SEKISUI

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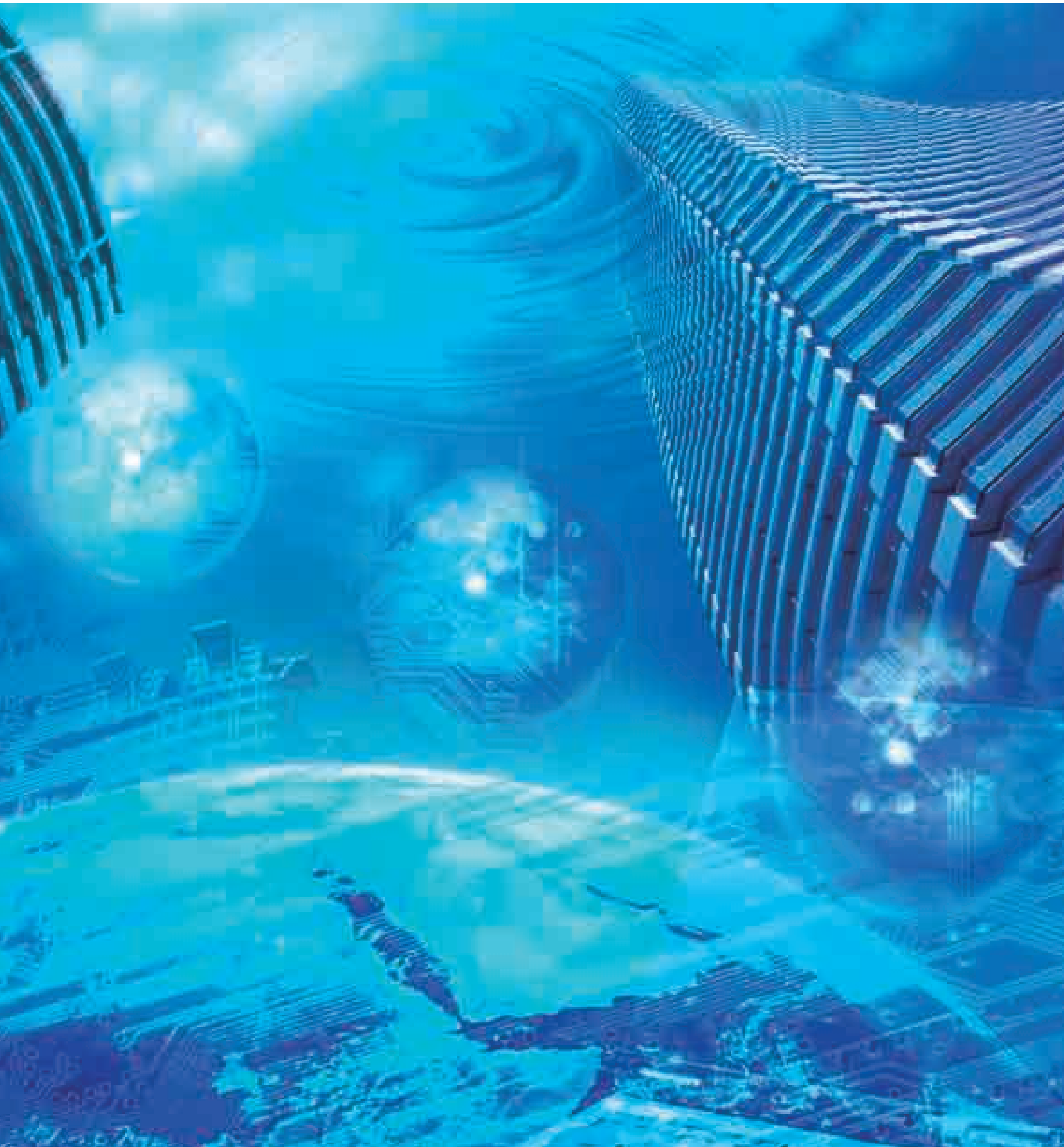
ESLON VALVE

Automatic Operation Valves



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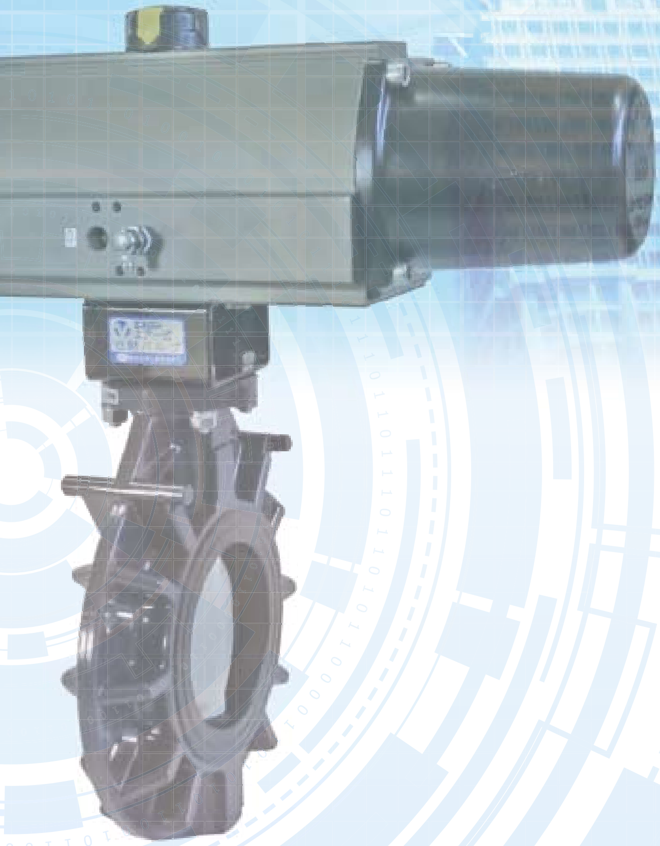
Automatic Operation Valves



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Pneumatic valve

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PNEUMATIC DIAPHRAGM VALVE TYPE F

Size:15～50
Material:PVC、HT、PP、PVDF ▶▶ 9

PNEUMATIC DIAPHRAGM VALVE TYPE B

Size:15～100
Material:PVC、HT、PP、PVDF ▶▶ 10

PNEUMATIC BALL VALVE TYPE S

Size:15～100
Material:PVC、HT、PP、PVDF ▶▶ 11

PNEUMATIC BALL VALVE TYPE C

Size:15～100
Material:PVC、HT、PP、PVDF ▶▶ 12

PNEUMATIC BUTTERFLY VALVE TYPE S

Size:40～400
Material:PVC、PP、PVDF ▶▶ 13

PNEUMATIC BUTTERFLY VALVE TYPE T

Size:40～300
Material:PVC、PP、PVDF ▶▶ 14

AIR OPERATION VALVE

Size:15～65
Material:PVC ▶▶ 15

Electric valve

17 ▶▶ 25

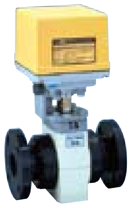
ELECTRIC DIAPHRAGM VALVE TYPE KS

Size:15～150
Material:PVC、HT、PP、PVDF ▶▶ 17

ELECTRIC BALL VALVE TYPE K

Size:15～100
Material:PVC、HT、PP、PVDF ▶▶ 18

ELECTRIC BALL VALVE TYPE N



Size:15～100
Material:PVC、HT、PP、PVDF ▶▶ 19

ELECTRIC BALL VALVE TYPE KS

Size:15～100
Material:PVC、HT、PP、PVDF ▶▶ 20

ELECTRIC YP BALL VALVE

Size:15～50
Material:PVC ▶▶ 21

3-WAY BALL VALVE

Size:15～50
Material:PVC ▶▶ 22

ELECTRIC BUTTERFLY VALVE TYPE K

Size:40～300
Material:PVC、PP、PVDF ▶▶ 23

ELECTRIC BUTTERFLY VALVE TYPE N

Size:40～300
Material:PVC、PP、PVDF ▶▶ 24

ELECTRIC BUTTERFLY VALVE TYPE KS

Size:40～300
Material:PVC、PP、PVDF ▶▶ 25

ESLON VALVE Automatic Operation Product List

PNEUMATIC

■PNEUMATIC DIAPHRAGM VALVE TYPE F

Material			PVC			HT		PP	PVDF		
Connection			Flange	Thread	TS	Flange	TS	Flange	Flange	Thread	Butt
Operation			Double Action & Air To Open&Close			Double Action & Air To Open&Close		Double Action & Air To Open&Close	Double Action & Air To Open&Close		
SizeA(B)	15	(1/2)	●	●	●	●	●	●	●	●	●
	20	(3/4)	●	●	●	●	●	●	●	●	●
	25	(1)	●	●	●	●	●	●	●	●	●
	32	(1 1/4)	●	—	●	●	●	●	●	—	—
	40	(1 1/2)	●	●	●	●	●	●	●	●	●
	50	(2)	●	●	●	●	●	●	●	●	●

■PNEUMATIC DIAPHRAGM VALVE TYPE B

Material			PVC			HT		PP	PVDF		
Connection			Flange	Thread	TS	Flange	TS	Flange	Flange	Thread	Butt
Operation			Double Action & Air To Open&Close			Double Action & Air To Open&Close		Double Action & Air To Open&Close	Double Action & Air To Open&Close		
SizeA(B)	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)	●	—	—	●	—	●	●	—	—

■PNEUMATIC BALL VALVE TYPE S

Material			PVC			HT		PP	PVDF		
Connection			Flange	Thread	T S	Flange	T S	Flange	Flange	Thread	Butt
Operation			Double Action & Air To Open&Close			Double Action & Air To Open&Close		Double Action & Air To Open&Close	Double Action & Air To Open&Close		
SizeA(B)	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)	●	●	●	●	●	●	●	●	●

■PNEUMATIC BALL VALVE TYPE C

Material			PVC			HT		PP	PVDF		
Connection			Flange	Thread	T S	Flange	T S	Flange	Flange	Thread	Butt
Operation			Double Action & Air To Open&Close			Double Action & Air To Open&Close		Double Action & Air To Open&Close	Double Action & Air To Open&Close		
SizeA(B)	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)	●	●	●	●	●	●	●	●	●

PNEUMATIC

PNEUMATIC BUTTERFLY VALVE TYPE S

Material			PVC		PP		PVDF	
Operation			Double Action	Air To Open&Close	Double Action	Air To Open&Close	Double Action	Air To Open&Close
SizeA(B)	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)	●	●	●	●	●	●

PNEUMATIC BUTTERFLY VALVE TYPE T

Material			PVC		PP		PVDF	
Operation			Double Action	Air To Open&Close	Double Action	Air To Open&Close	Double Action	Air To Open&Close
SizeA(B)	40	(1 1/2)	●	●	●	●	●	●
	50	(2)	●	●	●	●	●	●
	65	(2 1/2)	●	●	●	●	●	●
	80	(3)	●	●	●	●	●	●
	100	(4)	●	●	●	●	●	●
	125	(5)	●	●	●	●	●	●
	150	(6)	●	●	●	●	●	●
	200	(8)	●	●	●	●	●	●
	250	(10)	●	–	●	–	●	–
	300	(12)	●	–	●	–	●	–

AIR OPERATION VALVE

Material			PVC	
Connection			TS	
Operation			Double Action	Air To Open&Close
SizeA(B)	15	(1/2)	●	●
	20	(3/4)	●	●
	25	(1)	●	●
	32	(1 1/4)	●	●
	40	(1 1/2)	●	●
	50	(2)	●	●
	65	(2 1/2)	●	●

ELECTRIC

■ELECTRIC DIAPHRAGM VALVE TYPE KS

Power supply voltage			AC100V/200V						
Material			PVC			HT		PP	PVDF
Connection			Flange	Thread	TS	Flange	TS	Flange	Flange
SizeA(B)	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)	●	—	—	—	—	●	—

■ELECTRIC BALL VALVE TYPE K

Power supply voltage			AC100V/200V								
Material			PVC			HT		PP	PVDF		
Connection			Flange	Thread	TS	Flange	TS	Flange	Flange	Thread	Butt
SizeA(B)	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)	●	●	●	●	●	●	●	●	●

■ELECTRIC BALL VALVE TYPE N (Standard Type 15~40A、Higher Speed Type 15~100A)

Power supply voltage			AC100V/200V等								
Material			PVC			HT		PP	PVDF		
Connection			Flange	Thread	TS	Flange	TS	Flange	Flange	Thread	Butt
SizeA(B)	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)	●	●	●	●	●	●	●	●	●

■ELECTRIC BALL VALVE TYPE KS

Power supply voltage			AC100V/200V等								
Material			PVC			HT		PP	PVDF		
Connection			Flange	Thread	TS	Flange	TS	Flange	Flange	Thread	Butt
SizeA(B)	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)	●	●	●	●	●	●	●	●	●

ELECTRIC

ELECTRIC YP BALL VALVE

Power supply voltage			DC24V		
Material			PVC		
Connection			Flange	Thread	TS
SizeA(B)	15	(1/2)	●	●	●
	20	(3/4)	●	●	●
	25	(1)	●	●	●
	32	(1 1/4)	●	●	●
	40	(1 1/2)	●	●	●
	50	(2)	●	●	●

3-WAY BALL VALVE

Power supply voltage			AC100V/200V		
Material			PVC		
Connection			Flange	Thread	TS
SizeA(B)	15	(1/2)	●	●	●
	20	(3/4)	●	●	●
	25	(1)	●	●	●
	40	(1 1/2)	●	●	●
	50	(2)	●	●	●

ELECTRIC BUTTERFLY VALVE TYPE K

Power supply voltage			AC100V/200V		
Material			PVC	PP	PVDF
SizeA(B)	40	(1 1/2)	●	●	●
	50	(2)	●	●	●
	65	(2 1/2)	●	●	●
	80	(3)	●	●	●
	100	(4)	●	●	●
	125	(5)	●	●	●
	150	(6)	●	●	●
	200	(8)	●	●	●
	250	(10)	●	●	●
	300	(12)	●	●	●

ELECTRIC BUTTERFLY VALVE TYPE N

Power supply voltage			AC100V/200V		
Material			PVC	PP	PVDF
SizeA(B)	40	(1 1/2)	●	●	●
	50	(2)	●	●	●
	65	(2 1/2)	●	●	●
	80	(3)	●	●	●
	100	(4)	●	●	●
	125	(5)	●	●	●
	150	(6)	●	●	●
	200	(8)	●	●	●
	250	(10)	●	●	●
	300	(12)	●	●	●

ELECTRIC BUTTERFLY VALVE TYPE KS

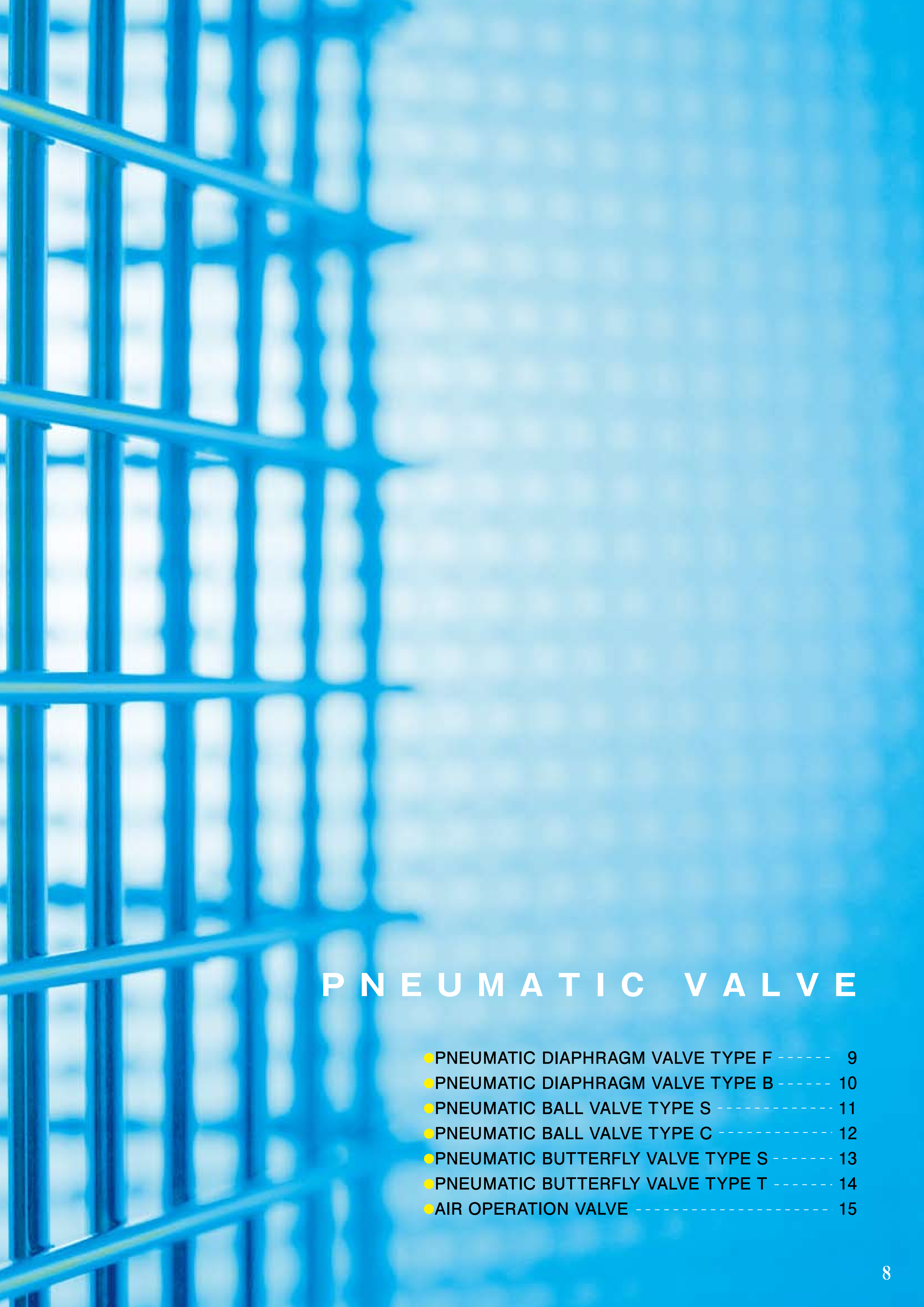
Power supply voltage			AC100V/200V		
Material			PVC	PP	PVDF
SizeA(B)	40	(1 1/2)	●	●	●
	50	(2)	●	●	●
	65	(2 1/2)	●	●	●
	80	(3)	●	●	●
	100	(4)	●	●	●
	125	(5)	●	●	●
	150	(6)	●	●	●
	200	(8)	●	●	●
	250	(10)	●	●	●
	300	(12)	●	●	●

Precautions

1. The maximum working pressure at the room temperature is described in each page. The maximum working pressure at actual usable temperature has to refer to Technical Information.
2. For chemical resistance of products, please refer to "Chemical Resistance Guide for Plastic Pipes, Fittings & Valves". Please select a valve and material considering operating conditions such as temperature, pressure, feature, and concentration, etc.
3. Do not use Eslon valves, Pipes, & Fittings for compressed air or gas applications.
4. Fluid containing slurry, solid, sediment, or crystallized fluid might disable the operating or sealing of valve, or might cause damage of valve.
5. The relating regulations might be applied to the equipment or facilities where the valve is used. Please confirm it in advance.
6. PVDF valves correspond to the export restriction products according to the regulations of the Export Trade Control Order. The export certificate is needed when exporting.

