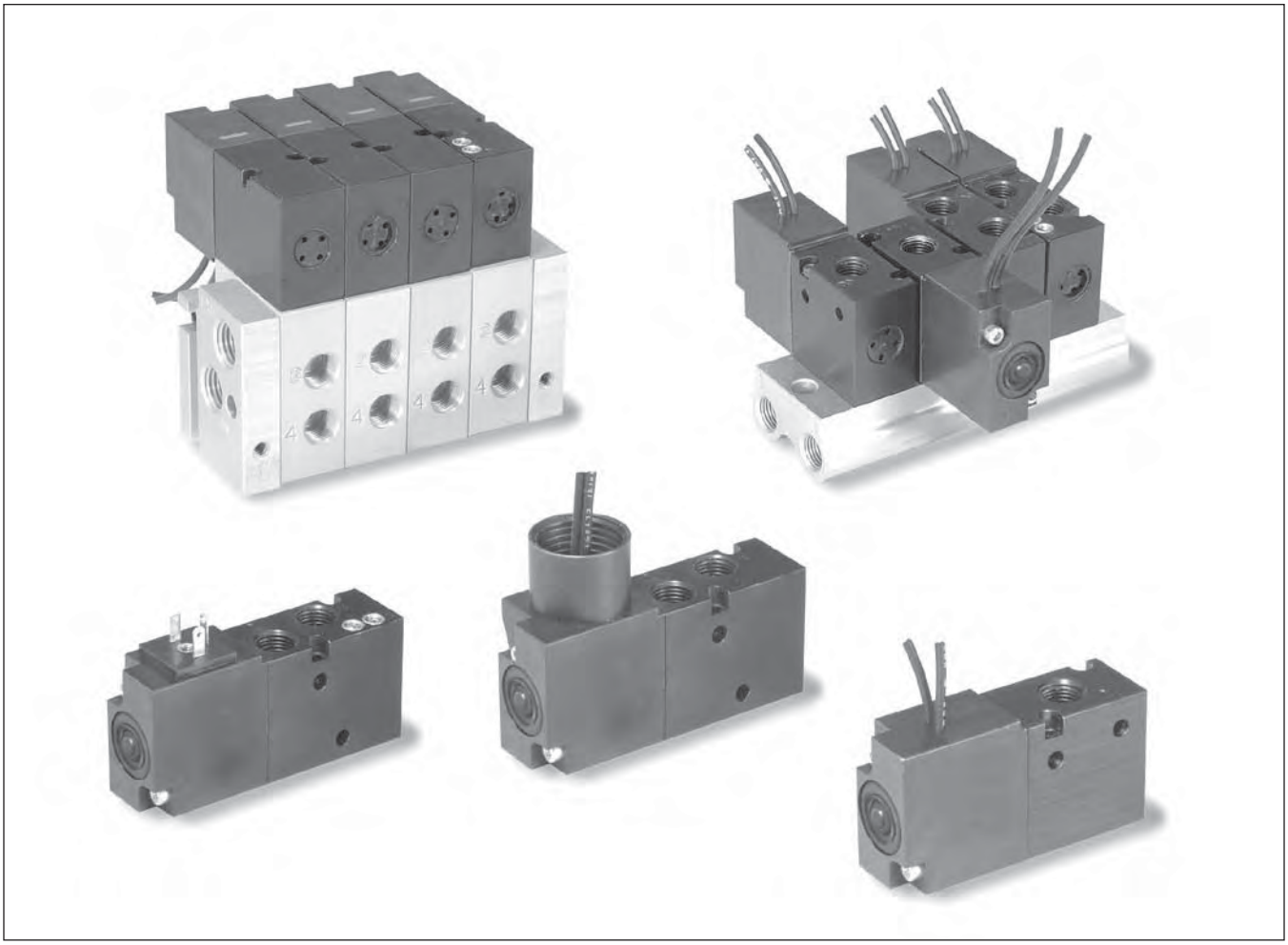
"XM" Series

Air Control Valves
Direct Acting, 1/8" Port
3-Way & 4-Way: .15 Cv

Section B

www.parker.com/pneu/xm



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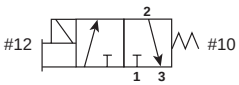
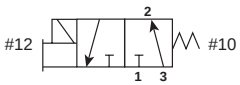
3-Way, 2-Position, Normally Closed



De-energized position – Solenoid #12 de-energized. Pressure at inlet port 1 blocked, outlet port 2 connected to exhaust port 3.

Energized position – Solenoid #12 energized. Pressure at inlet port 1 is connected to outlet port 2, exhaust port 3 is blocked.

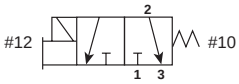
3-Way, 2-Position, Normally Open



De-energized position – Solenoid #12 de-energized. Pressure at inlet port 3 connected to outlet port 2, exhaust port 1 is blocked.

Energized position – Solenoid #12 energized. Pressure at inlet port 3 blocked, outlet port 2 connected to exhaust port 1.

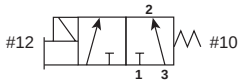
3-Way, 2-Position, Diverter



De-energized position – Solenoid #12 de-energized. Pressure at inlet port 2 connected to outlet port 3. Port 1 is blocked.

Energized position – Solenoid #12 energized. Pressure at inlet port 2 is connected to outlet port 1. Port 3 is blocked.

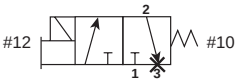
3-Way, 2-Position, Selector



De-energized position – Solenoid #12 de-energized. Pressure at inlet port 1 is blocked. Pressure at inlet port 3 is connected to outlet port 2.

Energized position – Solenoid #12 energized. Pressure at inlet port 1 is connected to outlet port 2. Pressure at port 3 is blocked.

2-Way, 2-Position, Normally Closed

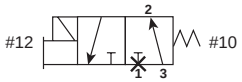


De-energized position – Solenoid #12 de-energized. Pressure at inlet port 1 blocked, port 2 is connected to port 3, which is plugged.

Energized position – Solenoid #12 energized. Pressure at inlet port 1 is connected to outlet port 2. Port 3 is blocked.

* Plug port 3.

2-Way, 2-Position, Normally Open

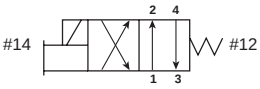


De-energized position – Solenoid #12 de-energized. Pressure at inlet port 3 is connected to outlet port 2. Port 1 is blocked.

Energized position – Solenoid #12 energized. Pressure at inlet port 3 is blocked. Port 2 is connected to port 1, which is plugged.

* Plug port 1.

