDF		
	Flange	Thread	TS	Flange	TS	Flange	Flange	Thread	Butt
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)	●	●	●	●	—	—	—	—	—

### 3-WAY BALL VALVE (P. I -5)

Material	PVC		
	Flange	Thread	TS
15 ( 1/2)	●	●	●
20 ( 3/4)	●	●	●
25 (1)	●	●	●
40 (1 1/2)	●	●	●
50 (2)	●	●	●

### LOCK BALL VALVE (COMPACT BALL VALVE) (P. I -6)

Material	PVC	
	Thread	TS
13 ( 3/8)	—	●
15 ( 1/2)	●	●
20 ( 3/4)	●	●
25 (1)	●	●
32 (1 1/4)	●	●
40 (1 1/2)	●	●
50 (2)	●	●

### ■ MINI BALL VALVE (P. I -7)

Material	PVC			
	Female Thread	Male Thread	TS	Hose Straight
Size				
6 (1/8)	●	●	—	●
13 (3/8)	●	—	●	—
15 (1/2)	●	—	●	—

### ■ YP BALL VALVE (P. I -8)

Material	PVC		
	Flange	Thread	TS
Size			
15 ( 1/2)	●	●	●
20 ( 3/4)	●	●	●
25 (1)	●	●	●
32 (1 1/4)	●	●	●
40 (1 1/2)	●	●	●
50 (2)	●	●	●

## BUTTERFLY VALVE

### ■ BUTTERFLY VALVE (P. I -9, 10)

Material	PVC		GF-PP (PP)	
	LEVER	GEAR	LEVER	GEAR
Size				
40 (1 1/2)	●	●	●	●
50 (2)	●	●	●	●
65 (2 1/2)	●	●	●	●
80 (3)	●	●	●	●
100 (4)	●	●	●	●
125 (5)	●	●	●	●
150 (6)	●	●	●	●
200 (8)	●	●	●	●
250 (10)	—	●	—	●
300 (12)	—	●	—	●
350 (14)	—	●	—	●
400 (16)	—	—	—	●
450 (18)	—	—	—	●
500 (20)	—	—	—	●
600 (24)	—	—	—	●

### ■ FRP BUTTERFLY VALVE (P. I -11)

Size	Material	FRP
300 (12)		●
350 (14)		●
400 (16)		●
450 (18)		●
500 (20)		●
600 (24)		●
700 (28)		●
800 (32)		●
900 (36)		●
1000 (40)		●

### ■ ROTARY DAMPER (P. I -12)

Size	Material	PVC
40 (1 1/2)		●
50 (2)		●
65 (2 1/2)		●
80 (3)		●
100 (4)		●
125 (5)		●
150 (6)		●
200 (8)		●
250 (10)		●
300 (12)		●

### ■ BUTTERFLY VALVE FOR UNDER GROUND (P. I -13)

Material	PVC	
	Handle	Cap
Size		
50 (2)	●	●
75 (3)	●	●
100 (4)	●	●
125 (5)	●	●
150 (6)	●	●
200 (8)	●	●
250 (10)	●	●
300 (12)	●	●

## GATE VALVE

### ■ GATE VALVE (P. I -14)

Material	PVC	
	Flange	
	Internal Thread	External Thread
Size		
40 (1 1/2)	●	●
50 (2)	●	●
65 (2 1/2)	●	●
80 (3)	●	●
100 (4)	●	●
125 (5)	●	●
150 (6)	●	●
200 (8)	●	●

### ■ GATE VALVE FOR PORTABLE WATER (P. I -15)

Material	PVC			
	Water Supply Flange		JIS 10K Flange	
	Handle	Cap	Handle	Cap
Size				
50	●	●	●	●
75	●	●	●	●
100	●	●	●	●
125	●	●	●	●
150	●	●	●	●
200	●	●	●	●

## GLOBE VALVE

### ■ GLOBE VALVE (P. I -16)

Material	PVC		
	Flange	Thread	TS
Size			
15 ( 1/2)	●	●	●
20 ( 3/4)	●	●	●
25 (1)	●	●	●
32 (1 1/4)	●	●	—
40 (1 1/2)	●	●	—
50 (2)	●	●	—
65 (2 1/2)	●	—	—
80 (3)	●	—	—
100 (4)	●	—	—

## STRAINER

### ■ STRAINER (P. I -17)

Material	PVC			
	Flange	Thread	TS	True Union Thread*TS
Size				
15 ( 1/2)	●	●	●	●
20 ( 3/4)	●	●	●	●
25 (1)	●	●	●	●
32 (1 1/4)	●	●	●	●
40 (1 1/2)	●	●	●	●
50 (2)	●	●	●	●
65 (2 1/2)	●	—	—	—
80 (3)	●	—	—	—
100 (4)	●	—	—	—

Body of Size 15 to 50 is transparency.

## CHECK VALVE

### ■ CHECK VALVE (SWING TYPE • BALL TYPE • LIFT TYPE) (P. I -18, 19, 20)

TYPE	SWING TYPE			BALL TYPE				LIFT TYPE
	PVC	PP	PVDF	PVC		HT (CPVC)		
Material	Flange	Flange	Flange	Thread	TS	Thread	TS	Flange
Size								
15 ( 1/2)	●	●	●	●	●	●	●	●
20 ( 3/4)	●	●	●	●	●	●	●	●
25 (1)	●	●	●	●	●	●	●	●
32 (1 1/4)	●	●	●	●	●	●	●	●
40 (1 1/2)	●	●	●	●	●	●	●	●
50 (2)	●	●	●	●	●	●	●	●
65 (2 1/2)	●	●	●	—	●	—	●	—
80 (3)	●	●	●	—	●	—	●	—
100 (4)	●	●	●	—	●	—	●	—
125 (5)	●	●	●	—	—	—	—	—
150 (6)	●	●	●	—	—	—	—	—
200 (8)	●	●	●	—	—	—	—	—

## RELIEF VALVE

### RELIEF VALVE (P. I -21)

Material	PVC			PP	PVDF	
	Flange	Thread	TS	Flange	Flange	Thread
13 ( 3/8)	—	●	●	—	—	●
15 ( 1/2)	●	●	●	●	●	●
20 ( 3/4)	●	●	●	●	●	●
25 (1)	●	●	●	●	●	●
32 (1 1/4)	●	●	●	●	●	●
40 (1 1/2)	●	●	●	●	●	●
50 (2)	●	●	●	●	●	●

### PRESSURE REGULATION VALVE (P. I -23)

Material	PVC			PP	PVDF	
	Flange	Thread	TS	Flange	Flange	Thread
13 ( 3/8)	—	●	●	—	—	●
15 ( 1/2)	●	●	●	●	●	●
20 ( 3/4)	●	●	●	●	●	●
25 (1)	●	●	●	●	●	●
32 (1 1/4)	●	●	●	●	●	●
40 (1 1/2)	●	●	●	●	●	●
50 (2)	●	●	●	●	●	●

## Important Notes

Please note the following items when you use or select the valve.

1. The maximum working pressure described in each page is it at the room temperature 20°C. The maximum working pressure for an actual usable temperature have to refer to a diagram of page III-2.
2. Please consider carefully use conditions of the temperature, pressure, density, etc. referring to "Chemical Resistance Manual for Eslon Plastic Pipes, Valves and Relative Materials", when you use or select the valve for the chemical application.
3. The relating regulations might be applied to the equipment or facilities where the valve is used. Please confirm it in advance.
4. The following products corresponds to the export restriction product according to regulations of Foreign Trade Control Law. The export admission of Japanese Government is needed when using it excluding Japan.
  - Valves which main body is made from PVDF
  - Butterfly valve with seat made from FPM

※1 The description of this catalog might change for the improvement of the product in future.

※2 The drawings and the part lists which were described in this catalog might be partially omitted. Please confirm them in the latest product approval drawing when the product is ordered and used. The latest information can confirm the homepage <http://www.eslon-plant.jp>.





# I Manual Operation Valve

## ■ DIAPHRAGM VALVE ■

- DIAPHRAGM VALVE ----- I-1
- DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE -- I-3

## ■ BALL VALVE ■

- BALL VALVE ----- I-4
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- MINI BALL VALVE ----- I-7
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## ■ BUTTERFLY VALVE ■

- BUTTERFLY VALVE (LEVER TYPE) ----- I-9
- BUTTERFLY VALVE (GEAR TYPE) ----- I-10
- FRP BUTTERFLY VALVE ----- I-11
- ROTARY DAMPER ----- I-12
- BUTTERFLY VALVE FOR UNDER GROUND ----- I-13

## ■ GATE VALVE ■

- GATE VALVE ----- I-14
- GATE VALVE FOR PORTABLE WATER ----- I-15

## ■ Other ■

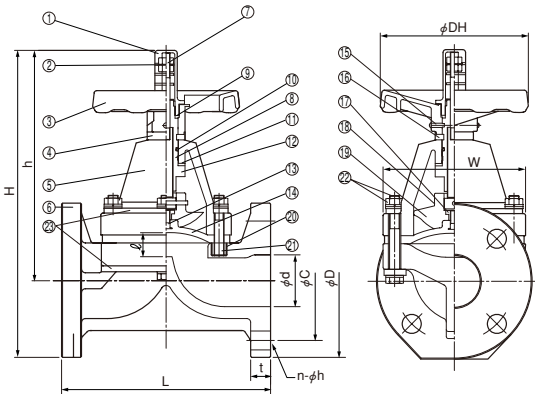
- GLOBE VALVE ----- I-16
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- CHECK VALVE SWING TYPE ----- I-18
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# ESLON DIAPHRAGM VALVE



- Excellent sealing performance with low tightening torque because of optimized diaphragm and weir design
- Improved diaphragm by decreasing stress relaxation of rubber
- Excellent pressure resistance and durability in main body and bonnet
- Built-in visual indicator prevents over tightening and clearly shows open-close position
- Drip-proof and dustproof mechanism prevent water and dust entering in the bonnet
- Easy handling and installation because of flat flange bottom

## Flange Type



## Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Indicator Cover	1	PC	⑭	Diaphragm	1	EPDM, PTFE or C-PE
②	Indicator	1	SUS304	⑮	Lock Pin for 32~250A	2	SUS304
③	Handle	1	PVC	⑯	Stem Set	1	PP or PVC
④	Collar	1	PE	⑰	Metallic Fixtures for Compressor	1	C3604
⑤	Bonnet	1	PVC, HT, PP or PVDF	⑱	Compressor	1	15-150A GF-PP 200-250A Zn plated FCD
⑥	Body	1	PVC, HT, PP or PVDF	⑲	Lock Pin for Compressor	1	SUS304
⑦	Indicator Stud Bolt	1	SUS304	⑳	Insert Nut	—	C3604, SUS304
⑧	Stem Sleeve	1	C3604	㉑	Stud Bolt	—	SUS304
⑨	Stem Packing	1	NBR	㉒	Bolt & Nut	—	SUS304
⑩	O-ring	1	NBR	㉓	Reinforcement Plate for HT, PP, PVDF	1	SUS304 or SS400 Painted by Epoxy Resin
⑪	Thrust Washer	1	PTFE, SUJ				
⑫	Stem Spindle	1	PTFE				
⑬	Insert Bolt	EPDM	1	Cr Plated SS			
		PTFE	1	SUS304 or Titanium			

Size		d	L	H	h	DH	W	ℓ	Flange (JIS 10K)				Weight (kg/pc)				Q'ty per Carton
A	B								φD	φC	n-φh	t	PVC	HT (CPVC)	PP	PVDF	
15	1/2	16	110	166	119	80	76	10	95	70	4-15	14	0.9	1.1	0.8	1.1	8
20	3/4	20	120	180	130	80	82	12	100	75	4-15	14	1.0	1.3	1.0	1.3	8
25	1	25	130	195	133	80	90	15	125	90	4-19	14	1.4	1.7	1.3	1.7	8
32	1 1/4	41	180	269	199	125	122	20	140	100	4-19	16	2.6	3.3	2.5	3.4	2
40	1 1/2	41	180	269	199	125	122	20	140	105	4-19	16	2.6	3.3	2.5	3.4	2
50	2	52	210	308	230	148	142	27	155	120	4-19	20	3.6	4.5	3.4	4.8	2
65	2 1/2	67	250	379	291	210	170	36	175	140	4-19	22	6.2	7.7	5.9	8.4	2
80	3	80	280	415	322	210	202	37	185	150	8-19	22	8.2	9.6	7.9	11.2	2
100	4	100	340	497	392	260	255	61	210	175	8-19	24	13.8	18.3	15.4	21.1	1
125	5	125	410	560	435	350	320	61	250	210	8-23	24	21.8	—	20.0	26.0	1
150	6	150	480	630	490	350	375	70	280	240	8-23	26	26.3	—	25.5	36.0	1
200	8	198	570	790	625	395	430	96	330	290	12-23	30	51.0	—	44.0	61.0	1
250	10	248	680	950	750	555	540	132	400	355	12-25	31	93.0	—	77.0	108.0	1

\* Flange dimensions are in accordance with JIS B2220

\* Size 32A is same as 40A, it is fabricated to long bolt hole φ19×21 of the flange.

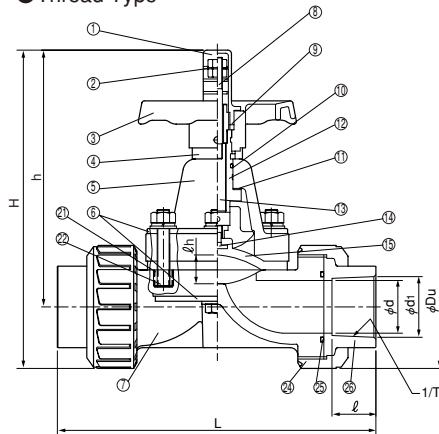
## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)						
		EPDM			PTFE			
		15~100A	125~150A	200~250A	15~100A	125A	150A	200~250A
PVC	0~50	1.0	0.8	0.4	1.0	0.7	0.5	0.3
HT (CPVC)	0~90	1.0	—	—	1.0	—	—	—
PP	0~90	1.0	0.8	0.4	1.0	0.7	0.5	0.3
PVDF	0~120	1.0	0.8	0.4	1.0	0.5	0.5	0.3

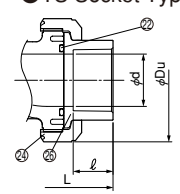
## True Union Type (Thread Type · TS Socket Type and Butt Fused Type)



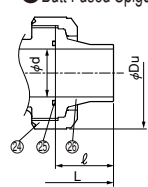
### ● Thread Type



### ● TS Socket Type



### ● Butt Fused Spigot Type



## Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Indicator Cover	1	PC	⑮	Diaphragm	1	EPDM, PTFE or C-PE
②	Indicator	1	SUS304	⑯	Lock Pin for 32~50A	2	SUS304
③	Handle	1	PVC	⑰	Stem Set	1	PP
④	Collar	1	PE	⑱	Lock Pin for Compressor	1	SUS304
⑤	Bonnet	1	PVC, HT or PVDF	⑲	Metallic Fixtures for Compressor	1	C3604
⑥	Reinforcement Plate for HT and PVDF	1	SUS304	⑳	Compressor	1	GF-PP
⑦	Body	1	PVC, HT or PVDF	㉑	Insert Nut	—	C3604, SUS304
⑧	Indicator Stud Bolt	1	SUS304	㉒	Stud Bolt	—	SUS304
⑨	Stem Packing	1	NBR	㉓	Bolt & Nut	—	SUS304
⑩	O-ring	1	NBR	㉔	Union Nut	2	PVC, HT or PVDF
⑪	Thrust Washer	1	PTFE, SUJ	㉕	O-ring	2	EPDM or FPM
⑫	Stem Sleeve	1	C3604	㉖	Socket	2	PVC, HT or PVDF
⑬	Stem Spindle	1	C3604	㉗	Inserted Nut	2	C3604
⑭	Insert Bolt	EPDM	SS400, Cr Plated SS				
		PTFE	SUS304 or Titanium				

Size		d	L			H		h		DH	W		Du		ℓh	Female Thread		TS Socket		Butt Spigot	
A	B		Thread	TS Socket	Butt Spigot	Thread-TS Socket	Butt Spigot	Thread-TS Socket	Butt Spigot		Thread-TS Socket	Butt Spigot	Thread-TS Socket	Butt Spigot		Size	ℓ	d1	1/T Taper	ℓ	ℓ
15	1/2	15	133	144	185	153	145	128	120	80	76	76	49	48	10	Rc 1/2	15	22.3	1/37	22	50
20	3/4	20	158	172	200	170	162	141	132	80	82	82	59	58	12	Rc 3/4	20	26.3	1/42	25	50
25	1	25	181	187	212	185	180	152	147	80	90	90	67	66	15	Rc 1	25	32.3	1/43	29	50
32	1 1/4	31	—	262	—	257	255	208	206	125	122	122	98	96	20	—	—	38.4	1/37	32	—
40	1 1/2	40	248	262	273	257	255	208	206	125	122	122	98	96	20	Rc 1 1/2	31	48.5	1/38	35	50
50	2	50	280	298	300	299	291	239	231	148	148	142	120	117	27	Rc 2	32	60.7	1/34	38	50

\*Female thread dimensions are in accordance with JIS B 0203.  
 \*Size 32A is same as 40A, it is changed to connection 32A.

Size		Weight (kg/pc)					Q'ty per Carton
A	B	PVC		HT (CPVC)	PVDF		
		Thread	TS Socket	TS Socket	Thread	Butt spigot	
15	1/2	0.7	0.7	0.8	0.9	0.9	12
20	3/4	0.8	0.8	1.0	1.0	1.0	12
25	1	1.1	1.1	1.2	1.4	1.4	12
32	1 1/4	—	1.1	—	—	—	4
40	1 1/2	2.7	2.7	3.4	3.7	3.7	4
50	2	3.6	3.6	4.3	5.0	5.0	4

## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)	
		EPDM	PTFE
PVC	0~50	1.0	1.0
HT (CPVC)	0~90	1.0	1.0
PVDF	0~100	1.0	1.0

## Recommended Torque for Fastening Diaphragm

\*Please Check fastening torque of the bolt to set diaphragm before flow test. Please re-fasten the bolt with recommended torque shown in the table below in case it is not enough.

Size	15~25	32~40	50	65	80	100	125	150~250
EPDM, C-PE	7 {70}	8 {80}	9 {90}	14 {150}	24 {250}	29 {300}	34 {350}	39 {400}
PTFE, PTFE with gas	7 {70}	11 {120}	14 {120}	14 {150}	29 {300}	34 {350}	39 {400}	44 {450}

# ESLON DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE



PAT.No.2968092,2974455

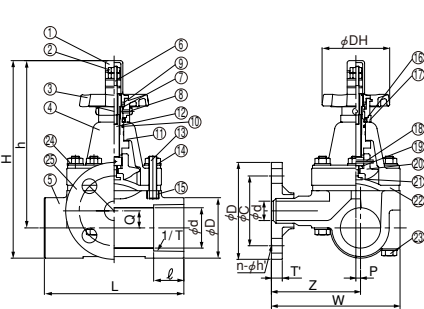
- Compact diaphragm valve with branch channel
- Keep water quality because of no stasis design in flow path
- Easy branch piping and no pressure loss
- Easy pressure control by reverse turn piping system

## Parts List

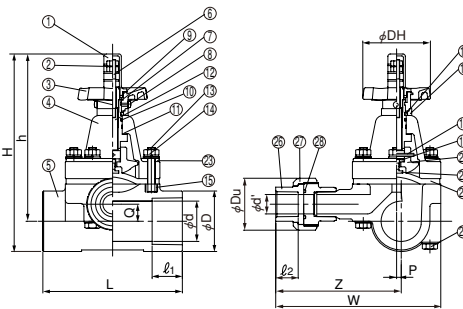
No.	Part Name	Q'ty	Material
①	Indicator Cover	1	PC
②	Indicator	1	SUS304
③	Handle	1	PVC
④	Bonnet	1	PVC,HT or PVDF
⑤	Body	1	PVC,HT or PVDF
⑥	Indicator Stud Bolt	1	SUS304
⑦	Stem Sleeve	1	C3604
⑧	Lock Pin for 50 and 65A	2	SUS304
⑨	Stem Packing	1	SUS304
⑩	O-ring	1	NBR
⑪	Thrust Washer	1	NBR
⑫	Stem Spindle	1	C3604
⑬	Stud Bolt	—	SUS304
⑭	Nut	—	SUS304
⑮	Insert Nut	—	C3604,SUS304
⑯	Stem Set	1	PP
⑰	Collar	1	PE
⑱	Lock Pin for Compressor	1	SUS304
⑲	Metallic Fixtures for Compressor	1	C3604
⑳	Compressor	1	GF-PP
㉑	Insert Bolt	1	EPDM PTFE
㉒	Diaphragm	1	EPDM or PTFE
㉓	Bolt	—	SUS304
㉔	Reinforcement Plate for HT & PVDF	1	SUS304
㉕	Flange	1	PVC,HT or PVDF
㉖	TS Socket or Butt Spigot	1	PVC,HT or PVDF
㉗	Union Nut	1	PVC,HT or PVDF
㉘	O-ring	1	EPDM or FPM

## TS Socket Type (Butt Fused Type)

### ● Flange Type



### ● Union Type



## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)	
		EPDM·PTFE	
PVC	0~50	0.5	
HT (CPVC)	0~90	0.5	
PVDF	0~120	0.5	

## TS Socket × Flange

Size	L	H	h	DH	P	W	Q	Z	TS Socket				Flange (JIS 10K)				Weight (kg/pc)			Q'ty per Carton
									D	ℓ	d	φD	φC	n-φh	t	PVC	HT (CPVC)	PVDF		
20X16	120	148	125	80	1.5	119	8	91	35	25	21	95	70	4-15	14	0.7	0.8	—	4	
25X25	120	172	152	80	3	142	8	100	44	29	25	125	90	4-19	14	1.1	1.2	1.4	1	
50X25	180	261	214	90	6	166	22	115	77	30	52	125	90	4-19	14	2.5	2.8	3.7	1	
65X40	240	307	259	148	6	203	30	140	96	61	67	140	105	4-19	16	3.8	4.3	4.6	1	

\*PVDF Valve : Since the connection type and dimension are different at each type. Please check the approval drawing. Please ask us for the approval drawing.

## TS Socket (Butt) × True Union with TS Socket

Size	L	H	h	DH	P	W	Q	Z	TS Socket				True Union Socket			Weight (kg/pc)			Q'ty per Carton
									D	ℓ <sub>1</sub>	d	d'	ℓ <sub>2</sub>	Du	PVC	HT (CPVC)	PVDF		
20X16	120	150	129	80	1.5	142	8	117	35	25	21	16	22.2	49	0.7	0.8	0.6	4	
25X25	120	179	154	80	3	187	8	144	44	29	25	25	28.6	67	1.1	1.2	1.1	1	
50X25	180	260	221	90	6	210	22	159	77	30	52	25	28.6	67	2.5	2.8	3.6	1	
65X40	240	313	265	148	6	257	30	197	96	61	67	40	35	98	3.8	4.3	4.7	1	

# ESLON BALL VALVE

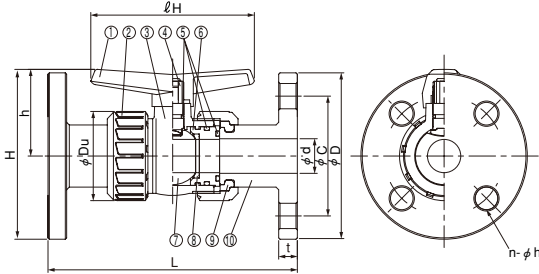


- Easy maintenance with ball stopper mechanism at closed position, which hold the ball back from popping out when the union nut is loosened
- Controllable sealing performance by tightening the union nut
- No pressure loss because of the full-port same inner diameter as that of pipe
- Keep water quality because of no stasis design in flow path
- Four colors handle for easy maintenance and piping classification



## Flange Type · Thread Type · TS Socket Type and Butt Fused Type

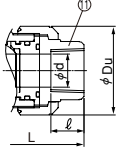
### ● Flange Type



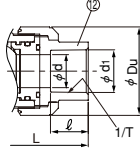
### ■ Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Handle	1	PVC	⑧	Seat	2	PTFE
②	Union Nut	2	PVC, HT, PP or PVDF	⑨	Set Ring	2	PVC, HT, PP or PVDF
③	Body	1	PVC, HT, PP or PVDF	⑩	Flange	2	PVC, HT, PP or PVDF
④	Stem	1	PVC, HT, PP or PVDF	⑪	Female Thread	2	PVC, PP or PVDF
⑤	O-ring	5	EPDM, FPM or C-PE	⑫	TS Socket	2	PVC or HT
⑥	Ball Stopper	2	PVC, HT, PP or PVDF	⑬	Butt Fused Socket	2	PVDF
⑦	Ball	1	PVC, HT, PP or PVDF				

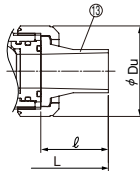
### ● Female Thread Type



### ● TS Socket Type



### ● Butt Fused Spigot Type



### ■ Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0
HT (CPVC)	0~90	1.0
PP	0~80	1.0
PVDF	0~100	1.0

## Flange Type

Size		d	L		H	h	ℓH	Du	Flange (JIS 10K)				Weight (kg/pc)				Q'ty per Carton
A	B		PVC·HT	PP·PVDF					φD	φC	n-φh	t	PVC	HT (CPVC)	PP	PVDF	
15	1/2	15	143	139	98	50	95	49	95	70	4-15	14	0.4	0.4	0.3	0.5	12
20	3/4	20	172	168	103	53	95	59	100	75	4-15	14	0.6	0.6	0.4	0.7	12
25	1	25	187	182	132	69	123	67	125	90	4-19	14	0.9	0.9	0.5	1.0	12
32	1 1/4	30	190	185	143	75	123	81	135	100	4-19	16	1.2	1.2	0.7	1.3	12
40	1 1/2	40	212	206	171	101	152	98	140	105	4-19	16	1.7	1.7	1.1	1.9	2
50	2	50	234	228	185	107	152	120	155	120	4-19	20	2.6	2.6	1.6	3.0	2
65	2 1/2	65	259	—	228	140	190	150	175	140	4-19	22	4.2	4.3	—	—	2
80	3	80	304	—	273	180	231	186	185	150	8-19	22	6.7	6.9	—	—	2
100	4	100	372	—	319	205	285	228	210	175	8-19	24	11.5	11.9	—	—	1