Information in this catalog is subject to change without notice due to improvement of products and productivity. The drawings and the part lists which were described in this catalog might be partially omitted. Please confirm the latest information such as approval drawing and specifications at our website when selecting or ordering.

http://www.eslon-plant.jp



PNEUMATIC VALVE

- PNEUMATIC DIAPHRAGM VALVE TYPE F ------ 9
- PNEUMATIC DIAPHRAGM VALVE TYPE B ------ 10
- PNEUMATIC BALL VALVE TYPE S ------------- 11
- PNEUMATIC BALL VALVE TYPE C ------------- 12
- PNEUMATIC BUTTERFLY VALVE TYPE S ------- 13
- PNEUMATIC BUTTERFLY VALVE TYPE T ------- 14
- AIR OPERATION VALVE ------------------------ 15

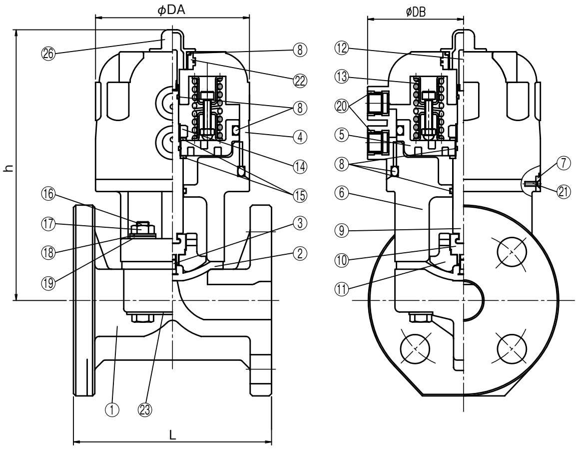
JIS　ANSI／ASTM　DIN／ISO

PNEUMATIC

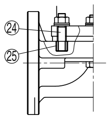
ESLON PNEUMATIC DIAPHRAGM VALVE TYPE F

- ◉ High pressure rating and excellent sealing performance with optimized diaphragm design.
  2 types of maximum working pressure, 1.0MPa / 0.7MPa for Normal Close Action.
- ◉ Optional accessories available on the top mount on request.
- ◉ Excellent chemical and corrosion resistance, light weight, and compact.
- ◉ Flat at the bottom of flange and insert nuts for prevention of tumbling and for better workability in plumbing.

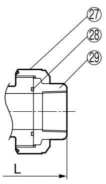
●Flange Type



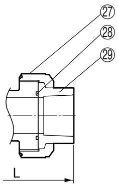
40、50A



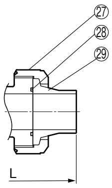
●Thread Type



●TS Socket Type



●Butt Type



⚠ Important Notes

Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Max. Operating Temperature

Material	Max. (℃)	
PVC	TS,Thread	50
	Flange	60
HT	90	
PP	90	
PVDF	Thread, Butt	100
	Flange	120

Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC、HT、PP or PVDF
②	Diaphragm	1	EPDM or PTFE
③	Insert Bolt	1	(EPDM)SS400+Cr Plated SS (PTFE)SUS304
④	Cover	1	GF-PP
⑤	Piston	1	GF-PP
⑥	Housing	1	GF-PP
⑦	Centerring	1	GF-PP
⑧	O-ring	6	NBR
⑨	Spindle	1	SUS304
⑩	Metallic Fixtures for Compressor	1	C3604
⑪	Compressor	1	GF-PP
⑫	Indicator	1	PA
⑬	Spring unit	1	Spring Steel
⑭	Nut	1	SUS304
⑮	Washer	2	SUS304
⑯	Bolt	–	SUS304
⑰	Nut	–	SUS304
⑱	Spring Washer	–	SUS304
⑲	Washer	–	SUS304
⑳	Connection insert for air	2	SUS304
㉑	Thread	1	SUS304
㉒	Cover insert nut	1	SUS304
㉓	Supporting plate ※2)	1	SUS304
㉔	Stud bolt	1	SUS304 ※1)
㉕	Insert nut	1	(PVC、HT、PP)C3604 ※1) (PVDF)SUS304 ※1)
㉖	Cap cover	1	PC
㉗	Union Nut	2	PVC、HT or PVDF
㉘	O-ring	2	EPDM or FKM
㉙	Socket	2	PVC、HT or PVDF

·※1 is only for 40 & 50A
·※2 is only for HT, PP, and PVDF.

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP)
		ISO10931 (PVDF)

·For flange, dimension of bolt holes conforming the standards

Standard Operating Air Pressure

Standard	Double Action		(15～50A)	0.4MPa
	Air To Open	10k	(15～50A)	0.6MPa
		7k	(15～25A)	0.4MPa
			(32～50A)	0.5MPa
	Air To Close		(15～50A)	0.5MPa

Air Supply Port

Double Action	Rc 1/4
Air To Open&Close	Rc 1/4

Option

Opening control unit	Pneumatic positioner
Closing control unit	Electro pneumatic positioner
Limit switch	Speed controller
Solenoid valve	Regulator with filter

Size

Flange type · Thread type · TS socket type · Butt type

Unit:mm

Size		L					h	DA	DB	Max. Working Pressure at Room Temp(MPa)				Air Consumption(ℓ/time/unit)			Weight (kg/pc)	
A	B	Flange	Thread PVC	Thread PVDF	TS socket	Butt				Double Action	Air To Close	Air To Open 7k	Air To Open 10k	Double Action	Air To Close	Air To Open	Flange	Thread·TS Socket·Butt
15	1/2	110	133	134	144	185	176	101	63	1.0	1.0	0.7	1.0	0.34	0.21	0.13	1.6	1.6
20	3/4	120	157	157	172	200	176	101	63	1.0	1.0	0.7	1.0	0.34	0.21	0.13	1.7	1.7
25	1	130	173	180	187	212	183	101	63	1.0	1.0	0.7	1.0	0.34	0.21	0.13	1.8	1.8
32	1 1/4	180	–	–	262	–	303	155	90	1.0	1.0	0.7	1.0	1.79	0.99	0.80	8.0	8.0
40	1 1/2	180	241	248	262	273	303	155	90	1.0	1.0	0.7	1.0	1.79	0.99	0.80	8.0	8.0
50	2	210	269	279	298	300	307	155	90	1.0	1.0	0.7	1.0	1.79	0.99	0.80	8.9	8.9

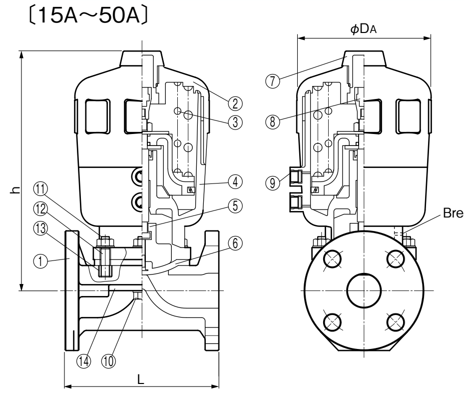
LINH Working Pressure and Temp ▶ 34　Flow Diagram ▶ 37　Installation ▶ 38

JIS **ANSI／ASTM** **DIN／ISO**

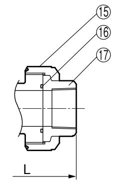
ESLON PNEUMATIC DIAPHRAGM VALVE TYPE B

- Excellent chemical and corrosion resistance, light weight, and compact.
- Optional accessories available on the top mount on request.
- Flat at the bottom of flange and insert nuts for prevention of tumbling and for better workability in plumbing.

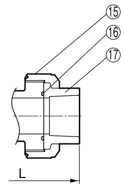
●Flange Type
〔15A～50A〕



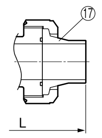
●Thread Type



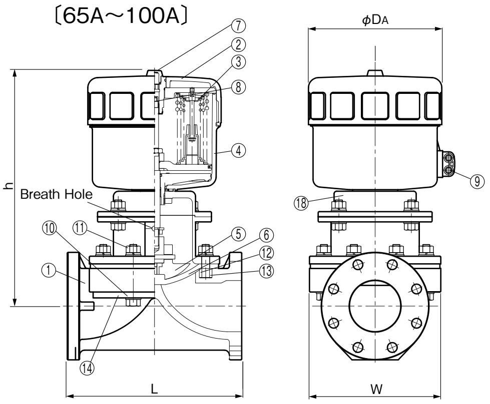
●TS Socket Type



●Butt Type



〔65A～100A〕



Parts List

No.	Part Name	Q'ty	Material	
①	Body	1	PVC、HT、PP or PVDF	
②	Cover	1	GF-PA	
③	Spring	1	Spring Steel	
④	Housing	1	GF-PA	
⑤	Compressor	1	50A or less	SCS14
			65A or more	GF-PP
⑥	Diaphragm	1	EPDM or PTFE	
⑦	Indicator Cover	1	PC	
⑧	Indicator	1	PA	
⑨	Connection insert for air	2	SUS303	
⑩	Bolt	—	SUS304	
⑪	Nut	6	SUS304	
⑫	Stud bolt	4	SUS304	
⑬	Insert nut	—	C3604、SUS304	
⑭	Supporting Plate	2	50A or less	SUS304
			65A or more	SS400 Painted by Epoxy Resin
⑮	Union Nut	2	PVC、HT or PVDF	
⑯	O-ring	2	EPDM or FKM	
⑰	Socket	2	PVC、HT or PVDF	
⑱	Bonnet		AC-7	

·Part No.⑪～⑬ is only for 40A～100A.
·Part No.⑬ in PVDF is SUS304.

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743、AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP)
		ISO10931 (PVDF)

·For flange, dimension of bolt holes conforming the standards

Max. Operating Temperature

Material	Max. (℃)	
PVC	TS,Thread	50
	Flange	60
HT	90	
PP	90	
PVDF	Thread, Butt	100
	Flange	120

Option

Limit switch for open-close	Solenoid valve
Limit switch for open	Electro pneumatic positioner
Manual handle for open-close	Speed controller
Operating & Closing Control unit	Regulator with filter
Opening control unit	

⚠ Important Notes

Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Standard Operating Air Pressure

Standard	Double Action	0.4MPa
	Air To Open&Close	0.5MPa

Air Supply Port

Double Action	G 1/4
Air To Open&Close	G 1/4

Size

Flange type·Thread type·TS socket type·Butt type

Unit:mm

Size		L					h		DA	Max. Working Pressure at Room Temp(MPa)				Air Consumption(ℓ/time/unit)			Weight (kg/pc)	
		Flange	Thread		TS socket	Butt	Flange	Thread·TS Socket·Butt		Double Action		Single Action		Double Action	Air To Close	Air To Open	Flange	Thread·TS Socket·Butt
A	B		PVC	PVDF						EPDM	PTFE	EPDM	PTFE					
15	1/2	110	133	134	144	185	169	167	101	0.7	0.6	0.7	0.5	0.36	0.25	0.11	1.5	1.5
20	3/4	120	157	157	172	200	172	167	101	0.7	0.6	0.7	0.5	0.40	0.28	0.12	1.5	1.5
25	1	130	173	180	187	212	171	174	101	0.5	0.4	0.6	0.4	0.41	0.28	0.14	1.7	1.7
32	1 1/4	180	—	—	262	—	281	284	158	0.5	0.4	0.6	0.4	1.09	0.62	0.47	6.0	6.0
40	1 1/2	180	241	248	262	273	281	284	158	0.5	0.4	0.6	0.4	1.09	0.62	0.47	6.0	6.0
50	2	210	269	279	298	300	286	289	158	0.4	0.3	0.6	0.4	1.23	0.67	0.56	6.9	6.9
65	2 1/2	250	—	—	—	—	435	—	211	0.4	0.2	0.6	0.4	3.49	0.92	0.93	12.5	—
80	3	280	—	—	—	—	436(431)	—	211(261)	0.4	0.2	0.6	0.4	3.98	1.18	1.42	14.3	—
100	4	340	—	—	—	—	465(461)	—	211(261)	0.4	0.2	0.5	0.3	3.34	1.00	1.45	24.0	—

·( ) : Normal Close
·Flange dimension of 32A is same as 40A, but long bolt hole on the flange.

JIS **ANSI／ASTM** **DIN／ISO**

PNEUMATIC

ESLON PNEUMATIC BALL VALVE TYPE S

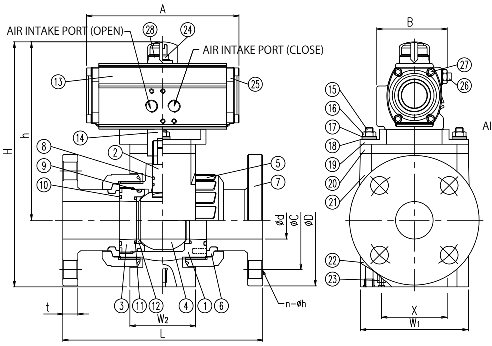
- Light weight and compact aluminum actuator.
- Excellent chemical & corrosion resistance.
- Changeable into automatic/manual operation.
- Air pressure for open/close operation : 0.4MPa.
- Manual side wheel handle for open/close is available.
- Box type of Limit switch is available as optional accessory.
- Conformity with NAMUR standard.

Conforming Standard

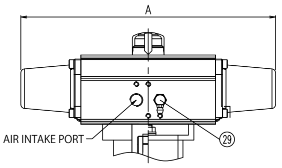
Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743、AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP) ISO10931 (PVDF)

·For flange, dimension of bolt holes conforming the standards

●Flange Type
〔Double Action〕

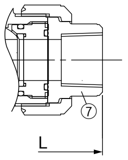


〔Air To Open&Close〕

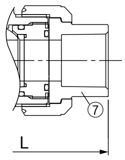


〔Box type of
Limit switch〕

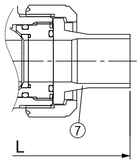
●Thread Type



●TS Socket Type



●Butt Type



Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC、HT、PP or PVDF
②	Stem	1	PVC、HT、PP or PVDF
③	Ball Stopper	—	PVC、HT、PP or PVDF
④	Ball	1	PVC、HT、PP or PVDF
⑤	Union Nut	2	PVC、HT、PP or PVDF
⑥	Set Ring	2	PVC、HT、PP or PVDF
⑦	Connections	2	PVC、HT、PP or PVDF
⑧	Stem O-Ring	—	EPDM or FKM
⑨	Ball Stopper O-Ring	—	EPDM or FKM
⑩	Union O-ring	2	EPDM or FKM
⑪	Ball Seat O-Ring	2	EPDM or FKM
⑫	Ball Seat	2	PTFE
⑬	Cylinder	1	AL6063
⑭	Connector	1	SUS303
⑮	Stud Bolt	2	SUS304

No.	Part Name	Q'ty	Material
⑯	Hexagon Nut	2	SUS304
⑰	Spring Washer	2	SUS304
⑱	Washer	2	SUS304
⑲	Yoke	1	FRP
⑳	Collar(Over 40A)	1	FRP
㉑	Upper Mount	1	FRP
㉒	Lower Mount	1	FRP
㉓	Insert Nut	—	C3601
㉔	Shaft	1	SCM435
㉕	Cover	2	AL12
㉖	Adjust Bolt	2	SUS304
㉗	Cover Bolt	8	SUS304
㉘	Shaft Cover	1	PA+PE
㉙	Cylinder Ventilation Plug	1	C3601:Chromium Coated

Size

Flange type·Thread type·TS socket type·Butt type

Unit:mm

Size		L					h		Actuator				W1	W2	X	Max. Working Pressure at Room Temp. (MPa)	Air Consumption (ℓ/time/unit)		Weight (kg/pc)			
A	B	Flange	Thread		TS Socket	Butt	Double Action	Air To Open &Close	Double Action		Air To Open&Close						Double Action	Air To Open &Close	Double Action		Air To Open&Close	
			PVC	PVDF					A	B	A	B							Flange	Thread·TS Socket	Flange	Thread·TS Socket
15	1/2	143	97	99	109	143	116	155	70	45	133	75	92	50	50	1.0	0.15	0.05	0.8	0.6	1.0	0.8
20	3/4	172	117	116	132	152	122	161	70	45	133	75	92	50	50	1.0	0.15	0.05	0.9	0.7	1.1	0.9
25	1	187	128	136	143	161	158	173	109	60	133	75	92	50	50	1.0	0.20	0.05	1.1	0.9	1.3	1.0
32	1 1/4	190	146	148	166	167	174	174	162	75	257	75	98	60	55	1.0	0.24	0.11	2.4	1.8	2.5	2.0
40	1 1/2	212	163	169	175	190	190	190	162	75	257	75	117	70	70	1.0	0.24	0.11	3.0	2.4	2.7	2.1
50	2	234	188	196	203	216	197	214	162	75	314	89	135	70	85	1.0	0.24	0.24	3.7	2.8	5.0	4.1
65	2 1/2	259	227	227	259	208	244	263	202	89	430	101	163	90	115	1.0	0.49	0.48	6.5	5.4	9.5	8.4
80	3	304	278	278	304	301	271	290	202	89	430	101	198	110	140	1.0	0.49	0.48	8.7	7.8	11.5	10.6
100	4	372	330	330	390	340	321	343	262	101	500	129	240	110	180	1.0	1.02	0.86	14.8	13.8	20.2	19.2

Option

Solenoid valve	Speed controller
Limit switch	Regulator with filter
Pneumatic positioner	Side Handle
Electro pneumatic positioner	

·Various optional accessories can be attached on request.

Max. Operating Temperature

Material	Max. (℃)
PVC	50
HT	90
PP	80
PVDF	100

Standard Operating Air Pressure

Standard	Double Action	0.4MPa
	Air To Open&Close	0.4MPa

Air Supply Port

Double Action	15~25A	Rc 1/8	32~100A	Rc 1/4
Air To Open&Close	15~100A	Rc 1/4		

⚠ Important Notes

- ●Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- ●Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Pneumatic Valve

LINK Working Pressure and Temp ▶ 34 Flow Diagram ▶ 37 Installation ▶ 38

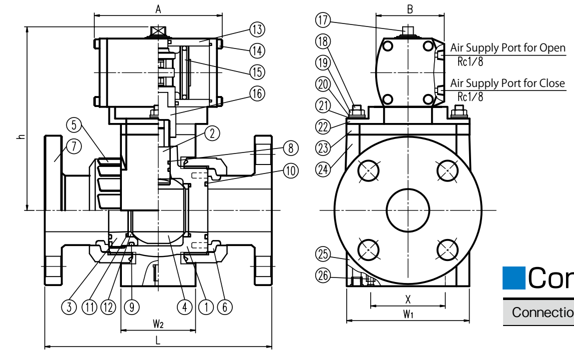
JIS **ANSI／ASTM** **DIN／ISO**

PNEUMATIC

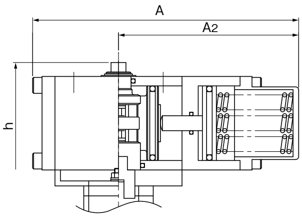
PNEUMATIC BALL VALVE TYPE C

- ◉Light weight and compact of aluminum actuator.
- ◉Excellent corrosion resistance.
- ◉Changeable into automatic/manual operation.
- ◉Other optional accessories are available on request.