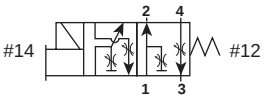
4-Way, 2-Position



De-energized position – Solenoid #14 de-energized. Pressure at inlet port 1 connected outlet port 2. Outlet port 4 connected to exhaust port 3.

Energized position – Solenoid #14 energized. Pressure at inlet port 1 is connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

4-Way, 2-Position with Flow Controls



De-energized position – Solenoid #14 de-energized. Pressure at inlet port 1 connected outlet port 2. Outlet port 4 connected to exhaust port 3.

Energized position – Solenoid #14 energized. Pressure at inlet port 1 is connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

Flow Controls meter exhaust from ports 2 and 4 separately into port 3.

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Flow Characteristics

- 3-Way: .15 Cv
- 4-Way: .15 Cv

3-Way Operating Pressure

- 0 to 125 PSIG
- 0.28" Hg Vacuum

4-Way Operating Pressure

- -14.7 to 125 PSIG

Ports

- 1/8" NPT

Mounting

- Inline
- IEM Bar Manifold
- Subbase Valve Manifold

Solenoids

- Continuous Duty Rated
- 24" Grommet
- 15mm 3-Pin (9.4mm Pin Spacing)
- 1/2" Conduit
- 12VDC to 240VAC

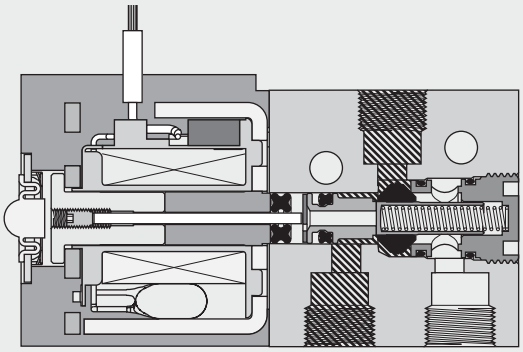
Balanced Poppet

- 3-Way N.O. & N.C.
- Diverter
- Selector
- Vacuum Option (V-Option)

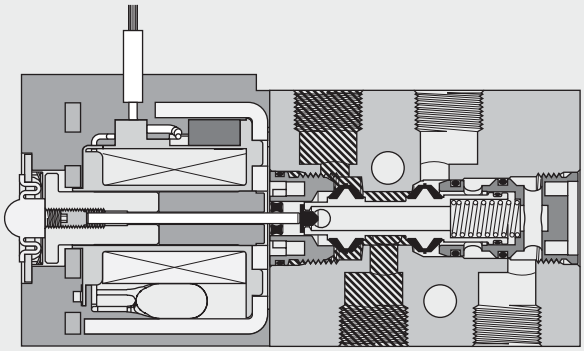
ROHS Compliant

Materials

- Body.....Aluminum
- Center Post & Armature.....Stainless Steel
- Stem.....Brass
- Spring.....Stainless Steel
- Seals.....Buna N



3-Way Inline Valve
Shown Energized



4-Way Inline Valve
Shown De-Energized

Pressure **Exhaust**

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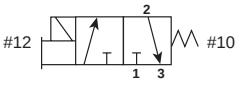
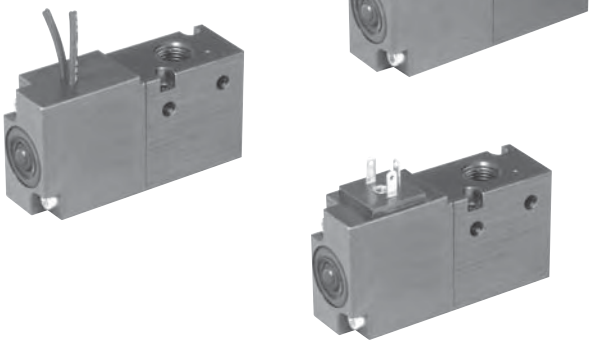
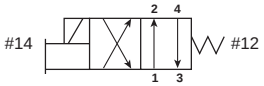
Inline Valves



N.C. Function Shown





3-Way

24" Grommet	3-Pin 15mm DIN 9.4mm	1/2" Conduit / 24" Leads	Voltage
XM30NBG49A	**XM30NB549A**	**XM30NBH49A**	24VDC
XM30NBG53A	**XM30NB553A**	**XM30NBH53A**	120VAC

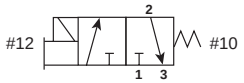
Note: All units with non-locking flush override.
Can be used as N.O / N.C. / Diverter / Selector function.

4-Way

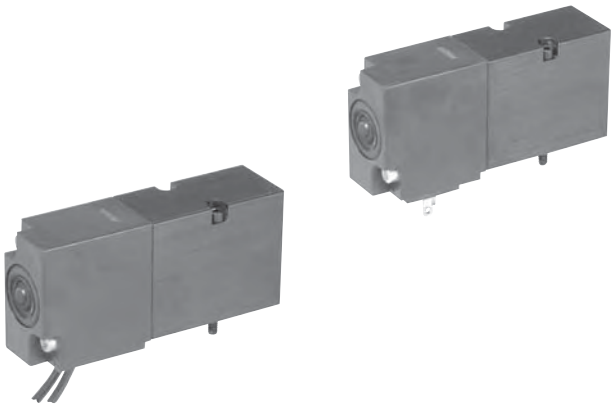
24" Grommet	3-Pin 15mm DIN 9.4mm	1/2" Conduit / 24" Leads	Voltage
XM40NBG49A	**XM40NB549A**	**XM40NBH49A**	24VDC
XM40NBG53A	**XM40NB553A**	**XM40NBH53A**	120VAC

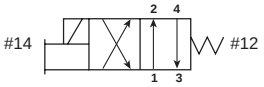
Note: All units with non-locking flush override.

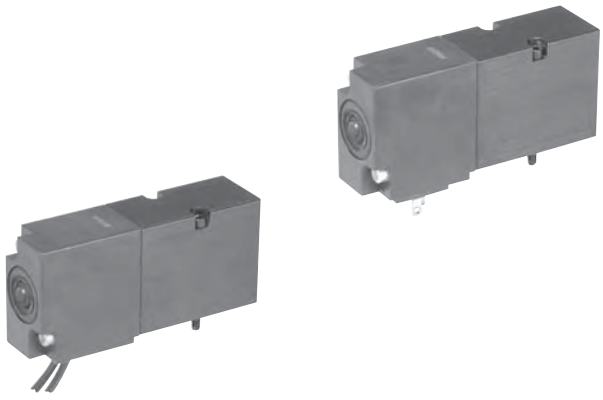
Subbase Mount



N.C. Function Shown







3-Way

24" Grommet	3-Pin 15mm DIN 9.4mm	Voltage
XM3VNBG49A	**XM3VNB549A**	24VDC
XM3VNBG53A	**XM3VNB553A**	120VAC

Note: All units with non-locking flush override.
Can be used as N.O / N.C. / Diverter / Selector function.

