



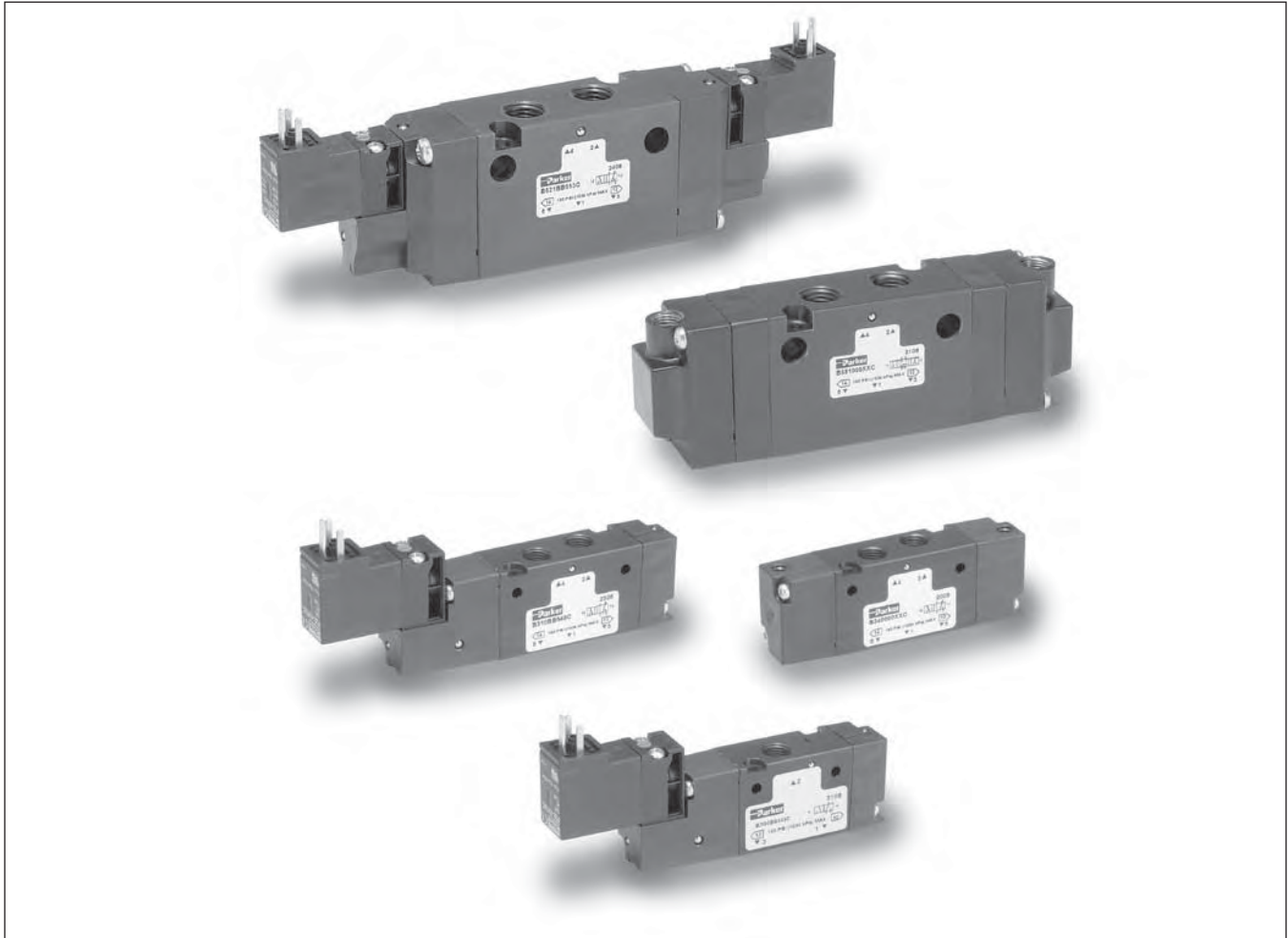
# "B" Series

## Air Control Valves

- B3 – .75 Cv 1/8", 1/4" Port
- B5 – 1.40 Cv 1/4", 3/8" Port
- B6 – 2.70 Cv 3/8" Port
- B7 – 5.90 Cv 1/2" Port
- B8 – 7.00 Cv 3/4" Port

### Section D

[www.parker.com/pneu/b](http://www.parker.com/pneu/b)



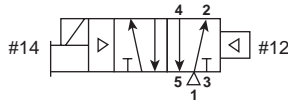
<b>D</b>
EZ
B
Viking Xtreme
ADEX
N

Basic Valve Functions .....	D26-D27	Technical Information.....	D46-D48
Basic Valve Features .....	D28-D29	Solenoid Repair Kits.....	D49
Common Part Numbers.....	D30-D31	Exploded Views & Kits.....	D50-D53
Model Number Index .....	D32-D35	Dimensions.....	D54-D70
Manifold / Subbases.....	D36-D39	Definitions & Weights .....	D71
Accessories .....	D40		
Sandwich Regulators .....	D41		
Valve Options .....	D42-D43		
Electrical Connectors / Accessories.....	D44-D45		

**BOLD ITEMS ARE MOST POPULAR.**



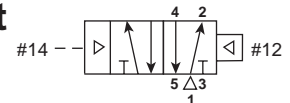
**Single Solenoid**  
**4-Way, 2-Position**



*De-energized position* – Solenoid operator #14 de-energized. Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

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

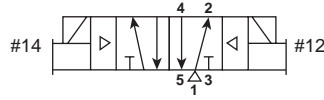
**Single Remote Pilot**  
**4-Way, 2-Position**



*Normal position* – Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

*Operated position* – Maintained air signal at port 14. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

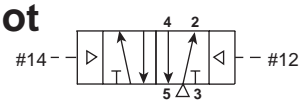
**Double Solenoid**  
**4-Way, 2-Position**



*Solenoid operator #14 energized last.* Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

*Solenoid operator #12 energized last.* Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

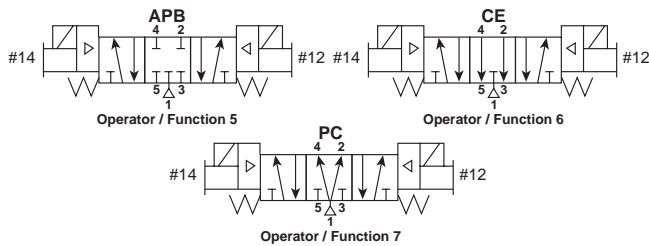
**Double Remote Pilot**  
**4-Way, 2-Position**



*Momentary air signal at port 14 last.* Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

*Momentary air signal at port 12 last.* Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

**Double Solenoid**  
**4-Way, 3-Position**



*With #12 operator energized* – inlet port 1 connected to cylinder port 2, cylinder port 4 connected to exhaust port 5.

*With #14 operator energized* – inlet port 1 connected to cylinder port 4, cylinder port 2 connected to exhaust port 3.

**Function 5: All Ports Blocked**

All ports blocked in the center position.

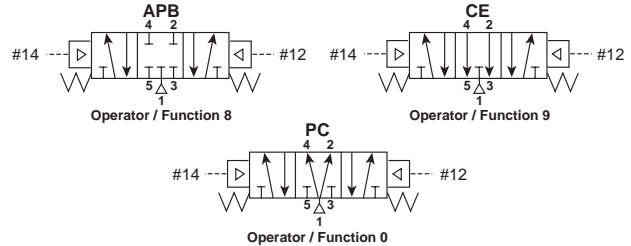
**Function 6: Center Exhaust**

Cylinder ports 2 and 4 connected to exhaust ports 3 and 5 in center position. Port 1 is blocked.

**Function 7: Pressure Center**

Pressure port 1 connected to cylinder ports 2 and 4, and exhaust ports 3 and 5 blocked in center position.

**Double Remote Pilot**  
**4-Way, 3-Position**



*With #12 operator signaled* – inlet port 1 connected to cylinder port 2, cylinder port 4 connected to exhaust port 5.

*With #14 operator signaled* – inlet port 1 connected to cylinder port 4, cylinder port 2 connected to exhaust port 3.

**Function 8: All Ports Blocked**

All ports blocked in the center position.

**Function 9: Center Exhaust**

Cylinder ports 2 and 4 connected to exhaust ports 3 and 5 in center position. Port 1 is blocked.

**Function 0: Pressure Center**

Pressure port 1 connected to cylinder ports 2 and 4, and exhaust ports 3 and 5 blocked in center position.

**Dual Pressure:**

May be used for dual pressure service with pressure at ports 3 & 5. (Use either external pilot source option "K", "W" or "X", or dual pressure pilot source option "D" or "E".) If pilot source "D" or "E" is selected, the high pressure must be at port #3. If pilot source "K", "W" or "X" is selected, the external pilot must be plumbed to port #14 or "X" respectively. NOTE: The "B6" valve is also available with dual pressure using Port 5 for high pressure (Option "G" & "H"). This is only to be used if converting from a "42" ("CM") Series traditional valve.

In the 3-Position valve, the effect of dual pressure is extremely important when the valve is in the center position, as the CE and PC functions are reversed. Therefore, care should be used when selecting a 3-Position valve.

D

EZ

B

Viking Xtreme

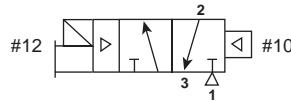
ADEX

N

**Basic Valve Functions**

**“B” Series Valves  
3-Way Valve**

**Single Solenoid  
3-Way, 2-Position  
NC (NNP)**

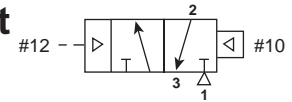


**Normally Closed:**

*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 connected to outlet port 2, exhaust port 3 is blocked.

**Single Remote Pilot  
3-Way, 2-Position  
NC (NNP)**

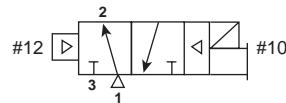


**Normally Closed:**

*Normal position* – Pressure at inlet port 1 blocked, outlet port 2 connected to exhaust port 3.

*Operated position* – Maintained air signal at port 12. Pressure at inlet port 1 connected to outlet port 2, exhaust port 3 is blocked.

**Single Solenoid  
3-Way, 2-Position  
NO (NP)**

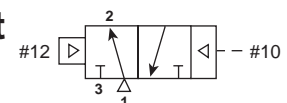


**Normally Open:**

*De-energized position* – Solenoid #10 de-energized. Pressure at inlet port 1 connected to outlet port 2, exhaust port 3 is blocked.

*Energized position* – Solenoid #10 energized. Pressure at inlet port 1 blocked, outlet port 2 connected to exhaust port 3.

**Single Remote Pilot  
3-Way, 2-Position  
NO (NP)**

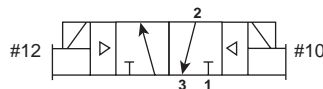


**Normally Open:**

*Normal position* – Pressure at inlet port 1 connected to outlet port 2, exhaust port 3 is blocked.

*Operated position* – Maintained air signal at port 10. Pressure at inlet port 1 blocked, outlet port 2 connected to exhaust port 3.

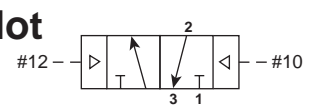
**Double Solenoid  
3-Way, 2-Position**



*Solenoid operator #12 energized last.* Pressure at inlet port 1 connected to outlet port 2, exhaust port 3 is blocked.

*Solenoid operator #10 energized last.* Pressure at inlet port 1 blocked, outlet port 2 connected to exhaust port 3.

**Double Remote Pilot  
3-Way, 2-Position**



*Momentary air signal at port 12 last.* Pressure at inlet port 1 connected to outlet port 2, exhaust port 3 is blocked.

*Momentary air signal at port 10 last.* Pressure at inlet port 1 blocked, outlet port 2 connected to exhaust port 3.

<b>D</b>
EZ
B
Viking Xtreme
ADEX
N

**3-Way Configuration**

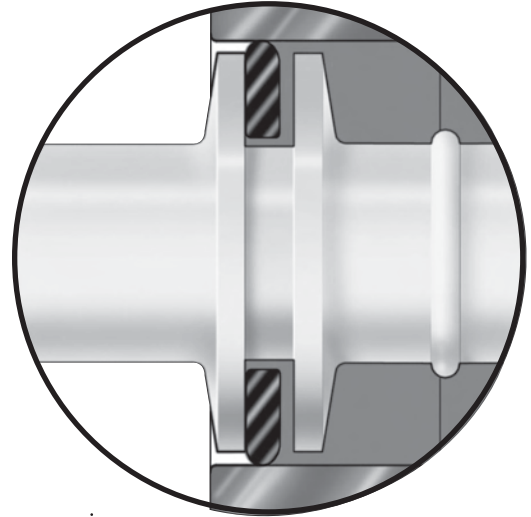
**B6, B7, B8:**  
Looking at the #1 and #3 ports, the solenoid (or remote operator) is always on the #3 port end. Different spools are used for NO and NC functions.

**B3, B5:**  
Looking at the #1 and #3 ports, the solenoid (or remote operator) is on the #3 port end for NC and the #1 port end for NO. The same spool is used for both.

# WCS

## Wear Compensation System

- **Maximum Performance**
  - Low Friction
  - Lower Operating Pressures
  - Fast Response
  - Less Wear
- **Long Cycle Life** - Under pressure, radial expansion of the seal occurs to maintain sealing contact with the valve bore.
- **Non-Lube Service** - No lubrication required for continuous valve shifting.
- **Bi-Directional Spool Seals** - Common spool used for any pressure, including vacuum.



D

EZ

B

Viking  
Xtreme

ADEX

N

Refer to [www.parker.com/pneu/b](http://www.parker.com/pneu/b)  
Click on Catalog B Series-E/USA

## “B” Series

### Flow Characteristics

- B3: .75 Cv
- B5: 1.40 Cv
- B6: 2.50 Cv
- B7: 5.90 Cv
- B8: 7.00 Cv

### Operating Pressure

- Vacuum to 145 PSIG

### Ports

- B3: 1/8, 1/4 Inch
- B5: 1/4, 3/8 Inch
- B6: 3/8 Inch
- B7: 1/2 Inch
- B8: 3/4 Inch

### Mounting

- Inline
- Subbase
- IEM Stackable Base
- IEM Aluminum Bar
- 5-Port Subbase Aluminum Bar

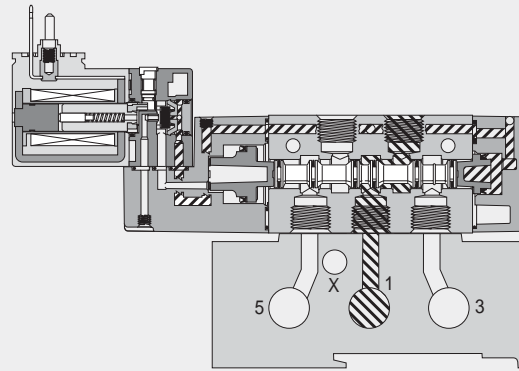
### Solenoids

- 1.2 Watt – 15mm 3-Pin (EN 175301-803)
- 2.5 to 7.3 Watt – Conduit, Grommet, 22mm & 30mm 3-Pin DIN (43650)
- 12VDC to 240VAC
- Female DIN Electrical Connectors

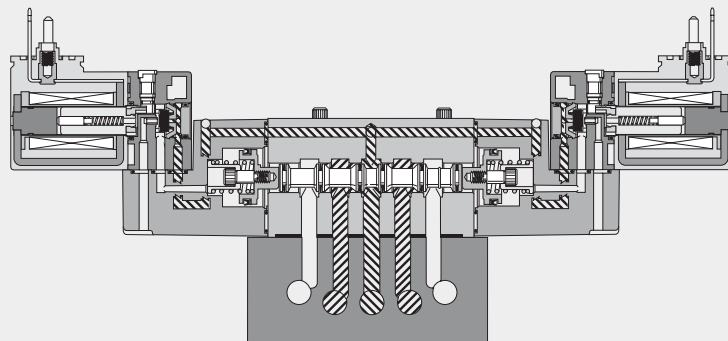
### Certification / Approval

- Approved to be CE marked
- IP65 Rated
- CSA C/US\*

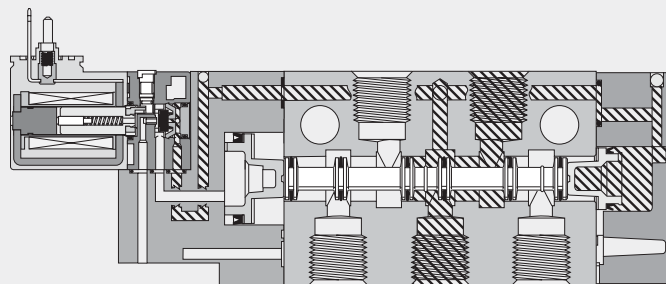
\* See catalog technical section for more information.



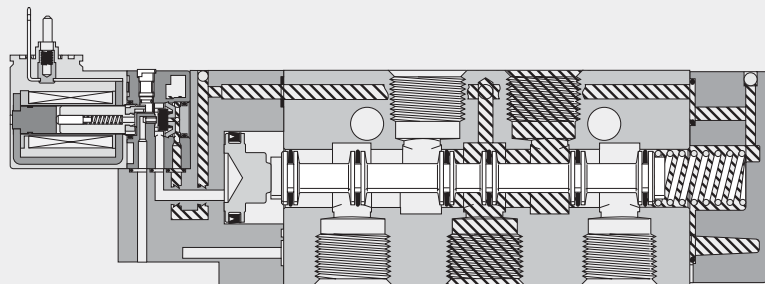
**B3 Single Solenoid IEM Aluminum Bar Manifold**  
 Shown De-Energized



**B3 Double Solenoid 3-Position Subbase Mounted**  
 Shown De-Energized



**B5 Single Solenoid Inline - Air Return**  
 Shown De-Energized



**B6, B7 & B8 Single Solenoid Inline - Spring / Air Return**  
 Shown De-Energized

Pressure Exhaust

**D**

**EZ**

**B**

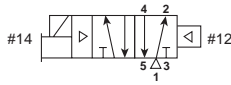
**Viking Xtreme**

**ADEX**

**N**



**Single Solenoid**  
**4-Way, 2-Position**



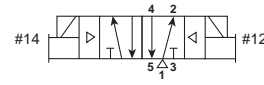
**Inline**

<b>B3</b>	<b>B310BB553C</b>	120VAC	1/8"	0.75 Cv
	<b>B310BB549C</b>	24VDC		
<b>B5</b>	<b>B511BB553C</b>	120VAC	1/4"	1.4 Cv
	<b>B511BB549C</b>	24VDC		
	<b>B512BB553C</b>	120VAC	3/8"	
	<b>B512BB549C</b>	24VDC		
<b>B6</b>	<b>B612BB553A</b>	120VAC	3/8"	2.7 Cv
	<b>B612BB549A</b>	24VDC		
<b>B7</b>	<b>B713BB553A</b>	120VAC	1/2"	5.9 Cv
	<b>B713BB549A</b>	24VDC		
<b>B8</b>	<b>B814BB553A</b>	120VAC	3/4"	7.0 Cv
	<b>B814BB549A</b>	24VDC		

**Subbase**

<b>B3</b>	<b>B31VBB553C</b>	120VAC	Less Base	0.65 Cv
	<b>B31VBB549C</b>	24VDC		

**Double Solenoid**  
**4-Way, 2-Position**



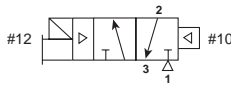
**Inline**

<b>B3</b>	<b>B320BB553C</b>	120VAC	1/8"	0.75 Cv
	<b>B320BB549C</b>	24VDC		
<b>B5</b>	<b>B521BB553C</b>	120VAC	1/4"	1.4 Cv
	<b>B521BB549C</b>	24VDC		
	<b>B522BB553C</b>	120VAC	3/8"	
	<b>B522BB549C</b>	24VDC		
<b>B6</b>	<b>B622BB553A</b>	120VAC	3/8"	2.7 Cv
	<b>B622BB549A</b>	24VDC		
<b>B7</b>	<b>B723BB553A</b>	120VAC	1/2"	5.9 Cv
	<b>B723BB549A</b>	24VDC		
<b>B8</b>	<b>B824BB553A</b>	120VAC	3/4"	7.0 Cv
	<b>B824BB549A</b>	24VDC		

**Subbase**

<b>B3</b>	<b>B32VBB553C</b>	120VAC	Less Base	0.65 Cv
	<b>B32VBB549C</b>	24VDC		

**Single Solenoid**  
**3-Way, 2-Position, NC**

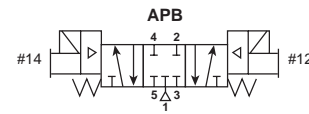


**Inline**

<b>B3</b>	<b>B3G0BB553C</b>	120VAC	1/8"	0.75 Cv
	<b>B3G0BB549C</b>	24VDC		
<b>B5</b>	<b>B5G1BB553C</b>	120VAC	1/4"	1.4 Cv
	<b>B5G1BB549C</b>	24VDC		
	<b>B5G2BB553C</b>	120VAC	3/8"	
	<b>B5G2BB549C</b>	24VDC		
<b>B6</b>	<b>B6V2BB553A</b>	120VAC	3/8"	2.7 Cv
	<b>B6V2BB549A</b>	24VDC		
<b>B7</b>	<b>B7V3BB553A</b>	120VAC	1/2"	5.9 Cv
	<b>B7V3BB549A</b>	24VDC		
<b>B8</b>	<b>B8V4BB553A</b>	120VAC	3/4"	7.0 Cv
	<b>B8V4BB549A</b>	24VDC		

3-Pin DIN 43650C Electrical Connection.  
 Non-Locking Flush Override.

**Double Solenoid**  
**4-Way, 3-Position, APB**



**Inline**

<b>B3</b>	<b>B350BB553C</b>	120VAC	1/8"	0.60 Cv
	<b>B350BB549C</b>	24VDC		
<b>B5</b>	<b>B551BB553C</b>	120VAC	1/4"	1.1 Cv
	<b>B551BB549C</b>	24VDC		
	<b>B552BB553C</b>	120VAC	3/8"	
	<b>B552BB549C</b>	24VDC		
<b>B6</b>	<b>B652BB553A</b>	120VAC	3/8"	2.1 Cv
	<b>B652BB549A</b>	24VDC		
<b>B7</b>	<b>B753BB553A</b>	120VAC	1/2"	5.7 Cv
	<b>B753BB549A</b>	24VDC		
<b>B8</b>	<b>B854BB553A</b>	120VAC	3/4"	6.6 Cv
	<b>B854BB549A</b>	24VDC		

**Subbase**

<b>B3</b>	<b>B35VBB553C</b>	120VAC	Less Base	0.50 Cv
	<b>B35VBB549C</b>	24VDC		

**D**

**EZ**

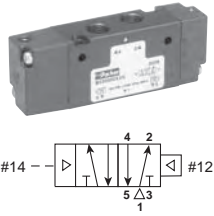
**B**

**Viking Xtreme**

**ADEX**

**N**

**Single Remote Pilot  
4-Way, 2-Position**



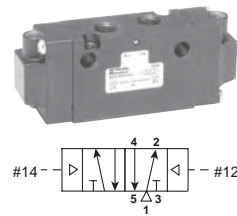
**Inline**

<b>B3</b>	<b>B330000XXC</b>	1/8"	0.75 Cv
<b>B5</b>	<b>B531000XXC</b>	1/4"	1.4 Cv
	<b>B532000XXC</b>	3/8"	
<b>B6</b>	<b>B632000XXA</b>	3/8"	2.7 Cv
<b>B7</b>	<b>B733000XXA</b>	1/2"	5.9 Cv
<b>B8</b>	<b>B834000XXA</b>	3/4"	7.0 Cv

**Subbase**

<b>B3</b>	<b>B33V000XXC</b>	Less Base	0.65 Cv
-----------	-------------------	-----------	---------

**Double Remote Pilot  
4-Way, 2-Position**



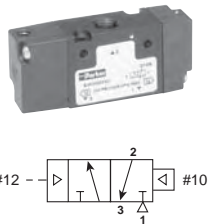
**Inline**

<b>B3</b>	<b>B340000XXC</b>	1/8"	0.75 Cv
<b>B5</b>	<b>B541000XXC</b>	1/4"	1.4 Cv
	<b>B542000XXC</b>	3/8"	
<b>B6</b>	<b>B642000XXA</b>	3/8"	2.7 Cv
<b>B7</b>	<b>B743000XXA</b>	1/2"	5.9 Cv
<b>B8</b>	<b>B844000XXA</b>	3/4"	7.0 Cv

**Subbase**

<b>B3</b>	<b>B34V000XXC</b>	Less Base	0.65 Cv
-----------	-------------------	-----------	---------

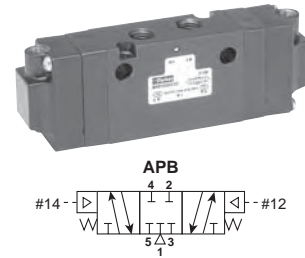
**Single Remote Pilot  
3-Way, 2-Position, NC**



**Inline**

<b>B3</b>	<b>B3K0000XXC</b>	1/8"	0.75 Cv
<b>B5</b>	<b>B5K1000XXC</b>	1/4"	1.4 Cv
	<b>B5K2000XXC</b>	3/8"	
<b>B6</b>	<b>B6X2000XXA</b>	3/8"	2.7 Cv
<b>B7</b>	<b>B7X3000XXA</b>	1/2"	5.9 Cv
<b>B8</b>	<b>B8X4000XXA</b>	3/4"	7.0 Cv

**Double Remote Pilot  
4-Way, 3-Position, APB**



**Inline**

<b>B3</b>	<b>B380000XXC</b>	1/8"	0.60 Cv
<b>B5</b>	<b>B581000XXC</b>	1/4"	1.1 Cv
	<b>B582000XXC</b>	3/8"	
<b>B6</b>	<b>B682000XXA</b>	3/8"	2.1 Cv
<b>B7</b>	<b>B783000XXA</b>	1/2"	5.7 Cv
<b>B8</b>	<b>B884000XXA</b>	3/4"	6.6 Cv

**Subbase**

<b>B3</b>	<b>B38V000XXC</b>	Less Base	0.50 Cv
-----------	-------------------	-----------	---------

# B3 Series

**BOLD OPTIONS ARE MOST POPULAR.**

**B3 1 0 B B 5 49 - C**

Basic Series	
B3 Series	B3

Engineering Level	
C	Current

Operator Function	
<b>3-Way</b>	
Single Solenoid, 2-Position NC - Air Return	<b>G</b>
Single Solenoid, 2-Position NO - Air Return	H
Double Solenoid, 2-Position	J
Single Remote Pilot, 2-Position NC - Air Return	<b>K</b>
Single Remote Pilot, 2-Position NO - Air Return	L
Double Remote Pilot, 2-Position	M
Single Solenoid, 2-Position NC - Air Return / Spring Assist	V
Single Solenoid, 2-Position NO - Air Return / Spring Assist	W
Single Remote Pilot, 2-Position NC - Air Return / Spring Assist	X
Single Remote Pilot, 2-Position NO - Air Return / Spring Assist	Y
<b>4-Way</b>	
Single Solenoid, 2-Position - Air Return	<b>1</b>
Double Solenoid, 2-Position	<b>2</b>
Single Remote Pilot, 2-Position - Air Return	<b>3</b>
Double Remote Pilot, 2-Position	<b>4</b>
Double Solenoid, 3-Position - APB	<b>5</b>
Double Solenoid, 3-Position - CE	6
Double Solenoid, 3-Position - PC	7
Double Remote Pilot, 3-Position - APB	<b>8</b>
Double Remote Pilot, 3-Position - CE	9
Double Remote Pilot, 3-Position - PC	0
Single Solenoid, 2-Position - Air Return / Spring Assist	E
Single Remote Pilot, 2-Position - Air Return / Spring Assist	F

Options	
Blank	None
02	Solenoid Rotated 180° - Pins Down

	AC		DC
	60Hz	50Hz	
42	24	22	
45			12
<b>49</b>			<b>24</b>
<b>53</b>	<b>120</b>	<b>110</b>	
57	240	230	
XX	Remote Pilot - M5 or Valve Less 15mm Solenoid		
YY	Remote Pilot - 5/32" (4mm) Tube		

Enclosure / Lead Length	
0	None, Remote Pilot Valve
<b>5</b>	<b>15mm 3-Pin DIN 43650C (Male Only)</b>
X	Valve Less 15mm Solenoid

Overrides <sup>§</sup>	
<b>0</b>	<b>None, Remote Pilot Valve</b>
<b>B</b>	<b>Flush - Non-Locking</b>
<b>C</b>	<b>Flush - Locking</b>
D	Extended - Non-Locking
E	Extended - Locking
X	Valve Less 15mm Solenoid

Port Size / Thread Type	
<b>3-Way</b>	
1/8" NPT Inline	<b>0*</b>
1/8" BSPP "G" Inline	5*
<b>4-Way</b>	
1/8" NPT Inline	<b>0*</b>
1/8" BSPP "G" Inline	5*
1/4" NPT Subbase	H†
1/8" NPT Face Mount	T**
Subbase Valve Less Base	<b>V‡</b>

Pilot Source / Pilot Exhaust	
<b>0</b>	<b>None, Remote Pilot Valve</b>
<b>B†</b>	<b>Internal - Port #1 / Vented</b>
E*	Dual Pressure - Port #3 / Vented
K†	External - Body / Tapped M5
X‡	External - Manifold / Vented

§ Enclosure '5'  
 - Override / Voltage Availability  
 S - Standard  
 O - Option

Voltage Code	Override Code			
	B	C	D	E
42	O	O	-	-
45	O	O	-	-
49	S	S	O	O
53	S	S	O	O
57	O	O	-	-

Voltage Code	"02" Option			
	B	C	D	E
42	O	O	-	-
45	O	O	-	-
49	S	S	O	O
53	S	S	O	O
57	O	O	-	-

\* Available for use on IEM Manifolds.  
 \*\* 4-Way only.  
 ‡ Subbase valves available for 4-Way valves only.

