

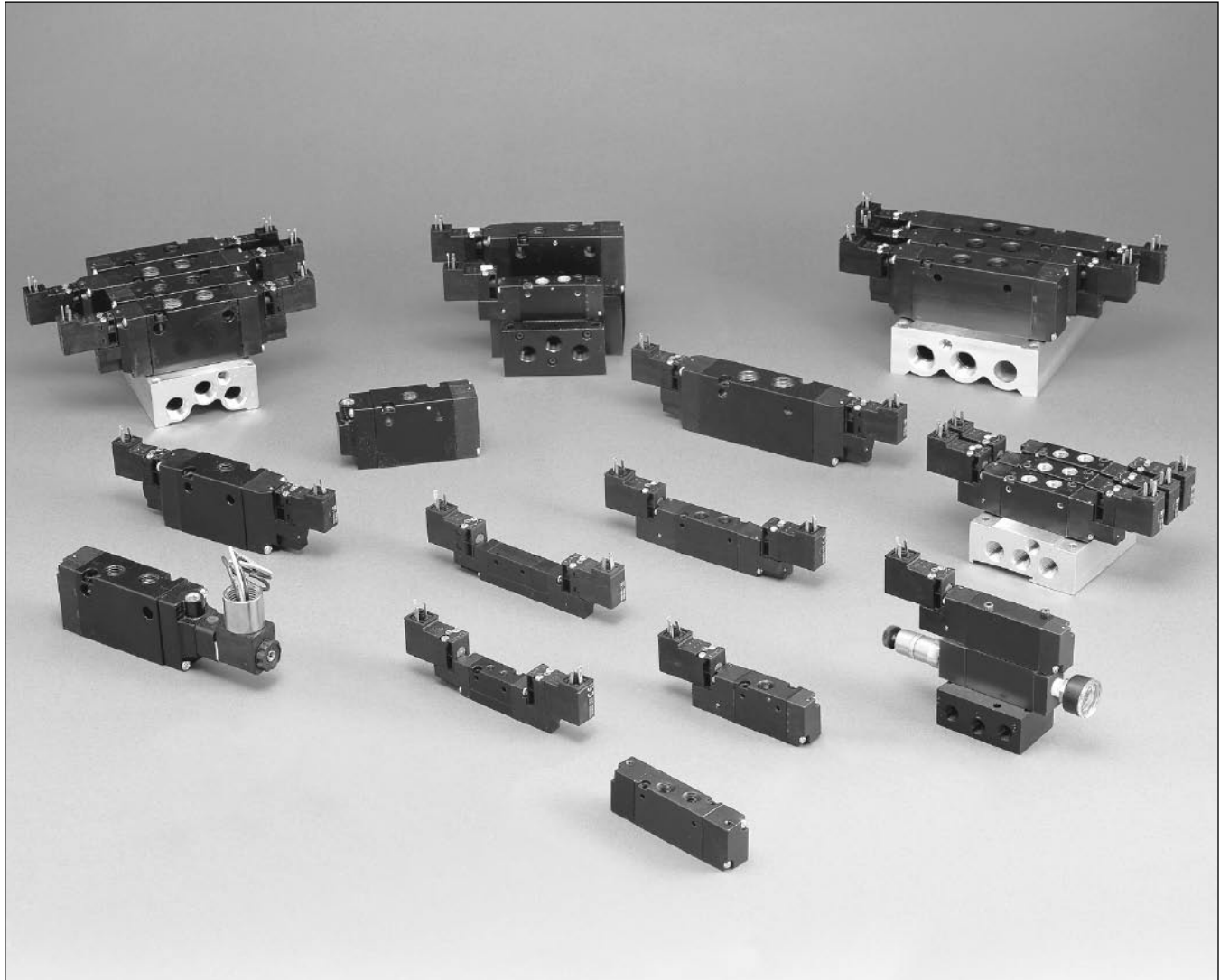
"B" Series

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 J

www.parker.com/pneu/b

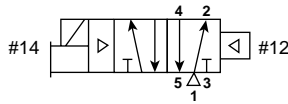


J

| | | | |
|-----------------------------|-------|--|-------|
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Bold text part numbers are standard.
Standard text part numbers may have longer lead times.

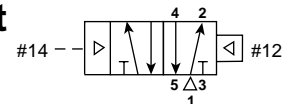
**Single Solenoid
4-Way, 2-Position**



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.

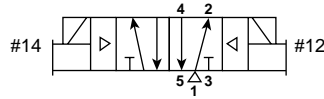
**Single Remote Pilot
4-Way, 2-Position**



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.

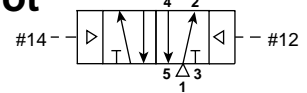
**Double Solenoid
4-Way, 2-Position**



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.

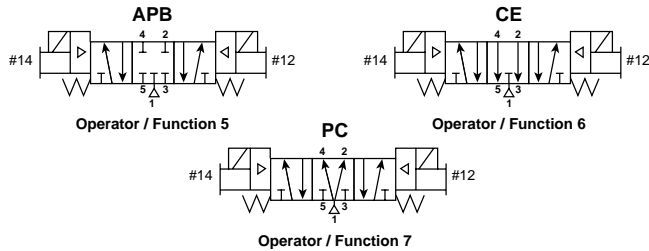
**Double Remote Pilot
4-Way, 2-Position**



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.

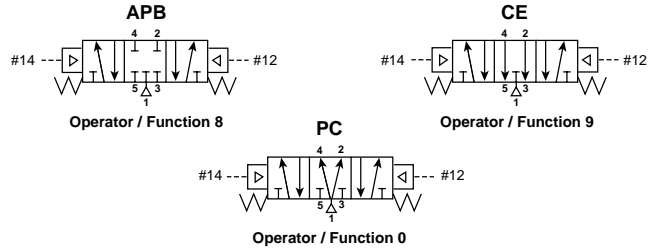
With #14 operator energized – inlet port 1 connected to cylinder port 4, cylinder port 2 connected to exhaust port 3.

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.

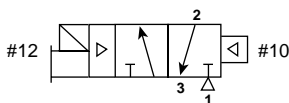
Function 0: Pressure Center
Pressure port 1 connected to cylinder ports 2 and 4, and exhaust ports 3 and 5 blocked in center position.

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.

Single Solenoid
3-Way, 2-Position NC

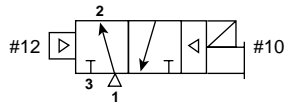


Normally Closed:

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 Solenoid
3-Way, 2-Position NO

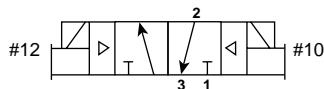


Normally Open:

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.

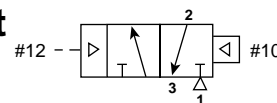
Double Solenoid
3-Way, 2-Position



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.

Single Remote Pilot
3-Way, 2-Position NC

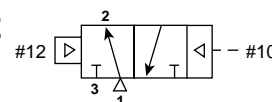


Normally Closed:

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 Remote Pilot
3-Way, 2-Position NO

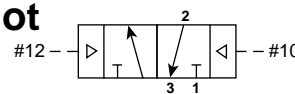


Normally Open:

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 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.

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3-Way Configuration

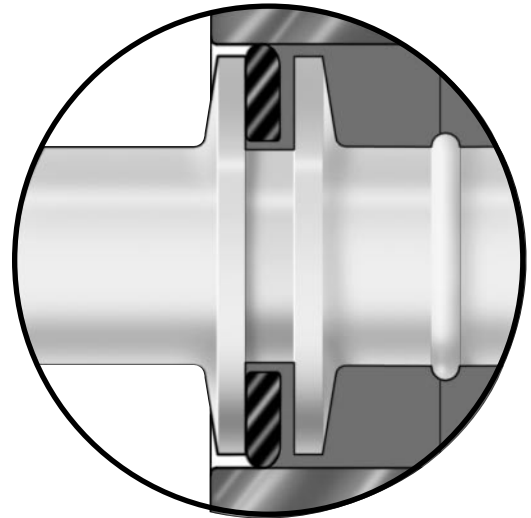
B6, B7, B8:
 Looking at the #1 and #3 ports, the solenoid (or remote operator) is always on the #3 port end. Different spools are used for NO and NC functions.

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.



Refer to www.parker.com/pneu/b
Click on Catalog B Series-E/USA

“B” Series

Flow Characteristics

- B3: .75 Cv
- B5: 1.40 Cv
- B6: 2.70 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

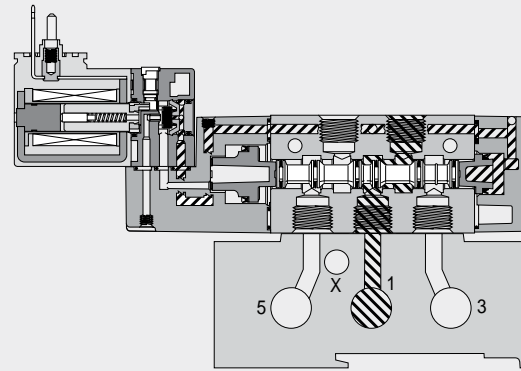
Solenoids

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

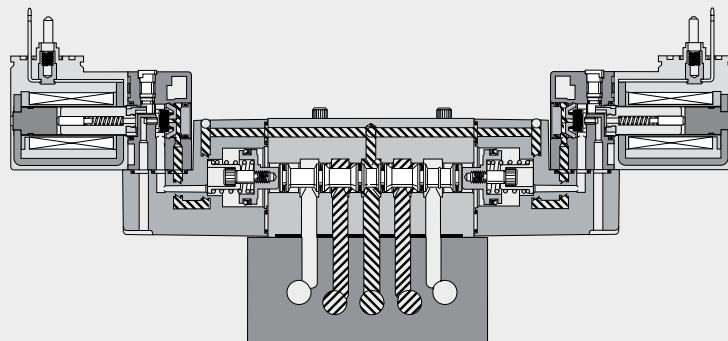
Certification / Approval

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

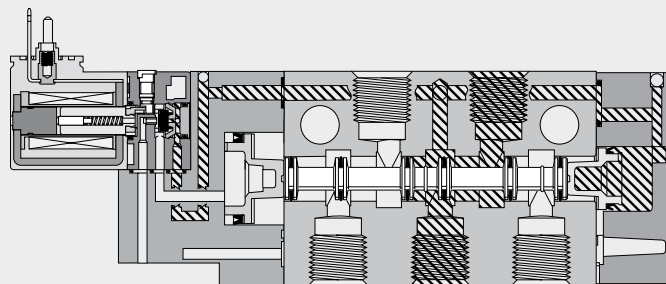
* See catalog technical section for more information.



