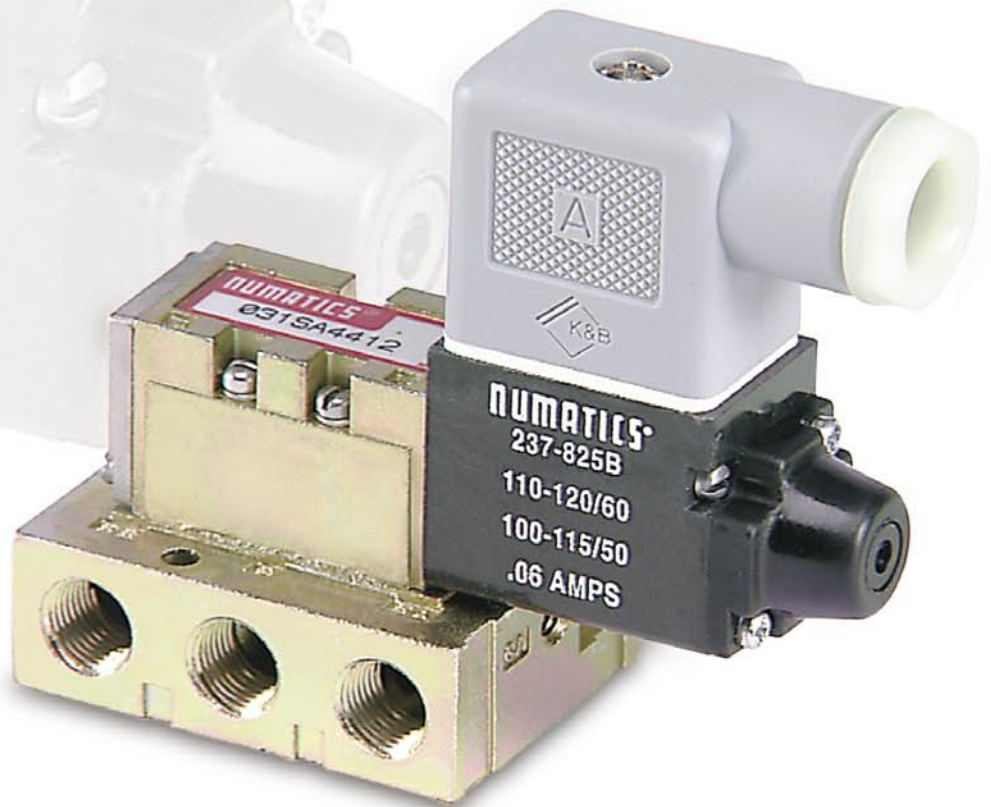


valves

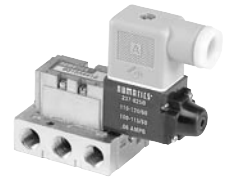
Mark 3, PA 3 and SPA 3 Series

Direct Solenoid, Air Pilot, or Solenoid Pilot Actuated Valves

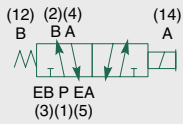


numatics®

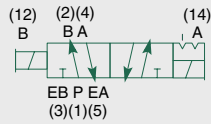
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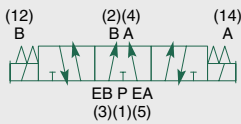
single solenoid
2 position 4-way



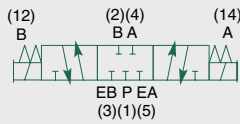
double solenoid
2 position 4-way



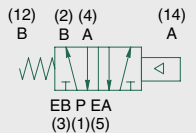
double solenoid
3 position 4-way
open center



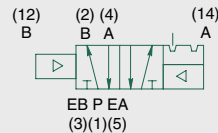
double solenoid
3 position 4-way
closed center



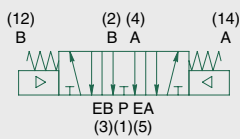
single air pilot
2 position 4-way



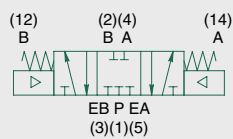
double air pilot
2 position 4-way



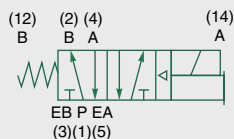
double air pilot
3 position 4-way
open center



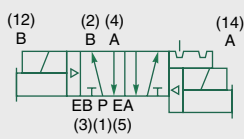
double air pilot
3 position 4-way
closed center



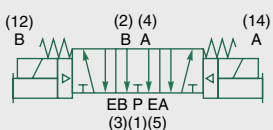
single solenoid pilot
2 position 4-way



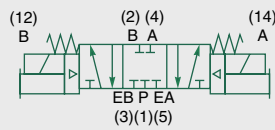
double solenoid pilot
2 position 4-way



double solenoid pilot
3 position 4-way
open center



double solenoid pilot
3 position 4-way
closed center



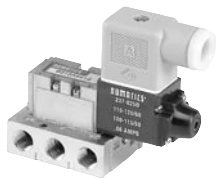
double solenoid
3 Position 4-Way (5/3),
open to 4 (A) and
2 (B) in center



5 Ported, 2 and 3 position, 4-way, Spool & Sleeve,
Cv: 0.35

- Direct solenoid, air pilot or solenoid air pilot actuated
- DIN plug-in solenoid with indicator light
- Unlubricated or lubricated service
- Integral speed control available
- Integral regulators available
- NEMA 4 / IP 65





Mark 3, SPA 3 & PA 3 Series

Technical Data

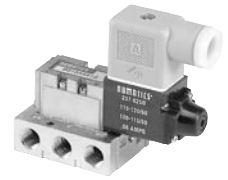
VALVE DATA	ENGLISH		METRIC	
Cv	1/8 NPTF = 0.35	10-32 UNF = 0.18	1/8 = 0.35	M5 = .018
Flow capacity	16.21 SCFM	8.34 SCFM	345 NI/m	177 NI/m
	Upstream pressure to atmosphere @80 PSIG		@ 6 bar upstream/5 bar downstream	
Operating Pressure Range	28" HG. Vacuum to 150 PSIG		Vacuum to 10 Bar	
Pilot Pressure Range	2-Position, Spring Return	20-100 PSIG		
	2-Position, Detented	15-100 PSIG		
	3-Position	20-100 PSIG		
Temperature Range (ambient)	Direct Solenoid	-10°F to +115°F	-23°C to +46°C	
	Air Pilot	-10°F to +200°F	-23°C to +93°C	
	Solenoid Air Pilot	-10°F to +115°F	-23°C to +16°C	

Operating Data - Mark 3

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	5.5	4.0	5.2	4.6
Holding Current (Amps.)		0.500	0.250	0.290	0.234	0.063	0.052	0.025	0.021
Inrush Current (Amps.)		N/A	N/A	0.490	0.450	0.093	0.090	0.042	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	0.008	0.008	0.008	0.008	0.008	0.008
De-energize in seconds	2-Position, Single, Spring Return	0.008	0.008	0.012	0.012	0.012	0.012	0.012	0.012
	2-Position, Double, Detented	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3-Position, Spring Centered	0.008	0.008	0.012	0.012	0.012	0.012	0.012	0.012

Operating Data - SPA 3

		12 VDC	24 VDC
Power (Watts)		1.2	1.2
Holding Current (Amps.)		0.100	0.050
Energize in Seconds	2-Position, Single, Spring Return	0.009	0.009
	2-Position, Double, Detented	0.010	0.010
	3-Position, Spring Centered	0.010	0.010
De-Energize in Seconds	2-Position, Single, Spring Return	0.015	0.015
	2-Position, Double, Detented	N/A	N/A
	3-Position, Spring Centered	0.040	0.040



How to Order

Valves

031 SA 4 15 4 0 000 61

Valve Series & Port Size

030 = 10-32

031* = 1/8

*Valve Unit Only (Mounting = 00)

Valve Type

BA = Single Solenoid Pilot, Spring Return w/Flush Non-Locking Override

BB = Double Solenoid Pilot w/Flush Non-Locking Override

PA = Single Air Pilot, Spring Return

PP = Double Air Pilot

SA = Single Solenoid, Spring Return w/Flush Non-locking Override

SS = Double 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 (5/3),
Open to 4 (A) and 2 (B) in Center