**Pilot Source 'X'**  
 External-Manifold / Vented

**INLINE & SUBBASE Valves –**  
 Only used IF an IEM or 5-Ported Subbase Aluminum Bar Manifold *requires* a common external pilot signal thru the manifold for low pressure / vacuum applications OR when used with Sandwich Regulators.

D  
 EZ  
 B  
 Viking Xtreme  
 ADEX  
 N





**B5 Series**

**BOLD OPTIONS ARE MOST POPULAR.**

**B5 1 1 B B 5 49 - C**

Basic Series	
B5 Series	B5

Engineering Level	
C	Current

Operator Function	
<b>3-Way</b>	
Single Solenoid, 2-Position NC - Air Return	<b>G</b>
Single Solenoid, 2-Position NO - Air Return	H
Double Solenoid, 2-Position	J
<b>Single Remote Pilot, 2-Position NC - Air Return</b>	<b>K*</b>
Single Remote Pilot, 2-Position NO - Air Return	L*
Double Remote Pilot, 2-Position	M*
Single Solenoid, 2-Position NC - Air Return / Spring Assist	V
Single Solenoid, 2-Position NO - Air Return / Spring Assist	W
Single Remote Pilot, 2-Position NC - Air Return / Spring Assist	X*
Single Remote Pilot, 2-Position NO - Air Return / Spring Assist	Y*
<b>4-Way</b>	
Single Solenoid, 2-Position - Air Return	<b>1</b>
Double Solenoid, 2-Position	<b>2</b>
Single Remote Pilot, 2-Position - Air Return	<b>3*</b>
Double Remote Pilot, 2-Position	<b>4*</b>
Double Solenoid, 3-Position - APB	<b>5</b>
Double Solenoid, 3-Position - CE	6
Double Solenoid, 3-Position - PC	7
Double Remote Pilot, 3-Position - APB	<b>8*</b>
Double Remote Pilot, 3-Position - CE	9*
Double Remote Pilot, 3-Position - PC	0*
Single Solenoid, 2-Position - Air Return / Spring Assist	E
Single Remote Pilot, 2-Position - Air Return / Spring Assist	F*

\* Pilot Source / Pilot Exhaust, Override, and Enclosure must be "0".

Port Size / Thread Type	
<b>3-Way</b>	
1/4" NPT Inline	<b>1*</b>
<b>3/8" NPT Inline</b>	<b>2*</b>
1/4" BSPP "G" Inline	6*
3/8" BSPP "G" Inline	7*
<b>4-Way</b>	
1/4" NPT Inline	<b>1*</b>
<b>3/8" NPT Inline</b>	<b>2*</b>
1/4" BSPP "G" Inline	6*
3/8" BSPP "G" Inline	7*
3/8" NPT Subbase	J†
1/4" NPT NAMUR Mount	T††
Subbase Valve Less Base - NPT	V‡
1/4" BSPP "G" NAMUR Mount	W††

\* Available for use on IEM Manifolds.  
 † 4-Way only.  
 ‡ Available with pilot source "0", "A", and "B" only.

Pilot Source / Pilot Exhaust	
<b>Enclosures "0, 5 &amp; X"</b>	
None, Remote Pilot Valve	0
Internal - Port #1 / Tapped M5	A†
<b>Internal - Port #1 / Vented</b>	<b>B†</b>
Dual Pressure - Port #3 / Vented	E*
External - Body / Tapped M5	K†
External - Manifold / Vented	X‡
<b>Enclosures "A, B, C, D, E, F, G, H, N, Q &amp; R"</b>	
Internal - Port #1 / Tapped M5	A†
<b>Internal - Port #1 / Vented</b>	<b>B†</b>
Dual Pressure - Port #3 / Tapped M5	D*†
External - Body / Tapped 1/8"	K†

\* Not available for 3-Way Valves.  
 † Not available for Remote Pilot Valves.  
 ‡ See Pilot Source Note below.

Overrides§	
None, Remote Pilot Valve	<b>0</b>
No Override	A†
<b>Flush - Non-Locking</b>	<b>B*</b>
<b>Flush - Locking</b>	<b>C</b>
Extended - Non-Locking	D
Extended - Locking	E*
Valve Less 15mm Solenoid	X

\* Only Available with Encl. "5".  
 † Only Available with Encl. "E".

Options	
Blank	None
02	Solenoid Rotated 180° - Pins Down
MD††	Manual Detent
VO*	Fluorocarbon Seals

\* Not available with Enclosure "0", "5", "X", "E" or "F".

†† Only Available with Operator Function 1 & 3 and Enclosure "N", "X" or Mobile Voltages upon Request.

	AC		DC
	60Hz	50Hz	
42	24	22	
45			12
<b>49</b>			<b>24</b>
<b>53</b>	<b>120</b>	<b>110</b>	
57	240	230	
<b>XX</b>	<b>Remote Pilot - M5 or Valve Less Solenoid</b>		
YY	Remote Pilot - 5/32" (4mm) Tube		

Enclosure / Lead Length	
0	None, Remote Pilot Valve
<b>5</b>	<b>15mm 3-Pin DIN 43650C (Male Only)</b>
A	30mm Square 3-Pin – ISO 4400 Form A (Male Only)
B	22mm Rectangular 3-Pin – Type B Industrial (Male Only)
C	3-Pin Automotive - Mini
D	5-Pin Automotive - Mini
E*	Intrinsically Safe - 30mm 3-Pin
F**	Hazardous Duty 1/2" NPT Conduit - 18" Leads
<b>G</b>	<b>Grommet - 18" Leads</b>
<b>H</b>	<b>1/2" NPT Conduit - 18" Leads</b>
N	Valve Less "A - R" Coil
Q	Grommet - 72" Leads
R	1/2" NPT Conduit - 72" Leads
X	Valve Less 15mm Solenoid

\* 24 VDC & Override "A" Only.  
 \*\* 12 VDC, 24 VDC, 120 VAC or 240 VAC.

**Note:** For Mobile Voltages, Contact the Application Team.

§ Enclosure '5' – Override / Voltage Availability

S - Standard  
 O - Option

Voltage Code	Override Code Standard				Voltage Code	Override Code "02" Option			
	B	C	D	E		B	C	D	E
42	O	O	-	-	42	O	O	-	-
45	O	O	-	-	45	O	O	-	-
49	S	S	O	O	49	S	S	O	O
53	S	S	O	O	53	S	S	O	O
57	O	O	-	-	57	O	O	-	-

**D**  
**EZ**  
**B**  
**Viking Xtreme**  
**ADEX**  
**N**

**Pilot Source 'X'**  
 External-Manifold / Vented or Tapped M5

**INLINE & SUBBASE Valves –**  
 Only used IF an IEM Aluminum Bar Manifold requires a common external pilot signal thru the manifold for low pressure / vacuum applications.



**B6 Series**

**BOLD OPTIONS ARE MOST POPULAR.**

**B6 1 2 B B 5 49 - A**

Basic Series	
B6 Series	B6

Engineering Level	
A	Current

Operator Function	
<b>3-Way</b>	
Single Solenoid, 2-Position NC - Air Return / Spring Assist	V
Single Solenoid, 2-Position NO - Air Return / Spring Assist	W
Single Remote Pilot, 2-Position NC - Air Return / Spring Assist	X
Single Remote Pilot, 2-Position NO - Air Return / Spring Assist	Y
<b>4-Way</b>	
Single Solenoid, 2-Position - Air Return	1
Double Solenoid, 2-Position	2
Single Remote Pilot, 2-Position - Air Return	3
Double Remote Pilot, 2-Position	4
Double Solenoid, 3-Position - APB	5
Double Solenoid, 3-Position - CE	6
Double Solenoid, 3-Position - PC	7
Double Remote Pilot, 3-Position - APB	8
Double Remote Pilot, 3-Position - CE	9
Double Remote Pilot, 3-Position - PC	0
Single Solenoid, 2-Position - Air Return / Spring Assist	E
Single Remote Pilot, 2-Position - Air Return / Spring Assist	F

Options	
Blank	None
02	Solenoid Rotated 180° - Pins Down
42*	Series Cylinder Mount Replacement

\* Only Available with Port Size “T” and “O”, “A”, “B”, and “L” Pilot Source.

	AC Voltage §		DC
	60Hz	50Hz	
42	24	22	
45			12
49			24
53	120	110	
57	240	230	
XX	Remote Pilot - M5 or Valve Less 15mm Solenoid		
YY	Remote Pilot - 5/32" (4mm) Tube		

Port Size / Thread Type	
<b>3-Way / 4-Way</b>	
3/8" NPT Inline	2*
3/8" BSPG “G” Inline	7*
1/4" NPT NAMUR Mount	T†

\* Available for use on IEM Manifolds.  
† 4-Way only. Available with pilot source “O”, “A”, “B” and “L” only.

Pilot Source / Pilot Exhaust	
<b>Enclosures “O, 5 &amp; X”</b>	
None, Remote Pilot Valve	O
Internal - Port #1 / Tapped M5	A†
<b>Internal - Port #1 / Vented</b>	<b>B†</b>
Dual Pressure - Port #5 / Vented	H
External - Body / Tapped M5	K†
<b>Enclosures “A, B, C, D, E, F, G, H, N, Q &amp; R”</b>	
Internal - Port #1 / Tapped M5	A†
Internal - Port #1 / Vented	B†
External - Body / Tapped 1/8"	K†

\* Not available for 3-Way Valves.  
† Not available for Remote Pilot Valves.

Overrides§	
<b>None, Remote Pilot Valve</b>	<b>O</b>
No Override	A†
<b>Flush - Non-Locking</b>	<b>B*</b>
<b>Flush - Locking</b>	<b>C</b>
Extended - Non-Locking	D
Extended - Locking	E*
Valve Less 15mm Solenoid	X

\* Only Available with Encl. “5”.  
† Only Available with Encl. “E”.

Enclosure / Lead Length	
0	None, Remote Pilot Valve
5	15mm 3-Pin DIN 43650C (Male Only)
A	30mm Square 3-Pin – ISO 4400 Form A (Male Only)
B	22mm Rectangular 3-Pin – Type B Industrial (Male Only)
E*	Intrinsically Safe - 30mm 3-Pin
F**	Hazardous Duty 1/2" NPT Conduit - 18" Leads
G	Grommet - 18" Leads
H	1/2" NPT Conduit - 18" Leads
N	Valve Less “A - R” Coil
Q	Grommet - 72" Leads
R	1/2" NPT Conduit - 72" Leads
X	Valve Less 15mm Solenoid

\* 24 VDC & Override “A” Only.  
\*\* 12 VDC, 24 VDC, 120 VAC or 240 VAC.

§ Enclosure ‘5’ – Override / Voltage Availability  
S - Standard  
O - Option

Voltage Code	Override Code Standard				Voltage Code	Override Code “02” Option			
	B	C	D	E		B	C	D	E
42	O	O	-	-	42	O	O	-	-
45	O	O	-	-	45	O	O	-	-
49	S	S	O	O	49	S	S	O	O
53	S	S	O	O	53	S	S	O	O
57	O	O	-	-	57	O	O	-	-

**INLINE Valves –**  
Only used IF an IEM Aluminum Bar Manifold requires a common external pilot signal thru the manifold for low pressure / vacuum applications.

D

EZ

B

Viking Xtreme

ADEX

N

# B7 & B8 Series

**BOLD OPTIONS ARE MOST POPULAR.**

**B7 1 3 A B G 53 - A**

Basic Series	
B7 Series	B7
B8 Series	B8

Engineering Level	
A	Current

Options	
Blank	None

Operator Function	
<b>3-Way</b>	
Single Solenoid, 2-Position NC - Air Return / Spring Assist	V
Single Solenoid, 2-Position NO - Air Return / Spring Assist	W
Single Remote Pilot, 2-Position NC - Air Return / Spring Assist	X
Single Remote Pilot, 2-Position NO - Air Return / Spring Assist	Y
<b>4-Way</b>	
Single Solenoid, 2-Position - Air Return	1
Double Solenoid, 2-Position	2
Single Remote Pilot, 2-Position - Air Return	3
Double Remote Pilot, 2-Position	4
Double Solenoid, 3-Position - APB	5
Double Solenoid, 3-Position - CE	6
Double Solenoid, 3-Position - PC	7
Double Remote Pilot, 3-Position - APB	8
Double Remote Pilot, 3-Position - CE	9
Double Remote Pilot, 3-Position - PC	0
Single Solenoid, 2-Position - Air Return / Spring Assist	E
Single Remote Pilot, 2-Position - Air Return / Spring Assist	F

	Voltage §		
	AC		DC
	60Hz	50Hz	
42	24	22	
45			12
49			24
53	120	110	
57	240	230	
XX	Remote Pilot - M5 or Valve Less Solenoid		
YY	Remote Pilot - 5/32" (4mm) Tube		

Port Size / Thread Type	
<b>B7 Series</b>	
1/2" NPT Inline	3*
1/2" BSPP "G" Inline	8*
<b>B8 Series</b>	
3/4" NPT Inline	4*
3/4" BSPP "G" Inline	9*

\* Available for use on IEM Manifolds.

Enclosure / Lead Length	
0	None, Remote Pilot Valve
5	15mm 3-Pin DIN 43650C (Male Only)
A	30mm Square 3-Pin - ISO 4400 Form A (Male Only)
B	22mm Rectangular 3-Pin - Type B Industrial (Male Only)
E*	Intrinsically Safe - 30mm 3-Pin
F**	Hazardous Duty 1/2" NPT Conduit - 18" Leads
G	Grommet - 18" Leads
H	1/2" NPT Conduit - 18" Leads
N	Valve Less "A - R" Coil
R	1/2" NPT Conduit - 72" Leads
X	Valve Less 15mm Solenoid

\* 24 VDC & Override "A" Only.  
\*\* 12 VDC, 24 VDC, 120 VAC or 240 VAC.

Pilot Source / Pilot Exhaust	
<b>Enclosures "0, 5 &amp; X"</b>	
None, Remote Pilot Valve	0
Internal - Port #1 / Tapped M5	A†
<b>Internal - Port #1 / Vented</b>	<b>B†</b>
External - Body / Tapped M5	K†
<b>Enclosures "A, B, C, D, E, F, G, H, N, Q &amp; R"</b>	
Internal - Port #1 / Tapped M5	A†
<b>Internal - Port #1 / Vented</b>	<b>B†</b>
External - Body / Tapped 1/8"	K†

† Not available for Remote Pilot Valves.

Overrides§	
None, Remote Pilot Valve	0
No Override	A†
<b>Flush - Non-Locking</b>	<b>B*</b>
<b>Flush - Locking</b>	<b>C</b>
Extended - Non-Locking	D
Extended - Locking	E*
Valve Less 15mm Solenoid	X

\* Only Available with Encl. "5".  
† Only Available with Encl. "E".

§ Enclosure '5'  
- Override / Voltage Availability  
S - Standard  
O - Option

Voltage Code	Override Code			
	B	C	D	E
42	O	O	-	-
45	O	O	-	-
49	S	S	O	O
53	S	S	O	O
57	O	O	-	-

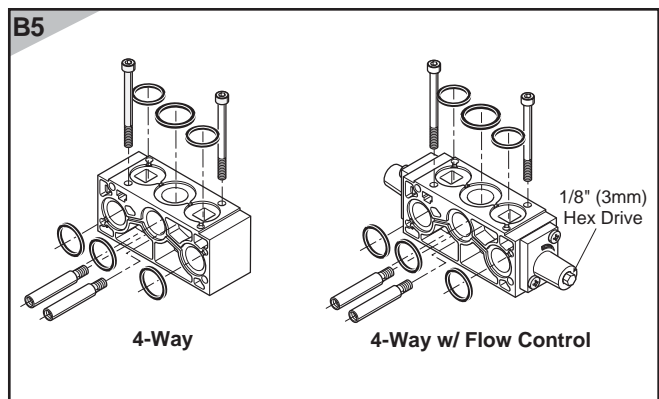
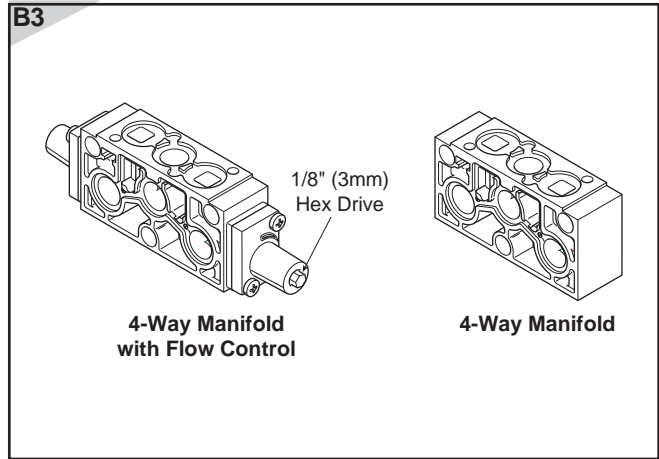
**INLINE Valves -**  
Only used IF an IEM Aluminum Bar Manifold requires a common external pilot signal thru the manifold for low pressure / vacuum applications.

D  
EZ  
B  
Viking Xtreme  
ADEX  
N

**IEM Stackable Manifolds**

Series	Type	Kit Number	
		Standard	Flow Control
B3	4-Way	PS2917P	PS2918P
B5	4-Way	PS2817P	PS2818P

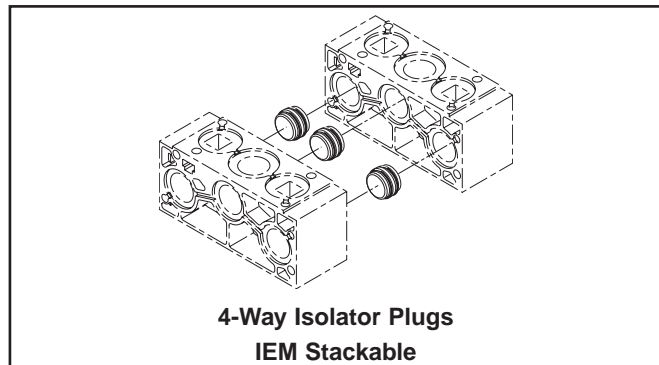
- Individual Manifold Bases stack together to form lightweight custom length manifold system.
- Easy-to-connect male / female tie rods for modular assembly.
- Utilizes B3 and B5 4-Way Inline Valves.
- Low-cost built-in Flow Controls with heavy-duty brass adjusting needles to control meter-out exhaust flow.
- Accessories include Isolator Plugs for pressure isolation and Universal Blanking Plates for auxiliary inlet and exhaust supply and future valve additions.
- Kit includes: (1) Manifold Base, (2) Hold-down Bolts, Tie-rods, Gaskets and O-rings.



**Isolator Plugs**

Series	Kit Number
	4-Way
B3	PS2919P
B5	PS2819P

- Used to isolate the #1, #3 or #5 gallery between two Manifold Bases. (IEM STACKABLE ONLY)
- **Kit includes:** (3) plugs and (6) o-rings

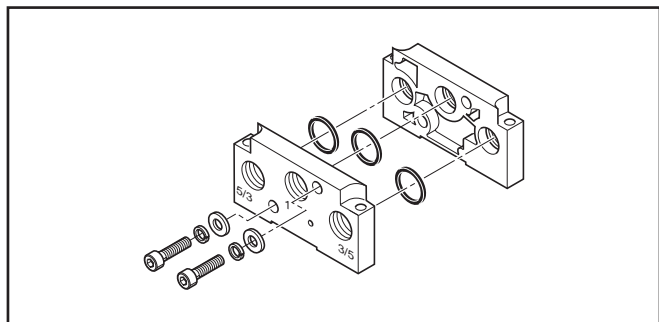


**End Plate Kits**

Series	Type	Kit Number
		NPT
B3	4-Way	PS2915P
B5	4-Way	PS2815P*

**Kit includes:** Right and Left End Plate, O-rings, Socket Head Cap Screws, Flat Washers and Lockwashers.

\* B5 4-Way use the same Kit.



D

EZ

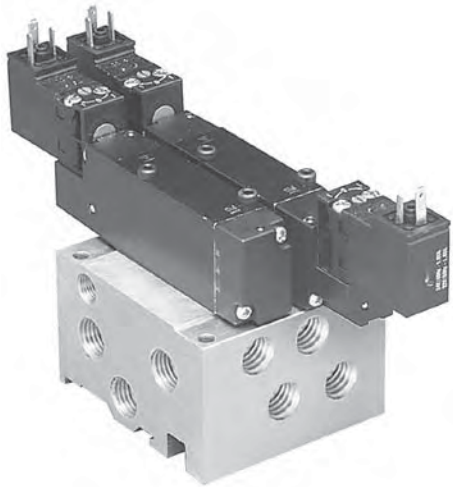
B

Viking  
Xtreme

ADEX

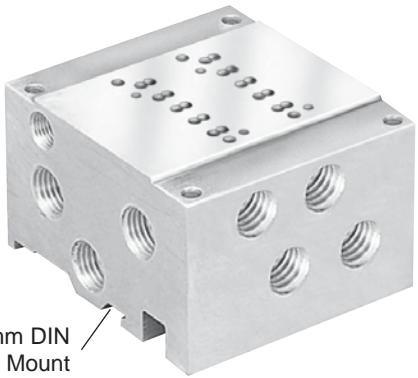
N

### B3 Series



4-Way, 1/8" NPT	<b>AAPSJ3B1N##NP</b>	## – stations 02 to 12
-----------------	----------------------	------------------------

### B3 Series



35mm DIN Rail Mount

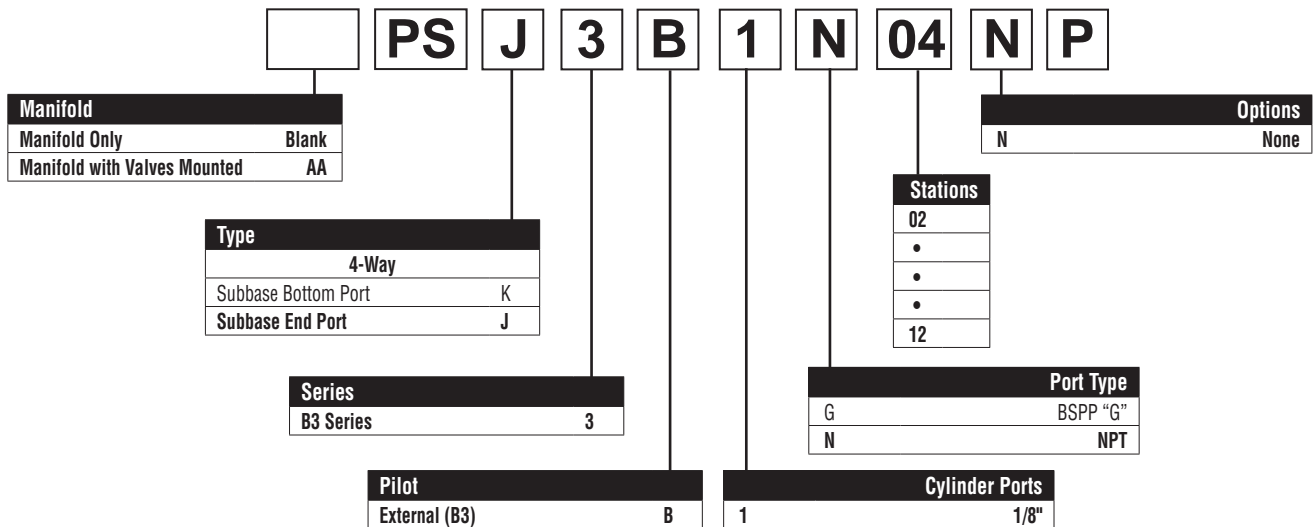
4-Way, 1/8" NPT	<b>PSJ3B1N##NP</b>	## – stations 02 to 12
-----------------	--------------------	------------------------

- Utilizes Subbase mount B3 valves.
- Available for 4-Way valves. If 3-Way function is required, plug a cylinder port.
- Common External Pilot galley is standard.
- Standard Internal Pilot valves need not use this galley, and the galley does not need to be plugged.
- External Pilot Valves – "X" or "W", must have Common External Galley pressurized.