4-Way

24" Grommet	3-Pin 15mm DIN 9.4mm	Voltage
XM4VNBG49A	**XM4VNB549A**	24VDC
XM4VNBG53A	**XM4VNB553A**	120VAC

Note: All units with non-locking flush override.

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XM	4	0	N	B	G49	—	A

Operator / Function

3-Way, Direct Operated, Single Solenoid, Spring Return	**3**
4-Way, Direct Operated, Single Solenoid, Spring Return	**4**

Port Size / Thread Type

1/8" NPT Inline	**0***
Subbase Valve Less Base	V

* Available on IEM manifolds.

Pilot Source / Exhaust

Direct Operated / Standard Pressure	**N***
Direct Operated / Vacuum Service	V**

* 3-Way Valve Positive Pressure, 4-Way Valve Vacuum or Positive Pressure

** 3-Way Valve Vacuum Pressure.

Overrides

Flush - Non-Locking	**B**

Options

Blank	**None**
F0*	Flow Control

* 4-Way Valves Only.

Engineering Level

A	**Current**

Enclosures / Lead Length

		Voltage		
		AC		DC
		60Hz	50Hz	
542	15mm 3-Pin DIN 9.4mm	24	22	
545*	15mm 3-Pin DIN 9.4mm			12
549*	**15mm 3-Pin DIN 9.4mm**			**24**
553	**15mm 3-Pin DIN 9.4mm**	**120**	**110**	
G42	Grommet / Flying Leads 24"	24	22	
G45*	**Grommet / Flying Leads 24"**			**12**
G49*	**Grommet / Flying Leads 24"**			**24**
G53	**Grommet / Flying Leads 24"**	**120**	**110**	
G57	Grommet / Flying Leads 24"	240	220	
H42†	1/2" Conduit / Flying Leads 24"	24	22	
H45*†	1/2" Conduit / Flying Leads 24"			12
H49*†	**1/2" Conduit / Flying Leads 24"**			**24**
H53†	**1/2" Conduit / Flying Leads 24"**	**120**	**110**	

* Mobile Voltage Rated.

† Inline Version Only.

Notes:

Inline Valves
Conduit Inline valves cannot be mounted to IEM or Subbase Manifolds.

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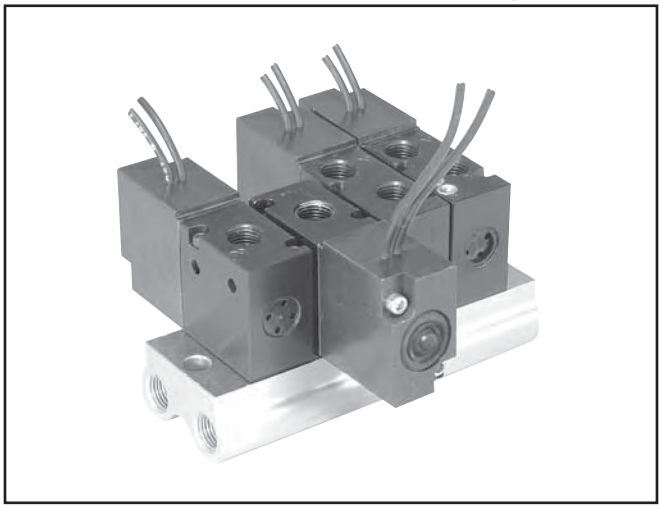
IEM Bar Manifold Assembly

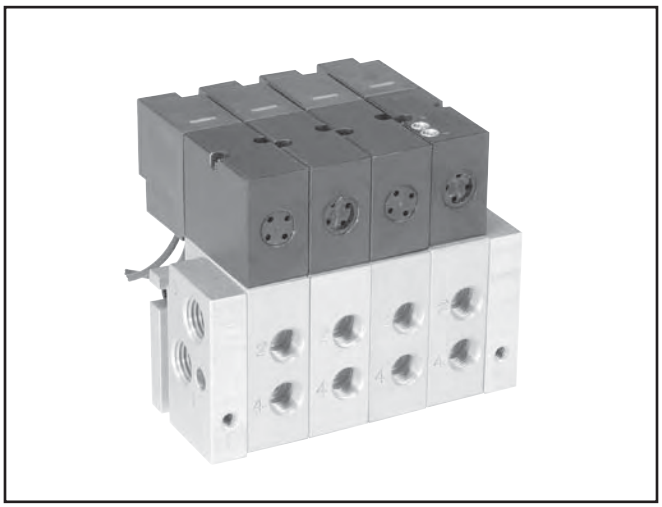


IEM Bar Manifold

Allows for mounting of 3-Way and 4-Way Inline valves on the same manifold. 3-Way Valves can be mounted on the same manifold to provide a Normally Closed or Normally Open function by rotating the valves 180°. 4-Way valves can be mounted with or without Flow Controls.

IEM Bar Manifold Assemblies consist of valves and an IEM Manifold. Valves and IEM Manifold can be ordered separately.

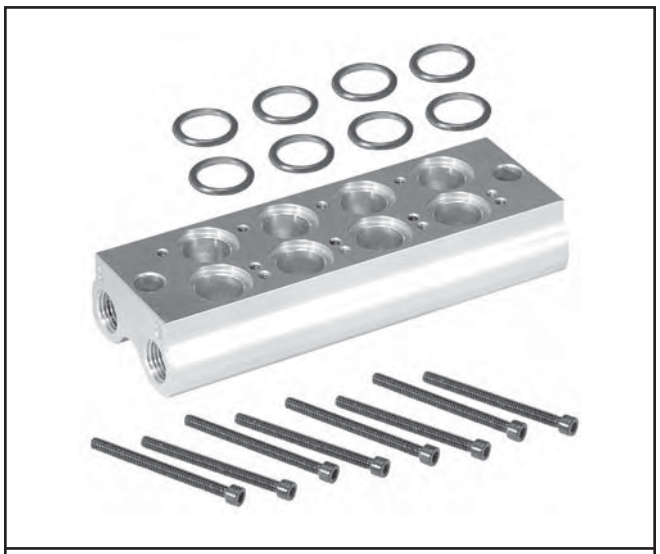
Subbase Manifold Assembly



Subbase Manifold

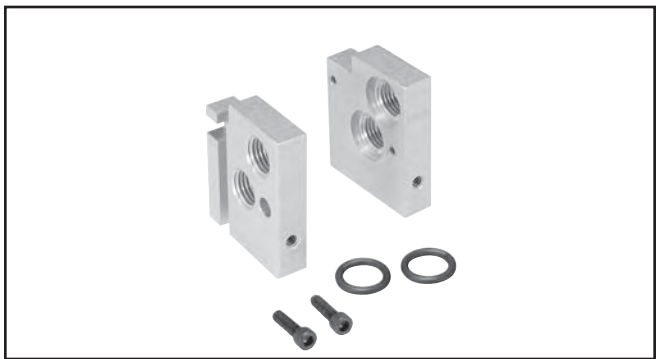
Allows for mounting of 3-Way and 4-Way Subbase Valves can be mounted on the same manifold. 3-Way Valves can be mounted on the same manifold to provide a Normally Closed or Normally Open function through the use of port isolation kits. 4-Way valves can be mounted with or without Flow Controls.