*available with SS only

Mounting

00 = Valve Unit Only

01 = Valve Unit Only w/Speed Control

15 = Manifold Block w/Side and Bottom Ports

25 = 15 w/Speed Control

41 = Standard Base, Side Ports, Individual Exhaust

46 = 41 w/Speed Control

56** = Standard Base, Bottom Ports, Individual Exhaust

58** = 56 w/Speed Control

**10-32 Ports Only

Voltage

20 = 24/50-60 VAC

30 = 110-120/50-60 VAC

40 = 220-240/50-60 VAC

60 = 12 VDC

61 = 24 VDC

00 = No Voltage (PA/PP only)

Special Options

11B = Flush Locking Override

11Z = Extended Locking Override

13A = 48" Leads

17N = DC Solenoid w/Surge
Suppression Diode

Port Type

0 = NPTF

G = G Tap

P = NPTF (Solenoid Pilot Valves)

Q = G-Tap (Solenoid Pilot Valves)

Wiring Option

B = DC Hardwired w/15" Leads

C = Proprietary AC Plug-In

E = Proprietary DC Plug-In

M = DC Straight 2-Pin Plug-in w/Light
(BA or BB only)

O = AC Hardwired w/15" Leads
(SA, SS or Air Pilot)

2 = DIN Plug-in AC Solenoid
(SA or SS only)

4 = DIN Plug-in DC Solenoid
(SA or SS only)

Plug Connector

M Wiring Option (SPA only)



LEAD LENGTH	PART NO.
12" Lead	230-443
48" Lead	230-476
120" Lead	230-486

PART NAME	PART NO.
Housing	140-384
Terminal	140-385

Plug connector is not included with solenoid assemblies or valve models. Must order separately.

Note: Wire Gage = 22 AWG

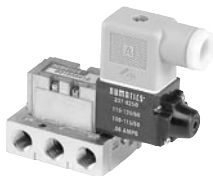
Cable Assemblies

C and E Wiring Option



CORD LENGTH	PART NO.
4' Cord	230-214
6' Cord	230-260
10' Cord	230-348
16' Cord	230-432
20' Cord	230-434
40' Cord	230-843

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



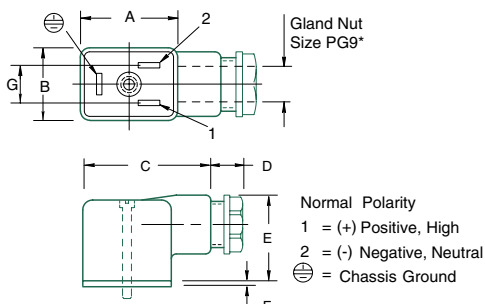
Mark 3, SPA 3 & PA 3 Series

Plug-in Connector Assemblies for DIN Plug-In Valves

2 and 4 Wiring Option

Per DIN Spec. NO 43650. *Accepts cable diameter 0.240 to 0.310.

11mm Industry Standard DIN Form B



CONNECTOR ASSEMBLY	PART NO.
Grey (A end solenoid) Plug Assembly	230-363
Black (B 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 and bottom dimensions (in parenthesis) = millimeters

A	B	C	D	E	F	G
1.12 (28.4)	0.83 (21.1)	1.57 (39.9)	0.40 (10.2)	1.10 (27.9)	0.06 (1.5)	0.43 (11.0)

How to Order continued

Regulators

031 RS 7 00 O 0 000 00

Valve Series & Port Size

031 = 1/8

Regulator Type

RS = Single Pressure to Port 1 (P)

RD = Dual Pressure to Ports 3 (EB) & 5 (EA)

Pressure Range

3 = 3-30 PSIG (0.2 - 2 Bar)

7 = 0-100 PSIG (0-6.9 Bar)

Mounting

00 = Regulator Unit Only

02** = Regulator Unit for Use w/Speed Control

**Speed control can only be used with type RS.

These model numbers include regulator with extra long screws #127-332. For complete information on ordering with speed control, see page 13.

Special Options

16N = Jumper on (A) 14 End

16P = Jumper on (B) 12 End

Port Type

0 = NPTF

Wiring Option

O = Non Plug-in

Assembly Kit

AK 0 C E 0000 1 N STD

Electrical/Electronics

Type & Location

0 = Standard

Valve Line

C = Mark 3 Series

Number of Valve Stations

A = 1 E = 5 I = 9 M = 13

B = 2 F = 6 J = 10 N = 14

C = 3 G = 7 K = 11 O = 15

D = 4 H = 8 L = 12 P = 16

Options

STD = Standard

Port Type

N = NPTF

G = G tap

End Plate Port Size

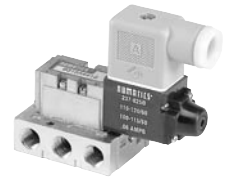
1 = 1/8

2 = 1/4

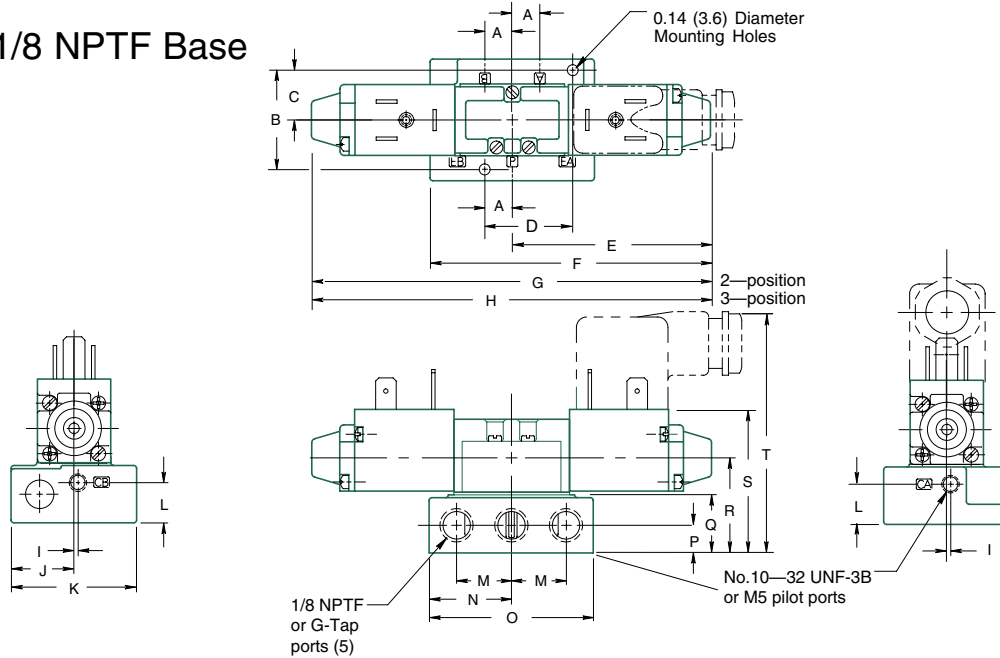
Example order

List in order, left to right, facing cylinder ports

Assembly Kit AK0CD00002NSTD
 Station 1 031SA4152000030
 Station 2 031SS4252000030
 Station 3 031SA4152000030
 Station 4 031SA4152000030
 ASSEMBLED



Mark 3 Valve with 1/8 NPTF Base

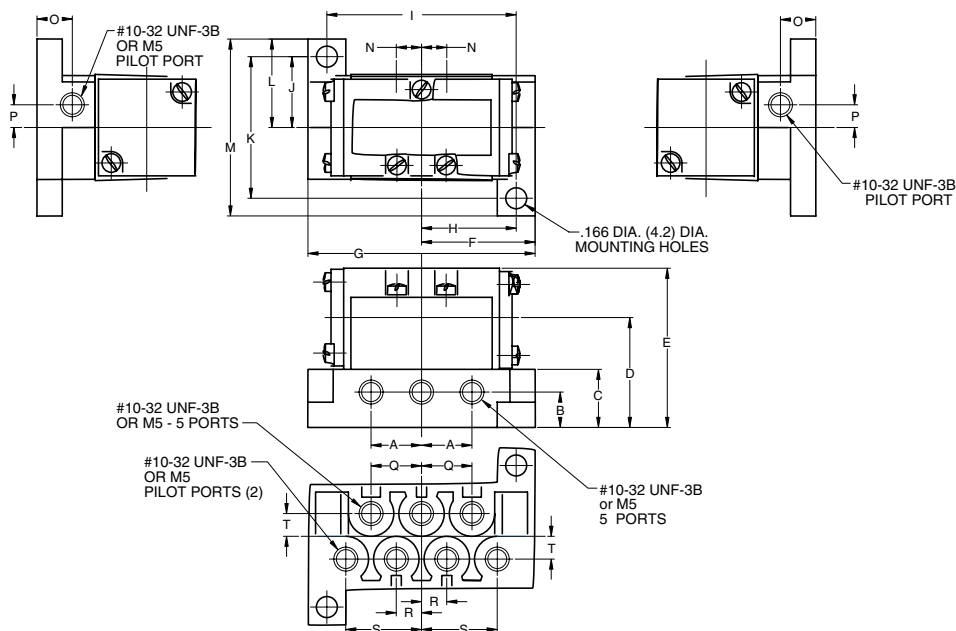


Dimensions

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	Q	R	S	T
0.31 (7.9)	1.09 (27.7)	0.55 (14.0)	1.00 (25.4)	2.30 (58.4)	3.24 (82.3)	4.60 (116.8)	4.86 (123.4)	0.03 (0.76)	0.69 (17.5)	1.38 (35.0)	0.44 (11.2)	0.63 (16.0)	0.94 (23.8)	1.88 (47.7)	0.31 (7.8)	0.65 (16.5)	1.06 (26.9)	1.65 (41.9)	2.80 (71.1)