**Kit includes:**

**Subbase** – (1) Manifold (bolts & gasket come with subbase valve).

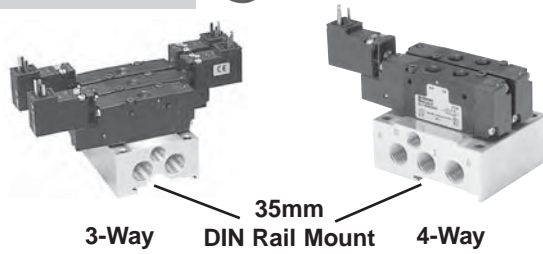
## Assembly Model Number



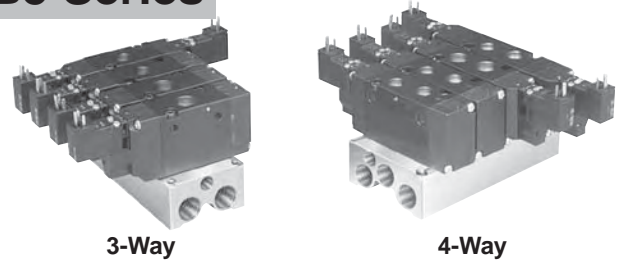
D
EZ
B
Viking Xtreme
ADEX
N

D

**B3 Series**



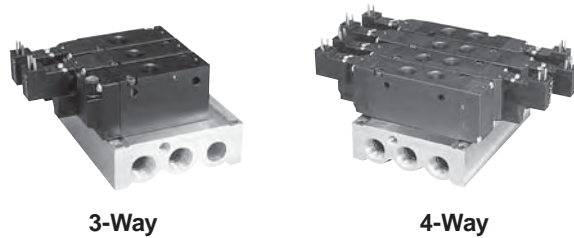
**B5 Series**



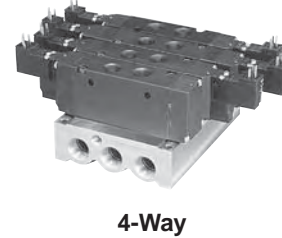
3-Way, NPT	<b>AAPSG3BXN##NP</b>	## – stations 02 to 12
4-Way, NPT	<b>AAPSM3BXN##NP</b>	

3-Way, NPT	<b>AAPSG5BXN##NP</b>	## – stations 02 to 12
4-Way, NPT	<b>AAPSM5BXN##NP</b>	

**B6 Series**



**B7 & B8 Series**



3-Way, NPT	<b>AAPSG6BXN##NP</b>	## – stations 02 to 12
4-Way, NPT	<b>AAPSM6BXN##NP</b>	

4-Way, NPT	<b>AAPSM7BXN##NP</b>	## – stations 02 to 12
------------	----------------------	---------------------------

- Utilizes Inline mount “B” Series valves.
- Different manifold for 3-Way & 4-Way valves (B7 and B8 use common manifolds).
- Common External Pilot galley is standard. Standard Internal Pilot valves need not use this galley. This galley does not require a plug for internally piloted valves.
- External Pilot Valves – “X” or “W”, must have Common External Galley pressurized.
- **Kits (PS....) include:** (1) Manifold, Valve Hold Down Bolts, Gaskets.

**IEM Bar Manifold Model Number**



Manifold	
Manifold Only	Blank
Manifold with Valves Mounted	AA

Type	
IEM 3-Way	G*
IEM 4-Way	M

\* Not available with B7 or B8.

Series	
B3 Series	3
B5 Series	5
B6 Series	6
B7 / B8 Series	7

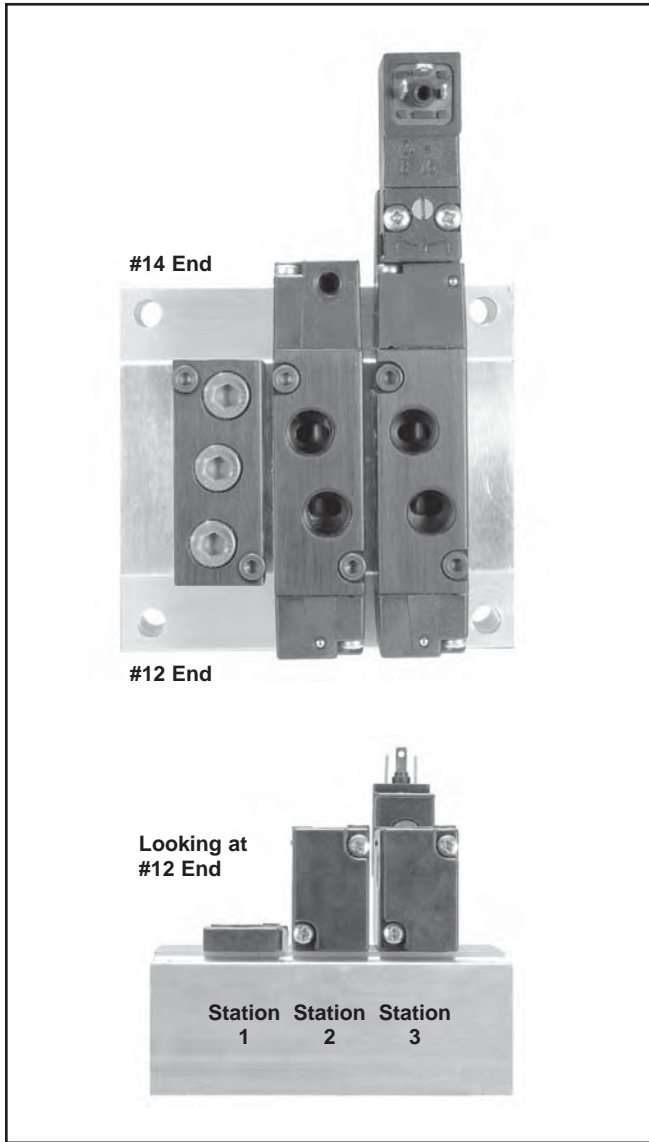
Options	
N	None

Stations	
02	
•	
•	
•	
12	

Port Type	
G	BSPP “G”
N	NPT

Pilot	
External	B

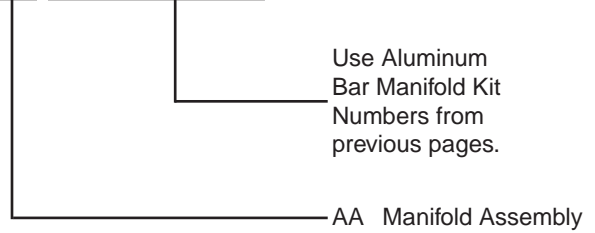
Cylinder Ports	
X	IEM Manifold



## How To Order Aluminum Bar Manifold Assemblies

1. List Manifold Assembly call out. Use AA + the part number of the aluminum bar manifold. This automatically includes the aluminum bar manifold and assembly.
2. List complete valve model number, listing left to right, **LOOKING AT THE #12 END** of the manifold. The left most station is station 1.  
 (If a blank station is needed, list the blanking plate part number at the desired station.)

**AA PS\*\*\*\*\*##NP**



**Example:** Application requires a 3-station “B3” 4-Way manifold with station #1 blanked off with valves assembled.

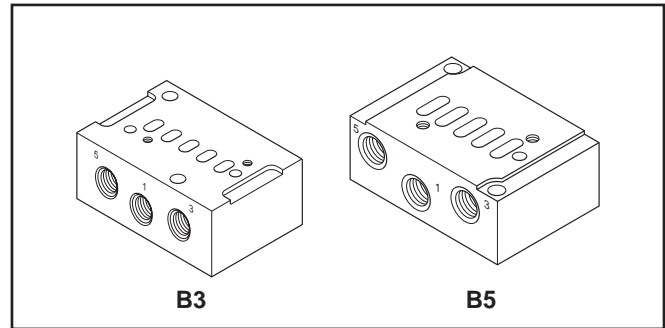
<u>Qty.</u>	<u>Part No.</u>	<u>Comment</u>
1	AAPSM3BXN03NP	
1	PS2920P .....	Station 1
1	B330000XXC.....	Station 2
1	B310BB549C.....	Station 3

<b>D</b>
EZ
B
Viking Xtreme
ADEX
N

### Subbase

Type	Size	Kit Number
		<b>NPT</b>
<b>B3</b> 4-Way	1/4"	<b>PS2934P</b>
<b>B5</b> 4-Way	3/8"	<b>PS2834P</b>

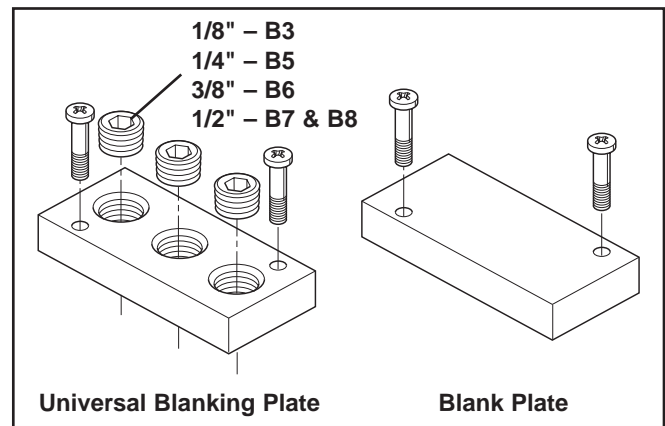
Kit includes: (1) subbase.  
(Hold down bolts & gasket are included with valve.)



D

### Blanking Plate

Type		Kit Number			
		IEM Universal		IEM	Subbase
		NPT	BSPP “G”	Blank	Blank
<b>B3</b>	3-Way	<b>PS2966P</b>	PS2967P	<b>PS2968P</b>	—
	4-Way	<b>PS2920P</b>	PS2921P	<b>PS2969P</b>	<b>PS2994P</b>
<b>B5</b>	3-Way	<b>PS2866P</b>	PS2867P	<b>PS2868P</b>	—
	4-Way	<b>PS2820P</b>	—	<b>PS2869P</b>	—
<b>B6</b>	3-Way	<b>PS2620P</b>	—	—	—
	4-Way		—	—	—
<b>B7</b>	4-Way	<b>PS2520P</b>	—	<b>PS2569P</b>	—



Kit includes:  
(1) Plate, (2) Screws, Seal / Gaskets

EZ

B

Viking Xtreme

ADEX

N

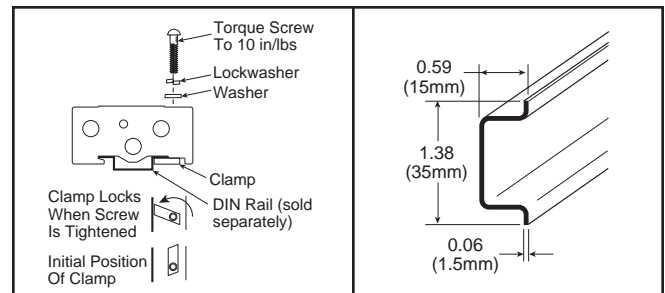
### DIN Rail Hardware Kits

Series	Length	Part Number
<b>B3</b>	6 Feet	AM1DE200

Series	IEM Bar	5-Port Subbase Bar
<b>B3</b>	PS2990P	PS2991P

Kit includes: (2) Screws, (2) Nuts, (2) Clamps

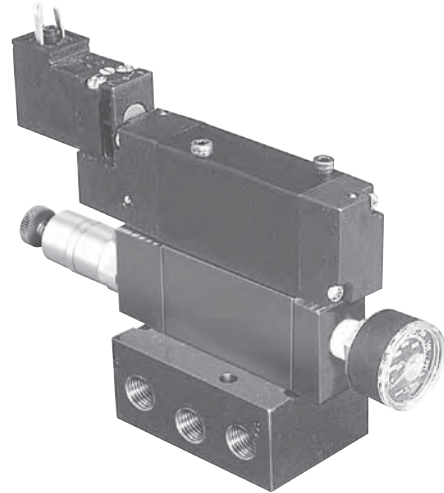




## B3 Series

### Sandwich Regulators

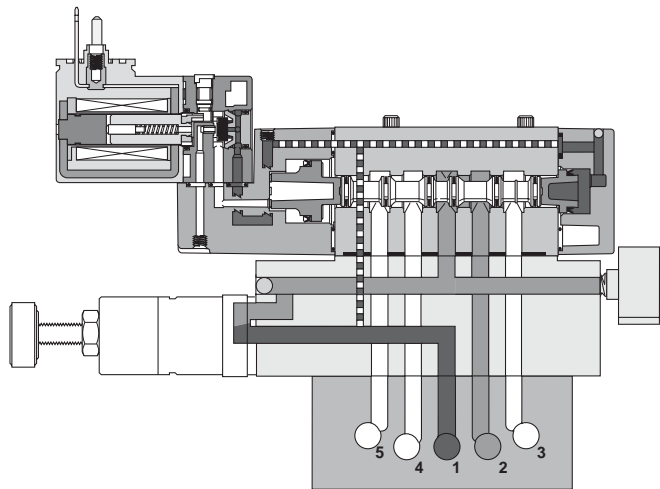
- Use with B3 Subbase Valves on 5-Ported Subbase Bar Manifolds.
- Common Port or Dual Port regulation control.
- Unregulated Pressure Supplied to Valve Pilot - Use Pilot Source - 'X'.
- Easy adjust knob control.



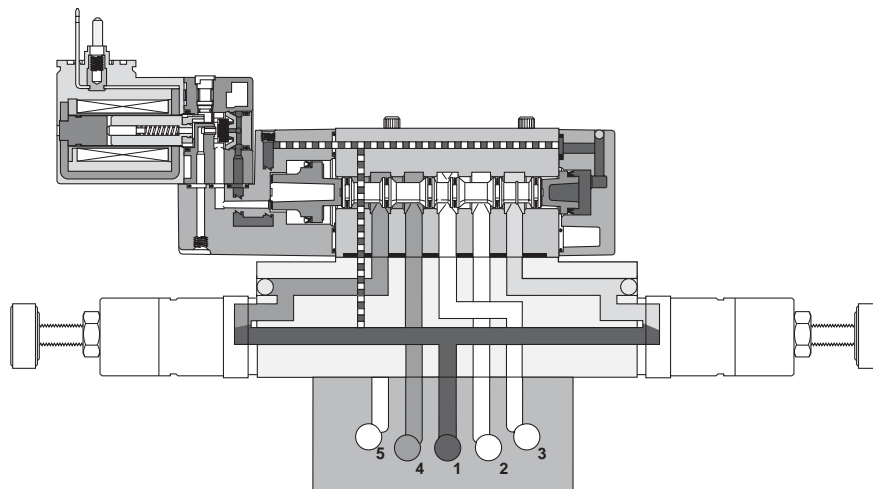
	Common Port with Gauge *	Dual Port without Gauge	Cv
<b>B3</b> 5-125 PSI	PS2930166P	PS2930233P	.33

\* Gauge is 160 PSI. Gauge shipped unassembled. For different gauge mounting configuration, use brass adapters listed at bottom of page.

### Common Port



### Dual Port



**D**

EZ

B

Viking Xtreme

ADEX

N

#### Brass Adapters for Gauge –

1/8" to 1/8" Female Coupling..... 207P-2  
 1/8" Male Pipe Nipped 1.5"..... 215PNL-2-15  
 1/8" Male to Female Adapter..... 222P-2-2

1/8" to 1/8" 45° Female Elbow..... 2201P-2-2  
 1/8" to 1/8" 90° Female Elbow..... 2200P-2-2

#### Gauge 1" Face –

0-160 PSI.....PS4051160BP

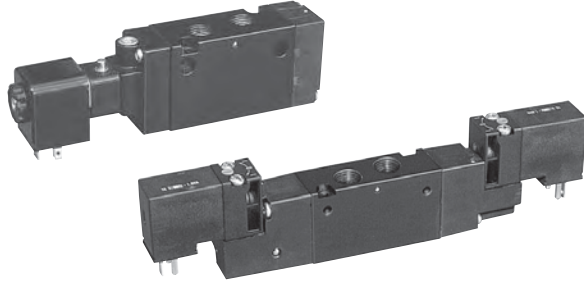
**Featured Valve Options**

**Featured Valve Options**

**Solenoid Rotated 180° - Pins Down**

B3 B5 B6 B7 B8

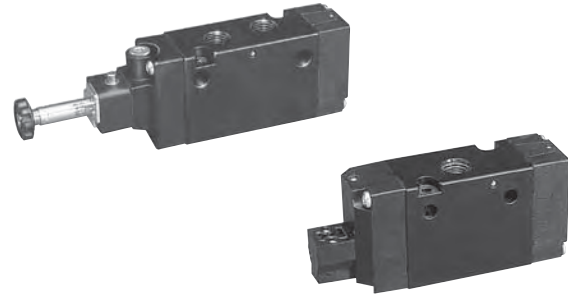
- 1.8W (2.4VA) solenoids – Enclosure “5”.
- Override on top for easy access.
- “02” in the Options code.



**Valve Less Solenoid**

B3 B5 B6 B7 B8

- Valve ordered & shipped without solenoid.
- Efficient method in place of valve repair, fully tested at factory.

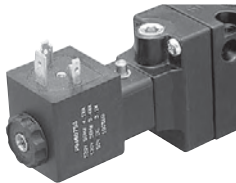


D

**Alternate Solenoid Enclosures**

B5 B6 B7 B8

- Enclosure “A”: 2.6W - 4.1VA (Coil rotates in 45° increments)
- Enclosure “B” – “R”: 4.6W - 7.3VA (Coil rotates in 90° increments)



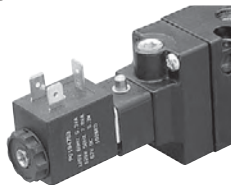
“A” 30mm 3-Pin



“C” 3-Pin Mini



“G”. “Q” Grommet



“B” 22mm 3-Pin



“D” 5-Pin Mini



“F”. “H”. “R” 1/2" Conduit

EZ

B

Viking Xtreme

ADEX

N

**Tube Fitting Remote Pilot**

B3 B5 B6 B7 B8

- “YY” Option
- 5/32" (4mm) Tube Fitting



**Featured Valve Options**

**Intrinsically Safe Solenoid Valves (“E” Option)**

**Hazardous Location Class:**

**Class I; Groups A, B, C & D**

**Class II; Groups E, F, & G**

**Class III; Div. I**

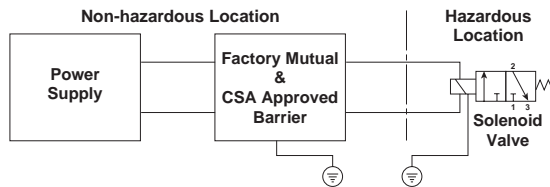
For use in low voltage (24VDC) Intrinsically Safe applications. NO OTHER VOLTAGE IS APPROVED.

36mm Coil width.

Comes standard with non-lighted solenoid connector.

Must be connected to an FM approved Barrier.

For dimensions, reference standard solenoid models. Maximum internally piloted valve pressure is 115 PSIG. Pressures to 145 PSIG can be used when external pilot is utilized and pilot pressure is limited to 115 PSIG.



**Intrinsically Safe Solenoid Pilot Assembly Kits**

Part Number	Description
P2FS13N1AE49	24VDC

**Hazardous Duty Solenoid Valves (“F” Option)**

**Hazardous Location Class:**

**Class I; Zone I EX, M, II & T4**

**Class I; Div. I. Groups A, B, C, & D**

**Class II & III; Div. I. Groups E, F, & G**

Comes standard with 1/2" conduit connection.

Voltage Range = ± 10%

Ambient Temp. Range = -20°C (-4°F) to 60°C (140°F)

Duty Factor = 100%

IP65 Rated (with Connected Conduit Connector)

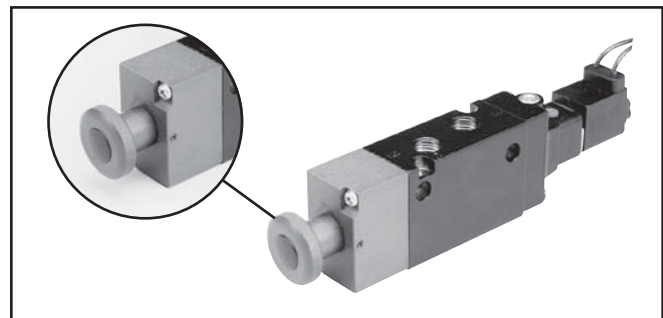
**Notes:**

1. Maximum non-hazardous location voltage not to exceed 250V RMS.
2. Connect per Barrier Manufacturers instructions.
3. Factory Mutual requires connections per ISA RP 12.6 instructions.
4. CSA requires “Installation to be in accordance with the Canadian Electrical Code. Part I.”
5. The hazardous duty coils are wider in size than both the B5 and the B6 valve. If mounted on a manifold, the valves need to be staggered to fit.



**B5 With Manual Detent**

- Positive mechanical contact of the override knob assures actuation of valve, however, knob does not move during normal cycling.
- Hard coated override to resist harsh environments.
- Override return spring is stainless steel, for harsh environments.
- Heavy duty locking mechanism to maintain position.
- Use in combination with mobile voltages or valve less solenoid.



**D**

EZ

B

Viking Xtreme

ADEX

N

## Female Electrical Connectors

### 15mm 3-Pin DIN 43650C (Use with Enclosure “5”)

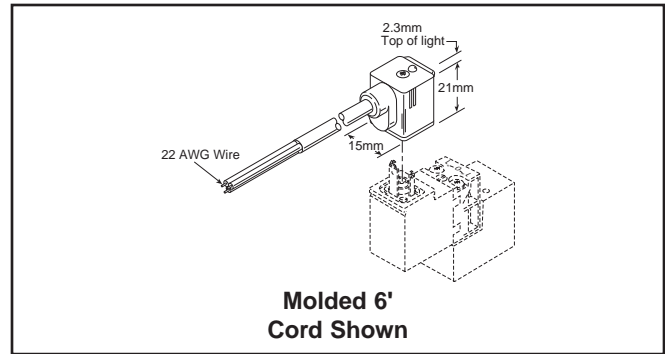
Connector	Connector with Cord	Description
PS2932BP	PS2932HBP 18 Inches	Unlighted
PS2932BP	PS2932JBP 6 Feet	Unlighted
PS294675BP	PS2946J75BP* 6 Feet	Light – 12VAC or DC
PS294679BP	PS2946J79BP* 6 Feet	Light – 24VAC or DC
PS294683BP	PS2946J83BP* 6 Feet	Light – 110/120VAC
PS294687BP	N/A	Light – 240/230VAC

\* LED with surge suppression.

**Note:** Max  $\phi$ 6.5mm cable size required for connector w/o 6' (2m) cord.  
 IP65 rated when properly installed.

**Engineering Data:**

- Conductors: 2 Poles Plus Ground
- Cable Range (Connector Only): 4 to 6mm (0.16 to 0.24 Inch)
- Contact Spacing: 8mm



D

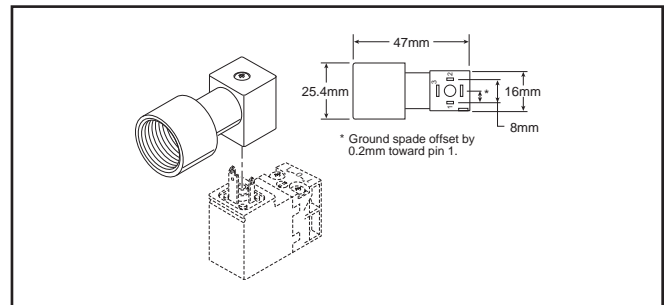
EZ

B

### 15mm 3-Pin DIN 43650C to 1/2" Conduit (Use with Enclosure “5”)

Connector	Description
PS2998P	1/2" NPTF Conduit – Unlighted with 3' (1m) Leads 20 AWG Wire

**Note:** Rated up to 250VAC or VDC; 6 Amps  
 IP65 rated when properly installed.



Viking Xtreme

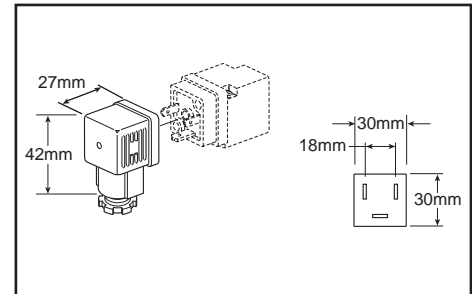
ADEX

N

## Female Electrical Connectors / Accessories

### 30mm Square 3-Pin – ISO 4400, DIN 43650A (Use with Enclosure “A”)

Connector	Connector with 6' (2m) Cord	Description
PS2028BP	PS2028JCP	Unlighted
PS203279BP	PS2032J79CP*	Light – 6-48V. 50/60Hz. 6-48VDC
PS203283BP	PS2032J83CP*	Light – 120V/60Hz
PS203283BP	N/A	Light – 240V/60Hz



\* LED with surge suppression.

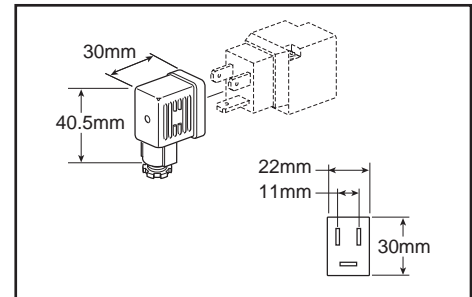
Note: Max ø6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

**Engineering Data:**

Conductors: 2 Poles Plus Ground; Cable Range (Connector Only): 8 to 10mm (0.31 to 0.39 Inch); Contact Spacing: 18mm

### 22mm Rectangular 3-Pin – Type B Industrial (Use with Enclosure “B”)

Connector	Connector with 6' (2m) Cord	Description
PS2429BP	PS2429JBP	Unlighted
PS243079BP	PS2430J79BP*	Light – 24V/60Hz. 24VDC
PS243083BP	PS2430J83BP*	Light – 120V/60Hz
PS243087BP	N/A	Light – 240V/60Hz



\* LED with surge suppression.

Note: Max ø6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

**Engineering Data:**

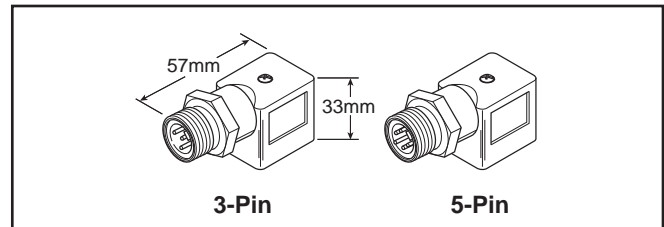
Conductors: 2 Poles Plus Ground; Cable Range (Connector Only): 6 to 8mm (0.24 to 0.31 Inch); Contact Spacing: 11mm

### 3-Pin / 5-Pin Male Automotive Connectors (Use on 22mm Rectangular 3-Pin Solenoid)

3-Pin	5-Pin	Description
PS2893CP	PS2893DP	Unlighted
PS2893C##P	PS2893D##P	Lighted - Voltage

## — 79 = 6 to 48VAC/VDC

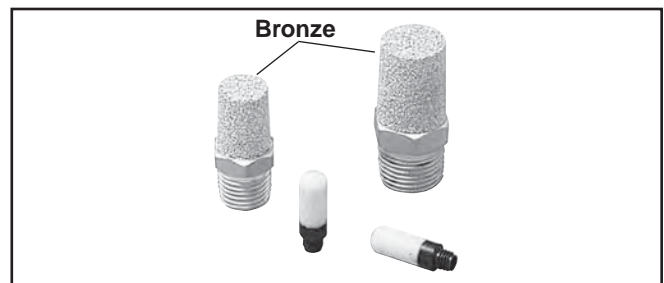
83 = 100 to 240VAC/48 to 120 VDC



## Exhaust Mufflers

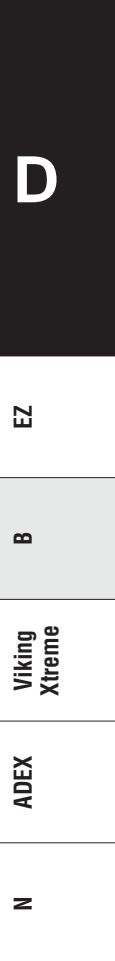
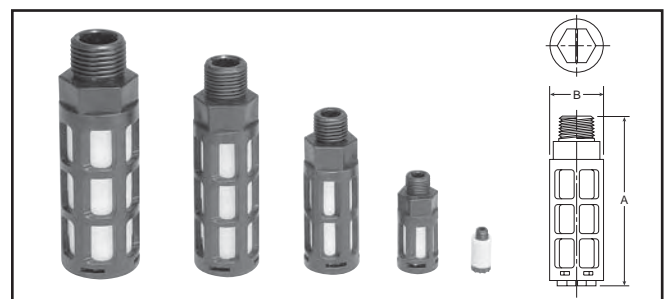
Pipe Thread	Part Number
M5	P6M-PAC5
1/8" NPT	EM12
1/4" NPT	EM25
3/8" NPT	EM37
1/2" NPT	EM50

P6M - Plastic; EM - Sintered Bronze



## Plastic Silencers

Thread Size	Part Number		A (mm)	B (mm)
	NPT	BSPT		
M5	AS-5		.43 (11)	.32 (8)
1/8"	ASN-6	AS-6	1.57 (40)	.63 (16)
1/4"	ASN-8	AS-8	2.56 (65)	.83 (21)
3/8"	ASN-10	AS-10	3.35 (85)	.98 (25)
1/2"	ASN-15	AS-15	3.74 (95)	1.18 (30)



## Flow Rating (Cv)

Size	Port Size	Mounting Style	2-Position	3-Position
<b>B3</b>	1/8" Ports	Inline	.75	.60
	1/4" Tube	Inline	.45	.45
	1/8" Ports	Subbase	.65	.45
	1/4" Ports	Subbase	.65	.50
<b>B5</b>	1/4" Ports	Inline	1.4	1.1
	3/8" Ports	Inline	1.4	1.1
	1/4" Ports	Subbase	1.4	1.1
	3/8" Ports	Subbase	1.4	1.1
<b>B6</b>	3/8" Ports	Inline	2.7	2.1
<b>B7</b>	1/2" Ports	Inline	5.9	5.7
<b>B8</b>	3/4" Ports	Inline	7.0	6.6

ANSI / (NFPA) T3.21.3-1990 standard for Cv measurement.