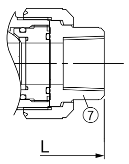
●Flange Type
〔Double Action〕

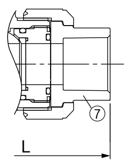


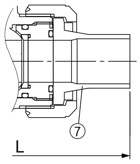
〔Air To Open&Close〕



●Thread Type ●TS Socket Type ●Butt Type







Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC、HT、PP or PVDF
②	Stem	1	PVC、HT、PP or PVDF
③	Ball Stopper	1	PVC、HT、PP or PVDF
④	Ball	1	PVC、HT、PP or PVDF
⑤	Union Nut	2	PVC、HT、PP or PVDF
⑥	Set Ring	2	PVC、HT、PP or PVDF
⑦	Socket	2	PVC、HT、PP or PVDF
⑧	Stem O-Ring	–	EPDM or FKM
⑨	Ball Stopper O-Ring	1	EPDM or FKM
⑩	Union O-ring	2	EPDM or FKM
⑪	Ball Seat O-Ring	2	EPDM or FKM
⑫	Ball Seat	2	PTFE
⑬	Cylinder	1	A6063
⑭	Bolt	8	SUS304
⑮	Piston	2	AC2A
⑯	Connector	1	SUS304
⑰	Shaft	1	SCS13
⑱	Stud Bolt	2	SUS304
⑲	Nut	2	SUS304
⑳	Spring Washer	2	SUS304
㉑	Washer	2	SUS304
㉒	Yoke	1	FRP
㉓	Collar	1	FRP
㉔	Upper Mount	1	FRP
㉕	Lower Mount	1	FRP
㉖	Insert Nut	2	C3601

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743、AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP)
		ISO10931 (PVDF)

·For flange, dimension of bolt holes conforming the standards

Size

Flange type·Thread type·TS socket type·Butt type

Unit:mm

Size		L					h		Actuator					W1	W2	X	Max. Working Pressure at Room Temp. (MPa)	Air Consumption(ℓ/time/unit)		Weight (kg/pc)			
A	B	Flange	Thread		TS Socket	Butt	Double Action	Air To Open &Close	Double Action		Air To Open&Close							Double Action	Air To Open& Close	Double Action		Air To Open&Close	
			PVC	PVDF					A	B	A	A2	B							Flange	Thread· TS Socket	Flange	Thread· TS Socket
15	1/2	143	97	99	109	143	113	136	82	43	189	130	60	92	50	50	1.0	0.1	0.04	0.7	0.5	1.8	1.6
20	3/4	172	117	116	132	152	120	139	82	43	189	130	60	92	50	50	1.0	0.1	0.04	0.8	0.6	1.9	1.7
25	1	187	128	136	143	161	132	151	82	43	189	130	60	92	50	50	1.0	0.1	0.04	0.9	0.7	2.1	1.8
32	1 1/4	190	146	148	166	167	156	156	120	64	189	130	60	98	60	55	1.0	0.1	0.16	1.9	1.3	2.4	1.9
40	1 1/2	212	163	169	175	190	172	205	120	64	269	182	87	117	70	70	1.0	0.33	0.16	2.5	1.9	5.6	5.0
50	2	234	188	196	203	216	179	208	120	64	269	182	87	135	70	85	1.0	0.33	0.16	3.2	2.3	6.3	5.4
65	2 1/2	259	227	227	259	208	241	278	170	90	385	262	121	163	90	115	1.0	0.94	0.55	6.9	5.8	15.3	14.2
80	3	304	278	278	304	301	306	306	243	121	385	262	121	198	110	140	1.0	0.94	0.55	12.9	12.0	17.3	16.4
100	4	372	330	330	390	340	337	337	243	121	385	262	121	240	110	180	1.0	0.94	0.55	17.5	16.5	21.4	20.4

Option

Solenoid valve	Speed controller
Limit switch	Regulator with filter
Pneumatic positioner	Manual handle for open-close
Electro pneumatic positioner	

·Other optional accessories are available on request.

Max. Operating Temperature

Material	Max. (℃)
PVC	50
HT	90
PP	80
PVDF	100

Standard Operating Air Pressure

Standard	Double Action	0.4MPa
	Air To Open&Close	0.5MPa

Air Supply Port

Double Action	15~50A	Rc 1/8	65~100A	Rc 1/4
Air To Open&Close	15~32A	Rc 1/8	40~100A	Rc 1/4

⚠Important Notes

●Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.

●Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

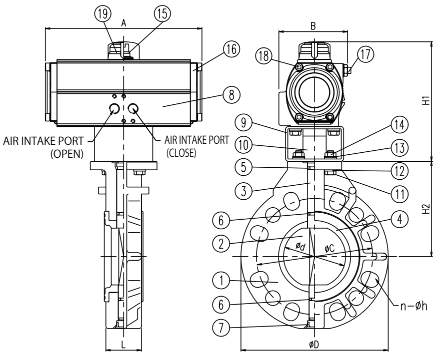
JIS10K **ANSI／ASTM** **DIN／ISO**

PNEUMATIC

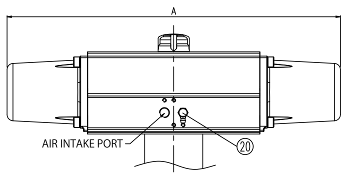
ESLON PNEUMATIC BUTTERFLY VALVE TYPE S

- Light weight and compact of aluminum actuator.
- Excellent corrosion resistance.
- Changeable into automatic/manual operation.
- Air pressure for open/close operation : 0.4MPa
- Manual side wheel handle for open/close is available.
- Box type of Limit switch is available as optional accessory.
- Conformity with NAMUR standard.

〔Double Action〕



〔Air To Open&Close〕



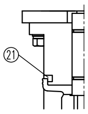
⚠ Important Notes

Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC、PP or PVDF
②	Disc	1	PP or PVDF
③	Shaft	1	SUS420J2 or SUS316
④	Seat Ring	1	EPDM or FKM
⑤	O-ring	1	EPDM or FKM
⑥	O-ring	2	EPDM or FKM
⑦	Lower Cap	1	PP
⑧	Cylinder	1	AL6063
⑨	Yoke	1	STKR+Painting
⑩	Connector	1	SUS303
⑪	Hexagon Bolt	8	SUS304
⑫	Washer	12	SUS304
⑬	Spring Washer	8	SUS304
⑭	Nut	4	SUS304
⑮	Shaft	1	SCM435
⑯	Cover	2	AL12
⑰	Adjust Bolt	2	SUS304
⑱	Cover Bolt	8	SUS304
⑲	Shaft Cover	1	PA+PE
⑳	Cylinder Ventilation Plug	1	C3601:Cr Plating
㉑	Reinforced Ring (350,400A PP)	2	S45C+Painting

350、400A
(Only for PP)



〔Box type of Limit switch〕

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10

・For flange, dimension of bolt holes conforming the standards

Size

Unit:mm

Size		L	Double Action		Air To Open&Close		Actuator				Max. Working Pressure at Room Temp. (MPa)	Air Consumption(ℓ/time/unit)		Weight (kg/pc)	
							Double Action		Air To Open&Close			Double Action	Air To Open &Close	Double Action	Air To Open &Close
A	B		H1	H2	H1	H2	A	B	A	B					
40	1 1/2	33	138	105	138	105	162	75	257	78	1.0	0.24	0.11	2.5	2.6
50	2	43	138	112	155	112	162	75	314	89	1.0	0.24	0.24	2.7	3.7
65	2 1/2	46	138	123	155	123	162	75	314	89	1.0	0.24	0.24	3.1	4.5
80	3	46	155	130	174	130	202	89	430	101	1.0	0.49	0.48	4,4	7.0
100	4	52	175	152	197	152	262	101	500	129	1.0	1.02	0.86	6.6	12.4
125	5	56	228	169	253	169	311	129	606	151	1.0	1.83	1.68	9.9	18.9
150	6	60	252	178	271	178	390	151	682	164	1.0	3.46	2.45	16.6	28.6
200	8	71	252	230	298	230	390	151	781	188	1.0	3.46	3.74	18.2	41.3
250	10	76	277	250	323	250	390	151	781	188	1.0	3.46	3.74	27.0	47.9
300	12	114	295	280	323	280	431	164	781	188	1.0	5.19	3.74	41.1	54.9
350	14	129	323	325	387	325	506	188	982	231	0.75	7.96	6.19	55.0	97.4
400	16	169	323	350	387	350	506	188	982	231	0.6	7.96	6.19	62.3	105.0

Option

Solenoid valve	Speed controller
Limit switch	Regulator with filter
Pneumatic positioner	Side Handle
Electro pneumatic positioner	

・Various optional accessories can be attached on request.

Max. Operating Temperature

Material	Max. (℃)
PVC	50
PP	80
PVDF	120

Standard Operating Air Pressure

Standard	Double Action	0.4MPa
	Air To Open&Close	0.4MPa

Air Supply Port

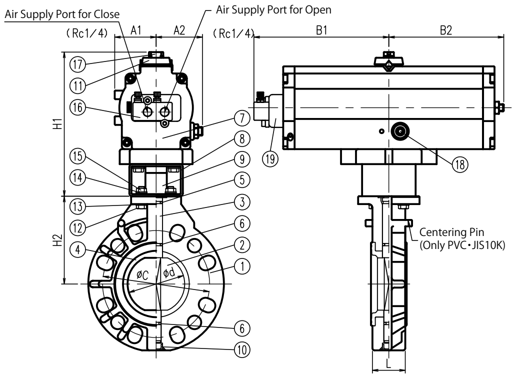
Double Action	Rc 1/4
Air To Open&Close	Rc 1/4

JIS10K **ANSI／ASTM** **DIN／ISO**

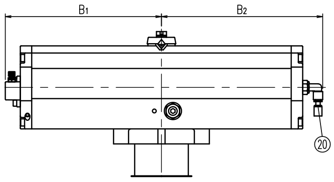
ESLON PNEUMATIC BUTTERFLY VALVE TYPE T

- Light weight and compact of aluminum actuator.
- Excellent corrosion resistance.
- Changeable into automatic/manual operation.
- Other optional accessories are available on request.

〔Double Action〕



〔Air To Open&Close〕



Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC、PP or PVDF
②	Gate	1	PP or PVDF
③	Shaft	1	SUS420J2 or SUS316
④	Seat ring	1	EPDM or FKM
⑤	O-ring	1	EPDM or FKM
⑥	O-ring	2	EPDM or FKM
⑦	Cylinder	1	Aluminum extrusion
⑧	Yoke	1	STKR
⑨	Connector	1	S45C
⑩	Lower Cap	1	PP
⑪	Indicator	1	—
⑫	Bolt	8	SUS304
⑬	Washer	12	SUS304
⑭	Spring Washer	8	SUS304
⑮	Nut	4	SUS304
⑯	Speed controller	1	—
⑰	Opening indicator shaft	1	—
⑱	Stopper Bolt	1	—
⑲	Equalizer valve	1	Only for Double Action
⑳	Silencer	1	Only for Air To Open&Close

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10

･For flange, dimension of bolt holes conforming the standards

⚠ Important Notes

Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Size

Double Action（40A～300A）、Air To Open&Close（40A～200A）

Unit:mm

Size		L	Double Action		Air To Open&Close		Actuator								Max. Working Pressure at Room Temp.（MPa）	Air Consumption（ℓ/time/unit）		Weight（kg/pc）	
							Double Action				Air To Open&Close					Double Action	Air To Open&Close	Double Action	Air To Open&Close
A	B		H1	H2	H1	H2	A_1	A_2	B_1	B_2	A_1	A_2	B_1	B_2					
40	1 1/2	33	178	105	178	105	51	53	156	130	51	53	177	184	1.0	0.9	0.5	4.9	6.1
50	2	43	178	112	178	112	51	53	156	130	51	53	177	184	1.0	0.9	0.5	5.1	6.3
65	2 1/2	46	178	123	178	123	51	53	156	130	51	53	177	184	1.0	0.9	0.5	5.4	6.6
80	3	46	202	130	202	130	58	65	189	161	58	65	219	226	1.0	2.0	1.1	8.4	11.5
100	4	52	202	152	259	152	58	65	189	161	69	83	269	276	1.0	2,0	2.1	9.4	18.6
125	5	56	259	169	259	169	69	83	227	202	69	83	269	276	1.0	3.9	2.1	15.9	20.1
150	6	60	259	178	324	178	69	83	227	202	85	101	350	357	1.0	3.9	4.6	16.8	30.3
200	8	71	259	230	324	230	69	83	227	202	85	101	350	357	1.0	3.9	4.6	19.9	38.2
250	10	76	324	250	—	—	85	101	280	258	—	—	—	—	1.0	7.8	—	36.4	—
300	12	114	324	280	—	—	85	101	280	258	—	—	—	—	1.0	7.8	—	43.5	—

Option

Solenoid valve	Pneumatic positioner
Limit switch	Electro pneumatic positioner
Manual handle for open-close	Regulator with filter
Opening control unit	

･Other optional accessories are available on request.

Max. Operating Temperature

Material	Max.（℃）
PVC	50
PP	80
PVDF	120

Standard Operating Air Pressure

Standard	Double Action	0.4MPa
	Air To Open&Close	0.5MPa

Air Supply Port

Double Action	Rc 1/4
Air To Open&Close	Rc 1/4

JIS **ANSI／ASTM** **DIN／ISO**

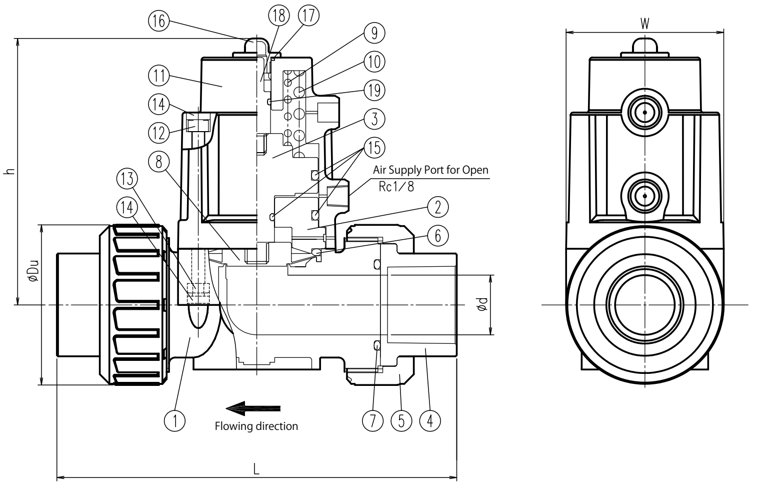
PNEUMATIC

ESLON AIR OPERATION VALVE

- Light weight and compact of plastic actuator.
- Excellent chemical and corrosion resistance.
- Excellent open-close durability.
- Water hammer prevention with optimized diaphragm design.
- By-pass on the valve body to avoid dead water by closing is available as optional accessory.

Conforming Standard

Connection	Standard	Classification
Socket	JIS	JIS K 6743､AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063



Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC
②	Diaphragm Stopper	1	PVC
③	Piston	1	PVC
④	TS Socket	2	PVC
⑤	Union Nut	2	PVC
⑥	O-Ring	1	EPDM or FKM
⑦	O-Ring	2	EPDM or FKM
⑧	Diaphragm	1	PTFE
⑨	Spring	1	SUS304
⑩	Spring	1	SUS304
⑪	Housing	1	PPS-GF
⑫	Bolt	4	SUS304
⑬	Nut	4	SUS304
⑭	Cap	8	EPDM
⑮	O-Ring	3	EPDM
⑯	Indicator Cover	1	PC
⑰	O-Ring	1	EPDM
⑱	Indicator	1	PVC
⑲	O-Ring	1	EPDM

Size

Unit:㎜

Size		d	L	h	W	Du	Max. Working Pressure at Room Temp. (MPa)	Air Consumption(ℓ/time/unit)			Weight (kg/pc)		
A	B							Double Action	Air To Close	Air To Open	Double Action	Air To Close	Air To Open
15	1/2	15	145	113	66	54	0.5	0.06	0.04	0.02	0.6	0.6	0.7
20	3/4	20	149	113	66	54	0.5	0.06	0.04	0.02	0.6	0.6	0.7
25	1	25	168	113	66	67	0.5	0.06	0.04	0.02	0.7	0.8	0.8
32	1 1/4	31	242	149	97	87	0.5	0.23	0.13	0.05	1.9	2.1	2.3
40	1 1/2	40	238	149	97	87	0.5	0.23	0.13	0.05	1.9	2.1	2.3
50	2	51	275	200	117	107	0.5	0.45	0.26	0.09	3.3	3.6	4.1
65	2 1/2	65	321	246	149	128	0.5	1.03	0.65	0.21	6.0	6.6	8.4

Option

Opening controller	Speed controller
Opening controller + Indicator	Solenoid valve
By-pass	Regulator with filter
Pedestal	─

Max. Operating Temperature

Material	Max. (℃)
PVC	50

Standard Operating Air Pressure

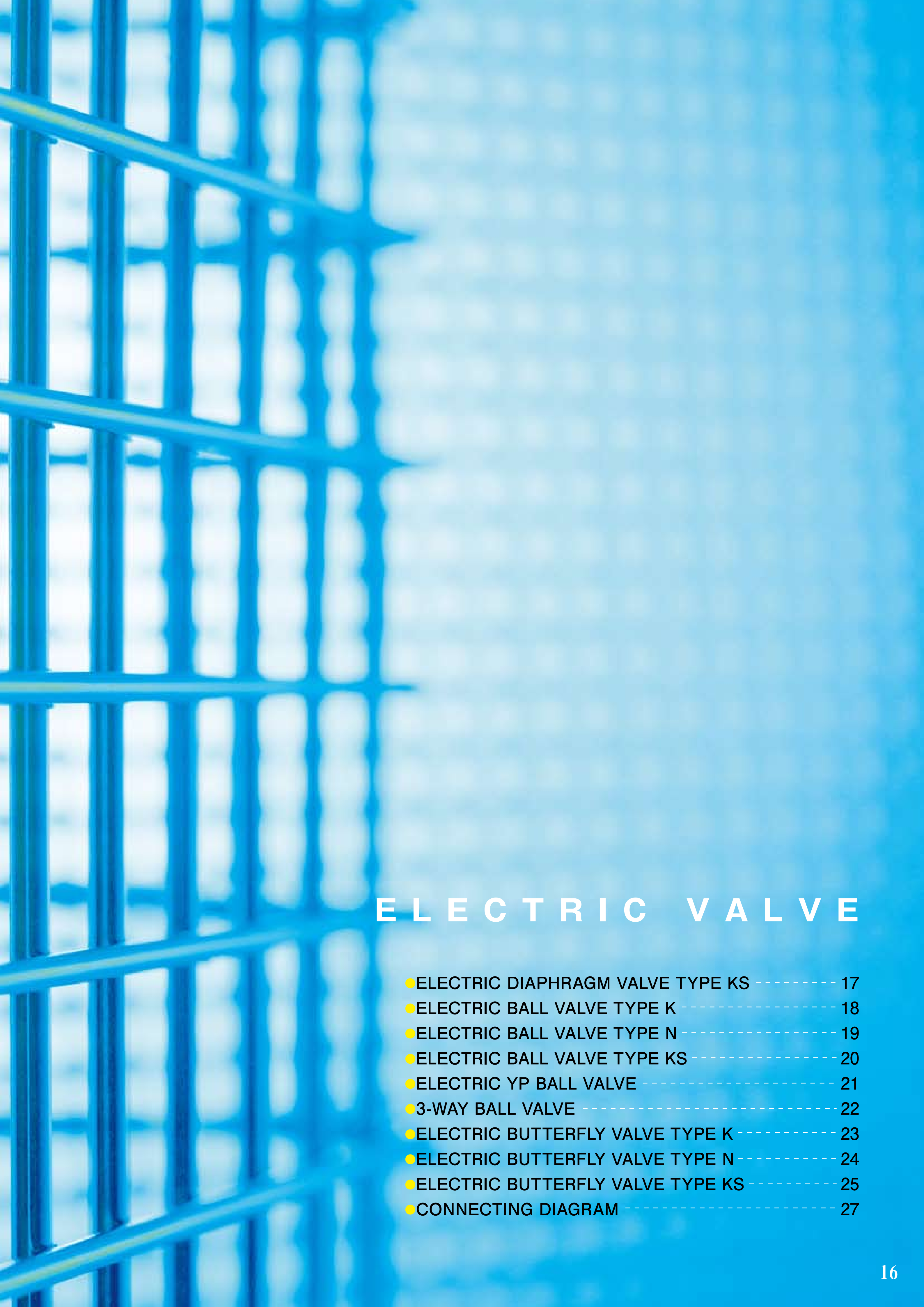
Standard	Double Action	0.4MPa
	Air To Open&Close	0.5MPa