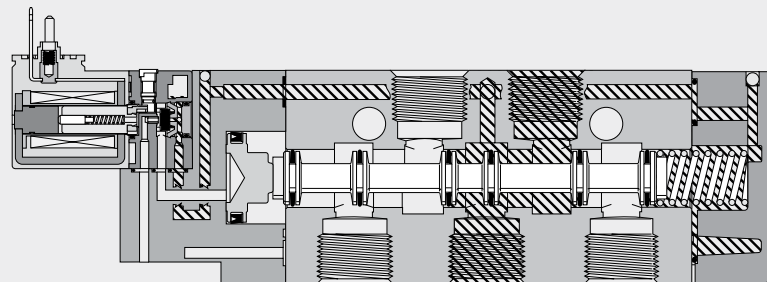
B3 Single Solenoid IEM Aluminum Bar Manifold
 Shown De-Energized



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



B5 Single Solenoid Inline - Air Return
 Shown De-Energized

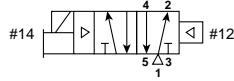


B6, B7 & B8 Single Solenoid Inline - Spring / Air Return
 Shown De-Energized



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Single Solenoid
4-Way, 2-Position



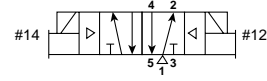
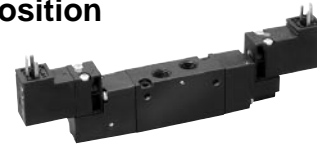
Inline

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

Subbase

| | | | | |
|-----------|--|-----------------|--------------|---------|
| B3 | B31VBB553C B31VBB549C | 120VAC 24VDC | Less Base | 0.65 Cv |
|-----------|--|-----------------|--------------|---------|

Double Solenoid
4-Way, 2-Position



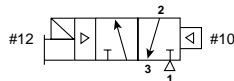
Inline

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

Subbase

| | | | | |
|-----------|--|-----------------|--------------|---------|
| B3 | B32VBB553C B32VBB549C | 120VAC 24VDC | Less Base | 0.65 Cv |
|-----------|--|-----------------|--------------|---------|

Single Solenoid
3-Way, 2-Position, NC

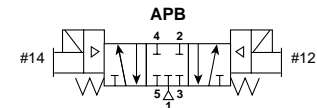


Inline

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

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

Double Solenoid
4-Way, 3-Position, APB



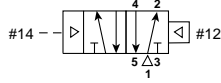
Inline

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

Subbase

| | | | | |
|-----------|--|-----------------|--------------|---------|
| B3 | B35VBB553C B35VBB549C | 120VAC 24VDC | Less Base | 0.50 Cv |
|-----------|--|-----------------|--------------|---------|

Single Remote Pilot
4-Way, 2-Position



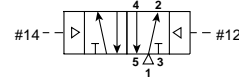
Inline

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

Subbase

| | | | |
|-----------|-------------------|-----------|---------|
| B3 | B33V000XXC | Less Base | 0.65 Cv |
|-----------|-------------------|-----------|---------|

Double Remote Pilot
4-Way, 2-Position



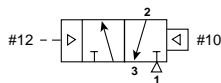
Inline

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

Subbase

| | | | |
|-----------|-------------------|-----------|---------|
| B3 | B34V000XXC | Less Base | 0.65 Cv |
|-----------|-------------------|-----------|---------|

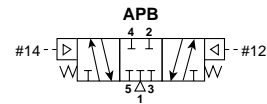
Single Remote Pilot
3-Way, 2-Position, NC



Inline

| | | | |
|-----------|-------------------|------|---------|
| B3 | B3K0000XXC | 1/8" | 0.75 Cv |
| B5 | B5K1000XXC | 1/4" | 1.4 Cv |
| | B5K2000XXC | 3/8" | |
| B6 | B6K2000XXA | 3/8" | 2.7 Cv |
| B7 | B7K3000XXA | 1/2" | 5.9 Cv |
| B8 | B8K4000XXA | 3/4" | 7.0 Cv |

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



Inline

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

Subbase

| | | | |
|-----------|-------------------|-----------|---------|
| B3 | B38V000XXC | Less Base | 0.50 Cv |
|-----------|-------------------|-----------|---------|

J



B3 Series

BOLD OPTIONS ARE STANDARD

| | | | | | | | | |
|----------------------------------|--|---|---|--|--|--|---|--|
| Basic Series B3 | Operator/ Function 1 | Port Size/ Thread Type 0 | Pilot Source/ Exhaust B | Overrides B | Enclosures/ Lead Length 5 | Voltage 49 | Options - | Engineering Level C |
| Basic Series B3 Series | | | | Overrides § 0 None, Remote Pilot Valve B Flush - Non-Locking C Flush - Locking D Extended - Non-Locking E Extended - Locking X Valve Less 15mm Solenoid | | Voltage § AC DC 60Hz 50Hz 42 24 22 45 47* 48* 49 53 120 110 57 240 230 | | Engineering Level C Current |
| | Operator / Function 3-Way G Single Solenoid, 2-Position NC - Air Return H Single Solenoid, 2-Position NO - Air Return J Double Solenoid, 2-Position K Single Remote Pilot, 2-Position NC - Air Return L Single Remote Pilot, 2-Position NO - Air Return M Double Remote Pilot, 2-Position V Single Solenoid, 2-Position NC - Air Return / Spring Assist W Single Solenoid, 2-Position NO - Air Return / Spring Assist X Single Remote Pilot, 2-Position NC - Air Return / Spring Assist Y Single Remote Pilot, 2-Position NO - Air Return / Spring Assist 4-Way 1 Single Solenoid, 2-Position - Air Return 2 Double Solenoid, 2-Position 3 Single Remote Pilot, 2-Position - Air Return 4 Double Remote Pilot, 2-Position 5 Double Solenoid, 3-Position - APB 6 Double Solenoid, 3-Position - CE 7 Double Solenoid, 3-Position - PC 8 Double Remote Pilot, 3-Position - APB 9 Double Remote Pilot, 3-Position - CE 0 Double Remote Pilot, 3-Position - PC E Single Solenoid, 2-Position - Air Return / Spring Assist F Single Remote Pilot, 2-Position - Air Return / Spring Assist | | Pilot Source / Pilot Exhaust 0 None, Remote Pilot Valve B† Internal - Port #1 / Vented E* Dual Pressure - Port #3 / Vented K† External - Body / Tapped M5 X‡ External - Manifold / Vented | | Enclosures / Lead Length 0 None, Remote Pilot Valve 5 15mm 3-Pin DIN 43650C (Male Only) X Valve Less 15mm Solenoid | | Options Blank None 02 Solenoid Rotated 180° - Pins Down | |
| | | | * Not available for 3-Way Valves. † Not available for Remote Pilot Valves. ‡ See Pilot Source Note below. | Port Size / Thread Type 3-Way 0* 1/8" NPT Inline 5* 1/8" BSPP "G" Inline Dual 3-Way & 4-Way 0* 1/8" NPT Inline 5* 1/8" BSPP "G" Inline H‡ 1/4" NPT Subbase T** 1/8" NPT Face Mount V‡ Subbase Valve Less Base | | | | § Enclosure '5' - Override / Voltage Availability S - Standard O - Option |
| | | | * 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. | | | Voltage Code Override Code Standard B C D E 42 O O - - 45 O O - - 47 - - O O 48 - - 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 - - 47 - - - - 48 - - - - 49 S S O O 53 S S O O 57 O O - - | |

B5 Series

BOLD OPTIONS ARE STANDARD

| Basic Series | Operator/ Function | Port Size/ Thread Type | Pilot Source/ Exhaust | Overrides | Enclosures/ Lead Length | Voltage | Options | Engineering Level | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|--|--|--|---|---|--------------|---------------|--|--|--|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|
| B5 | 1 | 1 | B | B | 5 | 49 | - | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basic Series B5 Series | Operator / Function 3-Way G Single Solenoid, 2-Position NC - Air Return H Single Solenoid, 2-Position NO - Air Return J Double Solenoid, 2-Position K Single Remote Pilot, 2-Position NC - Air Return L Single Remote Pilot, 2-Position NO - Air Return M Double Remote Pilot, 2-Position V Single Solenoid, 2-Position NC - Air Return / Spring Assist W Single Solenoid, 2-Position NO - Air Return / Spring Assist X Single Remote Pilot, 2-Position NC - Air Return / Spring Assist Y Single Remote Pilot, 2-Position NO - Air Return / Spring Assist 4-Way 1 Single Solenoid, 2-Position - Air Return 2 Double Solenoid, 2-Position 3 Single Remote Pilot, 2-Position - Air Return 4 Double Remote Pilot, 2-Position 5 Double Solenoid, 3-Position - APB 6 Double Solenoid, 3-Position - CE 7 Double Solenoid, 3-Position - PC 8 Double Remote Pilot, 3-Position - APB 9 Double Remote Pilot, 3-Position - CE 0 Double Remote Pilot, 3-Position - PC E Single Solenoid, 2-Position - Air Return / Spring Assist F Single Remote Pilot, 2-Position - Air Return / Spring Assist | Port Size / Thread Type 3-Way 1* 1/4" NPT Inline 2* 3/8" NPT Inline 6* 1/4" BSPP "G" Inline 7* 3/8" BSPP "G" Inline 4-Way 1* 1/4" NPT Inline 2* 3/8" NPT Inline 6* 1/4" BSPP "G" Inline 7* 3/8" BSPP "G" Inline J† 3/8" NPT Subbase T†† 1/4" NPT NAMUR Mount V† Subbase Valve Less Base - NPT W†† 1/4" BSPP "G" NAMUR Mount | Pilot Source / Pilot Exhaust Enclosures "0, 5 & X" 0 None, Remote Pilot Valve A† Internal - Port #1 / Tapped M5 B† Internal - Port #1 / Vented E* Dual Pressure - Port #3 / Vented K† External - Body / Tapped M5 X† External - Manifold / Vented Enclosures "A, B, C, D, E, F, G, H, N, Q & R" A† Internal - Port #1 / Tapped M5 B† Internal - Port #1 / Vented D*† Dual Pressure - Port #3 / Tapped M5 K† External - Body / Tapped M5 | Overrides \$ 0 None, Remote Pilot Valve A† No Override B* Flush - Non-Locking C Flush - Locking D Extended - Non-Locking E* Extended - Locking X Valve Less 15mm Solenoid * Only Available with Encl. "5". † Only Available with Encl. "E". | Enclosures / 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) 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 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 | Voltage \$ AC DC 60Hz 50Hz 42 24 22 45 12 47* 12 48* 24 49 24 53** 120 110 53 120 110 57 240 230 Remote Pilot - 1/8" or Valve Less Solenoid Remote Pilot - 5/32" (4mm) Tube | Options Blank None 02 Solenoid Rotated 180° – Pins Down MD**†† Manual Detent V0† Fluorocarbon Seals * Only Available with Mobile Voltages "47" & "48", or Enclosures "N" or "X". † Not available with Enclosure "0", "5", "X", "E" or "F". †† Only Available with Operator Function 1 & 3. | Engineering Level C Current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Enclosures / 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) 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 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | <table border="1"> <thead> <tr> <th rowspan="2">Voltage Code</th> <th colspan="4">Override Code</th> </tr> <tr> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>42</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>45</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>47</td> <td>-</td> <td>-</td> <td>O</td> <td>O</td> </tr> <tr> <td>48</td> <td>-</td> <td>-</td> <td>O</td> <td>O</td> </tr> <tr> <td>49</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>53</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>57</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | Voltage Code | Override Code | | | | B | C | D | E | 42 | O | O | - | - | 45 | O | O | - | - | 47 | - | - | O | O | 48 | - | - | O | O | 49 | S | S | O | O | 53 | S | S | O | O | 57 | O | O | - | - |
| Voltage Code | Override Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | B | C | D | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | O | O | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | O | O | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | - | - | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | - | - | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | S | S | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | S | S | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | O | O | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | <table border="1"> <thead> <tr> <th rowspan="2">Voltage Code</th> <th colspan="4">"02" Option</th> </tr> <tr> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>42</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>45</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>47</td> <td>-</td> <td>-</td> <td>O</td> <td>O</td> </tr> <tr> <td>48</td> <td>-</td> <td>-</td> <td>O</td> <td>O</td> </tr> <tr> <td>49</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>53</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>57</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | Voltage Code | "02" Option | | | | B | C | D | E | 42 | O | O | - | - | 45 | O | O | - | - | 47 | - | - | O | O | 48 | - | - | 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 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | - | - | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | - | - | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | S | S | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | S | S | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | O | O | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

