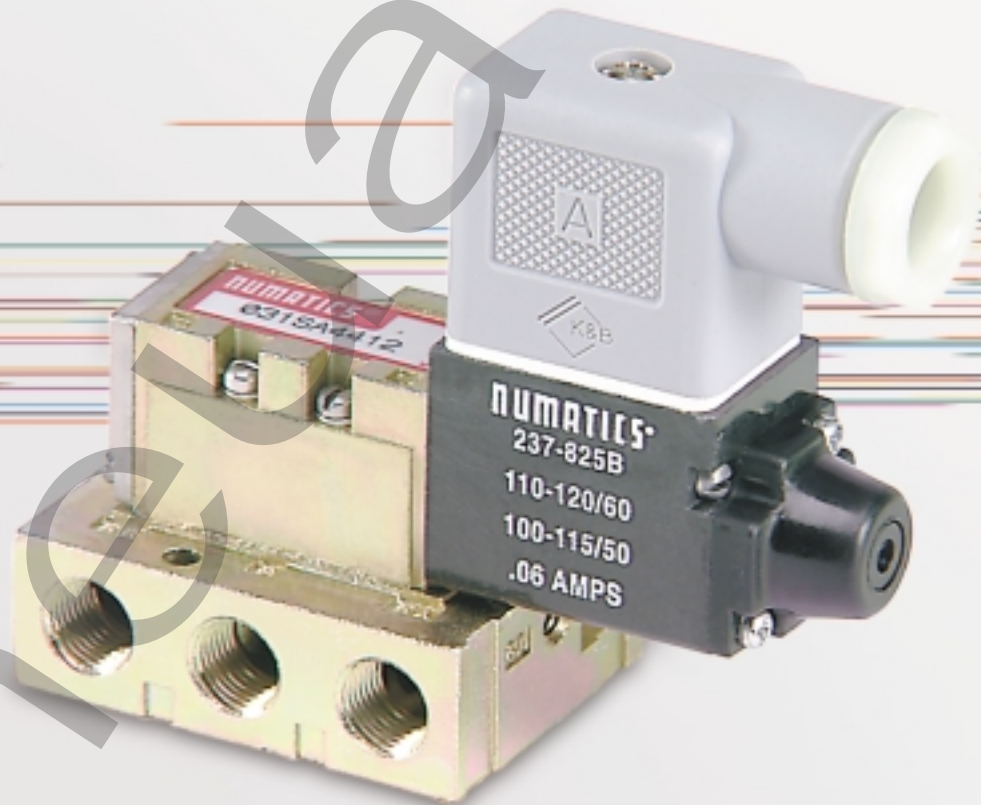


ORDER
ONLINE



Valves



Mark 3, PA 3 and SPA 3 Series

Direct Solenoid, Air Pilot, or Solenoid Pilot Actuated Valves

We're everywhere you need us to be!

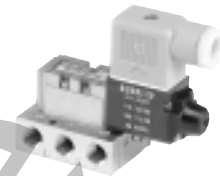


Mark 3, SPA 3 & PA 3 Series

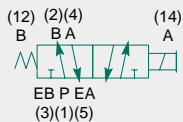
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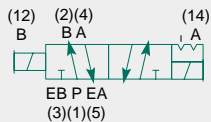
Mark 3, SPA 3 & PA 3 Series



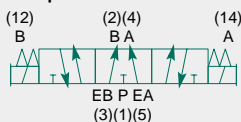
single solenoid
2 position 4-way



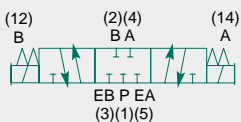
double solenoid
2 position 4-way



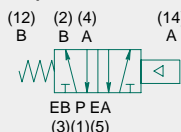
double solenoid
3 position 4-way
open center



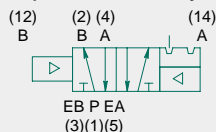
double solenoid
3 position 4-way
closed center



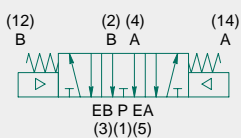
single air pilot
2 position 4-way



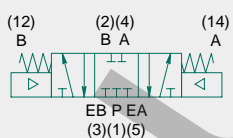
double air pilot
2 position 4-way



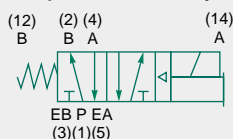
double air pilot
3 position 4-way
open center



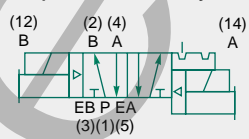
double air pilot
3 position 4-way
closed center



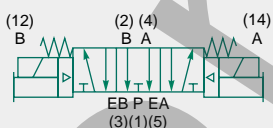
single solenoid pilot
2 position 4-way



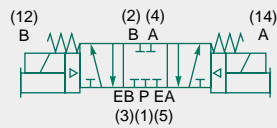
double solenoid pilot
2 position 4-way



double solenoid pilot
3 position 4-way
open center



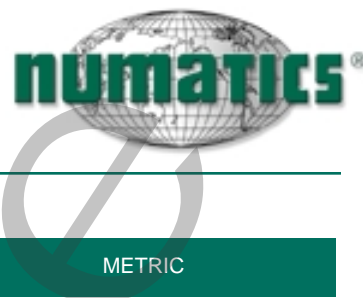
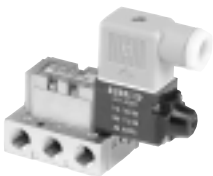
double solenoid pilot
3 position 4-way
closed center



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 2-Position, Detented 3-Position	20-100 PSIG 15-100 PSIG 20-100 PSIG		
Temperature Range (ambient)	Direct Solenoid Air Pilot Solenoid Air Pilot	-10°F to +115°F -10°F to +200°F -10°F to +115°F	-23°C to +46°C -23°C to +93°C -23°C to +16°C	

Operating Data - Mark 3

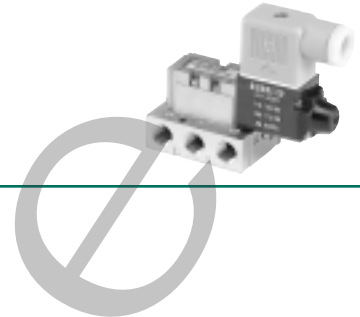
ALL SOLENOIDS ARE CONTINUOUS DUTY RATED	12 VDC	24 VDC	24 VAC 50 Hz.	24 VAC 60 Hz.	115 VAC 50 Hz.	120 VAC 60 Hz.	230 VAC 50 Hz.	240 VAC 60 Hz.
Power (Watts)	6.0	6.0	4.0	3.0	5.5	4.0	5.2	4.6
Holding Current (Amps.)	0.500	0.250	0.290	0.234	0.063	0.052	0.025	0.021
Inrush Current (Amps.)	N/A	N/A	0.490	0.450	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
	2-Position, Double, Detented	0.012	0.012	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
De-energize in seconds	2-Position, Single, Spring Return	0.008	0.008	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
	3-Position, Spring Centered	0.008	0.008	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



