



Easy-maintenance valves with straight flow paths

LPS SERIES

LPS[®] VALVES

Features

● Straight flow path

Flow path resistance is low, and structure is not prone to retention of process fluids or cleaning solutions.

● No shaft seal gland packing

More reliable against leakage than ball valves, butterfly valves, and other valves with gland packing.

● Can be dismantled and assembled with internal piping intact

● No buffing is used to finish internal surfaces

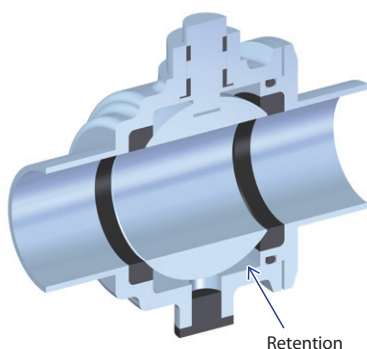
(electropolishing only)

● Lighter in weight because of special stainless steel machining

Mass is equivalent to that of Fujikin aluminum actuator diaphragm valves.

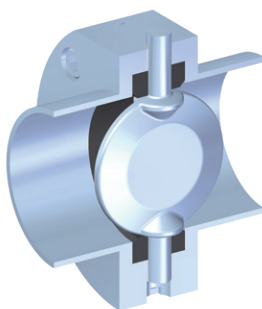
■ No shaft seal gland

Ball valve



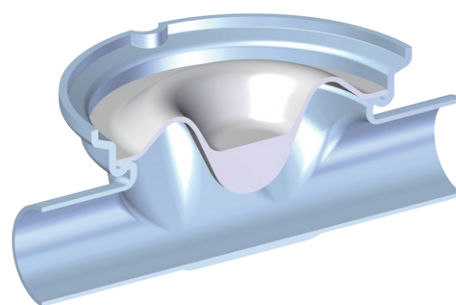
- Shaft seal
- Has retention section
- Poor dismantling performance

Butterfly valve



- Shaft seal
- No retention section
- Poor dismantling performance

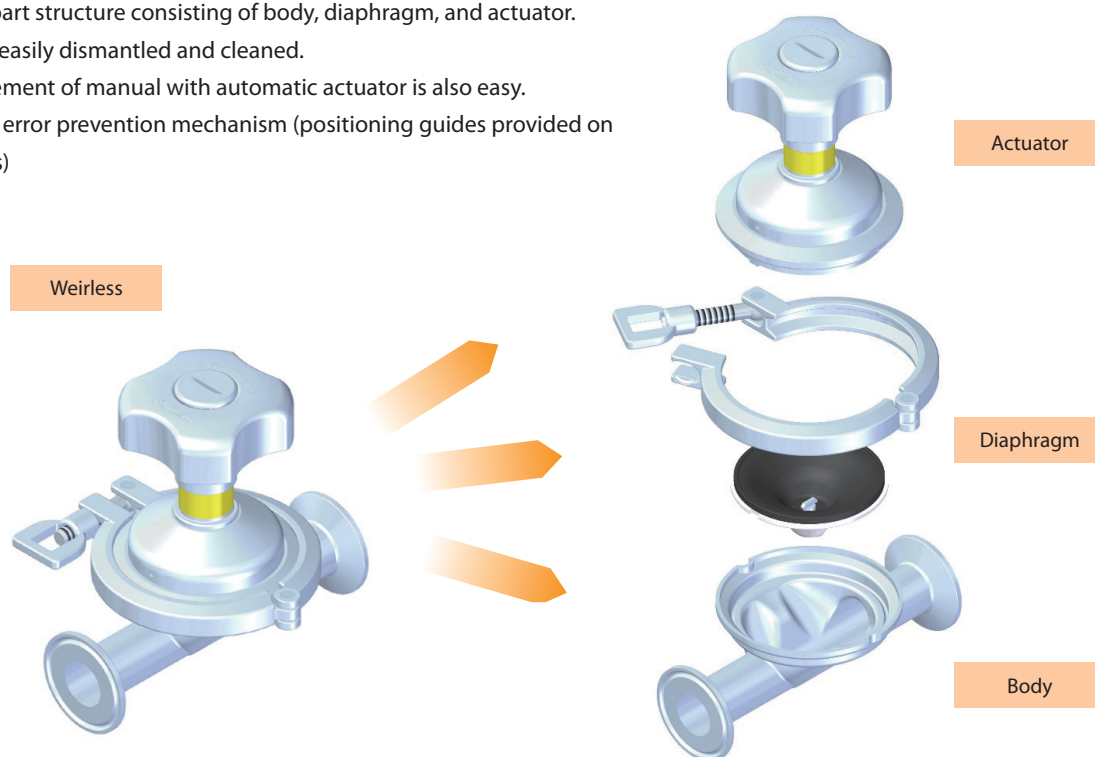
LPS_® valve



- Diaphragm seal
- No retention section
- Good dismantling performance

Can be dismantled and assembled with piping intact

- Three-part structure consisting of body, diaphragm, and actuator.
- Can be easily dismantled and cleaned.
- Replacement of manual with automatic actuator is also easy.
- Human error prevention mechanism (positioning guides provided on all parts)