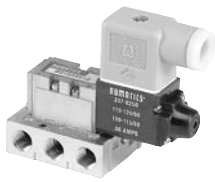
PA 3 Valve with 10-32 UNF-3B Base



Dimensions

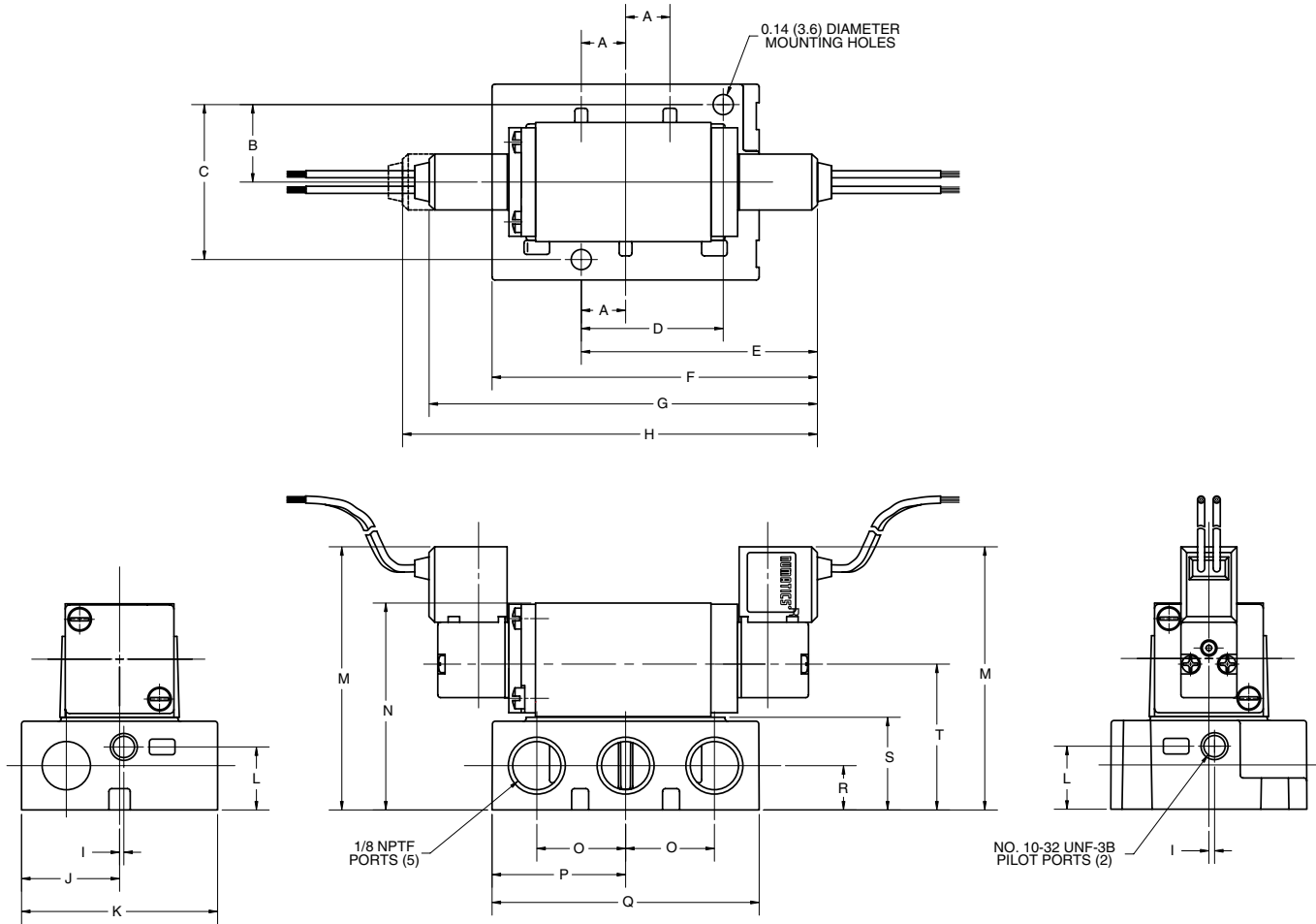
top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
0.40 (10.2)	0.28 (7.1)	0.46 (11.7)	0.87 (22.1)	1.26 (32.0)	0.90 (22.9)	1.80 (45.7)	0.75 (19.1)	1.50 (38.1)	0.56 (14.2)	1.12 (28.4)	0.70 (17.8)	1.40 (35.6)	0.20 (5.1)	0.28 (7.1)	0.18 (4.6)	0.40 (10.2)	0.20 (5.1)	0.60 (15.2)	0.18 (4.6)



Mark 3, SPA 3 & PA 3 Series

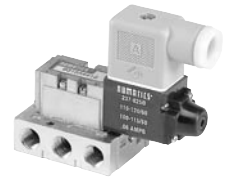
SPA 3 Valve with 10-32 UNF-3B Base



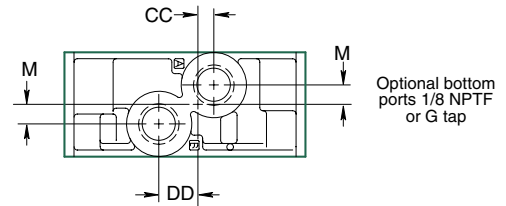
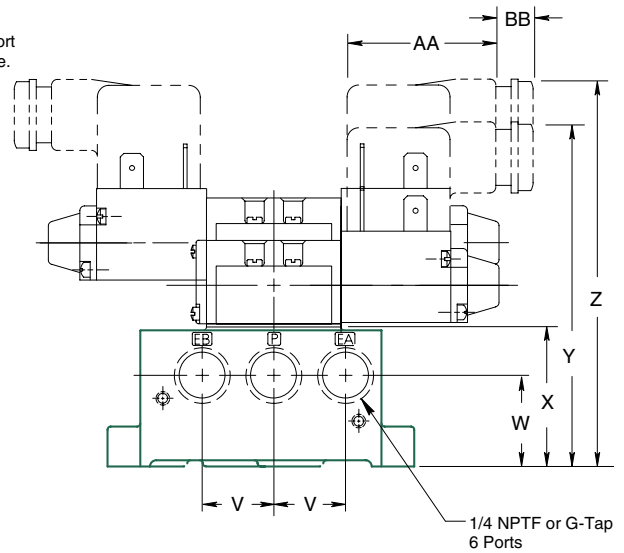
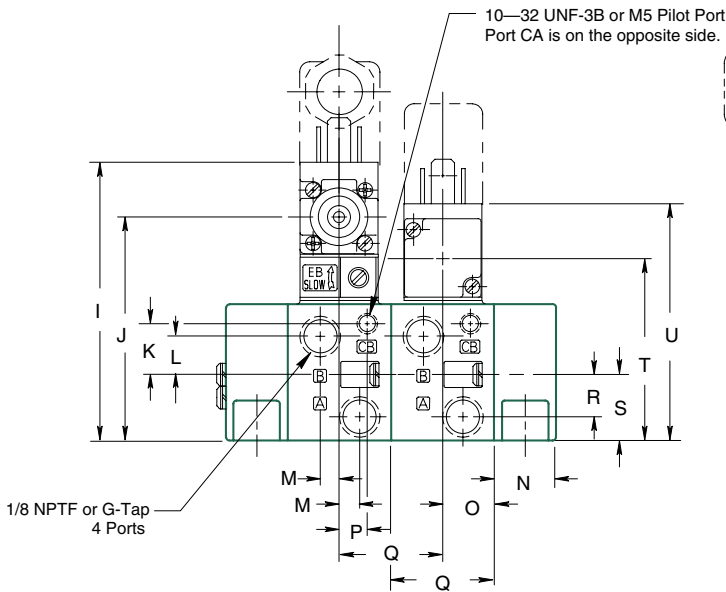
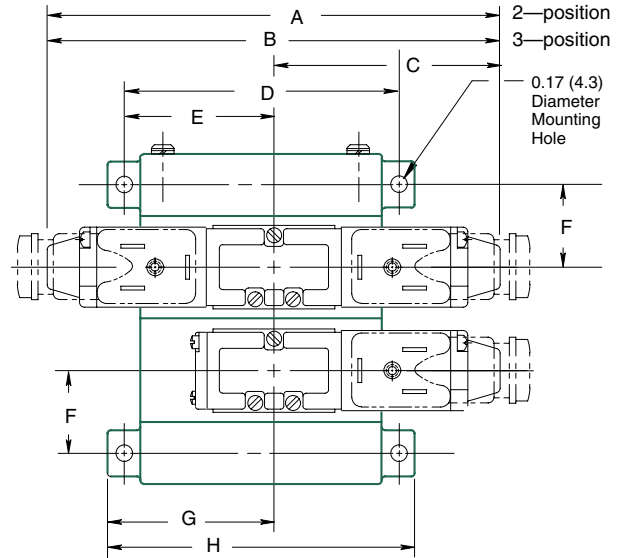
Dimensions

