

valves

# **LO1** Series

*Direct Solenoid Actuated Valves*



# numatics

# Table of Contents

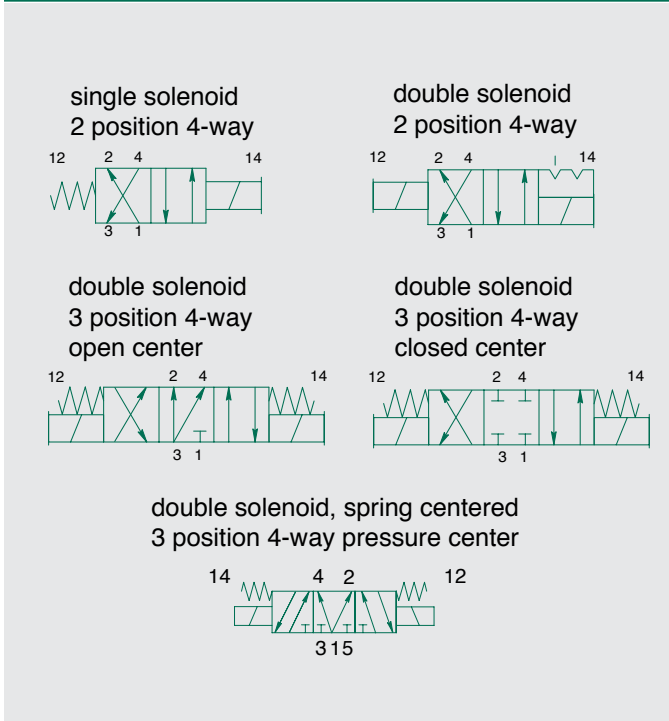


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<b>LO1 Series</b> .....	3-9
Technical and Operating Data.....	3
How to Order.....	4
Valve Dimensions.....	5
Manifold Assembly.....	6
Speed Control Kit.....	7
Mounting Kit.....	7
Blank Station Plate Kit.....	7
Solenoid Capsule Assemblies.....	7
Valve Service Kits and Parts.....	8-9



## L01 Series



4 Ported, 2 and 3 position, 4-way, Spool & Sleeve  
Cv: 0.20

- Direct solenoid actuated
- DIN plug-in solenoid with indicator light
- Unlubricated or lubricated service
- Integral speed control available
- In-line or manifold mounted
- NEMA 4 / IP65



## Technical Data

VALVE DATA	ENGLISH	METRIC
Cv	1/8 = 0.20	1/8 = 0.20
Flow capacity	9.3 SCFM @ 80 PSIG Upstream pressure to atmosphere	197 NI/m @ 6 bar upstream/5 bar downstream
Operating Pressure Range	28" HG. Vacuum to 150 PSIG	Vacuum to 10 Bar
Temperature Range (ambient)	-10°F to +115°F	-23°C to +46°C

## Operating Data

ALL SOLENOIDS ARE CONTINUOUS DUTY RATED		12 VDC	24 VDC	24 VAC 50 Hz.	24 VAC 60 Hz.	115 VAC 50 Hz.	120 VAC 60 Hz.	230 VAC 50 Hz.	240 VAC 60 Hz.
Power (Watts)		6.0	6.0	4.0	3.0	5.4	4.1	5.0	5.4
Holding Current (Amps.)		0.500	0.250	0.290	0.023	0.600	0.050	0.024	0.024
Inrush Current (Amps.)		N/A	N/A	0.490	0.045	0.100	0.090	0.041	0.041
Energize in seconds	2-Position, Single, Spring Return	0.012	0.012	0.008	0.008	0.008	0.008	0.008	0.008
	2-Position, Double, Detented	0.012	0.012	0.008	0.008	0.008	0.008	0.008	0.008
	3-Position, Spring Centered	0.012	0.012	0.010	0.010	0.010	0.010	0.010	0.010
De-energize in seconds	2-Position, Single, Spring Return	0.006	0.006	0.010	0.010	0.010	0.010	0.010	0.010
	2-Position, Double, Detented	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3-Position, Spring Centered	0.006	0.006	0.012	0.012	0.012	0.012	0.012	0.012