## Temperature Rating

5°F to 120°F (-15°C to 49°C) ambient.  
 (Buna-N and Fluorocarbon)

**D**

## Operating Pressure

**Maximum: 145 PSIG (1000 kPa)**  
**Minimum:**

Operator / Function	Internal Pilot	Minimum PSIG (kPa)				
		B3	B5	B6	B7	B8
<b>1. G. H</b>	Single Solenoid - Air Return	20 (138)	20 (138)	20 (138)	35 (241)	35 (241)
<b>2. A. J. S</b>	Double Solenoid					
<b>3. K. L</b>	Single Remote Pilot - Air Return					
<b>4. M</b>	Double Remote Pilot	Vacuum				
<b>5. 6. 7</b>	Double Solenoid - APB, CE, PC	30 (207)	30 (207)	30 (207)	45 (310)	45 (310)
<b>8. 9. 0</b>	Double Remote Pilot - APB, CE, PC			Vacuum		
<b>E. V. W</b>	Single Solenoid - Air Return / Spring Assist	35 (241)	35 (241)	35 (241)	35 (241)	35 (241)
<b>F. X. Y</b>	Single Remote Pilot - Air Return / Spring Assist					
<b>External Pilot*</b>						
<b>All</b>	<b>“B” Series</b>	Vacuum				

\* External Pilot Pressure / Remote Pilot Signal 35-145 PSIG (241-1000 kPa).

**Note:** For CSA-NRTL/C approved solenoid valves – insert an ‘L’ at the end of the valve part number.  
 B3: Maximum pressure - 120 PSI  
 B5: Maximum pressure - 145 PSI\*§  
 B6: Maximum pressure - 145 PSI\*§  
 B7: Maximum pressure - 145 PSI\*†  
 B8: Maximum pressure - 145 PSI\*†

\* Enclosure Option E is CSA / FM approved at source. For certification of valve / solenoid assembly, consult factory.

† Not Available with Enclosure 5

§ Not available with Enclosures 0. 5 & X



**Solenoid Information** (Solenoids are rated for continuous duty.)

Voltage				Enclosure "5"		Voltage				B5	B6	B7	B8	B5	B6	B7	B8
Code	AC		DC	Power Consumption	Holding (Amps)	Code	AC		DC	Enclosure "A"				Enclosure "B" to "R"			
	60Hz	50Hz					Power Consumption	Holding (Amps)		Power Consumption	Holding (Amps)	Power Consumption	Holding (Amps)	Power Consumption	Holding (Amps)		
42	24	22		1.6VA	.065	42	24	22		3.9VA	.136	7.3VA	.309				
45			12	1.2W	.098	45			12	2.6W	.208	4.6W	.365				
47*			12	0.91W	.074	47*			12	—	—	4.9W	.298				
48*			24	0.91W	.033	48*			24	—	—	4.8W	.142				
49			24	1.2W	.049	49			24	2.7W	.112	4.8W	.200				
53	120	110		1.6W	.013	53	120	110		4.1VA	.033	6.3VA	.047				
57	240	230		1.6W	.007	57	240	230		3.7VA	.017	6.4VA	.026				

**Note:** For enclosure "5" with "02" Option, solenoid wattage is 1.8W (2.4VA). Response time is 10% faster. Voltage rated +10 / -15%.

\* 47 and 48 code are mobile voltages. voltage +25 / -30%.

**Response Time**

Valve Size	Port Size	Enclosure "5"				Enclosure "A, B, C, D, G, H, Q & R"			
		0 Cu. In. Test Chamber		25* Cu. In. Test Chamber		0 Cu. In. Test Chamber		25* Cu. In. Test Chamber	
		Fill	Exhaust	Fill	Exhaust	Fill	Exhaust	Fill	Exhaust
<b>2-Position Single Solenoid / Internal Air Return</b>									
B3	1/8"	.024	.026	.149	.242	—	—	—	—
B5	1/4"	.038	.040	.106	.156	.025	.026	.090	.142
B5*	3/8"	.039	.041	.150	.245	.025	.027	.141	.241
B6*	3/8"	.037	.038	.096	.132	.016	.018	.084	.119
B7	1/2"	.073	.075	.195	.275	.049	.051	.167	.249
B8	3/4"	.072	.074	.166	.226	.049	.051	.142	.206
<b>2-Position Single Solenoid Spring / Air Return</b>									
B3	1/8"	.019	.022	.128	.217	—	—	—	—
B5	1/4"	.039	.041	.108	.162	.024	.026	.091	.143
B5*	3/8"	.040	.042	.169	.261	.024	.026	.143	.240
B6*	3/8"	.035	.036	.096	.133	.023	.024	.083	.120
B7	1/2"	.071	.074	.194	.275	.049	.051	.167	.249
B8	3/4"	.072	.074	.176	.239	.046	.048	.142	.204
<b>2-Position Double Solenoid</b>									
B3	1/8"	.013	.015	.122	.213	—	—	—	—
B5	1/4"	.016	.018	.082	.132	.012	.014	.077	.128
B5*	3/8"	.016	.018	.129	.222	.016	.018	.128	.225
B6*	3/8"	.016	.017	.074	.110	.012	.013	.071	.107
B7	1/2"	.026	.028	.145	.228	.022	.024	.138	.225
B8	3/4"	.026	.028	.123	.185	.022	.024	.115	.178
<b>3-Position Double Solenoid</b>									
B3	1/8"	.021	.023	.091	.141	—	—	—	—
B5	1/4"	.022	.023	.091	.141	.011	.011	.079	.135
B5*	3/8"	.022	.024	.135	.229	.016	.019	.135	.234
B6*	3/8"	.024	.026	.094	.139	.016	.018	.084	.132
B7	1/2"	.049	.051	.167	.257	.028	.030	.148	.238
B8	3/4"	.035	.037	.136	.206	.028	.030	.130	.195

**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 120V/60Hz solenoid. Times shown are average.

\* For 3/8" ported, 50 cu. in. test chamber is used. For 1/2" & 3/4", a 200 cu. in. test chamber is used.



**D**

EZ

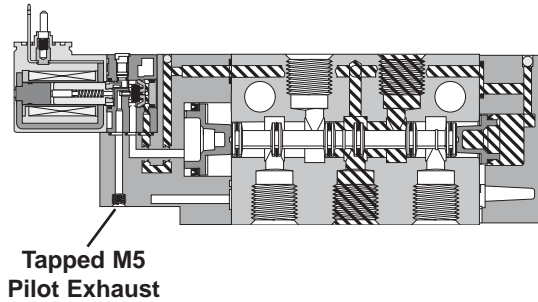
B

Viking Xtreme

ADEX

N

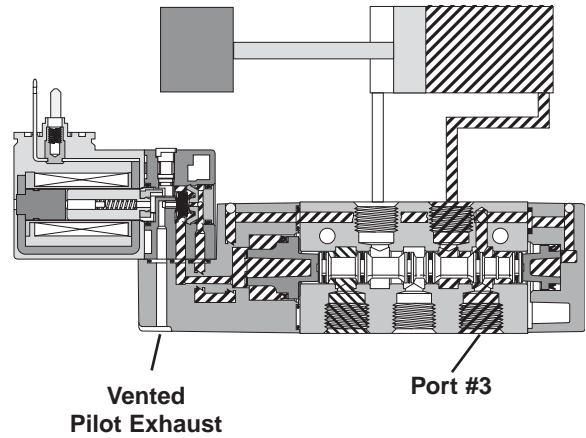
**A - Internal - Port #1 / Tapped M5**



B5 Shown

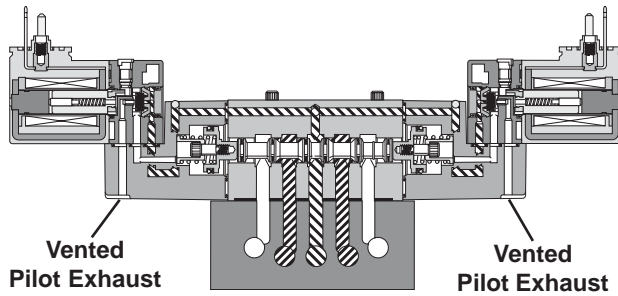
**E - Dual Pressure - Port #3 / Vented**

**H - Dual Pressure - Port #5 / Vented (Similar)**



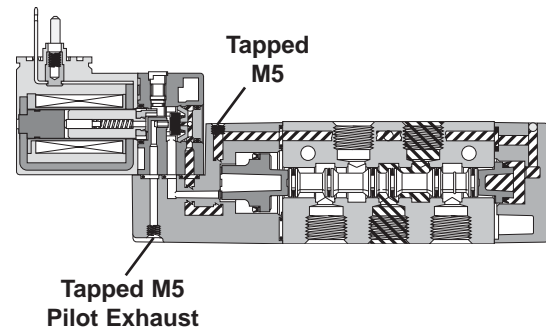
B3 Shown

**B - Internal - Port #1 / Vented**



B3 Shown

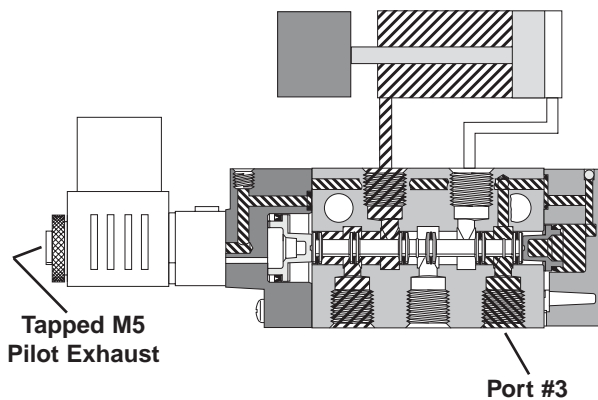
**K - External - Body / Tapped M5**



B3 Shown

**D - Dual Pressure - Port #3 / Tapped M5**

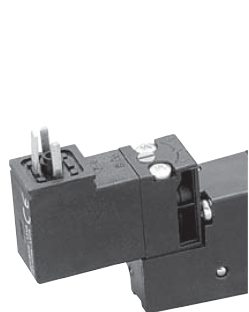
**G - Dual Pressure - Port #5 / Tapped M5 (Similar)**



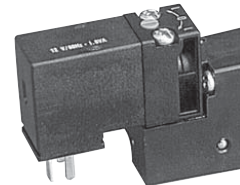
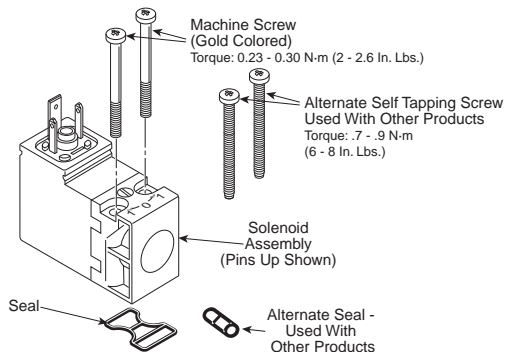
B5 Shown



**Solenoid Kits – B3 'C', B5 'C', B6 'A', B7 'A', B8 'A'  
 3-Pin, EN175301-803 (Former DIN 43650C), 15mm**



**STANDARD**



**"02" OPTION**

**PS2982\*##P –  
 Enclosure '5'**

Override	## Voltage						
	42	45	47*	48*	49	53	57
B	O	O	–	–	S	S	O
C	O	O	–	–	S	S	O
D	–	–	O	O	O	O	–
E	–	–	O	O	O	O	–

S - Standard; O - Option

\* Mobile Voltage

**Kit Includes:** Solenoid, (2) Machine Screws, (2) Self Threading Screws, (1) Gasket, (1) 3-cell Gasket.

**PS3541 \*##P –  
 Enclosure '5 with "02" Option**

Override	## Voltage				
	42	45	49	53	57
B	O	O	S	S	O
C	O	O	S	S	O
D	–	–	O	O	–
E	–	–	O	O	–

**Solenoid Kits Alternate Enclosures**

**P2F C A 4 49**

Type	Voltage / Frequency																
Solenoid Kit	C																
<b>Enclosures / Lead Length</b>																	
30mm Square 3-Pin – ISO 4400 Form A (Male Only)	A																
22mm Rectangular 3-Pin – Type B Industrial (Male Only)	B																
Hazardous Duty, FM / CSA	F*																
Grommet - 18" Leads	G																
1/2" NPT Conduit - 18" Leads	H																
Grommet 72" Leads	Q																
1/2" Conduit 72" Leads	R																
<table border="1" style="width: 100%;"> <thead> <tr> <th>Type</th> <th>Voltage / Frequency</th> </tr> </thead> <tbody> <tr> <td>42</td> <td>24VAC</td> </tr> <tr> <td>45</td> <td>12VDC</td> </tr> <tr> <td>47*</td> <td>12 VDC Mobile</td> </tr> <tr> <td>48*</td> <td>24 VDC Mobile</td> </tr> <tr> <td>49</td> <td>24VDC</td> </tr> <tr> <td>53</td> <td>120VAC</td> </tr> <tr> <td>57</td> <td>240VAC</td> </tr> </tbody> </table>		Type	Voltage / Frequency	42	24VAC	45	12VDC	47*	12 VDC Mobile	48*	24 VDC Mobile	49	24VDC	53	120VAC	57	240VAC
Type	Voltage / Frequency																
42	24VAC																
45	12VDC																
47*	12 VDC Mobile																
48*	24 VDC Mobile																
49	24VDC																
53	120VAC																
57	240VAC																

\* Only Available with Enclosures "A", "B" & "G".

\* Only Available with Voltage Codes "45", "49", "53" & "57".



**Option A & E**  
 30mm Square  
 3-Pin ISO 4400, DIN 43650A



**Option B**  
 22mm Rectangular  
 3-Pin DIN, Type B Industrial



**Option G & Q**  
 Grommet, 18" or 72" Leads



**Option F, H & R**  
 1/2" Conduit, 18" or 72" Leads

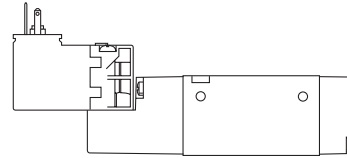
**B3 Series**

**Spool / Body Service Kits**

PS2901CP	4-Way, 2-Pos	<i>Kit Includes:</i>
PS2902CP	4-Way, 3-Pos APB	Item 15, 21 (2), 24, 25, 31 (2), grease packet
PS2903CP	4-Way, 3-Pos CE	Item 16, 21 (2), 31 (2), grease packet
PS2904CP	4-Way, 3-Pos PC	Item 16, 21 (2), 31 (2), grease packet
PS2971CP	3-Way, 2-Pos	Item 15, 21 (2), 24, 25, 31 (2), grease packet

**Valve to Manifold Kits**

PS2980P	Gasket (10) - Inline 3-Way Valve to Segmented Manifold
PS2981P	Gasket (10) - Inline 4-Way Valve to Segmented Manifold
PS2984P	O-ring (10) - Inline Valve to IEM Bar Manifold
PS2986P	Gasket - Subbase Valve to Subbase Bar Manifold; Item 4 (10), 39 (10)
PS2987P	Mounting Bolts (10) - Inline Valve / Subbase Valve

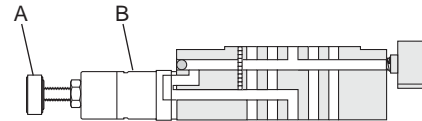


**Manifold to Manifold Kit**

PS2995P	O-ring (10), Sleeves (10), Tie Rods (10) - 3-Way Manifold
PS2996P	Gasket (10), Tie Rods (10) - 4-Way Manifold

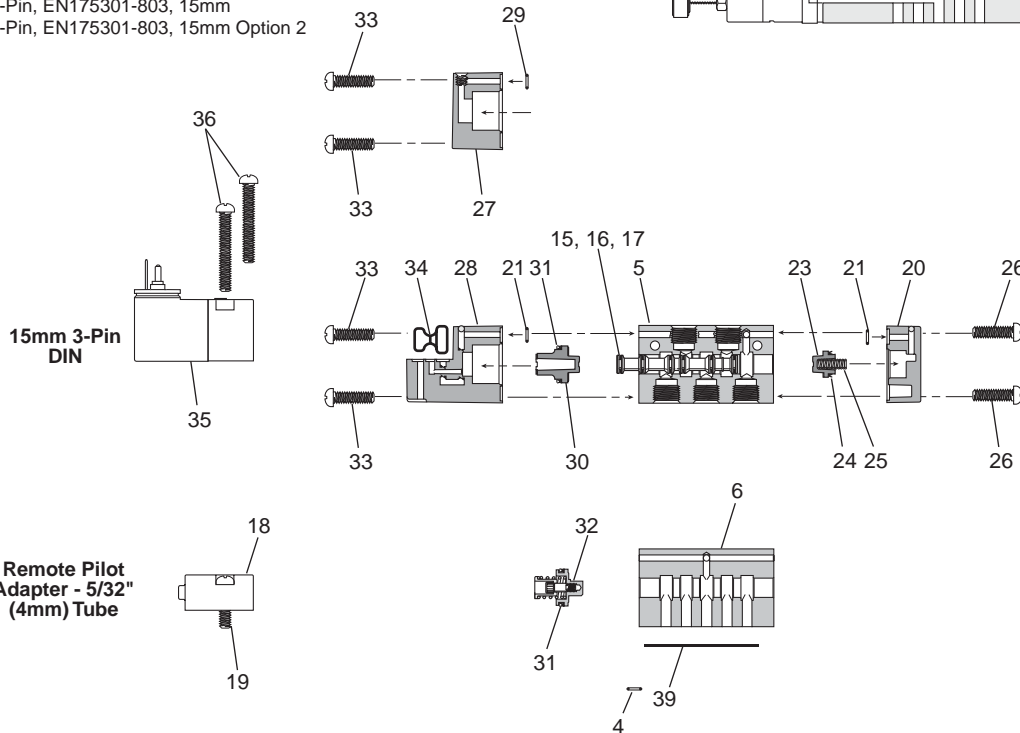
**Sandwich Regulator Cartridge Kit**

PS299922P	2-60 PSI Cartridge (Item A, B)
PS299933P	5-125 PSI Cartridge (Item A, B)



**Solenoid Kit** *Kit Includes: 35, 36, 34*

PS2982*##P	3-Pin, EN175301-803, 15mm
PS3541*##P	3-Pin, EN175301-803, 15mm Option 2



D

EZ

B

Viking Xtreme

ADEX

N

**Item List – Parts not sold separately.**

Item Description	Item Description	Item Description
4* O-ring - Ext Pilot Valve to Manifold	23 Return Piston	31* Lip Seal - Operator Piston
5 Inline Body - Tapped Ports	24* Lip Seal - Return Piston	32 Operator Piston Mechanism - 3-Position
6 Subbase Body	25* Spring, Return Assist	33 Screws - Operator Adapter
7 Inline Body - Tube Ports	26 Screws - Return Operator	34* Gasket - Solenoid to Adapter
15* Spool - 2-Position (Seals Assembled)	27 Remote Pilot Operator	35* 15mm Solenoid
16* Spool - 3-Position (Seals Assembled)	28a Solenoid Adapter - Vent Exhaust	36* Self Tapping Screw - Solenoid (Effective May 99)
17* Spool Seal	28b Solenoid Adapter - Ext Pilot. Vent Exhaust	36* Machine Screw - Solenoid (Jan 96 - May 99)
18 Remote Pilot Adapter (PVAP111)	28c Solenoid Adapter - Ext Pilot. Tapped Exhaust	39* Gasket - Subbase Valve to Base
19 Screw - Remote Pilot Adapter	28d Solenoid Adapter - Tapped Exhaust	40* Mounting Screws - Subbase Valve
20 Return Operator	29 O-ring - Remote Pilot	
21* Gasket - Body to Operator	30 Operator Piston - 2-Position	

**Note:** \* Parts are available in kits shown. For kit components, order VALVE LESS SOLENOID for assembled and tested repair valve.

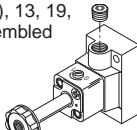


**B5 Series**

**Spool / Body Service Kits**

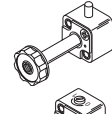
- |          |                  |   |
|----------|------------------|---|
| PS2801*P | 4-Way, 2-Pos     | <i>Kit Includes:</i>                              |
| PS2802*P | 4-Way, 3-Pos APB | Item 2, 10 (2), 14, 15, 116, 6 (2), grease packet |
| PS2803*P | 4-Way, 3-Pos CE  | Item 3, 6 (2), 10 (2), 13 (2), grease packet      |
| PS2804*P | 4-Way, 3-Pos PC  | Item 3, 6 (2), 10 (2), 13 (2), grease packet      |
| PS2871*P | 3-Way, 2-Pos NC  | Item 2, 10 (2), 14, 15, 116, 6 (2), grease packet |
- \* Viton Seal Kit (i.e. PS2801VP)

**Pilot Replacement Kit – Alternate Enclosure**

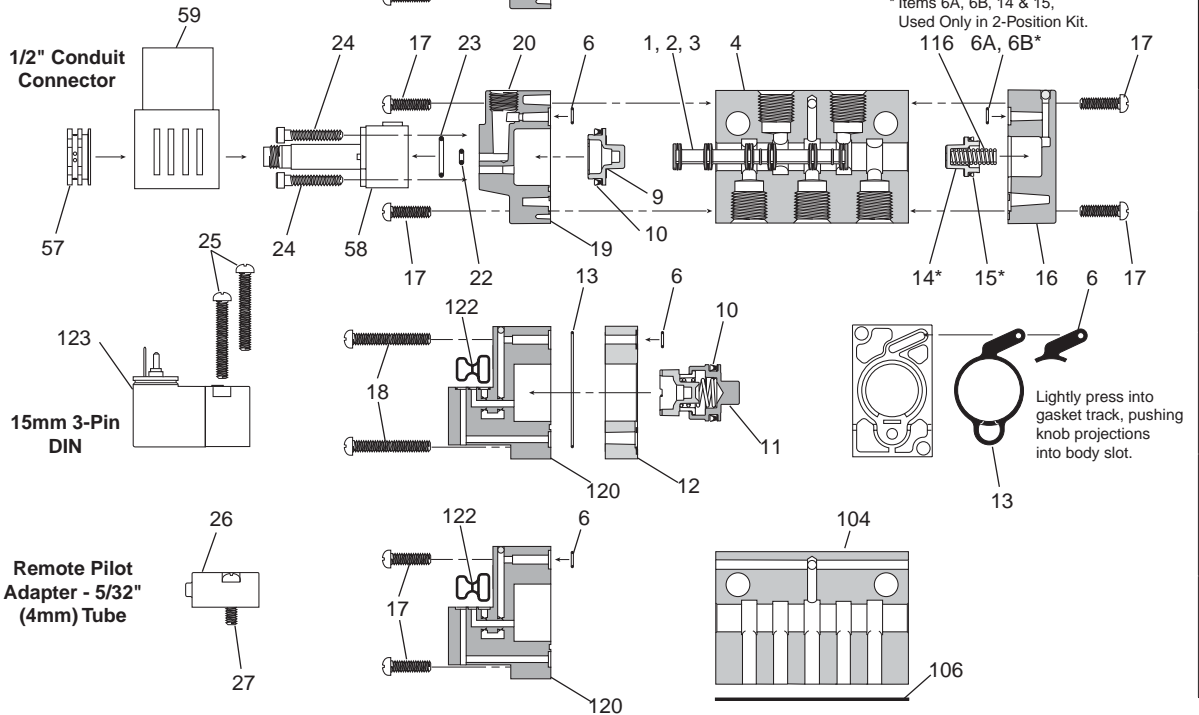
- Kit Includes:* Item 6, 9, 10, 11, 17 (2), 18 (2), 13, 19, 20, 22, 23, 24 (2), 57, 58 Assembled
- |           |                   |
|-----------|-------------------|
| PS2897GBP | Non-Locking, BSPP |
| PS2897GCP | Locking, BSPP     |
| PS2897NBP | Non-Locking, NPT  |
| PS2897NCP | Locking, NPT      |
- 

**Armature / Override Kit**

- Kit Includes:* Item 22, 23, 24 (2), 57, 58 Assembled

- |            |             |
|------------|-------------|
| P2FP13N4D* | Non-Locking |
| P2FP13N4C* | Locking     |
- 

\* Comes with a Thru Nut and A Diffuser Nut.



\* Items 6A, 6B, 14 & 15, Used Only in 2-Position Kit.

Lightly press into gasket track, pushing knob projections into body slot.

**Item List – Parts not sold separately.**

Item	Description	Item	Description	Item	Description
1*	Spool Seal	15*	Lip Seal - Return Piston	57*	Solenoid Nut
2*	Spool - 2-Position (Seals Assembled)	16	Return Operator	58a*	Solenoid Base Assembly - Locking
3*	Spool - 3-Position (Seals Assembled)	17*	Screws - Operator Adapter - 2-Position	58b*	Solenoid Base Assembly - Non Locking
4	Inline Body	18*	Screws - Operator Adapter - 3-Position	59*	Coil - Alternate Enclosure (see Page D49)
6A*	Gasket - Body to Operator	19*	Operator Adapter - Alt Enclosure	104	Subbase Body
6B	O-ring - Body to Operator (Effective July 2007)	20*	1/8" NPT Pipe Plug	106*	Gasket - Subbase Valve to Base
7	Remote Pilot Operator	22*	O-ring - Small - Solenoid Base	116*	Spring, Return Assist
9	Operator Piston - 2-Position	23*	O-ring - Large - Solenoid Base	120a	Solenoid Adapter - Vent Exhaust
10*	Lip Seal - Operator Piston	24*	Bolts - Solenoid Base	120b	Solenoid Adapter - Tapped Exhaust
11	Operator Piston Mechanism - 3-Position	25a*	Self Tapping Screw - Solenoid (Effective May 99)	120d	Solenoid Adapter - Ext Pilot. Vent Exhaust
12	Adapter - 3-Position	25b*	Machine Screw - Solenoid (Jan 96 - May 99)	120e	Solenoid Adapter - Ext Pilot. Tapped Exhaust
13*	Gasket - 3-Position Adapter to Body	26	Remote Pilot Adapter - 5/32" Tube (PVAP111)	122*	Gasket - Solenoid to Adapter
14	Return Piston	27	Screws - Remote Pilot Adapter	123*	15mm Solenoid

**Note:** \* Parts are available in kits shown. For kit components, order VALVE LESS SOLENOID for assembled and tested repair valve.