Mark 3, SPA 3 & PA 3 Series



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

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

- 2 = DIN Plug-in AC Solenoid (SA or SS only)
- 4 = DIN Plug-in DC Solenoid (SA or SS only)
- O = AC Hardwired w/15" Leads (SA, SS or Air Pilot)
- B = DC Hardwired w/15" Leads
- M = DC Straight 2-Pin Plug-in w/Light (BA or BB only)

Plug Connector

SPA 3 only



LEAD LENGTH	PART NO.	PART NAME	PART NO.
12" Lead	230-443	Housing	140-384
48" Lead	230-476	Terminal	140-385
120" Lead	230-486		

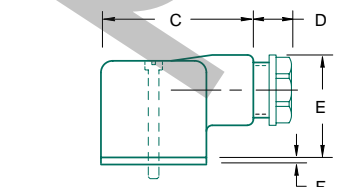
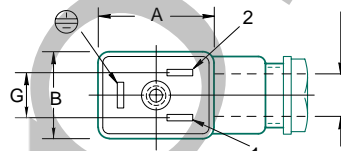
Plug connector is not included with solenoid assemblies or valve models. Must order separately.

Note: Wire Gage = 22 AWG

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

Plug-in Connector Assemblies

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



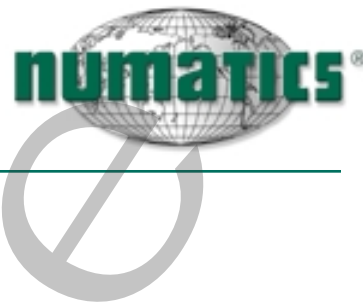
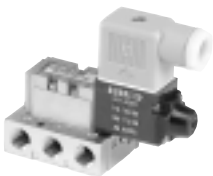
Normal Polarity
 1 = (+) Positive, High
 2 = (-) Negative, Neutral
 ⊕ = Chassis Ground

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)



Mark 3, SPA 3 & PA 3 Series

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
M = Metric

End Plate Port Size

1 = 1/8
0 = 10-32
C = M5
2 = 1/4

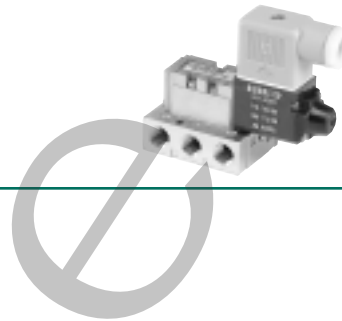
Example order

List in order, left to right, facing cylinder ports

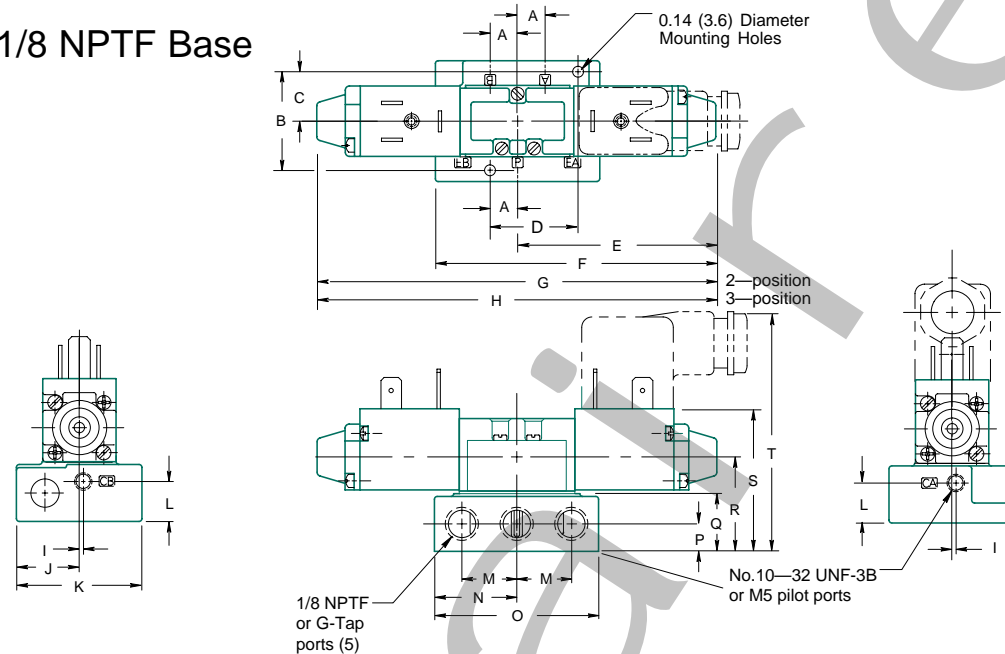
Assembly Kit AK0CD00002NSTD
Station 1 031SA4152000030
Station 2 031SS4252000030
Station 3 031SA4152000030
Station 4 031SA4152000030
ASSEMBLED