## L01 Series

### How to Order

#### Valves

**L01 SS 4 59 B 0 000 60**

**Valve Series & Port Size**  
L01 = 1/8

**Valve Type**  
SA = Single Direct Solenoid, Spring Return W/Flush Non-locking Override  
SS = Double Direct Solenoid w/Flush Non-locking Override

**Function**  
4 = 2 Position, 4-Way  
5 = 3 Position, 4-Way Open Center  
6 = 3 Position, 4-Way Closed Center  
7 = 3 Position, 4-Way Pressure Center

**Mounting**  
59 = Line Mounted, Common Exhaust  
87 = 59 w/Speed Control

**Voltage**  
20 = 24/50-60 VAC  
30 = 110-120/50-60 VAC  
40 = 220-240/50-60 VAC  
60 = 12 VDC  
61 = 24 VDC

**Options**  
11B = Flush Locking Override  
11Z = Extended Locking Override  
13A = 48" Leads  
17N = DC Solenoid W/Surge Suppression Diode  
18D = Side Ports

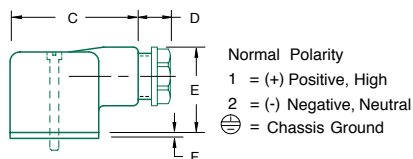
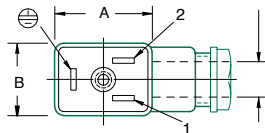
**Port Type**  
0 = NPTF  
G = G Tap

**Wiring Option**  
2 = Din Plug-in AC Solenoid  
4 = Din Plug-in DC Solenoid  
O = Hardwired AC  
B = Hardwired DC

NOTE: Plug connector is NOT included with DIN solenoid. Order plug-in connector assembly separately (see ordering information below)

#### Plug connector assemblies

Per DIN Spec. NO 43650. Accepts cable diameter 0.240 to 0.310  
11 mm Industry Standard DIN Form B



PLUG CONNECTOR DESCRIPTION	PART NO.
Grey (14 end solenoid) Plug Assembly	230-363
Black (12 end solenoid) Plug Assembly	230-364
Plug Assembly with 24 V Light	230-365
Plug Assembly with 110 V Light	230-366
Plug Assembly with 220 V Light	230-367

#### Dimensions

top dimensions = inches  
bottom dimensions (in parenthesis) = millimeters

A	B	C	D	E	F
1.12 (28.4)	0.83 (21.1)	1.57 (39.9)	0.40 (10.2)	1.10 (27.9)	0.06 (1.5)