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

J

B6 Series

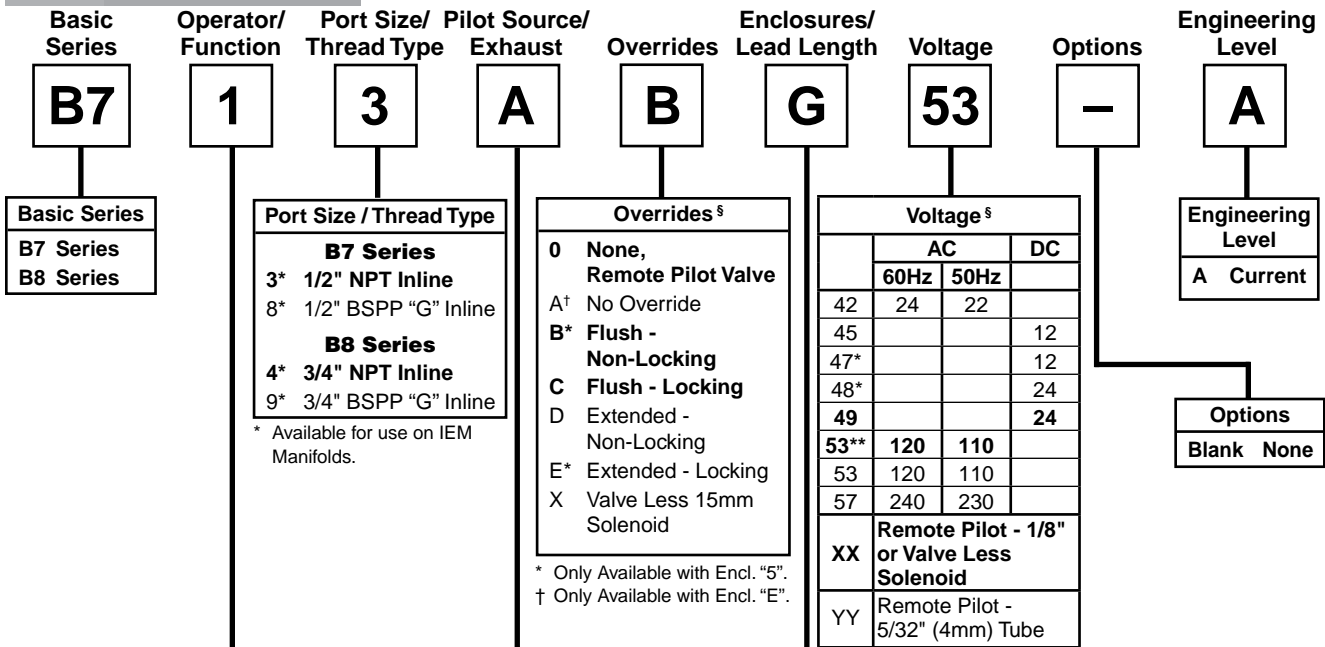
BOLD OPTIONS ARE STANDARD

| Basic Series | Operator/Function | Port Size/Thread Type | Pilot Source/Exhaust | Overrides | Enclosures/Lead Length | Voltage | Options | Engineering Level | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---|--------------|------------------------|-----------|----------|-------------------|------|----|----|----|----|----|---|---|----|-----|---|---|----|-----|----|---|----|-----------|---|----|-----------|------|-----|-----|----|----|-----|-----|---|--|---|-------|------|----|-----------------------------------|-----|-----------------------------------|---|---|--------------|-------------|--|--|--|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|----|---|---|---|---|
| B6 | 1 | 2 | B | B | 5 | 49 | - | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Basic Series</p> <p>B6 Series</p> | <p>Port Size / Thread Type</p> <p>3-Way / 4-Way</p> <p>2* 3/8" NPT Inline</p> <p>7* 3/8" BSPP "G" Inline</p> <p>T† 1/4" NPT NAMUR Mount</p> <p>* Available for use on IEM Manifolds.</p> <p>† 4-Way only. Available with pilot source "0", "A", "B" and "L" only.</p> | <p>Overrides §</p> <p>0 None, Remote Pilot Valve</p> <p>A† No Override</p> <p>B* Flush - Non-Locking</p> <p>C Flush - Locking</p> <p>D Extended - Non-Locking</p> <p>E* Extended - Locking</p> <p>X Valve Less 15mm Solenoid</p> <p>* Only Available with Encl. "5".</p> <p>† Only Available with Encl. "E".</p> | <p>Voltage §</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2"></th> <th colspan="2">AC</th> <th rowspan="2">DC</th> </tr> <tr> <th>60Hz</th> <th>50Hz</th> </tr> <tr> <td>42</td> <td>24</td> <td>22</td> <td></td> </tr> <tr> <td>45</td> <td></td> <td></td> <td>12</td> </tr> <tr> <td>47*</td> <td></td> <td></td> <td>12</td> </tr> <tr> <td>48*</td> <td></td> <td></td> <td>24</td> </tr> <tr> <td>49</td> <td></td> <td></td> <td>24</td> </tr> <tr> <td>53**</td> <td>120</td> <td>110</td> <td></td> </tr> <tr> <td>57</td> <td>240</td> <td>230</td> <td></td> </tr> </table> <p>XX Remote Pilot - 1/8" or Valve Less Solenoid</p> <p>YY Remote Pilot - 5/32" (4mm) Tube</p> <p>* Mobile voltage. Only available with Enclosures - "5" (Overrides "D" & "E" Only); "G" & "Q" (Overrides "C" & "D" Only).</p> <p>**Enclosure 5</p> | | AC | | DC | 60Hz | 50Hz | 42 | 24 | 22 | | 45 | | | 12 | 47* | | | 12 | 48* | | | 24 | 49 | | | 24 | 53** | 120 | 110 | | 57 | 240 | 230 | | <p>Engineering Level</p> <p>A Current</p> | <p>Options</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Blank</th> <th>None</th> </tr> <tr> <td>02</td> <td>Solenoid Rotated 180° - Pins Down</td> </tr> <tr> <td>42*</td> <td>Series Cylinder Mount Replacement</td> </tr> </table> <p>* Only Available with Port Size "T" and "0", "A", "B", and "L" Pilot Source.</p> | Blank | None | 02 | Solenoid Rotated 180° - Pins Down | 42* | Series Cylinder Mount Replacement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | AC | | DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 60Hz | 50Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | 24 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | | | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47* | | | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48* | | | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | | | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53** | 120 | 110 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | 240 | 230 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blank | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 02 | Solenoid Rotated 180° - Pins Down | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42* | Series Cylinder Mount Replacement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Operator / Function</p> <p>3-Way</p> <p>V Single Solenoid, 2-Position NC - Air Return / Spring Assist</p> <p>W Single Solenoid, 2-Position NO - Air Return / Spring Assist</p> <p>X Single Remote Pilot, 2-Position NC - Air Return / Spring Assist</p> <p>Y Single Remote Pilot, 2-Position NO - Air Return / Spring Assist</p> <p>4-Way</p> <p>1 Single Solenoid, 2-Position - Air Return</p> <p>2 Double Solenoid, 2-Position</p> <p>3 Single Remote Pilot, 2-Position - Air Return</p> <p>4 Double Remote Pilot, 2-Position</p> <p>5 Double Solenoid, 3-Position - APB</p> <p>6 Double Solenoid, 3-Position - CE</p> <p>7 Double Solenoid, 3-Position - PC</p> <p>8 Double Remote Pilot, 3-Position - APB</p> <p>9 Double Remote Pilot, 3-Position - CE</p> <p>0 Double Remote Pilot, 3-Position - PC</p> <p>E Single Solenoid, 2-Position - Air Return / Spring Assist</p> <p>F Single Remote Pilot, 2-Position - Air Return / Spring Assist</p> | <p>Pilot Source / Pilot Exhaust</p> <p>Enclosures "0, 5 & X"</p> <p>0 None, Remote Pilot Valve</p> <p>A† Internal - Port #1 / Tapped M5</p> <p>B† Internal - Port #1 / Vented</p> <p>H Dual Pressure - Port #5 / Vented</p> <p>K† External - Body / Tapped M5</p> <p>Enclosures "A, B, C, D, E, F, G, H, N, Q & R"</p> <p>A† Internal - Port #1 / Tapped M5</p> <p>B† Internal - Port #1 / Vented</p> <p>K† External - Body / Tapped M5</p> <p>* Not available for 3-Way Valves.</p> <p>† Not available for Remote Pilot valves.</p> | <p>Enclosures / Lead Length</p> <p>0 None, Remote Pilot Valve</p> <p>5 15mm 3-Pin DIN 43650C (Male Only)</p> <p>A 30mm Square 3-Pin - ISO 4400 Form A (Male Only)</p> <p>B 22mm Rectangular 3-Pin - Type B Industrial (Male Only)</p> <p>E* Intrinsically Safe - 30mm 3-Pin</p> <p>F** Hazardous Duty 1/2" NPT Conduit - 18" Leads</p> <p>G Grommet - 18" Leads</p> <p>H 1/2" NPT Conduit - 18" Leads</p> <p>N Valve Less "A - R" Coil</p> <p>Q Grommet - 72" Leads</p> <p>R 1/2" NPT Conduit - 72" Leads</p> <p>X Valve Less 15mm Solenoid</p> <p>* 24 VDC & Override "A" Only.</p> <p>** 12 VDC, 24 VDC, 120 VAC or 240 VAC.</p> | <p>§ Enclosure '5' - Override / Voltage Availability</p> <p>S - Standard</p> <p>O - Option</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">Voltage Code</th> <th colspan="4">Override Code</th> </tr> <tr> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> <tr> <td>42</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>45</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>47</td> <td>-</td> <td>-</td> <td>O</td> <td>O</td> </tr> <tr> <td>48</td> <td>-</td> <td>-</td> <td>O</td> <td>O</td> </tr> <tr> <td>49</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>53</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>57</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">Voltage Code</th> <th colspan="4">"02" Option</th> </tr> <tr> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> <tr> <td>42</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>45</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> <tr> <td>47</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>48</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>49</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>53</td> <td>S</td> <td>S</td> <td>O</td> <td>O</td> </tr> <tr> <td>57</td> <td>O</td> <td>O</td> <td>-</td> <td>-</td> </tr> </table> | Voltage Code | Override Code | | | | B | C | D | E | 42 | O | O | - | - | 45 | O | O | - | - | 47 | - | - | O | O | 48 | - | - | 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 | - | - | 47 | - | - | - | - | 48 | - | - | - | - | 49 | S | S | O | O | 53 | S | S | O | O | 57 | O | O | - | - |
| Voltage Code | Override Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | B | C | D | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | O | O | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | O | O | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | - | - | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | - | - | 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 | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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.

B7 & B8 Series

BOLD OPTIONS ARE STANDARD



Operator / Function

3-Way

V Single Solenoid, 2-Position NC - Air Return / Spring Assist
 W Single Solenoid, 2-Position NO - Air Return / Spring Assist
 X Single Remote Pilot, 2-Position NC - Air Return / Spring Assist
 Y Single Remote Pilot, 2-Position NO - Air Return / Spring Assist

4-Way

1 **Single Solenoid, 2-Position - Air Return**
 2 **Double Solenoid, 2-Position**
 3 **Single Remote Pilot, 2-Position - Air Return**
 4 **Double Remote Pilot, 2-Position**
 5 **Double Solenoid, 3-Position - APB**
 6 Double Solenoid, 3-Position - CE
 7 Double Solenoid, 3-Position - PC
 8 **Double Remote Pilot, 3-Position - APB**
 9 Double Remote Pilot, 3-Position - CE
 0 Double Remote Pilot, 3-Position - PC
 E Single Solenoid, 2-Position - Air Return / Spring Assist
 F Single Remote Pilot, 2-Position - Air Return / Spring Assist

Pilot Source / Pilot Exhaust

Enclosures "0, 5 & X"

0 None, Remote Pilot Valve
 A† Internal - Port #1 / Tapped M5
 B† Internal - Port #1 / Vented
 K† External - Body / Tapped M5

Enclosures "A, B, C, D, E, F, G, H, N, Q & R"

A† Internal - Port #1 / Tapped M5
 B† Internal - Port #1 / Vented
 K† External - Body / Tapped M5

† Not available for Remote Pilot valves.

Enclosures / 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.