Product specifications

Material	Body	Stainless steel (SUS316L)				
	Diaphragm	PTFE/EPDM (backup rubber)				
	Manual actuator	Stainless steel, etc. (bonnet section SUS316)				
	Automatic actuator	Stainless steel, etc. (bonnet section SUS316)				
Working pressure range		0–0.8 MPa				
Working temperature range		Fluid temperature: 0°C–140°C Working environment temperature (actuator working temperature): Constant 60°C Compatible with autoclaves				
Body surface roughness		Internal surfaces: Ra 1 μm or less (other than welded sections) + electropolishing External surfaces: Electropolishing				
Actuator type		Manual type (round handle) Manual type (lever handle) Spring-back type (normally closed type) [N.C.] Spring-back type (normally open type) [N.O.] Double-action type [D.A.]				
Body connection		Clamp type				
Size		0.5 (8A)	0.75 (15A)	1.0 (1S)	1.5 (1.5S)	2.0 (2S)
Cv value		4	11	20	48	78
Dimensions	Face-to-face dimension (mm)	108	140	159	190	203
	Internal diameter (mm)	10.5	17.5	23	35.7	47.8
	Lift (mm)	6.5	10.5	14	21.5	25

Part number format

LPS C - 1 - 7 - P E - HP - 2K - PSC - * * *

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①	Valve series name
LPS	Diaphragm size: 15A, 1S
LPSN	Diaphragm size: 8A, 1.5S, 2S

②	Actuator operation type
C	Spring-back (normal close type) (N.C.)
O	Spring-back (normal open type) (N.O.)
D	Double action type (D.A.)
M	Manual type (round handle)
L	Manual type (lever handle)

③	Diaphragm size
0.5	8A
0.75	15A
1	1S
1.5	1.5S
2	2S

④	Connection
5	Butt weld type (BW)
7	Clamp type

⑤	Diaphragm wetted surface material
P	PTFE

⑥	Backup rubber material
E	EPDM

⑦	Actuator working pressure
HP	Standard type (0.5 MPa)

⑧	Bonnet section clamp
None	Bolt and nut type
2K	Butterfly screw type

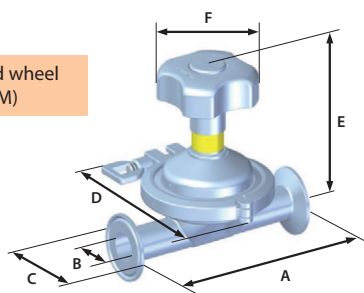
⑨	Options
None	No options
LC	With closed-side limit switch
LO	With open-side limit switch
LD	With open/closed dual limit switches
PSC	With closed-side proximity sensor
PSO	With open-side proximity sensor
PSD	With open/closed two-point proximity sensor
EP1	With electropneumatic positioner

⑩	Other
	Separate specifications (three-digit abbreviation)



Manual valve primary specifications

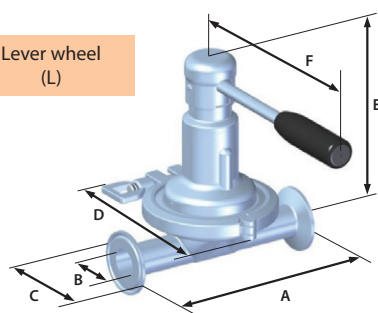
Round wheel
(M)



Units (mm)

type	Size	A	φB	φC	D	E	φF	Mass (kg)	Part No.
Manual M	0.5 (8A)	108	10.5	34	92	81	40	0.59	LPSNM-0.5-7-PE-2K
	0.75 (15A)	140	17.5	34	119	109	60	1.1	LPSM-0.75-7-PE-2K
	1.0 (15)	159	23	50.5	134	127	80	1.4	LPSM-1-7-PE-2K
	1.5 (1.5S)	190	35.7	50.5	163	163	110	2.6	LPSNM-1.5-7-PE-2K
	2.0 (2S)	203	47.8	64	185	185	160	3.3	LPSNM-2-7-PE-2K

Lever wheel
(L)