#### Manifold Assembly

**AK 0 1 E 0000 2 N STD**

**Electrical/Electronics Type & Location**  
0 = Standard

**Valve Line**  
1 = L01 Series

**Number of Valve Stations**  
B = 2 F = 6 J = 10  
C = 3 G = 7 K = 11  
D = 4 H = 8 L = 12  
E = 5 I = 9

**Options**  
STD = Standard

**Port Type**  
N = NPTF  
G = G tap

**End Plate Port Size**  
2 = 1/4

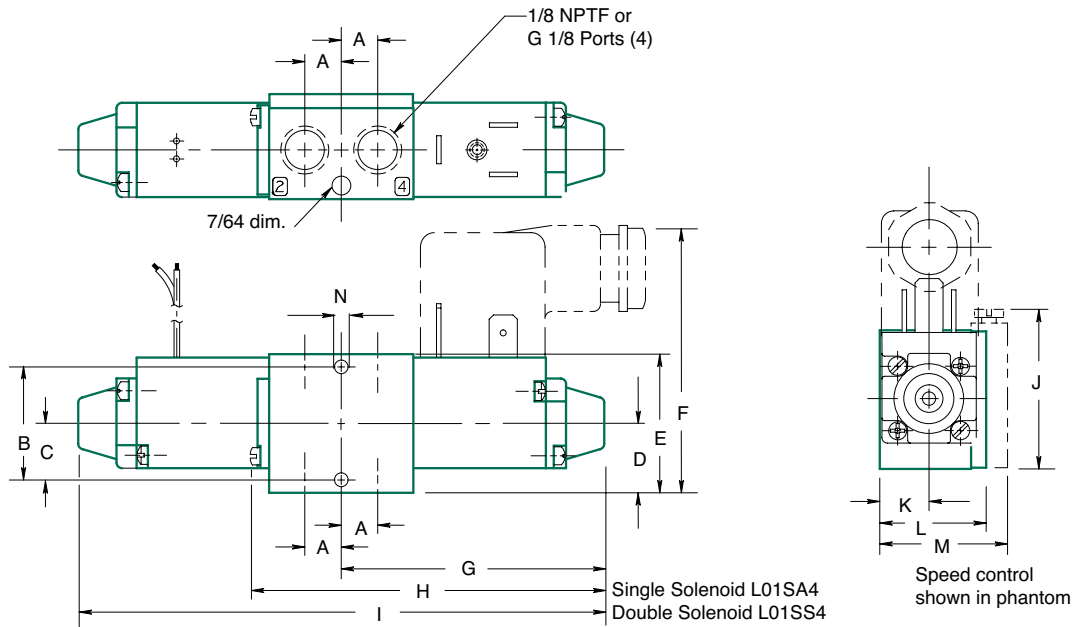
Example order:

List in order, left to right, facing cylinder ports

Assembly Kit:	AK01C00002NSTD
Station 1	LO1SS4872000030
Station 2	LO1SS4592000030
Station 3	LO1SA4592000030
	ASSEMBLED



### Valve 2 Position

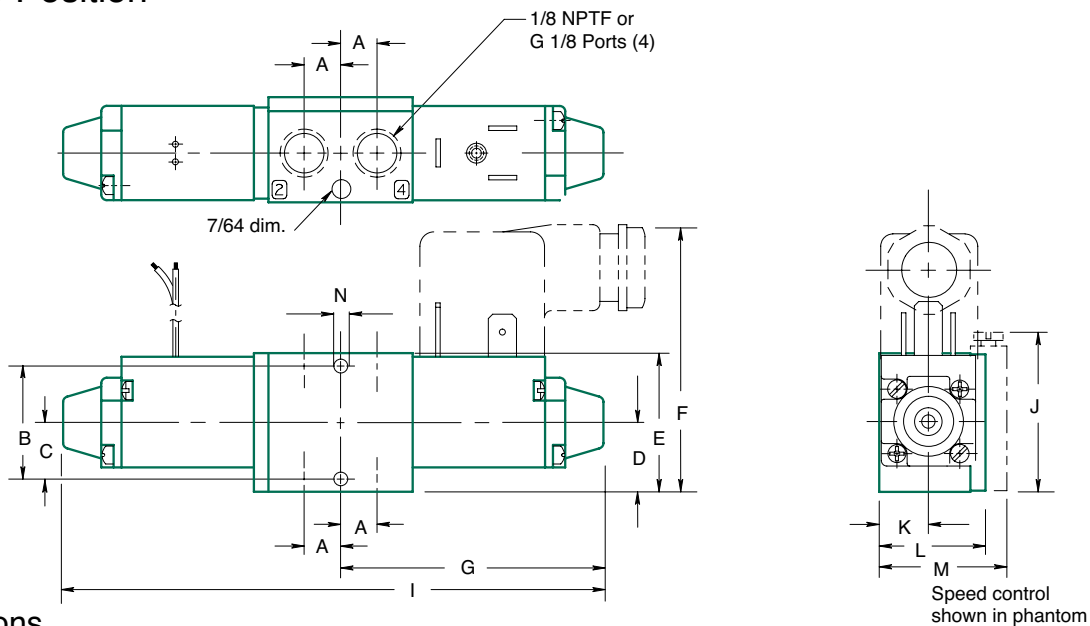


### Dimensions

top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

A	B	C	D	E	F	G	H	I	J	K	L	M	N
0.31 (7.9)	0.97 (24.6)	0.49 (12.4)	0.59 (15.0)	1.19 (30.2)	2.33 (59.2)	2.30 (58.4)	3.14 (79.8)	4.60 (116.8)	1.35 (34.3)	0.42 (10.7)	0.90 (22.9)	1.08 (27.4)	0.11 (2.8)