Subbase Manifold Assemblies consist of Valves, End Plate Kit and Manifold Subbase Kits. Valves, End Plate Kit and Manifold Subbase Kits can be ordered separately.

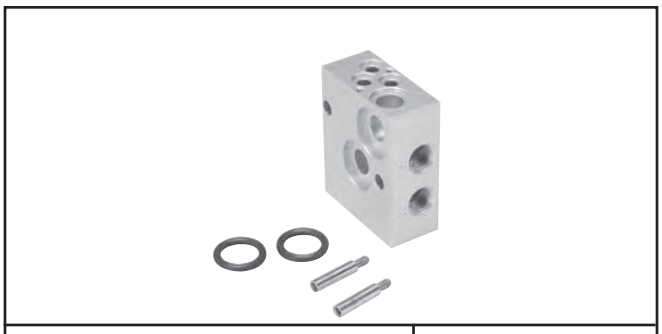


IEM Bar Manifold (NPT)	**PSMXNXN##NP**

– stations 02 to 12



End Plate Kit (NPT)	**PSXM31010P**



Manifold Subbase Kit (NPT)	**PSXM530CP**

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How to Order Manifold Assemblies

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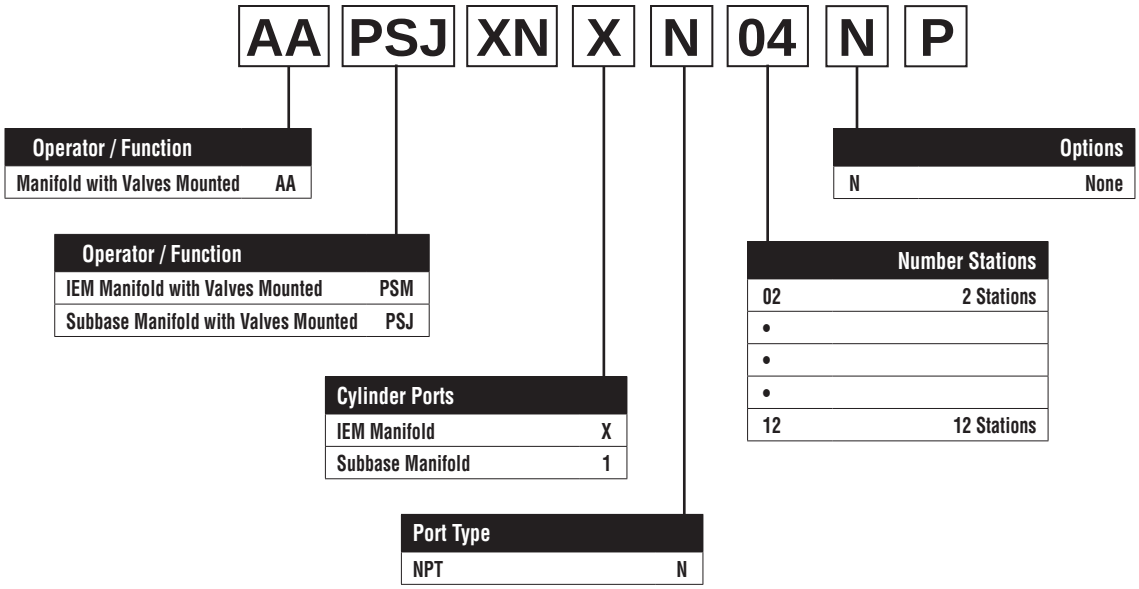

IEM Bar Manifold Assembly

First line item describes IEM Assembly. Subsequent line items listed identify each station in the Manifold starting with Station Number 1.

Manifold Assembly Ordering Example

Item	Qty	Part Number
001	1	AAPSMXNXN04NP
002	2	XM30NBG49A - **Station 1, 2 - Normally Closed**
003	1	XM40NBG49A - **Station 3**
004	1	XM40NBG49F0A - **Station 4**

Notes: When ordering Add-A-Folds, list valves left to right when looking at the Port 1/3 side of the manifold. All 3-Way valves will be assembled as 3-Way N.C. valves.

Component Ordering Example

Item	Qty	Part Number
001	1	PSMXNXN04NP (IEM Kit)
002	2	XM30NBG49A (Valve)
003	1	XM40NBG49A (Valve)
004	1	XM40NBG49F0A (Valve)

Subbase Manifold Assembly

First line item describes Subbase Assembly. Subsequent line items listed identify each station in the Manifold starting with Station Number 1.

Subbase Manifold Ordering Example

Item	Qty	Part Number
001	1	AAPSJXN1N04NP
002	2	XM3VNBG49A - **Station 1, 2 - Normally Closed**
003	1	XM4VNBG49A - **Station 3**
004	1	XM4VNBG49F0A - **Station 4**

Notes: When ordering Add-A-Folds, list valves left to right when looking at the Port 2/4 side of the manifold. All 3-Way valves will be assembled as 3-Way N.C. valves. Isolator Discs are required for N.O. functions

Component Ordering Example

Item	Qty	Part Number
001	1	PSXM31010P (End Plate Kit)
002	4	PSXM530CP (Subbase Kit)
003	2	XM3VNBG49A (Valve)
004	1	XM4VNBG49A (Valve)
005	1	XM4VNBG49F0A (Valve)