## Thread Type · TS Socket Type and Butt Fused Type

Size		d	L		H	h	ℓH	Du	Female Thread		TS Socket		Butt Spigot	Weight (kg/pc)			Q'ty per Carton			
A	B		Thread	TS Socket					Thread	Butt	Size	ℓ		d1	1/T Taper	ℓ		ℓ	PVC	HT (CPVC)
15	1/2	15	97	109	96	154	75	50	95	49	Rc 1/2	15	22.3	1/37	22	50	0.2	0.2	0.2	24
20	3/4	20	116	132	115	162	82	53	95	59	Rc 3/4	20	26.3	1/42	25	50	0.3	0.3	0.3	24
25	1	25	136	143	135	171	101	69	123	67	Rc 1	25	32.3	1/43	29	50	0.4	0.4	0.5	24
32	1 1/4	31	149	166	146	177	115	75	123	81	Rc 1 1/4	29	38.4	1/37	32	50	0.6	0.6	0.6	24
40	1 1/2	40	170	175	168	192	150	101	152	98	Rc 1 1/2	31	48.5	1/38	35	50	1.1	1.1	1.2	4
50	2	50	197	203	195	206	167	107	152	120	Rc 2	32	60.7	1/34	38	50	1.6	1.7	1.9	4
65	2 1/2	65	227	259	—	—	215	140	190	150	Rc 2 1/2	32	76.6	1/48	61	—	3.0	—	—	2
80	3	80	278	304	—	—	273	180	231	186	Rc 3	37	89.6	1/49	64	—	5.6	—	—	1
100	4	100	330	390	—	—	319	205	285	228	Rc 4	45	114.7	1/56	84	—	10.5	—	—	1

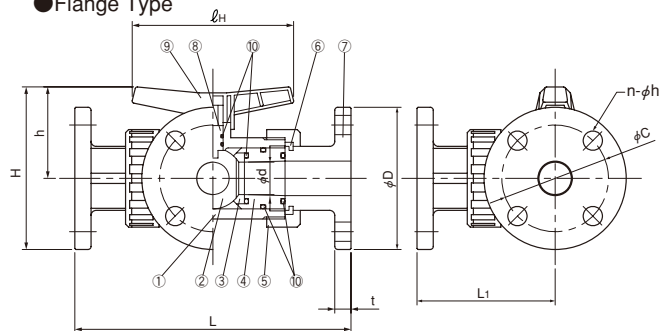
# ESLON 3-WAY BALL VALVE



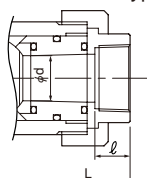
- Ball stopper mechanism prevents popping out of the ball at closed position
- Arrow marks on the handle and body accurately ensure flow direction
- Two types of flow direction available, T-Port and L-Port

## Flange Type · Thread Type and TS Socket Type

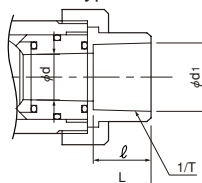
### ● Flange Type



### ● Female Thread Type



### ● TS Socket Type



### Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC
②	Ball	1	PVC
③	Seat	4	PTFE
④	Ball Stopper	2	PVC
⑤	Union Nut	3	PVC
⑥	Set Ring	3	PSF
⑦	Socket	3	PVC
⑧	Stem	1	PVC
⑨	Handle	1	PVC
⑩	O-ring	11	FPM or EPDM

### Flange Type

Unit:mm

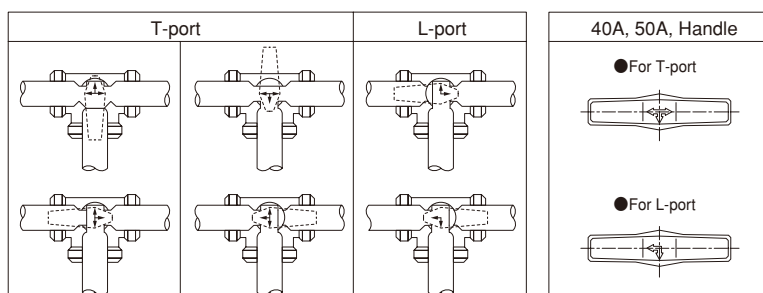
Size		d	L	L1	H	h	lH	Flange (JIS 10K)				Weight (kg/pc)	Q'ty per Carton
A	B	D	C	n-φh	t								
15	1/2	11	163	82	95	48	73	95	70	4-15	14	0.8	6
20	3/4	16	200	100	102	52	85	100	75	4-15	14	0.9	4
25	1	20	221	111	126	64	94	125	90	4-19	16	1.5	4
40	1 1/2	32	272	136	160	90	160	140	105	4-19	18	2.5	1
50	2	38	306	153	176	98	160	155	120	4-19	20	4.0	1

### Thread Type and TS Socket Type

Unit:mm

Size		d	L		L1		H	h	lH	Female Thread		TS Socket		Weight (kg/pc)		Q'ty per Carton	
A	B	Thread	TS Socket	Thread	TS Socket	Size				ℓ	d1	1/T Taper	ℓ	Thread	TS Socket		
15	1/2	11	118	129	59	65	73	48	73	Rc 1/2	14	22.3	1/34	24	0.3	0.3	6
20	3/4	16	134	151	67	76	81	52	85	Rc 3/4	16	26.3	1/34	28	0.4	0.4	4
25	1	20	156	175	78	88	98	64	94	Rc 1	18	32.4	1/34	32	0.6	0.6	4
40	1 1/2	32	203	232	102	116	138	90	160	Rc 1 1/2	20	48.5	1/37	41	1.5	1.5	1
50	2	38	225	260	113	130	154	98	160	Rc 2	25	60.6	1/37	47	2.2	2.3	1

### Flow Control Pattern by Handle



### Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0

# ESLON LOCK BALL VALVE (COMPACT BALL VALVE)

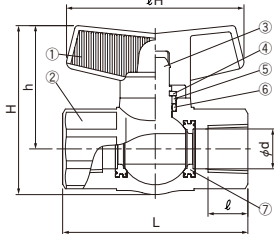


- Compact body offers easier piping even in narrow space
- Usable even in the condition with vibration or heat expansion because of integrated body with connection parts
- Six colors handle for easy maintenance, application or piping classification

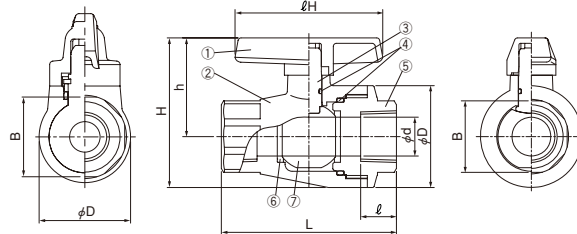


## Thread Type and TS Socket Type

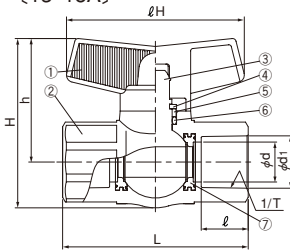
### ● Female Thread Type [15A]



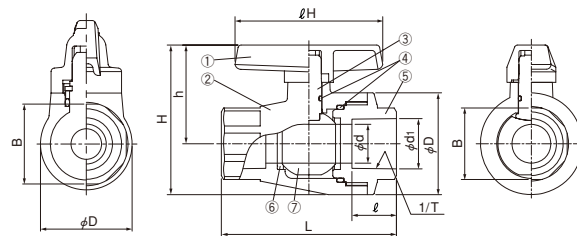
### [20A~50A]



### ● TS Socket Type [13·15A]



### [20A~50A]



### Parts List for size 13·15A

No.	Part Name	Q'ty	Material
①	Handle	1	PVC
②	Body	1	PVC
③	Ball Spindle	1	PVC
④	Retaining	1	PVC
⑤	Collar	1	PP
⑥	O-ring	1	EPDM or FPM
⑦	Seat	2	PTFE

### Parts List for size 20A~50A

No.	Part Name	Q'ty	Material
①	Handle	1	PVC
②	Body	1	PVC
③	Stem	1	PVC
④	O-ring	2	EPDM or FPM
⑤	Body Cap	1	PVC
⑥	Seat	2	PTFE
⑦	Ball	1	PVC

## Thread Type (15A~50A) and TS Socket Type (13A~50A)

Size		d	L	H	h	φD	ℓH	B	Female Thread		TS Socket		Weight (kg/pc)		Q'ty per Carton	
A	B								Size	ℓ	d1	1/T Taper	ℓ	Thread		TS Socket
13	3/8	13	79	74	54	36	76	34	—	—	18.3	1/30	18	—	0.1	30
15	1/2	13	79	73	53	36	77	34	Rc 1/2	17	22.3	1/33	20	0.1	0.1	30
20	3/4	20	102	86	57	59	85	41	Rc 3/4	21	26.3	1/42	25	0.2	0.2	20
25	1	25	113	96	64	66	95	46	Rc 1	23	32.3	1/43	29	0.3	0.3	20
32	1 1/4	29	114	119	82	74	110	54	Rc 1 1/4	28	38.4	1/37	32	0.4	0.4	12
40	1 1/2	35	130	133	91	85	110	65	Rc 1 1/2	30	48.5	1/38	35	0.6	0.6	12
50	2	45	155	154	103	103	140	77	Rc 2	35	60.6	1/35	39	1.0	1.0	12

\*Female thread dimensions are in accordance with JIS B0203

## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0

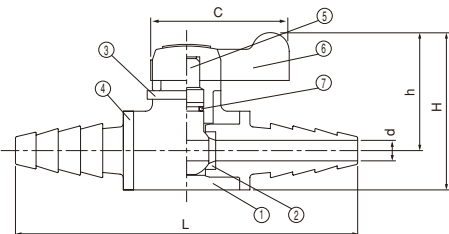
# ESLON MINI BALL VALVE



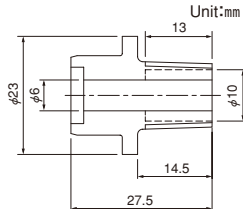
- Stable sealing performance with low tightening torque
- Easy flow rate control with visual position indicator
- Five types of end connection offers various combination and wide range of application
- The valve is assembled by fusion welding

## Thread Type and TS Socket Type

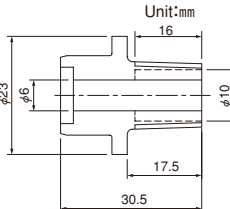
### ● Hose×Hose (6A)



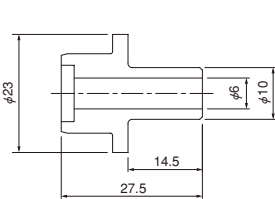
### ● Male Thread (R 1/4, 3/8)



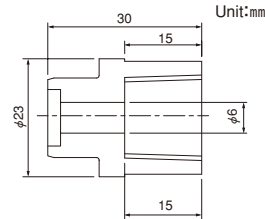
### ● Male Thread (R 1/2)



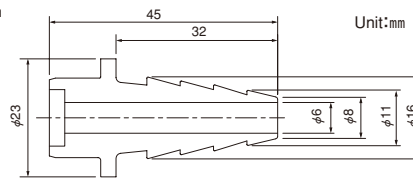
### ● Straight



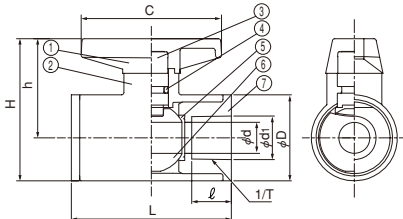
### ● Female Thread (Rc 1/4, 3/8)



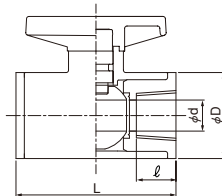
### ● Hose



### ● TS Socket (13A·15A)



### ● Female Thread (13A·15A)



Size		d	H	h	D	c	Female Thread		TS Socket			Q' ty per Carton
A	B						Size	l	d1	1/T Taper	l	
6	1/8	6	47	35	23	40	—	—	—	—	—	40 (20×2)
13	3/8	13	60	42	23	40	—	—	18.3	1/33	16.5	40
15	1/2	13	60	42	23	40	Rc1/2	10	22.3	1/33	16.5	40

## Parts List for 6A

No.	Part Name	Q' ty	Material
①	Body	1	PVC
②	Ball Seat	2	EPDM or FPM
③	Stem Stopper	1	PVC
④	Socket	1	PVC
⑤	Ball	1	PVC
⑥	Handle	1	PVC
⑦	O-ring	1	EPDM or FPM

## Parts List for 13A & 15A

No.	Part Name	Q' ty	Material
①	Handle	1	PVC
②	Body	1	PVC
③	Stem	1	PVC
④	O-ring	1	EPDM or FPM
⑤	Ball Seat	2	PTFE
⑥	Ball	1	PVC
⑦	Socket	2	PVC

## L & Weight for Each Connection Type

Size	Connection Type	Unit:mm	
		L	Weight (g/pc)
6 A	Male Thread×Male Thread	66	30
	Male Thread×Female Thread	69	40
	Male Thread×Hose	83	40
	Male Thread×Straight	66	30
	Female Thread×Female Thread	71	40
	Female Thread×Hose	85	40
	Female Thread×Straight	69	40
	Hose×Hose	100	40
13 A	Hose×Straight	83	40
	Straight×Straight	66	30
	Female Thread Rc1/2	67	90
	TS 13	67	90
	TS 15	67	80

## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0



# ESLON YP BALL VALVE

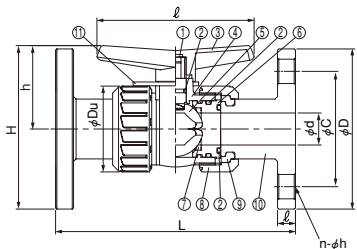


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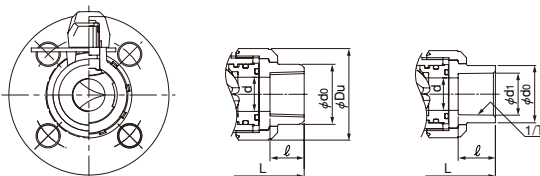
- Easy flow rate control with the particular flow channel geometry of the Ball
- High range ability to exceed 200 and equal % of flow characteristic
- Easy flow rate control by large visual indicator

## Flange Type · Thread Type and TS Socket Type

### ● Flange Type



### ● Female Thread Type ● TS Socket Type



## Parts List

No.	Part Name	Q' ty	Material
①	Stem	1	PVC
②	O-ring	5	FPM or EPDM
③	Handle	1	PVC
④	Body	1	PVC
⑤	Ball	2	PVC
⑥	Ball Stopper	2	PVC
⑦	Seat	2	PTFE
⑧	Union Nut	2	PVD
⑨	Set Ring	2	PVC
⑩	Flange	2	PVC
⑪	Indicator Plate	1	PVC

## Flange Type

Size		d	L	H	h	Flange (JIS 10K)				Weight (kg/pc)	Q' ty per Carton
A	B					φD	φC	n-φh	t		
15	1/2	15	143	98	50	95	70	4-15	14	0.4	12
20	3/4	20	172	103	53	100	75	4-15	14	0.6	12
25	1	25	187	132	69	125	90	4-19	14	0.9	12
32	1 1/4	30	190	143	75	135	100	4-19	16	1.2	12
40	1 1/2	40	212	171	101	140	105	4-19	16	1.7	2
50	2	50	234	185	107	155	120	4-19	20	2.6	2

⚠ Strainer should be installed in up stream for applications with slurry or crystal liquid.

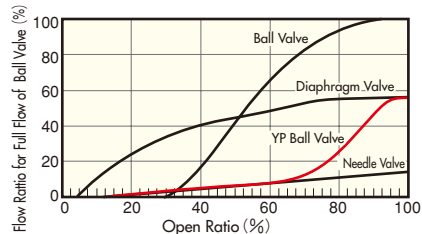
## Thread Type and TS Socket Type

Size		d	L		H	h	Female Thread		TS Socket		Weight (kg/pc)		Q' ty per Carton	
A	B		Thread	TS Socket			Size	ℓ	d1	1/T Taper	ℓ	Thread		TS Socket
15	1/2	15	97	109	74	50	Rc 1/2	15	22.3	1/37	22	0.2	0.2	24
20	3/4	20	116	132	82	53	Rc 3/4	20	26.3	1/42	25	0.3	0.3	24
25	1	25	136	143	102	69	Rc 1	25	32.3	1/43	29	0.4	0.4	24
32	1 1/4	31	149	166	115	75	Rc 1 1/4	29	38.4	1/37	32	0.6	0.6	24
40	1 1/2	40	170	175	149	102	Rc 1 1/2	31	48.5	1/38	35	1.1	1.1	4
50	2	50	197	203	166	108	Rc 2	32	60.7	1/34	38	1.6	1.6	4

## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0

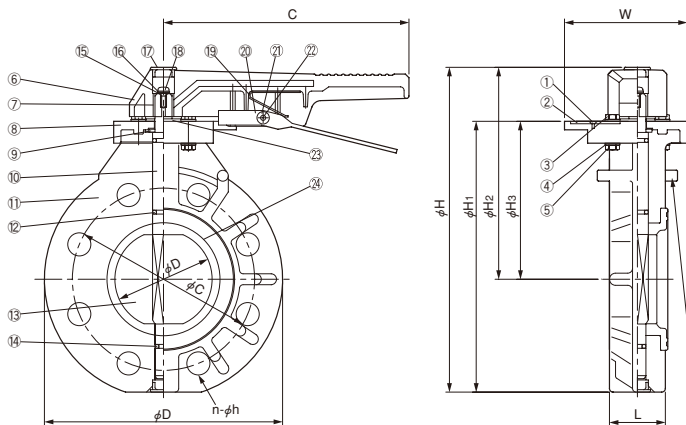
## Flow Characteristic of YP Ball Valve



# ESLON BUTTERFLY VALVE LEVER TYPE



- Stable sealing performance as spherical disc and preventive mechanism against over-tightening of flange
- Changeable lever handle into opposite direction even after installation
- Changeable into gear type or automatic type by dismounting lever handle and indicator plate
- Easy piping with JIS10K type flange by positioning pin
- Controllable flow in 12 levels



## Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Screw	3	SUS304	⑬	Disc	1	PP
②	Lock Plate	1	SUS304	⑭	O-ring	1	EPDM or FPM
③	Bolt	2	SUS304	⑮	Washer	1	SUS304
④	Washer	4	SUS304	⑯	Spring Washer	1	SUS304
⑤	Nut	2	SUS304	⑰	Cap	1	PP
⑥	Handle	1	PP	⑱	Screw	1	SUS304
⑦	Handle Insert	1	SUS304	⑲	Spring Plate	1	SUS304-CSP
⑧	Indicator Plate	1	PVC	⑳	Handle Lever	1	SUS304
⑨	Thrust Ring	1	SUS304	㉑	Cover	1	PP
⑩	Stem	1	SUS420J2 or SUS316	㉒	Lock Pin	1	SUS304
⑪	Body	1	PVC or GF-PP	㉓	Handle Washer	1	PP
⑫	O-ring	2	EPDM or FPM	㉔	Seat	1	EPDM or FPM

Positioning pin for JIS 10K Flange

Size		d	L	H	H1	H2	C	W	D	Flange (JIS 10K)		Weight (kg/pc)		Q'ty per Carton
A	B									C	n-φh	PVC	GF-PP	
40	1/2	45	33	217	174	148	202	101	140	105	4-19	1.2	1.1	2
50	2	57	43	232	189	156	202	101	155	120	4-19	1.4	1.2	2
65	2 1/2	71	46	253	210	166	202	101	178	140	4-19	1.7	1.5	2
80	3	80	46	268	222	173	202	101	196	150	8-19	2.0	1.8	2
100	4	100	52	306	263	192	245	123	229	175	8-19	3.0	2.7	2
125	5	125	56	347	294	220	310	155	254	210	8-23	4.6	4.1	2
150	6	150	60	372	319	229	310	155	286	240	8-23	5.5	4.8	2
200	8	198	71	466	399	297	400	200	343	290	12-23	8.9	8.0	2

Unit:mm

Butterfly Valves made from GF-PP body are available only for JIS 10K Flange.

## Usable Liquid Temperature & Maximum Working Pressure

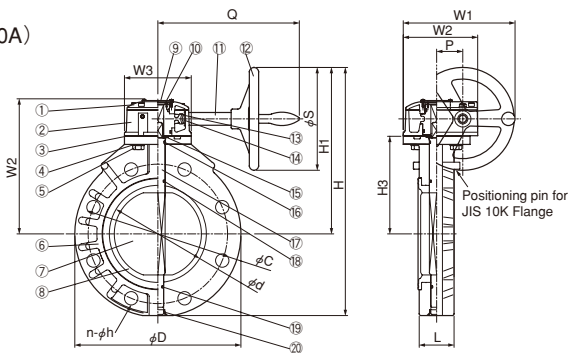
Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0
GF-PP	0~80	1.0

# ESLON BUTTERFLY VALVE GEAR TYPE



- Stable sealing performance as spherical disc and preventive mechanism against over tightening
- Changeable lever handle into opposite direction even after piping
- Changeable into lever type or automatic type by dismounting lever handle and indicator plate
- Easy piping with JIS10K type flange by positioning pin
- Full Open-close by rotating wheel handle six times

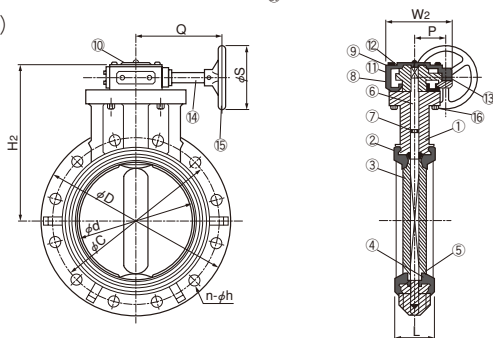
## ● (40A~300A)



## ■ Parts List (40A~300A)

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Housing Cover	1	FC200 Painted by Epoxy Resin	⑪	Shaft Cover	1	PVC
②	Housing	1	FC200 Painted by Epoxy Resin	⑫	Handle	1	FC200 Painted by Epoxy Resin
③	Gasket	1	EPDM	⑬	Segment Gear	1	FCD450
④	Washer	4	SUS304	⑭	Warm Gear	2	S45C
⑤	Bolt	4	SUS304	⑮	Spaser	1	SUS304
⑥	Body	1	PVC or GF-PP	⑯	O-ring	1	EPDM or FPM
⑦	Gate	1	PP	⑰	Shaft	1	SUS420J2 or SUS316
⑧	Seat	1	EPDM or FPM	⑱	O-ring	1	EPDM or FPM
⑨	Indicator Cover	1	Acrylic	⑲	O-ring	1	EPDM or FPM
⑩	Indicator	1	SUS304	⑳	Cap	1	PP

## ● (350A~600A)



## ■ Parts List (350A~600A)

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Body	1	PVC or PP	⑨	Housing Cover	1	FC25
②	Seat	1	EPDM or FPM	⑩	Indicator	1	PVC
③	Gate	1	PVC	⑪	Gear	1	FCD45
④	O-ring	2	EPDM or FPM	⑫	Oil Seal	1	EPDM
⑤	O-ring	2	EPDM or FPM	⑬	Bearing	1	SMCM220/420/810
⑥	Stem	1	SUS410 or SUS316	⑭	Stem	1	SS41
⑦	O-ring	1	EPDM or FPM	⑮	Handle	1	FC25
⑧	Housing	1	FC25	⑯	Bolt	4	SCM3 or SUS304

## Size 40~300A

Size		d	L	H	H1	H2	Q	W1	W2	W3	φS	D	Flange (JIS 10K)		Weight (kg/pc)		Q'ty per Carton
A	B												C	n-φh	PVC	GF-PP	
40	1 1/2	45	33	224	176	158	125	130	105	90	100	140	105	4-19	3.6	3.5	1
50	2	57	43	259	183	165	125	130	105	90	100	155	120	4-19	3.8	3.6	1
65	2 1/2	71	46	280	193	176	125	130	105	90	100	178	140	4-19	4.2	4.0	1
80	3	80	46	293	201	183	125	130	105	90	100	196	150	8-19	4.5	4.3	1
100	4	100	52	333	221	203	125	130	105	90	100	229	175	8-19	5.3	5.1	1
125	5	125	56	405	280	225	242	193	128	115	180	254	210	8-23	8.2	7.7	1
150	6	150	60	430	289	234	242	193	128	115	180	286	240	8-23	9.8	9.1	1
200	8	198	71	509	340	284	242	193	128	115	180	343	290	12-23	11.6	10.7	1
250	10	246	76	623	422	347	297	303	215	200	250	410	355	12-25	28.1	26.6	1
300	12	299	114	689	452	377	297	303	215	200	250	485	400	16-25	35.2	33.3	1

## Size 350~600A

Size		d	L	H2	Q	P	W2	φS	D	Flange (JIS 10K)		Weight (kg/pc)		Q'ty per Carton
A	B									C	n-φh	PVC	PP	
350	14	355	132	408	212	72	189	244	520	445	16-25	39.0	37.0	1
400	16	398	169	456	212	72	189	244	600	510	16-27	46.7	44.5	1
450	18	451	181	486	269	116	285	464	640	565	20-27	81.5	78.4	1
500	20	500	190	526	330	116	285	464	711	620	20-27	—	95.0	1
600	24	600	209	581	330	116	285	464	813	730	24-33	—	140.0	1

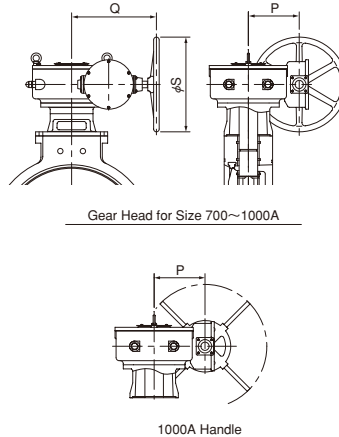
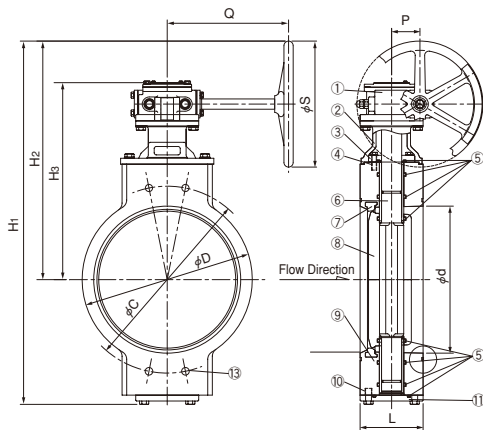
## ■ Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp. (MPa)				
		40~300A	350A	400A	450A	500~600A
PVC	0~50	1.0	0.7	0.6	0.5	—
GF-PP+PP	0~80	1.0	0.7	0.6	0.5	0.35

# ESLON FRP BUTTERFLY VALVE



- Excellent durability, high temperature and corrosion resistance
- Stable sealing performance by particular decentering disc with low tightening torque
- Need no gasket as packing is equipped on flange surface
- Changeable lever handle into opposite direction even after piping
- Lighter weight & easier handling than ductile iron, and no excessive load on piping
- Available as under ground valve