### Valve 3 Position



### Dimensions

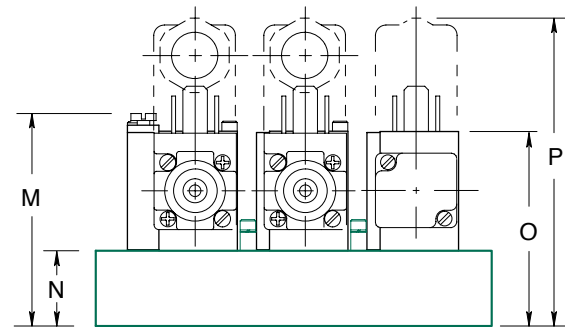
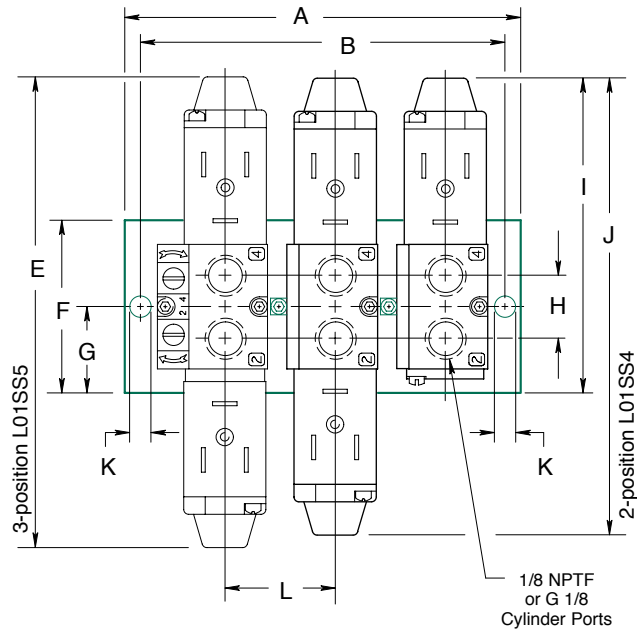
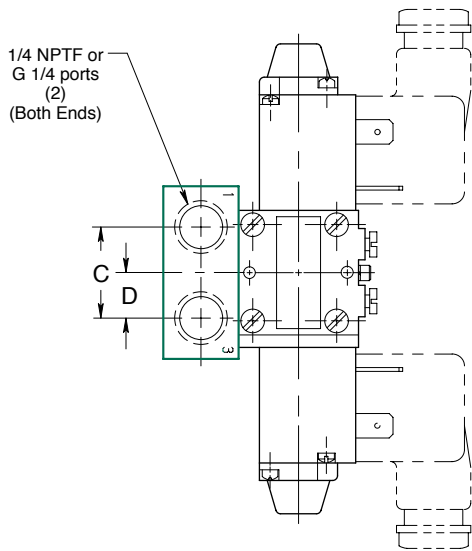
top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

A	B	C	D	E	F	G	H	I	J	K	L	M	N
0.31 (7.9)	0.97 (24.6)	0.49 (12.4)	0.59 (15.0)	1.19 (30.2)	2.33 (59.2)	2.37 (60.2)	—	4.86 (123.4)	1.35 (34.3)	0.42 (10.7)	0.90 (22.9)	1.08 (27.4)	0.11 (2.8)



## L01 Series

### Manifold Assembly Common Supply and Exhaust



### Dimensions

top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
See table below	See table below	0.91 (23.1)	0.45 (11.4)	4.86 (123.9)	1.69 (42.9)	0.84 (21.3)	0.62 (15.7)	3.14 (79.7)	4.60 (116.8)	0.20 (5.1)	1.10 (27.9)	2.10 (53.3)	0.75 (19.1)	1.94 (49.3)	3.02 (76.7)	