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	Q	R	S	T
0.31	0.55	1.09	1.00	1.66	2.29	2.73	2.92	0.03	0.69	1.38	0.44	1.85	1.46	0.63	0.94	1.88	0.31	0.65	1.03
(7.8)	(13.9)	(27.7)	(25.4)	(42.2)	(58.2)	(69.3)	(74.2)	(0.76)	(17.5)	(35.0)	(11.2)	(46.9)	(37.1)	(16.0)	(23.8)	(47.7)	(7.8)	(16.5)	(26.2)



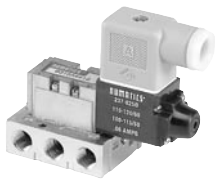
Manifold Block Assembly



Dimensions

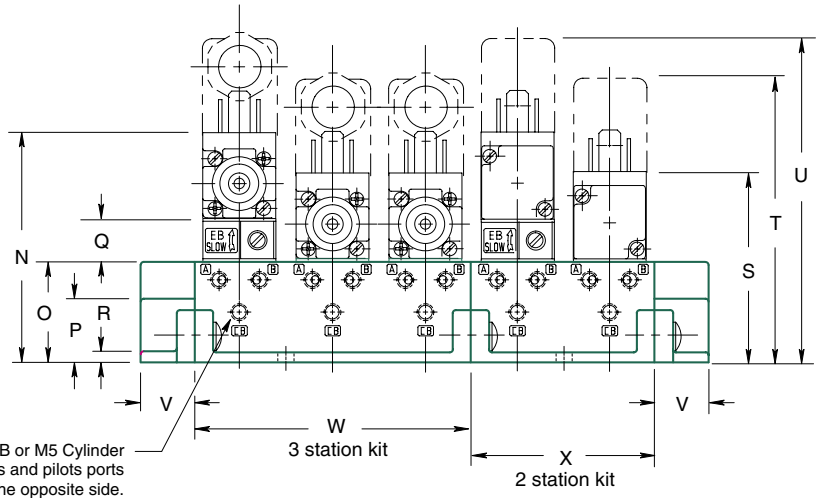
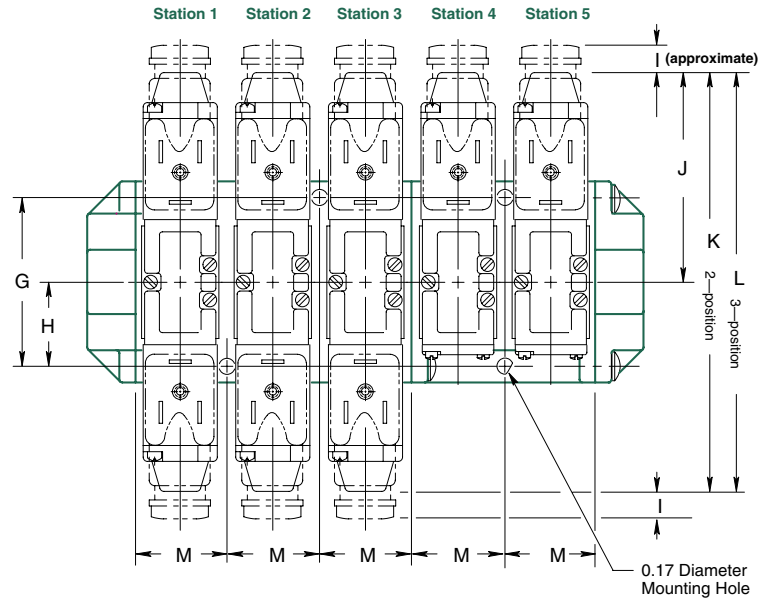
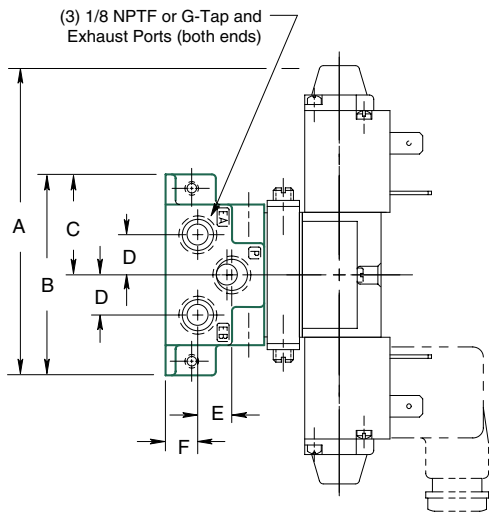
top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
4.60 (116.8)	4.86 (123.4)	2.30 (58.4)	2.63 (66.8)	1.44 (36.5)	0.81 (20.6)	1.59 (40.4)	2.94 (74.6)	2.77 (70.4)	2.24 (56.9)	0.47 (11.9)	0.34 (8.6)	0.19 (4.8)	0.59 (15.0)	0.48 (12.2)	0.27 (6.8)	1.00 (25.4)	0.41 (10.4)	0.72 (18.3)	1.82 (46.2)
U	V	W	X	Y	Z	AA	BB	CC	DD										
2.40 (61.0)	0.69 (17.5)	0.94 (23.9)	1.41 (35.8)	3.56 (90.4)	3.93 (99.8)	1.57 (39.9)	0.40 (10.2)	0.16 (4.1)	0.38 (9.6)										



Mark 3, SPA 3 & PA 3 Series

10-32 UNF-3B Manifold Assembly

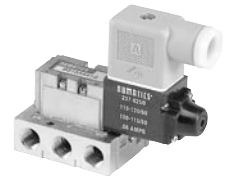


Dimensions

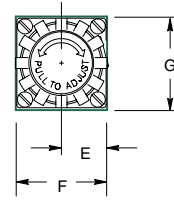
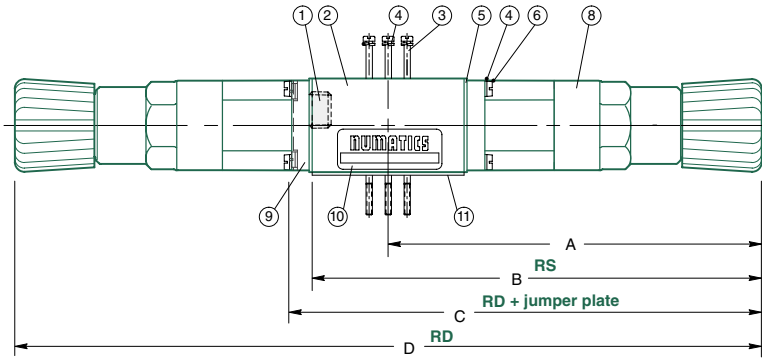
top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
3.30	2.00	1.00	0.40	0.38	0.32	1.70	0.85	0.30	2.33	4.60	4.86	0.92	2.36	1.00	0.52	0.37	0.10
(83.8)	(50.8)	(25.4)	(10.2)	(9.7)	(8.1)	(43.2)	(21.6)	(7.6)	(58.4)	(116.8)	(123.4)	(23.4)	(59.9)	(25.4)	(13.2)	(9.4)	(2.5)