## Parts List

No.	Part Name	Q'ty	Material
①	Gear Head	1	—
②	Stand	1	FC200
③	Pushout Protection Plate	1	
④	Screw	4	SUS304
⑤	O-ring	2	EPDM
⑥	Shaft	1	SUS304
⑦	Sealing Rubber	1	EPDM or FPM
⑧	Disc	1	FRP
⑨	Body	1	FRP
⑩	Screw	4	SUS304
⑪	Bottom Cover	1	SUS304
⑫	Flange Gasket	2	EPDM
⑬	Screw	8	SUS304

Unit:mm

Size		d	L	H1	H2	H3	P	Q	φS	φD1	φD2	Flange (JIS 10K)			Weight (kg/pc)
A	B											φD	φC	M	
300	12	300	145	785	528	429	68	300	300	325	335	355	400	M22	47
350	14	350	150	867	570	471	68	300	300	362	372	405	445	M22	59
400	16	400	160	1018	674	533	110	336	410	414	424	440	510	M24	93
450	18	450	170	1072	706	565	110	336	410	461	477	512	565	M24	107
500	20	500	185	1194	796	636	145	338	460	513	529	574	620	M24	150
600	24	600	205	1344	886	726	145	338	460	617	633	678	730	M30	193
700	28	700	235	1488	970	841	247	412	460	721	737	787	840	M30	304
800	32	800	250	1608	1030	901	247	412	460	825	841	895	950	M30	369
900	36	900	275	1733	1090	961	247	412	460	930	946	1002	1050	M30	575
1000	40	1000	300	1923	1220	1071	218	381	600	1034	1050	1116	1160	M36	680

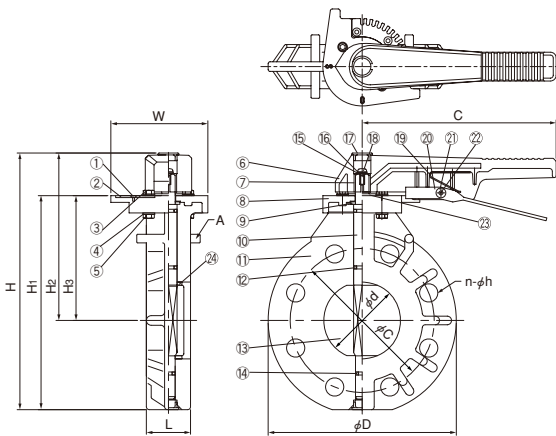
## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)	
		300~500A	600~1000A
FRP	0~80°C	Flow Direction	1.0
		anti-Flow Direction	0.5
			0.25

# ESLON ROTARY DAMPER



- Butterfly valve for airflow control
- Not completely flow stop even with the full-close position
- Changeable lever handle to opposite direction even after damper installation
- Easy piping with JIS10K type flange by positioning pin



## Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Screw	3	SUS304	⑬	Gate	1	PP
②	Lock Plate	1	SUS304	⑭	O-ring	1	EPDM or FPM
③	Bolt	2	SUS304	⑮	Washer	1	SUS304
④	Washer	4	SUS304	⑯	Spring Washer	1	SUS304
⑤	Nut	2	SUS304	⑰	Cap	1	PP
⑥	Handle	1	PP	⑱	Screw	1	SUS304
⑦	Handle Insert	1	SUS304	⑲	Laminated Spring	1	SUS304-CSP
⑧	Indicator Plate	1	PVC	⑳	Handle Lever	1	SUS304
⑨	Slust Ring	1	SUS304	㉑	Cover	1	PP
⑩	Stem	1	PVC	㉒	Lock Pin	1	SUS304
⑪	Body	1	PVC	㉓	Handle Washer	1	PP
⑫	O-ring	2	EPDM or FPM	㉔	Spasar Ring	1	EPDM

Unit:mm

Size		d	L	Height				W	C	Flange (JIS 10K)			Weight (kg/pc)	Q'ty per Carton
A	B			H	H1	H2	H3			phi D	phi C	n-phi h		
40	1 1/2	45	33±1.5	217	174	148	98	101	202	140	105	4-19	1.2	1
50	2	57	43±1.5	232	189	156	105	101	202	155	120	4-19	1.4	1
65	2 1/2	71	46±1.5	253	210	166	116	101	202	178	140	4-19	1.7	1
80	3	80	46±1.5	268	222	173	123	101	202	196	150	8-19	2.0	1
100	4	100	52±1.5	306	263	192	143	123	245	229	175	8-19	3.1	1
125	5	125	56±1.5	347	294	220	159	155	310	254	210	8-23	4.7	1
150	6	150	60±1.5	372	319	229	168	155	310	286	240	8-23	5.6	1
200	8	198	71±1.5	466	399	297	220	200	400	343	290	12-23	9.1	1
250	10	246	76±1.5	527	450	327	250	200	400	410	355	12-25	18.5	1
300	12	299	114±1.5	594	517	357	280	200	400	485	400	16-25	26.2	1

## Usable Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)	
		40~200A	250~300A
PVC	0~50°C	0.1	0.05

# ESLON BUTTERFLY VALVE FOR UNDER GROUND

50~150A Based on JWWA B 125

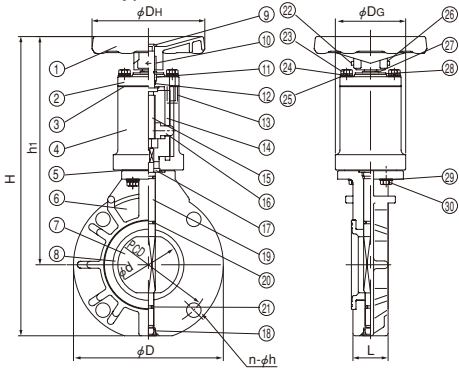


- Stable sealing performance as spherical disc and preventive mechanism from over-tightening.
- Easy open/close operation with low torque and wide range of flow rate control by operational handle from above the piping underground
- Easy handling because of weight in 1/10 - 1/15 of cast-iron type
- Full open-close by rotating handle ten times

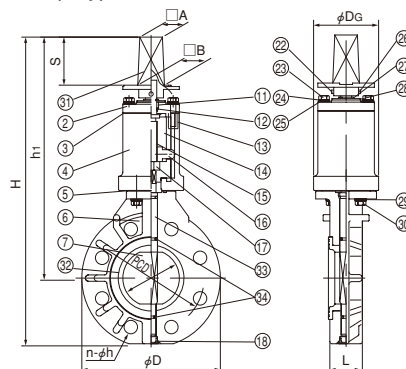
## Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Handle	1	PVC	19	Stem	1	SUS402 or SUS316
②	Cover	1	FRP	20	O-ring	2	EPDM or FPM
③	Gasket	1	NBR	21	O-ring	1	EPDM or FPM
④	Hausing	1	FRP	22	Pin	1	SUS304
⑤	Gasket	1	NBR	23	Bolt	4	SUS304
⑥	Body	1	PVC	24	Spring Washer	4	SUS304
⑦	Gate	1	PP	25	Washer	8	SUS304
⑧	Seat	1	EPDM or FPM	26	Pin	1	SUS304
⑨	Cap	1	PVC	27	Snap Ring	1	SUS304
⑩	Insert	1	SUS304	28	Stopper Ring	1	SUS304
⑪	Dust Seal	1	NBR	29	Washer	4	SUS304
⑫	O-ring	1	NBR	30	Bolt	4	SUS304
⑬	Insert	1	C3601BD	31	Cap	1	FC200
⑭	Sleeve	1	FCD400	32	Seat	1	EPDM
⑮	Shaft	1	SUS420J2	33	Stem	1	SUS420J2
⑯	Close	1	FCD400	34	O-ring	1	EPDM
⑰	Stopper	1	S45C				
⑱	Cap	1	PP				

### ● Handle Type



### ● Cap Type



Unit:mm

Size		d	L	H		h1		DG	Flange					
A	B			Handle	Cap	Handle	Cap		Water Supply			JIS 10K		
									D	C	n-φh	D	C	n-φh
50	2	57	43	357	404	281	329	92	155	120	4-19	155	120	4-19
75	3	80	46	391	438	298	344	92	196	168	4-19	196	150	8-19
100	4	100	52	434	478	321	364	92	229	195	4-19	229	175	8-19
125	5	125	56	502	530	377	404	115	254	220	6-19	254	210	8-23
150	6	150	60	526	555	386	413	115	286	247	6-19	286	240	8-23
200	8	198	71	603	632	434	463	115	343	299	8-19	343	290	12-23
250	10	246	76	620	662	420	462	180	—	—	—	410	355	12-25
300	12	299	114	687	729	420	492	180	—	—	—	485	400	16-25

Size		Cap			DH	Weight (kg/pc)		Q'ty per Carton
A	B	□A	□B	S		Handle	Cap	
50	2	32	38	70	148	3.1	3.5	1
75	3	32	38	70	148	3.5	3.9	1
100	4	32	38	70	148	4.5	4.9	1
125	5	32	38	70	210	8.7	8.9	1
150	6	32	38	70	210	9.7	9.9	1
200	8	32	38	70	210	13.0	13.2	1
250	10	32	38	70	250	19.9	22.1	1
300	12	32	38	70	280	29.6	29.8	1

## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0

# ESLON GATE VALVE

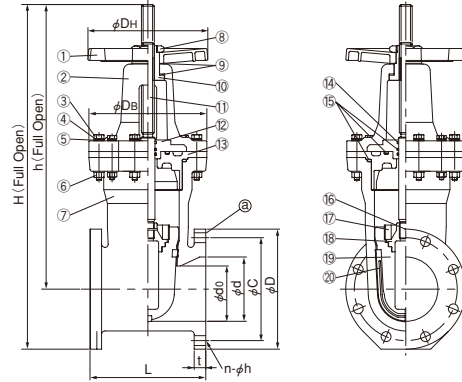
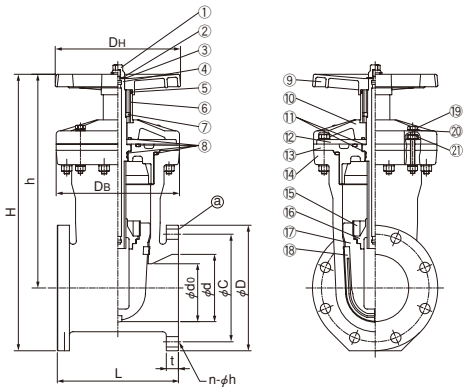
Internal Thread Type External Thread Type



- Stable sealing performance with low torque by unique U-O type seat
- Excellent durability and pressure resistance
- No deposit and no pressure loss because of flat flow channel
- Easy handling and piping with flat flange bottom

Internal Thread Type ●Excellent chemical resistance  
●Built in visual indicator for openness

External Thread Type ●Available for application with slurry or crystal liquid



⚠ Please use short nut and arrange bolt length to remain 1 pitch of bolt thread after installation so as not to damage the body by bolt end.

## Parts List

No.	Part Name	Q' ty	Material	No.	Part Name	Q' ty	Material
①	Cap Nut,Washer	各1	SS	⑫	Slust Plate for 80~200A	1	SUS304
②	Gasket Stopper	1	PP	⑬	Bonnet	1	HI-PVC
③	Gasket	1	EPDM	⑭	Body	1	HI-PVC
④	Stem	40A	SUS304	⑮	Lock Ring	1	HI-PVC
		50~200A	HT-PVC+SS	⑯	Female Connector	40A	CAC 406
⑤	O-ring	1	EPDM			50~200A	1
⑥	Indicator Cover	1	PC	⑰	Disc	1	HI-PVC+EPDM
⑦	Indicator	1	PVC	⑱	Seat	2	EPDM
⑧	O-ring	1	EPDM	⑲	Bolt	—	SUS304
⑨	Handle	1	PVC	⑳	Washer	—	SUS304
⑩	Gasket Box	1	HI-PVC	㉑	Nut	—	SUS304
⑪	Slust Washer	—	PP				

No.	Part Name	Q' ty	Material	No.	Part Name	Q' ty	Material
①	Handle	1	PVC	⑪	Stem	1	SUS304
②	Yoke	1	HI-PVC	⑫	Seal Plate	1	HI-PVC
③	Bolt	—	SUS304	⑬	Bonnet	1	HI-PVC
④	Spring Washer	—	SUS304	⑭	Dust Seal	2	NBR
⑤	Washer	—	SUS304	⑮	O-ring	2	EPDM
⑥	Nut	—	SUS304	⑯	Set Pin	1	SUS304
⑦	Body	1	HI-PVC	⑰	Lock Ring	1	HI-PVC
⑧	Nut	1	CAC 406	⑱	Connector	1	CAC 406
⑨	Slust Ring	2	PP	⑲	Disc	1	HI-PVC
⑩	Sleeve	1	CAC 406	㉑	Seat	1	EPDM

Size		d	L	H		h		D <sub>H</sub>	D <sub>B</sub>	Flange (JIS 10K)				Rotation Times to Close		Weight (kg/pc)		Q' ty per Carton
A	B			Internal Thread	External Thread	Internal Thread	External Thread			D	C	n-φn	t	Internal Thread	External Thread	Internal Thread	External Thread	
40	1 1/2	40	165	326	403	256	333	140	140	140	105	4-19	20	10	11	3.6	3.8	1
50	2	50	180	364	447	286	369	170	152	155	120	4-19	20	5 1/8	12 3/4	4.3	5.5	1
65	2 1/2	65	190	414	528	327	440	170	175	175	140	4-19	22	6 3/4	16 2/4	5.8	7.5	1
80	3	75	200	431	557	338	465	170	183	185	150	8-19	22	6 3/4	14 1/4	7.0	9.0	1
100	4	100	230	520	662	415	557	210	226	210	175	8-19	24	8 1/4	18 1/2	12.7	15.0	1
125	5	125	250	581	778	456	662	210	255	250	210	8-23	25	9 1/2	21 1/4	18.3	19.0	1
150	6	150	270	633	830	493	690	280	275	280	240	8-23	26	9 1/4	19 3/4	23.5	27.0	1
200	8	200	290	752	1012	586	847	280	347	330	290	12-23	28	12	26 1/4	40.1	40.5	1

## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0

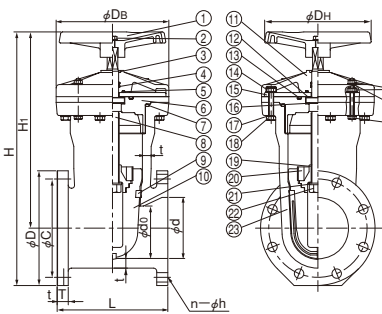
# ESLON GATE VALVE FOR PORTABLE WATER

50~150A Based on JWWA B 125

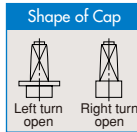
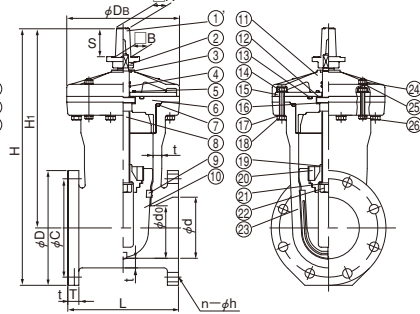


- Stable sealing performance with low torque by unique U-O type seat
- Excellent durability and pressure resistance
- Preventive mechanism from over-tightening
- No deposit and no pressure loss because of flat flow channel

### ● Handle Type



### ● Cap Type



### Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Handle	1	PVC	⑭	Nut	—	SUS304
①'	Cap	1	FCD-450	⑮	Slust Washer	1	SUS304
②	Set Pin	1	SUS304	⑯	Slust Washer	1	PTFE
③	Dust Seal	1	NBR	⑰	Washer	—	SUS304
④	Gasket	2	SBR	⑱	Bolt	—	SUS304
⑤	O-ring	1	SBR	⑲	Female Connector	1	BC-6
⑥	Bonnet	1	HI-PVC	⑳	Lock Ring	1	HI-PVC
⑦	O-ring	1	SBR	㉑	Washer	※	SUS304
⑧	Stem	1	SUS304	㉒	Nut	※	SUS304
⑨	Seat	1	SBR	㉓	Body	1	HI-PVC
⑩	Disc	1	HI-PVC	㉔	Nut	※	SUS304
⑪	Gasket Box	1	HI-PVC	㉕	Washer	※	SUS304
⑫	Slust Washer	1	PTFE	㉖	Bolt	※	SUS304
⑬	O-ring	1	SBR				

Unit:mm

Size	d	L	H		H <sub>1</sub>		DH	DB	t	Flange (Water Supply Flange)				Cap		
			Handle	Cap	Handle	Cap				D	C	n-φh	t	□A	□B	S
50	50	180	329	384	264	305	148	152	6	155	120	4-19	20	32	38	70
75	75	240	423	466	318	360	210	183	9	211	168	4-19	24	32	38	70
100	100	250	495	536	378	417	210	226	10	238	195	4-19	25	32	38	70
125	125	260	563	587	431	455	260	255	12	263	220	6-19	25	32	38	70
150	150	280	621	645	476	500	280	275	14	290	247	6-19	26	32	38	70
200	200	300	723	753	552	582	280	347	22	342	299	8-19	30	32	38	70

Size	Q'ty of Bolt and nut					Rotation Times to Close	Weight (kg/pc)		Q'ty per Carton
	⑫	⑭	⑰	⑱	㉔		Flange		
							Handle	Cap	
50	3	3	6	15 1/4	4.8	5.7	1		
75	4	4	8	14 1/4	9.4	10.0	1		
100	4	8	8	18 1/2	15.7	16.0	1		
125	4	8	8	21 1/2	19.9	21.2	1		
150	4	8	8	19 3/4	26.1	26.5	1		
200	4	8	8	26 1/2	42.4	42.9	1		

⚠ 200A valve is not standard product in Japan Water Works Association (JWWA)

### Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0



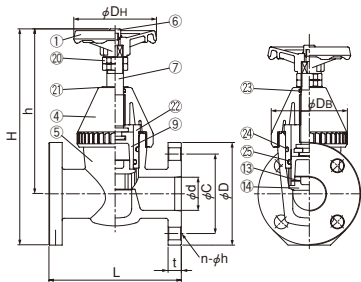
# ESLON GLOBE VALVE



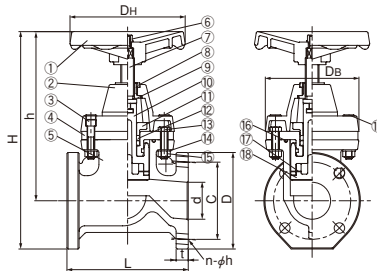
- Excellent durability and corrosion resistance as stem does not contact to medium by unique sealing mechanism
- Preventive mechanism from over-tightening and open/close visual indicator are equipped below the handle for 15~50A
- Easy handling and piping with flat flange bottom

## Flange Type · Thread Type and TS Socket Type

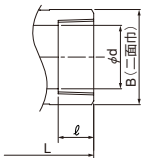
### ● Flange Type [15A~50A]



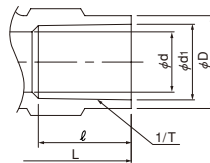
### [65A~100A]



### ● Female Thread Type



### ● TS Socket Type



### Parts List

No.	Part Name	Q'ty	Material
①	Handle	1	PVC
②	Bonnet	1	PVC
③	Bolt	4	Ni plated SCM
④	Bonnet	1	PVC
⑤	Body	1	PVC
⑥	Handle Nut	1	PVC
⑦	Stem	1	C3601
⑧	Set Nut	1	C3601
⑨	Sleeve	1	C3601
⑩	Disc Holder	1	PVC
⑪	Gasket Stopper	1	PP
⑫	Y Gasket	2	EPDM
⑬	Hexagon Bolt	4	Ni plated SCM
⑭	Washer	8	SUS304
⑮	Hexagon Nut	8	SUS304
⑯	O-ring	1	EPDM
⑰	Set Pin	—	PVC
⑱	Gate	1	PP
⑲	Bolt Cap	1	PP
⑳	Stopper Nut	2	PVC
㉑	Slust Washer for 40~50A	1	PTFE
㉒	Bush	1	PVC
㉓	O-ring	1	NBR
㉔/㉕	O-ring	1	EPDM or FPM

### Flange Type

Size		d	L	H (max)	h (max)	DH	DB	Flange (JIS 10K)				Weight (kg/pc)	Q'ty per Carton
A	B							D	C	n-φh	t		
15	1/2	16	85	199	152	65	52	95	70	4-15	14	0.5	24
20	3/4	21	95	215	165	65	62	100	75	4-15	14	0.6	24
25	1	26	110	239	177	80	72	125	90	4-19	14	0.9	24
32	1 1/4	32	135	272	205	80	83	140	100	4-19	16	1.3	8
40	1 1/2	41	190	304	234	125	105	140	105	4-19	16	1.9	2
50	2	50	200	327	249	125	115	155	120	4-19	20	2.6	2
65	2 1/2	65	220	390	303	150	170	175	140	4-19	22	5.5	2
80	3	80	240	442	350	210	189	185	150	8-19	22	7.5	2
100	4	102	290	500	395	210	231	210	175	8-19	24	11.0	1

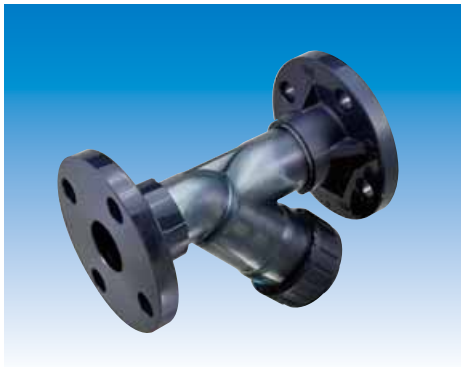
### Thread Type (15A~50A) and TS Socket Type (15A~25A)

Size		d	L		H (max)		h (max)		DH	DB	Female Thread		TS Socket			Weight (kg/pc)		Q'ty per Carton
A	B		Thread	TS Socket	Thread	TS Socket	Thread	TS Socket			Size	ℓ	d1	1/T Taper	ℓ	Thread	TS Socket	
15	1/2	16	85	110	169	169	152	152	65	52	Rc 1/2	15	22.4	1/34	30	0.3	0.3	24
20	3/4	21	95	130	186	186	165	165	65	62	Rc 3/4	17	26.5	1/34	35	0.4	0.4	24
25	1	26	110	150	201	201	177	177	80	72	Rc 1	20	32.6	1/34	40	0.5	0.5	24
32	1 1/4	32	135	—	234	—	205	203	80	83	Rc 1 1/4	22	—	—	—	0.8	—	8
40	1 1/2	41	140	—	257	—	234	225	125	105	Rc 1 1/2	25	—	—	—	1.3	—	2
50	2	50	180	—	298	—	249	239	150	115	Rc 2	28	—	—	—	1.8	—	2

### Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0

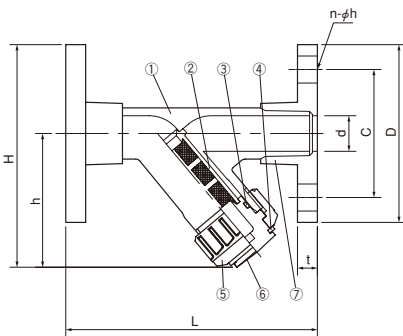
# ESLON STRAINER



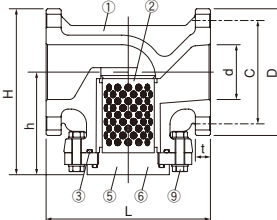
- Transparency body of 15-50A offers easy monitoring the condition of medium and screen
- Easy maintenance by detaching the union nut
- Excellent durability, pressure and corrosion resistance

## Flange Type · Thread Type · TS Socket Type and True Union Type

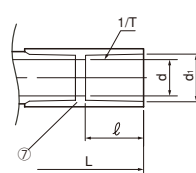
### ● Flange Type (15~50A)



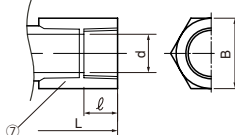
### ● Flange Type (65~100A)



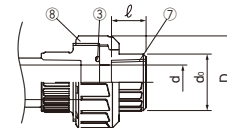
### ● TS Socket Type



### ● Female Thread Type



### ● True Union Type



### Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC
②	Holder with Screen	1	PVC
③	O-ring	1	EPDM or FPM
④	Open Ring	1	PVC
⑤	Cap Nut	1	PVC
⑥	Bonnet	1	PVC
⑦	Socket	2	PVC
⑧	Union Nut	2	PVC
⑨	Bolt & Nut	8	SUS304

### Flange Type

Size		d	L	H	h	Flange (JIS 10K)				Weight (kg/pc)	Q'ty per Carton
A	B					D	C	n-φh	t		
15	1/2	15	150	119	71	95	70	4-15	14	0.4	6
20	3/4	20	158	131	81	100	75	4-15	14	0.5	6
25	1	25	177	157	94	125	90	4-19	14	0.7	6
32	1 1/4	30	197	162	94	135	100	4-19	16	1.0	6
40	1 1/2	40	220	188	118	140	105	4-19	16	1.2	2
50	2	50	264	215	137	155	120	4-19	20	2.0	2
65	2 1/2	65	220	228	141	175	140	4-19	22	3.6	1
80	3	80	240	243	150	185	150	8-19	22	4.4	1
100	4	100	290	269	164	210	175	8-19	24	6.8	1

### Screen Type and Mesh Size

Mesh Size	15A~20A		25A~50A	
	PVDC	SUS	PVDC	SUS
10	—	○	○	○
20	—	○	○	○
30	○	○	○	○
40	○	○	○	○
50	○	○	○	○
60	○	○	○	○
70	—	○	—	○
80	—	○	—	○
100	—	○	—	○
120	—	○	—	○

### Thread Type · TS Socket Type and True Union Type

Size		d	L			H			h	Female Thread		TS Socket			Weight (kg/pc)			Q'ty per Carton
A	B		Thread	TS Socket	True Union	Thread	TS Socket	True Union		Size	ℓ	d1	1/T Taper	ℓ	Thread	TS Socket	True Union	
15	1/2	15	153	190	192	86	86	96	71	Rc 1/2	16	22.4	1/34	30	0.2	0.2	0.3	6
20	3/4	20	176	210	199	99	98	111	81	Rc 3/4	19	26.5	1/34	35	0.2	0.2	0.4	6
25	1	25	200	243	249	117	114	128	94	Rc 1	22	32.6	1/34	40	0.4	0.4	0.6	6
32	1 1/4	32	232	274	270	122	117	135	94	Rc 1 1/4	26	38.6	1/34	44	0.6	0.6	0.8	6
40	1 1/2	40	271	332	301	151	147	167	118	Rc 1 1/2	31	48.7	1/34	55	0.9	0.9	1.3	2
50	2	50	321	390	363	175	172	197	137	Rc 2	38	60.8	1/34	63	1.4	1.4	2.1	2

### Usable Liquid Temperature & Maximum Working Pressure

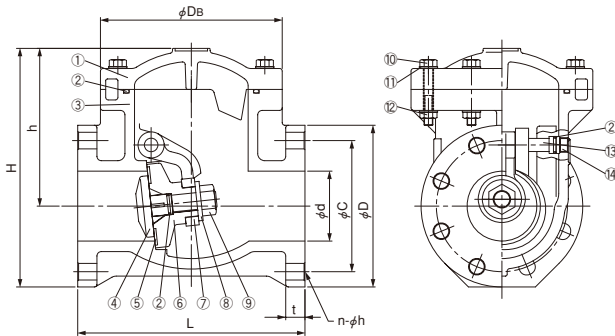
Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0

# ESLON CHECK VALVE SWING TYPE



- Low fluid resistance and excellent checking performance even with small differential pressure
- Excellent durability and pressure resistance
- Excellent corrosion & chemical resistance as all contact parts with medium is made from plastic
- Easy handling & piping because of weight in 1/4 - 1/5 of metal type

## Flange Type



## Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Bonnet	1	PVC,PP or PVDF	⑧	Washer	1	PVC,PP or PVDF
②	O-ring	1	EPDM or FPM	⑨	Hexagon Nut	1	PVC,PP or PVDF
③	Body	1	PVC,PP or PVDF	⑩	Hexagon Bolt	※	SUS304
④	Gasket Stopper	1	PVC or PVDF	⑪	Washer	※	SUS304
⑤	Gasket	1	EPDM or PTFE	⑫	Hexagon Nut	※	SUS304
⑥	Gate	1	PVC,PP or PVDF	⑬	shaft	1	PVC,PP or PVDF
⑦	Arm	1	PVC,PP or PVDF	⑭	Plug	1	PVC,PP or PVDF

Size		d	L	H	h	D <sub>B</sub>	Flange (JIS 10K)				Numbers of Bolt & Nut	Weight (kg/pc)			Q'ty per Carton
A	B					D	C	t	n-φh	PVC		PP	PVDF		
15	1/2	21	140	143	93	112	100	70	14	4-15	6	1.0	1.6	2.6	2
20	3/4	21	140	143	93	112	100	75	14	4-15	6	1.0	1.6	2.6	2
25	1	25	160	180	118	132	125	90	14	4-19	6	1.6	2.6	4.4	2
32	1 1/4	40	180	206	136	148	140	100	18	4-19	6	2.7	3.7	6.6	2
40	1 1/2	40	180	206	136	148	140	105	18	4-19	6	2.7	3.7	6.6	2
50	2	51	200	229	152	180	155	120	20	4-19	8	3.6	5.9	9.0	2
65	2 1/2	67	240	254	166	200	175	140	22	4-19	8	4.8	7.6	12.0	2
80	3	80	260	270	178	208	185	150	22	8-19	8	5.8	8.6	15.0	2
100	4	100	300	318	213	265	210	175	24	8-19	12	9.4	7.3	11.8	1
125	5	125	350	372	247	330	250	210	24	8-23	12	16.4	12.7	21.0	1
150	6	150	400	420	280	375	280	240	26	8-23	12	20.1	16.0	26.0	1
200	8	200	500	494	329	425	330	290	30	12-23	16	31.7	27.0	44.0	1

Unit:mm

\*Size 15A is same as 20A and size 32A is same as 40A, it is fabricated to long bolt hole of the flange.