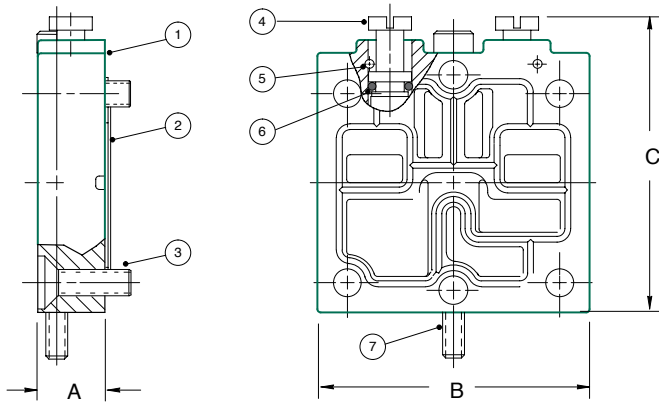
MANIFOLD # STATIONS	DIM A	DIM B	1/4 NPTF	G 1/4
2 Stations	2.84 (72.1)	2.53 (64.3)	106-822	106-833
3 Stations	3.94 (100)	3.63 (92.2)	106-823	106-834
4 Stations	5.03 (127.7)	4.72 (119.9)	106-824	106-835
5 Stations	6.13 (155.7)	5.82 (147.8)	106-825	106-836
6 Stations	7.23 (183.6)	6.91 (177.5)	106-826	106-837
7 Stations	8.23 (211.3)	8.01 (203.5)	106-827	106-838

MANIFOLD # STATIONS	DIM A	DIM B	1/4 NPTF	G 1/4
8 Stations	9.42 (239.3)	9.11 (231.4)	106-828	106-839
9 Stations	10.51 (267.0)	10.20 (259.1)	106-829	106-840
10 Stations	11.61 (294.9)	11.30 (287.0)	106-830	106-841
11 Stations	12.71 (322.8)	12.39 (314.7)	106-831	106-842
12 Stations	13.80 (350.5)	13.49 (342.6)	106-832	106-843
Mounting Kit	239-582	Order (1) mounting kit for each station on the manifold. Includes all studs, seals & screws.		



### Speed Control Kit - Side Mounted

239-581



#### Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
*1	1	Speed Control Body (not sold separately)	
*2	1	Gasket	113-414
*3	4	Screw Assembly	127-671
*4	2	Metering Screw	118-166
*5	2	Pin	131-220
*6	2	O-Ring Seal	126-163
*7	1	Screw	127-670

\* Indicates parts included in kit

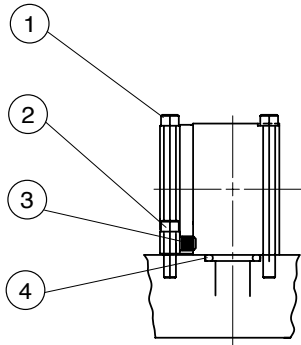
#### Dimensions

top dimensions = inches  
bottom dimensions (in parenthesis) = millimeters

A	B	C
0.30 (7.6)	1.22 (31.0)	1.35 (34.3)

### Mounting Kit

239-582

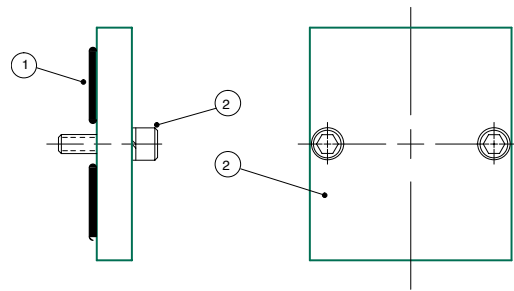


#### Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	2	Screw	127-670
2	1	Screw	127-669
3	1	Mounting Stud	125-560
4	2	O-Ring	126-107

### Blank Station Plate Kit

239-583



#### Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	2	O-Ring Seal	126-106
2	2	Screw	127-669
3	1	Blank Station Plate (not sold separately)	