Air Supply Port

Double Action	Rc 1/8
Air To Open&Close	Rc 1/8

⚠ Important Notes

Union nut is compatible only with Eslon True Union Fitting compact type. (Incompatible with Eslon Ball Valve, Diaphgram Valve, and True Union Fitting which is compatible with Ball Valve)



ELECTRIC VALVE

- ELECTRIC DIAPHRAGM VALVE TYPE KS ---------- 17
- ELECTRIC BALL VALVE TYPE K ---------- 18
- ELECTRIC BALL VALVE TYPE N ---------- 19
- ELECTRIC BALL VALVE TYPE KS ---------- 20
- ELECTRIC YP BALL VALVE ---------- 21
- 3-WAY BALL VALVE ---------- 22
- ELECTRIC BUTTERFLY VALVE TYPE K ---------- 23
- ELECTRIC BUTTERFLY VALVE TYPE N ---------- 24
- ELECTRIC BUTTERFLY VALVE TYPE KS ---------- 25
- CONNECTING DIAGRAM ---------- 27

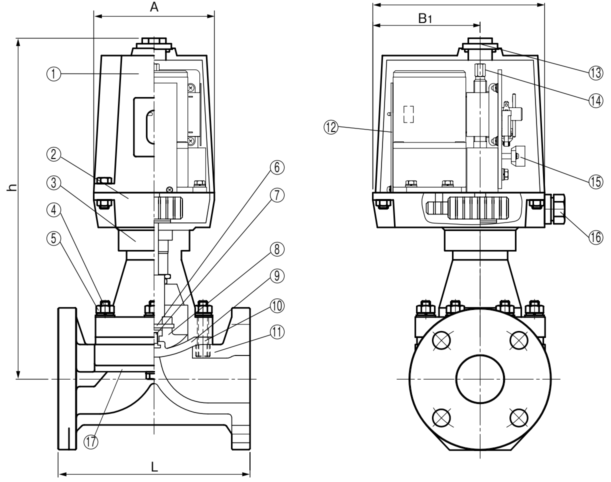
JIS **ANSI／ASTM** **DIN／ISO**

ELECTRIC

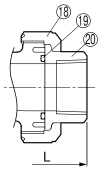
ESLON ELECTRIC DIAPHRAGM VALVE TYPE KS

- Excellent chemical and corrosion resistance with Epoxy resin coated aluminum actuator.
- Compact and high durability motor onboard.
- Easy flow control and water hammer prevention by slow action.
- Visual position indicator on actuator.
- Manual open-close operation is available by attached box wrench.

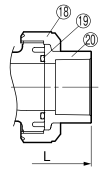
●Flange Type



●Thread Type



●TS Socket Type



Parts List

No.	Part Name	Q'ty	Material	
①	Cover	1	AC-4/Painted by Epoxy Resin	
②	Actuator base	1	AC-3/Painted by Epoxy Resin	
③	Bonnet	1	AC-7/Painted by Epoxy Resin	
④	Bolt	—	SUS304	
⑤	Nut	—	SUS304	
⑥	Spring Pin	1	SUS304	
⑦	Stud bolt	1	SUS304	
⑧	Compressor	1	GF-PP	
⑨	Diaphragm	1	EPDM or PTFE	
⑩	Stud Bolt	—	SUS304	
⑪	Body	1	PVC、HT、PP or PVDF	
⑫	Indicator	1	—	
⑬	Open-Close Plug	1	PP	
⑭	Open-Close Stem	1	SUS304	
⑮	Terminal Block	1	Phenol Resin	
⑯	Conduit gland	1	G1/2	
⑰	Supporting Plate	2	50A以下	SUS304
			65A以上	SS400 Painted by Epoxy Resin
⑱	Union Nut	2	PVC、HT or PVDF	
⑲	O-ring	2	EPDM or FKM	
⑳	Connections	2	PVC、HT or PVDF	

･Quantity of ④, ⑤, and ⑩ differ depending on size of valve.

Size

Flange Type･Thread Type･TS Socket Type

Unit:mm

Size		L				h	Actuator			Max. Working Pressure at Room Temp(MPa)		Time For Open-Close		Weight (kg/pc)
A	B	Flange	Thread	TS Socket	Butt		A	B	B1	EPDM	PTFE	50Hz	60Hz	
15	1/2	110	133	144	185	266	112	150	93	0.7	0.5	12	10	5.0
20	3/4	120	158	172	200	277	112	150	93	0.7	0.5	14	12	5.5
25	1	130	181	187	212	285	112	150	93	0.7	0.5	15	13	6.0
32	1 1/4	180	—	262	—	349	132	188	118	0.7	0.5	11	9	9.5
40	1 1/2	180	248	262	273	349	132	188	118	0.7	0.5	11	9	9.5
50	2	210	280	298	300	387	132	188	118	0.7	0.5	20	17	10.5
65	2 1/2	250	—	—	—	435	132	188	118	0.7	0.5	36	30	12.5
80	3	280	—	—	—	511	200	237	154	0.5	0.3	38	32	22.0
100	4	340	—	—	—	562	200	237	154	0.5	0.3	50	45	27.5
125	5	410	—	—	—	595	200	238	154	0.5	0.2	72	61	35.0
150	6	480	—	—	—	601	200	238	154	0.5	0.2	90	72	43.0

･Flange dimension of 32A is same as 40A, but long bolt hole on the flange.

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743、AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP)
		ISO10931 (PVDF)

･For flange, dimension of bolt holes conforming the standards

Max. Operating Temperature

Material	Max. (℃)	
PVC	TS Socket, Thread	50
	Flange	60
HT	90	
PP	90	
PVDF	Thread, Butt	100
	Flange	120

Option

No-voltage limit switch
Space heater

Specification of Actuator

Nominal diameter(A)		15~25A	32~65A	80A	100A	125･150A
Input system		Power switching system				
Contact output		Power supply voltage				
Operating voltage		Single-phase AC100,200V(50/60Hz)				
Motor	Type	Reversible motor				
	Time rating	30 minutes rating				
Protect		15~25A: impedance protect inside 32~150A:Thermal protect inside				
Rated curret	100V	0.3A	0.8A	1.0A	1.4A	2.0A
	200V	0.15A	0.4A	0.5A	0.7A	1.0A
Manual operation		Drive shaft direct operation				
Connector type		G1/2Conduit connector (max.ϕ10.5 Cabtire cable)				
Material		AC-4 Epoxy coating				
Protection		IP63				

⚠ Important Notes

Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

LINH Connecting Diagram ▶ 27 Working Pressure and Temp ▶ 34 Flow Diagram ▶ 37 Installation ▶ 38

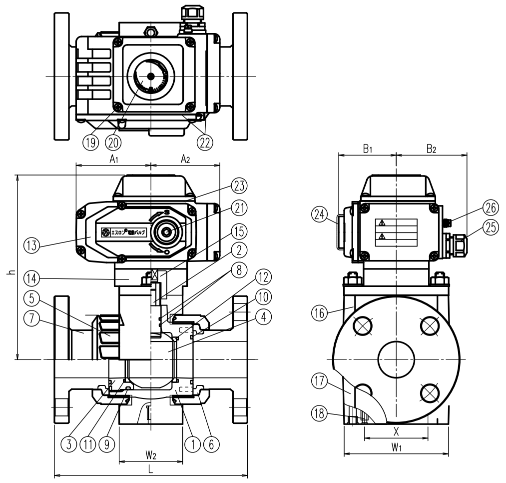
JIS ANSI／ASTM DIN／ISO

ESLON ELECTRIC BALL VALVE TYPE K

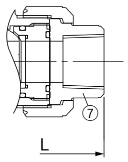
ELECTRIC

- ◎Light weight and compact of actuator with aluminum die-cast housing.
- ◎Excellent chemical and corrosion resistance.
- ◎Visual position indicator on actuator.
- ◎Easy flow control and water hammer prevention by slow action.
- ◎Suitable for frequent operation with constant rating type of motor onboard.
- ◎Conformity with CE.

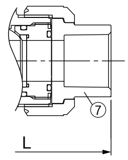
●Flange Type



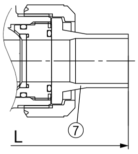
●Thread Type



●TS Socket Type



●Butt Type



Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC、HT、PP or PVDF
②	Stem	1	PVC、HT、PP or PVDF
③	Ball Stopper	—	PVC、HT、PP or PVDF
④	Ball	1	PVC、HT、PP or PVDF
⑤	Union Nut	2	PVC、HT、PP or PVDF
⑥	Set Ring	2	PVC、HT、PP or PVDF
⑦	Socket	2	PVC、HT、PP or PVDF
⑧	Stem O-Ring	—	EPDM or FKM
⑨	Ball Stopper O-Ring	—	EPDM or FKM
⑩	Union O-ring	2	EPDM or FKM
⑪	Ball Seat O-Ring	2	EPDM or FKM
⑫	Ball Seat	2	PTFE
⑬	Actuator	1	ADC12

No.	Part Name	Q'ty	Material
⑭	Yoke	1	AC4A
⑮	Connector	1	ZDC2
⑯	Upper Mount	1	FRP
⑰	Lower Mount	1	FRP
⑱	Insert Nut	2	C3601
⑲	Thread	14	SUS304
⑳	Indicator	1	Toughened glass
㉑	Manual handle pivot	1	S45C
㉒	Gasket	2	NBR
㉓	Gasket	1	NBR
㉔	Rubber Cap	1	NBR
㉕	Cable gland	1	PA、G1/2
㉖	Ground terminal	1	SS400/Nickel plate

・Ground terminal is only for AC200/220V.

⚠Important Notes

- ●Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- ●Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Size

Flange Type・Thread Type・TS Socket Type・Butt Type

Unit:mm

Size		L						h	Actuator				W1	W2	X	Max. Working Pressure at Room Temp (MPa)	Time For Open-Close		Weight(kg/pc)	
		Flange		Thread		TS Socket	Butt													
A	B	PVC·HT	PP·PVDF	PVC	PVDF	PVC·HT	PVDF		A1	A2	B1	B2					50Hz	60Hz	Flange	Thread·TS Socket
15	1/2	143	139	97	99	109	154	178	82.5	76	63.5	78	92	50	50	1.0	4	3.3	3.5	3.3
20	3/4	172	168	117	116	132	162	180	82.5	76	63.5	78	92	50	50	1.0	4	3.3	3.8	3.4
25	1	187	182	128	136	143	171	193	82.5	76	63.5	78	92	50	50	1.0	4	3.3	4.2	3.6
32	1 1/4	190	185	146	148	166	177	197	82.5	76	63.5	78	98	60	55	1.0	15	12.5	4.7	4.0
40	1 1/2	212	206	163	169	175	192	204	82.5	76	63.5	78	117	70	70	1.0	15	12.5	5.5	4.9
50	2	234	228	188	196	203	206	211	82.5	76	63.5	78	135	70	85	1.0	15	12.5	6.5	5.5
65	2 1/2	259	—	227	227	259	—	239	82.5	76	63.5	78	163	90	115	1.0	15	12.5	8.5	7.3
80	3	304	—	278	278	304	—	295	97.5	109	67	80.5	198	110	140	1.0	30	25	14.9	13.8
100	4	372	—	330	330	390	—	325	97.5	109	67	80.5	240	110	180	1.0	30	25	20.8	19.8

Option

No-voltage limit switch	Potentiometer
Space heater	

Max. Operating Temperature

Material	Max. (℃)
PVC	50
HT	90
PP	80
PVDF	100

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743、AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP)
		ISO10931 (PVDF)

・For flange, dimension of bolt holes conforming the standards

Specification of Actuator

Nominal diameter(A)		15～65A	80·100A
Input system		Power switching system	
Contact output		Power supply voltage	
Operating voltage		Single-phase AC100,200V(50/60Hz)	
Motor	Type	Reversible motor	
	Time rating	Continuous rating	
Protect		Thermal protect inside Adjustable mechanical stopper for open and close-side	
Rated curret	100/110V	0.7/0.9A	0.65/0.70A
	200/220V	0.4/0.5A	0.35/0.40A
Manual operation		Drive shaft direct operation	
Connector type		G1/2 Conduit(t Cable OD ϕ9-11)	
Material		ADC12 Epoxy coating	
Protection		IP66	

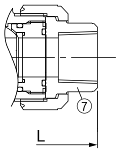
JIS **ANSI／ASTM** **DIN／ISO**

ESLON ELECTRIC BALL VALVE TYPE N

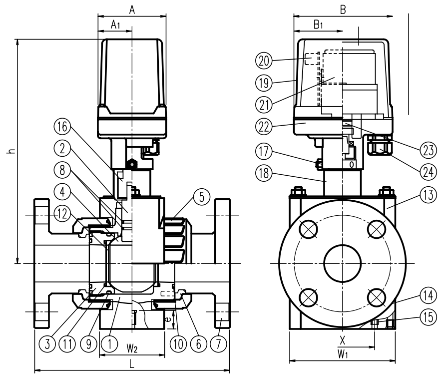
ELECTRIC

- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- Available 2 type of rotation speed by motor, standard type and high speed type for open-close operation.
- Visually confirmable valve action and open-close position, available manual open-close operation.

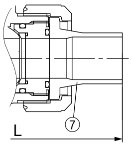
●Thread Type



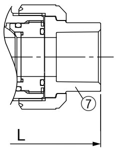
●Flange Type



●Butt Type



●TS Socket Type



⚠ Important Notes

- ●Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- ●Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC、HT、PP or PVDF
②	Stem	1	PVC、HT、PP or PVDF
③	Ball Stopper	─	PVC、HT、PP or PVDF
④	Ball	1	PVC、HT、PP or PVDF
⑤	Union Nut	2	PVC、HT、PP or PVDF
⑥	Set Ring	2	PVC、HT、PP or PVDF
⑦	Socket	2	PVC、HT、PP or PVDF
⑧	Stem O-Ring	─	EPDM or FKM
⑨	Ball Stopper O-Ring	─	EPDM or FKM
⑩	Union O-ring	2	EPDM or FKM
⑪	Ball Seat O-Ring	2	EPDM or FKM
⑫	Ball Seat	2	PTFE
⑬	Upper Mount	1	FRP
⑭	Lower Mount	1	FRP
⑮	Insert Nut	2	C3601
⑯	Connector	1	C3604
⑰	Thread	1	SUS304
⑱	Yoke	1	SUS304
⑲	Actuator Cover	1	PC
⑳	Terminal Block	1	─
㉑	Synchronous motor	1	─
㉒	Actuator base	1	ADC-12
㉓	Micro Switch	2	─
㉔	Cable connector	1	PA

Size

Flange Type·Thread Type·TS Socket Type·Butt Type

Unit:mm

Size		L						h		Actuator				W1	W2	X	Max. Working Pressure at Room Temp (MPa)	Time For Open-Close				Weight (kg/pc)	
		Flange		Thread		TS Socket	Butt	Standard Type	Higher Speed Type	A	A1	B	B1					Standard Type		Higher Speed Type		Flange	Thread·TS Socket
A	B	PVC·HT	PP·PVDF	PVC	PVDF	PVC·HT	PVDF											50Hz	60Hz	50Hz	60Hz		
15	1/2	143	139	97	99	109	154	166	193	74	37	107	36	92	50	50	1.0	5.4	4.5	3	2.5	2.0	1.7
20	3/4	172	168	117	116	132	162	168	195	74	37	107	36	92	50	50	1.0	15.5	13	3	2.5	2.2	1.8
25	1	187	182	128	136	143	171	181	208	74	37	107	36	92	50	50	1.0	15.5	13	3	2.5	2.5	2.0
32	1 1/4	190	185	146	148	166	177	228	228	74	37	107	53	98	60	55	1.0	16	13.5	6	5	3.3	2.7
40	1 1/2	212	206	163	169	175	192	244	244	74	37	107	53	117	70	70	1.0	16	13.5	6	5	3.9	3.4
50	2	234	228	188	196	203	206	─	331	160	93	175	105	135	70	85	1.0	─	─	3～ 4		11.0	10.0
65	2 1/2	259	─	227	227	259	─	─	351	160	93	175	105	163	90	115	1.0	─	─	3～ 4		14.0	13.0
80	3	304	─	278	278	304	─	─	377	160	93	175	105	198	110	140	1.0	─	─	6～10		18.0	17.0
100	4	372	─	330	330	390	─	─	412	160	93	175	105	240	110	180	1.0	─	─	6～10		24.5	24.0

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743, AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP)
		ISO10931 (PVDF)

·For flange, dimension of bolt holes conforming the standards

Max. Operating Temperature

Material	Max. (℃)
PVC	50
HT	90
PP	80
PVDF	100

Option

No-voltage limit switch

Specification of Actuator

Type		Standard Type		Higher Speed Type	
Nominal diameter (A)		15～32A	40A	15～40A	50～100A
Input system		Power switching system			
Contact output		Power supply voltage			
Operating voltage		Single-Phase AC100/110,200/220V (50/60Hz)			
Motor	Type	Inductor type synchronous motor			
	Time rating	15 minutes rating under loading rate 20%			
Protect		Thermal protect inside		Thermal protect inside	Thermistor type
Power consumption		16VA	19VA	50VA	100VA max.
Manual operation		Release of the screw lock		Drive shaft direct operation	
Connector type		G3/8 wire connector (ϕ5～ϕ10.5Cabtire cable)			
Material		ADC acrylic resin baking finish			
Protection		IP65			
Other		Space Heater			

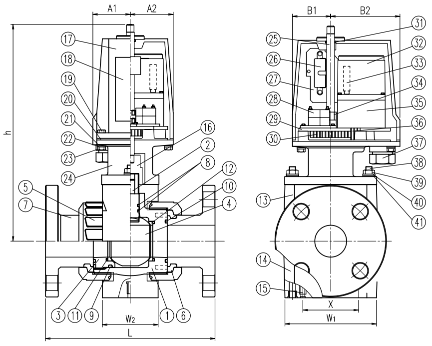
JIS **ANSI／ASTM** **DIN／ISO**

ELECTRIC

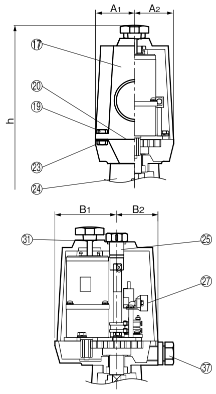
ESLON ELECTRIC BALL VALVE TYPE KS

- ◉ Excellent chemical and corrosion resistance with epoxy resin coated aluminum actuator.
- ◉ Compact and high durability motor on board.
- ◉ High rotation speed of open-close operation.
- ◉ Visual position indicator built in the actuator.
- ◉ Manual open-close operation is available by wrench.