**B6 Series**

**Spool / Body Service Kits**

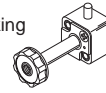
PS2601P	4-Way, 2-Pos	Item 2, 6 (2), 9 (2), 11, 14, grease packet
PS2602P	4-Way, 3-Pos APB	Item 3, 6 (2), 9 (2), 13 (2), grease packet
PS2603P	4-Way, 3-Pos CE	Item 3, 6 (2), 9 (2), 13 (2), grease packet
PS2604P	4-Way, 3-Pos PC	Item 3, 6 (2), 9 (2), 13 (2), grease packet
PS267101P	3-Way, 2-Pos. NC	Item 2, 6, 9, 14, grease packet
PS267102P	3-Way, 2-Pos. NO	Item 2, 6, 9, 14, grease packet

*Kit Includes:*

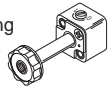
**Armature / Override Kit –**

*Kit Includes:* Item 22, 23, 24 (2), 57, 58 Assembled

P2FP13N4D\* Non-Locking



P2FP13N4C\* Locking



\* Comes with a Thru Nut and A Diffuser Nut.

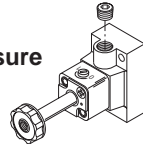
**Valve to Manifold Kits**

PS2684P	O-ring (10) - Inline Valve to IEM Manifold
PS2887P	Mounting Bolts (10) - Inline Valve

**Pilot Replacement Kit – Alternate Enclosure**

*Kit Includes:* Item 6, 8, 9, 10, 16 (2), 17 (2), 18, 13, 20, 22, 23, 24 (2), 57, 58 Assembled

PS2897GBP	Non-Locking, BSPP
PS2897GCP	Locking, BSPP
PS2897NBP	Non-Locking, NPT
PS2897NCP	Locking, NPT



**Solenoid Kit** *Kit Includes:* 25, 122, 123

PS2982\*##P 3-Pin, EN175301-803, 15mm

PS3541\*##P 3-Pin, EN175301-803, 15mm Option 2

**D**

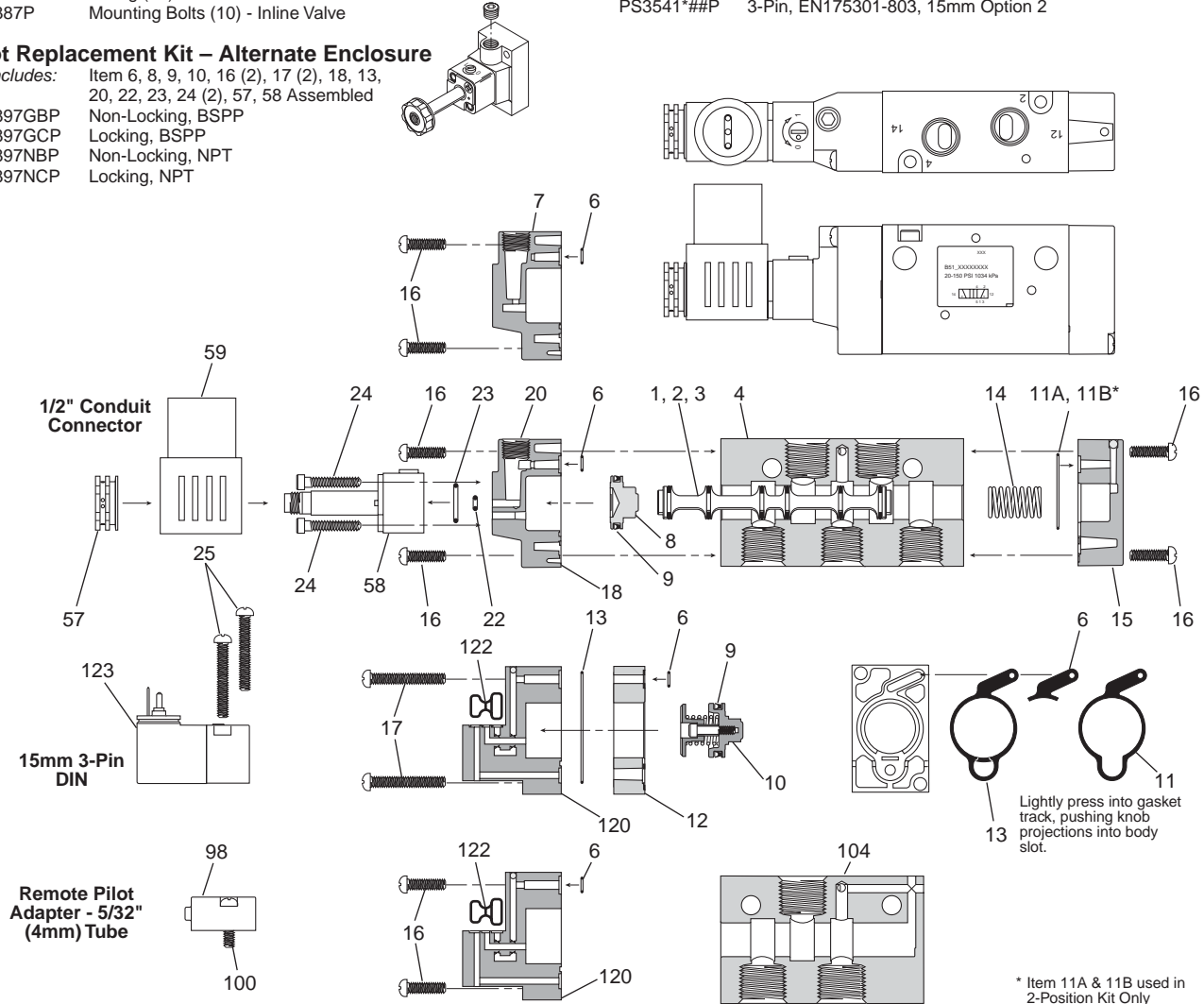
**EZ**

**B**

**Viking Xtreme**

**ADEX**

**N**



\* Item 11A & 11B used in 2-Position Kit Only

**Item List – Parts not sold separately.**

Item	Description	Item	Description	Item	Description
1*	Spool Seal	14*	Spring, Return Assist	58a*	Solenoid Base Assembly - Locking
2*	Spool - 2-Position (Seals Assembled)	15a	Return Operator	58b*	Solenoid Base Assembly - Non Locking
3*	Spool - 3-Position (Seals Assembled)	15b	Return Operator - CSA Option	59*	Coil - Alternate Enclosure (see Page D49)
4	Inline Body - 4-Way	16*	Screws - Operator Adapter - 2-Position	98*	Remote Pilot Adapter - 5/32" Tube (PVAP111)
6*	Gasket - Body to Operator	17*	Screws - Operator Adapter - 3-Position	100	Screws - Remote Pilot Adapter
7	Remote Pilot Operator	18*	Operator Adapter - Alt Enclosure	104	Inline Body - 3-Way
8	Operator Piston - 2-Position	20*	1/8" NPT Pipe Plug	120a	Solenoid Adapter - Vent Exhaust
9*	Lip Seal - Operator Piston	22*	O-ring - Small - Solenoid Base	120b	Solenoid Adapter - Tapped Exhaust
10	Operator Piston Mechanism - 3-Position	23*	O-ring - Large - Solenoid Base	120c	Solenoid Adapter - Ext Pilot. Vent Exhaust
11A*	Gasket - Body to Return Cap	24*	Bolts - Solenoid Base	120d	Solenoid Adapter - Ext Pilot. Tapped Exhaust
11B*	O-ring - Body to Operator (Effective Feb. 2008)	25*	Self Tapping Screw - Solenoid (Effective Jan 00)	122*	Gasket - Solenoid to Adapter
12	Adapter - 3-Position	57*	Solenoid Nut	123*	15mm Solenoid
13	Gasket - 3-Position Adapter to Body				

**Note:** \* Parts are available in kits shown. For kit components, order VALVE LESS SOLENOID for assembled and tested repair valve.



**B7 & B8 Series**

**Spool / Body Service Kits**

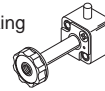
PS2501P	4-Way, 2-Pos	Item 2, 6 (2), 9 (2), 11, grease packet
PS2502P	4-Way, 3-Pos APB	Item 3, 6 (2), 9 (2), 13 (2), grease packet
PS2503P	4-Way, 3-Pos CE	Item 3, 6 (2), 9 (2), 13 (2), grease packet
PS2504P	4-Way, 3-Pos PC	Item 3, 6 (2), 9 (2), 13 (2), grease packet
PS257101P	3-Way, 2-Pos. NC	Item 2, 6, 9, grease packet
PS257102P	3-Way, 2-Pos. NO	Item 2, 6, 9, grease packet

*Kit Includes:*

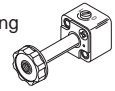
**Armature / Override Kit –**

*Kit Includes:* Item 22, 23, 24 (2), 57, 58 Assembled

P2FP13N4D\* Non-Locking



P2FP13N4C\* Locking



\* Comes with a Thru Nut and A Diffuser Nut.

**Valve to Manifold Kits**

PS2584P	O-ring (10) - Inline Valve to IEM Manifold
PS2587P	Mounting Bolts (10) - Inline Valve

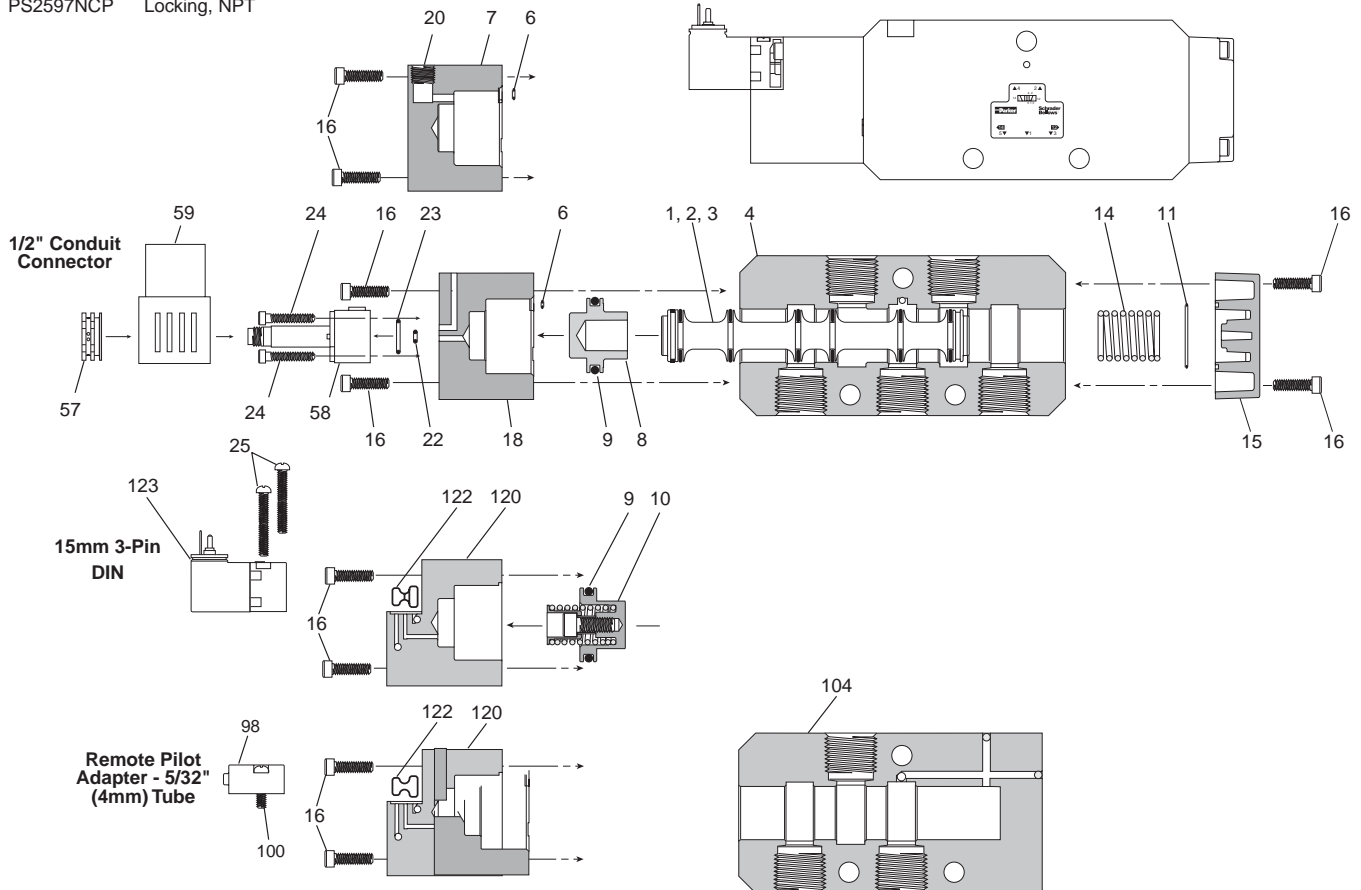
**Solenoid Kit** *Kit Includes:* 25, 122, 123

PS2982*##P	3-Pin, EN175301-803, 15mm
PS3541*##P	3-Pin, EN175301-803, 15mm Option 2

**Pilot Replacement Kit – Alternate Enclosure**

*Kit Includes:* Item 6, 8, 9, 10, 16 (4), 18, 20, 22, 23, 24 (2), 57, 58 Assembled

PS2597GBP	Non-Locking, BSPP
PS2597GCP	Locking, BSPP
PS2597NBP	Non-Locking, NPT
PS2597NCP	Locking, NPT



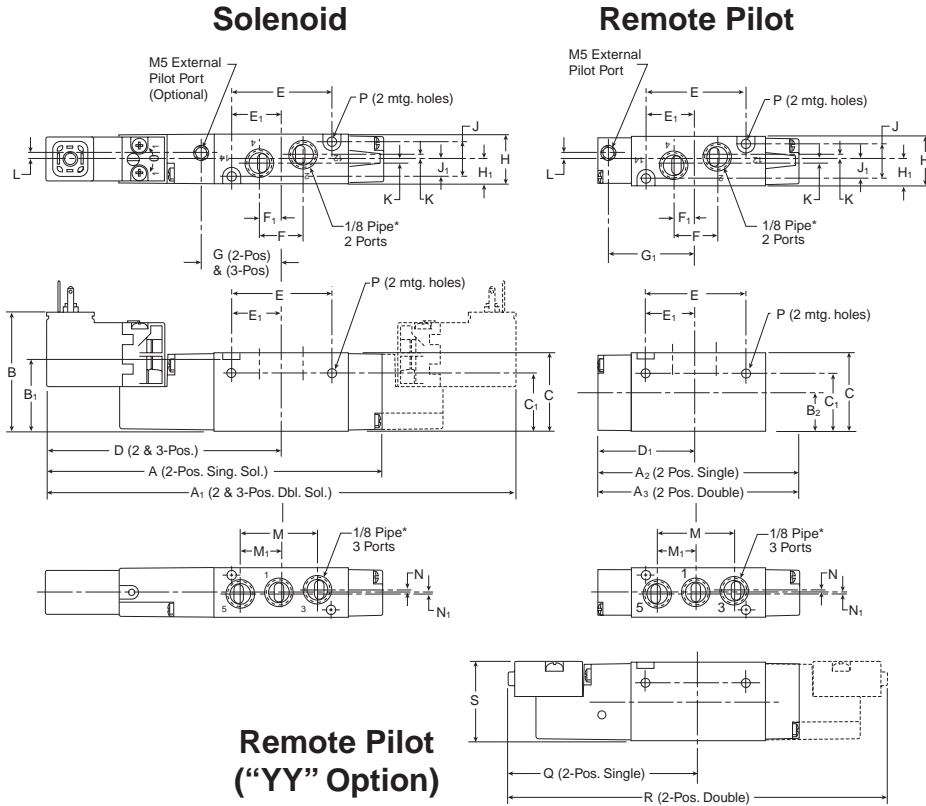
**Item List – Parts not sold separately.**

Item	Description	Item	Description	Item	Description
1*	Spool Seal	16*	Screws - Operator Adapter	98*	Remote Pilot Adapter - 5/32" Tube (PVAP111)
2*	Spool - 2-Position (Seals Assembled)	8*	Operator Adapter - Alt Enclosure	100	Screws - Remote Pilot Adapter
3*	Spool - 3-Position (Seals Assembled)	20*	1/8" NPT Pipe Plug	104	Inline Body - 3-Way
4	Inline Body - 4-Way	22*	O-ring - Small - Solenoid Base	120a	Solenoid Adapter - Vent Exhaust
6*	Gasket - Body to Operator	23*	O-ring - Large - Solenoid Base	120b	Solenoid Adapter - Tapped Exhaust
7	Remote Pilot Operator	24*	Bolts - Solenoid Base	120c	Solenoid Adapter - Ext Pilot. Vent Exhaust
8	Operator Piston - 2-Position	25*	Self Tapping Screw - Solenoid (Effective Jan 00)	120d	Solenoid Adapter - Ext Pilot. Tapped Exhaust
9*	Lip Seal - Operator Piston	57*	Solenoid Nut	122*	Gasket - Solenoid to Adapter
10	Operator Piston Mechanism - 3-Position	58a*	Solenoid Base Assembly - Locking	123*	15mm Solenoid
11*	Gasket - Body to Return Cap	58b*	Solenoid Base Assembly - Non Locking		
14*	Spring, Return Assist	59*	Coil - Alternate Enclosure (see Page D49)		
15a	Return Operator				

**Note:** \* Parts are available in kits shown. For kit components, order VALVE LESS SOLENOID for assembled and tested repair valve.



**B3 Single & Double Operators – 4-Way Inline**



**B3 4-Way Inline**

<b>A</b> 4.67 (119)	<b>A<sub>1</sub></b> 6.44 (164)	<b>A<sub>2</sub></b> 3.12 (79)	<b>A<sub>3</sub></b> 3.33 (85)	<b>B</b> 1.66 (42)
<b>B<sub>1</sub></b> 1.05 (27)	<b>B<sub>2</sub></b> .57 (14)	<b>C</b> 1.13 (39)	<b>C<sub>1</sub></b> .84 (21)	<b>D</b> 3.22 (82)
<b>D<sub>1</sub></b> 1.66 (42)	<b>E</b> 1.47 (37)	<b>E<sub>1</sub></b> .732 (19)	<b>F</b> .63 (16)	<b>F<sub>1</sub></b> .32 (8)
<b>G</b> 1.13 (29)	<b>G<sub>1</sub></b> 1.50 (38)	<b>H</b> .71 (18)	<b>H<sub>1</sub></b> .36 (9)	<b>J</b> .51 (13)
<b>J<sub>1</sub></b> .26 (7)	<b>K</b> .06 (2)	<b>L</b> .11 (3)	<b>M</b> 1.12 (28)	<b>M<sub>1</sub></b> .56 (14)
<b>N</b> .05 (1)	<b>N<sub>1</sub></b> .05 (1)	<b>P</b> ∅ .13 ∅ (3.3)	<b>Q</b> 2.69 (68)	<b>R</b> 5.37 (136)
<b>S</b> 1.16 (29)				

Inches (mm)

**D**

**EZ**

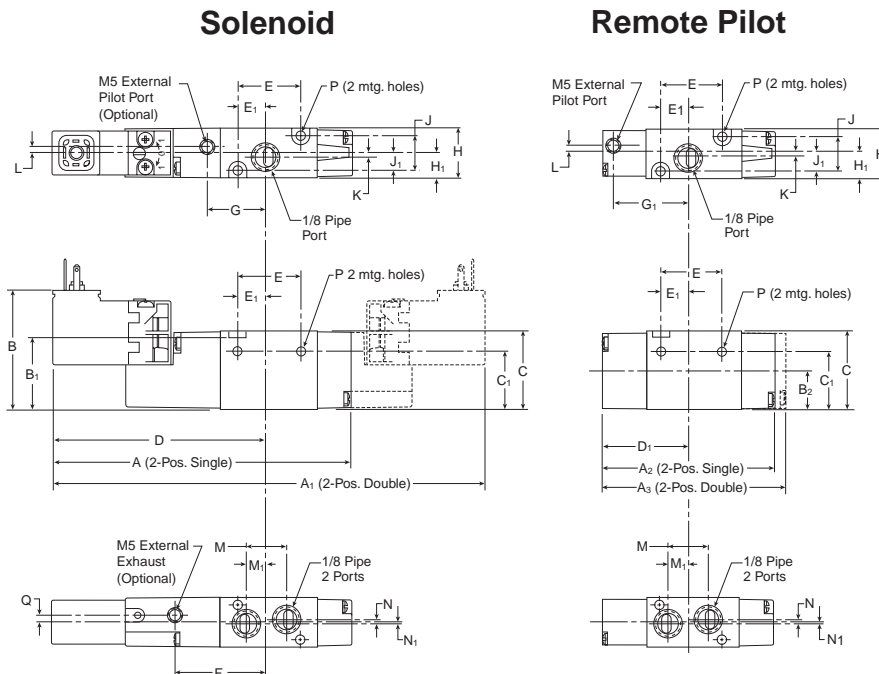
**B**

**Viking Xtreme**

**ADEX**

**N**

**B3 Single & Double Operators – 3-Way Inline**



**B3 3-Way Inline**

<b>A</b> 4.20 (107)	<b>A<sub>1</sub></b> 5.96 (151)	<b>A<sub>2</sub></b> 2.65 (67)	<b>A<sub>3</sub></b> 2.86 (73)	<b>B</b> 1.66 (42)
<b>B<sub>1</sub></b> 1.05 (27)	<b>B<sub>2</sub></b> .57 (14)	<b>C</b> 1.13 (29)	<b>C<sub>1</sub></b> .84 (21)	<b>D</b> 2.93 (74)
<b>D<sub>1</sub></b> 1.38 (35)	<b>E</b> .98 (25)	<b>E<sub>1</sub></b> .44 (11)	<b>F</b> 1.32 (34)	<b>G</b> .85 (22)
<b>G<sub>1</sub></b> 1.22 (31)	<b>H</b> .71 (18)	<b>H<sub>1</sub></b> .36 (9)	<b>J</b> .51 (13)	<b>J<sub>1</sub></b> .26 (7)
<b>K</b> .06 (2)	<b>L</b> .11 (3)	<b>M</b> .63 (16)	<b>M<sub>1</sub></b> .27 (7)	<b>N</b> .12 (3)
<b>N<sub>1</sub></b> .06 (2)	<b>P</b> ∅ .13 ∅ (3.3)	<b>Q</b> .08 (2)		

Inches (mm)

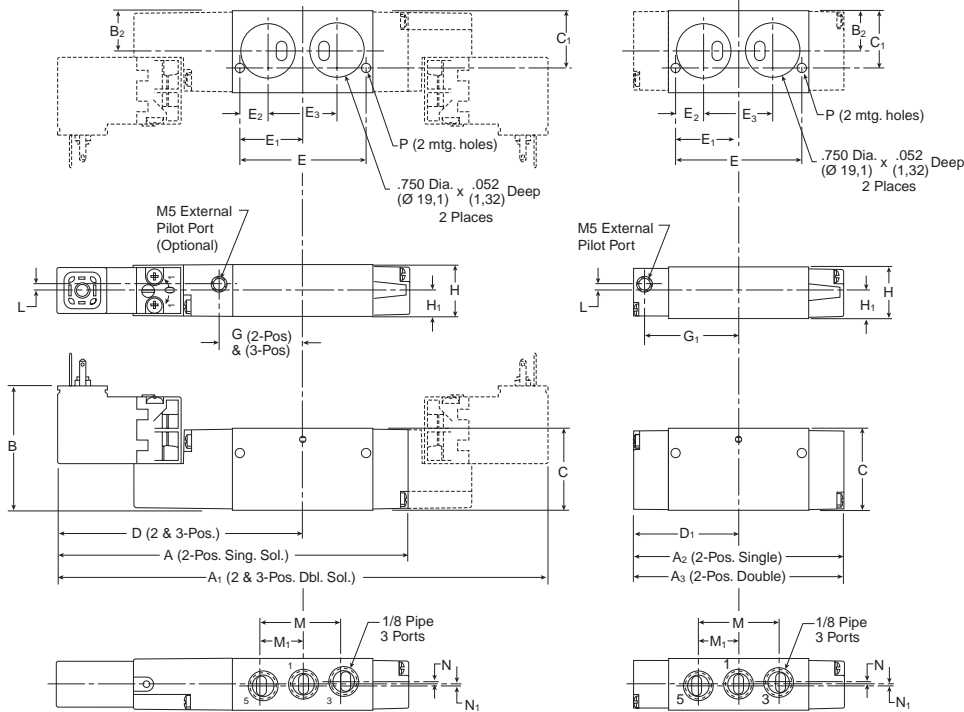
**B3**

**Single & Double Operators – 4-Way Face Mount**

**Solenoid**

**Remote Pilot**

**B3 4-Way Face Mount**



<b>A</b> 4.67 (119)	<b>A<sub>1</sub></b> 6.44 (164)	<b>A<sub>2</sub></b> 3.12 (79)	<b>A<sub>3</sub></b> 3.33 (85)	<b>B</b> 1.66 (42)
<b>B<sub>2</sub></b> .58 (15)	<b>C</b> 1.13 (29)	<b>C<sub>1</sub></b> .81 (21)	<b>D</b> 3.22 (82)	<b>D<sub>1</sub></b> 1.66 (42)
<b>E</b> 1.74 (44)	<b>E<sub>1</sub></b> .87 (22)	<b>E<sub>2</sub></b> .39 (10)	<b>E<sub>3</sub></b> .95 (24)	<b>G</b> 1.13 (29)
<b>G<sub>1</sub></b> 1.50 (38)	<b>H</b> .71 (18)	<b>H<sub>1</sub></b> .36 (9)	<b>L</b> .11 (3)	<b>M</b> 1.12 (28)
<b>M<sub>1</sub></b> .56 (14)	<b>N</b> .05 (1)	<b>N<sub>1</sub></b> .05 (1)	<b>P</b> Ø .13 (3.3)	

Inches (mm)

**D**

**EZ**

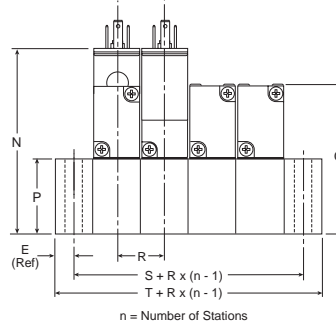
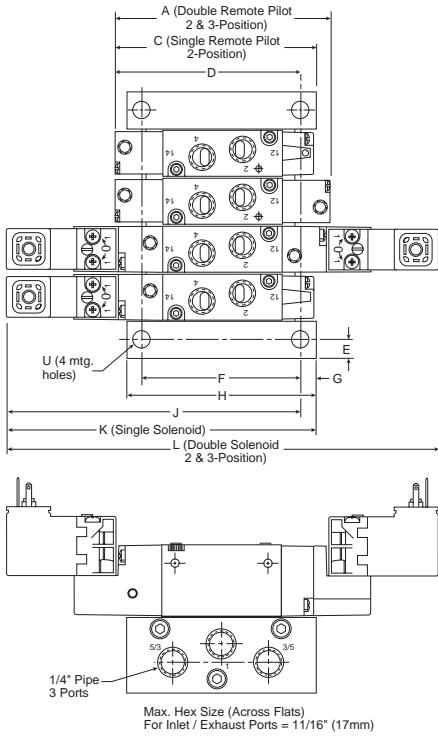
**B**

**Viking Xtreme**

**ADEX**

**N**

**B3** Single & Double Operators – 4-Way IEM Stackable



**B3 4-Way IEM Stackable**

<b>A</b> 3.33 (84.6)	<b>C</b> 3.12 (79.2)	<b>D</b> 2.91 (73.9)	<b>E</b> .30 (7.6)	<b>F</b> 2.49 (63.3)
<b>G</b> .25 (6.4)	<b>H</b> 3.00 (76.2)	<b>J</b> 4.46 (113.3)	<b>K</b> 4.67 (118.6)	<b>L</b> 6.43 (163.3)
<b>N</b> 2.91 (73.9)	<b>P</b> 1.25 (31.8)	<b>Q</b> 2.38 (60.5)	<b>R</b> .74 ± .01 (18.8) ± .3	
<b>S</b> 1.34 (34.0)	<b>T</b> 1.94 (49.3)	<b>U</b> Ø .28 Ø (7.1)		