### Solenoid Capsule Assemblies (Flush Non-Locking Override)

OVERRIDE TYPE	VALVE FUNCTION	WIRING OPTION	12/14 END	100-115/50 110-120/60	VOLTAGE			
					AC 200-230/50 220-240/60	24/50-60	DC 12 VDC 24 VDC	
Flush non-locking override (standard)	2 position	Hardwired	12/14	237-952	237-953	237-954	236-102	236-103
	2 position	DIN plug-in	12/14	237-961	237-962	237-963	236-126	236-127
	3 position	Hardwired	12 end	237-993	237-992	237-994	236-154	236-155
	3 position	Hardwired	14 end	237-990	237-989	237-991	236-108	236-109
	3 position	DIN plug-in	12 end	237-1011	237-1010	237-1012	236-166	236-167
	3 position	DIN plug-in	14 end	237-1008	237-1007	237-1009	236-132	236-133

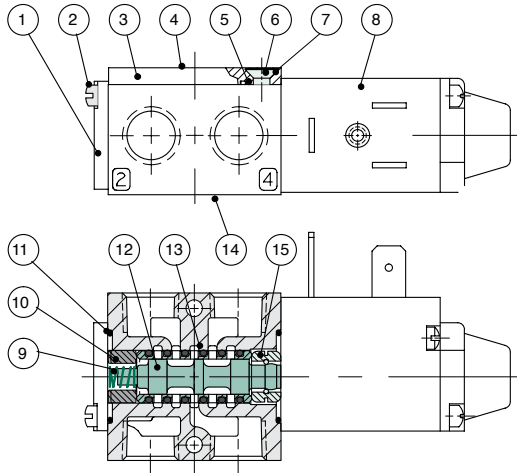
Includes solenoid and end cap assembly + screws and gaskets.



## L01 Series

### Valve Service Kits and Parts

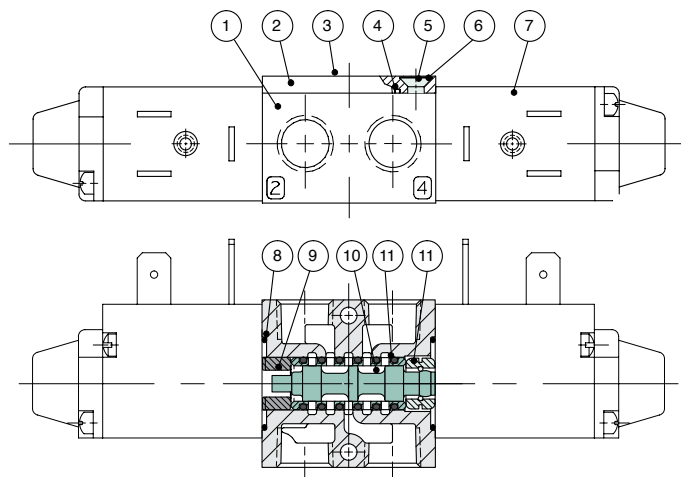
Kit No. L01-K1\* (For Model L01SA4)



#### Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Spring Cover	104-199
2	2	Screw	127-260
3	1	Top Plate	105-313
4	1	Nameplate	122-571
5 *	1	Gasket	113-414
6	4	Screw	127-604
7	4	Lockwasher	128-316
8	1	Solenoid Assembly (12/14)	See p. 7
9 *	1	Spring	115-203
10 *	1	Bumper	114-130
11 *	2	O-Ring Seal	126-134
12	1	Sleeve Assembly w/Seals	209-278
13 *	6	Seals	126-133
14	1	Valve Body (not sold separately)	
15 *	1	Detent Body	110-109

Kit No. L01-K1\* (For Model L01SS4)



#### Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Valve Body (not sold separately)	
2	1	Top Plate	105-313
3	1	Nameplate	122-571
4 *	1	Gasket	113-414
5	4	Screw	127-604
6	4	Lockwasher	128-316
7	2	Solenoid Assembly (12/14)	See p. 7
8 *	2	O-Ring Seal	126-134
9 *	1	Bumper	114-130
10	1	Sleeve Assembly w/Seals	209-278
11 *	6	Seals	126-133
12 *	1	Detent Assembly	210-111