## Minimum Operating Pressure

Unit:kPa

Size (A)		15	20	25	32	40	50	65	80	100	125	150	200
Vertical Piping	Min.Open Pressure	9.8											
	Min.Closed Pressure	29.4											
Horizontal Piping	Min.Open Pressure	9.8											
	Min.Closed Pressure	29.4				39.2				49.0			

## Usable Liquid Temperature & Maximum Working Pressure

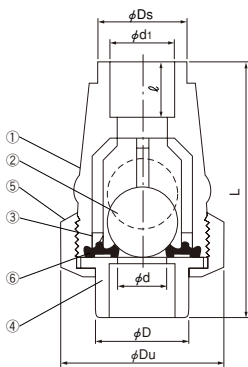
Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)					
		EPDM			PTFE		
		15~80A	100~200A	15~65A	80~100A	125A	150~200A
PVC	0~50	0.7	0.5	0.6	0.5	0.4	0.3
PP	0~80	0.7	0.5	0.6	0.5	0.4	0.3
PVDF	0~100	—	—	0.6	0.5	—	—

# ESLON CHECK VALVE BALL TYPE

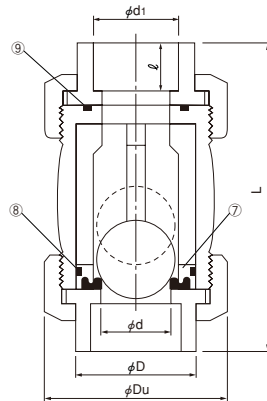


- Low fluid resistance and excellent checking performance even with small differential pressure
- Excellent corrosion & chemical resistance as all contact parts with medium is made from plastic
- Easy maintenance by detaching the union nut

●15A~50A



●65A~100A



## Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC or HT
②	Ball	1	PVC or HT
③	Washer	1	PVC or HT
④	End Connector	1/2	PVC or HT
⑤	Union Nut	1/2	PVC or HT
⑥	Seat	1	EPDM or FPM
⑦	Seat Carry	1	PVC or HT
⑧	Seat Carry O-ring	1	EPDM or FPM
⑨	O-ring	1	EPDM or FPM

## Thread Type and TS Socket Type

Size		d	L	D	Ds	Du	Female Thread		TS Socket			Weight (kg/pc)			Q'ty per Carton
A	B						Size	ℓ	d1	1/T Taper	ℓ	PVC Thread	HT (CPVC) TS Socket	HT (CPVC) TS Socket	
15	1/2	15	98	30	30	48	Rc 1/2	15	22.2	1/37	22	0.1	0.1	0.1	24
20	3/4	20	120	37	36	61	Rc 3/4	20	26.2	1/42	26	0.2	0.2	0.2	24
25	1	25	125	44	41	70	Rc 1	25	32.3	1/43	29	0.3	0.3	0.3	24
32	1 1/4	34	154	62	61	89	Rc 1 1/4	29	38.2	1/37	32	0.6	0.6	0.6	4
40	1 1/2	36	154	62	61	89	Rc 1 1/2	31	48.4	1/38	35	0.5	0.5	0.5	4
50	2	48	180	74	73	102	Rc 2	32	60.5	1/34	38	0.8	0.8	0.8	4
65	2 1/2	60	225	96	—	151	—	—	76.3	1/48	44	—	2.2	2.2	2
80	3	78	275	113	—	154	—	—	89.5	1/49	49	—	4.7	4.7	2
100	4	99	362	138	—	199	—	—	114.4	1/56	61	—	6.8	6.8	1

\*Female thread type is available only for PVC body.

## Usable Liquid Temperature & Maximum Working Pressure

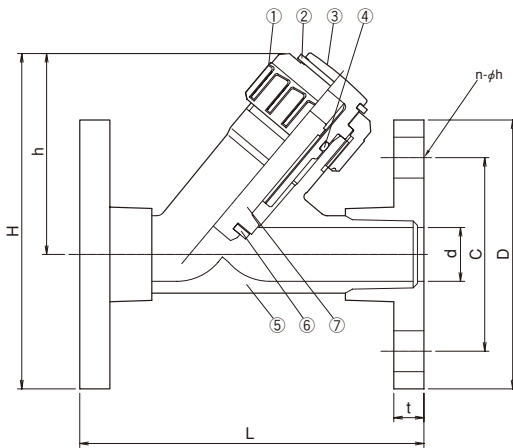
Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~50	1.0
HT (CPVC)	0~90	1.0

# ESLON CHECK VALVE LIFT TYPE



- Available for both horizontal and vertical piping direction
- Easy maintenance by detaching the union nut
- Excellent durability, pressure and corrosion resistance

## Flange Type



### Parts List

No.	Part Name	Q'ty	Material
①	Cap Nut	1	PVC
②	Stem Set	1	PVC
③	Bonnet	1	PVC
④	O-ring	1	EPDM or FPM
⑤	Body	1	PVC
⑥	Piston Gasket	1	EPDM or FPM
⑦	Piston	1	PVC+SS

### Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp. (MPa)
PVC	0~50	1.0

Size		d	L	H	h	Flange (JIS 10K)				Min. Opernd Pressure (kPa [kgf/cm <sup>2</sup> ])	Weight (kg/pc)	Q'ty per Carton
A	B					D	C	n-φh	t			
15	1/2	15	130	119	71	95	70	4-15	14	1.96 [0.02]	0.4	6
20	3/4	20	150	131	81	100	75	4-15	14	1.96 [0.02]	0.5	6
25	1	25	160	157	94	125	90	4-19	14	1.96 [0.02]	0.8	6
32	1 1/4	32	180	162	94	135	100	4-19	16	1.96 [0.02]	1.0	6
40	1 1/2	40	200	188	118	140	105	4-19	16	2.94 [0.03]	1.4	2
50	2	50	234	215	137	155	120	4-19	20	2.94 [0.03]	2.2	2

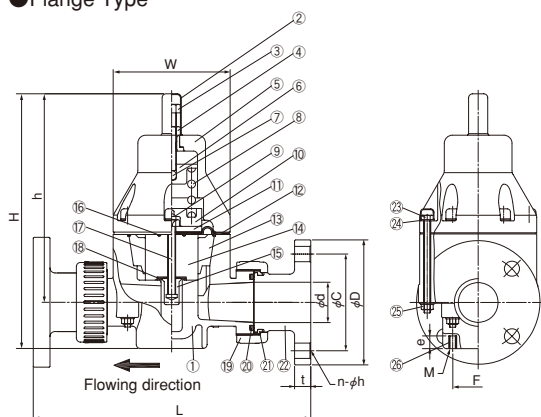
# ESLON RELIEF VALVE



- Prevent from over pressure
- Controllable relief pressure by adjusting bolt
- Available pressure range 0.02 – 1.0 MPa
- Available for both horizontal and vertical piping direction
- Excellent corrosion & chemical resistance as all contact parts with medium is made from plastic

## Flange Type · Thread Type and TS Socket Type

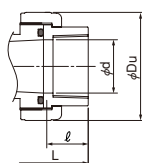
### ● Flange Type



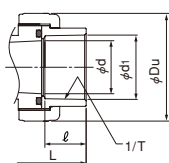
### Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Body	1	PVC,PP or PVDF	⑭	Piston	1	PVC,PP or PVDF
②	Cover	1	PE	⑮	Piston Head	1	PVDF
③	Pressure Regulation Bolt	1	SUS304	⑯	O-ring	1	EPDM or FPM
④	Lock Nut	1	SUS304	⑰	Connection Bolt	1	SUS304
⑤	Bonnet	1	GF-PP	⑱	Gasket	1	EPDM or FPM
⑥	Spring Plate	1	SS400+Ni plated	⑲	Union Nut	2	PVC,PP or PVDF
⑦	Slust	1	SS400+Ni plated	⑳	O-ring	2	EPDM or FPM
⑧	Adjust Spring	1	SUS304P	㉑	Set Ring	2	PVDF
⑨	Slust	1	SS400+Ni plated	㉒	Socket	2	PVC,PP or PVDF
⑩	Spring Plate	1	SS400+Ni plated	㉓	Bolt	—	SUS304
⑪	Slust Plate	1	SS400+Ni plated	㉔	Washer	—	SUS304
⑫	Diaphragm	1	EPDM with caped PTFE	㉕	Nut	—	SUS304
⑬	Separate Disc	1	PVC,PP or PVDF	㉖	Insert Nut	2	SUS304

### ● Female Thread Type



### ● TS Socket Type



## Flange Type

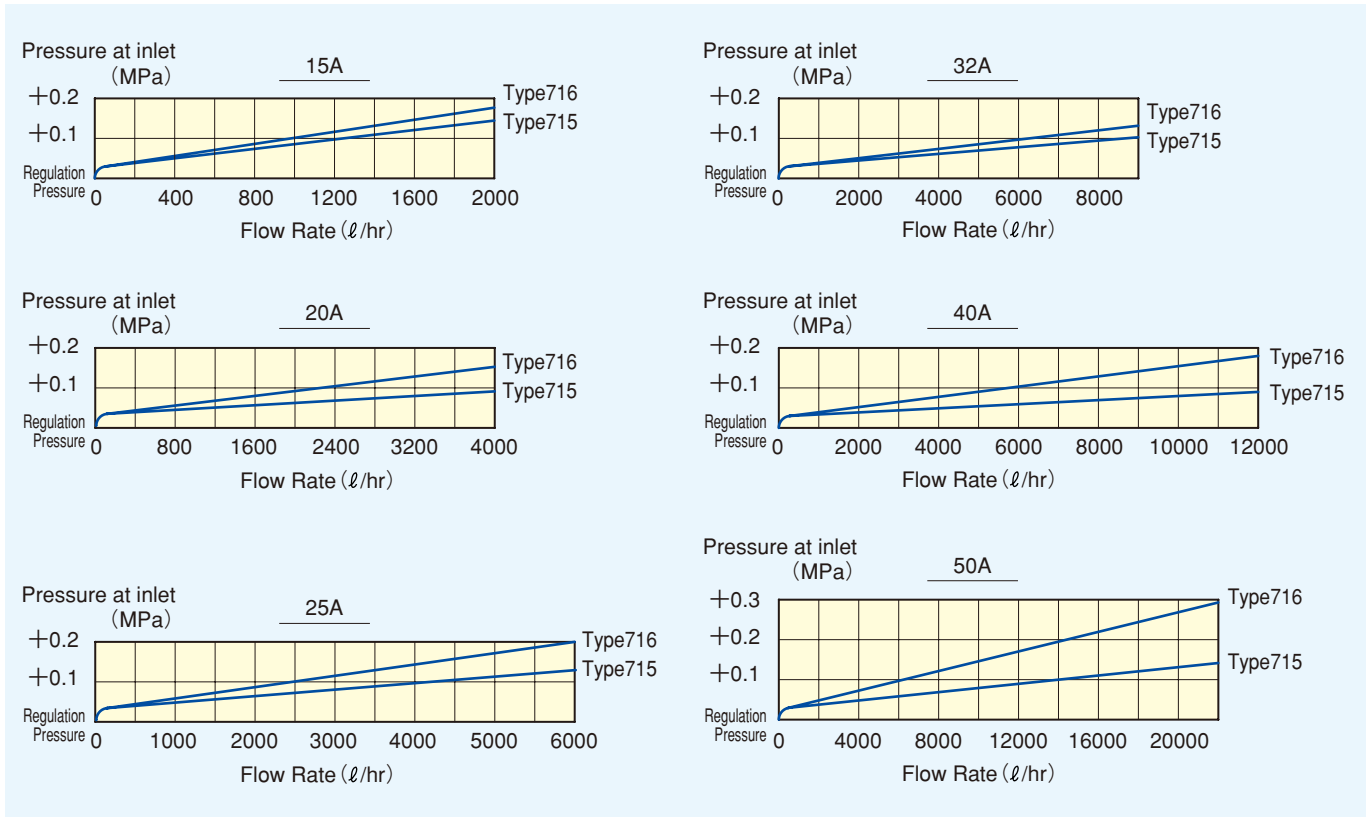
Size		d	L	H	h	W	Fixation Thread		Flange (JIS 10K)				Weight (kg/pc)			Q'ty per Carton
A	B						F	M×e	D	PCD	n-φh	T	PVC	PP	PVDF	
15	1/2	15	224	220	172	81	41	M6×16	95	70	4-15	14	1.2	0.9	1.5	1
20	3/4	20	255	252	202	107	47	M6×16	100	75	4-15	14	1.3	1.8	1.6	1
25	1	26	269	265	202	107	47	M6×16	125	90	4-19	14	2.5	2.0	2.9	1
32	1 1/4	32	323	330	262	147	66	M8×16	135	100	4-19	16	5.8	4.6	6.4	1
40	1 1/2	40	338	332	262	147	66	M8×16	140	105	4-19	16	6.0	4.7	6.6	1
50	2	50	346	340	262	147	66	M8×16	155	120	4-19	20	6.4	5.1	7.1	1

## Thread and TS Socket Type

Size		d	L		H	h	W	Fixation Thread		Female Tread		TS Socket			Weight (kg/pc)		Q'ty per Carton
A	B		Thread	TS Socket				F	M×e	Size	ℓ	d1	1/T Taper	ℓ	PVC Thread	PVDF Thread	
13	3/8	10	164	164	197	172	81	41	M6×16	Rc 1/4	14	18.3	1/31	19	0.9	1.1	1
15	1/2	15	172	177	197	172	81	41	M6×16	Rc 1/2	16	22.3	1/37	22	1.0	1.2	1
20	3/4	21	209	211	240	202	107	47	M6×16	Rc 3/4	20	26.3	1/42	25	2.0	2.2	1
25	1	26	218	220	240	202	107	47	M6×16	Rc 1	24	32.3	1/43	29	2.0	2.3	1
32	1 1/4	33	276	276	320	262	147	66	M8×16	Rc 1 1/4	28	38.4	1/37	32	5.1	5.6	1
40	1 1/2	40	281	281	320	262	147	66	M8×16	Rc 1 1/2	30	48.5	1/38	35	5.2	5.7	1
50	2	50	290	290	320	262	147	66	M8×16	Rc 2	33	60.6	1/34	38	5.3	5.8	1

## Pressure characteristic at Inlet Side

Pressure at inlet increases corresponding to increase of flow rate as shown below diagram.



## Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)	
		Regulation Pressure Type	
		715	716
PVC	0~ 50	0.4	1.0
PP	0~ 70	0.4	1.0
PVDF	0~100	0.4	1.0

## Regulation Pressure Range

Regulation Pressure Type	Regulation Pressure Range
715	0.02~0.4MPa
716	0.05~1.0MPa

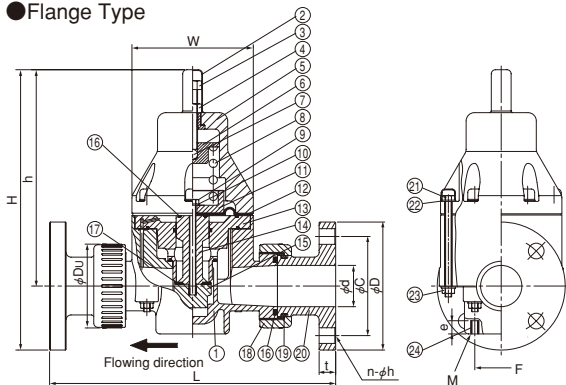
# ESLON PRESSURE REGULATION VALVE



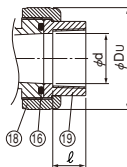
- Diaphragm type of regulation valve for control to constant pressure
- Operation pressure is controllable in the range of 0.1-0.9MPa
- Assured relief performance in both case of piping in horizontal and vertical direction
- Excellent corrosion & chemical resistance as all contact parts with medium is made from plastic

## Flange Type · Thread Type · TS Socket Type

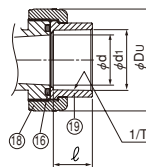
### ● Flange Type



### ● Female Thread Type



### ● TS Socket Type



### Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC, PP or PVDF
②	Cover	1	PE
③	Pressure Regulation Bolt	1	SUS304
④	Lock Nut	1	SUS304
⑤	Bonnet	1	GF-PP
⑥	Spring Plate	1	SS400+Ni plated
⑦	Slust	1	SUS304
⑧	Adjust Spring	1	SUS304P
⑨	Connection Bolt	1	SUS304
⑩	Washer	1	SUS304
⑪	Spring Plate	1	GF-PP
⑫	Diaphragm	1	EPDM with caped PTFE
⑬	Separate Disc	1	PVC, PP or PVDF
⑭	Piston	1	PVC, PP or PVDF
⑮	Piston Guide	1	PVDF
⑯	O-ring	7	EPDM or FPM
⑰	Gasket	1	EPDM or FPM
⑱	Union Nut	2	PVC, PP or PVDF
⑲	Set Ring	2	PVDF
⑳	Socket	2	PVC, PP or PVDF
㉑	Bolt	-	SUS304
㉒	Washer	-	SUS304
㉓	Nut	-	SUS304
㉔	Insert Nut	2	SUS304

### Flange Type

Size		d	L	H	h	W	Fixation Thread		Flange (JIS 10K)		Weight (kg/pc)			Q'ty per Carton		
A	B						F	MXe	D	PCD	n-φh	t	PVC	PP	PVDF	
15	1/2	15	224	220	172	81	41	M6×16	95	70	4-15	14	1.1	1.3	1.3	1
20	3/4	20	255	252	202	107	47	M6×16	100	75	4-15	14	1.2	1.4	1.4	1
25	1	26	269	265	202	107	47	M6×16	125	90	4-19	14	2.4	2.8	2.8	1
32	1 1/4	32	323	330	262	147	66	M8×16	135	100	4-19	16	5.7	6.6	6.6	1
40	1 1/2	40	338	332	262	147	66	M8×16	140	105	4-19	16	5.9	6.8	6.8	1
50	2	50	346	340	262	147	66	M8×16	155	120	4-19	20	6.3	7.2	7.2	1

Unit:mm

### Thread Type and TS Socket Type

Size		d	L			H	h	W	Fixation Thread		Female Thread		TS Socket			Weight (kg/pc)		Q'ty per Carton
A	B		Thread	TS Socket	Butt				F	MXe	Size	ℓ	d1	1/T Taper	ℓ	PVC Thread-TS Socket	PVDF Thread	
13	3/8	10	164	164	-	197	172	81	41	M6×16	Rc 1/4	14	18.3	1/31	19	0.8	0.8	1
15	1/2	16	172	177	227	197	172	81	41	M6×16	Rc 1/2	16	22.3	1/37	22	0.9	0.9	1
20	3/4	20	209	211	263	240	202	107	47	M6×16	Rc 3/4	20	26.3	1/42	25	1.9	1.9	1
25	1	25	218	220	269	240	202	107	47	M6×16	Rc 1	24	32.3	1/43	29	1.9	1.9	1
32	1 1/4	32	276	276	330	320	262	147	66	M8×16	Rc 1 1/4	28	38.4	1/37	32	5.0	5.0	1
40	1 1/2	41	281	281	336	320	262	147	66	M8×16	Rc 1 1/2	30	48.5	1/38	35	5.1	5.1	1
50	2	52	290	290	342	320	262	147	66	M8×16	Rc 2	33	60.6	1/34	38	5.2	5.2	1

Unit:mm

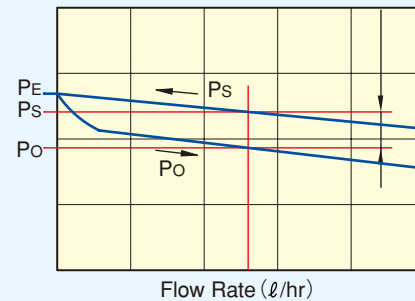
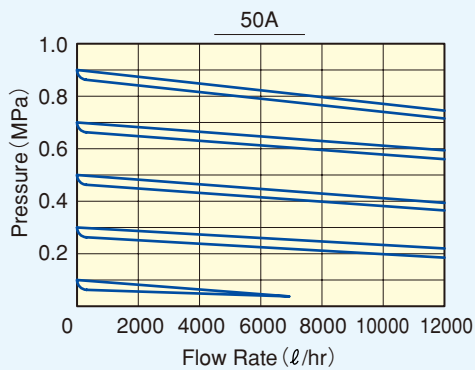
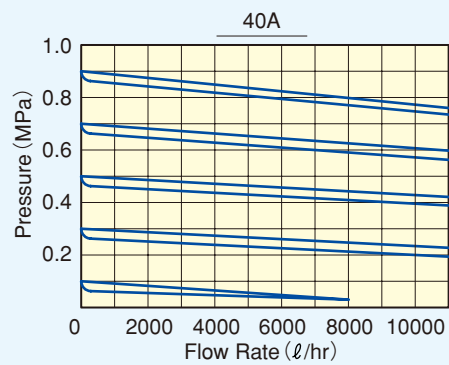
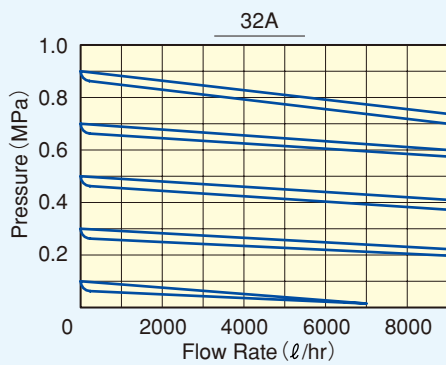
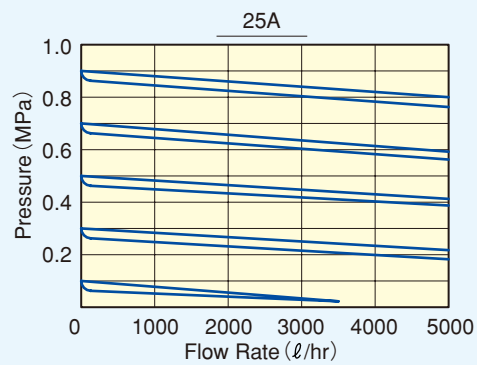
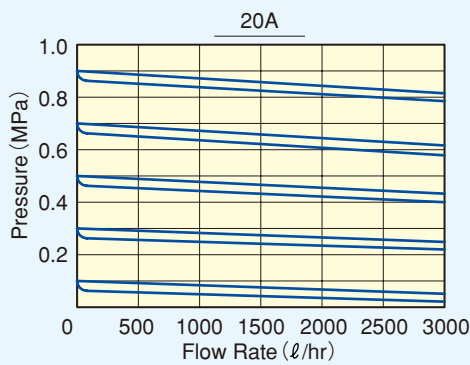
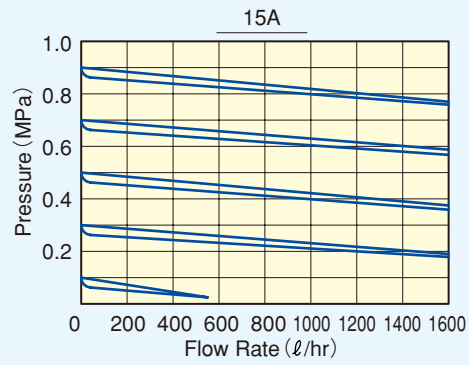
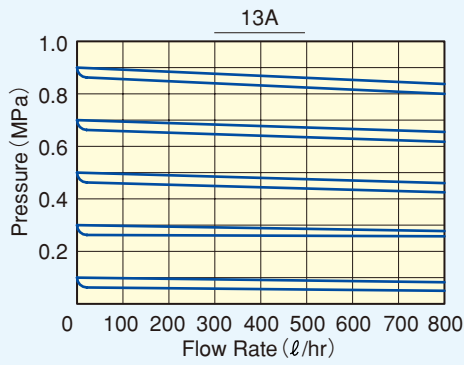
### Usable Liquid Temperature & Maximum Working Pressure

Material	Usable Temperature (°C)	max. Working Pressure at Room Temp (MPa)
PVC	0~ 50	1.0
PP	0~ 70	1.0
PVDF	0~100	1.0

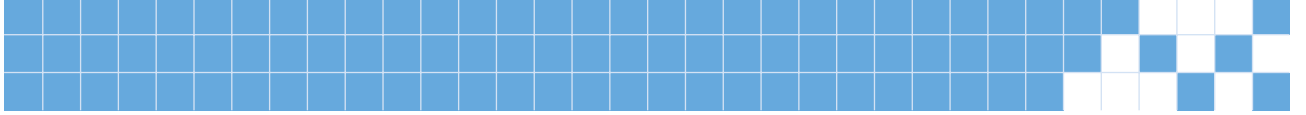


**Pressure characteristic at outlet side**

Pressure at outlet decreases corresponding to increase of flow rate as shown below diagram.