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

| Voltage Code | Override Code | | | |
|--------------|---------------|---|---|---|
| | B | C | D | E |
| 42 | O | O | - | - |
| 45 | O | O | - | - |
| 47 | - | - | O | O |
| 48 | - | - | O | O |
| 49 | S | S | O | O |
| 53 | S | S | O | O |
| 57 | O | O | - | - |

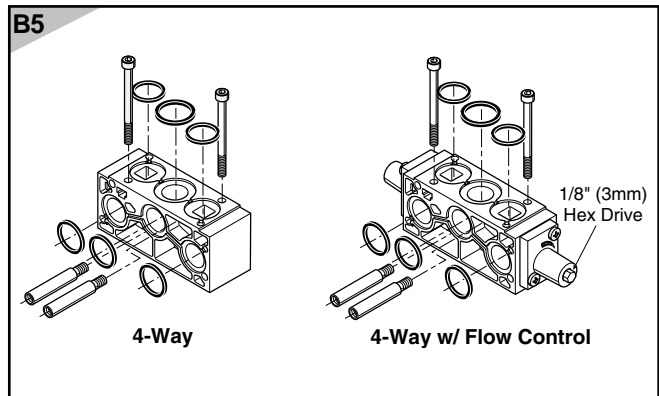
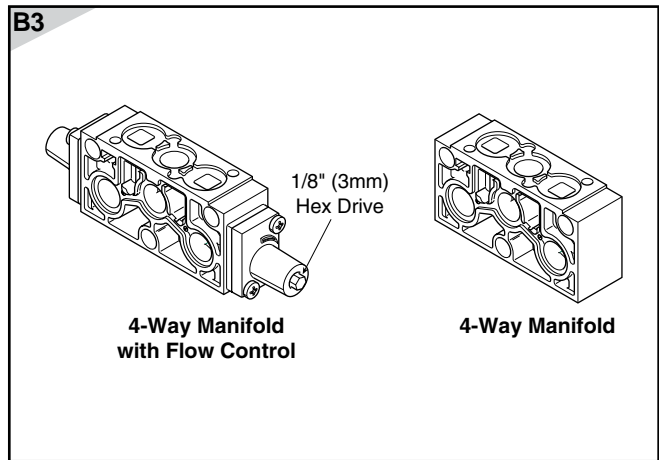
INLINE Valves -
 Only used IF an IEM Aluminum Bar Manifold requires a common external pilot signal thru the manifold for low pressure / vacuum applications.



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.

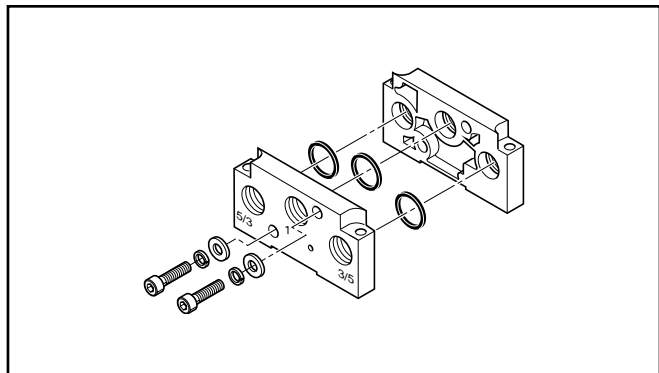


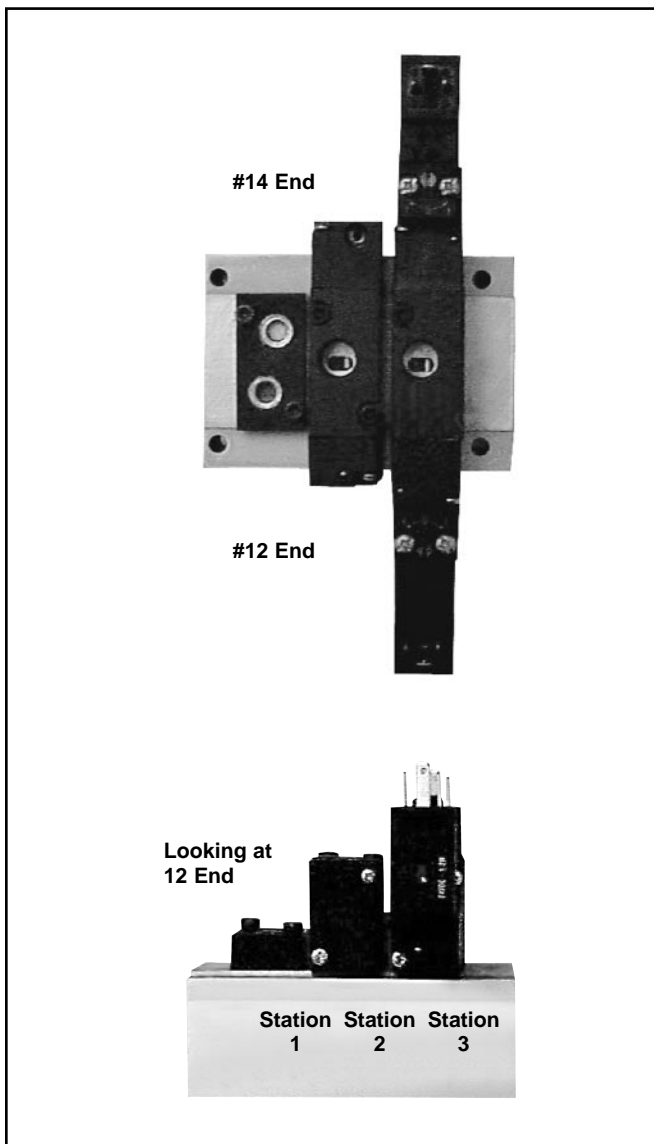
End Plate Kits

| 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.

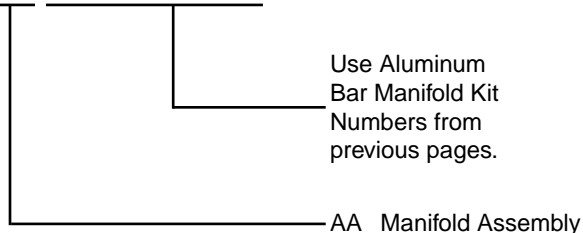




How To Order Aluminum Bar Manifold Assemblies

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***##P**

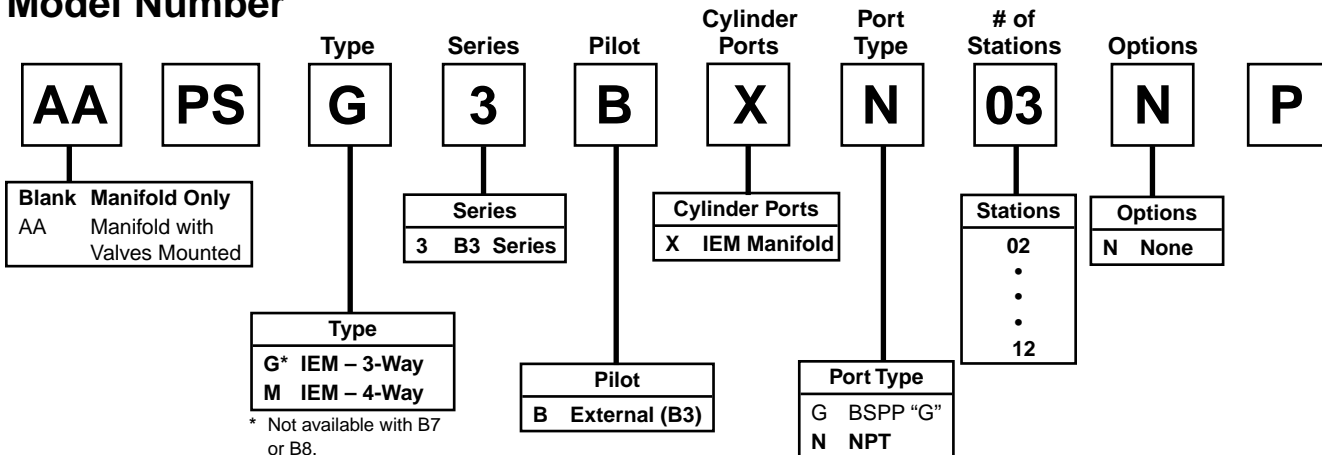


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Example: Application requires a 3-station "B3" 3-Way manifold with station #1 blanked off with valves assembled.

| Qty. | Part No. | Comment |
|------|-----------------|-----------|
| 1 | AASG3BXN03NP | |
| 1 | PS2966P | Station 1 |
| 1 | B330000XXC..... | Station 2 |
| 1 | B3J0BB553C..... | Station 3 |

Model Number





B3 Series

35mm DIN Rail Mount

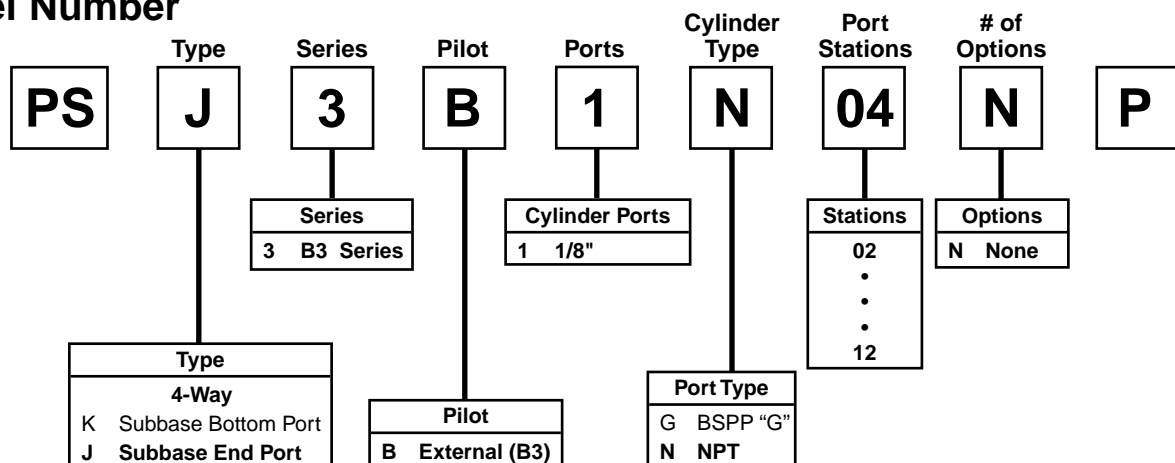
| | | |
|-----------------|--------------------|------------------------|
| 4-Way, 1/8" NPT | PSJ3B1N##NP | ## – stations 02 to 12 |
|-----------------|--------------------|------------------------|

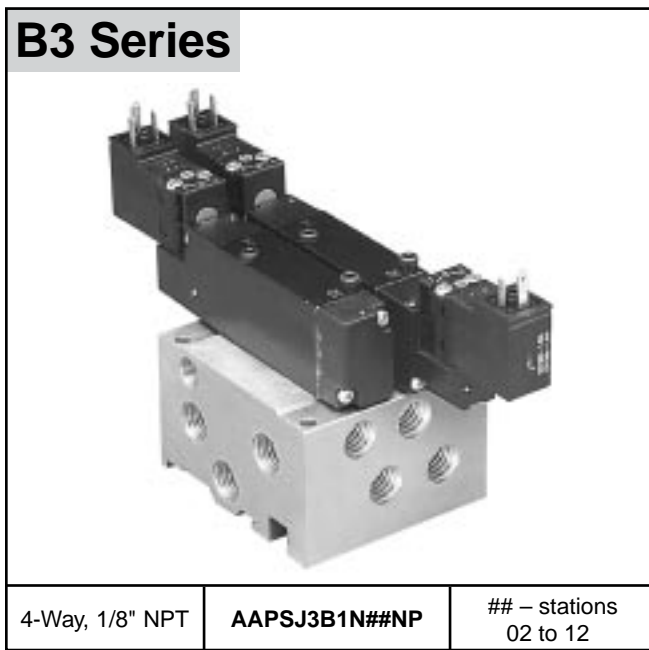
- Utilizes Subbase mount B3 valves.
- Available for 4-Way valves. If 3-Way function is required, plug a cylinder port.
- Common External Pilot galley is standard.
- Standard Internal Pilot valves need not use this galley, and the galley does not need to be plugged.
- External Pilot Valves – "X" or "W",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

Kit includes:

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

Model Number





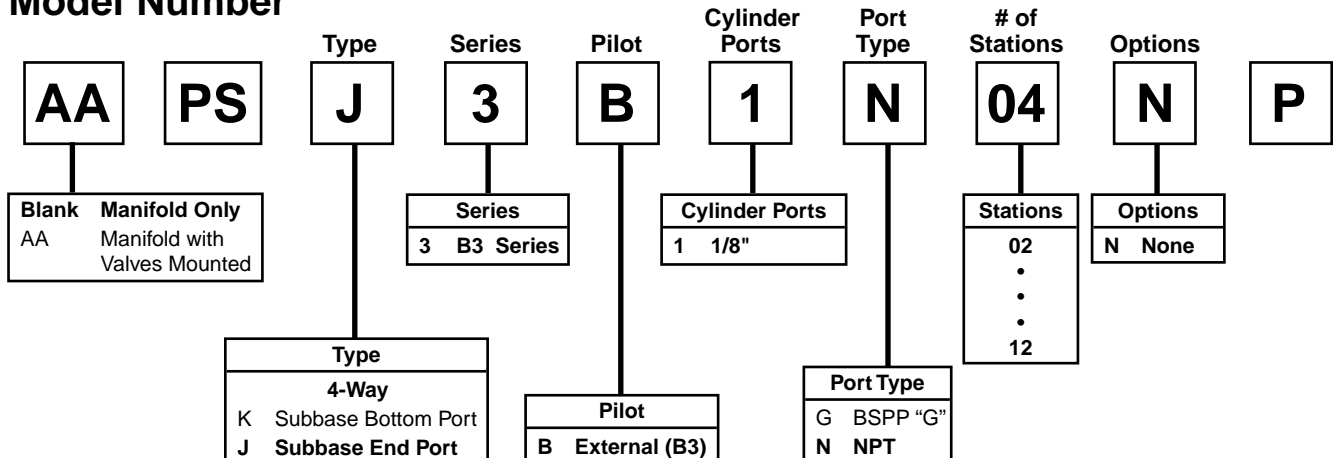
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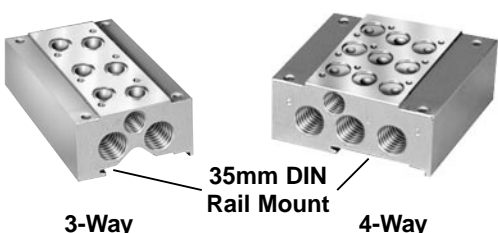
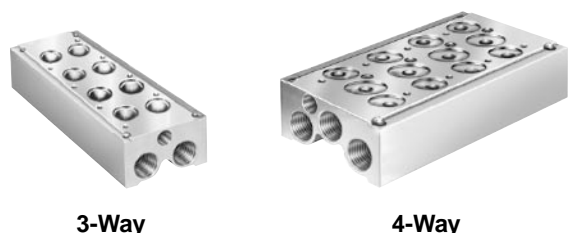

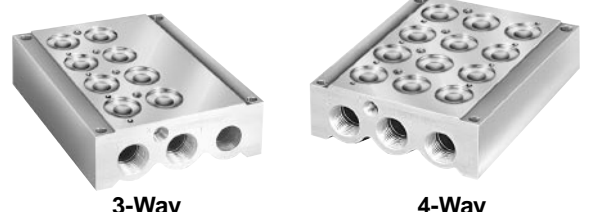
- Utilizes Subbase mount B3 valves.
- Available for 4-Way valves. If 3-Way function is required, plug a cylinder port.
- Common External Pilot galley is standard.
- Standard Internal Pilot valves need not use this galley, and the galley does not need to be plugged.
- External Pilot Valves – "X" or "W",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

Kit includes:

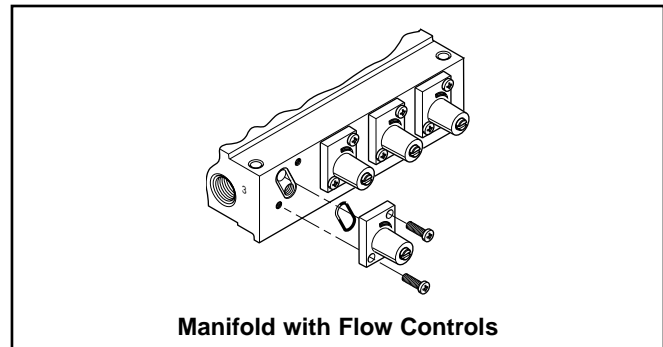
Subbase – (1) Manifold (bolts & gasket come with subbase valve).

Model Number

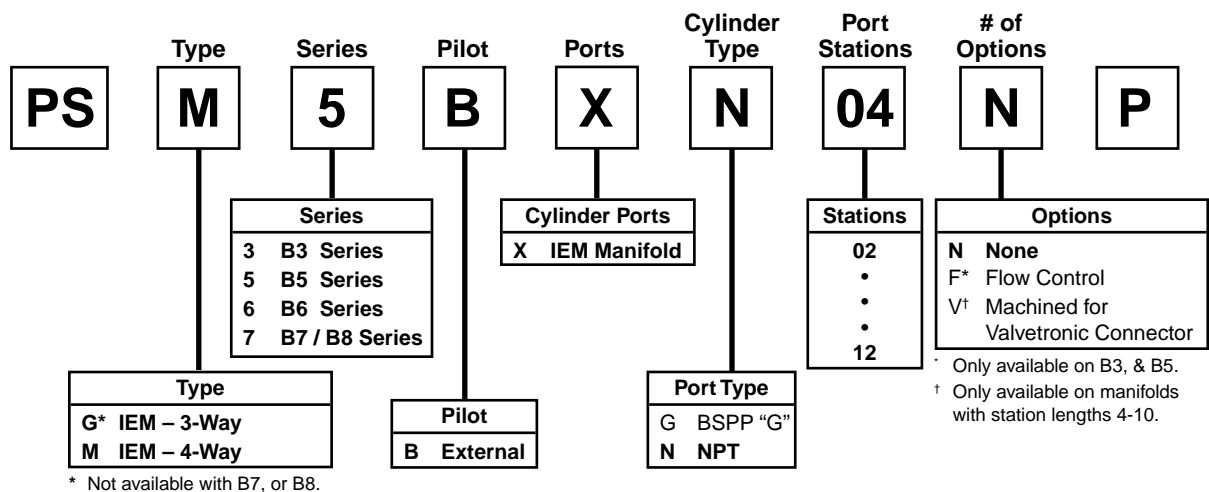


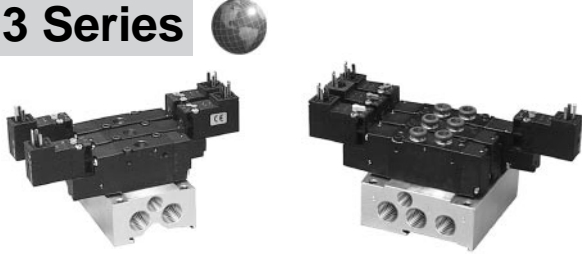
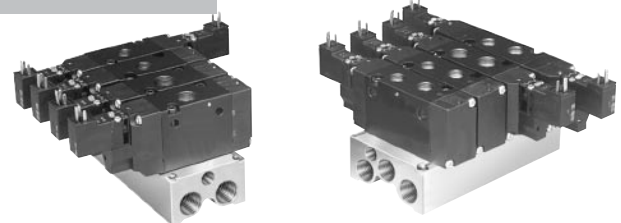
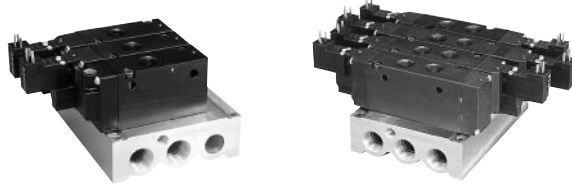
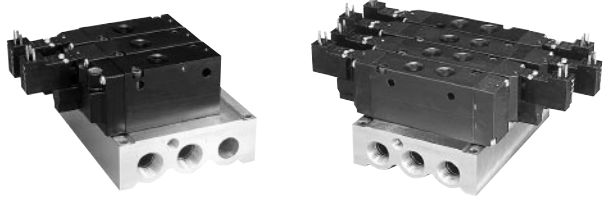
| | | | | | |
|--|--------------------|---------------------------|--|--------------------|---------------------------|
| B3 Series  | | | B5 Series  | | |
| 3-Way, NPT | PSG3BXN##NP | ## – stations 02 to 12 | 3-Way, NPT | PSG5BXN##NP | ## – stations 02 to 12 |
| 4-Way, NPT | PSM3BXN##NP | | 4-Way, NPT | PSM5BXN##NP | |
| B6 Series  | | | B7 & B8 Series  | | |
| 3-Way, NPT | PSG6BXN##NP | ## – stations 02 to 12 | 3-Way & 4-Way NPT | PSM7BXN##NP | ## – stations 02 to 12 |
| 4-Way, NPT | PSM6BXN##NP | | | | |

- 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.

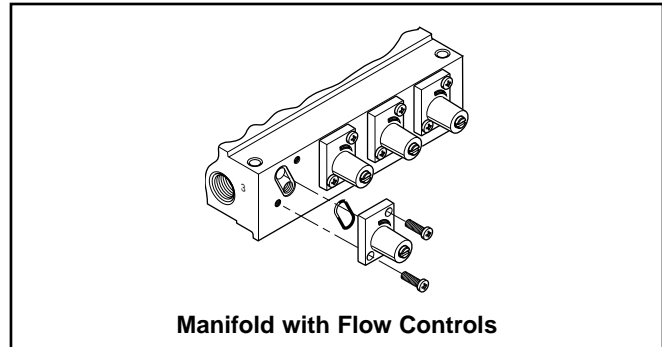


IEM Bar Manifold Model Number

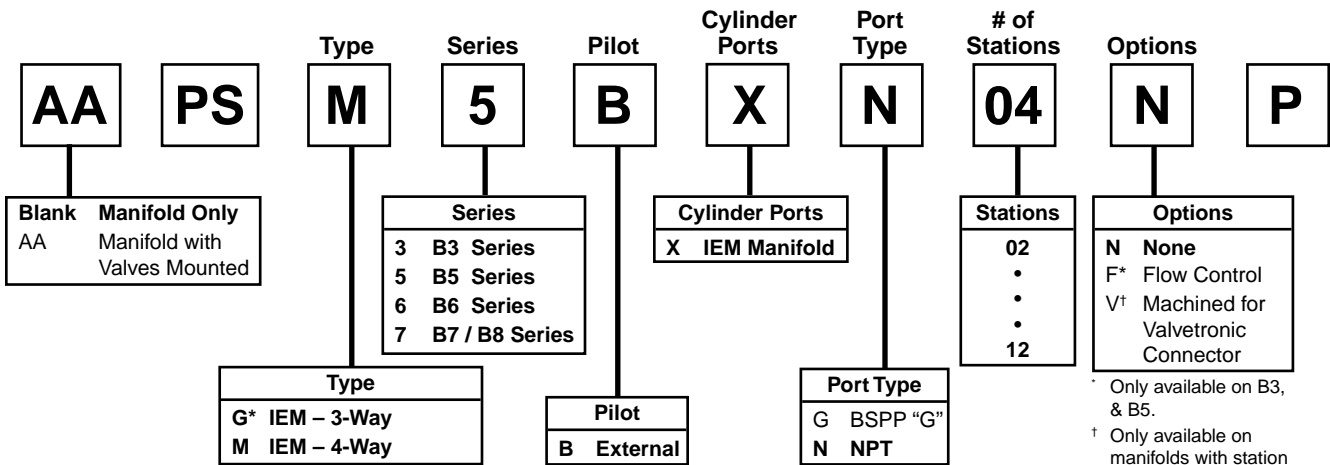


| | | | | | |
|--|----------------------|---------------------------|--|----------------------|---------------------------|
| <h3>B3 Series</h3>  | | | <h3>B5 Series</h3>  | | |
| 3-Way, NPT | AAPSG3BXN##NP | ## – stations 02 to 12 | 3-Way, NPT | AAPSG5BXN##NP | ## – stations 02 to 12 |
| 4-Way, NPT | AAPSM3BXN##NP | | 4-Way, NPT | AAPSM5BXN##NP | |
| <h3>B6 Series</h3>  | | | <h3>B7 & B8 Series</h3>  | | |
| 3-Way, NPT | AAPSG6BXN##NP | ## – stations 02 to 12 | 3-Way & 4-Way NPT | AAPSM7BXN##NP | ## – stations 02 to 12 |
| 4-Way, NPT | AAPSM6BXN##NP | | | | |

- 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 Assembly Model Number



* Not available with B7, or B8.