Mark 3, SPA 3 & PA 3 Series



Mark 3
Valve with 1/8 NPTF Base

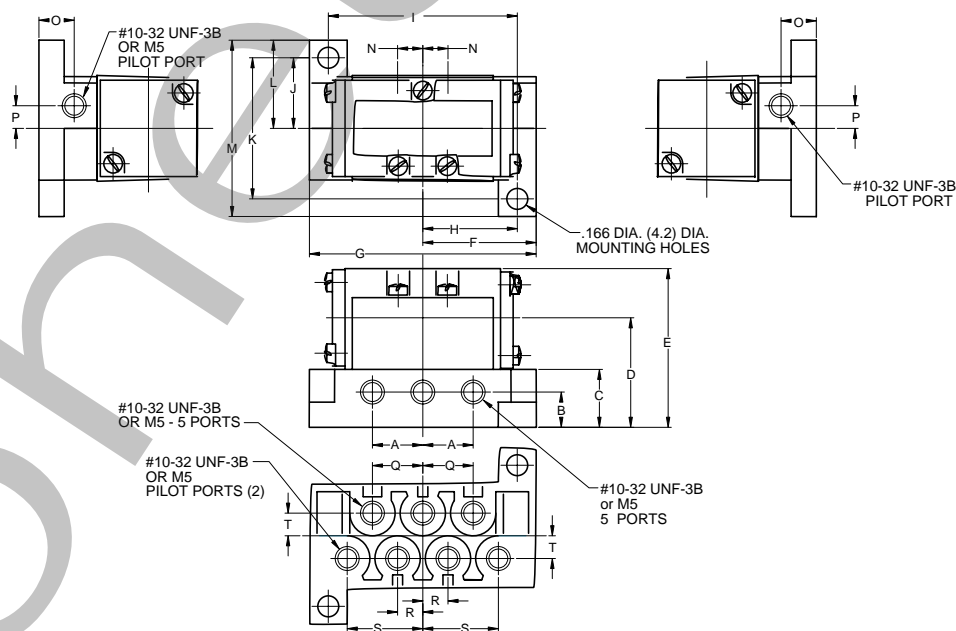


Dimensions

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

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



Dimensions

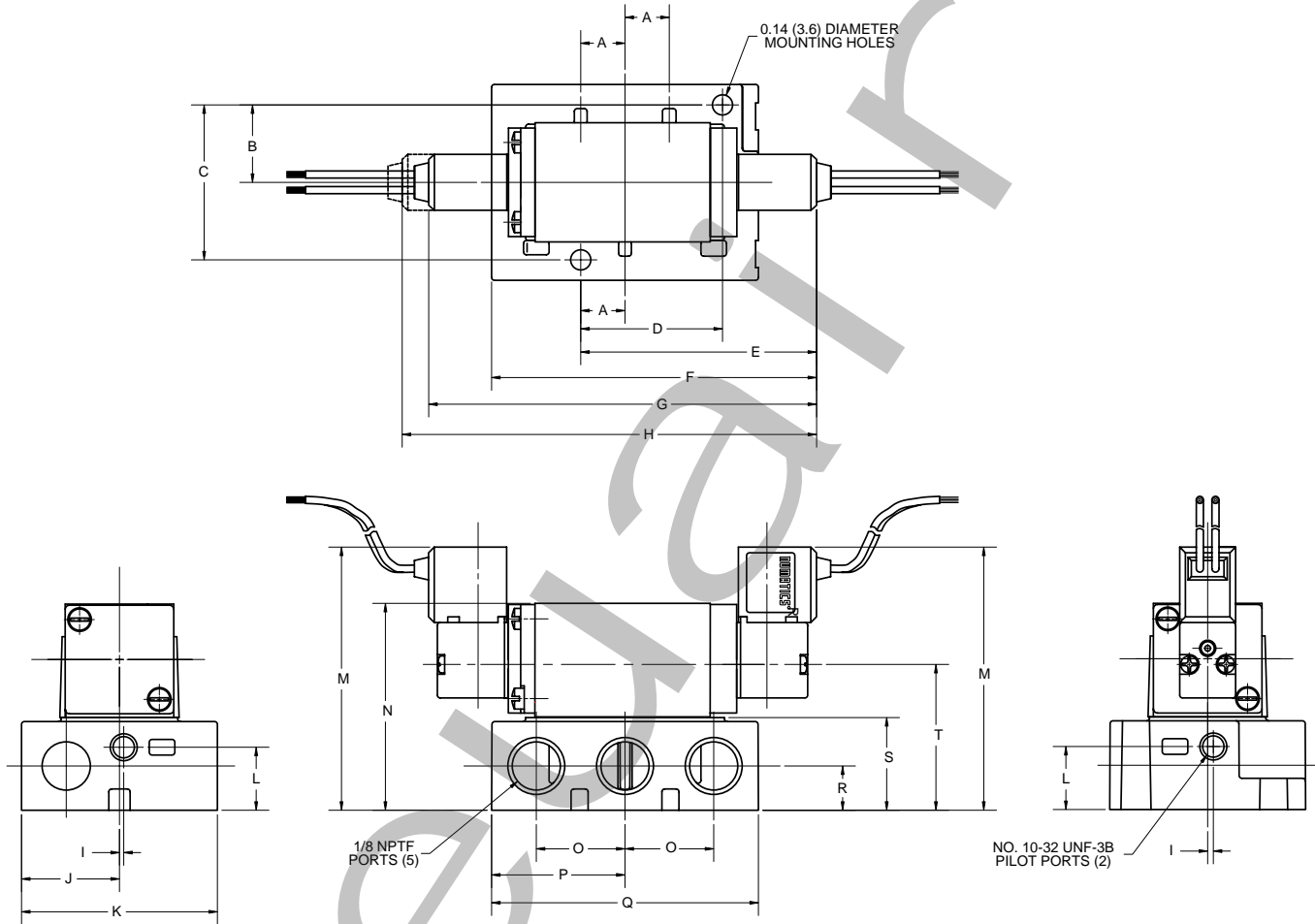
top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