S	T	U	V	W	X
1.99	3.15	3.52	0.50	2.76	1.84
(50.5)	(80.0)	(89.4)	(12.7)	(70.1)	(46.7)



Sandwich Pressure Regulator



Dimensions

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

A	B	C	D	E	F	G
3.73 (94.7)	4.48 (113.8)	4.70 (119.4)	7.47 (189.7)	0.437 (11.1)	0.875 (22.2)	0.92 (23.4)

Gauges - RS Regulators only

PRESSURE GAUGE	PART NO.
0-60 PSIG	214-216
0-150 PSIG	214-209
0-11 Bar	214-210

Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Plug (type RS only)	129-100
2	2	Regulator Block	RS: 213-319 RD: 213-320
3	3	Screw	standard: 127-331 w/speed control: 127-332
4	7	Lockwasher	128-172
5	*	Gasket (body to reg. ass'y)	113-472
6	**	Screw	127-380
8	*	Regulator Assembly (not sold separately)	
9	1	Jumper Plate Kit***	229-733
10	1	Nameplate	122-571
11	1	Gasket	113-403

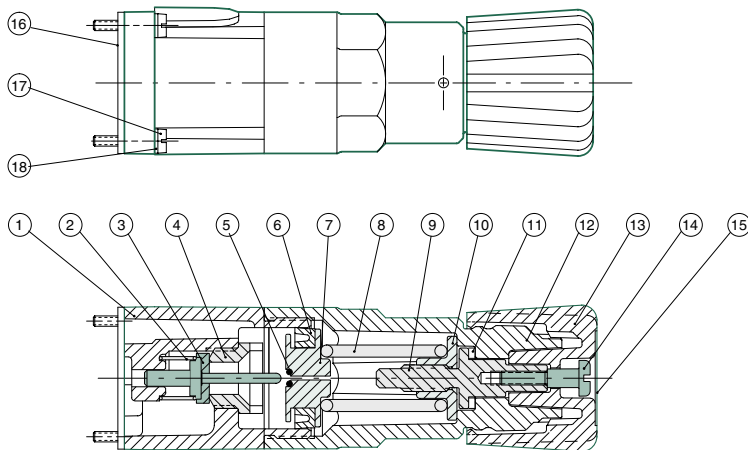
*(1) required for RS; (2) for RD

** (4) required for RS; (8) for RD

***Jumper plate kit (shown in phantom) includes jumper plate (4) screw #127-260; (4) lockwasher #128-172; and (1) gasket #113-290

Regulator Service Kits

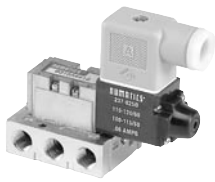
239-708



Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Regulator Body	101-706
2 *	1	Spring	115-226
3 *	1	Poppet Assembly	221-168
4	1	Poppet Seat	124-148
5 *	1	O-Ring	126-336
6 *	1	Seal U-Packing	124-302
7	1	Piston	125-928
8	1	Spring	0-30 PSIG: 115-352 0-100 PSIG: 115-342
9	1	Metering Screw	118-187
10	1	Spring Guide	112-369
11	1	Bearing	125-617
12	1	Bonnet	125-623
13	1	Knob	125-624
14	1	Screw	127-706
15	1	Label	122-992
16	1	Gasket	113-472
17	4	Screw	127-380
18	4	Lockwasher	128-172

*Indicates parts included in kit



Sandwich Pressure Regulators

Types: RS / RD

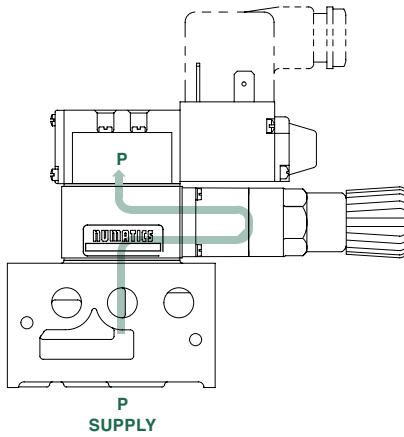
When ordering a valve plus regulator mounted on a base or manifold, list the regulator unit-only model number and include the mounting requirements only within the valve model selection.

Specify “Assembled.”

Example orders:	TYPE RS	TYPE RD
Valve: +mounting	031SA4152000030	031SS4152000030
Regulator (unit only)	031RS700O000000	031RD700O000000
	ASSEMBLED	ASSEMBLED

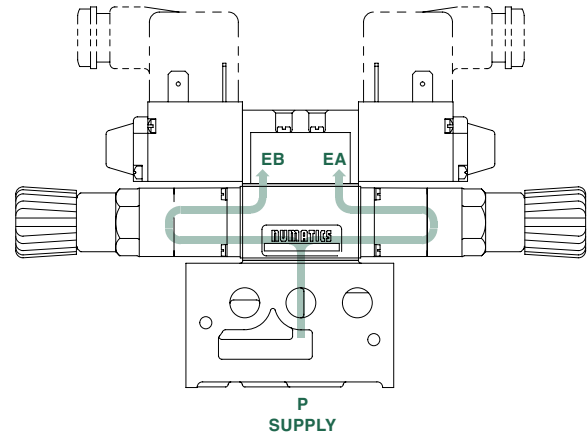
Type RS

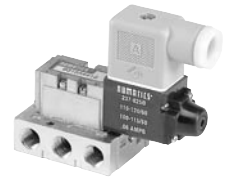
Single pressure from a single supply.



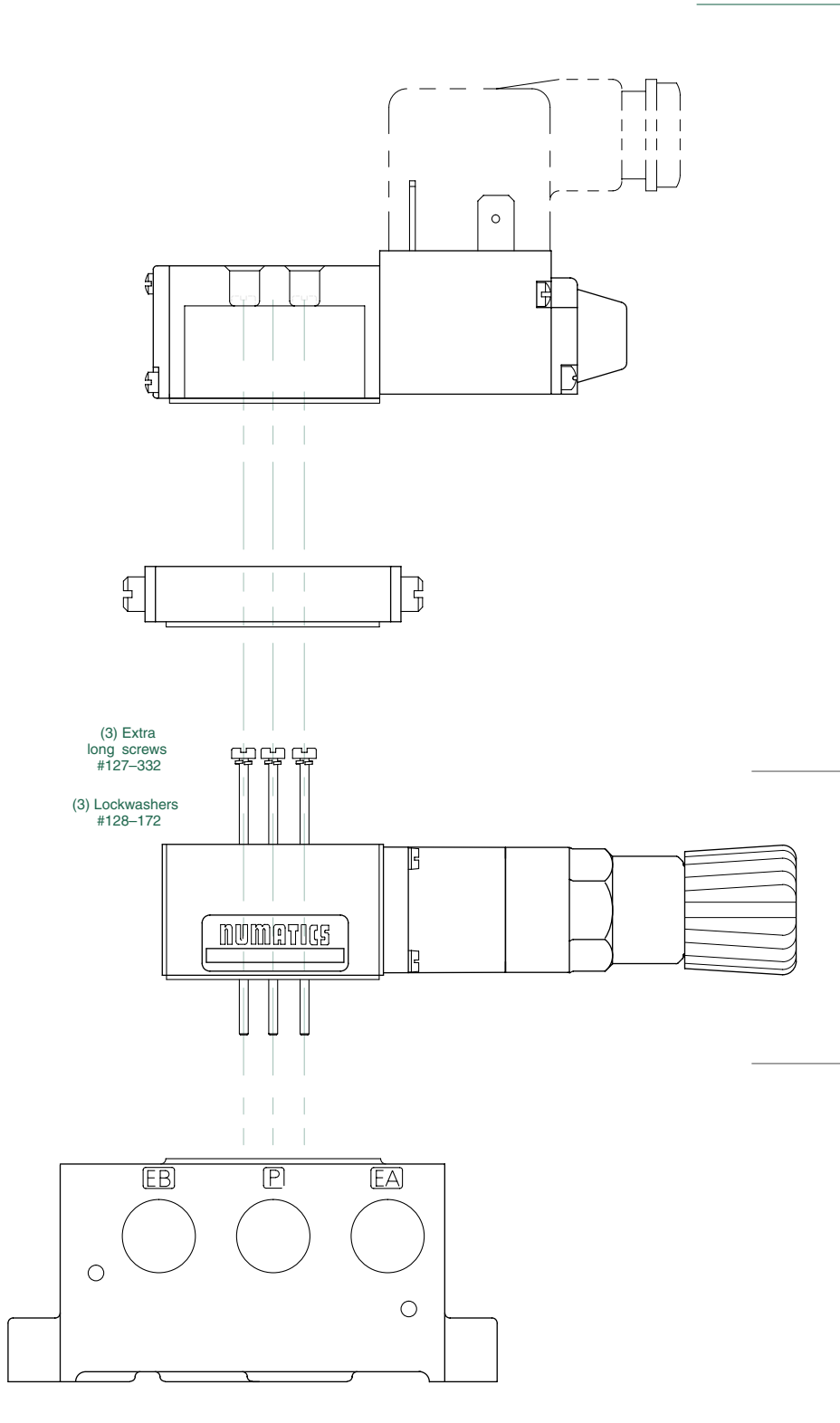
Type RD

Dual pressure from a single supply.