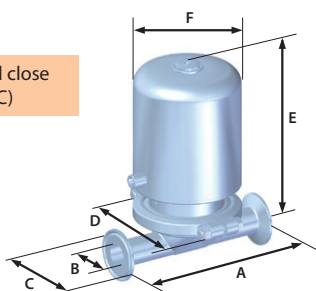


Units (mm)

type	Size	A	φB	φC	D	E	F	Mass (kg)	Part No.
Manual L	0.5 (8A)	108	10.5	34	92	104	99	0.74	LPSNL-0.5-7-PE-2K
	0.75 (15A)	140	17.5	34	119	154	140	1.7	LPSL-0.75-7-PE-2K
	1.0 (15)	159	23	50.5	134	161	180	2.1	LPSL-1-7-PE-2K
	1.5 (1.5S)	190	35.7	50.5	163	201	221	3.9	LPSNL-1.5-7-PE-2K
	2.0 (2S)	203	47.8	64	185	219	261	4.9	LPSNL-2-7-PE-2K

Automatic valve primary specifications

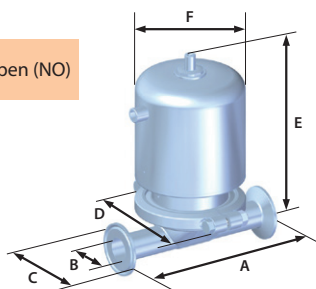
Normal close
(NC)



Units (mm)

type	Size	A	φB	φC	D	E	φF	Mass (kg)	Part No.
Automatic NC	0.5 (8A)	108	10.5	34	86	111	52	0.88	LPSNC-0.5-7-PE-HP
	0.75 (15A)	140	17.5	34	115	149	82	2.0	LPSC-0.75-7-PE-HP
	1.0 (15)	159	23	50.5	130	193	103	3.2	LPSC-1-7-PE-HP
	1.5 (1.5S)	190	35.7	50.5	158	247	128	7.1	LPSNC-1.5-7-PE-HP
	2.0 (2S)	203	47.8	64	170	283	164	10.3	LPSNC-2-7-PE-HP

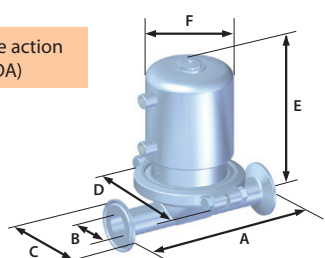
Normal open (NO)



Units (mm)

type	Size	A	φB	φC	D	E	φF	Mass (kg)	Part No.
Automatic NO	0.5 (8A)	108	10.5	34	86	111	52	0.86	LPSNO-0.5-7-PE-HP
	0.75 (15A)	140	17.5	34	115	149	82	1.8	LPSO-0.75-7-PE-HP
	1.0 (15)	159	23	50.5	130	178	103	2.6	LPSO-1-7-PE-HP
	1.5 (1.5S)	190	35.7	50.5	158	231	128	5.5	LPSNO-1.5-7-PE-HP
	2.0 (2S)	203	47.8	64	170	263	164	7.9	LPSNO-2-7-PE-HP

Double action
(DA)



Units (mm)

type	Size	A	φB	φC	D	E	φF	Mass (kg)	Part No.
Automatic DA	0.5 (8A)	108	10.5	34	86	106	42	0.74	LPSND-0.5-7-PE-HP
	0.75 (15A)	140	17.5	34	115	137	65	1.4	LPSD-0.75-7-PE-HP
	1.0 (15)	159	23	50.5	130	160	82	2.0	LPSD-1-7-PE-HP
	1.5 (1.5S)	190	35.7	50.5	158	202	103	3.8	LPSND-1.5-7-PE-HP
	2.0 (2S)	203	47.8	64	170	221	128	5.1	LPSND-2-7-PE-HP

Components (diaphragms and actuators)

Diaphragm



Size	Part No.
0.5	LPSNP-0.5-PE
0.75	LPSP-0.75-PE
1	LPSP-1-PE
1.5	LPSNP-1.5-PE
2	LPSNP-2-PE

Actuator

Manual round wheel actuator



Size	Part No.
0.5	LPSNM-0.5
0.75	LPSM-0.75
1	LPSM-1
1.5	LPSNM-1.5
2	LPSNM-2

Manual lever actuator



Size	Part No.
0.5	LPSNL-0.5
0.75	LPSL-0.75
1	LPSL-1
1.5	LPSNL-1.5
2	LPSNL-2



Automatic N.C.



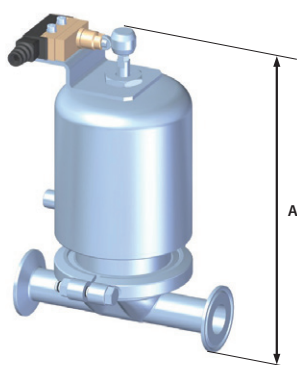
Automatic N.O.