PE=Reguration Pressure  
 Ps=Pressure at Closed Point  
 PO=Pressure at Open Point



**MEMO**

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Water treatment piping for electronics factory



High purity EsloClean piping



Aquarium piping



Chemical Treatment Piping for water purification system

## II Pipes & Related Products

### ■ PRODUCTS RELATED TO VALVE ■

● ESLON FLANGE WITH TS SOCKET (TS FLANGE) -----	II-1
● PACKING (GASKET) -----	II-2
● SUS INSERT FITTINGS -----	II-3
● ESLON TRUE UNION FITTING -----	II-4
● ESLON SADDLE BAND -----	II-4
● ESLON LARGE DIAMETER FITTINGS -----	II-5

### ■ PIPES AND FITTINGS ■

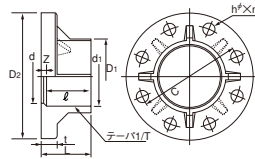
● ESLON U-PVC PIPE -----	II-7
U-PVC PIPE FOR PORTABLE WATER (ESLON VP & HI-GOLD) -----	II-7
U-PVC PIPE (ESLON VP, VU) -----	II-7
● U-PVC TS FITTINGS / HITS FITTINGS-GOLD -----	II-8
● ESLON CPVC PIPE (ESLON HT) -----	II-9
● ESLON CPVC PIPE FOR INDUSTRIAL APPLICATIONS -----	II-10
● ESLON VPFW·HTFW -----	II-11
● ESLON PVDF -----	II-12
● ESLON DUCT PIPES -----	II-13
● DUCT FITTINGS -----	II-14
● ESLON LP WITH FLANGE -----	II-15
● ESLON CLEAR PIPE -----	II-16

### ■ OTHER ■

● PVC WELDING ROD -----	II-16
● ESLON SOLVENT CEMENT -----	II-17

# Products Related to Valve

## FLANGE WITH TS SOCKET (TS FLANGE)



JIS 10K Type Material : PVC · HT and HI JIS 5K Type Material : PVC and HT (13~50A)

Unit:mm

Size		TS Socket					L	Z	d	Flange (10K)					Flange (5K)					Weight (PVC)			
A	B	d1	ℓ	Taper I/T	D1	10K				5K	C	D2	t	n-φh	Applicable Bolt	C	D2	t	n-φh	Applicable Bolt	10K	5K	
13	3/8	18.4	26	1/30	26	24	31	5	14	65	90	14	4-15	M12	50	55	75	9	4-12	M10	45	0.11	0.05
15	1/2	22.4	30	1/34	31	29	35	5	17	70	95	14	4-15	M12	50	60	80	9	4-12	M10	45	0.13	0.06
20	3/4	26.5	35	1/34	35	33	40	5	21	75	100	14	4-15	M12	50	65	85	10	4-12	M10	45	0.15	0.85
25	1	32.6	40	1/34	42	40	45	5	25	90	125	14	4-19	M16	55	75	95	10	4-12	M10	45	0.24	0.11
32	1 1/4	38.6	44	1/34	48	46	50	6	31	100	135	16	4-19	M16	60	90	115	12	4-15	M12	50	0.30	0.20
40	1 1/2	48.7	55	1/37	61	59	61	6	41	105	140	16	4-19	M16	60	95	120	12	4-15	M12	50	0.34	0.25
50	2	60.8	63	1/37	73	70	70	7	52	120	155	20	4-19	M16	70	105	130	14	4-15	M12	55	0.52	0.31
65	2 1/2	76.6	61	1/48	88	86	70	9	67	140	175	22	4-19	M16	75	130	155	14	4-15	M12	55	0.70	0.43
80	3	89.6	64	1/49	102	101*	72	8	78	150	185	22	8-19	M16	75	145	180	14	4-19	M16	55	0.71	0.59
100	4	114.7	84	1/56	132	129**	92	8	100	175	210	22	8-19	M16	75	165	200	16	8-19	M16	60	1.24	0.91
125	5	140.9	104	1/58	158	156**	114	10	125	210	250	24	8-23	M20	80	200	235	16	8-19	M16	60	1.71	1.29
150	6	166.0	132	1/63	186	185**	142	10	146	240	280	26	8-23	M20	85	230	265	18	8-19	M16	65	2.65	2.05
200	8	217.5	155	1/50	238	238**	166	11	196	290	330	28	12-23	M20	90	280	320	28	8-23	M20	90	3.62	3.40
250	10	268.8	185	1/50	289	289**	198	13	247	355	400	30	12-25	M22	95	345	385	30	12-23	M20	95	5.50	5.20
300	12	319.0	185	1/57	344**	—	203	18	298	400	445	32	16-25	M22	100	—	—	—	—	—	—	9.20	—

1.Flange dimensions are in accordance with JIS B 2210

3.Available 13-50A JIS 5K HT Flange

2.TS socket dimensions are in accordance with JIS K 6743

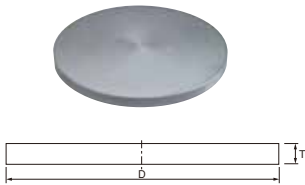
Water Supply Type Material : PVC

Unit:mm

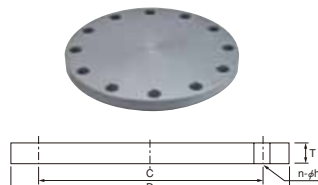
Size		TS Socket				L	Z	d	Flange					Weight	
A	B	d1	ℓ	Taper I/T	D1				C	D2	t	n-φh	Applicable Bolt	kg/pc	
75	3	89.6	64	1/30	102	72	8	78	168	211	22	4-19	M16	75	1.1
100	4	114.7	84	1/34	132	90	8	100	195	238	24	4-19	M16	80	1.6
125	5	140.9	104	1/34	158	114	10	125	220	263	24	6-19	M16	80	2.1
150	6	166.0	132	1/34	186	142	10	146	247	290	26	6-19	M16	85	2.9
200	8	217.5	155	1/34	238	166	11	196	299	342	28	8-19	M16	90	4.4
250	10	268.8	185	1/37	289	198	13	247	360	410	30	8-23	M20	95	6.2
300	12	319.0	185	1/37	344	203	18	298	414	464	32	10-23	M20	100	8.6

## FLANGE

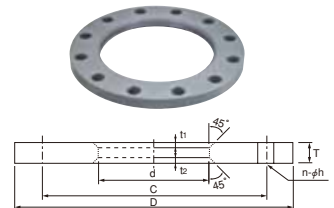
①SP Type



②SB Type



③SJ Type (For Welding)



JIS 10K Type Material : PVC and HI

Unit:mm

Size		D	C	d	T	t1	t2	n-φh	Applicable Bolt
A	B								
13	3/8	90	65	18	12	1.5	3	4-15	M12
15	1/2	95	70	22	12	1.5	3	4-15	M12
20	3/4	100	75	26	14	1.5	3	4-15	M12
25	1	125	90	32	14	1.5	3	4-19	M16
32	1 1/4	135	100	38	16	2.5	3	4-19	M16
40	1 1/2	140	105	48	16	2.5	3	4-19	M16
50	2	155	120	60	16	2.5	4	4-19	M16
65	2 1/2	175	140	76	18	2.5	4	4-19	M16
80	3	185	150	89	18	2.5	4	8-19	M16
100	4	210	175	114	18	3	4	8-19	M16
125	5	250	210	140	20	4	4	8-23	M20
150	6	280	240	165	22	4	4	8-23	M20
200	8	330	290	216	22	4	4	12-23	M20
250	10	400	355	267	24	4	4	12-25	M22

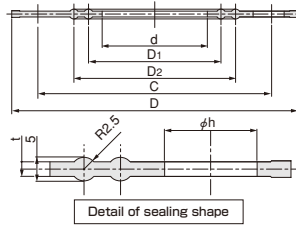
JIS 5K Type Material : PVC

Unit:mm

Size		D	C	d	T	t1	t2	n-φh	Applicable Bolt
A	B								
13	3/8	75	55	18	9	1.5	3	4-12	M10
15	1/2	80	60	22	9	1.5	3	4-12	M10
20	3/4	85	65	26	10	1.5	3	4-12	M10
25	1	95	75	32	10	1.5	3	4-12	M10
32	1 1/4	115	90	38	12	2.5	3	4-15	M12
40	1 1/2	120	95	48	12	2.5	3	4-15	M12
50	2	130	105	60	14	2.5	4	4-15	M12
65	2 1/2	155	130	76	14	2.5	4	4-15	M12
80	3	180	145	89	14	2.5	4	8-19	M16
100	4	200	165	114	16	3	4	8-19	M16
125	5	235	200	140	16	4	4	8-19	M16
150	6	265	230	165	18	4	4	8-19	M16
200	8	320	280	216	20	4	4	8-23	M20
250	10	385	345	267	22	4	4	12-23	M20

# PACKING (GASKET)

## ● EPDM PACKING



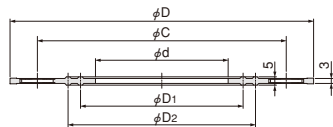
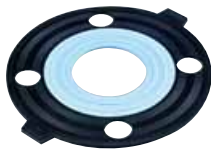
- Excellent chlorinated water & chemical resistance
- Excellent high temperature resistance. Available for hot water piping up to temperature 100°C
- Excellent sealing performance with low tightening torque because of double annular projection

## EPDM (JIS 10K Type, JIS 5K Type and Water Supply)

Unit:mm

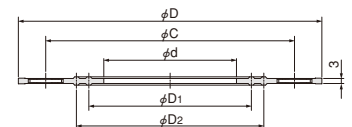
Size		d			D1			D2			C			D			t	n-φh			Weight (g/pc)			Recommended Fasten Torque		
A	B	JIS 10K	JIS 5K	Water Supply	JIS 10K	JIS 5K	Water Supply	JIS 10K	JIS 5K	Water Supply	JIS 10K	JIS 5K	Water Supply	JIS 10K	JIS 5K	Water Supply		JIS 10K	JIS 5K	Water Supply	JIS 10K	JIS 5K	Water Supply	JIS 10K	JIS 5K	Water Supply
13	3/8	17	17	—	25	24	—	38	36	—	65	55	—	88	73	—	3	4-15	4-12	—	20	17	—	15(150)	15(150)	—
15	1/2	20	20	—	28	28	—	42	40	—	70	60	—	93	78	—	3	4-15	4-12	—	23	19	—	15(150)	15(150)	—
20	3/4	25	25	—	33	33	—	47	45	—	75	65	—	98	83	—	3	4-15	4-12	—	29	21	—	30(300)	30(300)	—
25	1	30	30	—	38	38	—	53	52	—	90	75	—	123	93	—	3	4-19	4-12	—	40	25	—	30(300)	30(300)	—
30	1 1/4	38	38	—	48	46	—	63	61	—	100	90	—	133	113	—	3	4-19	4-15	—	46	34	—	30(300)	30(300)	—
40	1 1/2	46	46	—	54	54	—	69	68	—	105	95	—	138	118	—	3	4-19	4-15	—	50	37	—	30(300)	30(300)	—
50	2	58	58	58	68	66	68	83	80	83	120	105	120	153	128	153	3	4-19	4-15	4-19	55	41	55	30(300)	30(300)	30(300)
65	2 1/2	73	73	—	86	82	—	101	100	—	140	130	—	173	153	—	3	4-19	4-15	—	75	56	—	45(450)	45(450)	—
75	3	—	—	84	—	—	98	—	—	115	—	—	168	—	—	211	3	—	—	4-19	—	—	100	—	—	45(450)
80	3	84	84	—	98	94	—	113	113	—	150	145	—	183	178	—	3	8-19	4-19	—	77	69	—	45(450)	45(450)	—
100	4	106	106	106	120	116	120	138	135	140	175	165	195	208	198	238	3	8-19	8-19	4-19	95	78	120	45(450)	45(450)	45(450)
125	5	131	131	131	145	142	145	168	164	168	210	200	220	248	233	263	3	8-23	8-19	6-19	115	103	130	55(550)	55(550)	55(550)
150	6	155	155	155	170	168	175	196	190	195	240	230	247	278	263	290	3	8-23	8-19	6-19	145	124	150	55(550)	55(550)	55(550)
200	8	204	204	205	218	220	226	248	243	248	290	280	299	328	318	342	3	12-23	8-23	8-19	185	167	200	55(550)	55(550)	65(650)
250	10	254	254	254	270	270	276	306	300	300	355	345	360	398	383	410	3	12-25	12-23	8-23	250	220	250	65(650)	65(650)	65(650)
300	12	304	—	305	324	—	328	356	—	350	400	—	414	443	—	464	3	16-25	—	10-23	278	—	290	65(650)	—	65(650)
350	14	352	—	—	368	—	—	400	—	—	445	—	—	488	—	—	3	16-25	—	—	290	—	—	65(650)	—	—

## ● PTFE PACKING



- Excellent corrosion and chemical resistance by EPDM capped with PTFE
- Excellent sealing performance by double annular projection

## ● IIR-X PACKING



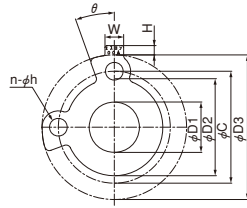
- Excellent sodium hypochlorite resistance

## PTFE and IIR-X

Unit:mm

Size		d		D1		D2		C		D		t	n-φh		Weight (g/pc)		Recommended Fasten Torque	
A	B	PTFE	IIR-X	PTFE	IIR-X	PTFE	IIR-X	PTFE	IIR-X	PTFE	IIR-X		PTFE	IIR-X	PTFE	IIR-X	PTFE	IIR-X
13	3/8	14	17	23	25	37	38	65	65	88	88	3	4-15	4-15	23	20	16(170)	15(150)
15	1/2	18	20	26	28	41	42	70	70	93	93	3	4-15	4-15	25	23	16(170)	15(150)
20	3/4	22	25	36	33	46	47	75	75	98	98	3	4-15	4-15	32	29	16(170)	30(300)
25	1	28	30	38	38	53	53	90	90	123	123	3	4-19	4-19	46	40	35(350)	30(300)
30	1 1/4	37	38	50	48	65	63	100	100	133	133	3	4-19	4-19	51	46	35(350)	30(300)
40	1 1/2	43	46	54	54	69	69	105	105	138	138	3	4-19	4-19	57	50	35(350)	30(300)
50	2	54	58	68	68	83	83	120	120	153	153	3	4-19	4-19	63	55	35(350)	30(300)
65	2 1/2	69	73	86	86	101	101	140	140	173	173	3	4-19	4-19	84	75	52(520)	45(450)
80	3	80	84	98	98	113	113	150	150	183	183	3	8-19	8-19	88	77	52(520)	45(450)
100	4	102	106	120	120	138	138	175	175	208	208	3	8-19	8-19	105	95	52(520)	45(450)
125	5	127	131	145	145	168	168	210	210	248	248	3	8-23	8-23	130	115	63(630)	55(550)
150	6	150	155	168	170	190	196	240	240	278	278	3	8-23	8-23	160	145	63(630)	55(550)
200	8	198	204	216	218	248	248	290	290	328	328	3	12-23	12-23	200	185	63(630)	55(550)
250	10	250	254	270	270	306	306	355	355	398	398	3	12-25	12-25	290	250	75(750)	65(650)
300	14	300	—	324	—	356	—	400	—	443	—	3	12-25	—	340	—	75(750)	65(650)

## ● TRIGURD PTEE



- Excellent sealing performance with low tightening torque
- Excellent solvent and chemical resistance
- Wide range of working temperature -240°C~+315°C
- High purity PTFE material
- Accordance with the standards of Food Sanitation Law
- Available for not only plastic piping but plastic lining steel pipe and stainless-steel pipe

### JIS10K Type

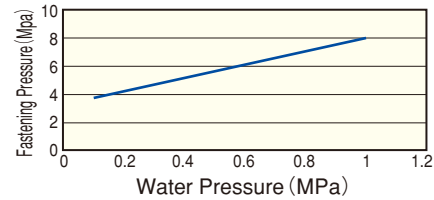
Size	D1	D2	C	D3	H	W	$\theta$	n- $\phi$ h	Recommended Fasten Torque
15	18	58	70	95	10	20	25°	2X15	14 {150}
20	22	63	75	100	10	20	23°	2X15	14 {150}
25	28	74	90	125	10	20	27°	2X19	29 {300}
30	37	84	100	135	10	20	24°	2X19	29 {300}
40	43	89	105	140	10	20	23°	2X19	29 {300}
※50	54	104	120	155	10	20	20°	2X19	29 {300}
65	69	124	140	175	10	20	17°	2X19	44 {450}
80	80	134	150	185	10	20	16°	2X19	44 {450}
100	102	159	175	210	10	20	14°	2X19	44 {450}
※125	127	190	210	250	10	20	13°	2X23	54 {550}
150	150	220	240	280	10	20	12°	2X23	54 {550}
※200	198	270	290	330	10	20	10°	2X23	54 {550}

### JPI 150 Type

Size	D1	D2	C	D3	H	W	$\theta$	n- $\phi$ h	Recommended Fasten Torque
50	61	104	120.6	152	10	20	20°	2X20	29 {300}
125	143	196	215.9	254	10	20	13°	2X23	54 {550}
200	220	277	298.4	343	10	20	10°	2X23	54 {550}

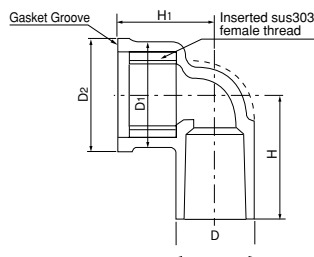
Trigard for 50,125 and 200A should be selected JPI 150 type.

### ■ Performance



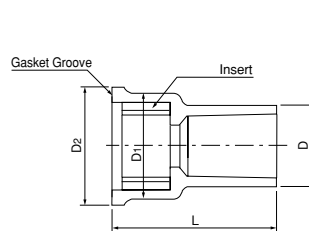
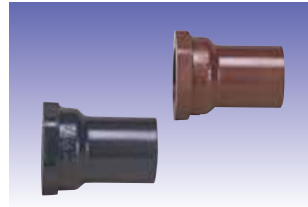
## SUS INSERT FITTINGS

① Insert Faucet Elbow (PVC, HT)



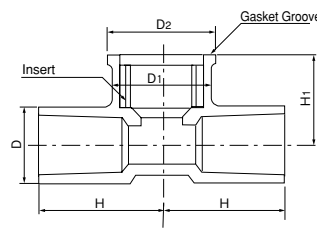
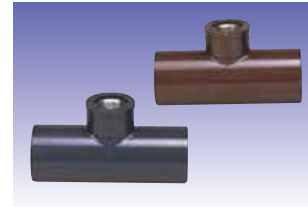
Size	D	D1	D2	H	H1
13AXRp3/8	28	34	35	32	29
13AXRp1/2	28	34	35	32	29
16AXRp3/8	31	34	35	38	32
16AXRp1/2	31	34	35	38	32
20AXRp1/2	36	42	44	51	36
25AXRp1	42	52	54	59	40

② Insert Faucet Socket (PVC, HT)



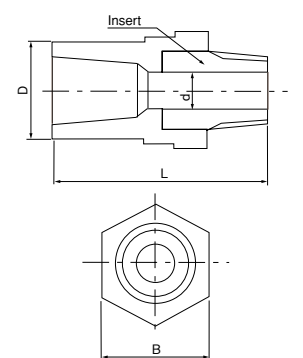
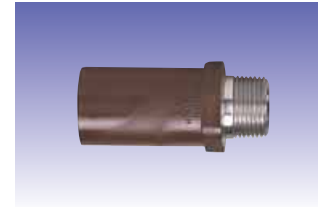
Size	D	D1	D2	L
13AXRp3/8	28	34	35	45
13AXRp1/2	28	34	35	45
16AXRp3/8	31	34	35	50
16AXRp1/2	31	34	35	50
20AXRp1/2	36	42	44	63
20AXRp3/4	36	42	44	63
25AXRp1	42	52	54	63

③ Insert Faucet Tee (PVC, HT)



Size	D	D1	D2	H	H1
13AXRp3/8	28	34	35	32	29
13AXRp1/2	28	34	35	32	29
16AXRp3/8	29	33	34	42	32
16AXRp1/2	29	33	34	42	32
20AXRp3/8	33	33	34	47	34
20AXRp1/2	33	33	34	47	34
25AXRp3/8	40	33	34	52	38
25AXRp1/2	40	33	34	52	38

④ Insert Valve Socket (HT)



Size	D	d	L	B
13AXR1/2	28	13	64	34
16AXR1/2	31	13	70	34
20AXR3/4	36	18	85	40
25AXR1	42	28	99	45
30AXR1 1/4	48	31	109	62
40AXR1 1/2	58	37	114	68
50AXR2	70	48	132	84

## ESLON TRUE UNION FITTING

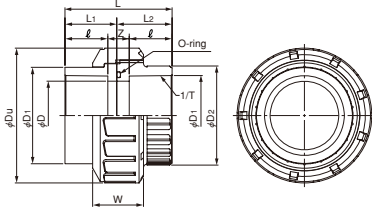
### ● COMPACT TYPE (TS SOCKET, PVDF TRANSITION FITTING)

- Compact body and union nut offer minimized space for piping
- Excellent sealing performance
- Easy tightening by hand with trapezoidal thread

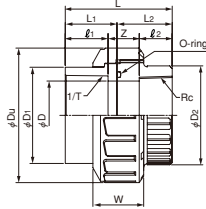
Note: Union parts are not compatible in compact type and true union ball valve compatible type.



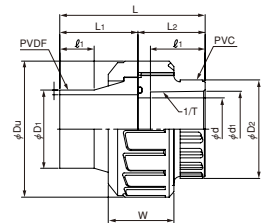
● TS Socket Type



● Thread Transition



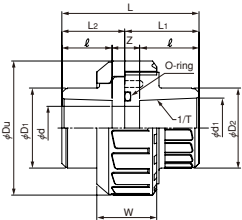
● PVDF Transition



Material : PVC, HT(C-PVC)

Size		TS Socket					Thread					Butt					Unit:mm									
A	B	d <sub>1</sub>	1/T	Z	ℓ	L <sub>1</sub>	L	Rc	Z	ℓ <sub>2</sub>	L	D <sub>1</sub>	t	Z	ℓ <sub>1</sub>	L <sub>1</sub>	L	L <sub>2</sub>	d	Du	D <sub>1</sub>	D <sub>2</sub>	W	O-ring		
13	3/8	18.3	1/30	6	18	20	42±1.5	3/8	9	15	42±1.5	—	—	—	—	—	—	22	13	40	24	26	17	P-16		
16	1/2	22.3	1/37	8	22	25	52±1.5	1/2	15	15	52±1.5	20	1.9	8	31	50	77±1.5	27	15	46	30	32	20	P-20		
20	3/4	26.3	1/42	9	25	28	59±1.5	3/4	18	16	59±1.5	25	1.9	9	31	50	81±1.5	31	20	54	35	37	23	P-24		
25	1	32.33	1/44	9	29	32	67±1.5	1	13	25	67±1.5	32	2.4	9	26	50	85±1.5	35	25	67	43	45	28	P-30		
30	1 1/4	38.43	1/37	12	32	36	76±1.5	1 1/4	11	33	76±1.5	40	2.4	12	22	50	90±1.5	40	31	78	53	55	31	P-36		
40	1 1/2	48.46	1/38	12	35	39	82±1.5	1 1/2	18.5	28.5	82±1.5	50	3.0	12	22	50	93±1.5	43	40	87	61	63	42	P-46		
50	2	60.56	1/34	16	38	43	92±1.5	2	21	33	92±1.5	63	3.0	16	22	50	99±1.5	49	51	107	76	78	43	P-58		
65	2 1/2	76.6	1/38	18	45	52	108±1.5	2 1/2	31	32	108±1.5	—	—	—	—	—	—	56	65	128	90	93	50	P-71		
75	3	89.6	1/40	24	48	58	120±1.5	3	35	37	120±1.5	—	—	—	—	—	—	62	77	151	108	111	57	P-85		
100	4	114.7	1/42	36	58	72	152±1.5	4	49	45	152±1.5	—	—	—	—	—	—	80	100	185	132	136	72	P-112		

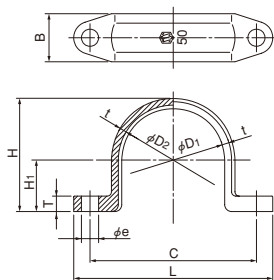
### ● TRUE UNION BALL VALVE COMPATIBLE TYPE



Material : PVC, HT(C-PVC)

Size		TS Socket			Unit:mm									
A	B	d <sub>1</sub>	1/T	ℓ	L	L <sub>1</sub>	L <sub>2</sub>	Z	d	Du	D <sub>1</sub>	D <sub>2</sub>	W	O-ring
16	1/2	22.3	1/37	22	59±1.5	29	30	13	16	49	33	31	24	P-20
20	3/4	26.3	1/42	25	68±1.5	35	33	16	20	59	35	36	26	P-24
25	1	32.3	1/43	29	78±1.5	36	42	20	25	67	44	44	31	P-30
30	1 1/4	38.4	1/37	32	90±1.5	44.5	45.5	26	30	81	54	54	31	P-36
40	1 1/2	48.5	1/38	35	94±1.5	42	52	24	40	98	65	67	40	P-48A
50	2	60.6	1/34	38	110±1.5	48	61	34	50	120	77	79	43	P-58