Inches (mm)

**D**

**EZ**

**B**

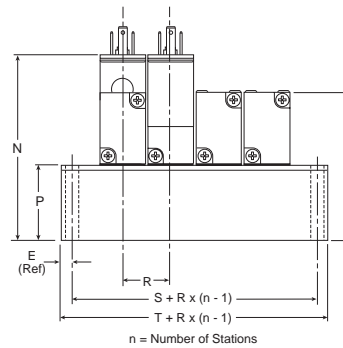
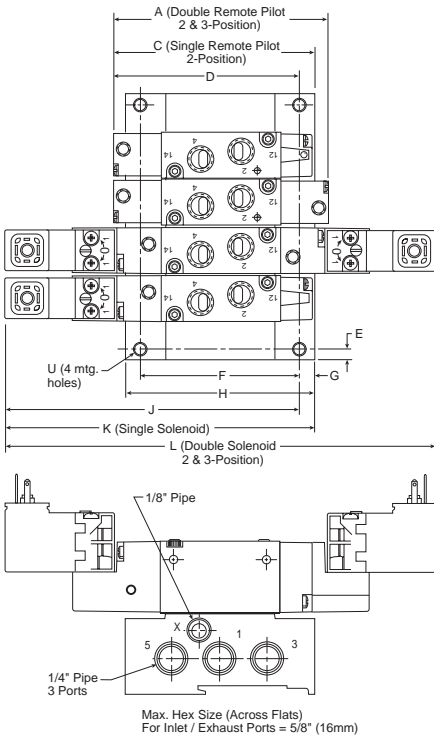
**Viking Xtreme**

**ADEX**

**N**



**B3 Single & Double Operators – 4-Way IEM Aluminum Bar**

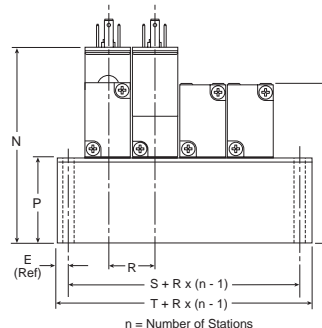
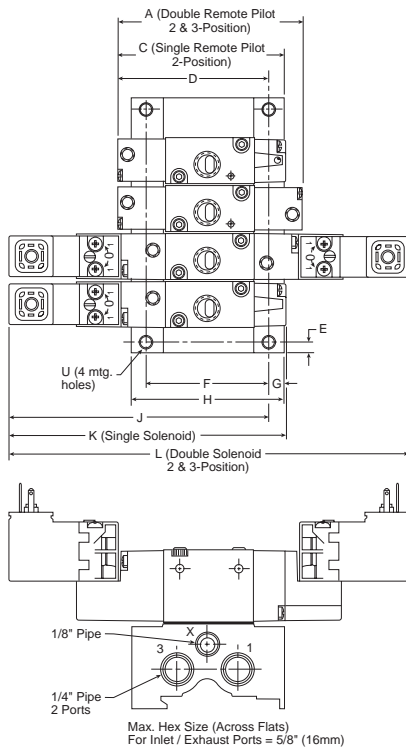


**B3 4-Way IEM Aluminum Bar Manifold**

<b>A</b> 3.33 (84.6)	<b>C</b> 3.17 (80.5)	<b>D</b> 2.94 (74.7)	<b>E</b> .25 (6.4)	<b>F</b> 2.54 (64.5)
<b>G</b> .23 (5.9)	<b>H</b> 3.00 (76.2)	<b>J</b> 4.50 (114.2)	<b>K</b> 4.73 (120.1)	<b>L</b> 6.43 (163.3)
<b>N</b> 2.94 (74.7)	<b>P</b> 1.28 (32.5)	<b>Q</b> 2.41 (61.2)	<b>R</b> .81 (20.5)	<b>S</b> 1.13 (28.8)
<b>T</b> 1.64 (41.6)	<b>U</b> Ø .23 Ø (5.8)			

Inches (mm)

**B3 Single & Double Operators – 3-Way IEM Aluminum Bar**

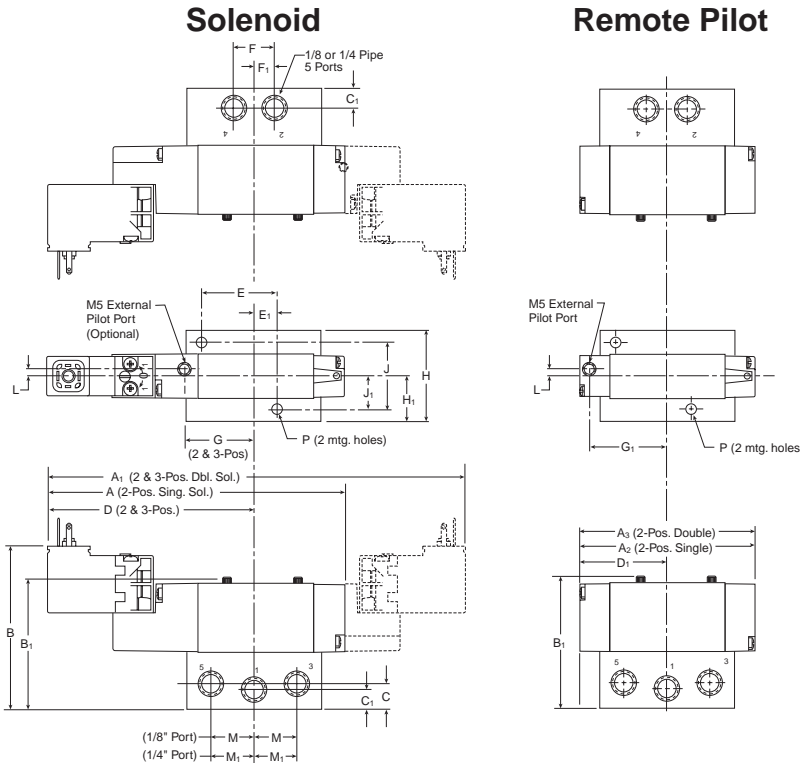


**B3 4-Way IEM Aluminum Bar Manifold**

<b>A</b> 2.86 (72.6)	<b>C</b> 2.65 (67.3)	<b>D</b> 2.33 (59.2)	<b>E</b> .25 (6.4)	<b>F</b> 1.80 (45.7)
<b>G</b> .23 (5.9)	<b>H</b> 2.25 (57.2)	<b>J</b> 3.88 (98.6)	<b>K</b> 4.20 (106.7)	<b>L</b> 5.96 (151.4)
<b>N</b> 2.93 (74.5)	<b>P</b> 1.27 (32.4)	<b>Q</b> 2.40 (61.1)	<b>R</b> .81 (20.5)	<b>S</b> 1.13 (28.8)
<b>T</b> 1.64 (41.6)	<b>U</b> Ø .23 Ø (5.8)			

Inches (mm)

**B3 Single & Double Operators – 4-Way Single Subbase**

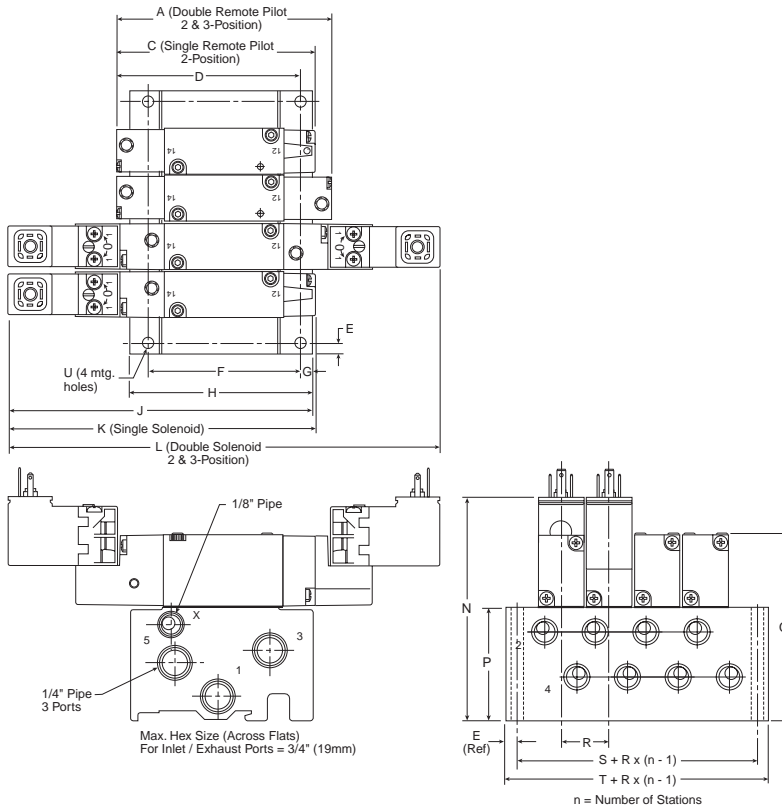


**B3 4-Way Single Subbase**

<b>A</b> 4.67 (119)	<b>A<sub>1</sub></b> 6.44 (164)	<b>A<sub>2</sub></b> 3.12 (79)	<b>A<sub>3</sub></b> 3.33 (85)	<b>B</b> 2.63 (67)
<b>B<sub>1</sub></b> 2.21 (56)	<b>C</b> .47 (12)	<b>C<sub>1</sub></b> .37 (9)	<b>D</b> 3.22 (82)	<b>D<sub>1</sub></b> 1.66 (42)
<b>E</b> 1.25 (32)	<b>E<sub>1</sub></b> .38 (10)	<b>F</b> .69 (18)	<b>F<sub>1</sub></b> .34 (9)	<b>G</b> 1.13 (29)
<b>G<sub>1</sub></b> 1.50 (38)	<b>H</b> 1.50 (38)	<b>H<sub>1</sub></b> .75 (19)	<b>J</b> 1.12 (28)	<b>J<sub>1</sub></b> .56 (14)
<b>M</b> .71 (18)	<b>M<sub>1</sub></b> .76 (19)	<b>P</b> Ø .18 Ø (4)		

Inches (mm)

**B3 Single & Double Operators – 5-Port Subbase Bar Manifold**



**B3 5-Port Subbase Bar Manifold**

<b>A</b> 3.33 (84.6)	<b>C</b> 3.12 (79.2)	<b>D</b> 2.88 (73.2)	<b>E</b> .25 (6.3)	<b>F</b> 2.43 (61.7)
<b>G</b> .22 (5.5)	<b>H</b> 2.93 (74.5)	<b>J</b> 4.66 (118.3)	<b>K</b> 4.67 (118.6)	<b>L</b> 6.43 (166.3)
<b>N</b> 3.47 (88.2)	<b>P</b> 1.81 (46.0)	<b>Q</b> 2.94 (74.7)	<b>R</b> .81 (20.5)	<b>S</b> 1.39 (35.4)
<b>T</b> 1.89 (48.0)	<b>U</b> Ø .22 Ø (5.6)			

Inches (mm)

**D**

**EZ**

**B**

**Viking Xtreme**

**ADEX**

**N**

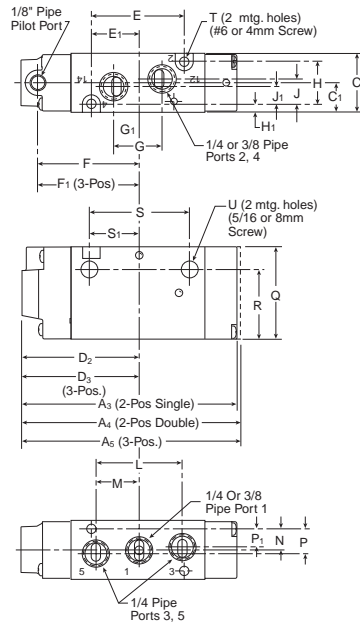
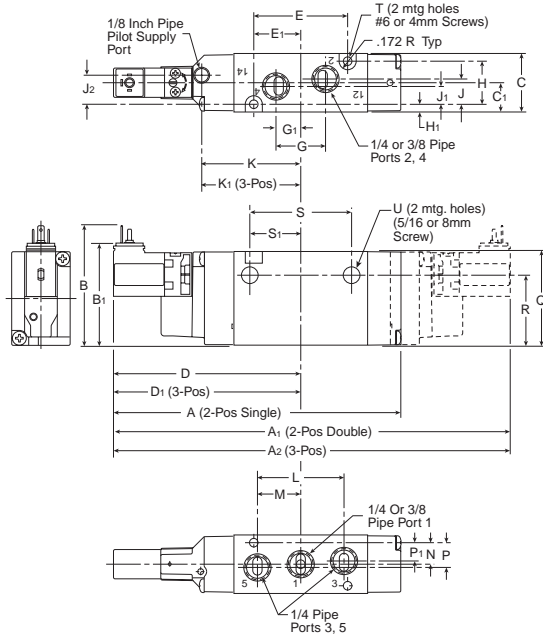
**B5**

**Single & Double Operators – 4-Way Inline**

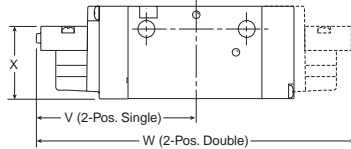
**Solenoid**

**Remote Pilot**

**B5 4-Way Inline**



**Remote Pilot ("YY" Option)**



<b>A</b> 5.78 (147)	<b>A<sub>1</sub></b> 7.51 (191)	<b>A<sub>2</sub></b> 8.45 (215)	<b>A<sub>3</sub></b> 4.37 (110)	<b>A<sub>4</sub></b> 4.70 (119)
<b>A<sub>5</sub></b> 5.64 (143)	<b>B</b> 2.41 (61)	<b>B<sub>1</sub></b> 2.06 (52)	<b>C</b> 1.18 (30)	<b>C<sub>1</sub></b> .59 (15)
<b>D</b> 3.76 (96)	<b>D<sub>1</sub></b> 4.23 (107)	<b>D<sub>2</sub></b> 2.35 (60)	<b>D<sub>3</sub></b> 2.82 (72)	<b>E</b> 1.89 (48)
<b>E<sub>1</sub></b> .95 (24)	<b>F</b> 2.01 (51)	<b>F<sub>1</sub></b> 2.47 (63)	<b>G</b> 1.00 (25)	<b>G<sub>1</sub></b> .50 (13)
<b>H</b> .87 (22)	<b>H<sub>1</sub></b> .16 (4)	<b>J</b> .51 (13)	<b>J<sub>1</sub></b> .36 (9)	<b>J</b> .58 (15)
<b>K</b> 2.00 (51)	<b>K<sub>1</sub></b> 2.47 (63)	<b>L</b> 1.75 (44)	<b>M</b> .88 (22)	<b>N</b> .43 (48)
<b>P</b> .50 (13)	<b>P<sub>1</sub></b> .37 (92)	<b>Q</b> 1.89 (48)	<b>R</b> 1.41 (36)	<b>S</b> 2.05 (52)
<b>S<sub>1</sub></b> 1.03 (26)	<b>T</b> Ø .177 Ø (4.5)	<b>U</b> Ø .34 Ø (9)	<b>V</b> 3.24 (82)	<b>W</b> 6.48 (165)
<b>X</b> 1.50 (383)				

Inches (mm)

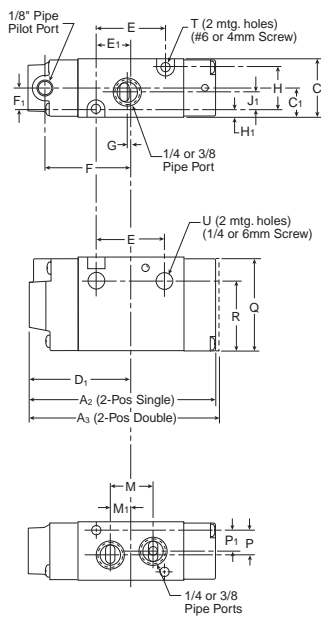
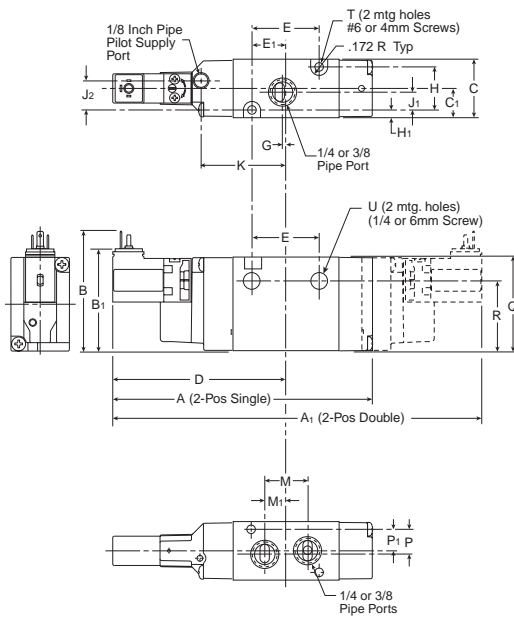
**B5**

**Single & Double Operators – 3-Way Inline**

**Solenoid**

**Remote Pilot**

**B5 3-Way Inline**



<b>A</b> 5.29 (134)	<b>A<sub>1</sub></b> 7.03 (179)	<b>A<sub>2</sub></b> 3.88 (99)	<b>A<sub>3</sub></b> 4.21 (107)	<b>B</b> 2.41 (61)
<b>B<sub>1</sub></b> 2.06 (52)	<b>C</b> 1.18 (30)	<b>C<sub>1</sub></b> .59 (15)	<b>D</b> 3.43 (87)	<b>D<sub>1</sub></b> 2.11 (54)
<b>E</b> 1.40 (36)	<b>E<sub>1</sub></b> .70 (18)	<b>F</b> 1.77 (45)	<b>F<sub>1</sub></b> .43 (11)	<b>G</b> .06 (2)
<b>H</b> .87 (22)	<b>H<sub>1</sub></b> .16 (4)	<b>J<sub>1</sub></b> .36 (9)	<b>J<sub>2</sub></b> .58 (15)	<b>K</b> 1.67 (42)
<b>M</b> .88 (22)	<b>M<sub>1</sub></b> .44 (11)	<b>P</b> .50 (13)	<b>P<sub>1</sub></b> .37 (9)	<b>Q</b> 1.89 (48)
<b>R</b> 1.41 (36)	<b>T</b> Ø .177 Ø (4.5)	<b>U</b> Ø .26 Ø (6.6)		

Inches (mm)



**D**  
**EZ**  
**B**  
**Viking Xtreme**  
**ADEX**  
**N**

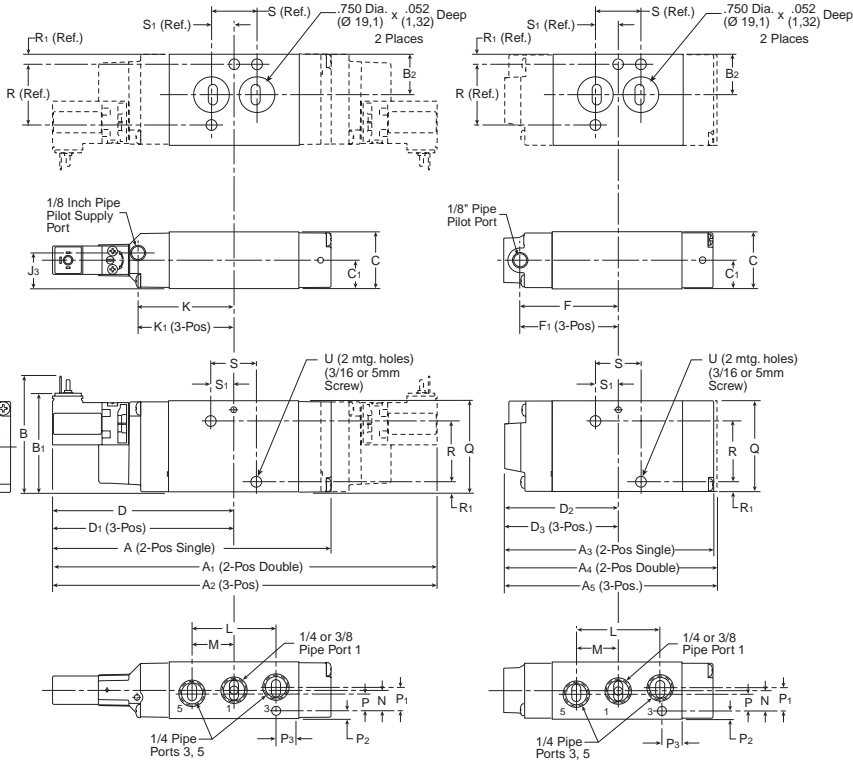
**B5**

**Single & Double Operators – 4-Way NAMUR Mount**

**Solenoid**

**Remote Pilot**

**B5 4-Way NAMUR Mount**



<b>A</b> 5.78 (147)	<b>A<sub>1</sub></b> 7.51 (191)	<b>A<sub>2</sub></b> 8.45 (215)	<b>A<sub>3</sub></b> 4.37 (110)	<b>A<sub>4</sub></b> 4.70 (119)
<b>A<sub>5</sub></b> 5.64 (143)	<b>B</b> 2.41 (61)	<b>B<sub>1</sub></b> 2.06 (52)	<b>B<sub>2</sub></b> .84 (21)	<b>C</b> 1.18 (30)
<b>C<sub>1</sub></b> .59 (15)	<b>D</b> 3.76 (96)	<b>D<sub>1</sub></b> 4.23 (107)	<b>D<sub>2</sub></b> 2.35 (60)	<b>D<sub>3</sub></b> 2.82 (72)
<b>F</b> 2.01 (51)	<b>F<sub>1</sub></b> 2.47 (63)	<b>J<sub>3</sub></b> .74 (19)	<b>K</b> 2.00 (51)	<b>K<sub>1</sub></b> 2.47 (63)
<b>L</b> 1.75 (44)	<b>M</b> .88 (22)	<b>N</b> .44 (11)	<b>P</b> .37 (9.4)	<b>P<sub>1</sub></b> .50 (13)
<b>P<sub>2</sub></b> .16 (4)	<b>P<sub>3</sub></b> .40 (10)	<b>Q</b> 1.89 (48)	<b>R</b> 1.26 (32)	<b>R<sub>1</sub></b> .21 (5)
<b>S</b> .94 (24)	<b>S<sub>1</sub></b> .47 (12)	<b>U</b> Ø .224 Ø (5.7)		

Inches (mm)

**D**

**EZ**

**B**

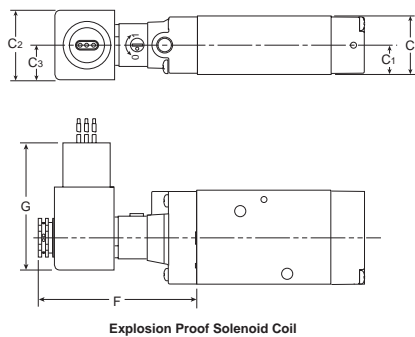
**Viking Xtreme**

**ADEX**

**N**

**B5**

**Alternative Electrical Enclosure Option F**

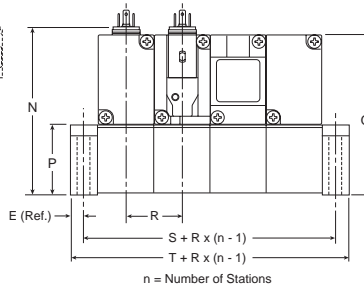
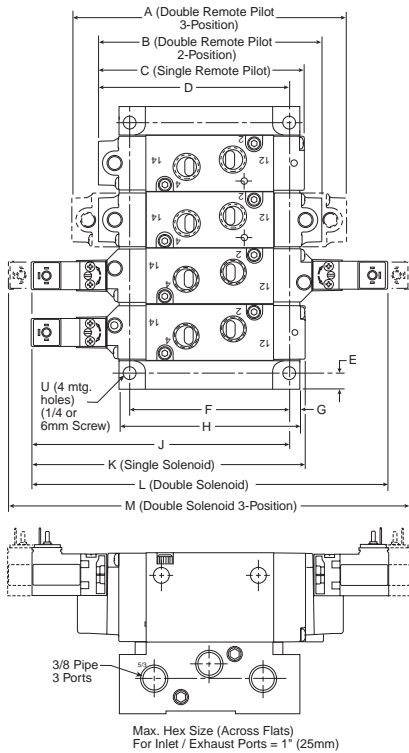


**B5 4-Way NAMUR Mount with Option F Enclosure**

<b>C</b> 1.18 (30)	<b>C<sub>1</sub></b> .59 (15)	<b>C<sub>2</sub></b> 1.42 (36)	<b>C<sub>3</sub></b> .71 (18)	<b>F</b> 3.15 (80)
<b>G</b> 2.60 (66)				

Inches (mm)

**B5 Single & Double Operators – 4-Way IEM Stackable**



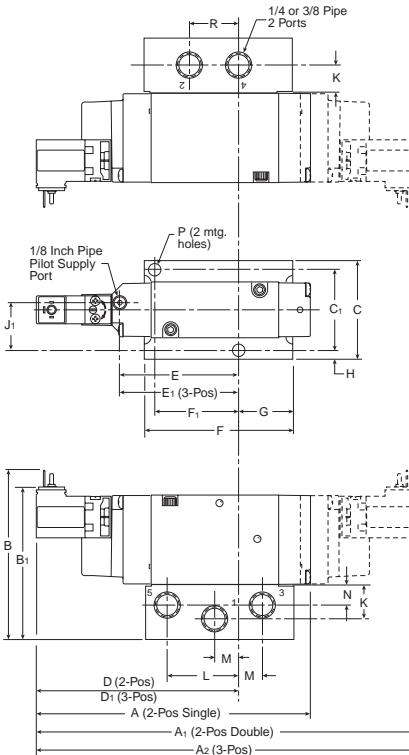
**B5 4-Way IEM Stackable**

<b>A</b> 5.64 (143.3)	<b>B</b> 4.70 (119.4)	<b>C</b> 4.37 (110.0)	<b>D</b> 4.29 (109.0)	<b>E</b> .29 (7.4)
<b>F</b> 3.44 (87.4)	<b>G</b> .24 (6.1)	<b>H</b> 3.92 (99.6)	<b>J</b> 5.48 (139.2)	<b>K</b> 5.78 (146.8)
<b>L</b> 7.52 (191.0)	<b>M</b> 8.46 (214.9)	<b>N</b> 3.56 (90.4)	<b>P</b> 1.50 (38.1)	<b>Q</b> 3.42 (86.9)
<b>R</b> 1.21 ± .01 (30.7) ± (.3)	<b>S</b> 1.79 (45.5)	<b>T</b> 2.37 (60.2)	<b>U</b> Ø .28 Ø (7.1)	

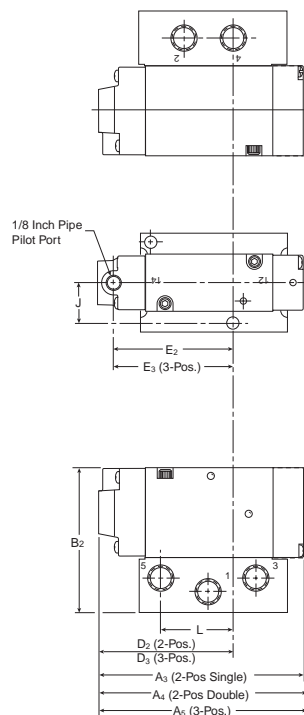
Inches (mm)