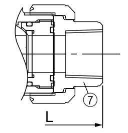
●Flange Type
(15～40A)



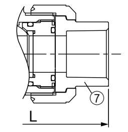
(50～100A)



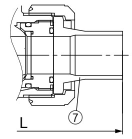
●Thread Type



●TS Socket Type



●Butt Type



Parts List

No.	Part Name	Q'ty	Material	No.	Part Name	Q'ty	Material
①	Body	1	PVC、HT、PP or PVDF	㉒	Washer	4	SUS304
②	Stem	1	PVC、HT、PP or PVDF	㉓	Nut	4	SUS304
③	Ball Stopper	—	PVC、HT、PP or PVDF	㉔	Actuator base	1	AC-7+Painted by Epoxy Resin
④	Ball	1	PVC、HT、PP or PVDF	㉕	Open-Close Shaft	1	SUS303
⑤	Union Nut	2	PVC、HT、PP or PVDF	㉖	Condenser	1	—
⑥	Set Ring	2	PVC、HT、PP or PVDF	㉗	Terminal Block	1	Phenol Resin
⑦	Socket	2	PVC、HT、PP or PVDF	㉘	Micro Switch	2	OMRON: V-105-1A4
⑧	Stem O-Ring	—	EPDM or FKM	㉙	Motor base	1	AC-7
⑨	Ball Stopper O-Ring	—	EPDM or FKM	㉚	Gear B	1	S45C
⑩	Union O-ring	2	EPDM or FKM	㉛	O-ring	1	SBR
⑪	Ball Seat O-Ring	2	EPDM or FKM	㉜	Reversible Motor	1	—
⑫	Ball Seat	2	PTFE	㉝	Thermal protector	1	—
⑬	Upper Mount	1	FRP	㉞	Com	2	SS400
⑭	Lower Mount	1	FRP	㉟	Gear Head	1	—
⑮	Insert Nut	2	C3601	㊱	Gear A	1	S45C
⑯	Driver stem	1	SUS303	㊲	Conduit gland	1	G1/2
⑰	Cover	1	AC-4+Painted by Epoxy Resin	㊳	Stud Bolt	2	SUS304
⑱	Face plate	1	AL-P	㊴	Nut	2	SUS304
⑲	Bolt	4	SUS304	㊵	Spring Washer	2	SUS304
⑳	Cover Gasket	1	NR	㊶	Washer	2	SUS304
㉑	Spring Washer	4	SUS304				

Option

No-voltage limit switch
Space Heater

Max. Operating Temperature

Material	Max. (℃)
PVC	50
HT	90
PP	80
PVDF	100

⚠ Important Notes

- ●Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- ●Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743、AS21(65A)
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999
Butt	DIN/ISO	DIN8077 (PP)
		ISO10931 (PVDF)

·For flange, dimension of bolt holes conforming the standards

Specification of Actuator

Nominal diameter(A)		15～40A	50～65A	80～100A
Input system		Power switching system		
Contact output		Power supply voltage		
Operating voltage		Single-phase AC100,200V(50/60Hz)		
Motor	Type	Reversible motor		
	Time rating	30 minutes rating		
Protect		15～65A: Impedance protect inside 80～100A:Thermal protect inside		
Rated curret	100V	0.2	0.3	0.6
	200V	0.15	0.15	0.3
Manual operation		Drive shaft direct operation		
Connector type		G1/2 wire connector (max.ϕ10.5 Cabtire cable)		
Material		AC-4 Epoxy coating		
Protection		IP63		

Size

Flange Type·Thread Type·TS Socket Type·Butt Type

Unit:mm

Size		L						h	Actuator				W1		W2	X	Max. Working Pressure at Room Temp (MPa)	Time For Open-Close		Weight(kg/pc)	
		Flange		Thread		TS Socket	Butt														
A	B	PVC·HT	PP·PVDF	PVC	PVDF	PVC·HT	PVDF		A1	A2	B1	B2	Flange	Thread·TS Socket				50Hz	60Hz	Flange	Thread·TS Socket
15	1/2	143	139	97	99	109	154	229	48	54	48	88	92	92	50	50	1.0	4	3	3.3	3.0
20	3/4	172	168	117	116	132	162	232	48	54	48	88	92	92	50	50	1.0	4	3	3.5	3.1
25	1	187	182	128	136	143	171	246	48	54	48	88	92	92	50	50	1.0	4	3	3.8	3.3
32	1 1/4	190	185	146	148	166	177	252	48	54	48	88	97	98	60	55	1.0	7	6	4.0	3.4
40	1 1/2	212	206	163	169	175	192	271	48	54	48	88	120	117	70	70	1.0	7	6	4.7	4.1
50	2	234	228	188	196	203	206	329	55	55	87	58	135	135	70	85	1.0	7	6	7.7	6.8
65	2 1/2	259	—	227	227	259	—	339	55	55	87	58	166	163	90	115	1.0	7	6	9.8	8.6
80	3	304	—	278	278	304	—	425	65	65	92	88	192	198	110	140	1.0	7	6	15.7	14.7
100	4	372	—	330	330	390	—	455	65	65	92	88	236	240	110	180	1.0	7	6	21.6	21.0

LINK Connecting Diagram ▶ 27 Working Pressure and Temp ▶ 34 Flow Diagram ▶ 37 Installation ▶ 38

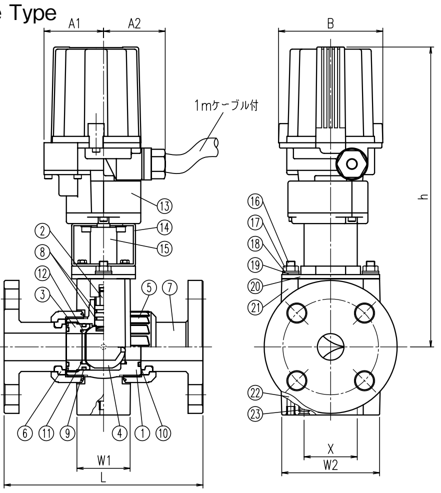
JIS **ANSI／ASTM** **DIN／ISO**

ELECTRIC

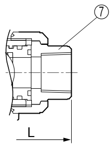
ESLON ELECTRIC YP BALL VALVE

- Unique flow channel design of the ball enable precise flowrate control.
- Automatic open/close control with 4- 20mA signal input.
- Excellent chemical and corrosion resistance with epoxy resin coated aluminum actuator.
- Compact and high durability motor onboard.
- Visual position indicator built in the actuator.

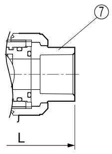
●Flange Type



●Thread Type



●TS Socket Type



Parts List

No.	Part Name		Q'ty	Material
①	Body		1	PVC
②	Stem		1	PVC
③	Ball Stopper		1	PVC
④	Ball		1	PVC
⑤	Union Nut		2	PVC
⑥	Set Ring		2	PVC
⑦	Socket		2	PVC
⑧	Stem O-Ring	15-32A	1	EPDM or FKM
		40、50A	2	EPDM or FKM
⑨	Ball Stopper O-Ring		1	EPDM or FKM
⑩	Union O-ring		2	EPDM or FKM
⑪	Ball Seat O-Ring		2	EPDM or FKM
⑫	Ball Seat		2	PTFE
⑬	Electric Actuator		1	―
⑭	Yoke		1	SUS304
⑮	Joint		1	SUS303
⑯	Stud Bolt		2	SUS304
⑰	Nut		2	SUS304
⑱	Spring Washer		2	SUS304
⑲	Washer		2	SUS304
⑳	Yoke		1	FRP
㉑	Upper Mount		1	FRP
㉒	Lower Mount		1	FRP
㉓	Insert Nut		2	C3601

Size

Flange Type・Thread Type・TS Socket Type

Unit:㎜

Size		L			h	Actuator			W1	W2	X	Max. Working Pressure at Room Temp (MPa)	Time For Open-Close	Weight (kg/pc)	
A	B	Flange	Thread	TS Socket		A1	A2	B						Flange	Thread・TS Socket
15	1/2	143	97	109	267	63	58	98	93	53	50	1.0	10	3.5	3.1
20	3/4	172	117	132	270	63	58	98	93	53	50	1.0	10	4.0	3.5
25	1	187	128	143	282	63	58	98	93	53	50	1.0	10	4.5	4.0
32	1 1/4	190	146	166	286	63	58	98	98	61	55	1.0	10	5.0	4.5
40	1 1/2	212	163	175	336	56	118	110	117	70	70	1.0	13	6.0	5.5
50	2	234	188	203	343	56	118	110	135	70	85	1.0	13	7.0	6.4

Max. Operating Temperature

Material	Max. (℃)
PVC	50

Specification of Actuator

Nominal diameter(A)	15～32A	40･50A
Operating voltage	DC24V	
Power consumption	14.4W	
Motor type	Synchronous motor	
Protective function	･Overload (lock) protection function ･Re-starting limit timer	
Opening detection	Potentiometer	
Input signal	DC4-20mA (Input resistance250Ω)	
Output signal	DC1～5V (Allowable load resistance 5kΩ or more)	
Resolution	1/1000	
Manual operation	None.	Drive shaft operation
Connector type	G1/2 female screw with 1m-cable	
Material	ADC	
Protection class	IP55	

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10
Socket	JIS	JIS K 6743
	ASTM	ASTM D2467
	DIN/ISO	DIN8063
Thread	JIS	JIS B 0203
	ANSI	ANSI B1.20.1
	DIN/ISO	DIN2999

･For flange, dimension of bolt holes conforming the standards

⚠ Important Notes

Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Connecting Diagram ▶ 27 Working Pressure and Temp ▶ 34 Flow Diagram ▶ 37 Installation ▶ 38

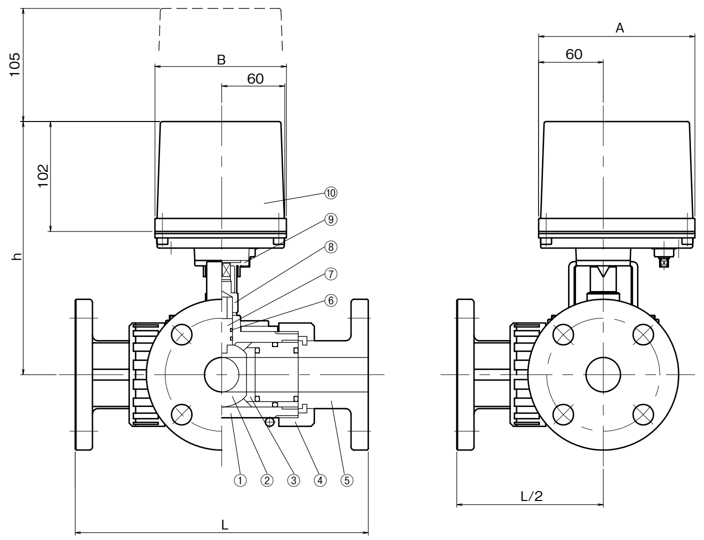
JIS

ESLON 3-WAY BALL VALVE

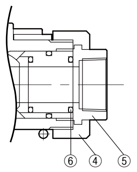
ELECTRIC

- Open/close position and flow rate control in 3-way
- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- Visually confirmable valve action and open-close position, available manual open-close operation.

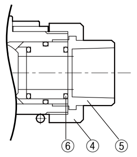
●Flange Type



●Thread Type



●TS Socket Type



Parts List

No.	Part Name	Q'ty	Material
①	Body	1	PVC
②	Ball	1	PVC
③	Ball Stopper		PVC
④	Union Nut		PVC
⑤	Socket		PVC
⑥	O-ring	11	EPDM or FKM
⑦	Stem	2	PVC
⑧	Connector	1	C3604BD
⑨	Bracket	1	SCS13
⑩	Electric Actuator	1	—

Size

Flange Type・Thread Type・TS Socket Type

Unit:mm

Size		L			h	Actuator		Max. Working Pressure at Room Temp (MPa)	Time For Open-Close		Weight (kg/pc)	
A	B	Flange	Thread	TS Socket		A	B		50Hz	60Hz	Flange	Thread・TS Socket
15	1/2	163	118	129	202	145	122	1.0	9.5	8	3.7	3.2
20	3/4	200	134	151	206	145	122	1.0	9.5	8	3.9	3.4
25	1	221	156	175	221	145	122	1.0	9.5	8	4.5	3.6
40	1 1/2	272	203	232	235	145	122	1.0	7.6	6	5.8	4.9
50	2	306	225	260	246	145	122	1.0	7.6	6	7.3	5.7

Option

No-voltage limit switch

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
Socket	JIS	JIS K 6743
Thread	JIS	JIS B 0203

・For flange, dimension of bolt holes conforming the standards

Max. Operating Temperature

Material	Max. (℃)
PVC	50

⚠ Important Notes

Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Specification of Actuator

Nominal diameter(A)		15~25A	32~65A
Input system		Power switching system	
Contact output		Power supply voltage	
Operating voltage		Single-phase AC100/110,200/220V(50/60Hz)	
Motor	Type	Synchronous motor	Reversible motor
	Time rating	15 minutes rating under loading rate 20%	
Protect		Thermal protect inside	
Power consumption		19VA	60VA
Manual operation		Drive shaft direct operation	
Connector type		G1/2 conduit (Cable connector) (Φ6-12 cabtire cable)	
Material		ADC acrylic resin baking finish	
Protection		IP65	
Other		Space Heater	

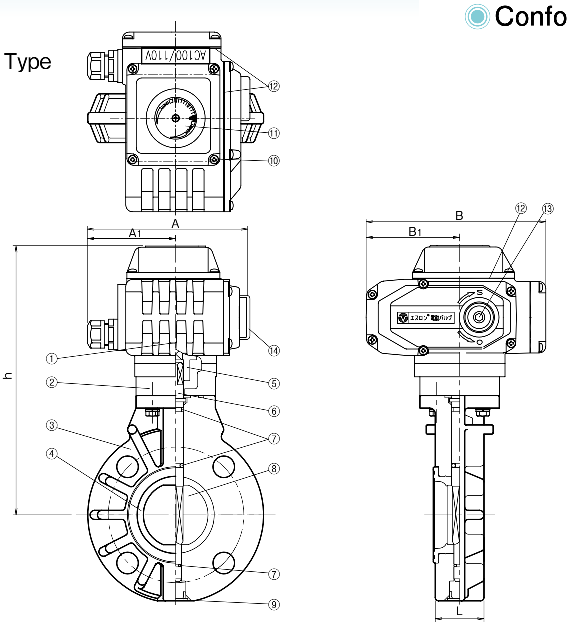
JIS10K **ANSI／ASTM** **DIN／ISO**

ESLON ELECTRIC BUTTERFLY VALVE TYPE K

ELECTRIC

- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- Visual position indicator built in the actuator.
- Easy flow control and water hammer prevention by slow action.
- Suitable for frequent operation with constant rating type of motor onboard.
- Manual open-close operation is available by attached handle.
- Conformity with CE.

●Flange Type



Parts List

No.	Part Name	Q'ty	Material
①	Electric Actuator	1	ADC12/Epoxy Baking Finish
②	Yoke	1	AC4A
③	Body	1	PVC、PP or PVDF
④	Seat Ring	1	EPDM or FKM
⑤	Connector	1	ZDC2
⑥	Shaft	1	SUS420J2 or SUS316
⑦	O-ring	3	EPDM or FKM
⑧	Gate	1	PP or PVDF
⑨	Cap	1	PP
⑩	Screw	14	SUS304
⑪	Open-Close Indicator	1	Toughened glass
⑫	Gasket	3	NBR
⑬	Manual Handle Pivot	1	S45C
⑭	Rubber cap	1	NBR

Size

Unit:mm

Size		L	h	Actuator				Max. Working Pressure at Room Temp. (MPa)	Time For Open-Close		Weight (kg/pc)
A	B			A	A1	B	B1		50Hz	60Hz	
40	1 1/2	33	230	141.5	63.5	158.5	85.5	1.0	15	12.5	3.3
50	2	43	237	141.5	63.5	158.5	82.5	1.0	15	12.5	3.5
65	2 1/2	46	248	141.5	63.5	158.5	82.5	1.0	15	12.5	3.8
80	3	46	282	147.5	67	206.5	97.5	1.0	30	25	6.1
100	4	52	302	147.5	67	206.5	97.5	1.0	30	25	6.9
125	5	56	348	182.5	94	256.5	123	1.0	30	25	11.8
150	6	60	357	182.5	94	256.5	123	1.0	30	25	12.8
200	8	71	409	182.5	94	256.5	123	1.0	30	25	15.1
250	10	76	486	242	137	381	181.5	1.0	30	25	33.0
300	12	114	516	242	137	381	181.5	1.0	30	25	40.1

Option

No-voltage limit switch	Potentiometer
Space heater	

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10

·For flange, dimension of bolt holes conforming the standards

Max. Operating Temperature

Material	Max. (℃)
PVC	50
PP	80
PVDF	120

Specification of Actuator

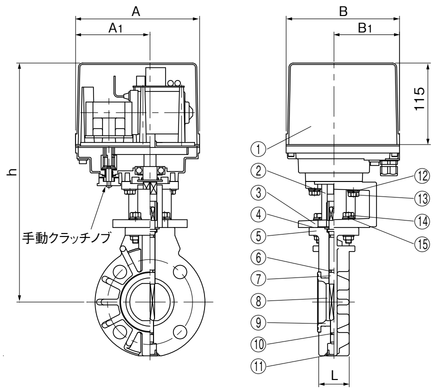
Nominal diameter(A)		40～65A	80·100A	125～200A	250·300A
Input system		Power switching system			
Contact output		Power supply voltage			
Operating voltage		Single-phase AC100/110,200/220V(50/60Hz)			
Motor	Type	Reversible motor			
	Time rating	Continuous rating			
Protect		Thermal protect inside Adjustable mechanical stopper for open-side and close-side			
Rated curret	100/110V	0.7/0.9A	0.65/0.70A	1.1/1.2A	1.8/2.0A
	200/220V	0.4/0.5A	0.35/0.40A	0.55/0.60A	0.9/1.0A
Manual operation		with manual operation mechanism			
Connector type		G1/2 conduit (Cable ODΦ9～11)			
Material		ADC12 Epoxy coating			
Protection class		IP66			

JIS10K **ANSI／ASTM** **DIN／ISO**

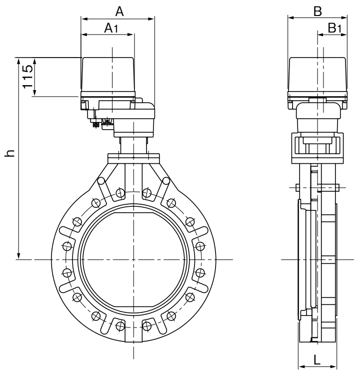
ESLON ELECTRIC BUTTERFLY VALVE TYPE N

- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- High speed of open-close operation for smaller sizes, easy flow control and water hammer prevention by slow action for larger sizes.