## ESLON SADDLE BAND



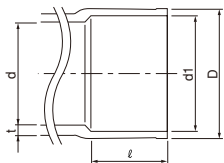
Size	φD <sub>1</sub>	φD <sub>2</sub>	t	C	L	φe	T	H <sub>1</sub>	H	B	Bolt
16	22	24	3	42	53	6	5	11	26	15	M5
20	26	29	3	48	59	6	5	13	30.5	18	M5
25	32	35	3	54	65	6	6	16	36.5	18	M5
28	34	37	3	59	73	7	7	17	38.5	20	M6
30	38	41	4	66	80	7	7	19	43.5	20	M6
40	48	52	4	90	109	10	9	24	54	25	M8
50	60	64	4	97	116	10	9	30	66	28	M8
65	76	81	4	114	134	10	10	38	82.5	30	M8
75	89	94	4	134	158	12	11	44.5	95.5	38	M10
100	114	120	4.5	160	186	12	12	57	121.5	42	M10
125	140	150	5	192	218	12	12	70	150	46	M10
150	165	177	8	238	268	17	14	82.5	179	50	M14
200	216	236	10	316	356	18	20	108	236	70	M16

# ESLON LARGE DIAMETER FITTINGS



- Applications; Industrial & process piping, pressure & sewage treatment, Irrigation etc
- Available 13A through 300A with PVC, HI-PVC or HT(C-PVC) Solvent socket fittings
- 0.6MPa Maximum working pressure rating at 20°C, 1.0MPa Maximum working pressure rating at 20°C (fiber reinforced fitting)
- Excellent chemical and corrosion resistance
- Lower installation cost

## Common Taper Socket Dimension



● 200A~300A Unit:mm

Size	D	t	d1	ℓ	d
200A	243	13.0	217.4±0.7	145	196
250A	300	14.5	268.6±0.7	175	242
300A	356	16.0	319.8±0.8	185	288

● 異径部 Unit:mm

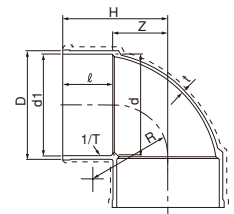
Size	D	d1	ℓ	d
100A	134	114.7±0.3	84	102
150A	189	166.0±0.4	132	146

## 90° Elbow

※Max. Working Pressure : 0.4MPa for 90° Elbow only



Dashed Shape for Fiber Reinforced 1.0MPa fitting

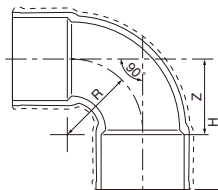


Unit:mm

Size	D	H	Z	ℓ	d1	d	1/T	R	t
200A	238	240	115	125	217.5±0.7	215	1/43	190	10.5
250A	289	280	140	140	268.1±0.8	265	1/50	235	10.5
300A	341	325	170	155	319.0±1.0	316	1/52	240	10.5

## 90° Bend

Dashed Shape for Fiber Reinforced 1.0MPa fitting

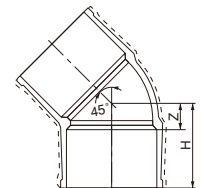


Unit:mm

Size	H	Z	R
200A	341	196	196
250A	428	253	242
300A	441	256	242

## 45° Elbow

Dashed Shape for Fiber Reinforced 1.0MPa fitting



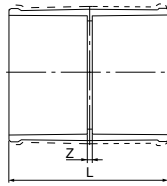
Unit:mm

Size	H	Z
200A	205	60
250A	254	79
300A	280	95



## Coupling

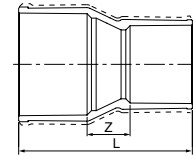
Dashed Shape for Fiber Reinforced 1.0MPa fitting



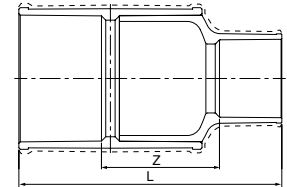
Unit:mm		
Size	Z	L
200A	10	300
250A	34	384
300A	38	408

## Reducing Coupling

Dashed Shape for Fiber Reinforced 1.0MPa fitting



Unit:mm		
Size	L	Z
200A×150A	368	91
※250A×150A	557	250
250A×200A	400	80
※300A×150A	605	288
※300A×200A	601	271
300A×250A	435	75

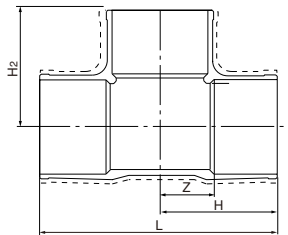


● With Bushing

With Bushing

## Tee

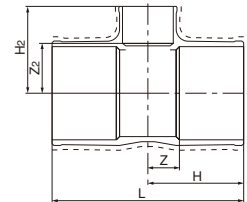
Dashed Shape for Fiber Reinforced 1.0MPa fitting



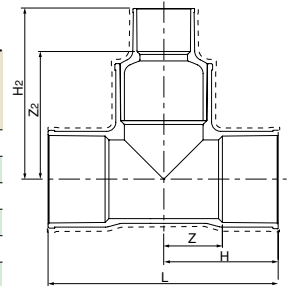
Unit:mm				
Size	H	H <sub>2</sub>	L	Z
200A	267	267	533	122
250A	355	355	710	180
300A	410	375	820	225

## Reducing Tee

Dashed Shape for Fiber Reinforced 1.0MPa fitting



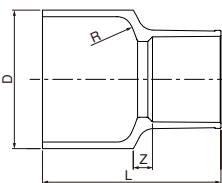
Unit:mm					
Size	H	Z	L	H <sub>2</sub>	Z <sub>2</sub>
200A×100A	218	73	436	200	116
200A×150A	245	100	490	257	125
※250A×150A	355	180	710	524	392
250A×200A	335	160	670	335	190
※300A×150A	375	190	750	561	429
※300A×200A	410	225	820	599	454
300A×250A	375	190	750	392	217



● With Bushing

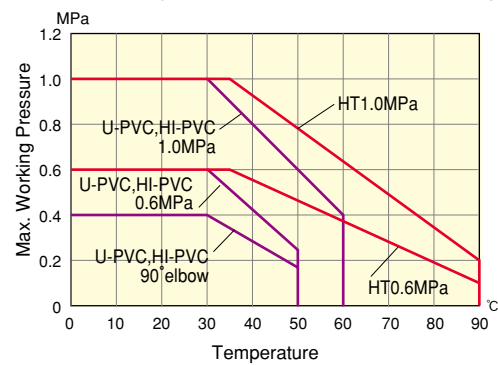
With Bushing

## Bushing



Unit:mm				
Size	L	Z	R	D
250A×150A	344	37	242	267.0±0.9
300A×200A	374	44	288	318.0±1.0

## Max. Working Pressure at Actual Usable Temp.



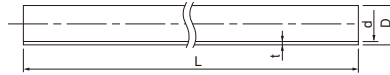
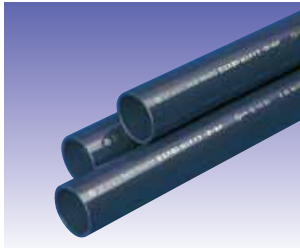
### Maximum Working Pressure

- 0.6MPa at 20°C except 0.4MPa for 90° Elbow
- 1.0MPa at 20°C for Fiber Reinforced fitting

# PIPES AND FITTINGS

## ESLON U-PVC PIPE

### ● U-PVC PIPE FOR PORTABLE WATER (ESLON VP & HI-GOLD)

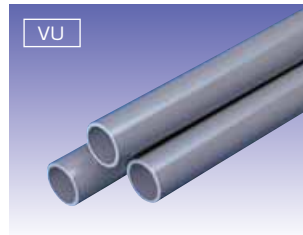
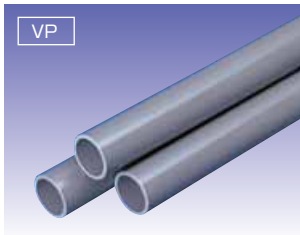


- Excellent chemical and corrosion resistance
- Durable flow performance because of no attachment of scale or rust on smooth inner surface
- Eslon HI Gold pipe has more than 2 times of impact strength compared to normal PVC type

Unit:mm

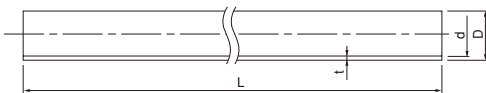
Size	D	Tolerance		t	d	L	Weight (kg/m)		Standard			
		Max/min	Average				HI-VPW-G	VPW	JIS	JWWA	SEKISUI	
13	18.0	±0.20	±0.2	2.5±0.20	13.0	4000 <sup>+30</sup> / <sub>-10</sub>	—	0.170	0.174	HI / VP	—	—
16	22.0	±0.20	±0.2	3.0±0.30	16.0	4000 <sup>+30</sup> / <sub>-10</sub>	—	0.251	0.256	HI	VP	—
20	26.0	±0.20	±0.2	3.0±0.30	20.0	4000 <sup>+30</sup> / <sub>-10</sub>	—	0.303	0.310	HI / VP	—	—
25	32.0	±0.20	±0.2	3.5±0.30	25.0	4000 <sup>+30</sup> / <sub>-10</sub>	—	0.439	0.448	HI / VP	—	—
30	38.0	±0.30	±0.2	3.5±0.30	31.0	4000 <sup>+30</sup> / <sub>-10</sub>	—	0.531	0.542	HI / VP	—	—
40	48.0	±0.30	±0.2	4.0±0.30	40.0	4000 <sup>+30</sup> / <sub>-10</sub>	5000 <sup>+30</sup> / <sub>-10</sub>	0.774	0.791	HI / VP	—	—
50	60.0	±0.40	±0.2	4.5±0.40	51.0	4000 <sup>+30</sup> / <sub>-10</sub>	5000 <sup>+30</sup> / <sub>-10</sub>	1.098	1.122	HI / VP	—	—
65	76.0	±0.50	±0.2	4.5±0.40	67.0	4000 <sup>+30</sup> / <sub>-10</sub>	(5000) <sup>+30</sup> / <sub>-10</sub>	1.415	1.445	—	HI / VP	—
75	89.0	±0.50	±0.2	5.9±0.40	77.2	(4000) <sup>+30</sup> / <sub>-10</sub>	5000 <sup>+30</sup> / <sub>-10</sub>	2.156	2.202	HI / VP	—	—
100	114.0	±0.60	±0.2	7.1±0.50	99.8	(4000) <sup>+30</sup> / <sub>-10</sub>	5000 <sup>+30</sup> / <sub>-10</sub>	3.338	3.409	HI / VP	—	—
125	140.0	±0.80	±0.5	7.5±0.50	125.0	4000 <sup>+30</sup> / <sub>-10</sub>	(5000) <sup>+30</sup> / <sub>-10</sub>	4.370	4.464	—	HI / VP	—
150	165.0	±1.00	±0.3	9.6±0.60	145.8	(4000) <sup>+30</sup> / <sub>-10</sub>	5000 <sup>+30</sup> / <sub>-10</sub>	6.561	6.701	HI	—	—
200	216.0	±1.30	±0.7	11.5±0.70	193.0	4000 <sup>+30</sup> / <sub>-10</sub>	(5000) <sup>+30</sup> / <sub>-10</sub>	10.338	10.129	—	—	HI / VP
250	267.0	±1.60	±0.9	14.2±0.90	238.6	4000 <sup>+30</sup> / <sub>-10</sub>	(5000) <sup>+30</sup> / <sub>-10</sub>	15.781	15.481	—	—	HI / VP
300	318.0	±1.90	±1.0	17.0±1.10	284.0	4000 <sup>+30</sup> / <sub>-10</sub>	(5000) <sup>+30</sup> / <sub>-10</sub>	22.494	21.962	—	—	HI / VP

### ● U-PVC PIPE (ESLON VP, VU) JIS K 6741



- Excellent chemical and corrosion resistance
- Durable flow performance because of no attachment of scale or rust on smooth inner surface

Unit:mm



Size	D Tolerance	t		d		L	Weight (kg/m)	
		VP	VU	VP	VU		VP	VU
40	48±0.2	3.6+0.8	1.8+0.4	40	44	4,000±10	0.791	0.413
50	60±0.2	4.1+0.8	1.8+0.4	51	56	4,000±10	1.122	0.521
65	76±0.3	4.1+0.8	2.2+0.6	67	71	4,000±10	1.445	0.825
75	89±0.3	5.5+0.8	2.7+0.6	77	83	4,000±10	2.202	1.159
100	114±0.4	6.6+1.0	3.1+0.8	100	107	4,000±10	3.409	1.737
125	140±0.5	7.0+1.0	4.1+0.8	125	131	4,000±10	4.464	2.739
150	165±0.5	8.9+1.4	5.1+0.8	146	154	4,000±10	6.701	3.941
200	216±0.7	10.3+1.4	6.5+1.0	194	202	4,000±10	10.129	6.572
250	267±0.9	12.7+1.8	7.8+1.2	240	250	4,000±10	15.481	9.758
300	318±1.0	15.1+2.2	9.2+1.4	286	298	4,000±10	21.962	13.701
350	370±1.2	—	10.5+1.4	—	348	4,000±10	—	18.051
400	420±1.3	—	11.8+1.6	—	395	4,000±10	—	23.059
450	470±1.5	—	13.2+1.8	—	442	4,000±10	—	28.875
500	520±1.6	—	14.6+2.0	—	489	4,000±10	—	35.346
600	630±3.2	—	17.8+2.8	—	592	4,000±10	—	52.679

## U-PVC TS FITTINGS / HITS FITTINGS-GOLD (JIS K 6743)

### Product List Fitting

Product Size	Socket (TSS)	Tee (TST)	Elbow (TSL)	Valve Socket	45° Elbow	True Union Socket	Cap	Simple Joint	Faucet Socket (TSSL)	Faucet Socket (TSSS)	Faucet Tee (TSST)
13	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / -	TS / HITS	TS / HITS	TS / HITS
16	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / -	TS / HITS	TS / HITS	-
20	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / -	TS / HITS	TS / HITS	TS / HITS
25	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / -	TS / HITS	TS / HITS	TS / HITS
30	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / -	-	-	-
40	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / -	-	-	-
50	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / -	-	-	-
65	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	-	-	-	-	-	-
75	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	-	TS / HITS	-	-	-	-
100	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	-	TS / HITS	-	-	-	-
125	TS / HITS	TS / HITS	TS / HITS	-	TS / HITS	-	-	-	-	-	-
150	TS / HITS	TS / HITS	TS / HITS	-	TS / HITS	-	TS / -	-	-	-	-

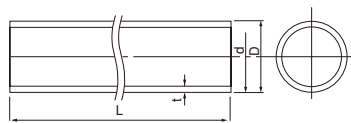
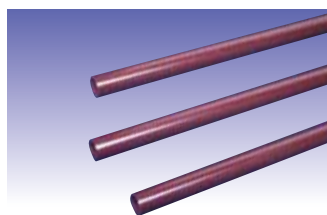
### Reducing Elbow

Product Size	Socket (TSS)	Tee (TST)	Elbow (TSL)	Faucet Tee (TSST)	Product Size	Socket (TSS)	Tee (TST)	Product Size	Socket (TSS)	Tee (TST)
16×13	TS / HITS	TS / HITS	-	TS / -	40×13	-	TS / HITS	65× 50	TS / HITS	TS / HITS
20×13	TS / HITS	TS / HITS	TS / HITS	TS / HITS	40×16	-	TS / HITS	75× 25	-	TS / HITS
20×16	TS / HITS	TS / HITS	-	-	40×20	TS / HITS	TS / HITS	75× 40	-	TS / HITS
25×13	TS / HITS	TS / HITS	TS / HITS	-	40×25	TS / HITS	TS / HITS	75× 50	TS / HITS	TS / HITS
25×16	TS / HITS	TS / HITS	-	-	40×30	TS / HITS	TS / HITS	75× 65	TS / HITS	TS / HITS
25×20	TS / HITS	TS / HITS	TS / HITS	-	50×13	-	TS / HITS	100× 50	-	TS / HITS
30×13	TS / HITS	TS / HITS	-	-	50×16	-	TS / HITS	100× 75	TS / HITS	TS / HITS
30×16	TS / HITS	TS / HITS	-	-	50×20	-	TS / HITS	125×100	TS / HITS	TS / HITS
30×20	-	TS / HITS	-	-	50×25	TS / HITS	TS / HITS	150× 75	-	TS / HITS
30×25	TS / HITS	TS / HITS	-	-	50×30	TS / HITS	TS / HITS	150×100	TS / HITS	TS / HITS
					50×40	TS / HITS	TS / HITS	150×125	TS / HITS	TS / HITS

### Insert Faucet Fitting JIS K 6743

Product Size	Insert Faucet Elbow (S)	Faucet Elbow with Insert Seat	Insert Faucet Elbow (L)	Insert Faucet Socket	Insert Faucet Tee	Insert male/ female Elbow	Insert Valve Socket
13	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	-	TS / HITS
16	TS / HITS	-	-	TS / HITS	-	-	TS / HITS
20	TS / HITS	-	-	TS / HITS	TS / HITS	- / HITS	TS / HITS
25	TS / HITS	-	-	TS / HITS	TS / HITS	-	TS / HITS
30	-	-	-	-	-	-	TS / HITS
40	-	-	-	-	-	-	TS / HITS
50	-	-	-	-	-	-	TS / HITS
16×13	-	-	TS / HITS	-	TS / HITS	-	-
20×13	TS / HITS	TS / HITS	TS / HITS	TS / HITS	TS / HITS	-	-
25×13	-	-	-	-	TS / HITS	-	-
25×20	-	-	-	-	TS / -	-	-

## ESLON CPVC PIPE (ESLON HT) (JIS K 6776)



- For high temperature application
- High durability and thermal insulation

Unit:mm

Size	D	Tolerance		t	d	L	Weight (kg/m)	Standard	
		Max/min	Average					JIS	SEKISUI
13	18.0	±0.20	±0.20	2.5 ±0.20	13.0	4000±10	0.180	○	—
16	22.0	±0.20	±0.20	3.0 ±0.30	16.0		0.265	○	—
20	26.0	±0.20	±0.20	3.0 ±0.30	20.0		0.321	○	—
25	32.0	±0.20	±0.20	3.5 ±0.30	25.0		0.464	○	—
30	38.0	±0.30	±0.20	3.5 ±0.30	31.0		0.561	○	—
40	48.0	±0.40	±0.20	4.0 ±0.30	40.0		0.818	○	—
50	60.0	±0.40	±0.20	4.5 ±0.40	51.0		1.161	○	—
65	76.0	±0.40	±0.20	5.0 ±0.50	66.0		1.651	—	○
75	89.0	±0.40	±0.25	5.8 ±0.50	77.4		2.244	—	○
100	114.0	±0.50	±0.25	7.0 ±0.60	100.0		3.483	—	○
125	140.0	±0.60	±0.40	8.2 ±0.60	123.6		5.025	—	○
150	165.0	±0.80	±0.45	9.7 ±0.70	145.6		7.004	—	○
200	216.0	±1.30	±0.70	11.0 <sup>+1.30</sup> <sub>-0.70</sub>	194.0		10.484	—	○

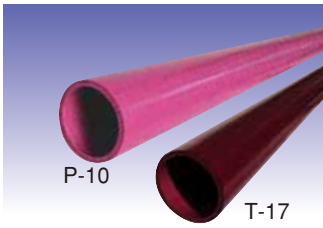
### Product List Fitting (JIS K 6777)

Product Size	Socket	Reducing Elbow	90° Elbow	45° Elbow	Tee	Reducing Tee	Cap	11 1/4° Bend	22 1/2° Bend	45° Bend	90° Bend	Expansion Joint
13	○	—	○	○	○	—	○	○	○	○	○	○
16	○	○	○	○	○	○	○	○	○	○	○	○
20	○	○	○	○	○	○	○	○	○	○	○	○
25	○	○	○	○	○	○	○	○	○	○	○	○
30	○	○	○	○	○	○	○	○	○	○	○	○
40	○	○	○	○	○	○	○	○	○	○	○	○
50	○	○	○	○	○	○	○	○	○	○	○	○
65	○	○	○	○	○	○	—	○	○	○	○	○
75	○	○	○	○	○	○	—	○	○	○	○	○
100	○	○	○	○	○	○	—	○	○	○	○	○
125	○	○	○	○	○	○	—	○	○	○	○	—
150	○	○	○	○	○	○	—	○	○	○	○	—

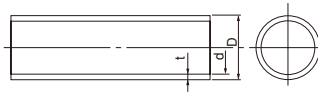
### Product List Insert Fitting

Product Size	Insert Faucet Socket	Insert Faucet Elbow	Insert Faucet Long Elbow	Insert Faucet Tee	Insert Valve Socket
13	○	○	○	○	○
16	○	○	—	—	○
20	○	○	—	—	○
20×13	○	○	—	—	—
25	○	○	—	—	○
30	—	—	—	—	○
40	—	—	—	—	○
50	—	—	—	—	○

# ESLON CPVC PIPE FOR INDUSTRIAL APPLICATIONS



Specialized two types of HT pipe for industrial applications



- Excellent chemical and corrosion resistance
- **Type T-17** : for Acid and Low salinity chlorine water plant applications
- **Type P-10** : for sodium hydroxide plant application
- Sch80 dimension offers excellent ESCR resistance
  - 30 - 50% decreasing in stress by support implements of piping
  - 20 - 25% decreasing in stress by inner pressure

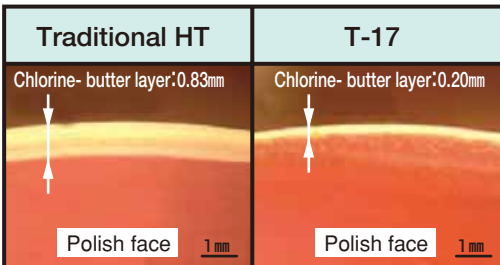
Unit:mm

Size	D	Tolerance		t	d	L	Weight (kg/m)
		Max/Min	Average				
20	26	±0.20	±0.10	3.9+0.5	17.0	4000±10	0.379
25	32	±0.20	±0.10	4.5+0.6	22.0		0.617
30	38	±0.20	±0.10	4.9+0.6	27.0		0.793
40	48	±0.20	±0.10	5.1+0.6	37.0		1.070
50	60	±0.25	±0.15	5.5+0.8	47.0		1.484
65	76	±0.30	±0.20	7.0+1.0	60.0		2.389
75	89	±0.35	±0.25	7.6+1.0	72.0		3.047
100	114	±0.40	±0.25	8.6+1.2	94.0		4.483
125	140	±0.50	±0.40	9.5+1.2	119.0		6.100
150	165	±0.60	±0.45	11.0+1.4	140.0		8.339
200	216	±1.30	±0.70	12.7+2.0	187.0		12.623
250	267	±1.60	±0.90	15.1+1.8	233.0		17.408
300	318	±1.90	±1.00	17.5+2.2	279.0		24.336

## Chemical Resistance

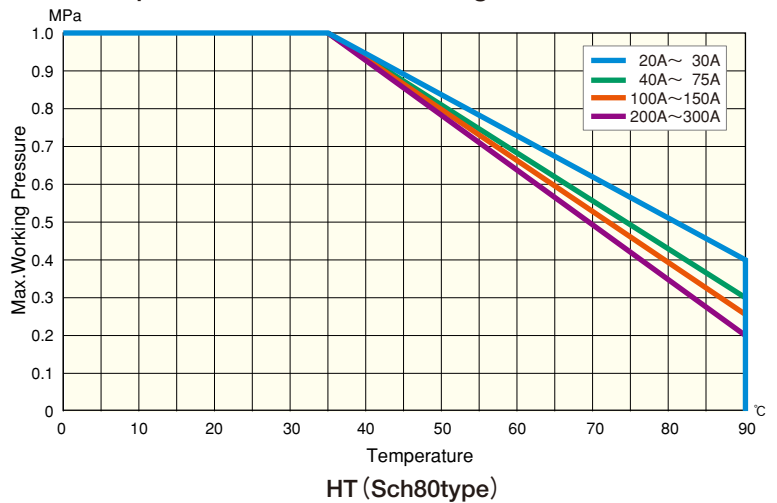
### Low salinity water resistance test for type T-17

Low chemical penetration into pipe wall and retard to grow chlorine- butter layer compared with ordinary HT pipe



< Test condition > In saturated saline water (NaCl 20wt%) with 0.2MPa at 85°C for 8 weeks

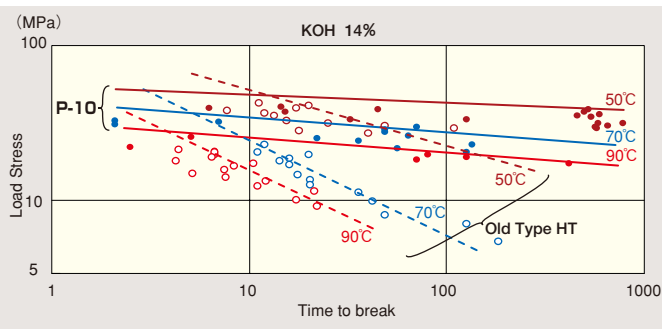
## Temperature Pressure De-Rating



## ESLON CPVC PIPE for Chemical Industrial Field

### ●ESCR test in KOH

P-10 has an excellent sodium hydroxide-resistance. Pipe under lower stress condition performs better durability.



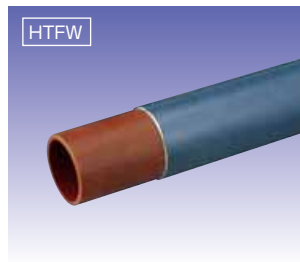
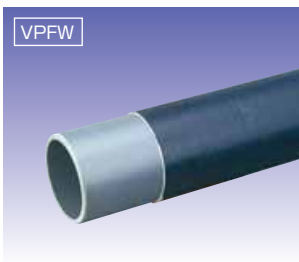
< Test method > Time at failure with constant load in KOH 14% by Launder Stress Cracking Tester

### ●Erosion test in soda electrolysis plant

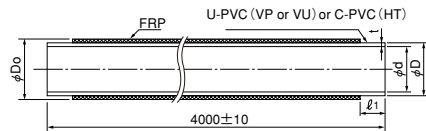
The bleached wall thickness by soda is small and mechanical properties are almost same as before the erosion test.