**B5 Single & Double Operators – 4-Way Single Subbase**

**Solenoid**



**Remote Pilot**



**B5 4-Way Subbase**

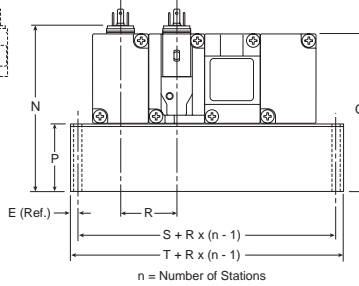
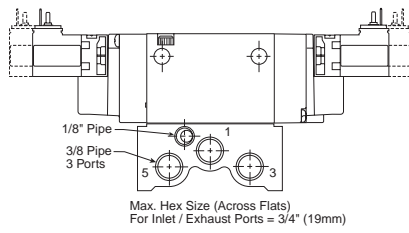
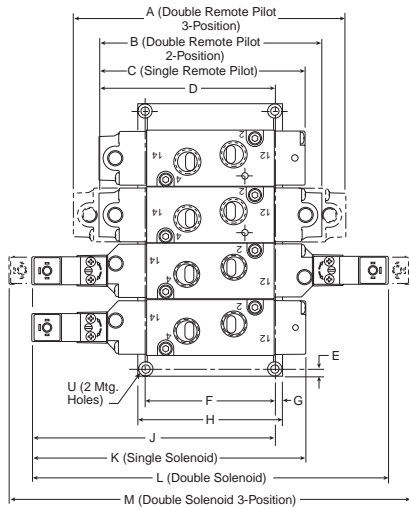
<b>A</b> 5.78 (147)	<b>A<sub>1</sub></b> 7.52 (191)	<b>A<sub>2</sub></b> 8.46 (215)	<b>A<sub>3</sub></b> 4.37 (110)	<b>A<sub>4</sub></b> 4.70 (119)
<b>A<sub>5</sub></b> 5.64 (143)	<b>B</b> 3.56 (90)	<b>B<sub>1</sub></b> 3.21 (82)	<b>B<sub>2</sub></b> 3.03 (77)	<b>C</b> 2.12 (54)
<b>C<sub>1</sub></b> 1.69 (43)	<b>D</b> 4.26 (108)	<b>D<sub>1</sub></b> 4.73 (120)	<b>D<sub>2</sub></b> 2.85 (72)	<b>D<sub>3</sub></b> 3.32 (40)
<b>E</b> 2.51 (65)	<b>E<sub>1</sub></b> 2.98 (76)	<b>E<sub>2</sub></b> 2.60 (66)	<b>E<sub>3</sub></b> 3.07 (80)	<b>F</b> 2.90 (74)
<b>F<sub>1</sub></b> 1.69 (43)	<b>G</b> .95 (24)	<b>H</b> .22 (5)	<b>J</b> .84 (21)	<b>J<sub>1</sub></b> .99 (25)
<b>K</b> .71 (18)	<b>L</b> 1.50 (38)	<b>M</b> .50 (13)	<b>N</b> .46 (12)	<b>P</b> Ø .27 Ø (7)
<b>R</b> 1.00 (25)				

Inches (mm)



**D**  
 EZ  
 B  
 Viking Xtreme  
 ADEX  
 N

**B5 Single & Double Operators – 4-Way IEM Aluminum Bar**

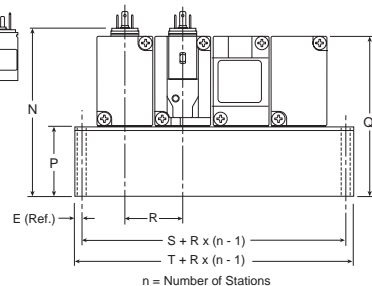
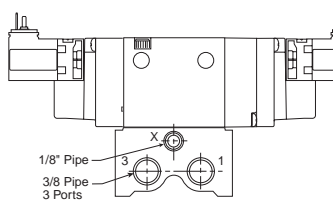
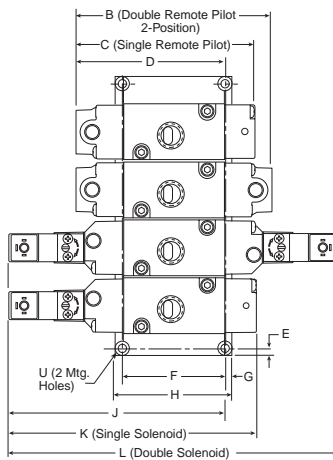


**B5 4-Way IEM Aluminum Bar Manifold**

<b>A</b> 5.64 (143.3)	<b>B</b> 4.70 (119.4)	<b>C</b> 4.37 (110.0)	<b>D</b> 3.74 (95.0)	<b>E</b> .18 (4.6)
<b>F</b> 2.78 (70.6)	<b>G</b> .17 (4.3)	<b>H</b> 3.12 (79.2)	<b>J</b> 5.15 (130.8)	<b>K</b> 5.78 (146.8)
<b>L</b> 7.52 (191.0)	<b>M</b> 8.46 (214.9)	<b>N</b> 3.50 (89.0)	<b>P</b> 1.44 (36.6)	<b>Q</b> 3.36 (85.3)
<b>R</b> 1.26 (32.0)	<b>S</b> 1.78 (45.2)	<b>T</b> 2.14 (54.4)	<b>U</b> Ø .22 Ø (5.5)	

Inches (mm)

**B5 Single & Double Operators – 3-Way IEM Aluminum Bar**



**B5 3-Way IEM Aluminum Bar Manifold**

<b>B</b> 4.21 (106.9)	<b>C</b> 3.88 (98.6)	<b>D</b> 3.41 (86.6)	<b>E</b> .18 (4.6)	<b>F</b> 2.12 (53.8)
<b>G</b> .17 (4.3)	<b>H</b> 2.46 (62.5)	<b>J</b> 4.82 (122.4)	<b>K</b> 5.29 (134.4)	<b>L</b> 7.03 (178.6)
<b>N</b> 3.50 (89.0)	<b>P</b> 1.44 (36.6)	<b>Q</b> 3.36 (85.3)	<b>R</b> 1.26 (32.0)	<b>S</b> 1.76 (44.7)
<b>T</b> 2.12 (53.8)	<b>U</b> Ø .18 Ø (4.6)			

Inches (mm)

D

EZ

B

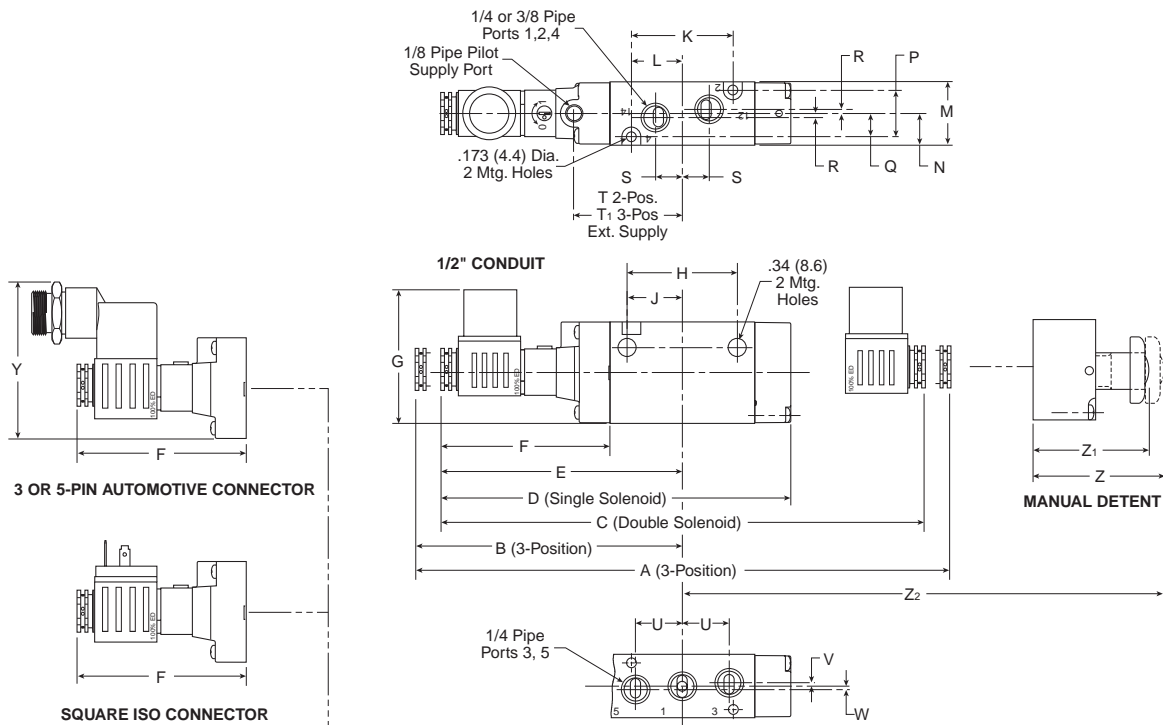
Viking Xtreme

ADEX

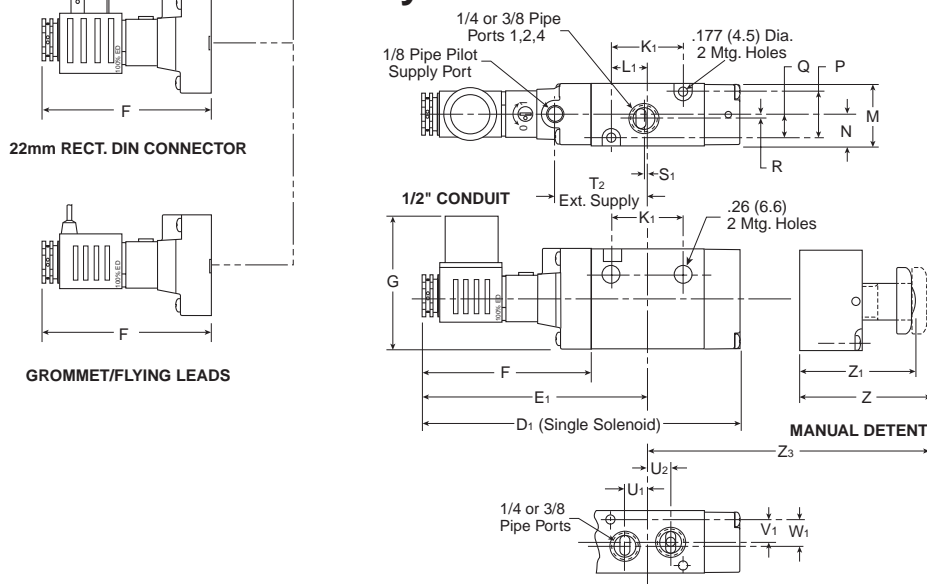
N

**B5**

**4-Way Alternative Electrical Enclosures**



**3-Way Alternative Electrical Enclosures**



**B5 Alternative – Electrical Enclosures** Inches (mm)

<b>A</b> 9.94 (252.5)	<b>A<sub>1</sub></b> .872 (221.4)	<b>B</b> 4.97 (126.2)	<b>C</b> 9.00 (228.6)	<b>D</b> 6.52 (165.6)	<b>D<sub>1</sub></b> 6.02 (152.9)	<b>E</b> 4.50 (114.3)	<b>E<sub>1</sub></b> 4.26 (108.1)	<b>F</b> 3.15 (80.0)	<b>G</b> 2.47 (62.8)	<b>H</b> 2.05 (52.1)	<b>J</b> 1.03 (26.2)	<b>K</b> 1.89 (48.0)
<b>K<sub>1</sub></b> 1.40 (35.5)	<b>L</b> .95 (24.1)	<b>L<sub>1</sub></b> .70 (17.8)	<b>M</b> 1.18 (30.0)	<b>N</b> .59 (15.0)	<b>P</b> .87 (22.1)	<b>Q</b> .43 (10.9)	<b>R</b> .08 (2.0)	<b>S</b> .50 (12.7)	<b>S<sub>1</sub></b> .06 (1.5)	<b>T</b> 2.01 (51.1)	<b>T<sub>1</sub></b> 2.47 (62.7)	<b>T<sub>2</sub></b> 1.76 (44.8)
<b>U</b> .87 (22.1)	<b>U<sub>1</sub></b> .43 (10.9)	<b>U<sub>2</sub></b> .45 (11.3)	<b>V</b> .06 (1.5)	<b>V<sub>1</sub></b> .37 (9.3)	<b>W</b> .07 (1.8)	<b>W<sub>1</sub></b> .50 (13)	<b>Y</b> 2.90 (73.6)	<b>Z</b> 2.40 (60.9)	<b>Z<sub>1</sub></b> 2.12 (53.8)	<b>Z<sub>2</sub></b> 3.75 (95.2)	<b>Z<sub>3</sub></b> 4.17 (105.8)	

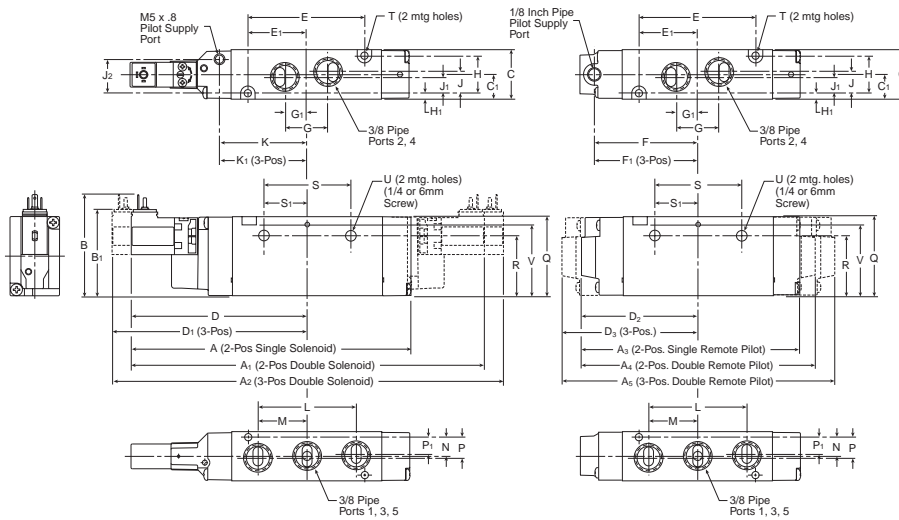


**B6**

**Single & Double Operators – 4-Way Inline**

**Solenoid**

**Remote Pilot**



**B6 4-Way Inline**

<b>A</b> 6.67 (169.5)	<b>A<sub>1</sub></b> 8.41 (213.7)	<b>A<sub>2</sub></b> 9.35 (237.6)	<b>A<sub>3</sub></b> 5.26 (133.7)	<b>A<sub>4</sub></b> 5.59 (142.1)
<b>A<sub>5</sub></b> 6.54 (166.0)	<b>B</b> 2.41 (61.3)	<b>B<sub>1</sub></b> 2.06 (52.3)	<b>C</b> 1.18 (30.0)	<b>C<sub>1</sub></b> .59 (15.0)
<b>D</b> 4.21 (106.8)	<b>D<sub>1</sub></b> 4.68 (118.8)	<b>D<sub>2</sub></b> 2.80 (71.0)	<b>D<sub>3</sub></b> 3.27 (83.0)	<b>E</b> 2.79 (70.8)
<b>E<sub>1</sub></b> 1.39 (35.4)	<b>F</b> 2.45 (62.3)	<b>F<sub>1</sub></b> 2.92 (74.3)	<b>G</b> 1.03 (26.1)	<b>G<sub>1</sub></b> .51 (13.1)
<b>H</b> .91 (23.0)	<b>H<sub>1</sub></b> .14 (3.5)	<b>J</b> .51 (13.1)	<b>J<sub>1</sub></b> .39 (10.0)	<b>J<sub>2</sub></b> .81 (20.6)
<b>K</b> 2.09 (53.0)	<b>K<sub>1</sub></b> 2.56 (64.9)	<b>L</b> 2.34 (59.4)	<b>M</b> 1.17 (29.7)	<b>N</b> .45 (11.5)
<b>P</b> .49 (12.5)	<b>P<sub>1</sub></b> .41 (10.5)	<b>Q</b> 1.89 (48.0)	<b>R</b> 1.45 (36.8)	<b>S</b> 2.09 (53.0)
<b>S<sub>1</sub></b> 1.04 (26.5)	<b>T</b> Ø .17 (4.4)	<b>U</b> Ø .27 (6.9)	<b>V</b> 1.69 (43.0)	

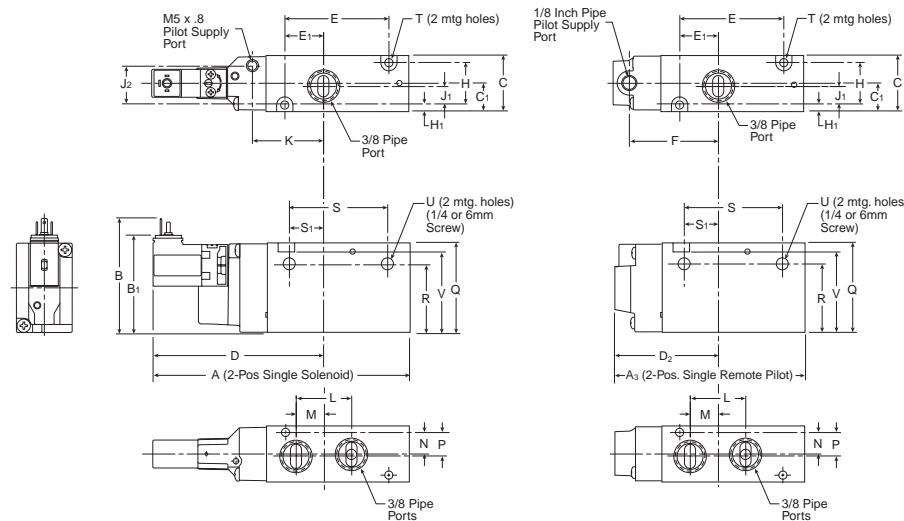
Inches (mm)

**B6**

**Single Operators – 3-Way Inline**

**Solenoid**

**Remote Pilot**



**B6 3-Way Inline**

<b>A</b> 5.42 (137.7)	<b>A<sub>3</sub></b> 4.01 (101.9)	<b>B</b> 2.41 (61.3)	<b>B<sub>1</sub></b> 2.06 (52.3)	<b>C</b> 1.18 (30.0)
<b>C<sub>1</sub></b> .59 (15.0)	<b>D</b> 3.63 (92.1)	<b>D<sub>2</sub></b> 2.22 (56.3)	<b>E</b> 2.19 (55.6)	<b>E<sub>1</sub></b> 0.82 (20.7)
<b>F</b> 1.87 (47.6)	<b>H</b> .91 (23.0)	<b>H<sub>1</sub></b> .14 (3.5)	<b>J<sub>1</sub></b> .39 (10.0)	<b>J<sub>2</sub></b> .81 (20.6)
<b>K</b> 1.51 (38.3)	<b>L</b> 1.17 (29.7)	<b>M</b> .59 (15.0)	<b>N</b> .45 (11.5)	<b>P</b> .49 (12.5)
<b>Q</b> 1.89 (48.0)	<b>R</b> 1.45 (36.8)	<b>S</b> 2.09 (53.0)	<b>S<sub>1</sub></b> 0.76 (19.4)	<b>T</b> Ø .17 (4.4)
<b>U</b> Ø .27 (6.9)	<b>V</b> 1.69 (43.0)			

Inches (mm)

D

EZ

B

Viking Xtreme

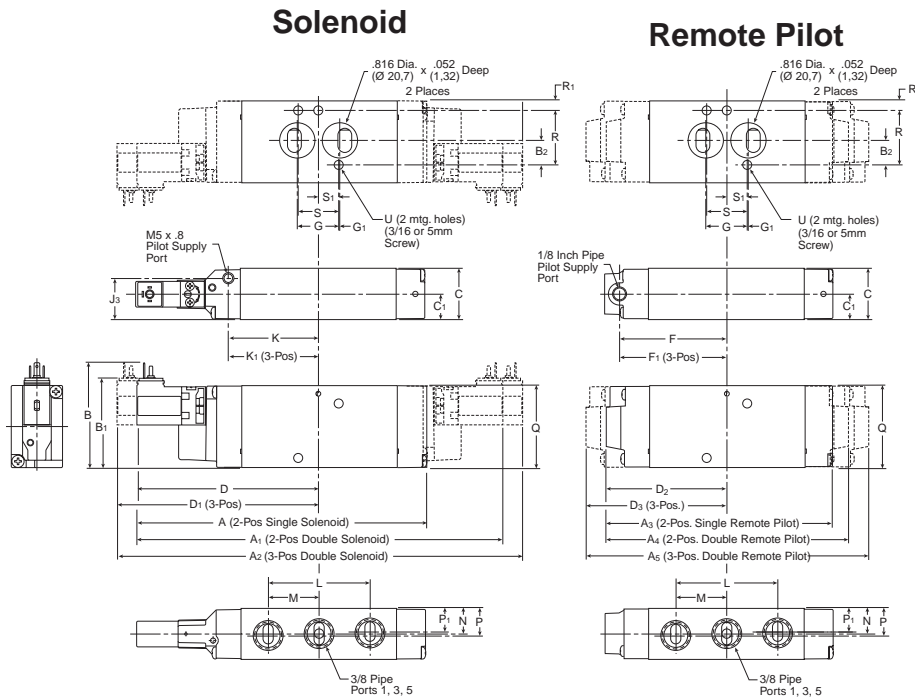
ADEX

N



**B6**

**Single & Double Operators – 4-Way NAMUR Mount**



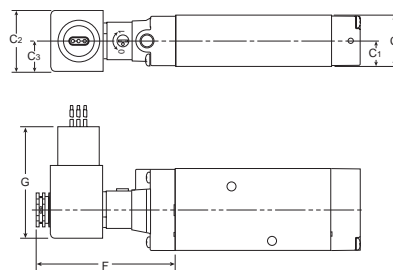
**B6 4-Way NAMUR Mount**

<b>A</b> 6.67 (169.5)	<b>A<sub>1</sub></b> 8.41 (213.7)	<b>A<sub>2</sub></b> 9.35 (237.6)	<b>A<sub>3</sub></b> 5.26 (133.7)	<b>A<sub>4</sub></b> 5.59 (142.1)
<b>A<sub>5</sub></b> 6.54 (166.0)	<b>B</b> 2.41 (61.3)	<b>B<sub>1</sub></b> 2.06 (52.3)	<b>B<sub>2</sub></b> .57 (14.4)	<b>C</b> 1.18 (30.0)
<b>C<sub>1</sub></b> .59 (15)	<b>D</b> 4.21 (106.8)	<b>D<sub>1</sub></b> 4.68 (118.8)	<b>D<sub>2</sub></b> 2.80 (71.0)	<b>D<sub>3</sub></b> 3.27 (83.0)
<b>F</b> 2.45 (62.3)	<b>F<sub>1</sub></b> 2.92 (74.3)	<b>G</b> .95 (24.2)	<b>G<sub>1</sub></b> .02 (0.53)	<b>J<sub>3</sub></b> .95 (24.1)
<b>K</b> 2.09 (53.0)	<b>K<sub>1</sub></b> 2.56 (64.9)	<b>L</b> 2.34 (59.4)	<b>M</b> 1.17 (29.7)	<b>N</b> .59 (15)
<b>P</b> .63 (16)	<b>P<sub>1</sub></b> .55 (14)	<b>Q</b> 1.89 (48.0)	<b>R</b> 1.26 (32)	<b>R<sub>1</sub></b> .22 (5.5)
<b>S</b> .94 (24)	<b>S<sub>1</sub></b> .47 (12)	<b>T</b> Ø .17 Ø (4.4)	<b>U</b> Ø .27 Ø (6.9)	

Inches (mm)

**B6**

**Alternative Electrical Enclosure Option F**



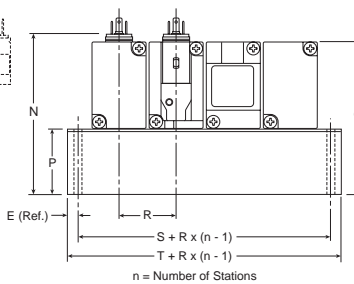
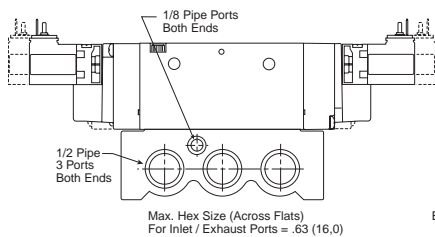
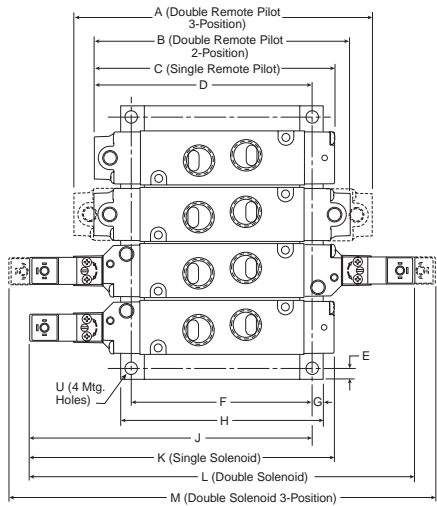
**Hazardous Duty  
 Solenoid Coil**

**B6 4-Way NAMUR Mount  
 with Option F Enclosure**

<b>C</b> 1.18 (30)	<b>C<sub>1</sub></b> .59 (15)	<b>C<sub>2</sub></b> 1.42 (36)	<b>C<sub>3</sub></b> .71 (18)	<b>F</b> 3.15 (80)
<b>G</b> 2.60 (66)				

Inches (mm)

**B6 Single & Double Operators – 4-Way IEM Aluminum Bar**

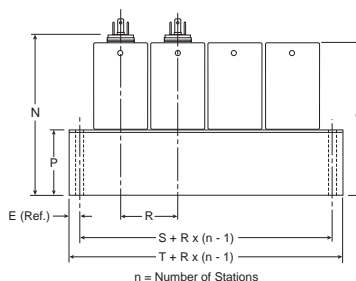
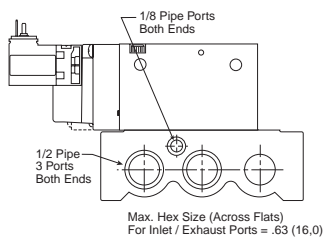
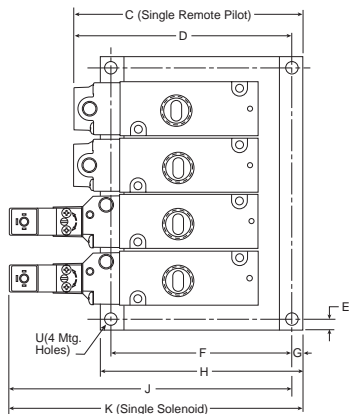


**B6 4-Way IEM Aluminum Bar Manifold**

<b>A</b> 6.54 (166.0)	<b>B</b> 5.59 (142.1)	<b>C</b> 5.26 (133.7)	<b>D</b> 4.76 (121.0)	<b>E</b> .24 (6.0)
<b>F</b> 3.94 (100.0)	<b>G</b> .24 (6.0)	<b>H</b> 4.41 (112.0)	<b>J</b> 6.17 (156.8)	<b>K</b> 6.67 (169.5)
<b>L</b> 8.41 (213.7)	<b>M</b> 9.35 (237.6)	<b>N</b> 3.60 (91.3)	<b>P</b> 1.54 (39.0)	<b>Q</b> 3.43 (87.0)
<b>R</b> 1.24 (31.5)	<b>S</b> 1.77 (45.0)	<b>T</b> 2.24 (57.0)	<b>U</b> ∅ .26 ∅ (6.5)	

Inches (mm)

**B6 Single Operators – 3-Way IEM Aluminum Bar**



**B6 3-Way IEM Aluminum Bar Manifold**

<b>C</b> 5.00 (127.0)	<b>D</b> 4.76 (121.0)	<b>E</b> .24 (6.0)	<b>F</b> 3.94 (100.0)	<b>G</b> .24 (6.0)
<b>H</b> 4.41 (112.0)	<b>J</b> 6.17 (156.8)	<b>K</b> 6.41 (162.8)	<b>N</b> 3.60 (91.3)	<b>P</b> 1.54 (39.0)
<b>Q</b> 3.43 (87.0)	<b>R</b> 1.24 (31.5)	<b>S</b> 1.77 (45.0)	<b>T</b> 2.24 (57.0)	<b>U</b> ∅ .26 ∅ (6.5)