〔40A～200A〕



〔250･300A〕



Parts List

No.	Part Name	Q'ty	Material
①	Actuator	1	−
②	Connector	1	S45C／Electroless Ni Deposition
③	Yoke	1	ADC12
④	Adaptor Plate	1	SUS304
⑤	Body	1	PVC､PP or PVDF
⑥	O-ring	2	EPD or FKM
⑦	Shaft	1	SUS420J2 or SUS316
⑧	Gate	1	PP or PVDF
⑨	Seat Ring	1	EPDM or FKM
⑩	O-ring	1	EPDM or FKM
⑪	Cap	1	PP
⑫	Washer	4	SUS304
⑬	Bolt	4	SUS304
⑭	Bolt	4	SUS304
⑮	Washer	4	SUS304

Size

Unit:㎜

Size		L	h	Actuator				Max. Working Pressure at Room Temp. (MPa)	Time For Open-Close (50/60Hz)	Weight (kg/pc)
A	B			A	A1	B	B1			
40	1 1/2	33	330	175	105	160	92.5	1.0	3～4	7.8
50	2	43	338	175	105	160	92.5	1.0	3～4	8.0
65	2 1/2	46	348	175	105	160	92.5	1.0	3～4	8.5
80	3	46	356	175	105	160	92.5	1.0	6～10	9.0
100	4	52	388	175	105	160	92.5	1.0	6～10	10.5
125	5	56	425	175	105	160	92.5	1.0	8～15	14.0
150	6	60	434	175	105	160	92.5	1.0	8～15	15.0
200	8	71	485	175	105	160	92.5	1.0	8～15	18.0
250	10	76	565	217.5	158	175	87.5	1.0	24～45	27.0
300	12	114	595	217.5	158	175	87.5	1.0	24～45	34.0

Option

No-voltage limit switch

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10

･For flange, dimension of bolt holes conforming the standards

Max. Operating Temperature

Material	Max. (℃)
PVC	50
PP	80
PVDF	120

Specification of Actuator

Nominal diameter(A)		40～100A	125～200A	250･300A
Input system		Power switching system		
Contact output		Power supply voltage		
Operating voltage		Single-phase AC100/110,200/220V(50/60Hz)		
Motor	Type	DC Motor		
	Time rating	15 minutes rating under loading rate 20%		
Protect		Thermistor type		
Power consumption		100VA max.	150VA max.	120VA max.
Manual operation		Drive shaft dired operation		Drive shaft manipulation
Connector type		G1/2 wire connector(ϕ6-12 Cabtire cable)		
Material		ADC acrylic resin baking finish		
Protection		IP65		
Other		Space heater		

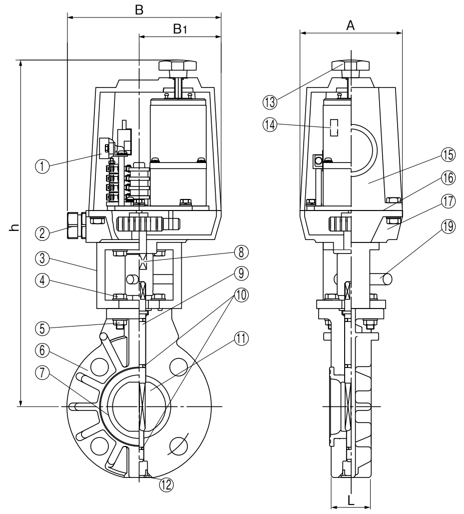
JIS10K **ANSI／ASTM** **DIN／ISO**

ESLON ELECTRIC BUTTERFLY VALVE TYPE KS

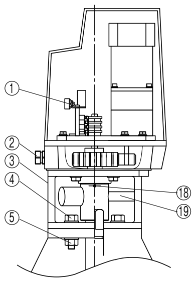
ELECTRIC

- Excellent chemical and corrosion resistance with Epoxy resin coated aluminum actuator.
- Compact and high durability motor onboard.
- High rotation speed of open-close operation.
- Visual position indicator built in the actuator.
- Manual open-close operation is available by wrench.

(40～200A)



(250･300A)



Parts List

No.	Part Name	Q'ty	Material
①	Terminal Block	1	Phenol Resin
②	Conduit gland	1	G1/2
③	Yoke	1	AC-7/Epoxy Resin
④	Bolt	4	SUS304
⑤	Nut	4	SUS304
⑥	Body	1	PVC､PP or PVDF
⑦	Seat Ring	1	EPDM or FKM
⑧	Driver stem	1	SUS303/Epoxy Resin
⑨	Shaft	1	SUS420J2 or SUS316
⑩	O-ring	2	EPDM or FKM
⑪	Gate	1	PP or PVDF
⑫	Cap	1	PP
⑬	M/A switching screw	1	Epoxy Resin
⑭	Thermal protector	1	–
⑮	Cover	1	AC-4/Epoxy Resin
⑯	Cover Gasket	1	CR
⑰	Actuator base	1	AC-3/Epoxy Resin
⑱	M/A switching pin	1	SUS304(250A)
⑲	Manual operation handle	1	SUS304

Size

Unit:mm

Size		L	h	Actuator			Max. Working Pressure at Room Temp. (MPa)	Time For Open-Close		Weight (kg/pc)
A	B			A	B	B1		50Hz	60Hz	
40	1 1/2	33	365	110	165	88	1.0	7.2	6	4.8
50	2	43	372	110	165	88	1.0	7.2	6	5.1
65	2 1/2	46	383	110	165	88	1.0	7.2	6	5.4
80	3	46	433	130	200	110	1.0	7.2	6	8.1
100	4	52	452	130	200	110	1.0	7.2	6	9.0
125	5	56	541	168	259	152	1.0	7.2	6	16.6
150	6	60	550	168	259	152	1.0	7.2	6	17.6
200	8	71	602	168	259	152	1.0	7.2	6	19.0
250	10	76	718	227	281	153	1.0	18.0	15	28.6
300	12	114	749	227	281	153	1.0	18.0	15	35.6

Specification of Actuator

Nominal diameter(A)		40～65A	80･100A	125～200A	250･300A
Input system		Power switching system			
Contact output		Power supply voltage			
Operating voltage		Single-phase AC100/200V 50/60Hz			
Motor	Type	Reversible motor			
	Time rating	30 minutes rating			
Protect		40～65A: impedance protect inside 80～300A:Thermal protect inside			
Rated curret	100V	0.3	0.6	1.0	1.8
	200V	0.15	0.3	0.5	0.9
Manual operation		Manual handle for open-close			
Connector type		G1/2 wire connector (max.ϕ10.5 Cabtire cable)			
Material		AC-4 Epoxy coating			
Protection		IP63			

Conforming Standard

Connection	Standard	Classification
Flange	JIS10K	JIS B 2220
	ANSI	ANSI B16.5
	DIN/ISO	DIN EN 1092-1 PN-10

･For flange, dimension of bolt holes conforming the standards

Option

No-voltage limit switch
Space heater

Max. Operating Temperature

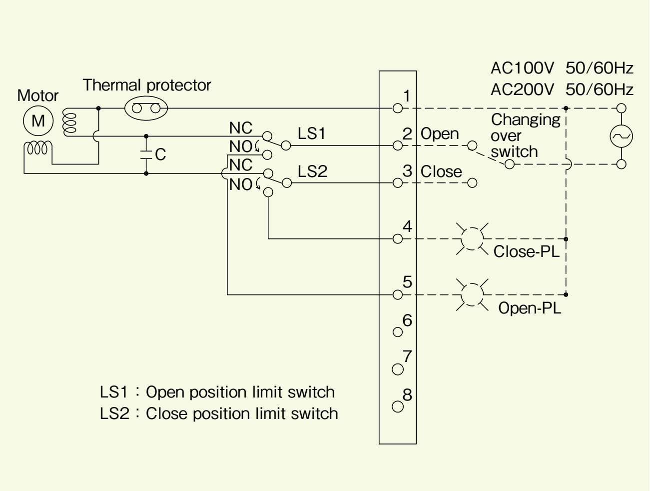
Material	Max. (℃)
PVC	50
PP	80
PVDF	120

Connecting Diagram ▶ 27 Working Pressure and Temp ▶ 34 Flow Diagram ▶ 37 Installation ▶ 38

CONNECTING DIAGRAM

Connecting diagrams below are for the standard type of actuators, additional diagram must be referred to diagram for optional accessories.

■ELECTRIC DIAPHRAGM VALVE TYPE KS, ELECTRIC BALL VALVE TYPE KS, ELECTRIC BUTTERFLY VALVE TYPE KS



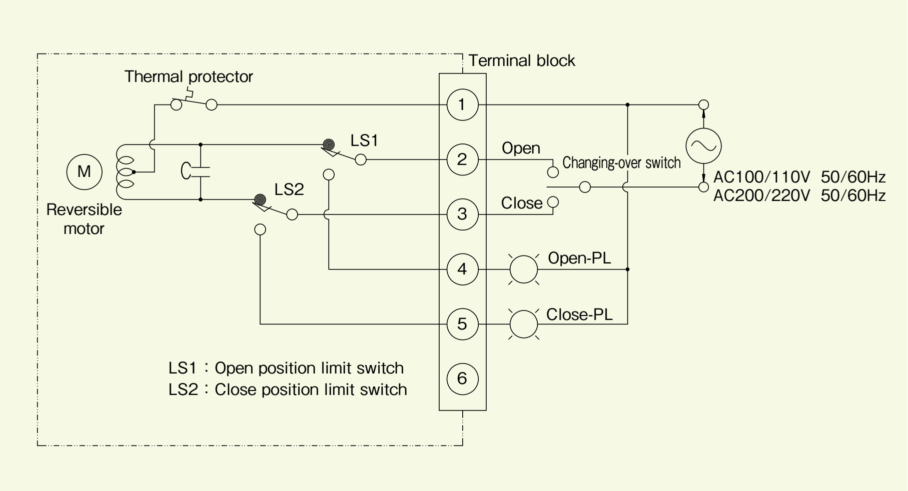
Terminal1 : Power source common terminal
2 : Power terminal for opening
3 : Signal terminal for closing
4 : Signal terminal for closing
5 : Signal terminal for opening
6 : be not in use
7 : be not in use
8 : be not in use

Precaution

⚠Do not apply the current to selector switches for both open and close at same time.

⚠Selector switch must be independently installed for each valve to prevent malfunction.

■ELECTRIC BALL VALVE TYPE K, ELECTRIC BUTTERFLY VALVE TYPE K



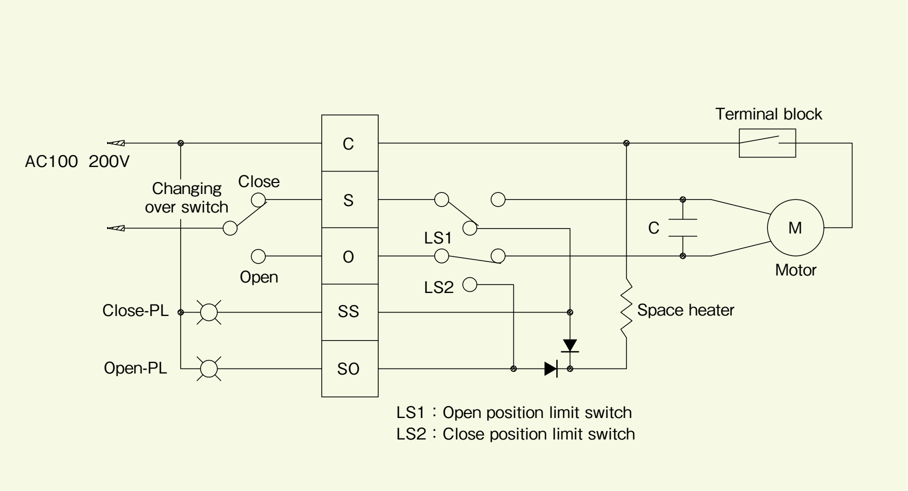
Terminal1 : Power source common terminal
2 : Power terminal for opening
3 : Signal terminal for closing
4 : Signal terminal for opening
5 : Signal terminal for closing
6 : be not in use

Precaution

⚠Do not apply the current to selector switches for both open and close at same time.

⚠Selector switch must be independently installed for each valve to prevent malfunction.

■ELECTRIC BALL VALVE TYPE N STANDARD TYPE, 3-WAY BALL VALVE



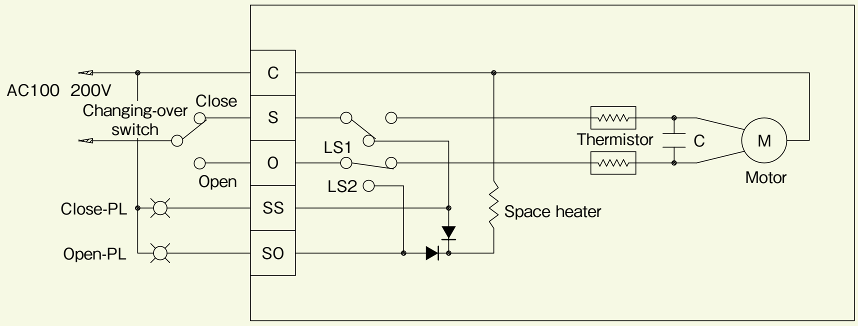
TerminalC : Power source common terminal
S : Terminal for closing
O : Terminal for opening
SS : Signal terminal for closing
SO : Signal terminal for opening

Precaution

⚠Do not apply the current to selector switches for both open and close at same time.

⚠Selector switch must be independently installed for each valve to prevent malfunction.

■ELECTRIC BALL VALVE TYPE N HIGHER SPEED TYPE（15～40A）



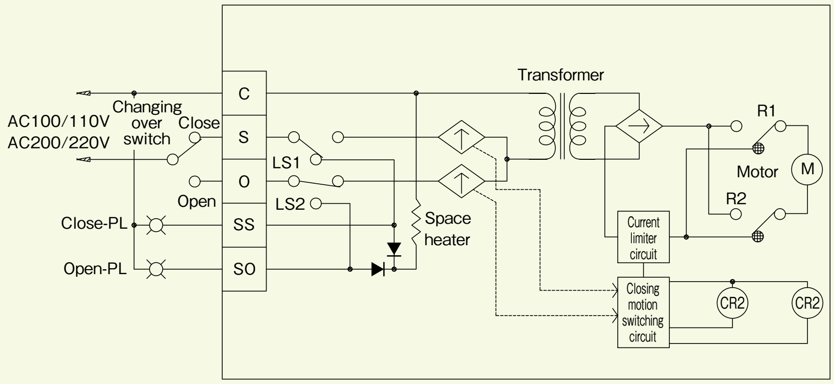
LS1：Open position limit switch
LS2：Close position limit switch

TerminalC ：Power source common terminal
S ：Terminal for closing
O ：Terminal for opening
SS：Signal terminal for closing
SO：Signal terminal for opening

Precaution

⚠Do not apply the current to selector switches for both open and close at same time.
⚠Selector switch must be independently installed for each valve to prevent malfunction.

■ELECTRIC BALL VALVE TYPE N HIGHER SPEED TYPE(50～100A), ELECTRIC BUTTERFLY VALVE TYPE N



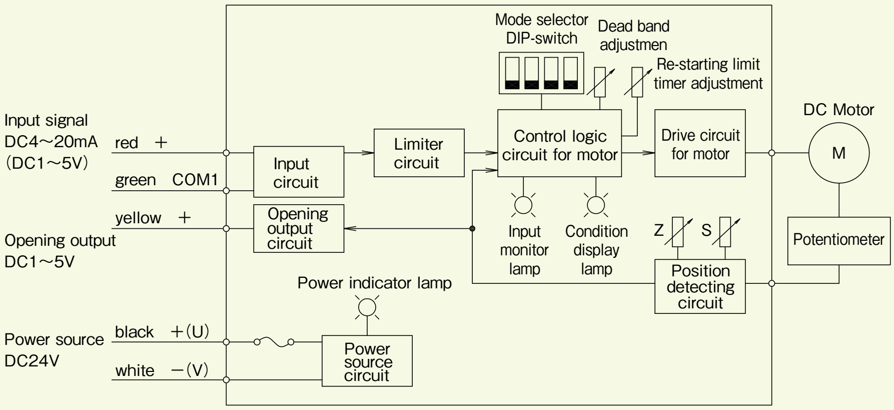
LS1：Open position limit switch
LS2：Close position limit switch

TerminalC ：Power source common terminal
S ：Terminal for closing
O ：Terminal for opening
SS：Signal terminal for closing
SO：Signal terminal for opening

Precaution

⚠Do not apply the current to selector switches for both open and close at same time.
⚠Selector switch must be independently installed for each valve to prevent malfunction.

■ELECTRIC YP BALL VALVE



Z：Zero point adjustment
S：Span adjustment

Technical Information

Technical Information

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- Material Property 31
- Chemical Resistance Guide 32
- Maximum Working Pressure - Temperature Rating 34
- Cv & Kv Values of Eslon Valve 37
- Flow Characteristic of Eslon Valve 37
- Flow Diagram 37

User's guide

- Installation 38

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 tends to be attacked by some chemicals such as aromatic hydrocarbon, ketones, esters and chlorinated hydrocarbon.
	Hi-Impact Polyvinyl Chloride	HI-PVC	Almost same mechanical properties as PVC however higher impact strength and durability. Inferior to PVC in chemical resistance.
	Chlorinated Polyvinyl Chloride	C-PVC	Almost same properties as PVC however higher heat resistance and usable for higher temperature application than PVC.
	Polypropylene	PP	Resist against most of acids, alkalis and salts however weak resistant against strong acids such as highly-concentrated nitric acid, chrome acid, and mixture of them. Resistant against many solvents (specifically the solvent with active group), however tends to be attacked by chlorine-containing solvents, aliphatic series, and aromatic hydro-carbon.
	Glass Fiber reinforced polypropylene	GF-PP	Glass fiber reinforced PP(polypropylene) has higher mechanical properties and temperature resistance than PP. High chemical resistance and light weight.
	Vinylidene Fluoride	PVDF	Highly resistant in higher temperature range, against ordinary acids and chemicals, however broken down by fuming sulfuric acid and strong basic amines. Usable conditions and application are limited for ketones, amides, esters, solvents and alkalis.
Seal material etc	Polytetra-fluoroethylene (Trade name Teflon)	PTFE	Highly resistant against ordinary acids and alkalis, and not dissolved nor changed by ordinary solvent medium. Attacked by melted alkali metal and by fluorine and chlorine trifluoride in high temperature.
	Ethylene Propylene Rubber	EPDM	Chemical resistant and ozone resistant. Comparatively resistant against ketones and esters, however weak resistant against aromatics, alphatic families, gasoline, and oil.
	Fluororubber (Trade name Viton)	FKM	Highly resistant against ordinary chemicals, especially acids. Resistant against oils, however attacked by ketones, ammonia anhydride, concentrated caustic soda,etc.
	Chlorinated polyethylene	FKM-FB	Enhanced FKM in chemical resistance. Superior resistant especially against high-temperature acids and highly concentrated acids. Remarkably low metal elution by chemicals. Same level of oil-resistance and high temperature resistance as FKM.
	Polyvinylidene chloride	PVDC	Almost same properties as PVC however resistant and durability in higher temperature.