	Sample1	Sample2	Reference
Size	40A	50A	No erosion
Chemical	NaOH 35%	NaOH 35%	
Temperature	85°C	85°C	
Pressure	Non Pressure	Non Pressure	
Period	1Year	1Year	
Tensile Strength	45MPa	48MPa	45~50MPa
Elongation at break point	98%	117%	80~190%
Whitening depth	0.1mm	0.1mm	—
Sample photograph			

# ESLON VPFW·HTFW (FRP REINFORCED U-PVC PIPE)



- High pressure & high temperature resistance
- Excellent corrosion resistance
- Easy handling and installation



## VPFW H type: 90°C×5K

Unit:mm

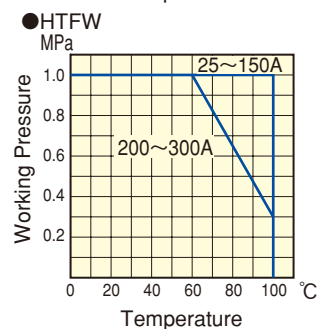
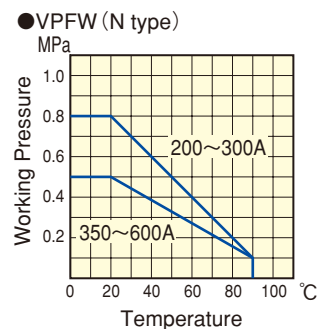
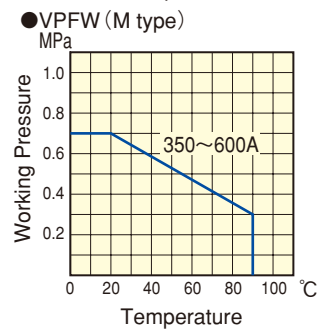
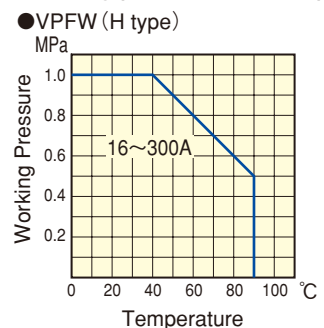
Size	D	t	l <sub>1</sub>	Do	d	Weight (kg/m)
16	22±0.2	3.0	40	24	16	0.37
20	26±0.2	3.0	45	28	20	0.44
25	32±0.2	3.5	50	34	25	0.61
30	38±0.2	3.5	55	40	31	0.73
40	48±0.2	4.0	65	50	40	1.03
50	60±0.25	4.5	75	63	51	1.45
65	76±0.3	4.5	75	78	67	1.90
75	89±0.3	5.9	80	91	77	2.78
100	114±0.4	7.1	100	117	100	4.31
125	140±0.5	7.5	120	143	125	5.63
150	165±0.6	9.6	150	168	146	8.14
200	216±0.7	11.0	175	221	194	13.0
250	267±0.9	13.6	205	272	240	19.5
300	318±1.0	16.2	205	324	286	27.2

## HTFW 100°C×3K

Unit:mm

Size	D	t	l <sub>1</sub>	Do	d	Weight (kg/m)
25	32±0.2	3.5	50	34	25	0.62
30	38±0.2	3.5	55	40	31	0.74
40	48±0.2	4.0	60	50	40	1.05
50	60±0.25	4.5	75	63	51	1.48
65	76±0.3	5.0	80	78	67	2.09
75	89±0.3	5.8	90	91	77	2.79
100	114±0.4	7.0	110	117	100	4.33
125	140±0.5	8.2	130	143	125	6.12
150	165±0.6	9.7	155	168	146	8.35
200	216±0.8	11.0	175	219	194	11.70
250	267±1.0	13.6	205	270	240	17.60
300	318±1.1	16.2	205	321	286	24.40

## Working pressure and Temp



## VPFW M type: 90°C×3K

Unit:mm

Size	D	t	l <sub>1</sub>	Do	d	Weight (kg/m)
350	370±1.2	11.2	270	374	348	22.9
400	420±1.3	12.6	320	425	395	29.5
450	470±1.5	14.1	370	475	442	36.5
500	520±1.6	15.6	370	527	489	45.9
600	630±3.2	19.2	420	637	592	65.1

## Fittings For 16~150A

Product	Nominal Diameter A
Socket	16~150
Reducing Socket	20×16~150×100
Reducing Socket	25×20~150×100
Tee	16~150
Reducing Tee	20×16~150×65
90° Elbow	16~150
45° Elbow	16~150
Flange	16~150

## VPFW N type: 90°C×1K

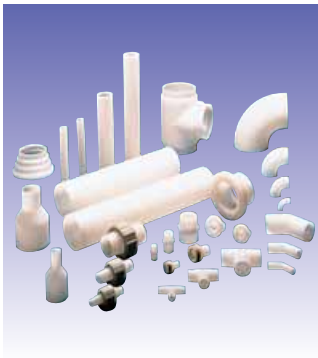
Unit:mm

Size	D	t	l <sub>1</sub>	Do	d	Weight (kg/m)
200	216±0.7	11.0	175	219	194	11.5
250	267±0.9	13.6	205	270	240	17.2
300	318±1.0	16.2	205	321	286	23.9
350	370±1.2	11.2	270	373	348	20.3
400	420±1.3	12.6	320	423	395	25.5
450	470±1.5	14.1	370	473	442	31.5
500	520±1.6	15.6	370	523	489	38.3
600	630±3.2	19.2	420	633	592	56.1

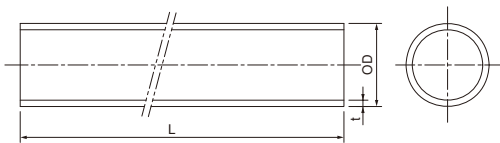
## Fittings For 200~600A

Product	Nominal Diameter A
Socket	200~600
Reducing Socket	200×75~600×350
Reducing Socket	200×75~600×350
Tee	200~600
Reducing Tee	200×75~600×350
90° Elbow	200~600
45° Elbow	200~600
Flange	200~600

## ESLON PVDF



- Excellent chemical resistance in high temperature
- Excellent UV & gamma ray resistance
- Excellent abrasion resistance, mechanical properties, and electrical isolation



### PIPE

Unit:mm

Size A	OD	t	L
15	20	1.9	5000
20	25	1.9	5000
25	32	2.4	5000
32	40	2.4	5000
40	50	3.0	5000
50	63	3.0	5000
65	75	3.6	5000
80	90	4.3	5000
100	110	5.3	5000
125	140	4.3	5000
150	160	4.9	5000
200	225	6.9	5000

### Product List Fitting

Size [A]	OD [mm]	90° Bend	45° Elbow	Tee	Cap
15	20	○	○	○	○
20	25	○	○	○	○
25	32	○	○	○	○
32	40	○	○	○	○
40	50	○	○	○	○
50	63	○	○	○	○
65	75	○	—	○	○
80	90	○	○	○	○
100	110	○	○	○	○
125	140	○	○	○	—
150	160	○	○	○	—

### Product List Reducing Fitting

Size [A]	OD [mm]	Tee	Reducer	Size [A]	OD [mm]	Tee	Reducer
20×15	25×20	—	○	50×40	63×50	—	○
25×15	32×20	—	○	65×40	75×50	—	○
25×20	32×25	—	○	65×50	75×63	—	○
30×15	40×20	—	○	80×50	90×63	○	○
30×20	40×25	—	○	80×65	90×75	—	○
30×25	40×32	—	○	100×50	110×63	○	○
40×15	50×20	—	○	100×80	110×90	○	○
40×20	50×25	—	○	125×100	140×110	—	—
40×25	50×32	—	○	150×50	160×63	○	—
40×32	50×40	—	○	150×80	160×90	○	—
50×25	63×32	○	○	150×100	160×110	○	○
50×32	63×40	—	○	150×125	—	—	○

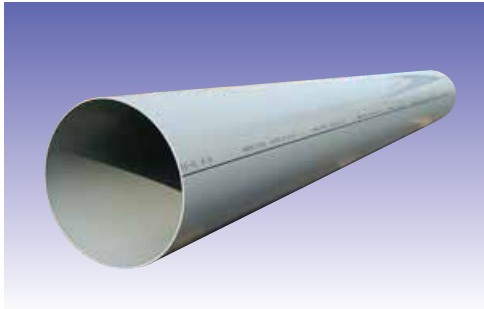
### Product List Others

Size [A]	OD [mm]	Stab Flange	Backing Ring PP+SS	Union FPM
15	20	○	○	○
20	25	○	○	○
25	32	○	○	○
32	40	○	○	○
40	50	○	○	○
50	63	○	○	○
65	75	○	○	—
80	90	○	○	—
100	110	○	○	—
125	140	○	○	—
150	160	○	○	—

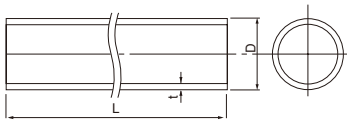
Size [A]	OD [mm]	Female Adapter	Male Adapter
15×1/2	20	○	○
20×3/4	25	○	○
25×1	32	○	○
32×1 1/4	40	○	○
40×1 1/2	50	○	○
50×2	63	○	○

## ESLON DUCT PIPES

### ● Duct Pipes



- ⦿ Available ventilation application
- ⦿ Excellent chemical resistance
- ⦿ Excellent physical properties like impact, bending and tensile strength
- ⦿ Self extinguishing and excellent flame retardant
- ⦿ Light weight and easy installation



### ■ Dimension Table

#### E-Type

Unit:mm

Size	D	Tolerance	t	L	Weight (kg/pc)
E150	165	±0.8	2.5	4,000	7.3
E200	216	±1.8	2.5	4,000	9.7
E250	267	±2.6	3.0	4,000	14.4
E300	318	±3.0	3.0	4,000	17.2
E350	370	±3.0	3.5	4,000	23.0
E400	420	±3.5	4.0	4,000	30.0
E450	470	±3.5	4.5	3,000	28.6
E450	470	±3.5	4.5	4,000	38.2
E500	520	±3.5	5.0	3,000	35.2
E500	520	±3.5	5.0	4,000	46.9
E600	612	±3.5	6.0	2,000	33.1

#### ET-Type

Unit:mm

Size	D	Tolerance	t	L	Weight (kg/pc)
ET250	267	±2.6	5.0	4,000	25.2
ET300	318	±3.0	5.0	4,000	30.5
ET350	370	±3.0	5.0	4,000	35.5
ET400	420	±3.5	5.0	4,000	40.4
ET450	470	±3.5	5.0	4,000	45.2



## DUCT FITTINGS

### ● Sleeve (Socket) Type



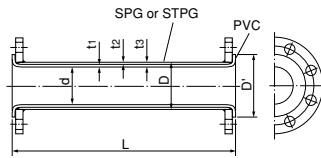
Product	Size (A)
90° Elbow	150~600
45° Elbow	150~600
Socket	150~600
Reducing Socket	600×350~600×500
Eccentric Reducing Socket	200×150~500×450
Tee	150~600
Y-Tee	150~600
Cap	150~600

### ● Flange Type



Product	Size (A)
90° Elbow	150~600
45° Elbow	150~600
Reducing Socket	600×350~600×500
Eccentric Reducing Socket	200×150~500×450
Tee	150~600
Expansion Joint	75~600
Lever-Type Damper	150~600
Handle-Type Damper	75~300
Gear-Type Damper	300~600
Flange	75A~600A
Blind Flange	75~600

# ESLON LP With FLANGE



## Pipe

Unit:mm

Size		D	t3	t1	D'	L	d	t2	Weight (kg/pc)	
A	B								5KF	10KF
20	3/4	27.2	4.3	1.5	46	5500±5	18.6	2.8	10.7	11.5
25	1	34.0	4.7	1.5	56	5500±5	24.6	3.2	15.3	16.7
32	1 1/4	42.7	5.0	1.5	66	5500±5	32.7	3.5	21.5	22.9
40	1 1/2	48.6	5.0	1.5	71	5500±5	38.6	3.5	24.6	26.0
50	2	60.5	5.3	1.5	84	5500±5	49.9	3.8	33.2	34.9
65	2 1/2	76.3	5.7	1.5	104	5500±5	64.9	4.2	46.6	48.4
80	3	89.1	6.2	2.0	118	5500±5	76.9	4.2	56.3	57.5
100	4	114.3	6.5	2.0	140	5500±5	101.3	4.5	76.9	78.4
125	5	139.8	6.5	2.0	175	5500±5	126.8	4.5	95.4	98.4
150	6	165.2	7.5	2.5	201	5500±5	150.2	5.0	126.8	130.7
200	8	216.3	8.8	3.0	250	5500±5	198.7	5.8	193.2	196.6
250	10	267.4	10.4	4.0	315	5500±5	246.2	6.6	278.3	283.5
300	12	318.5	10.9	4.0	358	5500±5	296.7	6.9	343.8	348.8
350	14	355.6	11.9	4.0	403	5500±5	331.8	7.9	436.0	442.0
400	16	406.4	11.9	4.0	460	5500±5	382.6	7.9	499.4	503.6

1. Available up to 5500mm in length on request.  
 2. Tolerance of D' is -4mm for 20-150A and -5mm for 200-400A.

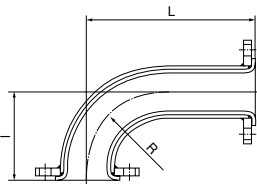
- Excellent corrosion & chemical resistance
- High mechanical properties
- Available for cooling water, water supply, and chemical pipe applications

## Fittings

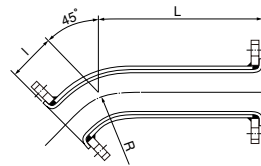
Size	90° Long Elbow	45° Long Elbow	Tee	Reducer
20	○	○	○	—
25	○	○	○	○
32	○	○	○	○
40	○	○	○	○
50	○	○	○	○
65	○	○	○	○
80	○	○	○	○
100	○	○	○	○
125	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○

## Special Fittings

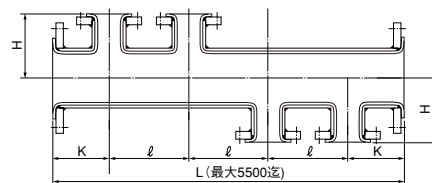
### 90° Elbow pipe



### 45° Elbow pipe



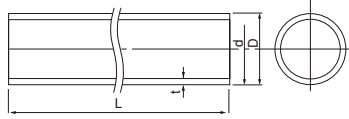
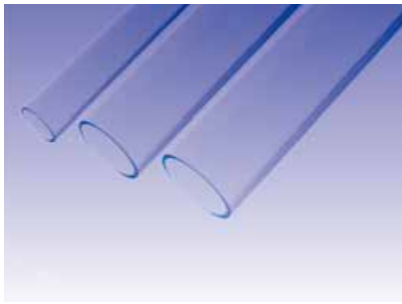
### Header



Unit:mm

Size	L
50~80	I~1000
100~250	I~1500
300~350	I~1000

# ESLON CLEAR PIPE

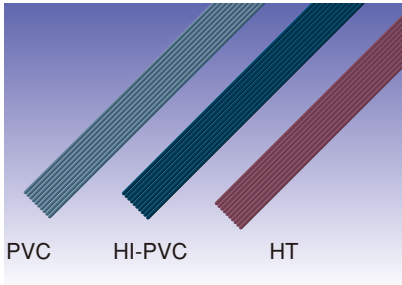


Unit:mm

Size	D	t	d	L	Weight (kg/m)
9	13±0.1	2.0±0.2	9	4000±10	0.098
13	18±0.2	2.5±0.3	13		0.173
16	22±0.2	3.0±0.3	16		0.254
20	26±0.2	3.0±0.3	20		0.308
25	32±0.2	3.0±0.3	26		0.388
28	34±0.2	3.0±0.3	28		0.415
30	38±0.2	3.0±0.3	32		0.468
40	48±0.2	3.5±0.4	41		0.695
50	60±0.2	4.0±0.4	52		0.999
65	76±0.3	4.0±0.4	68		1.285
75	89±0.3	4.5±0.4	80		1.696
100	114±0.4	5.5±0.4	103		2.662
125	140±0.5	6.0±0.5	128		3.587
150	165±0.5	7.0±0.5	151		4.934
200	216±0.7	8.0±0.5	200		7.423

- Excellent transparency PVC pipe
- Excellent chemical resistance and UV-rays Resistance
- Accordance with the standards of Food Sanitation Law

# PVC WELDING ROD



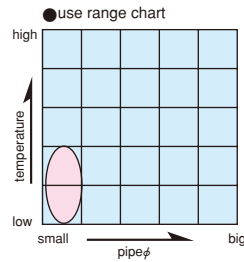
PVC      HI-PVC      HT

Unit:mm

	color	Shape			length (mm)	Unite of Packing (kg)
		single (●)		Double (●●)		
		φ2	φ3	φ3		
For PVC pipe	Gray	1,190	530	270	1,000	5
For HI pipe	Navy Blue	1,230	540	280	1,000	5
For HT pipe	Brown	990	440	220	1,000	5
For Plant HT pipe	Pink	990	440	220	1,000	5

# ESLON SOLVENT CEMENT

## ESLON SOLVENT CEMENT NO.75



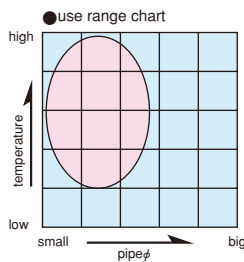
◎ Low viscosity and quick-drying type  
For winter season, small diameter piping

⚠ Don't use in summer season or large diameter piping

Volume	Remarks
500g	with brush
1 kg	with brush



## ESLON SOLVENT CEMENT NO.73

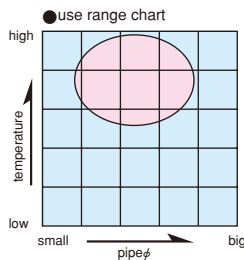


◎ Standard type  
For small and medium diameter piping

Volume	Remarks
100g	with brush
500g	with brush
1 kg	with brush



## ESLON SOLVENT CEMENT NO.70

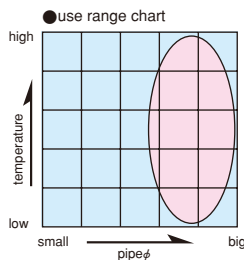


◎ High viscosity and quick-installation type  
For summer season, medium diameter piping

Volume	Remarks
500g	with brush
1 kg	with brush



## ESLON SOLVENT CEMENT NO.65



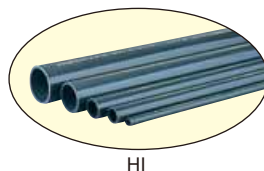
◎ Semi-quick-drying type  
For irrigation and sewage piping, medium and large diameter piping

⚠ Don't use for drink water piping

Volume	Remarks
1 kg	—



## ESLON SOLVENT CEMENT NO.80



◎ High initial strength and long pot life  
For ESLON HI GOLD, and u-PVC piping

⚠ It must be used for HI GOLD piping.

Volume	Remarks
500g	with brush
1 kg	with brush



## ESLON HEAT PROOF CEMENT NO.100/NO.110

### NO.100



### NO.110



◎ High adhesive even in high temperature  
For ESLON HT

⚠ No.100 must be used for small and medium diameter HT piping

⚠ No.110 must be used for large diameter HT piping, VPFW piping, and HTFW piping

No.100 (Small and medium diameter)		No.110 (VPFW, HTFW, large diameter HT)	
Volume	Remarks	Volume	Remarks
250g	with brush	500g	with brush
500g	with brush		



## III Technical Information

### ■ Technical Information ■

- Characteristic of Material ----- III-1
- Basic Physical Property of Material for valve at Temp.20°C ----- III-1
- Chemical Resistance of Material ----- III-2
- Temperature Pressure De-Rating ----- III-2

### ■ Flow Characteristic ■

- Flow Characteristics of Eslon Valve ----- III-3
- Cv & Kv Values ----- III-3
- Flow Diagram ----- III-4

### ■ Installation ■

- Installation ----- III-5

# Technical Information

## Characteristic of Material

	Material	Abbreviation	General Characteristic
Valve body	Polyvinyl Chloride	PVC	Resistant against most of acids,alkalis and salts of high to low concentration level.However,the material tends to be attacked by some chemicals-such as aromatic hydrocarbon,ketones,esters and chlorinated hydrocarbon.
	Hi-Impact Polyvinyl Chloride	HI-PVC	Resistance properties are nearly the same as PVC. Having high impact resistance and durability.
	Chlorinated Polyvinyl Chloride	C-PVC	Resistance propeties are nearly the same as PVC.Having a high heatresistance,this is serviceable in the temperature range higher than the former's.
	Polypropylene	PP	Not stable against strong acids such as concentrated nitric acid and chrome acid mixture,but this is resistant against other acids,alkalis and salts.Resistant against many organic solvents(specifically the solvent with active group),but tends to be attacked by chlorinecontaining solvents,aliphatic series and aromatic hydro-carbon.
	Glass Fiber reinforced polypropylene	GF-PP	Having higher mechanical properties for rigidity and tensile strength than polypropylene.
	Vinylidene Fluoride	PVDF	Highly resistant up to a high temperature range against ordinary acids & salts and organic chemicals,but broken down by fuming sulfuric acid and strong basic amines.Aiso,the use conditions with ketone,amide,ester,organic solvent ad alkali are limited.
Seal material etc	Polytetra-fluoroethylene (Trade name Teflon)	PTFE	Resistant against ordinary acid and alkali,and not dissolved nor changed by ordinary solvent medium.Attacked by melted aikali metal and in a high temperature,by fluorine and chlorine trifluoride.
	Ethylene Propylene Rubber	EPDM	Provided with an exellent ozone-resistance and chemical-resistance.Comparatively resistant against ketone and ester,but less resistant against aromatics & alphatic families,and gasoline and oil.
	Fluororubber (Trade name Viton)	FPM	Most chemical-resistant among all rubber families.Has a good resistance against strong oxidizing acid such as concentrated sulfuric acid and nitric acid;resistant against aliphatic and aromatic families and oils,but attacked by ketones,ammonia anhydride,concentrated caustic soda,etc.
	Chlorinated polyethylene	C-PE	Provided with an excellent chemical-resistance, especially against hypochlorous acid, chromic acid, and nitric acid. ozone-resistance, and oil-resistance. Used as a modifier for plastic and rubber.
	Polyvinylidene chloride	PVDC	Has almost same chemical-resistance as polyvinyl chloride, and keep chemical-resistance up to a high temperature range.

## Basic Physical Property of Material for valve at Temp.20°C

Property	Unite	PVC	HI-PVC	C-PVC (HT)	PP	GF-PP	PVDF	PTFE
Density	g/cc	1.43	1.40	1.48	0.92	1.04	1.77	2.17
Water Absorption	mg/m <sup>2</sup>	0.04~0.06	0.04~0.06	0.04~0.06	0.01		0.04	0.00
Tensile Strength at Yield	MPa	47.1~50.1	47.1~50.1	49.0~53.9	24.5~34.3	82	49.0~53.9	19.6
Tensile Strength at 90°C	MPa			24.5	14.7		24.5	
Modulus of Elasticity	MPa	2.94×10 <sup>3</sup>	2.26×10 <sup>3</sup>	2.94×10 <sup>3</sup>	1.18×10 <sup>3</sup>	7.3×10 <sup>3</sup>	1.5×10 <sup>3</sup>	3.9×10 <sup>2</sup>
Flexural Strength	MPa	78.5~88.3	79.4	88.3	24.5~34.3	95.1	64.7	
Poisson's Ratio	—	0.38	0.38	0.38	0.44		0.28	
Sharpy Impact Strength	kJ/m <sup>2</sup>	6.86~9.81	19.6~29.4	6.86~9.81	6.86~9.81	11.8	17.7~19.6	2.94
Heat Deflection Temperature	°C	74	80	110	105	145	145	
Max Usable Temperature	°C	50	50	90	90	90	120	260
Linear Expansion Coefficient	/°C	7×10 <sup>-5</sup>	6~8×10 <sup>-5</sup>	7×10 <sup>-5</sup>	12×10 <sup>-5</sup>	4.5×10 <sup>-5</sup>	12×10 <sup>-5</sup>	10×10 <sup>-5</sup>
Thermal Conductivity	W/m·K	0.15	0.15	0.14	0.12		0.12	0.7
Dielectric Strength	kV/mm	40	40	40	26	26	70	
Volume Resistivity	Ωcm	5.3×10 <sup>15</sup>	5.3×10 <sup>5</sup>	5.3×10 <sup>15</sup>	4.9×10 <sup>15</sup>		5×10 <sup>15</sup>	1×10 <sup>18</sup>

## Chemical Resistance of Material

Please refer to "Chemical Resistance Manual for Eslon Plastics Pipe, Valves and Relative Materials" for details of Chemical.