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



Mark 3, SPA 3 & PA 3 Series

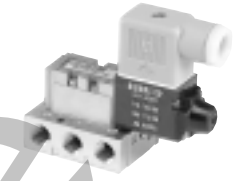
SPA 3
Valve with 10-32 UNF-3B Base



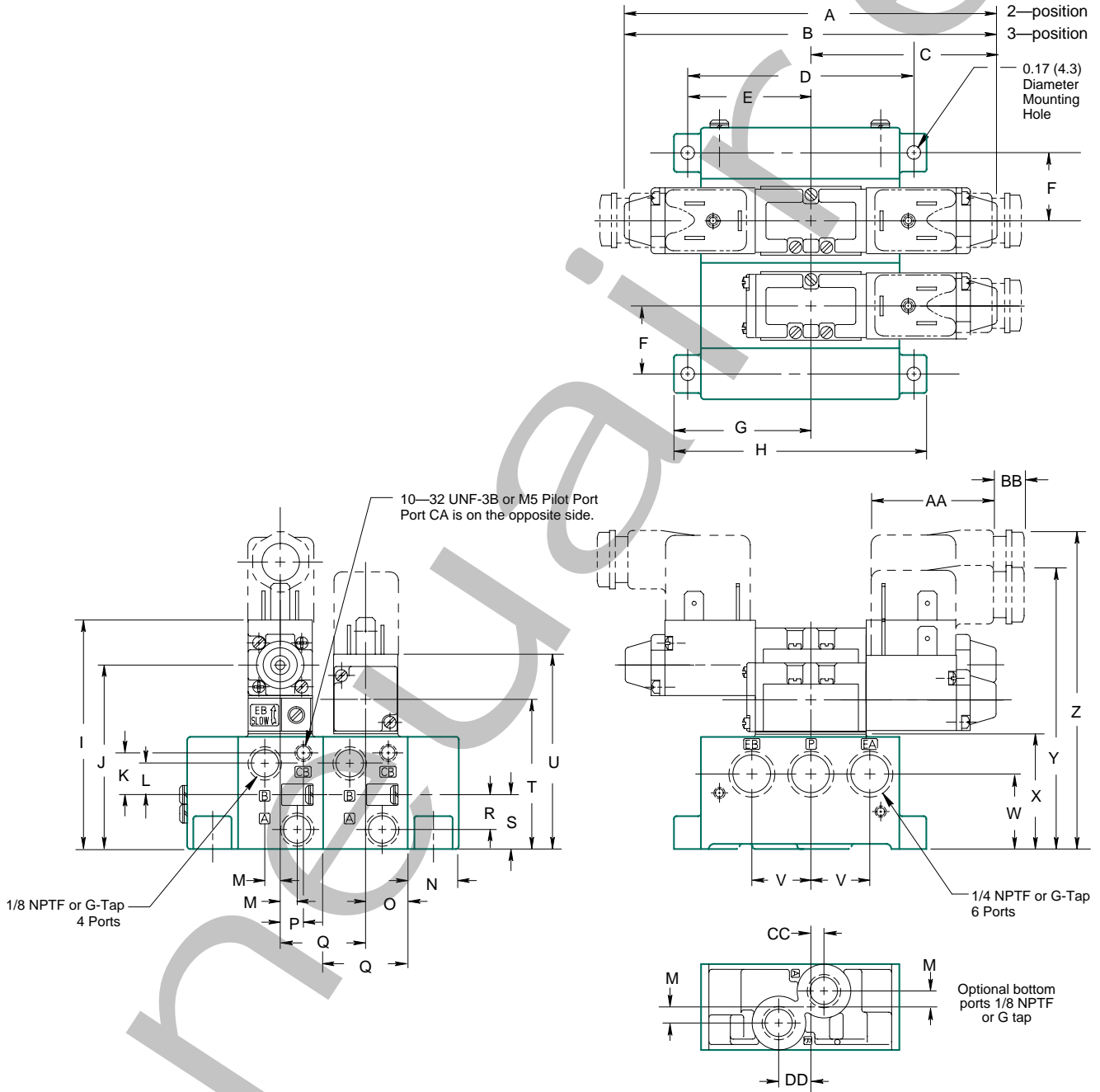
Dimensions

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



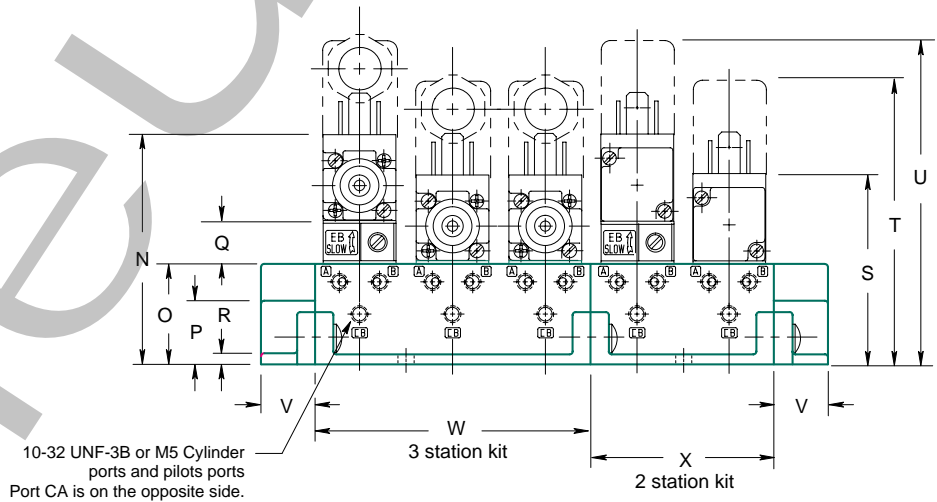
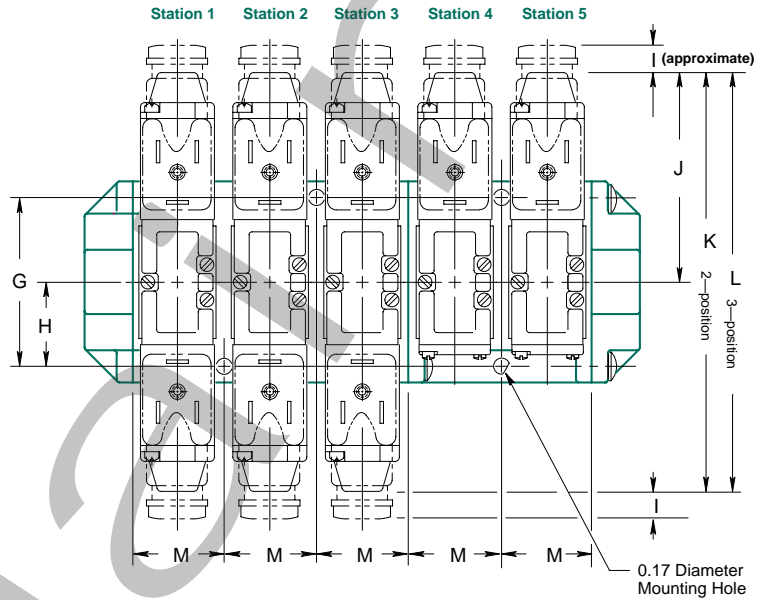
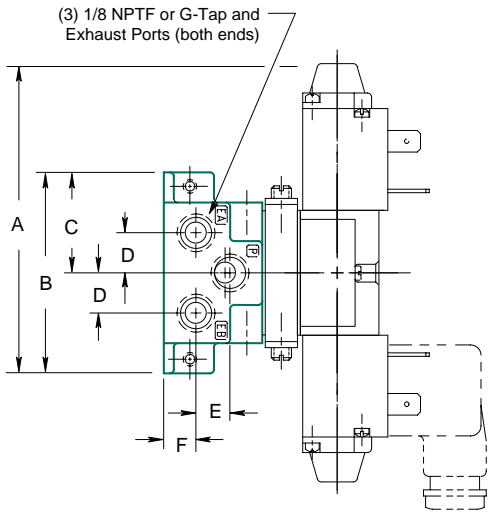
Dimensions