Basic Physical Property of Material for Valve at Temp.23℃

Material		PVC	HI-PVC	C-PVC（HT）	PP	GF-PP	PVDF	PTFE
Property	Unit							
Density	g/cc	1.43	1.40	1.48	0.92	1.04	1.77	2.17
Water Absorption	mg/m^2	0.04~0.06	0.04~0.06	0.04~0.06	0.01		0.04	0.00
Tensile Strength Yield	MPa	50~55	40~45	50~55	35~40	77~83	49~54	17~22
Modulus of Elasticity	MPa	2.5~3.0×10^3	2.0~2.5×10^3	2.5~3.0×10^3	1.0~1.5×10^3	3.3~3.8×10^3	2.3~2.8×10^3	3.7~4.2×10^2
Flexural Strength	MPa	78~89	76~81	88	24~35	93~98	64	
Sharpy Impact Strength	kJ/m^2	5~10	90	10~15	3~8	7~12	17~21	2~5
Heat Deflection Temperature	℃	61~66	63~68	98~103	118~123	145~150	145~150	
Linear Expansion Coefficient	/℃	7×10^{-5}	7×10^{-5}	7×10^{-5}	12×10^{-5}	4.5×10^{-5}	12×10^{-5}	10×10^{-5}
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^{15}	5.3×10^{15}	5.3×10^{15}	4.9×10^{15}		5×10^{15}	1×10^{18}

･This data is intended to serve as reference.

Chemical Resistance Guide

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

1 Please note that plastic might be strongly affected by surface-activating agent.
2 "PVC" in chemical resistance guide does not include "HI-PVC".
3 This table is intended to serve as guide only. The information based on data accumulated from immersion test and experiments herein is believed to be reliable, but no representations, guarantee or warranties of any kinds are made as to its accuracy, suitability for particular applications or results to be obtained.

++ : Excellent Resistant
+ : Good Resistant
− : Caution (Actual testing suggested)
−− : Not recommended

Chemical	Concentration	Temp.		Plastic							Rubber			
	(%)	(℃)	(℉)	PVC	CPVC (HT)	PP	GF-PP	PVDC	PVDF	PTFE	EPDM	FKM	FKM-FB	IIR-X
Ammonia water NH_3Aq	10	20	68	+	−	++	++		++	++	++	+		++
		40	104	+	−	++	++		++	++	++	−		++
		60	140	+	−	++	++		++	++	++	−−		++
		80	176		−	+	+		++	++	++			++
		100	212				+		++	++	++			+
Hydrochloric acid HCl	15	20	68	+	++	++	++	++	++	++	++	++	++	++
		40	104	+	++	++	++	++	++	++	+	+	++	++
		60	140	+	++	++	++	+	++	++	−	−	++	+
		80	176		++	++	++		++	++	−−	−−	+	−−
		100	212				−		++	++				
	25	20	68	+	++	++	++	++	++	++	++	++	++	++
		40	104	+	++	++	++	++	++	++	+	+	++	+
		60	140	−	++	++	++	++	++	++	−	−	++	−
		80	176		++	++	++	++	++	++	−−	−−	+	−−
		100	212				−		++	++				
	35	20	68	+	++	++	++	++	++	++	+	++	++	+
		40	104	−	++	++	++	++	++	++	+	+	++	−
		60	140	−	+	++	++	++	++	++	−−	−−	+	−−
		80	176		+	+	+	++	++	++			+	
		100	212				−		+	++				
Chlorine gas Cl_2	Wet	20	68	+	+	−−	−−	++	++	++	−−	−−		−−
		40	104	−	−				++	++				
		60	140	−	−				++	++				
		80	176		−				++	++				
		100	212						++	++				
	Dry	20	68	+	++	−−	−−	++	++	++	−−	+		−−
		40	104	+	++				++	++		−		
		60	140	+	++				++	++		−−		
		80	176		++				++	++				
		100	212						++	++				
Sodium hydroxide NaOH	5	20	68	+	+	++	++	++	++	++	++	++		
		40	104	+	−−							++		
		60	140	+	−−									
		80	176											
		100	212											
	15	20	68	++	+	++	++	++	++	++	++	+		++
		40	104	++	−	++	++		++	++	++	−		++
		60	140	++	−	++			+	++	++	−−		++
		80	176		−−	+			−	++	+			++
		100	212						−−	++	+			
Potassium permanganate $KMnO_4$	10	20	68	++	++	+	+	++	++	++	++	++		++
		40	104	++	++	−	−	++	++	++	++	++		
		60	140	+	++				++	++	++	++		
		80	176		+				++	++				
		100	212						++	++				
	25	20	68	++	++	+	+		++	++	++	+		++
		40	104	−	++	−	−		++	++	++	+		
		60	140	−	++				++	++	++			
		80	176		+				++	++				
		100	212						++	++				
Chromic acid H_2CrO_4	20	20	68	+	+	−−	−−	++	++	++	+	+		−−
		40	104	−	−			+	++	++	−−	+		
		60	140	−−	−−			+	++	++		+		
		80	176						++	++		−		
		100	212						++	++		−−		
	50	20	68	−	−	−−	−−	++	++	++	−−	+		−−
		40	104	−−	−−			+	−	++				
		60	140					+	−−	++				
		80	176							++				
		100	212							++				
Acetic acid CH_3COOH	20	20	68	++	++	++	++	++	++	++	++	+		−−
		40	104	+	++	++	++	++	++	++	++	−		
		60	140	−	+	+	+		++	++	+	−		
		80	176		−	−	−		++	++		−−		
		100	212						+	++				
	50	20	68	++	++	++	++	++	++	++	−−	+	+	−−
		40	104	+	+	+	+	++	++	++		−	−	
		60	140	−	−	−	−		++	++		−−	−−	
		80	176		−−		−−		++	++				
		100	212						+	++				

Chemical Resistance Guide

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

1 Please note that plastic might be strongly affected by surface-activating agent.
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++ : Excellent Resistant
\+ : Good Resistant
− : Caution (Actual testing suggested)
−− : Not recommended

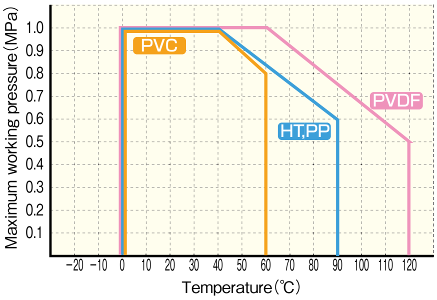
Chemical	Concentration	Temp.		Plastic							Rubber			
	(%)	(℃)	(℉)	PVC	CPVC (HT)	PP	GF-PP	PVDC	PVDF	PTFE	EPDM	FKM	FKM-FB	IIR-X
Sodium hypochlorite NaClO	5	20	68	++	++	+	+	++	++	++	+	++	++	++
		40	104	++	++	+	+	++	++	++	+	+	+	+
		60	140	−	−	−	−	+	++	++	−	−	−	−
		80	176						++					
		100	212						++					
	10	20	68	++	++	+	+	++	++	++	−−	++	++	++
		40	104	++	++	−	−	+	++	++				
		60	140	−	−	−	−	+	++	++				
		80	176						++					
		100	212						++					
Nitric acid HNO_3	30	20	68	++	++	++	++	++	++	++	+	++	++	++
		40	104	+	+	++	++	++	++	++	+	+	++	+
		60	140	−	−	+	+	++	++	++	−−	+	++	+
		80	176		−−	+	+		++	++		−	+	
		100	212						++	++		−	+	
	50	20	68	++	++	++	++	++	++	++	−−	++	++	−−
		40	104	−	−	+	+	++	++	++		+	++	
		60	140	−−	−−	−	−		+	++		−	+	
		80	176			−−	−		+	++		−−	+	
		100	212						−	++				
	70	20	68	−−	−−	−−	−−	−−	−	++	−−	−−	+	−−
		40	104						−−	+			−	
		60	140											
		80	176											
		100	212											
Toluene (Toluol) $C_6H_5CH_3$	Pure	20	68	−−	−−	+	+	−−	++	++	−−	−		−−
		40	104			−	−		++	++				
		60	140			−−	−−		+	++				
		80	176						+	++				
		100	212						−	+				
Hydrofluoric acid HF	Dilute	20	68	++	++	++	−−	++	++	++	++	++		++
		40	104	++	+	+		++	++	++	++	++		++
		60	140	−	+	+		++	++	++	++	++		++
		80	176		−	+		++	++	++	++	++		+
		100	212			+			++	++	++	++		
	50	20	68	+	+	++	−−	++	++	++	++	++	++	++
		40	104	−−	−−	+		++	++	++	+	++	++	++
		60	140			+		++	++	++	−	++	++	+
		80	176			+			++	++		++	++	−
		100	212						++	++		+	++	
Benzene C_6H_6	Pure	20	68	−	−	+	+	++	++	++	−−	+		−−
		40	104	−−	−−	−	−		+	++		+		
		60	140						+	++		+		
		80	176						+	++		+		
		100	212											
Formaldehyde HCHO	35	20	68	++	++	++	++	++	++	++	++	++		++
		40	104	++	++	++	++	++	++	++	++	++		++
		60	140	−	+	++	++		+	++	+	+		+
		80	176			+	++		−−	++	+	−		−
		100	212							++				
Methyl alcohol CH_3OH	Pure	20	68	−	−	++	++	++	++	++	++	−−		++
		40	104	−−	−−	++	++	++	++	++	++			++
		60	140			+	+	+	+	+	+			+
		80	176											
		100	212											
Sulfuric acid H_2SO_4	30	20	68	++	++	++	++	++	++	++	++	++	++	++
		40	104	++	++	++	++		++	++	++	++	++	++
		60	140	++	++	++	++		++	++	++	++	++	++
		80	176		++	++	++		++	++	+	++	++	+
		100	212				++		++	++	−−	++	++	
	90	20	68	+	+	++	++	−−	++	++	++	++	++	+
		40	104	−	−	++	++		++	++	+	++	++	+
		60	140	−	−	+	+		++	++	−	++	++	+
		80	176			+	+		++	++	−−	+	++	−
		100	212						+	+		−−	+	
	98	20	68	+	+	−−	−−	−−	++	++	−	++	++	−−
		40	104	−	−				+	++			++	
		60	140	−−	−−					++			++	
		80	176							++				
		100	212							+				

Maximum Working Pressure - Temperature Rating

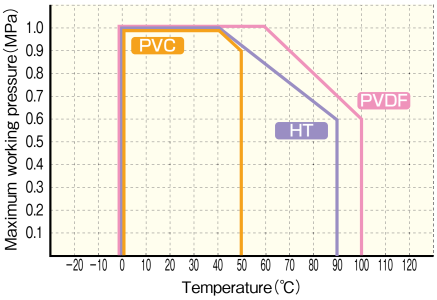
Mechanical properties of Eslon valves decrease with increasing temperature as with other ordinary thermoplastic.
Maximum working pressure = Static normal operation pressure + Water hammer

Pneumatic Diaphragm Valve Type F

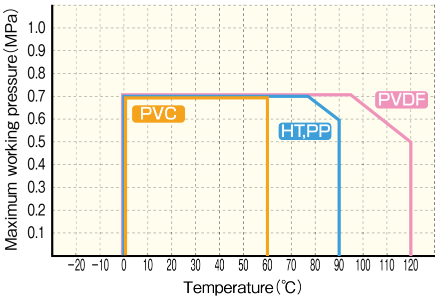
■Double Action,Air To Close,Air To Open 10K／Diaphragm:EPDM･PTFE／Flange



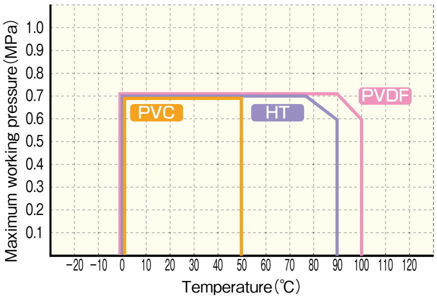
■Double Action,Air To Close,Air To Open 10K／Diaphragm:EPDM･PTFE／TS･Thread･Butt Spigot



■Air To Open 7K／Diaphragm:EPDM･PTFE／Flange

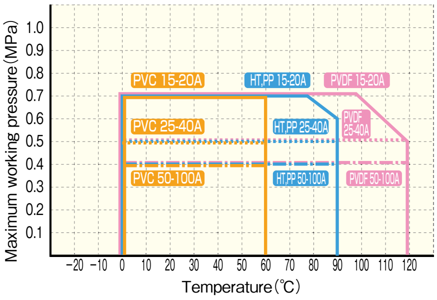


■Air To Open 7K／Diaphragm:EPDM･PTFE／TS･Thread･Butt Spigot

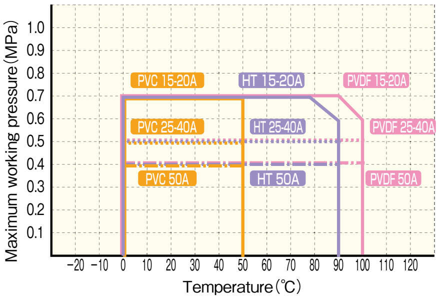


Pneumatic Diaphragm Valve Type B

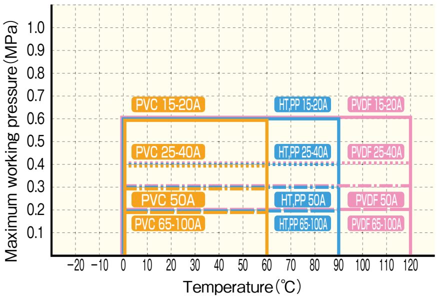
■Double Action／Diaphragm:EPDM／Flange



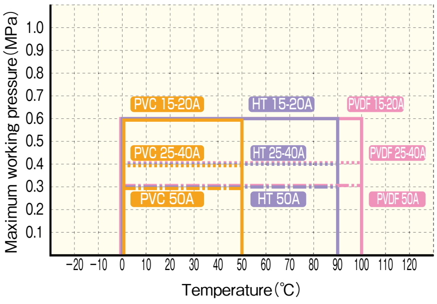
■Double Action／Diaphragm:EPDM／TS･Thread･Butt Spigot



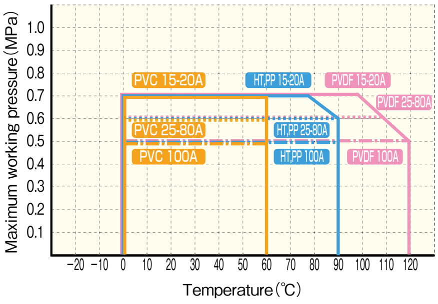
■Double Action／Diaphragm:PTFE／Flange



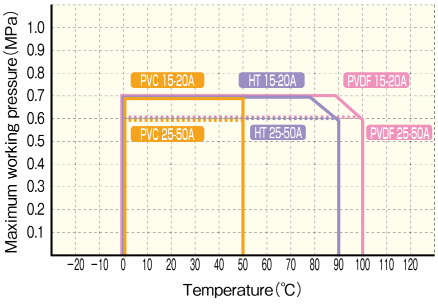
■Double Action／Diaphragm:PTFE／TS･Thread･Butt Spigot



■Air To Close,Air To Open／Diaphragm:PTFE／TS･Thread･Butt Spigot



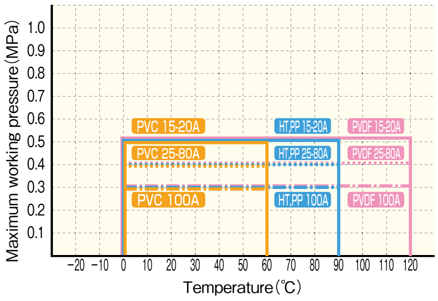
■Air To Close,Air To Open／Diaphragm:EPDM／TS･Thread･Butt Spigot



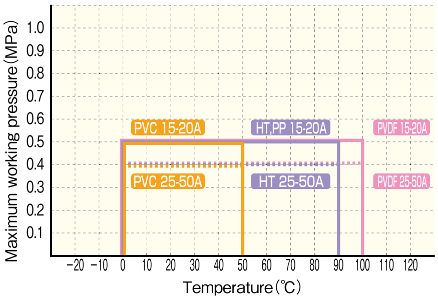
Maximum Working Pressure - Temperature Rating

Pneumatic Diaphragm Valve Type B

■Air To Close,Air To Open／Diaphragm:PTFE／Flange

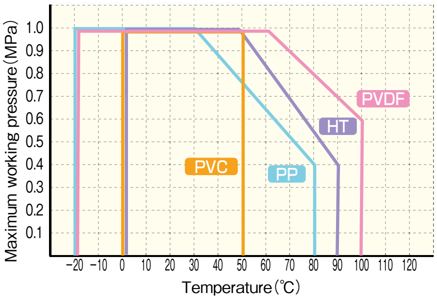


■Air To Close,Air To Open／Diaphragm:PTFE／
TS･Thread･Butt Spigot



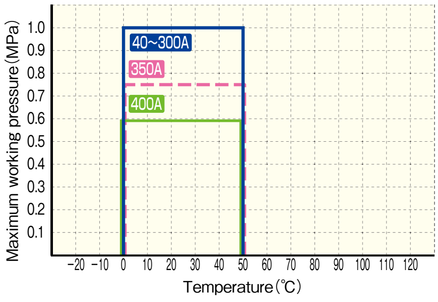
Pneumatic Ball Valve Type S,Type C

■Double Action,Air To Close,Air To Open

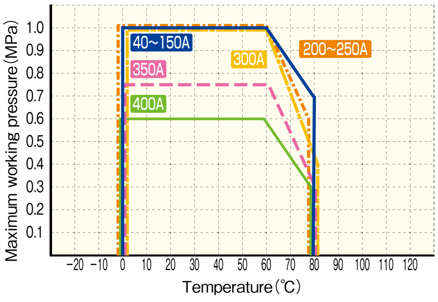


Pneumatic Butterfly Valve Type S,Type T

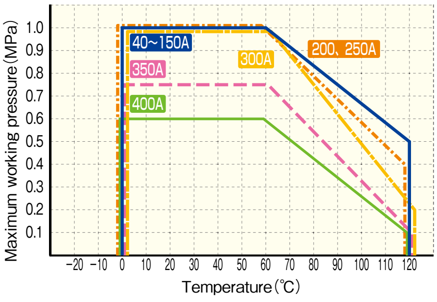
■Double Action,Air To Close,Air To Open／
Body material: PVC