† Only available on manifolds with station lengths 4-10.

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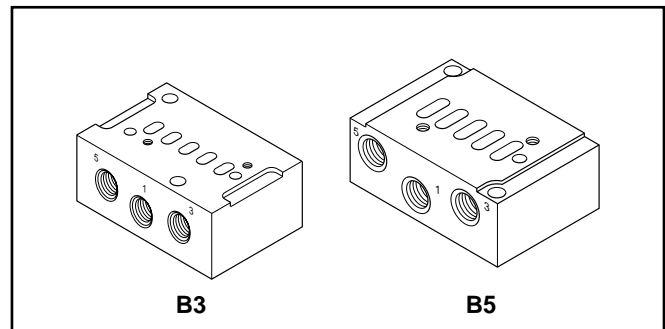
Accessories

**"B" Series Valves
Subbase / Manifolds**

Subbase

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

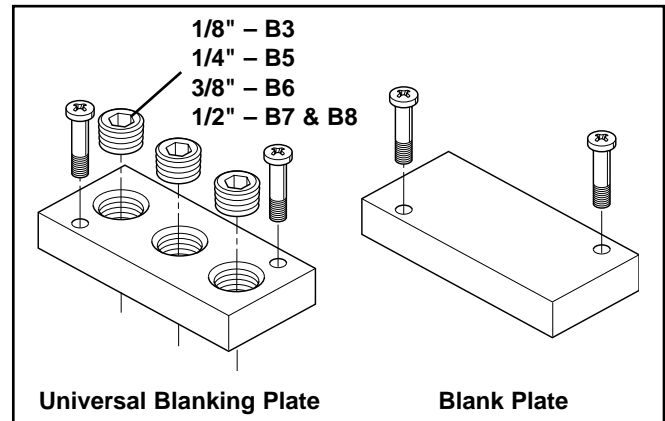
Kit includes: (1) subbase.
(Hold down bolts & gasket are included with valve.)



Blanking Plate

| Type | | Kit Number | | | |
|------|-------|---------------|----------|---------|---------|
| | | IEM Universal | | IEM | Subbase |
| | | NPT | BSPP "G" | Blank | Blank |
| B3 | 3-Way | PS2966P | PS2967P | PS2968P | — |
| | 4-Way | PS2920P | PS2921P | PS2969P | PS2994P |
| B5 | 3-Way | PS2866P | PS2867P | PS2868P | — |
| | 4-Way | PS2820P | PS2821P | PS2869P | — |
| B6 | 3-Way | PS2620P | PS2621P | PS2669P | — |
| | 4-Way | | | | |
| B7 | 4-Way | PS2520P | PS2521P | PS2569P | — |
| B8 | 4-Way | | | | |

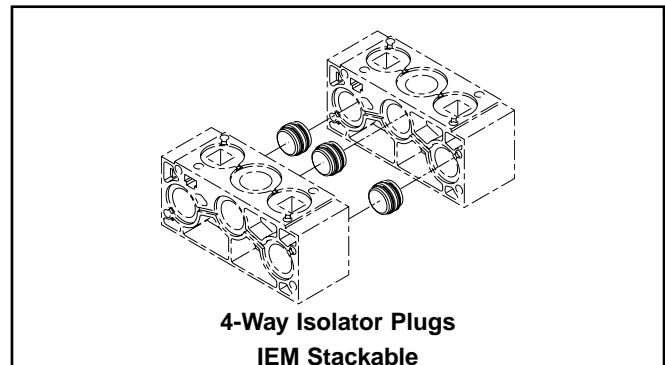
Kit includes:
(1) Plate, (2) Screws, Seal / Gaskets



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



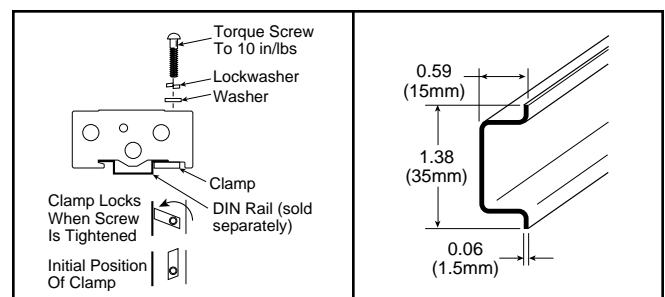
DIN Rail

| Series | Length | Part Number |
|--------|--------|-------------|
| B3 | 6 Feet | AM1DE200 |

DIN Rail Hardware Kit

| Series | IEM Bar | 5-Port Subbase Bar |
|--------|---------|--------------------|
| B3 | PS2990P | PS2991P |

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

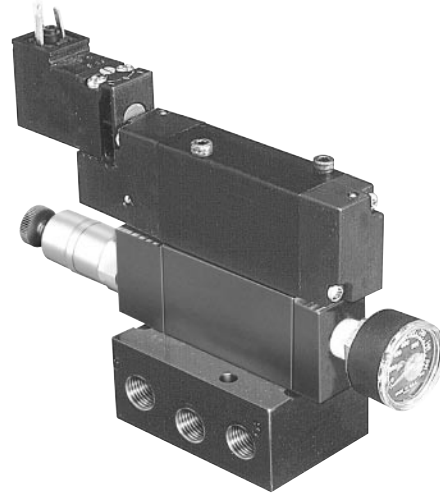




B3 Series

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.

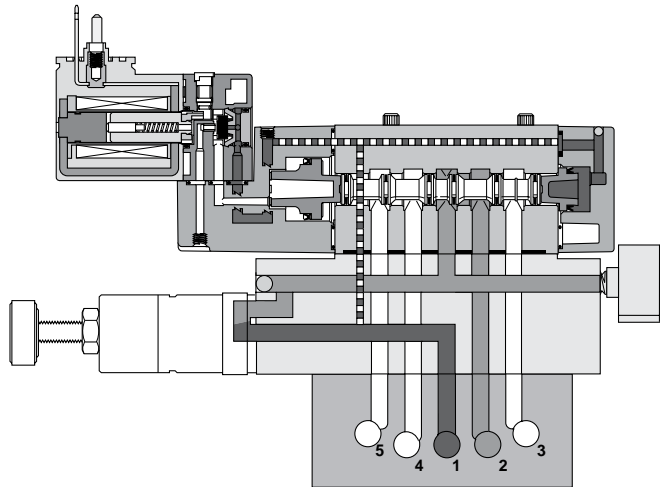


| | Common Port with Gauge * | Dual Port without Gauge | Cv |
|------------------------|--------------------------|-------------------------|-----|
| B3 5-125 PSI | PS2930166P | PS2930233P | .33 |

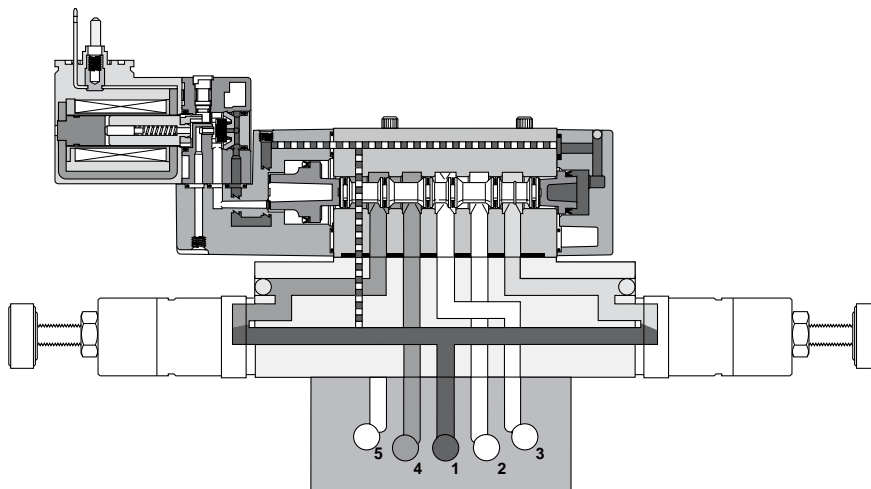
* Gauge is 160 PSI. Gauge shipped unassembled. For different gauge mounting configuration, use brass adapters listed at bottom of page.

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Common Port



Dual Port



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

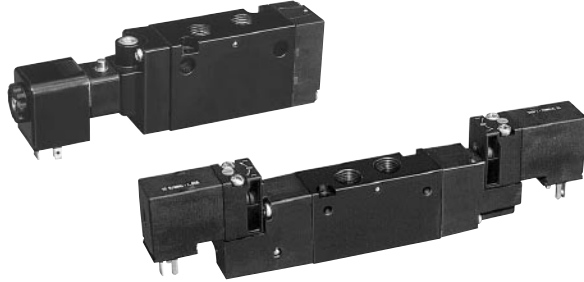
Gauge 3/4" Face –

0-160 PSI..... PS3451160P

Solenoid Rotated 180° - Pins Down

B3 B5 B6 B7 B8

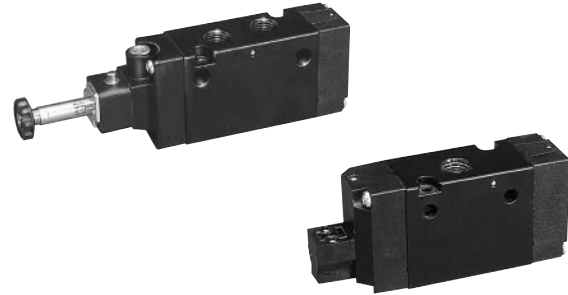
- 1.8W (2.4VA) solenoids – Enclosure "5".
- Override on top for easy access.
- "02" in the Options code.



Valve Less Solenoid

B3 B5 B6 B7 B8

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



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

Tube Fitting Remote Pilot

B3 B5 B6 B7 B8

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



Inline Valve Tube Fitting

B3

- 1/4" Tube Fitting (B3)
- 3/8" or 8mm Tube Fitting (B4)
- Cylinder Ports and / or Inlet / Exhaust Ports



**B5, B6, B7, B8 (“E” Option)
Intrinsically Safe Solenoid Valves**

Hazardous Location Class:

Class I; Groups A, B, C & D

Class II; Groups E, F, & G

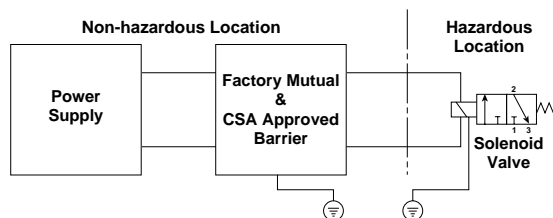
Class III; Div. I

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

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.



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."

**B5, B6, B7, B8 (“F” Option)
Hazardous Duty Solenoid Valves**

Hazardous Location Class:

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

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

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

Comes standard with non-lighted solenoid connector.

Voltage Range = +10° +/- 10%

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

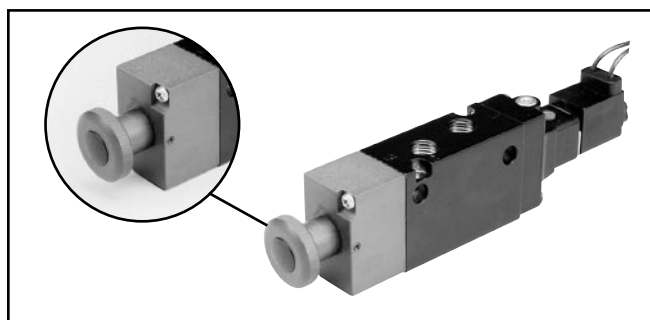
Duty Factor = 100%

IP65 Rated (with Connected Conduit Connector)

J

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.