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

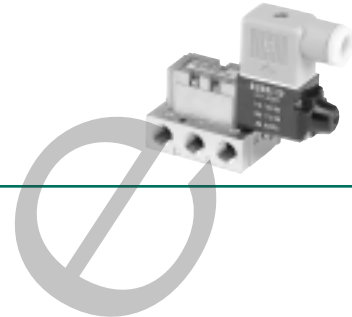
top dimensions = inches and bottom dimensions (in parenthesis) = millimeters

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)

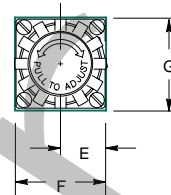
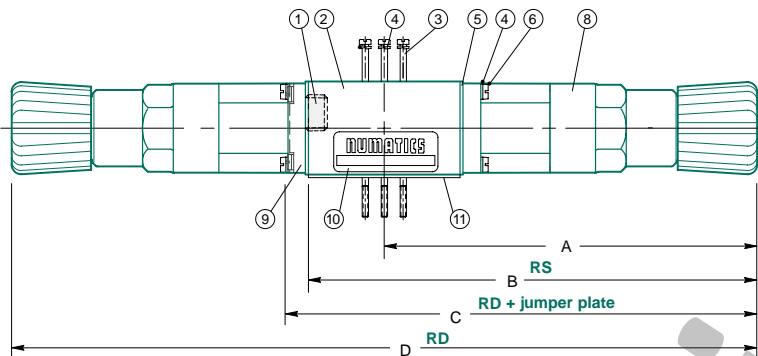
S	T	U	V	W	X
1.99	3.15	3.52	0.50	2.76	1.84
(50.5)	(80.0)	(89.4)	(12.7)	(70.1)	(46.7)



Mark 3, SPA 3 & PA 3 Series



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

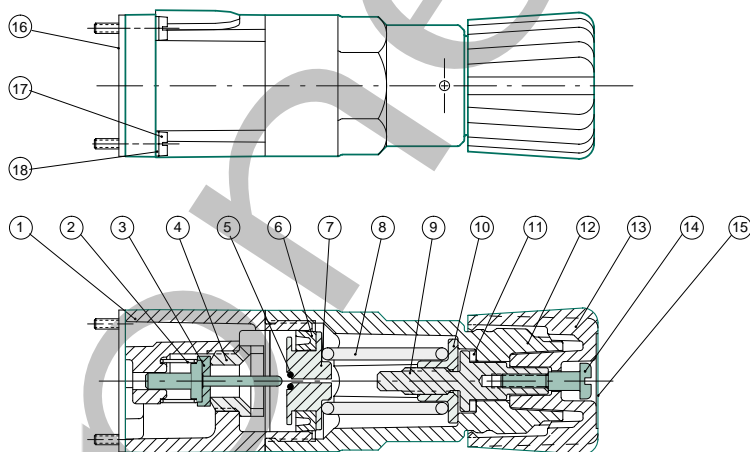
*(1) required for RS; (2) for RD

** (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

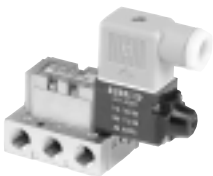
Regulator Service Kits

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	125-618
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



Mark 3, SPA 3 & PA 3 Series

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

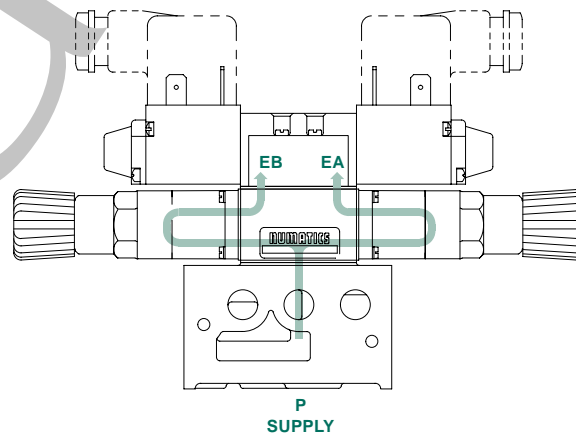
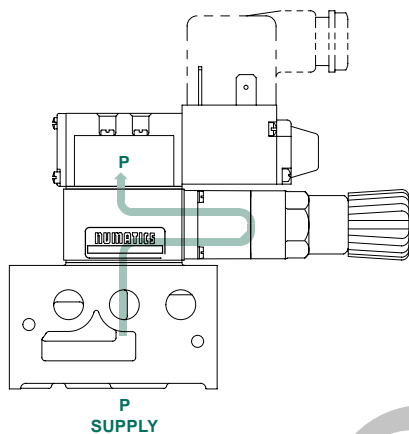
ASSEMBLED

Type RS

Single pressure from a single supply.

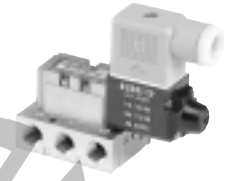
Type RD

Dual pressure from a single supply.



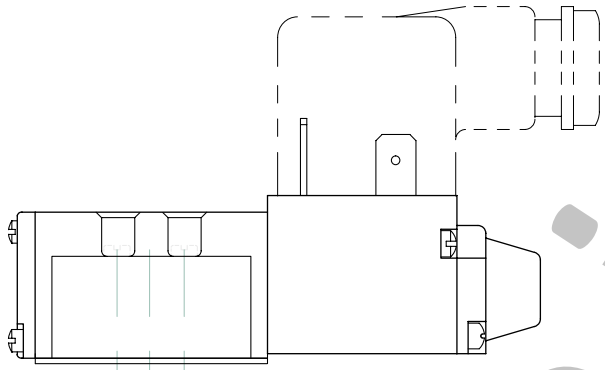


Mark 3, SPA 3 & PA 3 Series



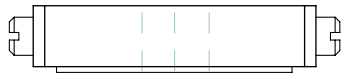
Valve, Speed Control, and Regulator Assembly