++ Not affected      - Slightly affected but serviceable  
 + Negligibly affected      -- Not serviceable

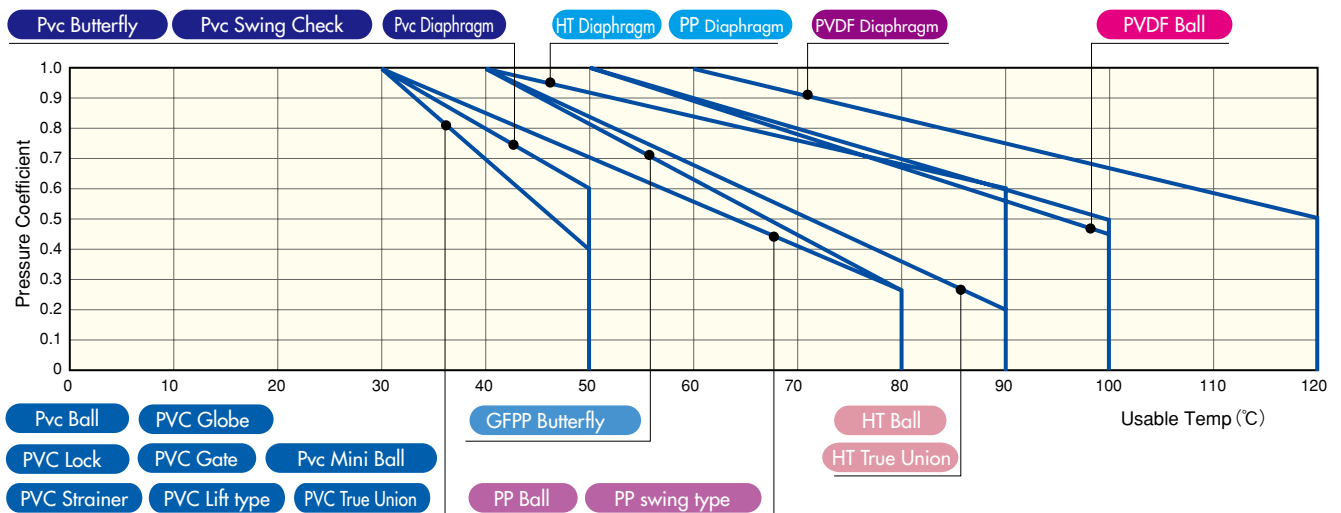
Chemical	Concentration (%)	Temp. (°C)	Material									
			PVC	HT	P	GFP	PVDC	PVDF	PTFE	EPDM	FPM	
Calcium chloride CaCl <sub>2</sub>	Satu	20	++	++	++	++	++	++	++	++	++	++
		40	++	++	++	++	++	++	++	+	+	
		60	++	++	++	++	++	++	++	-	-	
		80	++	++	++	++	++	++	++	++	++	
Sodium chloride NaCl	Satu	20	++	++	++	++	++	++	++	++	++	
		40	++	++	++	++	++	++	++	++	++	
		60	++	++	++	++	++	++	++	++	++	
		80	++	++	++	++	++	++	++	++	++	
Hydrochloric acid HCl	15	20	++	++	++	++	++	++	++	++	++	
		40	++	++	++	++	++	++	++	+	+	
		60	++	++	++	++	++	++	++	-	-	
Sodium hydroxide NaOH	5	20	+	+								
		40	+	-								
		60	+	-								
		80	--	--								
	15	20	++	++	++	++	++	++	++	++	-	
		40	++	++	++	++		++	++	++	-	
		60	++	++	++			+	++	++	--	
		80		+	+			-	++	+		
Cresol C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> )OH	Pure	20	-	--	-	--	++	++	++	--	+	
		40					++	++	++		+	
		60						+	++		+	
		80						+	++		+	
Chromic acid H <sub>2</sub> CrO <sub>4</sub>	10	20	++	++	--	--	++	++	++	+	++	
		40	++	++			++	++	++	-	+	
		60	-	-			++	++	++	--	+	
Acetic acid CH <sub>3</sub> COOH	20	20	++	++	++	++	++	++	++	++	+	
		40	+	++	++	++	++	++	++	++	-	
		60	-	+	+	+		++	++	+	-	
		80	-	-	-	-		+	++		--	
Sodium Hypochlorite NaClO	7	20	++	++	+	+	++	++	++	+	++	
		40	+	+	-	-	++	++	++	+	+	
		60	--	--	-	-	+	+	++	-	-	
		80										

Chemical	Concentration (%)	Temp. (°C)	Material									
			PVC	HT	P	GFP	PVDC	PVDF	PTFE	EPDM	FPM	
Nitric acid HNO <sub>3</sub>	10	20	++	++	++	++	++	++	++	++	++	++
		40	++	++	++	++	++	++	++	++	++	++
		60	-	++	++	++	++	++	++	+	+	
		80		+	+	+		++	++	--	--	
Ammonium hydroxide NH <sub>4</sub> OH	40	20	++	++	++	++	--	++	++	++	+	
		40	++	++	++	++		++	++	++	-	
		60	++	++	++	++		++	++	++	--	
		80			++	++		++	++			
Toluene C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>		20	--	--	+	+	--	++	++	--		
		40			-	-		++	++			
		60			--	--		+	++			
		80							++			
Hydrofluoric acid HF	Dilute	20	++	++	++	--	++	++	++	++	++	
		40	++	+	+		++	++	++	++	++	
		60	-	+	+		++	++	++	++	++	
		80		-				++	++	++	++	
Benzene C <sub>6</sub> H <sub>6</sub>	Pure	20	-	-	+	+	++	++	++	--	+	
		40	--	--	-	-		+	++		+	
		60						+	++		+	
		80						-	++		+	
Formaldehyde HCHO	35	20	++	++	++	++	++	++	++	++	++	
		40	++	++	++	++	++	++	++	++	++	
		60	-	+	++	++		+	++	+	+	
		80			+	++		--	++	+	-	
Methyl alcohol CH <sub>3</sub> OH		20	++	++	++	++	++	++	++	++	--	
		40	+	+	++	++	++	++	++	++		
		60	+	+	++	++	++	++	++	++		
		80			+	+		++	++	+		
Hydrogen sulfide H <sub>2</sub> S		20	++	++	++	++	++	++	++	++	++	
		40	++	++	++	++	++	++	++	++	++	
		60	++	++	++	++	++	++	++	++	+	
		80		+	++	+		++	++	+		
Sulfuric acid H <sub>2</sub> SO <sub>4</sub>	10	20	++	++	++	++	++	++	++	++	++	
		40	++	++	++	++	++	++	++	++	++	
		60	++	++	++	++		++	++	++	++	
		80		++	++	++		++	++	++	++	

## Temperature Pressure De-Rating

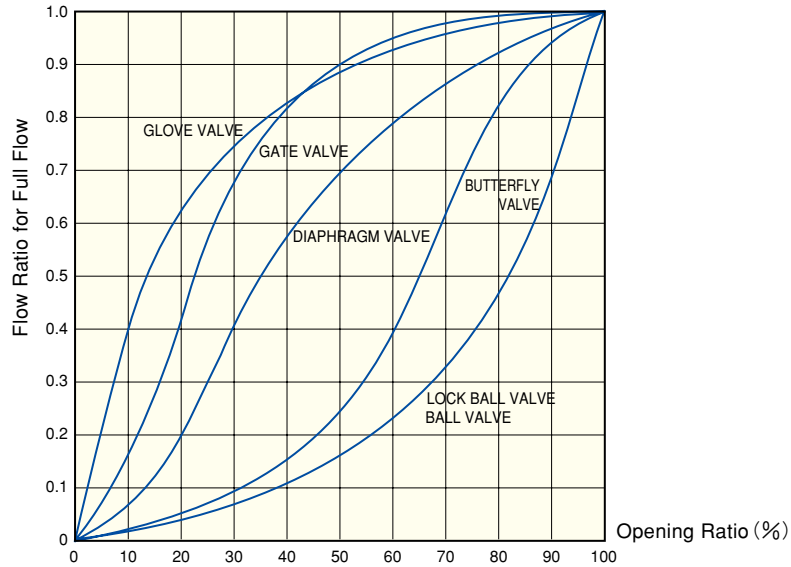
Max. working pressure at actual usable temperature can be calculated according to the following equation;

$$\text{Max. working pressure at actual usable temp.} = \text{Max. Working Pressure at 20°C} \times \text{Pressure coefficient at actual usable temp.}$$



# Flow Characteristic

## Flow Characteristics Of Eslon Valve



## Cv & Kv Values

Cv value (valve constant) is the flow coefficient used in USA, and non-dimensional value representing how many gallons (1 US gallon = 3.7852 litres) of water of 60°F (15.5°C) pass valve for one minute, where the pressure difference at the inlet and the outlet of the valve is 1 PSI (0.0703kgf/cm²) at its full open. 1 gallon is treated as 1Cv.

Kv value is the flow capacity coefficient used in the International Standards. It represents how many liters of water can pass the valve for one minute, where the pressure difference at the inlet and the outlet of the valve is 1 bar (1.0197kgf/cm²) at its full open.

The Cv and Kv value for liquids is expressed by the following equation;

$$Cv = Q \sqrt{\frac{\gamma}{P_1 - P_2}}$$

- Cv : Valve capacity coefficient
- Q : Volumetric flow [GALLON]
- P1 : Inlet pressure [PSI]
- P2 : Outlet pressure [PSI]
- $\gamma$  : Liquid density [lb/gal]

$$Cv = 0.0703Kv$$

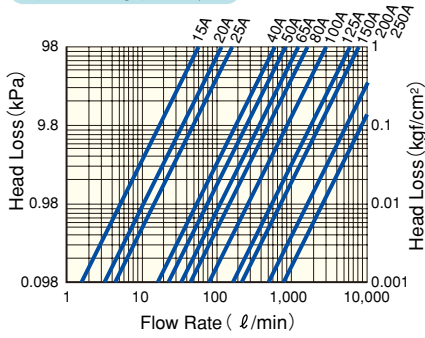
## Cv VALUE · Kv VALUE

Size (A)	Item	Cv VALUE · Kv VALUE											
		Diaphragm Valve	Dead Space Free Tee-Type	Ball Valve	Compact Ball Valve	Butterfly Valve	Gate Valve	Globe Valve	Check Valve			Strainer	Relief Valve
									Swing	Ball	Lift		
Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv	Cv	Kv		
15	6.3 89.6	5.2 74	12.1 172	10.0 142	— —	— —	4.7 66.9	— —	10.5 149.0	5.6 80.0	2.8 39.8	2.46 35.0	
20	12.0 171	— —	31.5 448	26.8 381	— —	— —	6.7 95.3	17.6 250	25.7 366.0	8.3 118.0	4.9 69.7	7.20 102	
25	17.6 250	13.1 186	48.9 696	43.1 613	— —	— —	10.0 142	24.2 344	36.9 525.0	13.8 196	7.2 102	7.58 107	
32	— —	— —	80.1 1139	69.6 990	— —	— —	16.0 228	— —	— —	20.2 287	13.2 188	19.4 275	
40	46.3 659	30.1 428	154 2191	115 1636	74 1053	— —	25.8 367	67.8 964	84.0 1195	31.7 451	17.9 255	21.3 302	
50	76.1 1083	— —	267 3798	196 2788	172 2447	210 3000	45.2 643	91.4 1300	146 2077	56.5 804	28.7 408	21.3 302	
65	135 1920	— —	352 5007	— —	282 4011	360 5000	66.3 943	222 3158	— —	— —	39.8 568	— —	
80	180 2560	— —	471 6700	— —	309 4395	530 7500	87.6 1246	306 4353	322 4580	— —	52.6 751	— —	
100	280 3983	— —	780 11095	— —	446 6344	880 12500	141 2006	596 8478	547 7781	— —	84.6 1208	— —	
125	533 7582	— —	— —	— —	755 10740	1050 15000	— —	771 10967	— —	— —	— —	— —	
150	857 12191	— —	— —	— —	993 14125	1400 20000	— —	1084 15420	— —	— —	— —	— —	
200	1113 15832	— —	— —	— —	2213 31479	2390 34000	— —	1920 27312	— —	— —	— —	— —	
250	1864 26515	— —	— —	— —	3440 48993	— —	— —	— —	— —	— —	— —	— —	
300	— —	— —	— —	— —	4929 70114	— —	— —	— —	— —	— —	— —	— —	
350	— —	— —	— —	— —	6311 89772	— —	— —	— —	— —	— —	— —	— —	
400	— —	— —	— —	— —	8757 124566	— —	— —	— —	— —	— —	— —	— —	
450	— —	— —	— —	— —	11107 157994	— —	— —	— —	— —	— —	— —	— —	
500	— —	— —	— —	— —	14622 207994	— —	— —	— —	— —	— —	— —	— —	
600	— —	— —	— —	— —	17945 255263	— —	— —	— —	— —	— —	— —	— —	

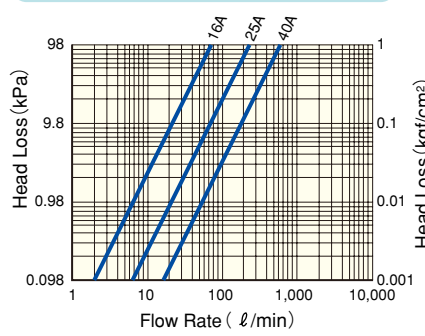


## Flow Diagram

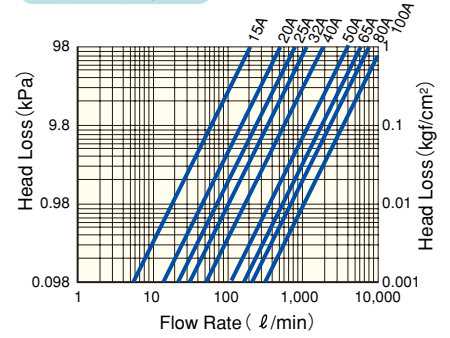
DIAPHRAGM VALVE



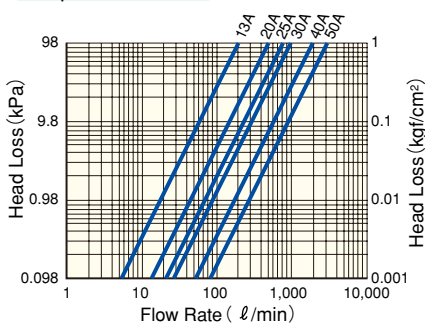
DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE



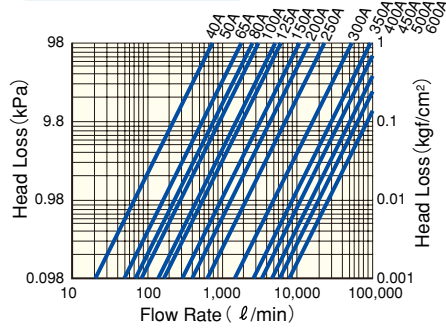
BALL VALVE



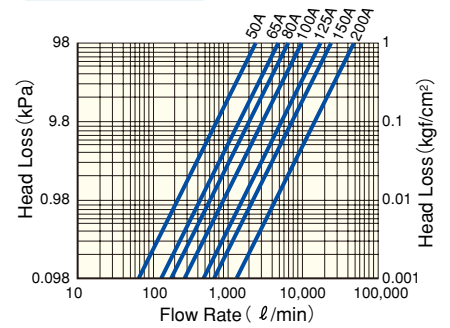
Compact BALL VALVE



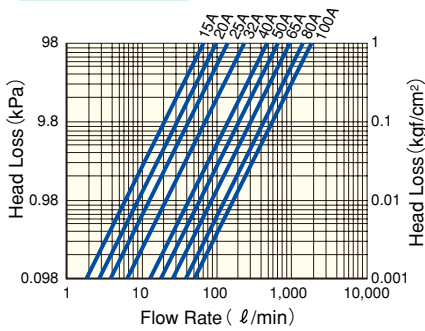
BUTTERFLY VALVE



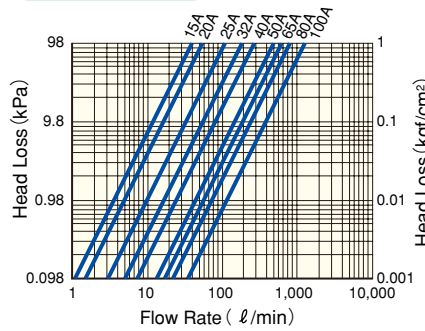
GATE VALVE



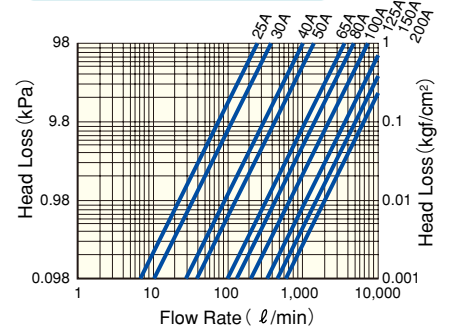
Globe VALVE



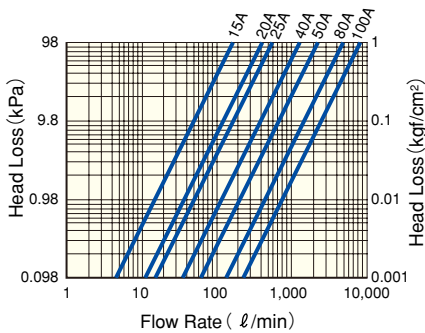
STRAINER



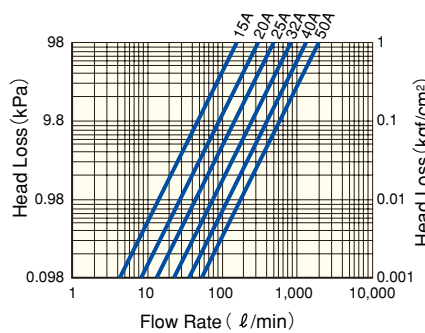
CHECK VALVE SWING TYPE



CHECK VALVE BALL TYPE



CHECK VALVE LIFT TYPE



# INSTALLATION

## 1 Handling and Storage

- Valves need to be handled with care and refrain from dropping and throwing. Strong impact may affect its performance of Rigid PVC product.
- A large nominal diameter pipe can be heavy, make sure for 2-man to unload and handle.
- Store un-wrapped and stack up product orderly for long time storage.

## 2 Installation

- Sufficient ventilation is needed for the installation under corrosive environment.
- Do not install the products in place under extremely cold and humid.
- In case the frost can happen, it is necessary to maintain the temperature above the freezing point to avoid it from freezing.
- When disassembling and assembling are needed for maintenance purpose, follow the instruction that is enclosed in packaging.

## 3 Connecting Flanges

- Esilon Packing (gasket) to seal is recommended to use.
- Bolts needed to be snugged evenly and washers, spring washers must be used with both of bolts and nuts to maintain strength of flanges.
- There should not be seen any gap between flanges when bolts are tightened.
- Do NOT connect to any metal flanged pipe (including LP pipes).
- Tighten bolts diagonally as shown below.
- Recommended torque for bolts can be found in table. 1 (when EPDM Esilon packing is used).
- Proper sizes of bolts are recommended to use as shown in table.2 for proper installation.

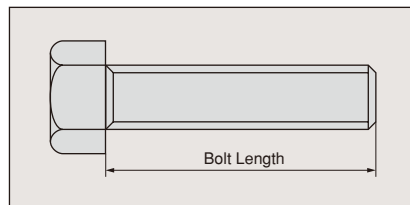
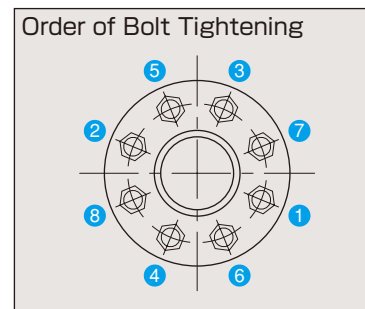


Table 1 Torque Standards for Bolt Tightening

Unit:N·m (kgf·cm)

Size (A)	15~20	25~50	65~100	125~200	250~300
Torque	15 {150}	30 {300}	45 {450}	55 {550}	65 {650}

Table 2 Bolt of

Unit:mm

Nominal Diameter A		15	20	25	32	40	50	65	75	80	100	125	150	200	250	300	350	400	450	500	600
		Bolt Diameter	M12	M12	M16	M16	M16	M16	M16	—	M16	M16	M20	M20	M20	M22	M22	—	—	—	—
BALL·STOP·STRAINER CHECK·TS Flange (10K用)	Bolt Diameter	M12	M12	M16	M16	M16	M16	M16	—	M16	M16	M20	M20	M20	M22	M22	—	—	—	—	—
	Bolt Length	50	50	55	60	60	70	75	—	75	75	80	85	90	95	100	—	—	—	—	—
TSFlange (5K用)	Bolt Diameter	M10	M10	M10	M12	M12	M12	M12	—	M16	M16	M16	M16	M20	M22	—	—	—	—	—	—
	Bolt Length	45	45	45	50	50	55	55	—	55	60	60	65	90	95	—	—	—	—	—	—
TSFlange (水道用)	Bolt Diameter	—	—	—	—	—	—	—	M16	—	M16	M16	M16	M16	M20	M20	—	—	—	—	—
	Bolt Length	—	—	—	—	—	—	—	75	—	80	80	85	90	95	100	—	—	—	—	—
DIAPHRAGM (10K用)	Bolt Diameter	M12	M12	M16	—	M16	M16	M16	—	M16	M16	M20	M20	M20	M22	—	—	—	—	—	—
	Bolt Length	45	45	50	—	55	65	70	—	70	80	80	85	90	95	—	—	—	—	—	—
GATE VALVE FOR PIPELINE (10K用)	Bolt Diameter	—	—	—	—	—	M16	M16	—	M16	M16	M20	M20	M20	—	—	—	—	—	—	—
	Bolt Length	—	—	—	—	—	70	70	—	70	75	80	85	90	—	—	—	—	—	—	—
GATE VALVE FOR WATER SUPPLY	Bolt Diameter	—	—	—	—	—	M16	—	M16	—	M16	M16	M16	M16	—	—	—	—	—	—	—
	Bolt Length	—	—	—	—	—	70	—	75	—	80	80	80	90	—	—	—	—	—	—	—
BUTTERFLY VALVE	Bolt Diameter	—	—	—	—	M16	M16	M16	—	M16	M16	M20	M20	M20	M22	M22	M22	M24	M24	M24	M30
	Bolt Length	—	—	—	—	90	110	120	—	120	130	140	140	160	180	210	250	265	280	295	330

## 4. Jointing by solvent cement agent

TS method should be followed for jointing by solvent cement as below.

- 1 Pipe must be cut as square as possible with proper tool.
- 2 Remove all burrs and saw dust with knife then round off the corners by 1-2 degree.
- 3 Marking the depth of entry is a good way to make sure for complete insert.
- 4 Remove all dirt, dust, moisture and oil from outside of pipes and inside of TS fittings with dry and clean rag.
- 5 Use Eslon solvent cement for the best result.
- 6 Apply solvent cement uniformly and more on the pipe and less on entrance to avoid the solvent cement from coming out.
- 7 Pay attention to avoid any solvent cement from going in valve. It may cause a lack of seal or not being able to operate the valve, especially, vertical piping lines need more attention.
- 8 Insert pipe into fitting immediately without delay while solvent cement is still wet after solvent cement is applied. Remove any excess solvent cement with rag.
- 9 After finished jointing, hold its position for 2 to 3 minutes. Avoid any impact and bending until dry. Ensure that all valves are in open position, in order to release solvent vapor to avoid solvent crack. Blow dry if necessary.
- 10 Because of slow evaporation of solvent, installation less than 5 degree C is not recommended.
- 11 Please consult us if installation under 5 degree C can not be avoided.
- 12 Solvent cements for pipes and fittings are flammable. Refrain from smoking while working with solvent cements. Keep them away from any flame or other ignition sources in work area and storage area. Make sure to work only in well ventilated area. Ingestion or intentional inhalation of solvent vapors can be harmful or fatal.

## 5. Jointing with screws

- 1 Remove all parts where screws go in from valve (including lock ball, stop and strainer).
- 2 Since all parts are made with plastics, it is possible to be damaged when jointing with metal screws. Plastic valve sockets must be used.
- 3 Even though all screw threads are followed by JIS B0203, they are not as durable as metal. Do NOT tighten too much to avoid damage.
- 4 Sealing tape can be used for sealing. Do NOT use requid sealant, hemp, and paint which may cause material deterioration.
- 5 Hand tight by single hand then use water-pump pliers or belt wrench to turn another half to one revolution.
- 6 When use belt wrench, make sure to place it at proper spot and avoid damage.

## 6. Fused bonding

- 1 It takes room for work area and fusing machine to fuse pipes together. Keep enough work space for safety and two-man job.
- 2 Fused bonding should be done in the place without draft. The draft can take the heat away from heater surface, which may cause an unfavorable result.
- 3 Make sure to use correct equipment because it takes different heater face for different nominal diameters and pipe materials.
- 4 Grounding must be done before turn the power on of fusing machine. (The fusing machine needs to be grounded for 150 type as well)
- 5 Be careful of an electric shock.
- 6 Since heater face is around 260 to 270 degree C hot. Be careful of burning by touching accidentally.
- 7 Heater temperature setting, fusing time and the length of insertion must be followed by the instruction.
- 8 Bonding should be carried out smoothly within 5 seconds after pipe is pulled out from heater face.

The details of basic bonding instruction "Fused Bonding Instruction Booklet" is available.

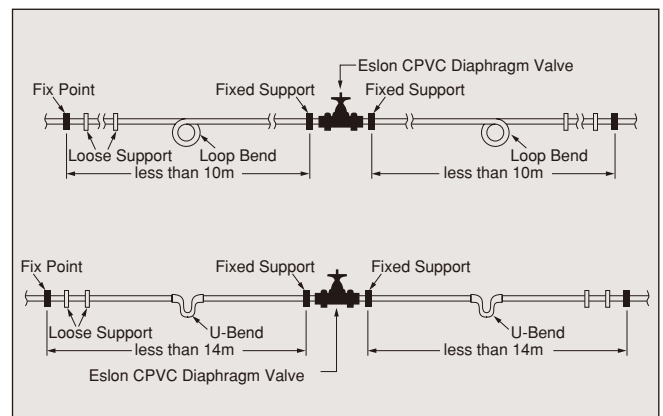
## 7. Seal testing

- 1 After all piping is completed, the pipe system must be tested under water pressure. Apply pressure after releasing air in piping.
- 2 Ordinal leak detector is not recommended to use. That can cause damage or crack on pipes, fitting and valves.

## 8. Shrinkage of pipe system

After installation, temperature change and liquid running through piping system can cause pipe shrinkage. This shrinkage can affect valves that piping system is connected to. Inlet and outlet of valves needs to be fixed.

Example in case of a long straight pipeline

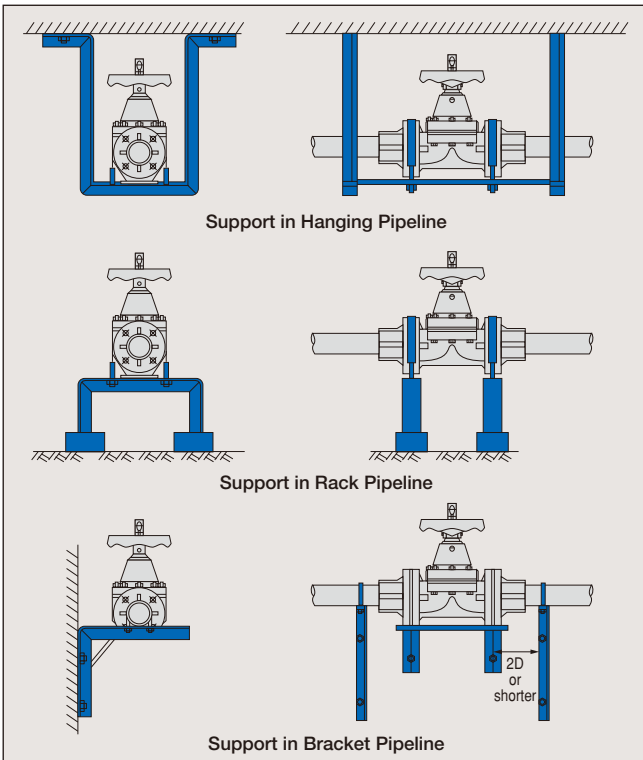


## 9 Supporting

Supporting valve is necessary since valve is heavy.

- ① Support valve ITSELF.
- ② When valve is connected to metal piping system, avoid all weight from being on the valve. Consider points where weight should be supported at.
- ③ Use flange part to support valve by metal banding with screws. Utilize insert nuts located on the bottom of valve to fix the union diaphragm valve on the support.
- ④ Install two additional supports on both ends of valve within 2D (D stands for nominal valve size) distance from flanges.
- ⑤ Fix whole piping system when pipe lines nearby the pump is vibrating or vibration when fluid is running though pipe lines.

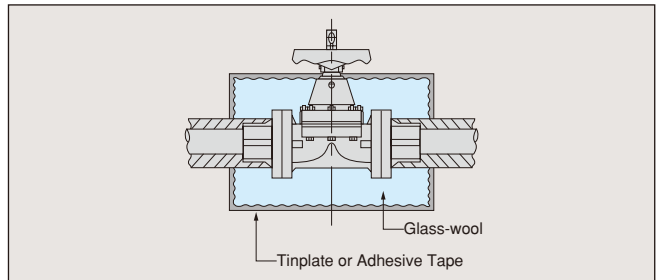
### Standard Supporting Method



## 10 Insulation valves

Fluid freezes up when operating temperature is under freezing point, if fluid does not move though pipe lines or stays still due to valve being closed. It is necessary to install glass wool or foamed urethane insulation to avoid pipe lines from freezing up. Refer to insulation handbook to consult for proper thickness of insulation.

### Heat Insulation Materials



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