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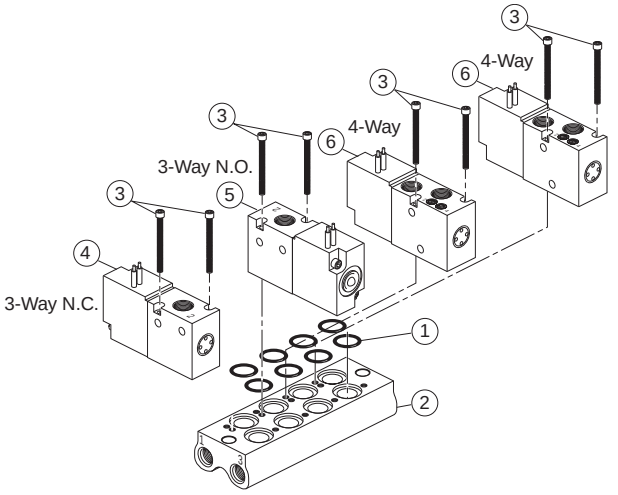
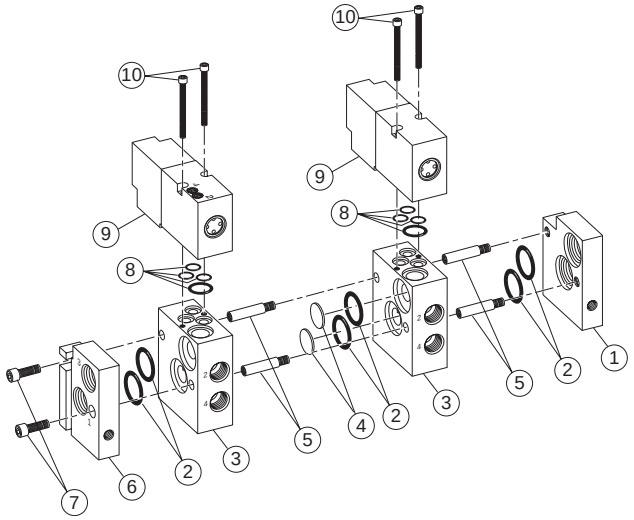
Inline Valve on IEM Bar Manifold Assembly

IEM Bar Manifold Assembly's are assembled by adding Inline Valves to an IEM Bar Manifold. O-rings are installed at each valve station in the counterbore on the top of the manifold. Valves are installed with 2 mounting screws. For 3-Way N.C. valve operation, line up the solenoid end of the Valve with Port 1 on the Manifold. For 3-Way N.O. operation, line up the solenoid end of the valve with Port 3 on the manifold. For 4-Way valve operation, line up the Solenoid end of the valve with Port 1 on the manifold. If manifolds are factory assembled, all 3-Way valves are N.C. To convert from N.C. to N.O. operation, remove valve from the base and place valve 180° from the original position with the solenoid end lined up with the 3-Port on the manifold.



Subbase Valve and Manifold Assembly

Subbase Manifold Assembly's are assembled by adding tie rods and manifold bases to the end plate kit of the subbase end plate kit as shown below. Valves are added to each subbase per manifold design. 4-Way and 3-Way valves are mounted with Solenoids Coils facing away from subbase delivery ports 2 and 4. For 3-Way N.O. Functions, valves must be isolated from the other 3-Way N.C. and 4-Way valves on the manifold. This is achieved by placing port isolator discs in between the subbase of the first 3-Way N.O. Valve and the subbase of the last 3-Way N.C. or 4-Way valve in the Subbase Manifold. Inlet pressure is connected to Port 3 of the manifold for the 3-Way N.O. valves. Inlet pressure is connected to the Port 1 of the manifold for the 3-Way N.C. and 4-Way valves. Separate Inlet Pressure Ports and Exhaust Ports are required for N.O. and N.C. 3-way function valves.



Performance Information

Electrical						Flow		Seals
Code	Voltage			Power Consumption	Holding Current	Cv Chart		
	AC		DC			3-Way	4-Way	
	60Hz	50Hz		(W / VA)	(Amps)			
42	24	22	—	4.8VA	.200	.15	.15	Buna N
45*	—	—	12	4.5W	.375	.15	.15	
49*	—	—	24	4.5W	.188	.15	.15	
53	120	110	—	4.32VA	.036	.15	.15	
57	240	220	—	4.32VA	.018	.15	.15	
Note: Voltage Tolerance: +10 / -15%						Cv tested per ANSI / (NFPA) T3.21.3		

* Mobile Voltage, +25/-30%

Response Time

Code	Voltage	0 Cu. In. Test Chamber		12 Cu. In. Test Chamber	
		Fill	Exhaust	Fill	Exhaust
49	24VDC	.011	.007	.240	.384
53	120VAC	.011	.020	.240	.384

Average Fill Time (Seconds): With 100 PSIG supply, time required to fill from 0-90 PSIG and exhaust from 100 PSIG to 10 PSIG is measured from instant of energizing, or de-energizing solenoid. Times shown are average.
Tested per ANSI / (NFPA) T3.21.8.

Operating Pressure

Function / Pilot Source	Minimum	Maximum
3-Way, N	0 PSIG	125 PSIG
3-Way, V	0.28" Hg	125 PSIG
4-Way, N	0.28" Hg	125 PSIG

Temperature Rating

32°F to 125°F (0°C to 50°C)

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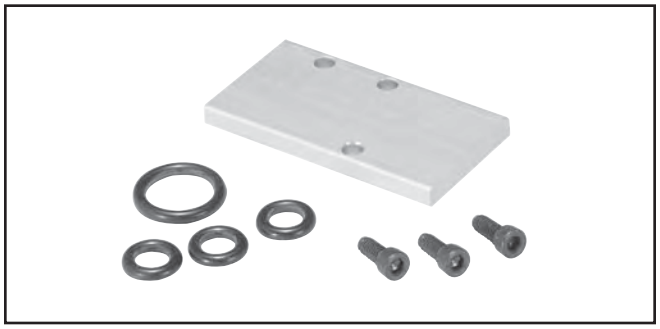
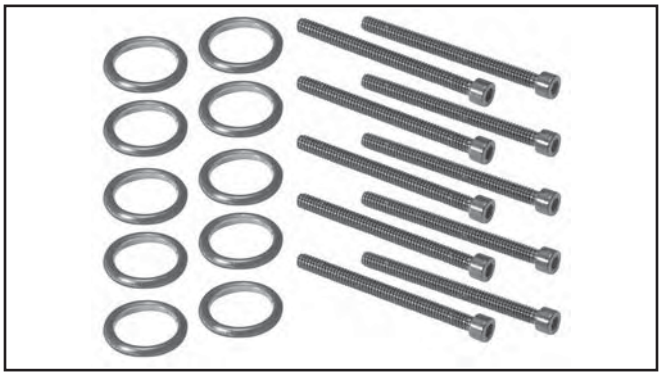
Blanking Plate



Kit Number	
Part Number	**Description**
PSXM8310P	**Subbase Blank Kit**

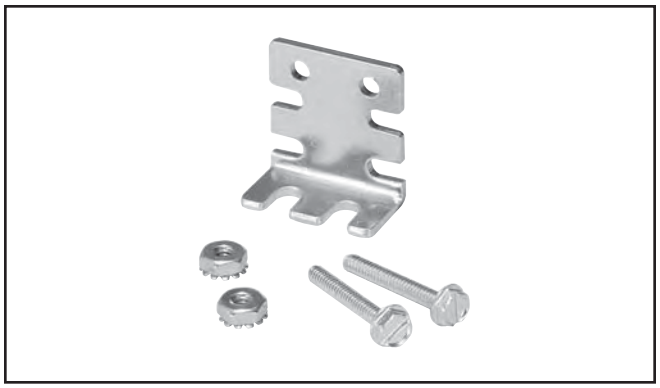
Subbase Kit includes: (1) Plate, (3) Screws, (4) Gaskets
Fits Subbase or IEM type Manifold.