EXAMPLE



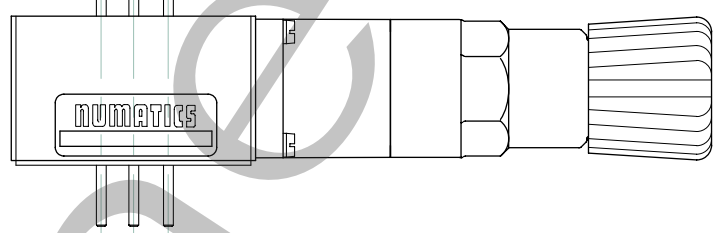
031SA4252000030

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



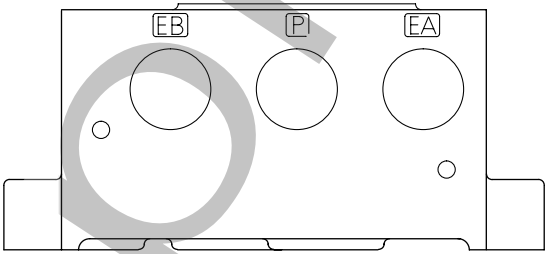
(3) Extra
long screws
#127-332

(3) Lockwashers
#128-172



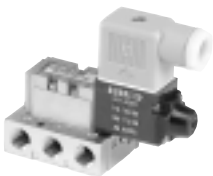
031RS702O000000

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

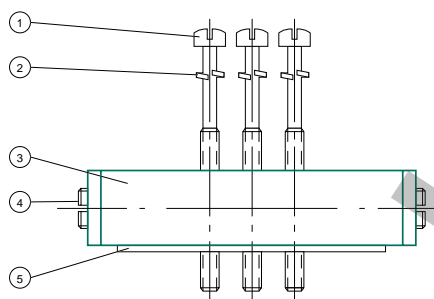
END PLATE PORTS	MANIFOLD PORT	PART NO.
1/8 NPTF	10-32 UNF-3B	229-526
G 1/8	M5	239-260
1/4 NPTF	1/8 NPTF	229-719
G 1/4	G 1/8	239-261

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

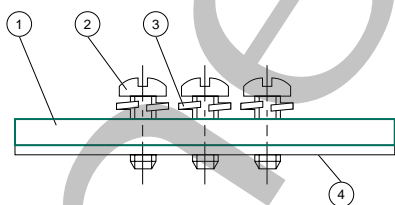


Parts List

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

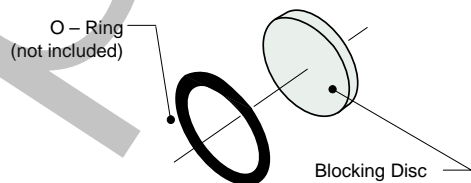
229-538



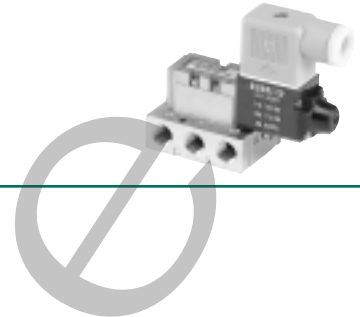
Parts List

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

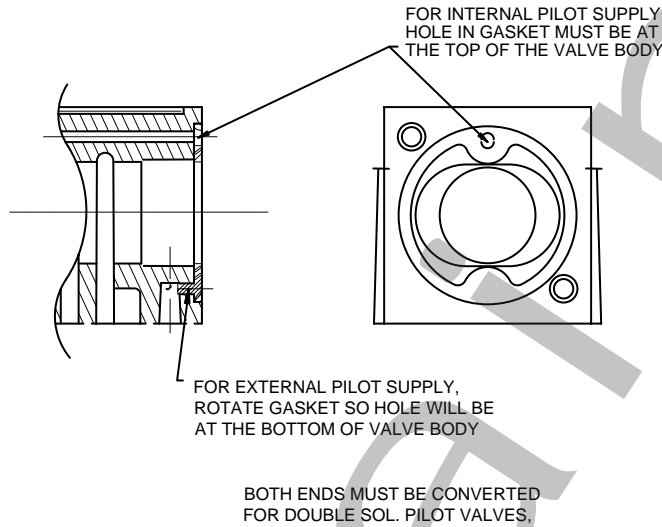
Blocking Discs



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



SPA 3 Internal/External Pilot Selection



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	DC 12 VDC	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.