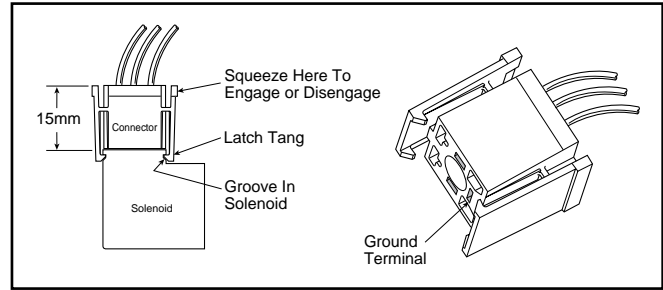
**15mm 3-Pin DIN 43650C Quick Connect
(Use with Enclosure “5”)**

| Connector | Description |
|-----------|----------------------|
| PS298305P | 18" Cord (1/2 Meter) |
| PS298320P | 72" Cord (2 Meter) |

Note: Rated up to 135VAC, 55VDC; .75 amp max.

Engineering Data:

Conductors: 2 Poles Plus Ground
Contact Spacing: 8mm



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

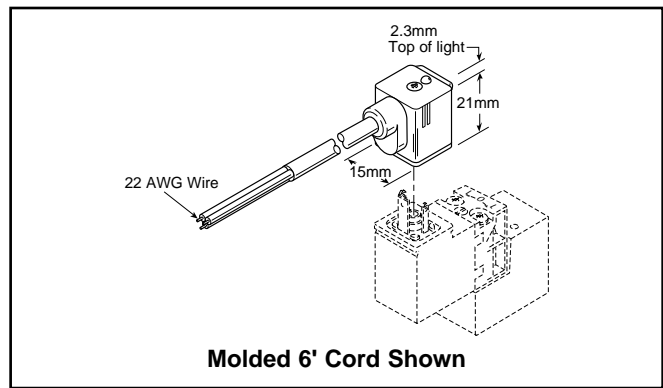
| Connector | Connector with 6' (2m) Cord | Description |
|------------|-----------------------------|---------------------|
| PS2932BP | PS2932JBP | Unlighted |
| PS294675BP | PS2946J75BP* | Light – 12VAC or DC |
| PS294679BP | PS2946J79BP* | Light – 24VAC or DC |
| PS294683BP | PS2946J83BP* | Light – 110/120VAC |
| PS294687BP | N/A | Light – 240/230VAC |

* LED with surge suppression.

Note: Max \varnothing 6.5mm (22 gage wire) cable size required for connector w/o 6' (2m) cord.
IP65 rated when properly installed.

Engineering Data:

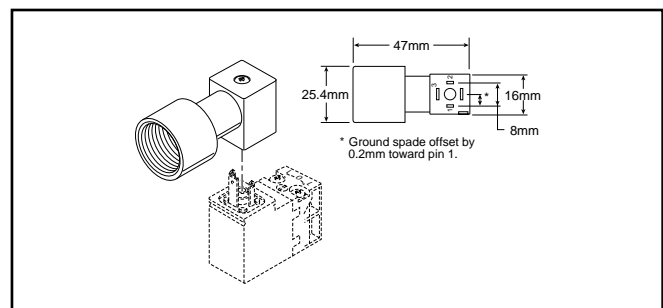
Conductors: 2 Poles Plus Ground
Cable Range (Connector Only): 4 to 6mm (0.16 to 0.24 Inch)
Contact Spacing: 8mm



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

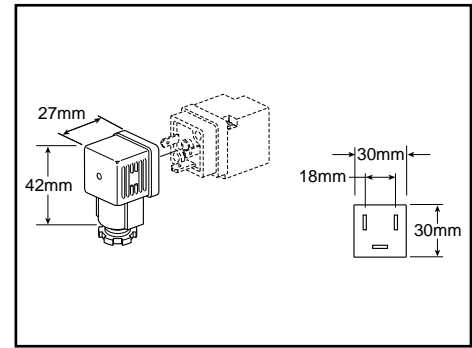
| Connector | Description |
|-----------|--|
| PS2998P | 1/2" NPTF Conduit – Unlighted with 3' (1m) Leads 20 AWG Wire |

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



Female Electrical Connectors / Accessories
30mm Square 3-Pin – ISO 4400, DIN 43650A
(Use with Enclosure "A")

| Connector | Connector with 6' (2m) Cord | Description |
|------------|-----------------------------|---------------------------------|
| PS2028BP | PS2028JBP | Unlighted |
| PS203279BP | PS2032J79BP* | Light – 6-48V, 50/60Hz, 6-48VDC |
| PS203283BP | PS2032J83BP* | Light – 120V/60Hz |
| PS203283BP | N/A | Light – 240V/60Hz |



* LED with surge suppression.

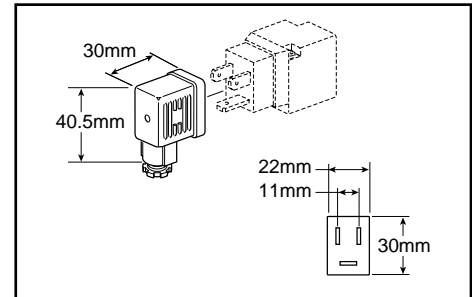
Note: Max ø6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

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.

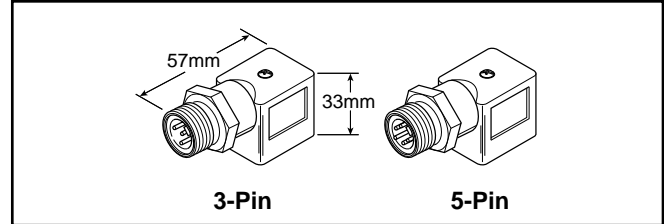
Engineering Data:

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 |

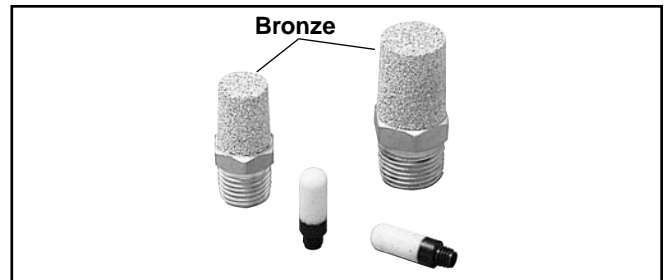
— 75 - 12VDC 79 - 24VDC & 24VAC
 83 - 120VAC 87 - 240VAC



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 |
|-----------|------------|----------------|------------|------------|
| B3 | 1/8" Ports | Inline | .75 | .60 |
| | 1/4" Tube | Inline | .45 | .45 |
| | 1/8" Ports | Subbase | .65 | .45 |
| | 1/4" Ports | Subbase | .65 | .50 |
| B5 | 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 |
| B6 | 3/8" Ports | Inline | 2.7 | 2.1 |
| B7 | 1/2" Ports | Inline | 5.9 | 5.7 |
| B8 | 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)

Operating Pressure

Maximum: 145 PSIG (1000 kPa)

Minimum:

| Operator / Function | Internal Pilot | Minimum PSIG (kPa) | | | | |
|-------------------------|--|--------------------|----------|----------|----------|----------|
| | | B3 | B5 | B6 | B7 | B8 |
| 1, G, H | Single Solenoid - Air Return | 20 (138) | 20 (138) | 20 (138) | 35 (241) | 35 (241) |
| 2, A, J, S | Double Solenoid | | | | | |
| 3, K, L | Single Remote Pilot - Air Return | | | | | |
| 4, M | Double Remote Pilot | Vacuum | | | | |
| N, P, Q | Double Solenoid - Dual 3/2 | 40 (275) | — | — | — | — |
| 5, 6, 7 | Double Solenoid - APB, CE, PC | 30 (207) | 30 (207) | 30 (207) | 45 (310) | 45 (310) |
| 8, 9, 0 | Double Remote Pilot - APB, CE, PC | | | Vacuum | | |
| E, V, W | Single Solenoid - Air Return / Spring Assist | 35 (241) | 35 (241) | 35 (241) | 35 (241) | 35 (241) |
| F, X, Y | Single Remote Pilot - Air Return / Spring Assist | | | | | |
| External Pilot** | | | | | | |
| All | "B" Series | Vacuum | | | | |

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

† External Pilot Not Available with B3 Dual 3/2.

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: No suffix required for CSA*†

B8: No suffix required for CSA*†

* 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%.

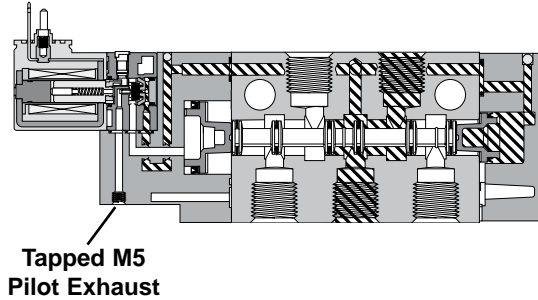
Response Time

| 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 |
| 2-Position Single Solenoid / Internal Air Return | | | | | | | | | |
| 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 |
| 2-Position Single Solenoid Spring / Air Return | | | | | | | | | |
| 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 |
| 2-Position Double Solenoid | | | | | | | | | |
| 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 |
| 3-Position Double Solenoid | | | | | | | | | |
| 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.

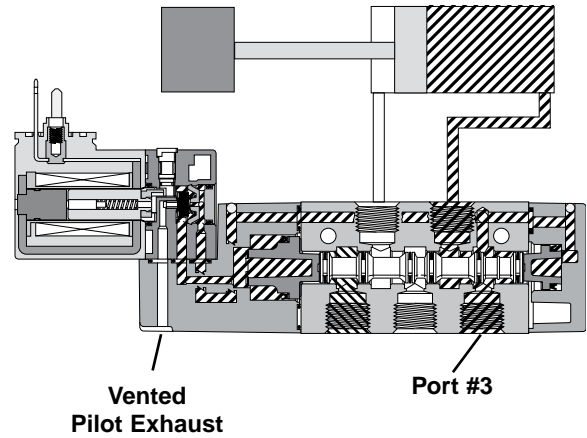
* For 3/8" ported, 50 cu. in. test chamber is used. For 1/2" & 3/4", a 200 cu. in. test chamber is used.