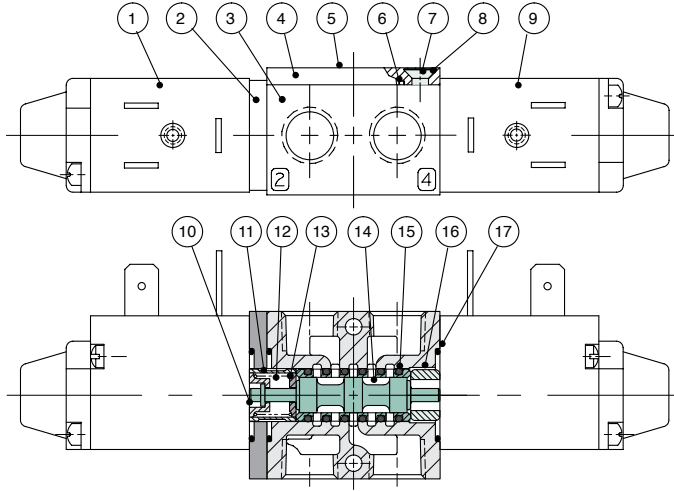
\*Indicates parts included in service kit. \*\*Spool and sleeve assemblies sold as precision matched set and include (6) #126-133 seals; spools are not interchangeable.





### Valve Service Kits and Parts

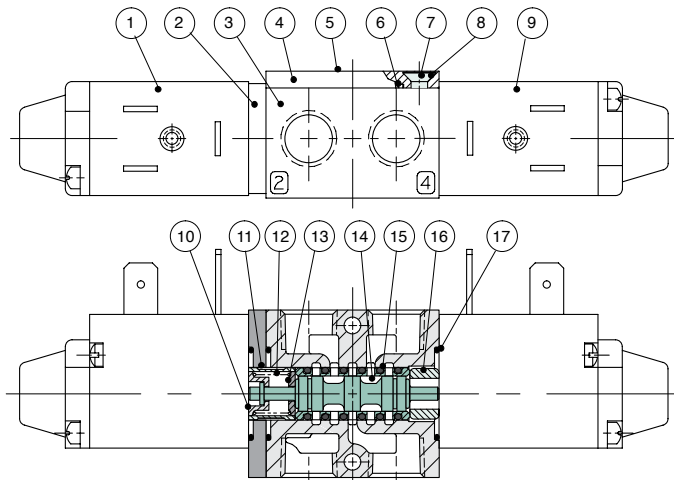
Kit No. L01-K3\* (For Model L01SS5)



#### Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Solenoid Assembly (12 End)	See p. 7
2	1	Adaptor	119-343
3	1	Valve Body (not sold separately)	
4	1	Top Plate	105-313
5	1	Nameplate	122-571
*6	1	Gasket	113-414
7	4	Screw	127-604
8	4	Lockwasher	128-316
9	1	Solenoid Assembly (14 End)	See p. 7
*10	1	Spring Retainer	116-396
*11	1	Spacer	116-397
*12	1	Spring	115-291
*13	1	Spring Retainer	116-395
14	1	Sleeve Assembly w/Seals	**209-373
*15	6	Seals	126-133
*16	1	Bumper	114-171
*17	3	O-Ring Seals	126-134

Kit No. L01-K3\* (For Model L01SS6)