■Double Action,Air To Close,Air To Open／
Body material: PP

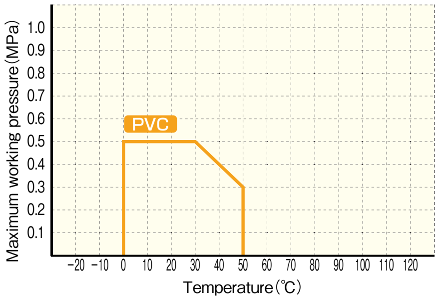


■Double Action,Air To Close,Air To Open／
Body material: PVDF



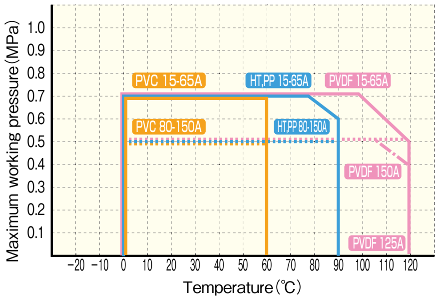
Air Operation Valve

■Double Action,Air To Close,Air To Open

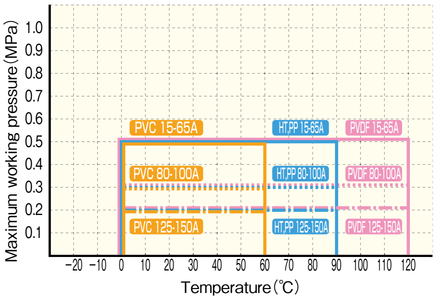


Electric Diaphragm Valve Type KS

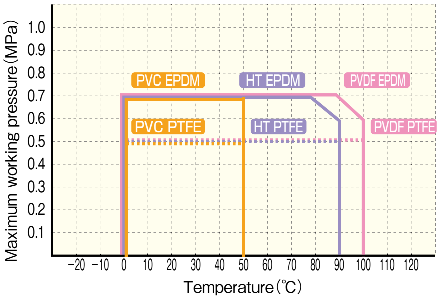
■Diaphragm:EPDM／Flange



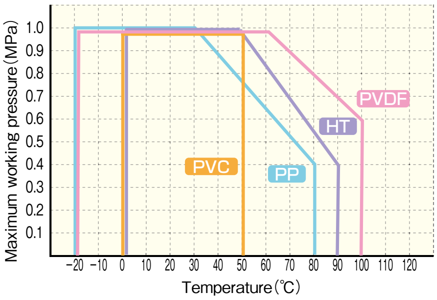
■Diaphragm:PTFE／Flange



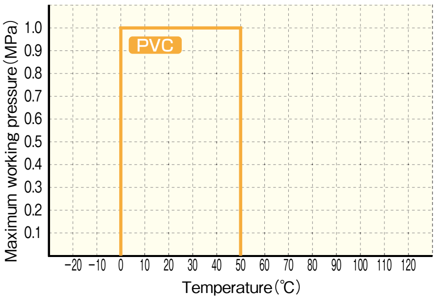
■Diaphragm:EPDM･PTFE／TS･Thread･Butt Spigot



Electric Ball Valve Type K·Type N·Type KS

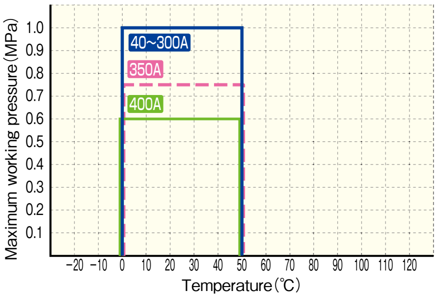


Electric YP Ball Valve

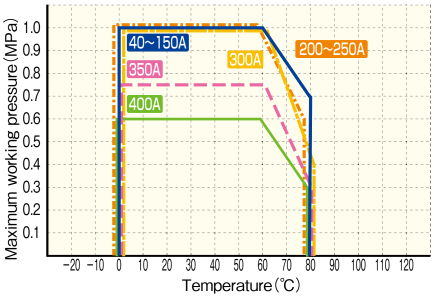


Electric Butterfly Valve Type K·Type N·Type KS

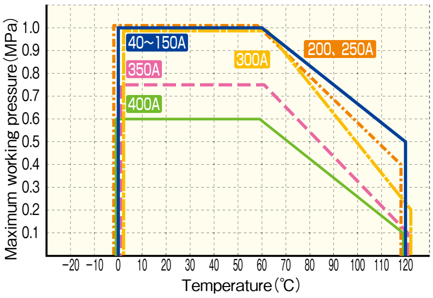
■Body material: PVC



■Body material: PP



■Body material: PVDF



ESLON Technical Information

Cv & Kv Values

Cv VALUE・Kv VALUE

Product \ Size(A)		15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Diaphragm Valve	Cv	6.3	12.0	17.6	—	46.3	76.1	135	180	280	533	857	1113	1864	—	—	—	—	—	—
	Kv	89.6	171	250	—	659	1083	1920	2560	3983	7582	12191	15832	26515	—	—	—	—	—	—
Ball Valve	Cv	12.1	31.5	48.9	80.1	154	267	352	471	780	—	—	—	—	—	—	—	—	—	—
	Kv	172	448	696	1139	2191	3798	5007	6700	11095	—	—	—	—	—	—	—	—	—	—
Butterfly Valve	Cv	—	—	—	—	74	172	282	309	446	755	993	2213	3440	4929	6311	8757	11107	14622	17945
	Kv	—	—	—	—	1053	2447	4011	4395	6344	10740	14125	31479	48993	70114	89772	124566	157994	207994	255263
Air Operation Valve	Cv	5.5	7.5	10	25	28	45	65	—	—	—	—	—	—	—	—	—	—	—	—
	Kv	78.2	107	142	356	398	640	925	—	—	—	—	—	—	—	—	—	—	—	—

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.

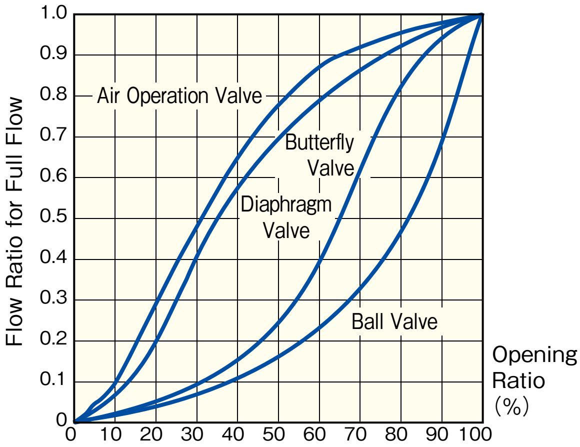
The Cv and Kv value for liquids is expressed by the following equation;

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

Cv :Valve capacity coefficient
Q : Volmetric flow〔GALLON〕
P1 : Inlet pressure〔PSI〕
P2 : Outlet pressure〔PSI〕
γ : Liquid density〔b/gal〕

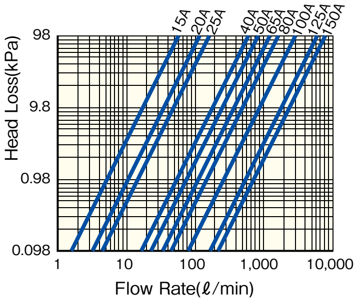
$$Cv=0.0703Kv$$

Flow Characteristics Of Eslon Valve

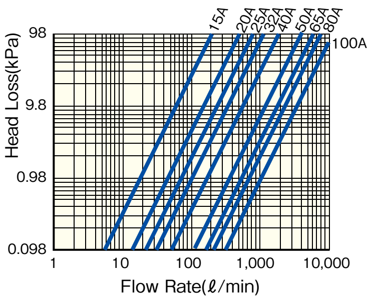


Flow Diagram

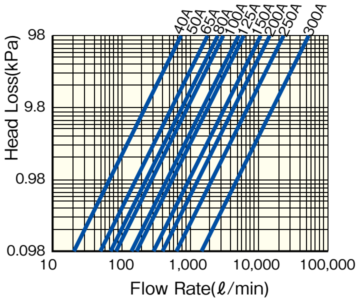
Diaphragm Valve



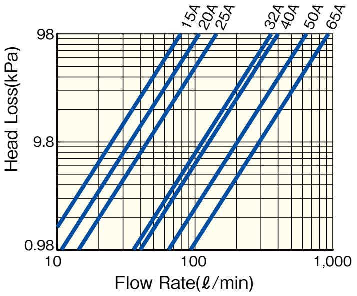
Ball Valve



Butterfly Valve



Air Operation Valve



CAUTION IN USE OF ESLON AUTOMATIC VALVES

⚠ Pay special attention on items with this mark, because it may cause personal accident if the caution in question in neglected.

1 Storage and Transportation

❶Handle products carefully, avoid dropping and throwing products. Products might be affected in performance or damaged by strong impact.
❷As large size of products heavy, unload and handle by 2-persons if necessary.
❸For storage, store products in their cartons or wrapping and stack up orderly not to unpeel.
❹Avoid exposing products to direct sunlight. Avoid storing and handling products in the condition of excessive temperature or humidity.

2 Installation

❶Keep ventilating when products are installed in corrosive atmosphere.
❷When installing products, avoid bending, tension, or other external load on products.Avoid stepping or apply excessive weight on products. It might cause failure, leaking, or damage of products.
❸Do not install automatic valve so as to set the actuator downward, it should be installed upward or sideways.
❹Align the axes of pipe and valve. Tighten bolts diagonally and evenly.
❺Support valve by proper method not to load excess stress.
❻Do not over-fasten the union nut of ball valve.Over-fastening union nut than the state at shipment may cause the inability of actuator operation due to over-torque.

Electric Valve

❼Electric valve is not explosion-proof. Do not install electric valve in flammable atmosphere.
❽Electric actuator is not waterproof. For outdoor use, install waterproof measure such as cover or roof. Install electric valve so as to set cable gland downward and putty to avoid water seeping.

3 Operating Instructions

❶Do not install and use products under out of condition of temperature or humidity.
❷In case that fluid might freeze up due to operating condition, prevent freezing by thermal insulation or other methods.
❸In case of leaking from union nut, retighten evenly both sides of union nuts.
❹Inspect and exchange periodically valves in use for slurry medium.
❺Prevent using for crystalline fluid.
❻Check periodically bolt torque for flange connection and keep them specified torque. Bolt looseness might cause leaking.

Pneumatic valve

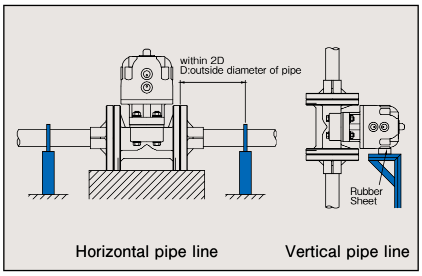
❼Operation-air should be dry-air
❽In case air pressure for actuator operation is high, reduce into the specified pressure for the actuators.
❾For flow test or operation test after installation, apply air pressure of less than 0.5MPa for double action valve and 0.6MPa for single action valve.
❿For the tube to supply compression air for actuator operation, use the tube with more than 6mm diameter. Using other diameter of tube may influence open-close speed.
⓫In manual operation of pneumatic actuator, do not turn shaft-top of the actuator by wrench because spring back is dangerous. Use manual operation unit if the manual operation is necessary.
⓬Do not use pneumatic actuator under the condition of rainwater, splash, or fine particles. Install the cover to avoid rainwater or direct sunlight when use outside.
⓭Prevent entering water into pneumatic actuator from air intake hole to avoid the inability of actuator operation.

Electric Valve

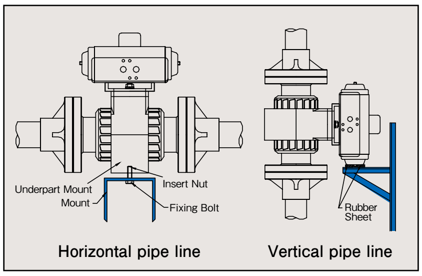
⓮Apply allowable voltage and the power source specified by indication on actuator.
⓯Connect electric wire according to connecting diagram.
⓰Install the grounding wire.
⓱Usable only single phase AC for AC source.For positioner, install necessary devices for the proportional control of flow rate, such as balancing relay-unit, detect-sensor, and controller.
⓲Do not splash water to the actuator.
⓳Unable to change opening/closing speed of electric valve.

■Standard Supporting Method

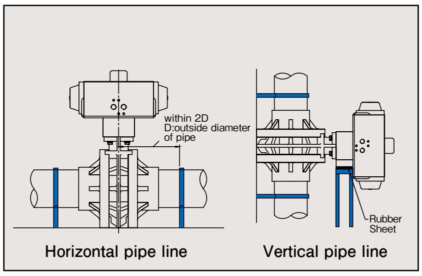
●Diaphragm Valve



●Ball Valve



●Butterfly Valve



CAUTION IN USE OF ESLON AUTOMATIC VALVES

4 Maintenance

❶In case of des-assembling or re-assembling of valve for the maintenance, refer instruction or manual.
❷Execute maintenance and inspection of valve in every 3-6 months.
❸Refer instruction or manual of each valve type for installation, how to use, and others.

Pneumatic valve

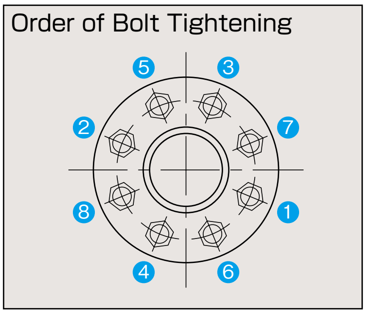
❹Prohibit des-assembling of pneumatic actuator after installation of valve to avoid danger and trouble in operation.
❺No lubricating required.

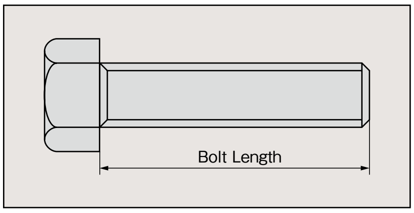
Electric Valve

❻Prohibit des-assembling of electric pneumatic actuator.
❼Even in case thermal protector worked, the valve will return to workable condition in a few minutes.Check cause of overheating and execute preventive measures.

5 Installation Procedure for Flange connection

❶Use Eslon gasket (packing) as sealing for flange connection.
❷Tighten evenly bolts, using washers and spring washers for both of bolts and nuts for prevention of damage of flanges.
❸Set valve and gaskets between flanges, then tighten bolts after adjusting the position and dimensions not to make a gap between them.
❹Use flat faced flanges for Eslon valves and gaskets, do not use raised faced flange.
❺Tighten bolts diagonally, evenly, and gradually as shown below.
❻Recommended torque for bolts is specified in table. 1(for Eslon EPDM gaskets).
❼Use specified size and length of bolts shown in table.2.


Order of Bolt Tightening



■Table-1 Torque Standards for Bolt Tightening Unit:N·m

Size(A)	15~20	25~50	65~100	125~200	250~300
Torque	15	30	45	55	65

■Table-2 The bolt for the flange connection

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
DIAPHRAGM VALVE	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	–	–	–	–	–	–
BALL VALVE	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	–	–	–	–	–
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
TS Flange* 1	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	–	–	–	–	–
TS Flange* 2	Bolt Diameter	M10	M10	M10	M12	M12	M12	M12	–	M16	M16	M16	M16	M20	M20	M20	–	–	–	–	–
	Bolt Length	45	45	45	50	50	55	55	–	55	60	60	65	90	95	95	–	–	–	–	–
TS Flange* 3	Bolt Diameter	–	–	–	–	–	–	–	M16	–	M16	M16	M16	M16	M20	M20	–	–	–	–	–
	Bolt Length	–	–	–	–	–	–	–	75	–	80	80	85	90	95	100	–	–	–	–	–

* 1. : for the 10K-Flange of JIS-Standard
* 2. : for the 5K-Flange of JIS-Standard
* 3. : for the Flange of Water-Service

6 Installation Procedure by Solvent Cement

Disassemble union nut and socket ends from valve body, then connect by solvent cement. Cementing without disassembling socket ends might cause failure of valve function by flowing solvent cement in valve.
Make marks on union nuts and body in accordance with fully-tighten position before loosen union nuts, and becomes easy to reassemble.

❶Cut pipe in a right angle to the pipe axis.
❷Remove all burrs and saw dust by knife then round off edge by 1-2 degree.
❸Mark the insert length of pipe and depth of socket to ensure 0 (zero) point and complete inserting.
❹Wipe cementing surfaces of pipe and fitting by dry and clean cloth to remove all dirt, dust, moisture and oil.
❺Use specified grade of Eslon solvent cement.
❻Apply solvent cement evenly buts lightly more on pipe and less on fitting to avoid overflowing of solvent cement to inside.
❼Avoid flowing of solvent cement into valve if in case of installing without disassembling socket ends. Need more attention especially for vertical piping lines.
❽After applying solvent cement, insert pipe quickly into socket end and wipe away overflowing cement.
❾Hold pipe and socket for 1 - 2 minutes after insertion. Avoid any impact and bending until dry. Ventilate inside of valve and piping to release solvent vapors in order to prevent solvent crack. Blow inside of piping if necessary.
❿Because of slow evaporation of solvent, installation at less than 5 degree C is not recommended.
⓫Solvent cement is flammable hazardous material including organic solvents. Prohibit use of fire such as smoking, torching, or fire-working around work and storage area. Ventilate sufficiently, do not inhale solvent vapors.

7 Installation Procedure for Thread connection

❶Disassemble union nut and thread ends from valve body, then connect to pipe.Make marks on union nuts and body in accordance with fully-tighten position before loosen union nuts, and becomes easy to reassemble.
❷Do not screw with metal thread to prevent damage. Use plastic thread of fittings such as PVC valve sockets.
❸Threads dimension is conforming to JIS B0203, however prevent over-tightening to avoid damage of thread.
❹Use sealing tape for thread connection (wrap 2 - 3 ply). Do not use required sealing, hemp, or paint. It can cause stress cracking.
❺Tighten by single hand then use water-pump pliers or belt wrench by turning 180 - 360°
❻In case of tightening by belt wrench, turn carefully not to damage thread.

8 Installation Procedure by Socket welding

❶For socket welding work, wide space to set welding machine is needed. Keep enough work space for safety and work by 2-persons.
❷Prevent receiving wind during installation as temperature of heater face is affected and it cause failure in welding.
❸Ensure the type of welding machine corresponding to the size and material of pipe.
❹Ensure ground connection before turning on the power of welding machine.
❺Be careful of an electric shock by electric all leakage.
❻Be careful not to burn yourself by touch to heater face heated at 260 - 270 degree C.
❼Follow the instruction and specified welding condition such as heater face temperature, fusion time, and length of insertion as directed.
❽Insert pipe smoothly into socket with 5 seconds after pipe is pulled out from heater face.

For details, refer to the instruction manual for welding machine.

9 Leak test on installed piping

❶Prohibit using compressed air or gas in leak test for thermoplastic piping systems. Conduct leak test under hydrostatic pressure. Apply hydrostatic pressure after releasing air in piping.
❷Prohibit using leak detector including surface-activating agent. That can cause damage or crack on valves, pipes, and fittings.

10 Expansion and Contraction

Linear expansion coefficient of plastic and temperature variation by fluid or change in atmosphere temperature cause thermal expansion & contraction, and tensile or compress stress on piping. Especially in case of installation of Eslon valve with metal piping, inlet and outlet around valves needs to be fixed not to be affected on valve as mechanical properties and loaded stress between plastic valve and metal piping absolutely differ.

11 Thermal Insulation

Fluid might freeze up in valve when temperature is underfreezing point of fluid and stop flowing. Install thermal insulation material such as glass wool or foamed urethane onto piping in those cases. Refer to insulation handbook to consult forproper thickness of insulation.

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