IEM Valve / Manifold O-ring Kit



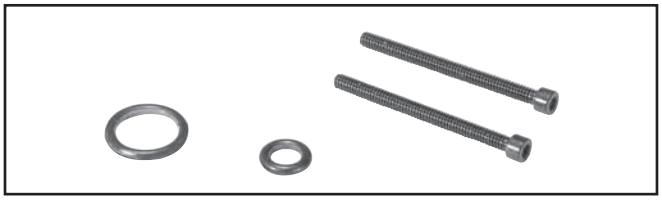
Part Number	
PSXM2186P	IEM Valve / Manifold O-ring Kit

Mounting Bracket - Inline Valve



Part Number	Description
PSXM8288P	Mounting Bracket

Subbase Valve / Manifold Bolt Kit

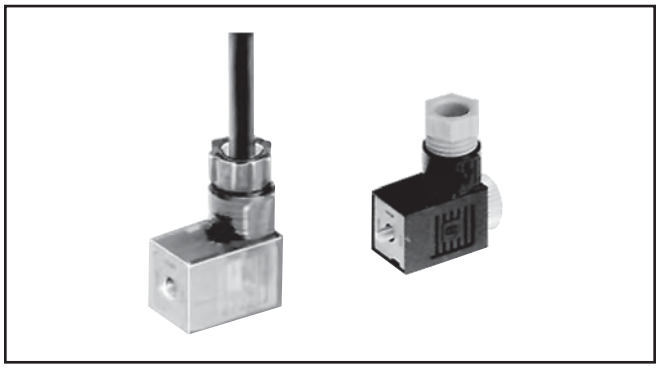


Part Number	Description
PSXM8100P	Subbase Valve / Manifold Bolt Kit

Isolator Plugs - Subbase Manifold

Part Number	Description
PSXM40900P	Isolation Plugs

Plug-in Electrical Connectors - 9.4mm



Indication	Voltage	Unwired Plug	Plug with 6' Lead
None	N/A	**PESC10**	**PESC12**
LED & Suppression	12/24V	**PESC2020B**	**PESC2220B**
	120VAC	**PESC2001F**	**PESC2201F**

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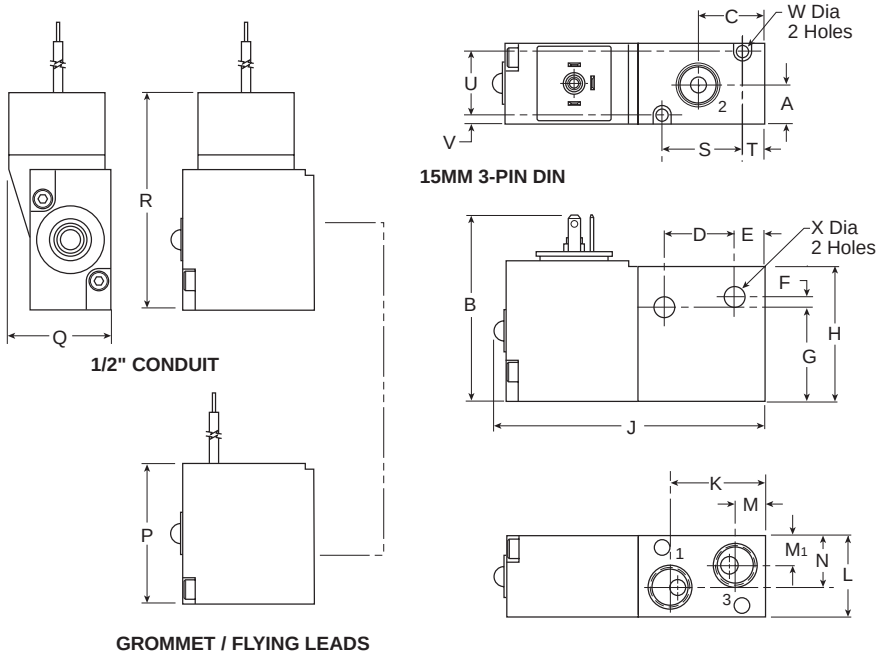


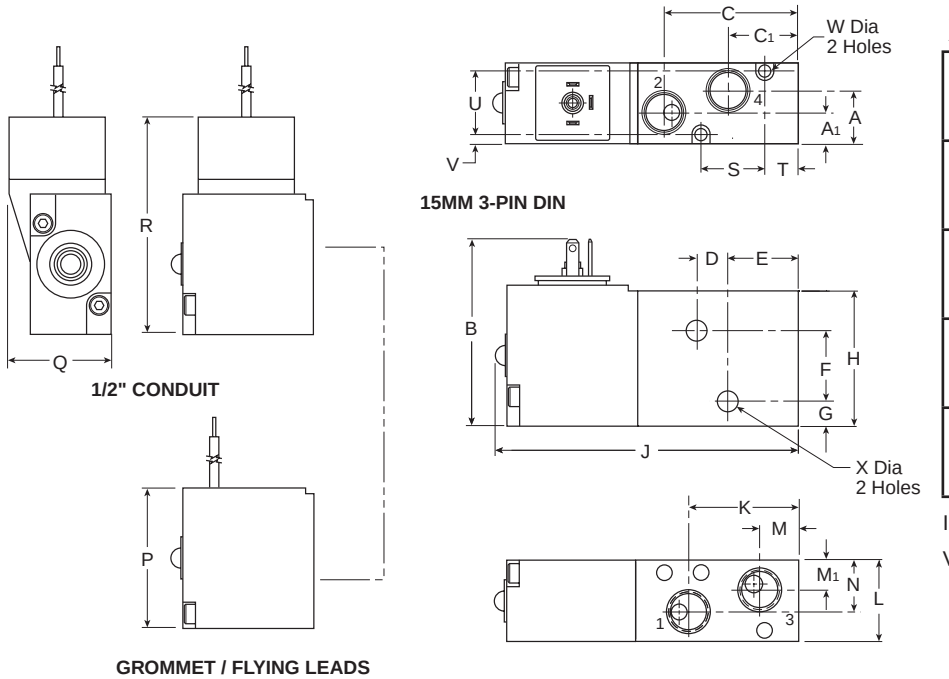
XM 3-Way Inline

A	B	C	D	E
.38 (10)	1.69 (43)	.62 (16)	.66 (17)	.28 (7.0)
F	**G**	**H**	**J**	**K**
.10 (2.5)	.87 (22)	1.25 (32)	2.50 (64)	.87 (22)
L	**M**	**M_1**	**N**	**P**
.75 (19)	.28 (7.0)	.28 (7.0)	.48 (12)	1.32 (34)
Q	**R**	**S**	**T**	**U**
.98 (24.9)	2.10 (53)	.75 (19)	.21 (5.4)	.59 (15)
V	**W**	**X**		
.08 (2.0)	.11 (2.9)	.16 (4.0)		