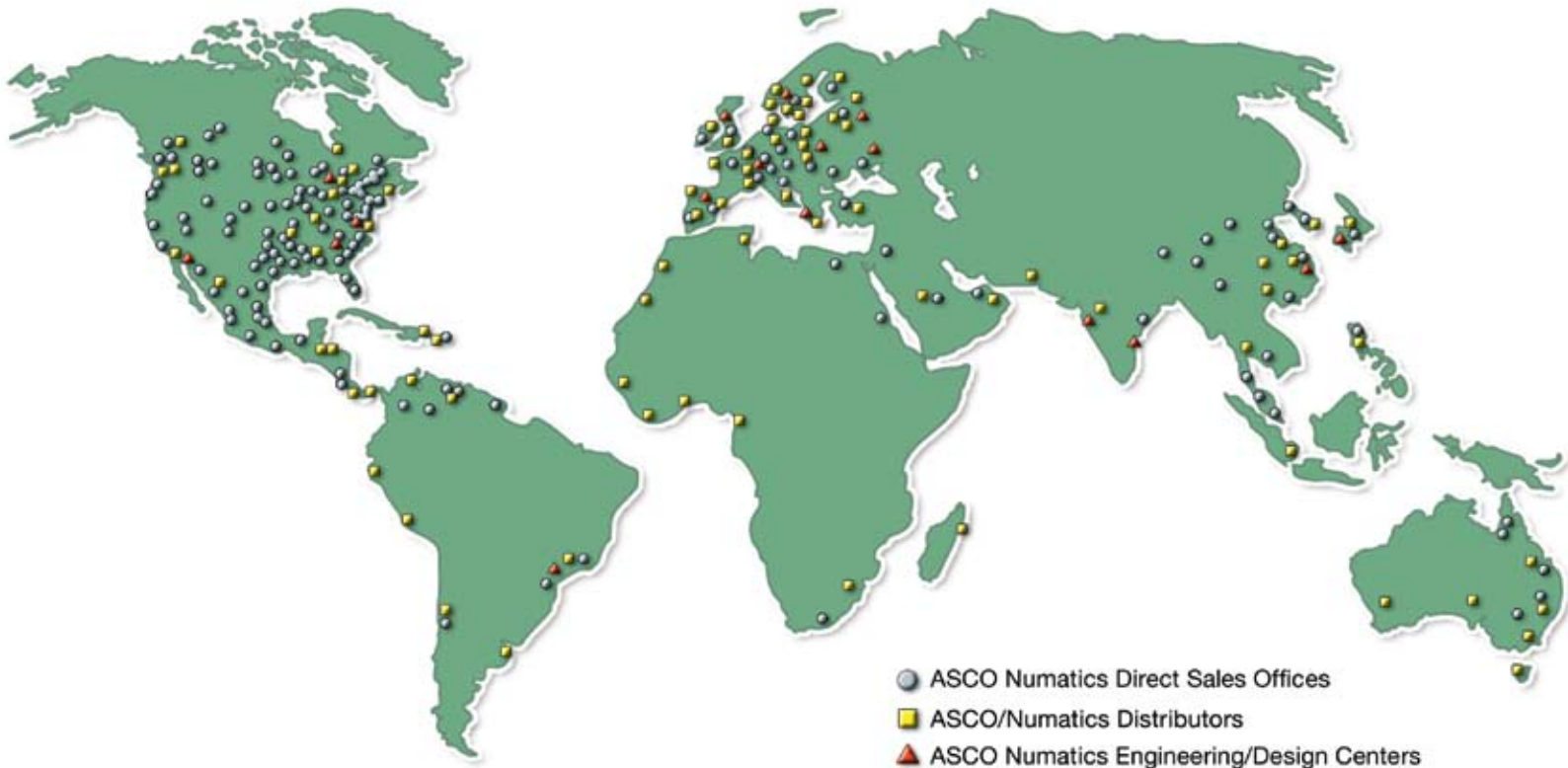
#### Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Solenoid Assembly (12 End)	See p. 7
2	1	Adaptor	119-343
3	1	Valve Body (not sold separately)	
4	1	Top Plate	105-313
5	1	Nameplate	122-571
6 *	1	Gasket	113-414
7	4	Screw	127-604
8	4	Lockwasher	128-316
9	1	Solenoid Assembly (14 End)	See p. 7
10 *	1	Spring Retainer	116-396
11 *	1	Spacer	116-397
12 *	1	Spring	115-291
13 *	1	Spring Retainer	116-395
14	1	Sleeve Assembly w/Seals	209-374**
15 *	6	Seals	126-133
16 *	1	Bumper	114-171
17 *	3	O-Ring Seals	126-134

\*Indicates parts included in service kit. \*\*Spool and sleeve assemblies sold as precision matched set and include (6) #126-133 seals; spools are not interchangeable.

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