Valve, Speed Control, and Regulator Assembly



EXAMPLE

031SA4252000030

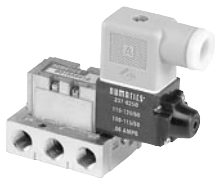
1/8 NPTF Mark 3
single solenoid valve unit +
speed control sandwich +
FlexiBlok manifold with
1/8 NPTF side and bottom
cylinder ports

031RS702O000000

Mark 3 single pressure
regulator (0 – 100 PSIG)
+ extra long screws

EXAMPLE ORDER:

Valve: 031SA4252000030
Regulator: 031RS702O000000
 ASSEMBLED



Mark 3, SPA 3 & PA 3 Series

End Plate Kits

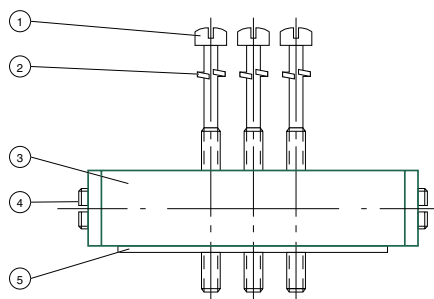
END PLATE PORTS	MANIFOLD PORT	PART NO.
1/8 NPTF	10-32 UNF-3B	229-526
G 1/8	M5	239-260
1/4 NPTF	1/8 NPTF	229-719
G 1/4	G 1/8	239-261

Parts List

NO. REQ'D	PART NAME	PART NO.			
		1/8 NPTF	1/4 NPTF	G 1/8	G 1/4
1	Left End Plate	104-198	104-238	104-405	104-366
2	Screw	127-265	127-328	127-265	127-328
2	Lockwasher	128-109	128-116	128-109	128-116
3	Seal	126-107	126-201	126-107	126-201
1	Right End Plate	104-197	104-237	104-404	104-365

Speed Control Kit

239-469

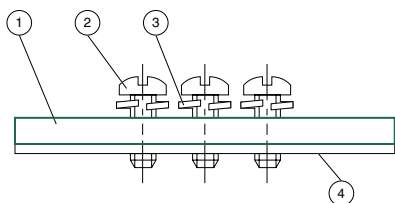


Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	3	Screw	127-293
2	3	Lockwasher	128-242
3	3	Speed Control (not sold separately)	
4	1	Metering Screw Assembly	213-255
5	2	Gasket	113-407

Blank Station Plate Kit

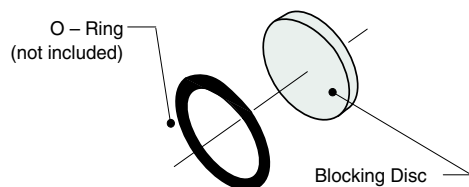
229-538



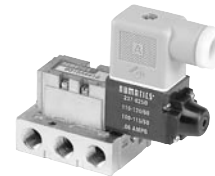
Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Blank Station Plate (not sold separately)	
2	3	Lockwasher	127-260
3	3	Screw	128-172
4	1	Gasket	113-403

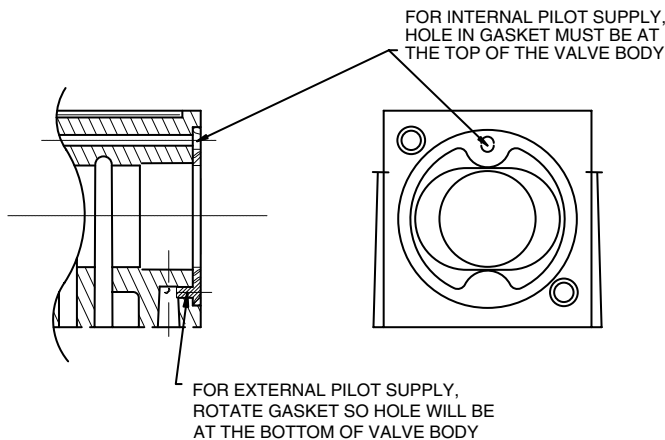
Blocking Discs



PORT TYPE	PART NO.
10-32 UNF-3B	124-138
1/8 NPTF	124-151



SPA 3 Internal/External Pilot Selection



BOTH ENDS MUST BE CONVERTED
FOR DOUBLE SOL. PILOT VALVES,

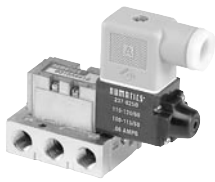
Direct Solenoid Capsule Assemblies (Flushing Non-Locking Override)

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

Includes solenoid and end cap assembly + screws and gaskets.