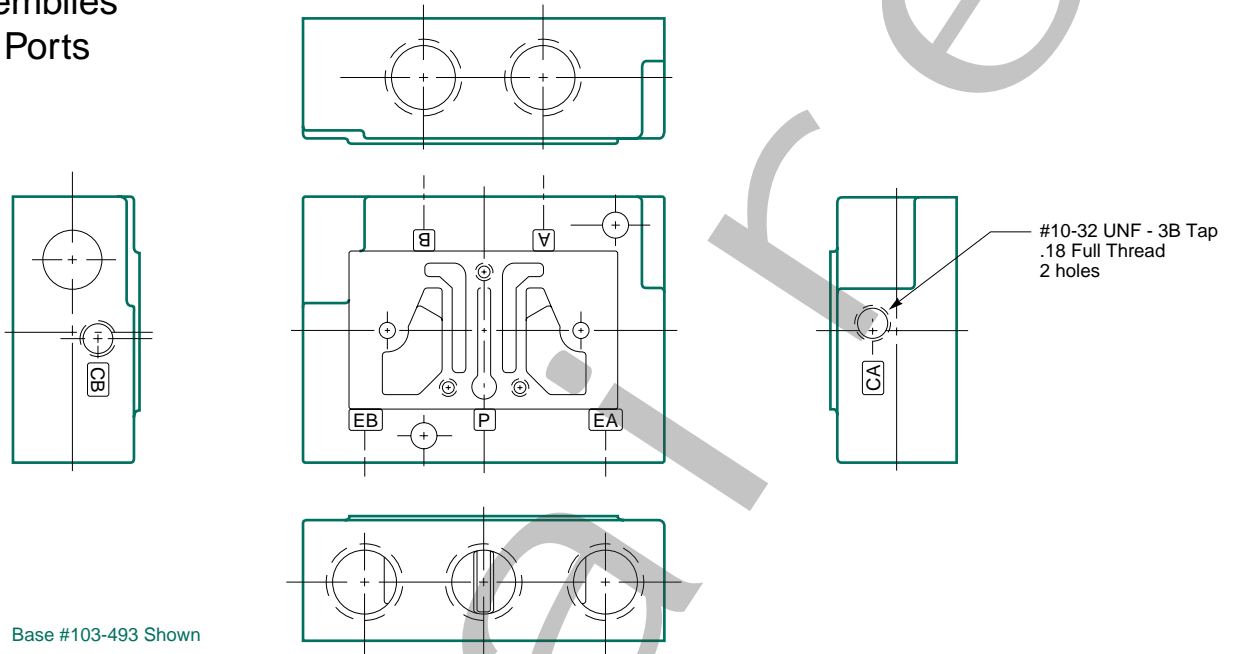
Solenoid Pilot Capsule Assemblies

	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

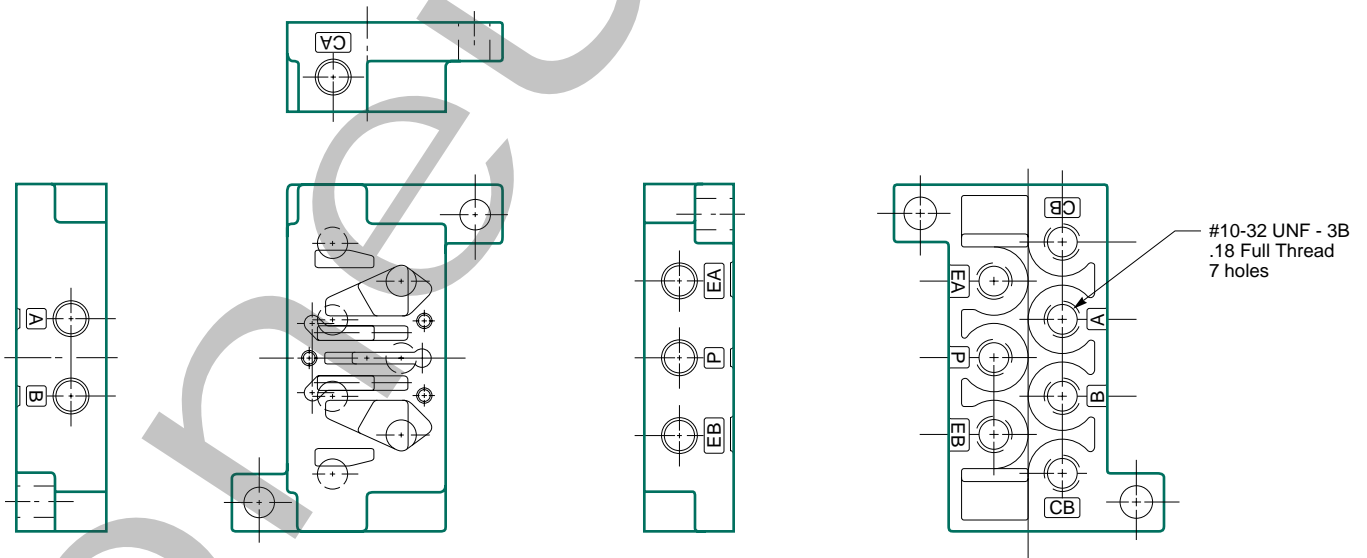


Base #103-493 Shown

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.

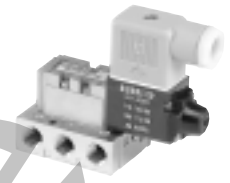
BASE DESCRIPTION	PART NO.
10-32 UNF-3B	103-395
M5	103-613

56 & 58 Bases: bottom ports, individual exhaust.

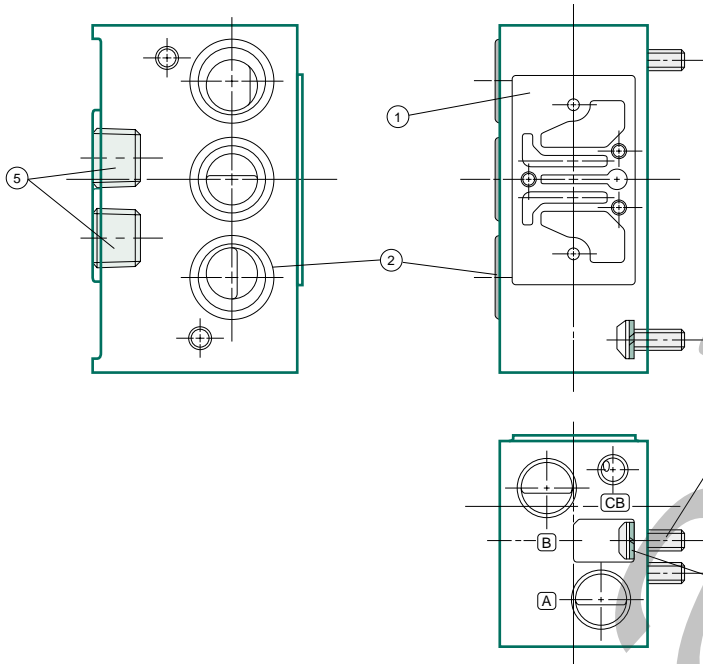
BASE DESCRIPTION	PART NO.
10-32 UNF-3B	103-396
M5	103-614



Mark 3, SPA 3 & PA 3 Series



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

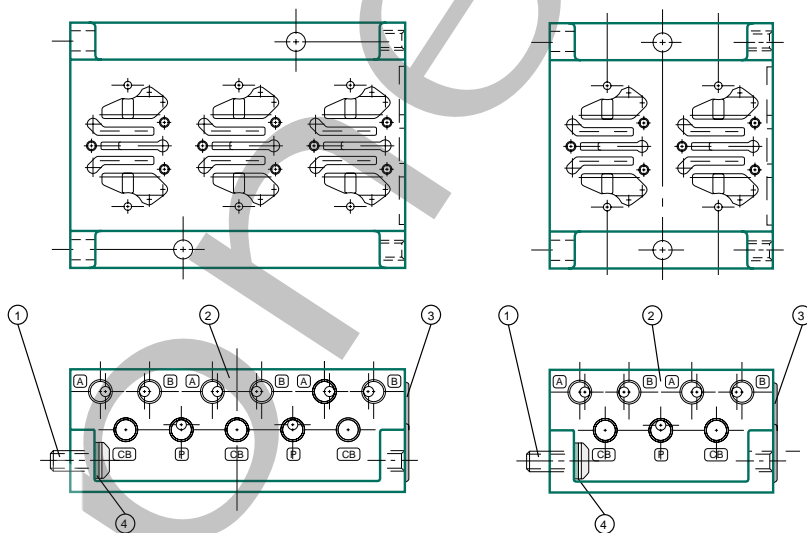
Flexiblok #15: side & bottom cylinder ports

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

Manifold Kits – 10-32 UNF-3B

3 Station Kit

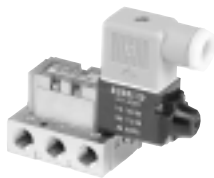
2 Station Kit



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

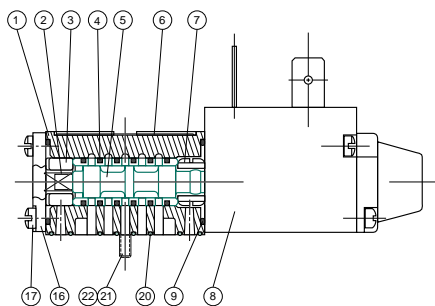


Mark 3, SPA 3 & PA 3 Series

Valve Service Kits and Parts - 2 Position

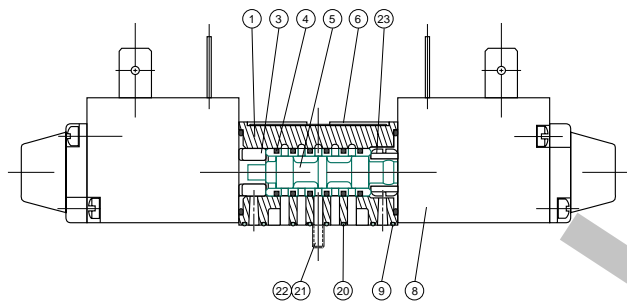
Kit No. MK3-K1 (for models 030SA4, 031SA4)