Inches (mm)

Valve Weight
Grommet..... 4 oz (.11 Kg)
DIN ..... 4 oz (.11 Kg)
Conduit ..... 5 oz (.14 Kg)

Note: 22 AWG black cross linked polyethylene insulated lead wire.



XM 4-Way Inline

A	A_1	B	C	C_1
.48 (12)	.28 (6.9)	1.69 (43)	1.23 (31)	.64 (16)
D	**E**	**F**	**G**	**H**
.24 (6.5)	.68 (17)	.65 (16.5)	.22 (5.6)	1.25 (32)
J	**K**	**L**	**M**	**M_1**
2.80 (71)	1.01 (26)	.75 (19)	.36 (9.1)	.28 (7.1)
N	**P**	**Q**	**R**	**S**
.48 (12)	1.32 (34)	.98 (25)	2.10 (53)	.59 (15)
T	**U**	**V**	**W**	**X**
.32 (8.0)	.59 (15)	.08 (2.0)	.11 (2.9)	.16 (4.0)

Inches (mm)

Valve Weight
Grommet..... 4.3 oz (.12 Kg)
DIN ..... 4.3 oz (.12 Kg)
Conduit ..... 5.3 oz (.15 Kg)

Note: 22 AWG black cross linked polyethylene insulated lead wire.

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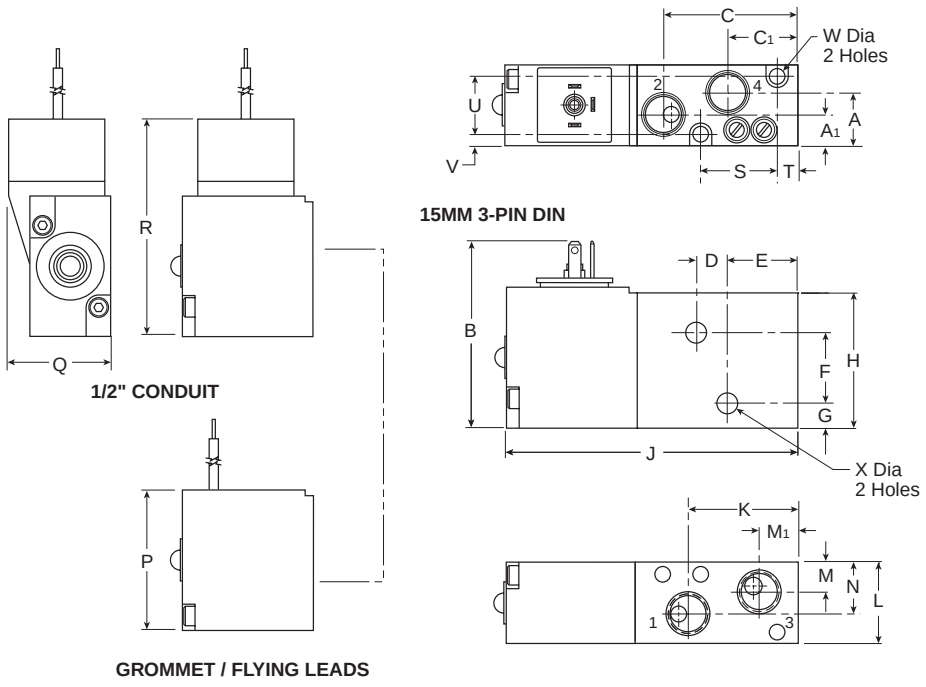


XM 4-Way Inline with Flow Controls

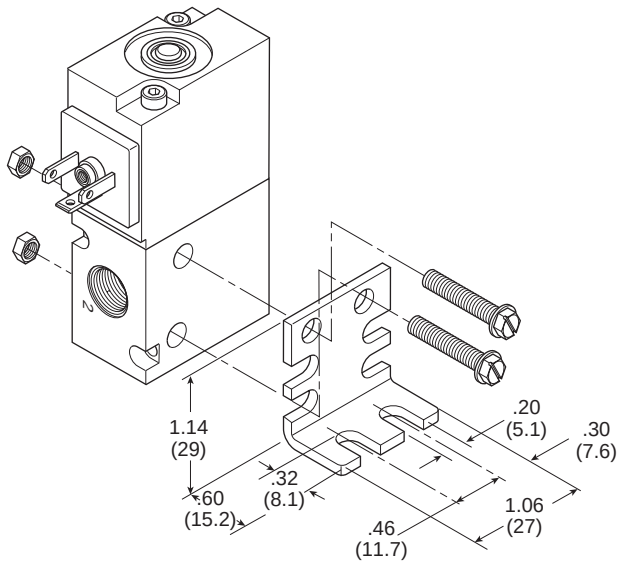
A	A1	B	C	C1
.48 (12)	.28 (6.9)	1.69 (43)	1.23 (31)	.64 (16)
D	**E**	**F**	**G**	**H**
.24 (6.5)	.68 (17)	.65 (16.5)	.22 (5.6)	1.25 (32)
J	**K**	**L**	**M**	**M1**
2.80 (71)	1.01 (26)	.75 (19)	.36 (9.1)	.28 (7.1)
N	**P**	**Q**	**R**	**S**
.48 (12)	1.32 (34)	.98 (25)	2.10 (53)	.59 (15)
T	**U**	**V**	**W**	**X**
.32 (8.0)	.59 (15)	.08 (2.0)	.11 (2.9)	.16 (4.0)

Inches (mm)

Valve Weight
Grommet..... 4.3 oz (.12 Kg)
DIN ..... 4.3 oz (.12 Kg)
Conduit ..... 5.3 oz (.15 Kg)

Note: 22 AWG black cross linked polyethylene insulated lead wire.