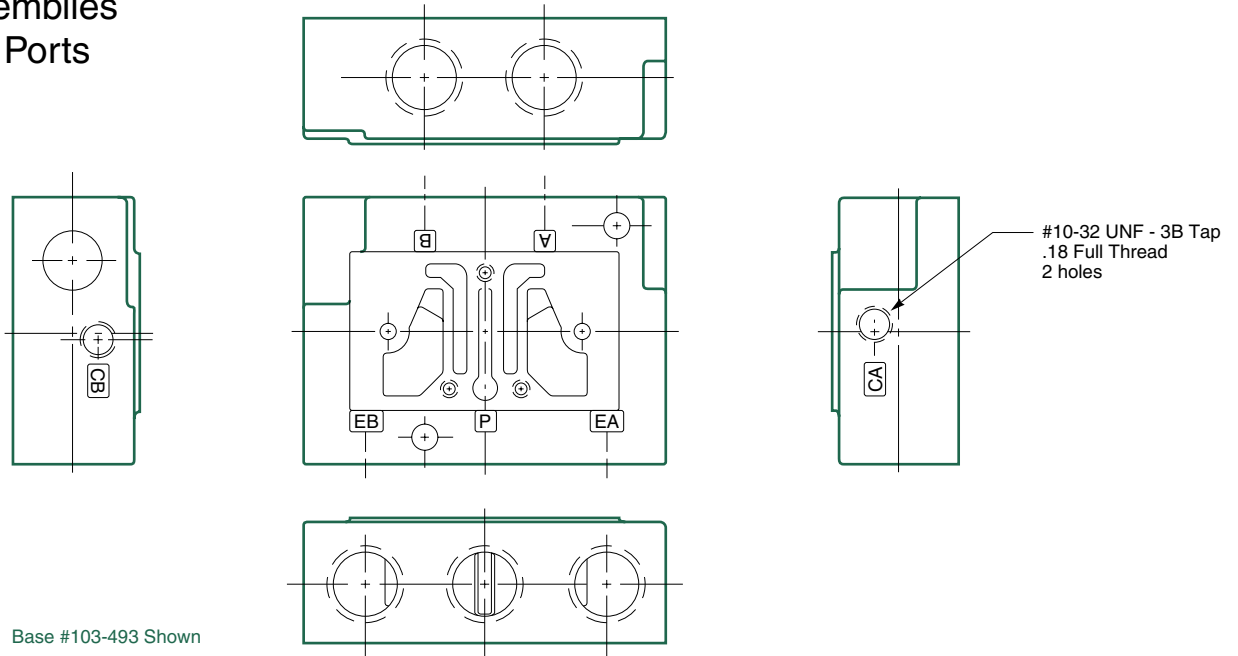
Solenoid Pilot Capsule Assemblies

	12 VDC	24 VDC
Hardwired	236-298	236-299
Straight Plug-In	236-301	236-302



Mark 3, SPA 3 & PA 3 Series

Base Assemblies 1/8 NPTF Ports

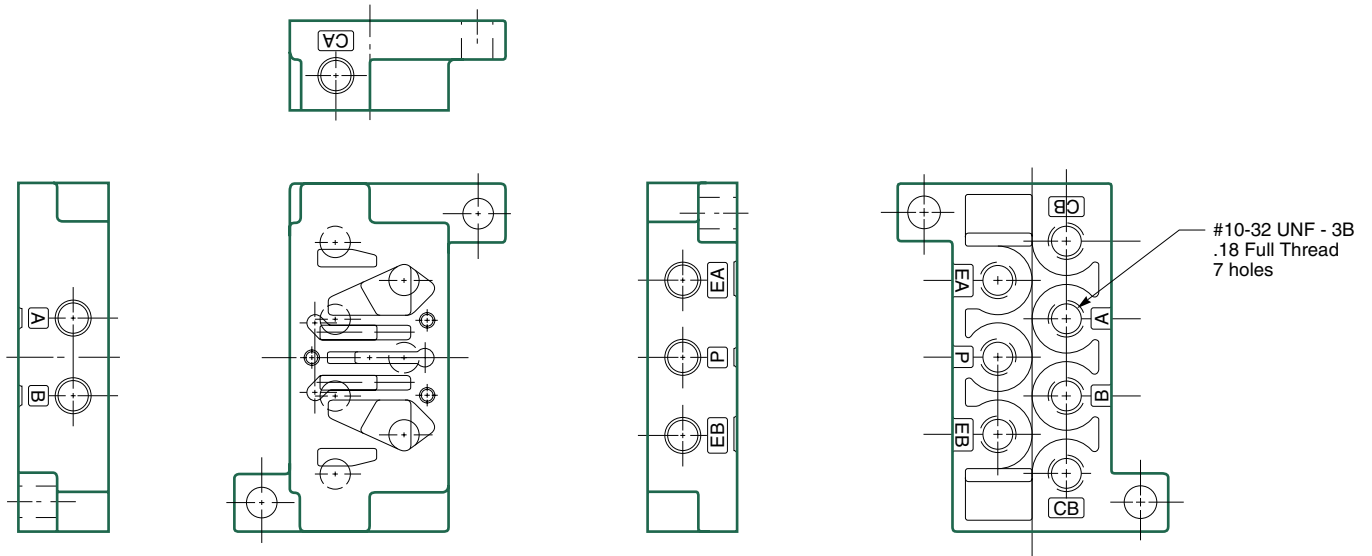


Base #103-493 Shown

41 & 46 Bases: side ports only, individual exhaust.

BASE DESCRIPTION	PART NO.
1/8 NPTF	103-493
G 1/8	103-592

Base Assemblies 10-32 UNF-3B Ports



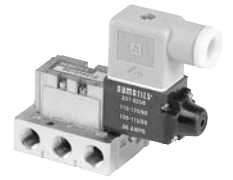
Base #103-396 Shown

41 & 46 Bases: side ports only, individual exhaust.

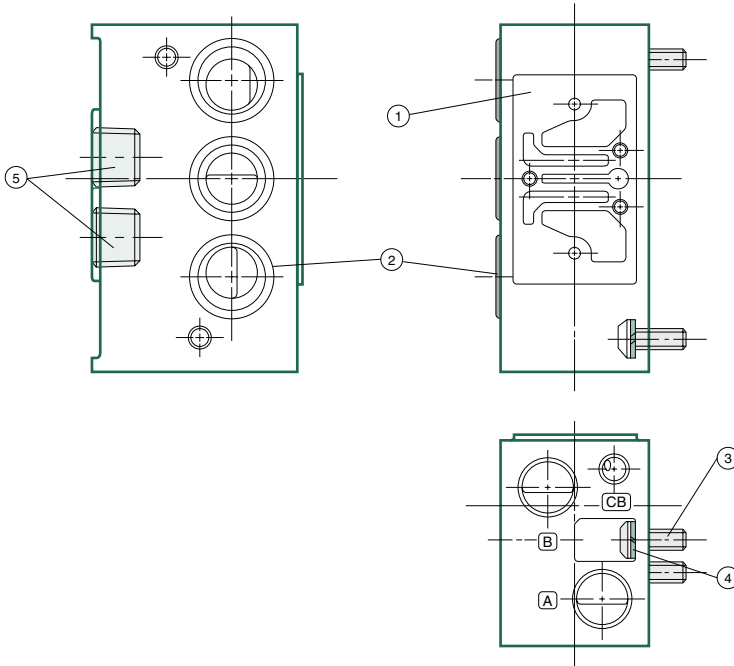
BASE DESCRIPTION	PART NO.
10-32 UNF-3B	103-395
M5	103-613

56 & 58 Bases: bottom ports, individual exhaust.

BASE DESCRIPTION	PART NO.
10-32 UNF-3B	103-396
M5	103-614



Manifold Kits – Flexiblok



Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	1	Manifold Block (not sold separately)	
2	3	Seal	126-201
3	2	Screw	127-327
4	2	Lockwasher	128-116
5	2	Plug	1/8 NPTF: 129-100 G 1/8: 129-160

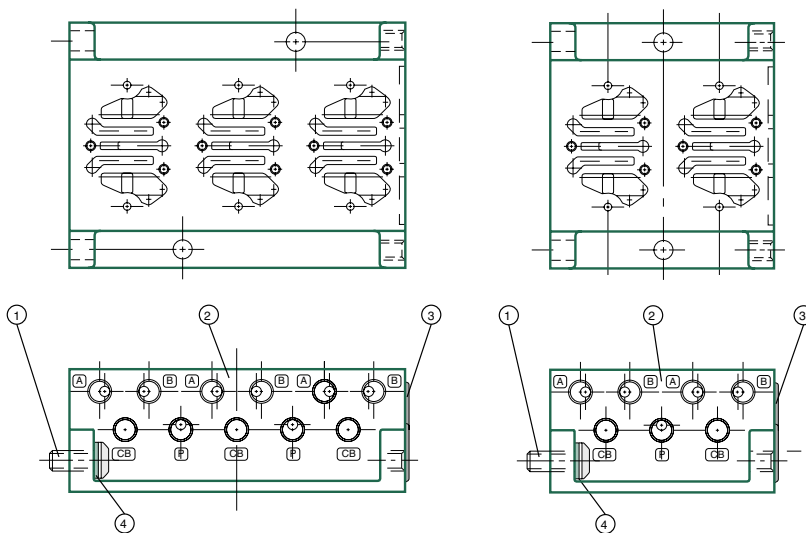
Flexiblok #15: side & bottom cylinder ports

MANIFOLD DESCRIPTION	PART NO.
1/8 NPTF	229-718
G 1/8	239-262

Manifold Kits – 10-32 UNF-3B

3 Station Kit

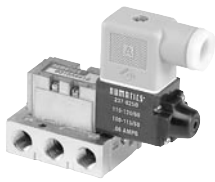
2 Station Kit



Parts List

DET. NO.	NO. REQ'D	PART NAME	PART NO.
1	2	Screw	127-265
2	1	Manifold Block (not sold separately)	
3	3	Seal	126-107
4	2	Lockwasher	128-109

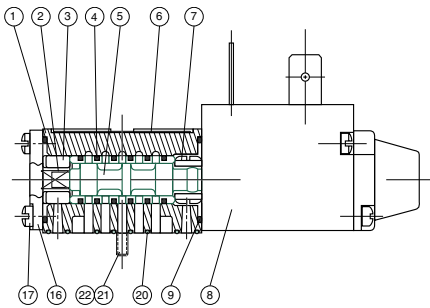
MANIFOLD DESCRIPTION	PART NO.
10-32 UNF-3B – 2-station manifold kit	229-524
M5 – 2-station manifold kit	239-263
10-32 UNF-3B – 3-station manifold kit	229-525
M5 – 3-station manifold kit	239-264



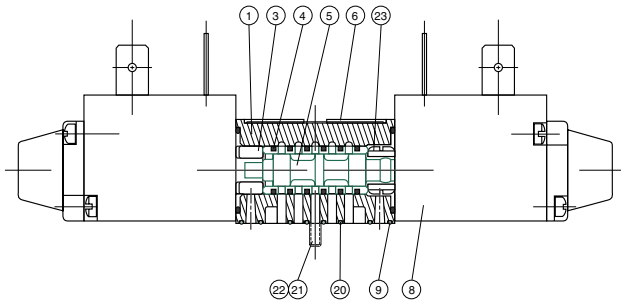
Mark 3, SPA 3 & PA 3 Series

Valve Service Kits and Parts - 2 Position

Kit No. MK3-K1 (for models 030SA4, 031SA4)