Parts List



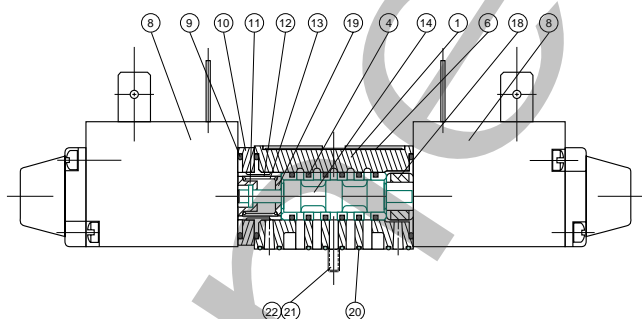
DET. NO.	SA4	SS4 & PP4	SS5 & PP5	SS6 & PP6	PA4	PART NAME	PART NO.
1	1	1	1	1	1	Valve Body (not sold separately)	
2 *	1	N/A	N/A	N/A	N/A	Spring	115-203
3 *	1	1	N/A	N/A	1	Bumper	114-130
4 *	6	6	6	6	6	Seal	126-133
5	1	1	N/A	N/A	1	Sleeve Assembly w/seals	209-278
6	1	1	1	1	1	Nameplate	122-571
7 *	1	N/A	N/A	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

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

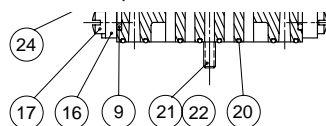


Valve Service Kits and Parts -
3 Position

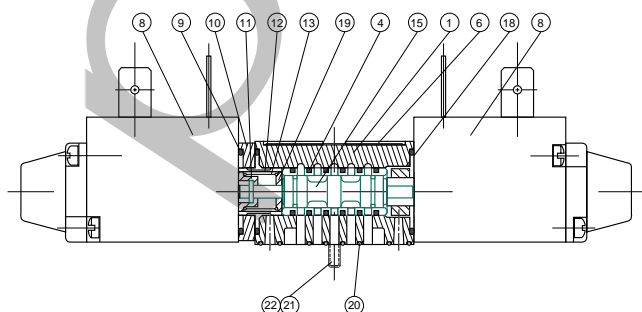
Kit No. MK3-K3 (for models 030PP5, 031PP5,
030SS5, 031SS5)



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



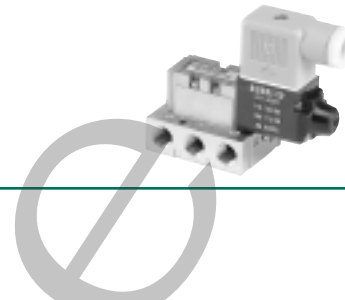
Kit No. MK3-K3 (for models 030PP6, 031PP6,
030SS6, 031SS6)



*Indicates parts included in repair kit.



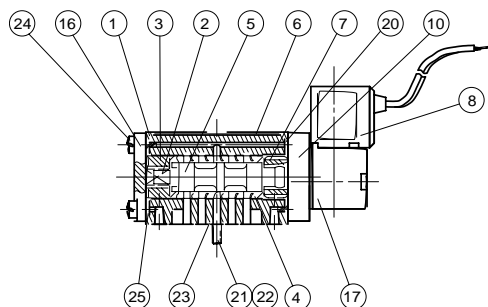
Mark 3, SPA 3 & PA 3 Series



Valve Service Kits and Parts - 2 Position

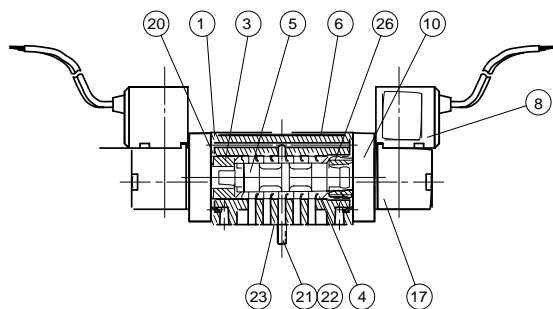
Kit No. SPA3P-K1 (for models 030BA4, 031BA4)

Parts List



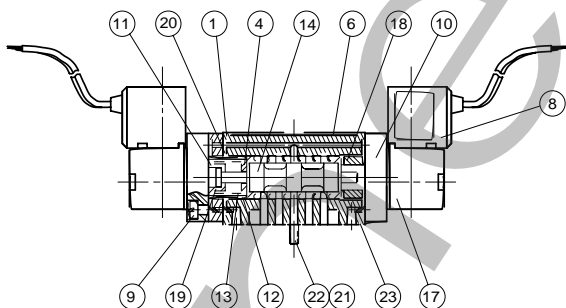
DET. NO.	BA4	BB4	BB5	BB6	PART NAME	PART NO.
1	1	1	1	1	Valve Body (not sold separately)	
2	1*	N/A	N/A	N/A	Spring	115-231
3	1*	1*	N/A	N/A	Bumper	114-130
4	6*	6*	6*	6*	Seal	126-133
5	1	1	N/A	N/A	Sleeve Assembly w/seals	209-278
6	1	1	1	1	Nameplate	122-571
7	1*	N/A	N/A	N/A	Detent Body	110-109
8	1	2	2	2	Solenoid 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

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

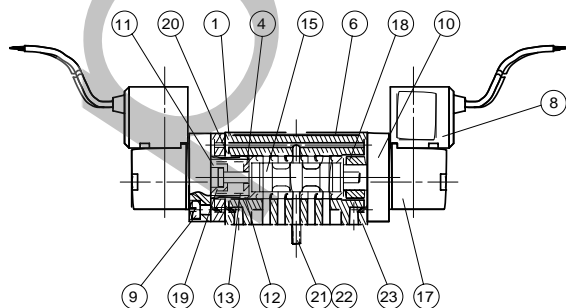


Valve Service Kits and Parts - 3 Position

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



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



*Indicates parts included in kit.