Mounting Bracket Dimensions



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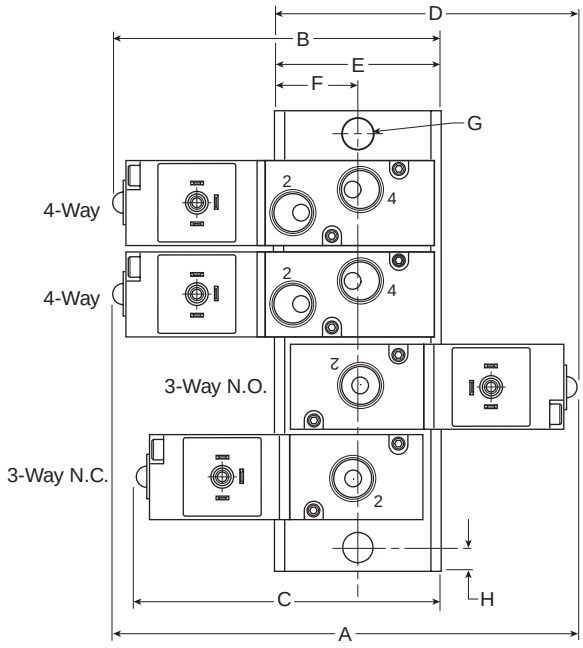

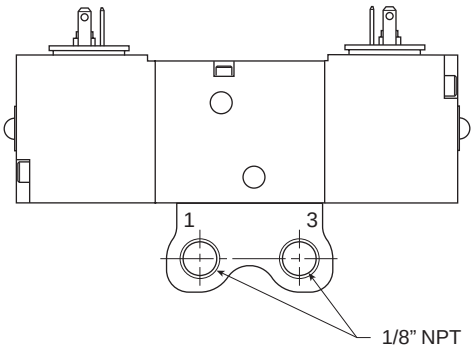

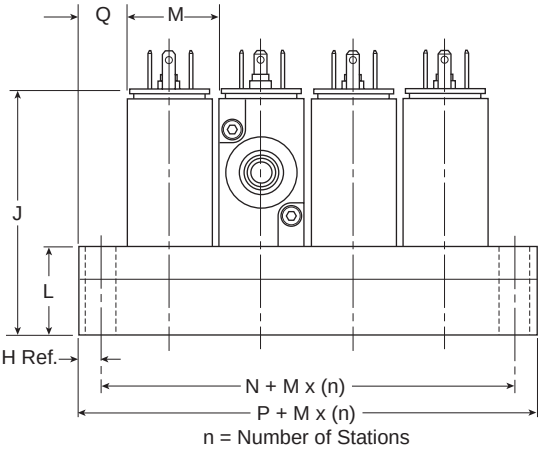

XM IEM Manifold

A	B	C	D	E
4.04 (103)	2.86 (73)	2.67 (68)	2.67 (68)	1.47 (37)
F	**G**	**H**	**J**	**L**
.74 (19)	Ø .28 Ø (7.0)	.20 (5.0)	2.11 (54)	.79 (20)
M	**N**	**P**	**Q**	
.80 (20.5)	.48 (12)	.88 (22)	.44 (11)	

Inches (mm)

Manifold Weight
2 Station ..... 2.5 oz (.07 Kg)
Each Additional ..... 1 oz (.03 Kg)

Valve Weight
3-Way ..... 4 oz (.11 Kg)
4-Way ..... 4.3 oz (.12 Kg)

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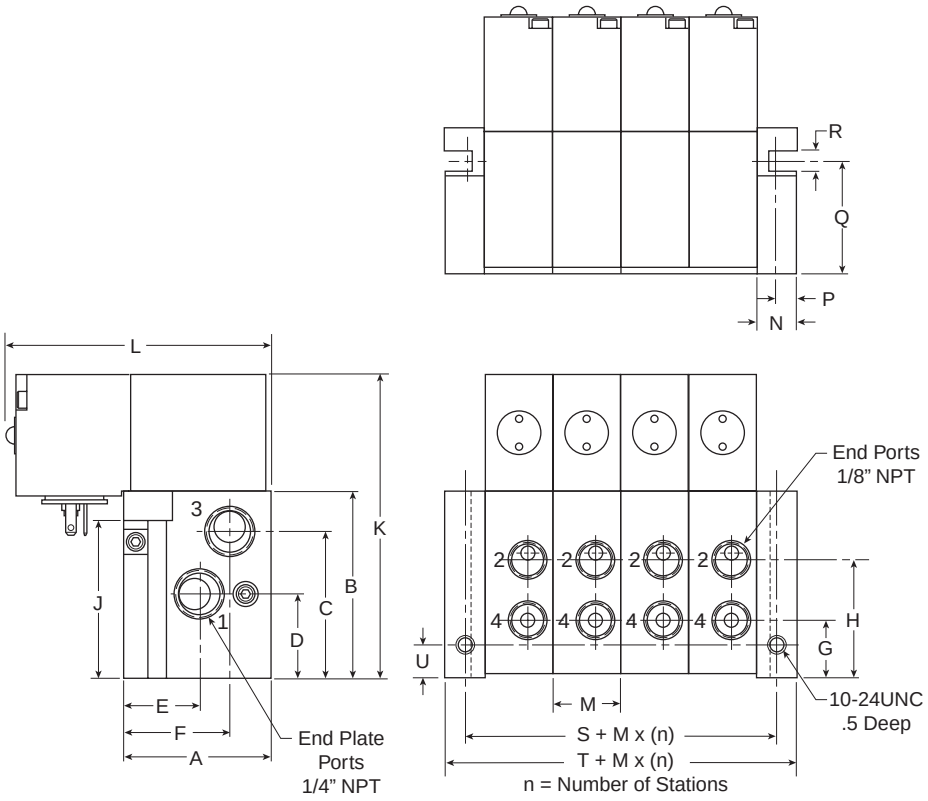

XM Subbase

A	B	C	D	E
1.62 (41)	2.00 (51)	1.58 (40)	.92 (23)	.85 (22)
F	**G**	**H**	**J**	**K**
1.19 (30)	.61 (16)	1.26 (32)	1.70 (43)	3.25 (83)
L	**M**	**N**	**P**	**Q**
2.85 (72)	.75 (19)	.44 (11)	.28 (7.0)	1.25 (32)
R	**S**	**T**	**U**	
.22 (5.6)	.44 (11)	.88 (22)	.51 (13)	

Inches (mm)

Subbase Weight
Single Subbase .... 3.2 oz (.09 Kg)
End Plates ..... 3.2 oz (.09 Kg)

Valve Weight
3-Way ..... 3.7 oz (.10 Kg)
4-Way ..... 4.6 oz (.13 Kg)

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Notes

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