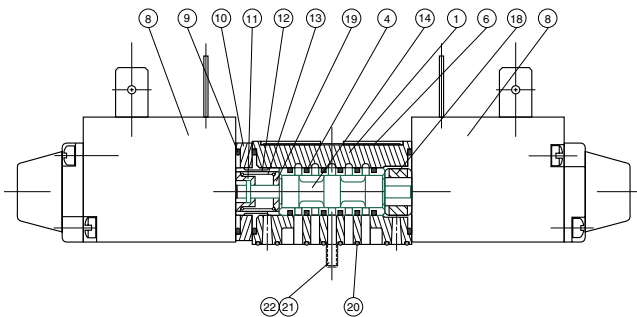


Kit No. MK3-K1 (for models 030PP4, 031PP4)
030SS4, 031SS4)

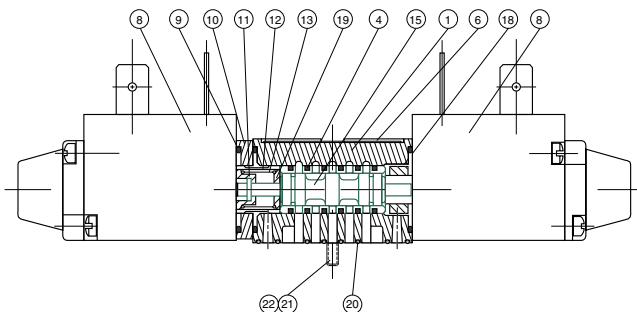


Valve Service Kits and Parts - 3 Position

Kit No. MK3-K3 (for models 030PP5, 031PP5,
030SS5, 031SS5)



Kit No. MK3-K3 (for models 030PP6, 031PP6,
030SS6, 031SS6)

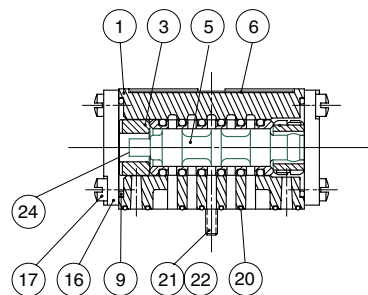


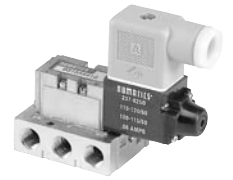
Parts List

DET. NO.	SA4	SS4 & PP4	SS5 & PP5	SS6 & PP6	PA4	PART NAME	PART NO.
1	1	1	1	1	1	Valve Body (not sold separately)	
2 *	1	N/A	N/A	N/A	N/A	Spring	115-203
3 *	1	1	N/A	N/A	1	Bumper	114-130
4 *	6	6	6	6	6	Seal	126-133
5	1	1	N/A	N/A	1	Sleeve Assembly w/seals	209-278
6	1	1	1	1	1	Nameplate	122-571
7 *	1	N/A	N/A	N/A	N/A	Detent Body	110-109
8	1	2	2	2	N/A	Solenoid Capsule Assembly	See p. 15
9 *	2	2	3	3	2	O-Ring	126-134
10	N/A	N/A	1	1	N/A	Adaptor	119-343
11 *	N/A	N/A	1	1	N/A	Spring Retainer	116-396
12 *	N/A	N/A	1	1	N/A	Spacer	116-397
13 *	N/A	N/A	1	1	N/A	Spring	115-291
14	N/A	N/A	1	N/A	N/A	Sleeve Assembly w/seals	209-373
15	N/A	N/A	N/A	1	N/A	Sleeve Assembly w/seals	209-374
16	1	N/A	N/A	N/A	2	End Plate	104-199
17	2	N/A	N/A	N/A	4	Screw	127-260
18 *	N/A	N/A	1	1	N/A	Bumper	101-498
19 *	N/A	N/A	1	1	N/A	Spring Retainer	116-395
20 *	1	1	1	1	1	Gasket	113-407
21	3	3	3	3	3	Screw	127-292
22	3	3	3	3	3	Lockwasher	128-242
23 *	N/A	1	N/A	N/A	N/A	Detent Assembly	210-111
24 *	N/A	N/A	N/A	N/A	1	Spring	115-231

*Indicates parts included in repair kit.

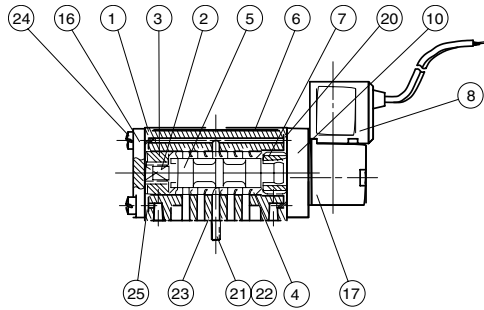
Kit No. PA3-K1 (for model 030PA4, 031PA4)



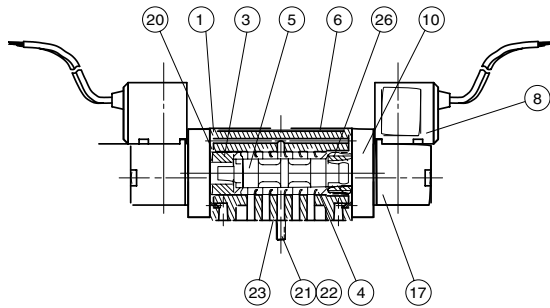


Valve Service Kits and Parts - 2 Position

Kit No. SPA3P-K1 (for models 030BA4, 031BA4)

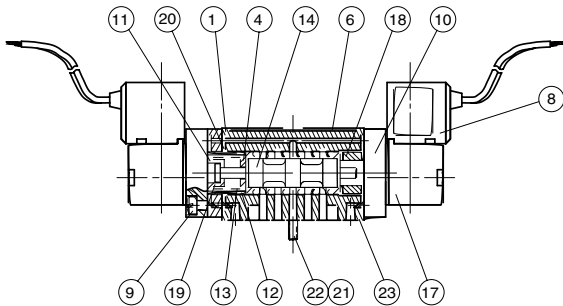


Kit No. SPA3P-K1 (for models 030BB4, 031BB4)

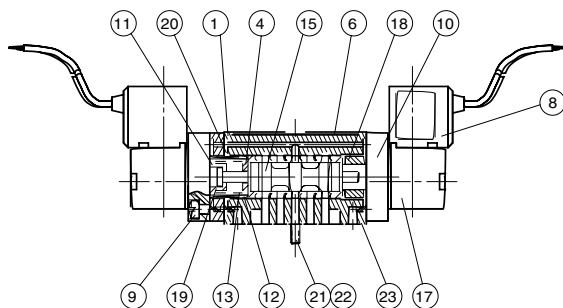


Valve Service Kits and Parts - 3 Position

Kit No. SPA3P-K3 (for models 030BB5, 031BB5)



Kit No. SPA3P-K3 (for models 030BB6, 031BB6)



Parts List

DET. NO.	BA4	BB4	BB5	BB6	PART NAME	PART NO.
1	1	1	1	1	Valve Body (not sold separately)	
2	1*	N/A	N/A	N/A	Spring	115-231
3	1*	1*	N/A	N/A	Bumper	114-130
4	6*	6*	6*	6*	Seal	126-133
5	1	1	N/A	N/A	Sleeve Assembly w/seals	209-278
6	1	1	1	1	Nameplate	122-571
7	1*	N/A	N/A	N/A	Detent Body	110-109
8	1	2	2	2	Solenoid Capsule Assembly	See p. 15
9	N/A	N/A	3	3	Screw	127-613
10	1	2	2	2	Adaptor Assembly	219-343
11	N/A	N/A	1*	1*	Spring Retainer	116-395
12	N/A	N/A	1*	1*	Spacer	116-397
13	N/A	N/A	1*	1*	Spring	115-291
14	N/A	N/A	1	N/A	Sleeve Assembly w/seals	209-537
15	N/A	N/A	N/A	1	Sleeve Assembly w/seals	209-538
16	1	N/A	N/A	N/A	End Plate	104-199
17	1	2	2	2	Pilot Assembly	219-345
18	N/A	N/A	1*	1*	Bumper	114-171
19	N/A	N/A	1*	1*	Spring Retainer	116-396
20	1*	2*	3*	3*	Gasket	113-296
21	3	3	3	3	Screw	127-292
22	3	3	3	3	Lockwasher	128-242
23	1*	1*	1*	1*	Gasket	113-407
24	4	4	2	2	Screw	127-260
25	1*	N/A	N/A	N/A	Gasket	113-297
26	N/A	1*	N/A	N/A	Detent Assembly	210-111

*Indicates parts included in kit.

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