Automatic D.A.

Size	Type	Part No.
0.5	N.C.	LPSNC-0.5-HP
	N.O.	LPSNO-0.5-HP
	D.A.	LPSND-0.5-HP
0.75	N.C.	LPSC-0.75-HP
	N.O.	LPSO-0.75-HP
	D.A.	LPSD-0.75-HP
1	N.C.	LPSC-1-HP
	N.O.	LPSO-1-HP
	D.A.	LPSD-1-HP
1.5	N.C.	LPSNC-1.5-HP
	N.O.	LPSNO-1.5-HP
	D.A.	LPSND-1.5-HP
2	N.C.	LPSNC-2-HP
	N.O.	LPSNO-2-HP
	D.A.	LPSND-2-HP

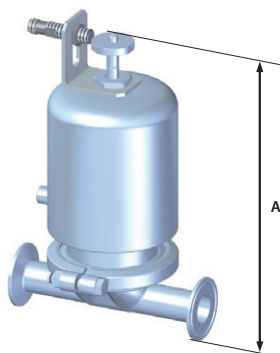
Automatic valve limit switch assembly (ex. N.C. type closed-side detection)



Units (mm)

Size	A
0.75	189
1	233
1.5	287
2	323

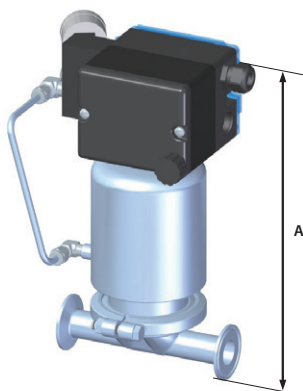
Automatic valve proximity sensor assembly (ex. N.C. type open-side detection)



Units (mm)

Size	A
0.75	189
1	229
1.5	287
2	319

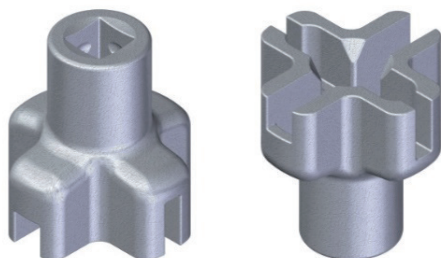
Automatic valve electropneumatic positioner assembly (ex. N.C. type)



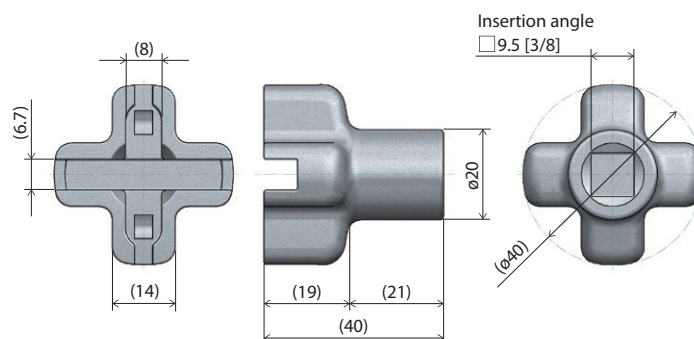
Units (mm)

Size	A
0.75	223
1	263
1.5	310
2	342

Joint for butterfly screw clamp fastening

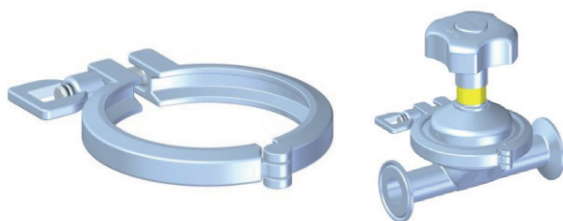


Part No.	SCS13-CLAMPLOCK-FTG
Material	SCS13



Bonnet section clamp

Butterfly screw type



Size	Part No.
0.5	LPSNA-0.5-CLA-2K
0.75	LPSA-0.75-CLA-2K
1	LPSA-1-CLA-2K
1.5	LPSNA-1.5-CLA-2K
2	LPSNA-2-CLA-2K

Bolt and nut type



Size	Part No.
0.5	LPSNA-0.5-CLA-2D
0.75	LPSA-0.75-CLA-2D
1	LPSA-1-CLA-2D
1.5	LPSNA-1.5-CLA-2D
2	LPSNA-2-CLA-2D

Automatic actuator diaphragm replacement plug



Size	Part No.
0.5	LPSA-0.5-HS-4AJ
0.75	LPSA-1-HS-4AJ
1	
1.5	LPSA-1.5-HS-4AJ
2	