Inches (mm)

**D**

**EZ**

**B**

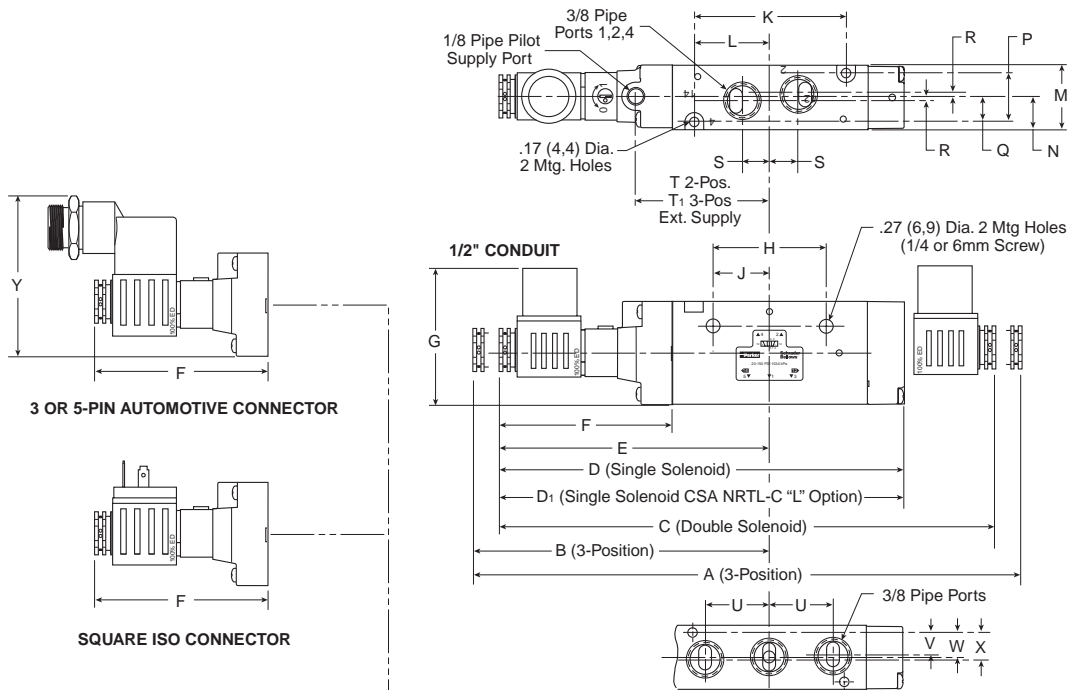
**Viking Xtreme**

**ADEX**

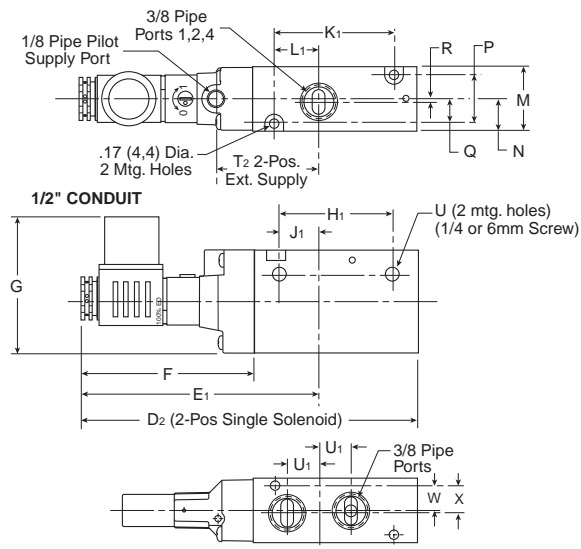
**N**

**B6**

**4-Way Alternative Electrical Enclosures**



**3-Way Alternative Electrical Enclosures**



**B6 Alternative – Electrical Enclosures** Inches (mm)

<b>A</b> 10.84 (275.3)	<b>B</b> 5.41 (137.5)	<b>C</b> 9.89 (251.3)	<b>D</b> 7.41 (188.2)	<b>D<sub>1</sub></b> 7.74 (196.6)	<b>D<sub>2</sub></b> 6.17 (156.6)	<b>E</b> 4.94 (125.6)	<b>E<sub>2</sub></b> 4.37 (111.0)	<b>F</b> 3.15 (80.0)	<b>G</b> 2.47 (62.8)	<b>H</b> 2.09 (53.0)	<b>H<sub>1</sub></b> 2.09 (53.0)	<b>J</b> 1.04 (26.5)
<b>J<sub>1</sub></b> 0.76 (19.4)	<b>K</b> 2.79 (70.8)	<b>K<sub>1</sub></b> 2.19 (55.6)	<b>L</b> 1.39 (35.4)	<b>L<sub>1</sub></b> .82 (20.7)	<b>M</b> 1.18 (30.0)	<b>N</b> .59 (15.0)	<b>P</b> .91 (23.0)	<b>Q</b> .45 (11.5)	<b>R</b> .06 (1.6)	<b>S</b> .51 (13.1)	<b>T</b> 2.45 (62.3)	<b>T<sub>1</sub></b> 2.93 (29.7)
<b>T<sub>2</sub></b> 1.89 (48.0)	<b>U</b> .59 (15.0)	<b>U<sub>1</sub></b> .59 (15.0)	<b>V</b> .41 (10.5)	<b>W</b> .45 (11.5)	<b>X</b> .49 (12.5)	<b>Y</b> 2.90 (73.6)						



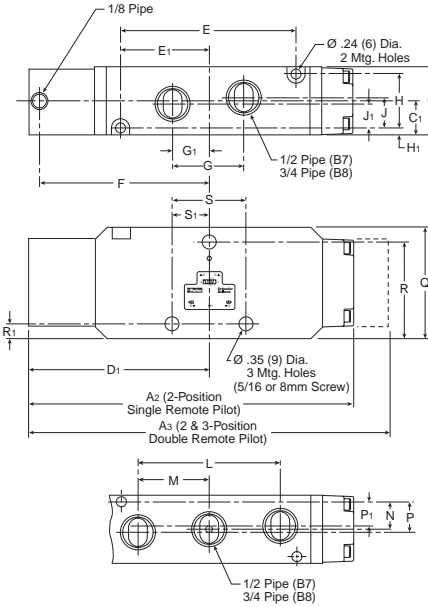
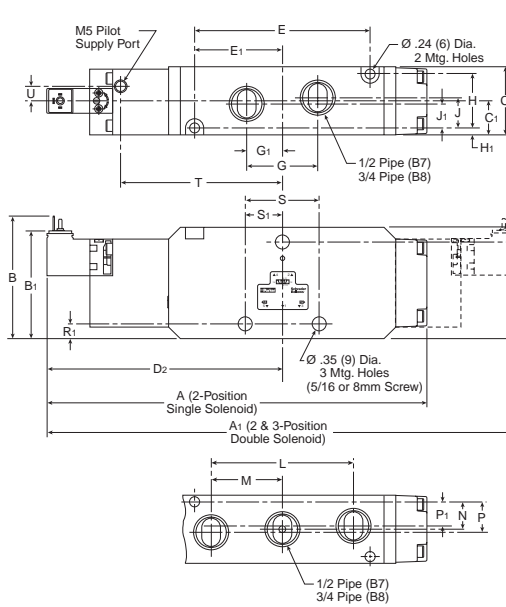
**B7**

**Single & Double Operators – 4-Way Inline**

**B8**

**Solenoid**

**Remote Pilot**



**B7 & B8 4-Way Inline**

<b>A</b> 9.13 (232)	<b>A<sub>1</sub></b> 11.29 (287)	<b>A<sub>2</sub></b> 7.79 (198)	<b>A<sub>3</sub></b> 8.62 (219)
<b>B</b> 2.95 (75)	<b>B<sub>1</sub></b> 2.59 (66)	<b>C</b> 1.65 (42)	<b>C<sub>1</sub></b> .83 (21)
<b>D<sub>1</sub></b> 4.29 (109)	<b>D<sub>2</sub></b> 5.63 (143)	<b>E</b> 4.21 (107)	<b>E<sub>1</sub></b> 2.13 (54)
<b>F</b> 4.06 (103)	<b>G</b> 1.73 (44)	<b>G<sub>1</sub></b> .87 (22)	<b>H</b> 1.29 (33)
<b>H<sub>1</sub></b> .16 (4)	<b>J</b> .75 (19)	<b>J<sub>1</sub></b> .59 (15)	<b>L</b> 3.39 (86)
<b>M</b> 1.69 (43)	<b>N</b> .67 (17)	<b>P</b> .75 (19)	<b>P<sub>1</sub></b> .59 (15)
<b>Q</b> 2.68 (68)	<b>R</b> 2.32 (59)	<b>R<sub>1</sub></b> .35 (9)	<b>S</b> 1.81 (46)
<b>S<sub>1</sub></b> .90 (23)	<b>T</b> 3.94 (100)	<b>U</b> .35 (9)	

Inches (mm)

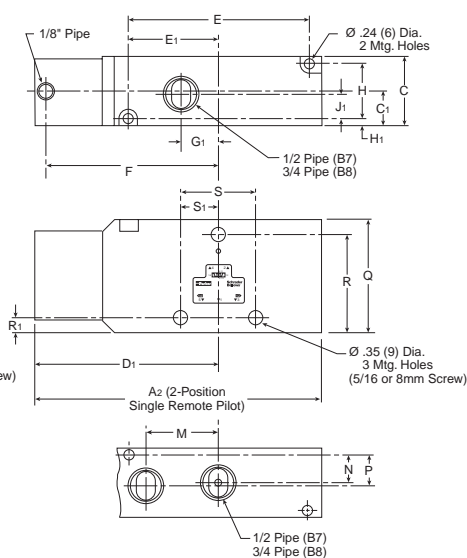
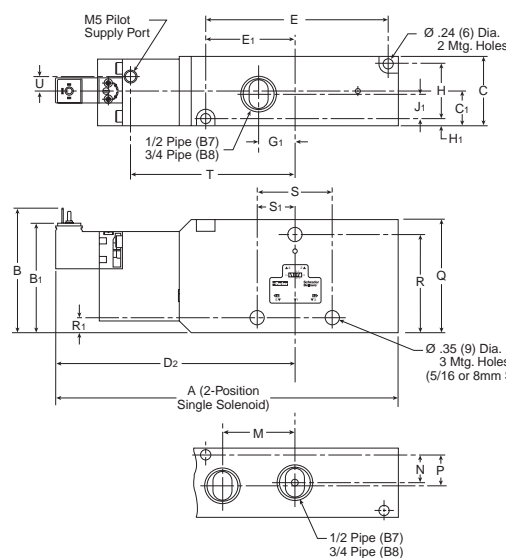
**B7**

**Single Operators – 3-Way Inline**

**B8**

**Solenoid**

**Remote Pilot**



**B7 & B8 3-Way Inline**

<b>A</b> 7.99 (203)	<b>A<sub>2</sub></b> 6.65 (169)	<b>B</b> 2.95 (75)	<b>B<sub>1</sub></b> 2.59 (66)
<b>C</b> 1.65 (42)	<b>C<sub>1</sub></b> .83 (21)	<b>D<sub>1</sub></b> 4.29 (109)	<b>D<sub>2</sub></b> 5.63 (143)
<b>E</b> 4.21 (107)	<b>E<sub>1</sub></b> 2.13 (54)	<b>F</b> 4.06 (103)	<b>G<sub>1</sub></b> .86 (22)
<b>H</b> 1.29 (33)	<b>H<sub>1</sub></b> .16 (4)	<b>J<sub>1</sub></b> .59 (15)	<b>M</b> 1.69 (43)
<b>N</b> .67 (17)	<b>P</b> .75 (19)	<b>Q</b> 2.68 (68)	<b>R</b> 2.32 (59)
<b>R<sub>1</sub></b> .35 (9)	<b>S</b> 1.81 (46)	<b>S<sub>1</sub></b> .90 (23)	<b>T</b> 3.94 (100)
<b>U</b> .35 (9)			

Inches (mm)

**D**

**EZ**

**B**

**Viking Xtreme**

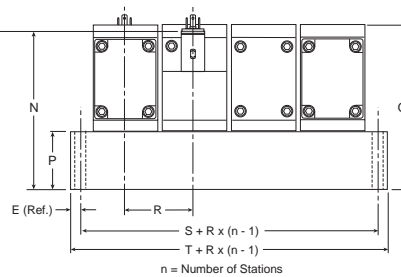
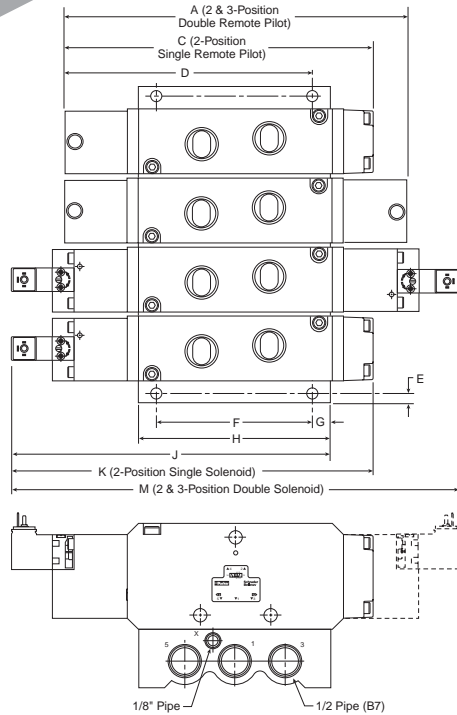
**ADEX**

**N**

**B7**

**Single & Double Operators – 4-Way IEM Aluminum Bar**

**B8**



**B7 & B8 4-Way IEM Aluminum Bar Manifold**

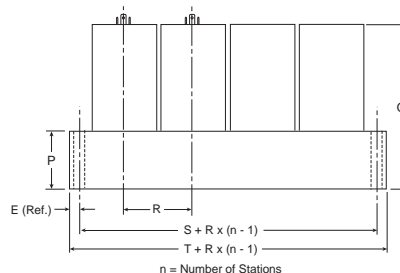
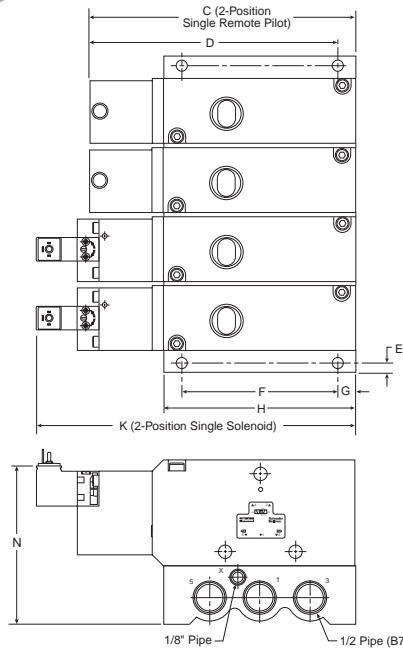
<b>A</b> 7.79 (198)	<b>C</b> 8.62 (219)	<b>D</b> 6.26 (159)	<b>E</b> .24 (6)
<b>F</b> 3.94 (100)	<b>G</b> .45 (11.5)	<b>H</b> 4.84 (123)	<b>J</b> 8.07 (205)
<b>K</b> 9.13 (232)	<b>M</b> 11.29 (287)	<b>N</b> 4.00 (101.5)	<b>P</b> 1.48 (37.5)
<b>Q</b> 4.15 (105.5)	<b>R</b> 1.77 (45)	<b>S</b> 2.24 (57)	<b>T</b> 2.72 (69)

Inches (mm)

**B7**

**Single Operators – 3-Way IEM Aluminum Bar**

**B8**



**B7 & B8 3-Way IEM Aluminum Bar Manifold**

<b>C</b> 6.65 (169)	<b>D</b> 4.92 (124.9)	<b>E</b> .24 (6)	<b>F</b> 3.94 (100)
<b>G</b> .45 (11.5)	<b>H</b> 4.84 (123)	<b>K</b> 7.99 (203)	<b>N</b> 4.00 (101.5)
<b>P</b> 1.48 (37.5)	<b>Q</b> 4.15 (105.5)	<b>R</b> 1.77 (45)	<b>S</b> 2.24 (57)
<b>T</b> 2.72 (69)			

Inches (mm)

**D**

EZ

B

Viking Xtreme

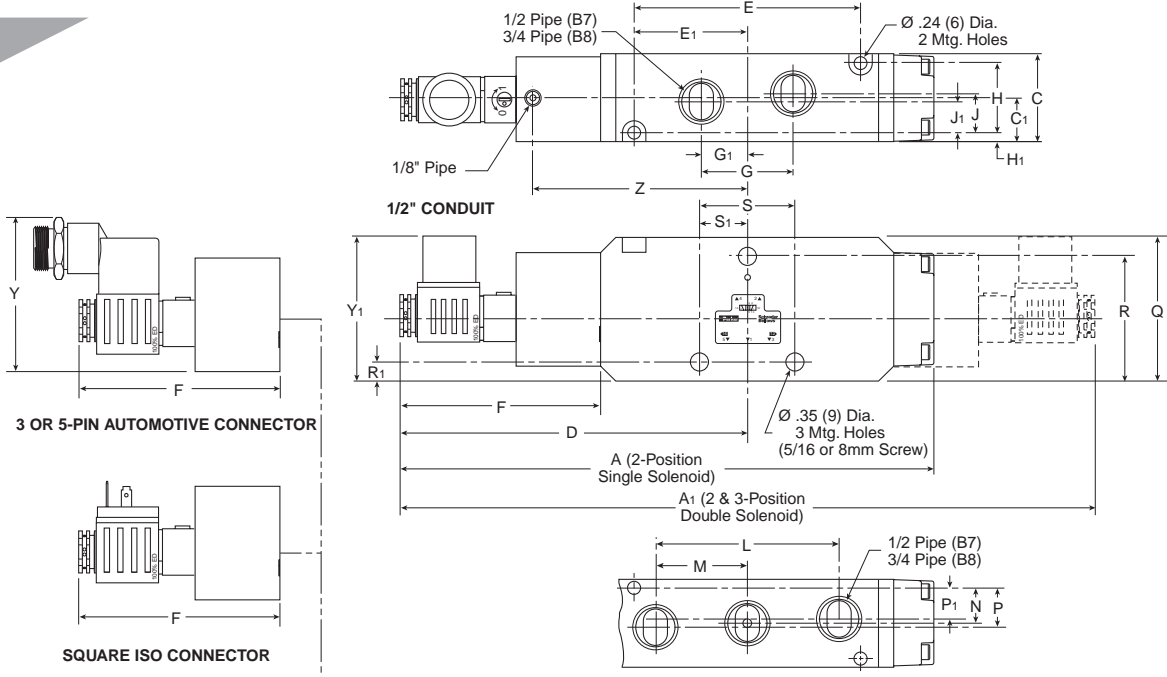
ADEX

N

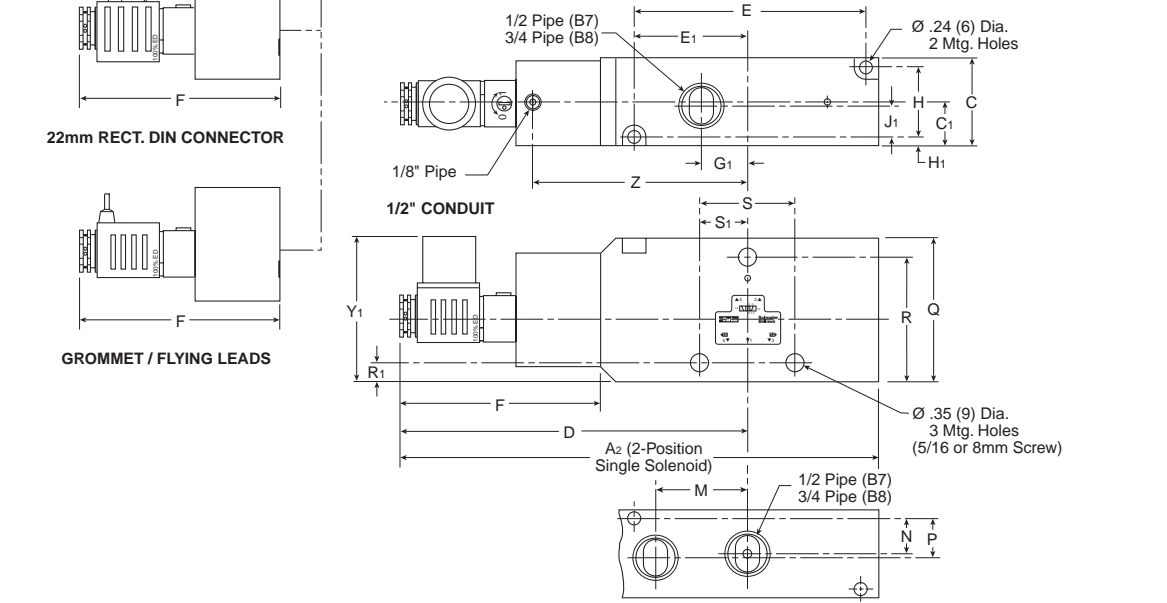
**B7**

**B8**

**4-Way Alternative Electrical Enclosures**



**3-Way Alternative Electrical Enclosures**



**B7 & B8 3 & 4-Way Alternative – Electrical Enclosures** Inches (mm)

<b>A</b> 9.92 (252)	<b>A<sub>1</sub></b> 12.91 (328)	<b>A<sub>2</sub></b> 8.78 (223)	<b>C</b> 1.65 (42)	<b>C<sub>1</sub></b> .83 (21)	<b>D</b> 6.46 (164)	<b>E</b> 4.21 (107)	<b>E<sub>1</sub></b> 2.13 (54)	<b>F</b> 3.74 (95)	<b>G</b> 1.73 (44)	<b>G<sub>1</sub></b> .86 (22)	<b>H</b> 1.29 (33)	<b>H<sub>1</sub></b> .16 (4)
<b>J</b> .75 (19)	<b>J<sub>1</sub></b> .59 (15)	<b>L</b> 3.39 (86)	<b>M</b> 1.69 (43)	<b>N</b> .67 (17)	<b>P</b> .75 (19)	<b>P<sub>1</sub></b> .59 (15)	<b>Q</b> 2.68 (68)	<b>R</b> 2.32 (59)	<b>R<sub>1</sub></b> .35 (9)	<b>S</b> 1.81 (46)	<b>S<sub>1</sub></b> .90 (23)	<b>Y</b> 2.87 (73)
<b>Y<sub>1</sub></b> 2.71 (69)	<b>Z</b> 3.98 (101)											

**D**

**EZ**

**B**

**Viking Xtreme**

**ADEX**

**N**

**Definitions**

- CSA C/US** ..... Canadian Standards Association and UL Applicable.
- IP65** ..... International classification system for sealing effectiveness for enclosures of electrical equipment. IP stands for "Ingress Protection" and the two digits XY stand for: X - protection from solid objects and Y - protection from moisture. IP 65 is protection from dust and water washdown.
- NEMA 4** ..... National standard for electrical enclosure protection. NEMA 4 provides protection against dirt, dust, water hosedown and rain. (Similar to IP 65)
- DIN 43650C** ..... International standard for the 15mm 3-Pin connector. The pin spacing is 8mm.
- 3-WAY** ..... Valve has three ways for air to flow. Also designated as 3/2.
- 4-WAY** ..... Valve has four ways for air to flow. Also designated as 5/2 for 2-Position and 5/3 for 3-Position.
- NC** ..... Normally Closed. Pressure is blocked when in neutral position. (Normally Non-Passing)
- NO** ..... Normally Open. Pressure passes thru when in neutral position. (Normally Passing)
- IEM** ..... Inlet / Exhaust manifold. The inlet and exhaust ports are located in the manifold. The cylinder ports are accessed in the valve.
- 5-Port Subbase Bar Manifold**  
Manifold that includes the inlet and outlet ports as well as the #2 & #4 cylinder ports. Utilizes a subbase valve less base.
- NLMOR** ..... Non-Locking Manual Override. A constant actuation must be maintained for the valve to remain shifted.
- LMOR** ..... Locking Manual Override. Valve remains shifted without constant end user override actuation.
- Surge Suppression**  
Nullifies reverse EMF generated when a solenoid is de-energized.
- SCFM** ..... Measure of air flow. Standard Cubic Feet per Minute at 68°F and 36% humidity at sea level.
- PSIG** ..... Pounds per Square Inch measured with a gage. (Catalog pressure reflects PSIG)
- PSIA** ..... Pounds per Square Inch atmospheric.
- kPa** ..... Kilopascals. International measure of pressure. 145 PSIG = 1000 kPa
- PSIG = 0 → PSIA = 14.7 → In. of Hg = 0 → kPa = 0

**Product Shipping Weights**

Series	Single Solenoid	3-Position Solenoid	Manifold Stackable	Subbase	End Plate
B3	.25	.35	.20	.60	.50
B5	.70	.80	.20	.80	.70
B6	1.8	2.4	—	—	—
B7	2.5	2.9	—	—	—
B8	2.5	2.9	—	—	—

Weights are in pounds and are approximate.

**Cv Calculations**

**Cv** ..... Measure of calculating flow of a valve (or other pneumatic device) that takes into effect the temperature, pressure, pressure drop, and flow. As a rule of thumb, a Cv of 1.0 is 25 SCFM with a 5 PSIG pressure drop.

$$Cv = \frac{\text{Cylinder Area (Sq. In.)} \times \text{Stroke (In.)} \times \text{Compression Factor (Table 1)}}{\text{(See Table 2)} \times \text{Stroke Time (sec.)} \times 28.8}$$

**Table 1  
Compression Factors and "A" Constants**

Inlet Pressure (PSIG)	Compression Factor	"A" Constants for Various Pressure Drop*		
		2 PSI Δ P	5 PSI Δ P	10 PSI Δ P
10	1.6	.152	.103	
20	2.3	.126	.084	.065
30	3.0	.111	.073	.055
40	3.7	.100	.065	.048
50	4.4	.091	.059	.044
60	5.1	.085	.055	.040
70	5.7	.079	.051	.037
80	6.4	.075	.048	.035
90	7.1	.071	.046	.033
100	7.8	.068	.044	.032
110	8.5	.065	.042	.030
120	9.2	.063	.040	.029
130	9.9	.061	.039	.028
140	10.6	.058	.037	.027
150	11.2	.057	.036	.026
160	11.9	.055	.035	.025
170	12.6	.053	.034	.024
180	13.3	.052	.033	.024
190	14.0	.051	.032	.023
200	14.7	.050	.032	.023

**Note:** Use "A" constant at 5 PSI Δ P for most applications. On very critical applications, use "A" at 2 PSI Δ P. You will find in many cases, a 10 PSI Δ P is not detrimental, and can save money and mounting space.

\* Tabulated values are the solution of  $\frac{1}{22.48} \sqrt{\frac{GT}{(P_1 - P_2) P_2}}$  where T is for 68°F and G = 1 for Air.

**Table 2  
Effective Square-Inch Areas for Standard-Bore-Size Cylinders**

Bore Size	Cylinder Area (Sq. In.)	Bore Size	Cylinder Area (Sq. In.)
3/4"	.44	4"	12.57
1"	.79	4-1/2"	15.90
1-1/8"	.99	5"	19.64
1-1/4"	1.23	6"	28.27
1-1/2"	1.77	7"	38.48
1-3/4"	2.41	8"	50.27
2"	3.14	10"	78.54
2-1/2"	4.91	12"	113.10
3-1/4"	8.30	14"	153.94
3-5/8"	10.32		



**Notes**

---

**D**

EZ

B

Viking  
Xtreme

ADEX

N