A - Internal - Port #1 / Tapped M5



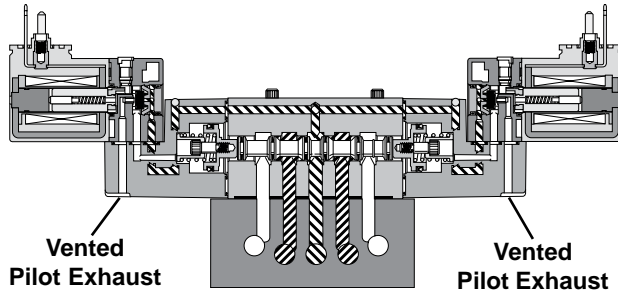
B5 Shown

E - Dual Pressure - Port #3 / Vented
***H - Dual Pressure - Port #5 / Vented (Similar)**



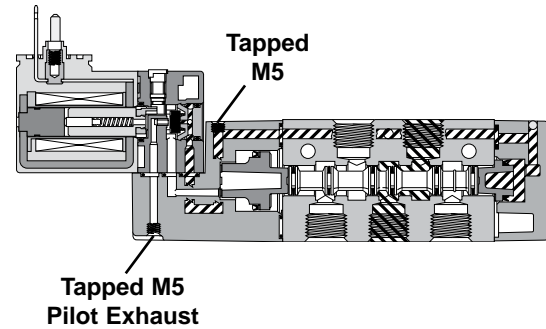
B3 Shown

B - Internal - Port #1 / Vented



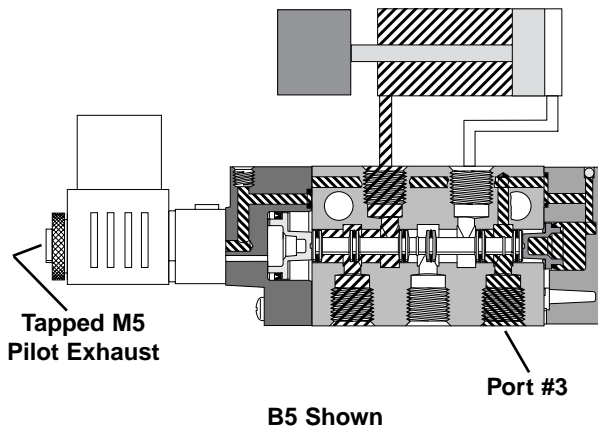
B3 Shown

K - External - Body / Tapped M5



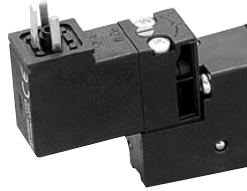
B3 Shown

D - Dual Pressure - Port #3 / Tapped M5
***G - Dual Pressure - Port #5 / Tapped M5 (Similar)**

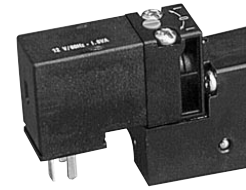
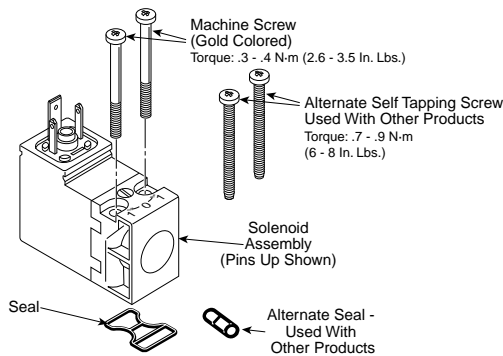


B5 Shown

Solenoid Kits – B3 'C', B5 'C', B6 'A', B7 'A', B8 'A'
3-Pin 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 | | | | * Override | ## Voltage |
|---------------|------------|----|----|----|---------------|------------|
| | 42 | 45 | 49 | 53 | | 57 |
| B | O | O | S | S | B | O |
| C | O | O | S | S | C | O |
| D | – | – | O | O | D | – |
| E | – | – | O | O | E | – |

J

Alternate Enclosures



"A" & "E" 30mm 3-Pin



"C" 3-Pin Mini



"G", "Q" Grommet



"B" 22mm 3-Pin



"D" 5-Pin Mini



"F", "H", "R" 1/2" Conduit

Enclosure 'A' thru 'R'

| Part No. | Description | ## Voltage | | | | | | |
|------------|---|-------------|-------------|--------------|--------------|-------------|--------------|--------------|
| | | 42 24VAC | 45 12VDC | 47 12VDC* | 48 24VDC* | 49 24VDC | 53 120VAC | 57 230VAC |
| PS2828A##P | 30mm 3-Pin DIN 43650A | O | O | – | – | S | S | O |
| PS2828B##P | 22mm 3-Pin DIN 43650 Industrial | O | O | – | O | S | S | O |
| PS2828E49P | Intrinsically Safe - 30mm, 3-Pin | – | – | – | – | O | – | – |
| PS2828F##P | Hazardous Duty - 1/2" Conduit - 18" Leads | – | O | – | – | O | O | O |
| PS2828G##P | Grommet - 18" Lead | O | O | O | O | S | S | O |
| PS2828H##P | 1/2" Conduit - 18" Lead | O | O | O | – | S | S | O |
| PS2828Q##P | Grommet - 72" Lead | O | O | O | O | O | O | O |
| PS2828R##P | 1/2" Conduit - 72" Lead | O | O | O | – | O | O | O |

S - Standard; O - Option

* Mobile Voltage



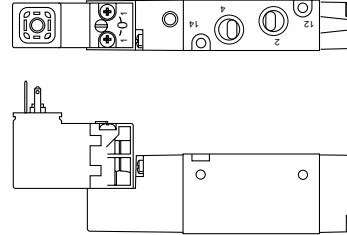
B3 Series

Spool / Body Service Kits

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

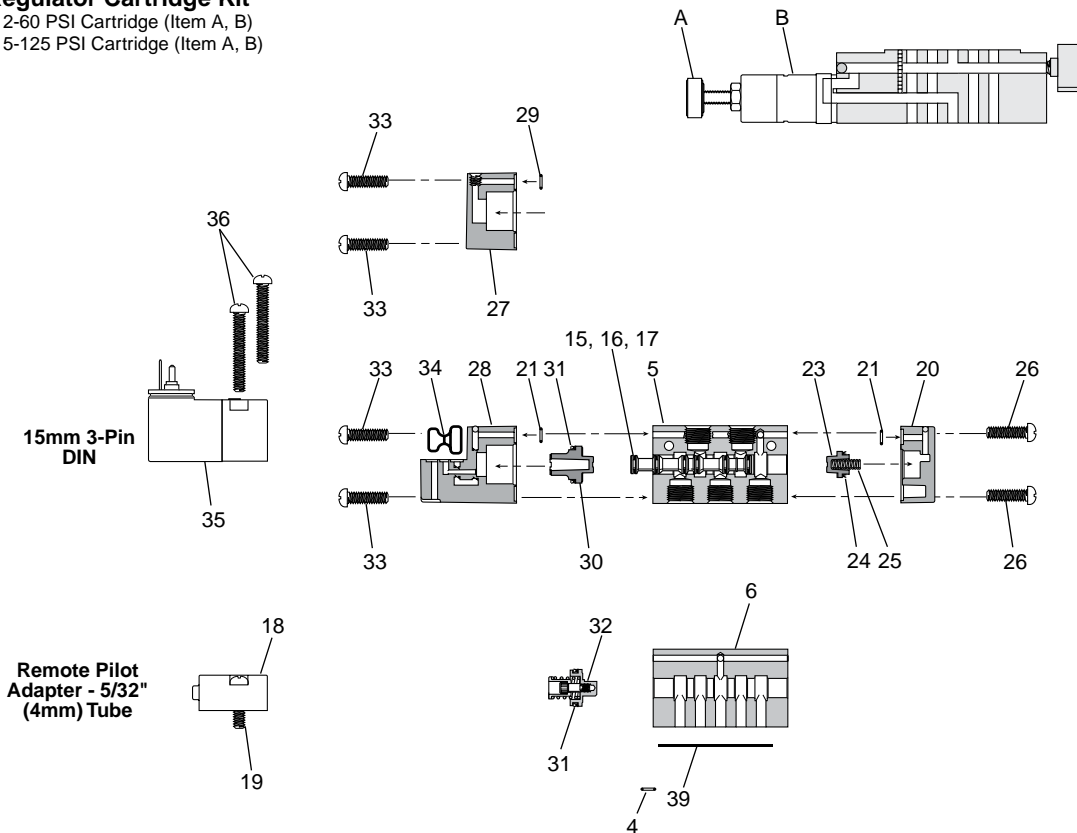


Manifold to Manifold Kit

| | |
|---------|---|
| 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) |



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 (see Page 27) |
| 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.

Technical Information

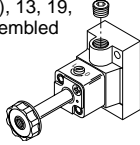
B5 Series

Spool / Body Service Kits

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

Pilot Replacement Kit – Alternate Enclosure

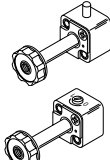
- Kit Includes:* Item 6, 9, 10, 11, 17 (2), 18 (2), 13, 19, 20, 22, 23, 24 (2), 57, 58 Assembled
- | | |
|-----------|-------------------|
| PS2897GBP | Non-Locking, BSPP |
| PS2897GCP | Locking, BSPP |
| PS2897NBP | Non-Locking, NPT |
| PS2897NCP | Locking, NPT |



Armature / Override Kit

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

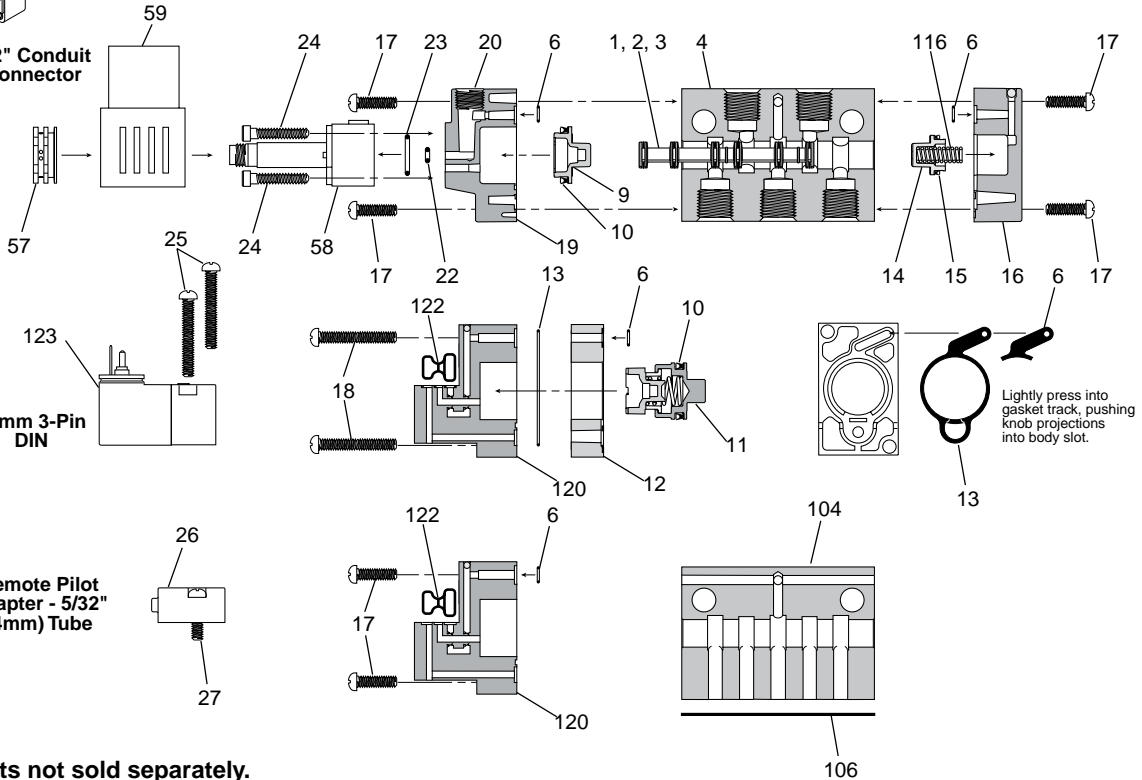
- | | |
|----------|-----------------------------|
| PS2844BP | Non-Locking |
| PS2844CP | Locking |
| PS2892P | Solenoid Nut - Item 57 (10) |



1/2" Conduit Connector

15mm 3-Pin DIN

Remote Pilot Adapter - 5/32" (4mm) Tube



Item List – Parts not sold separately.

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

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

J

B6 Series

Spool / Body Service Kits

- PS2601*P 4-Way, 2-Pos
- PS2602*P 4-Way, 3-Pos APB
- PS2603*P 4-Way, 3-Pos CE
- PS2604*P 4-Way, 3-Pos PC
- PS267101*P 3-Way, 2-Pos, NC
- PS267102*P 3-Way, 2-Pos, NO
- * Viton Seal Kit (i.e. PS2801VP)

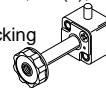
Kit Includes:

- Item 2, 6 (2), 9 (2), 11, 14, grease packet
- Item 3, 6 (2), 9 (2), 13 (2), grease packet
- Item 3, 6 (2), 9 (2), 13 (2), grease packet
- Item 3, 6 (2), 9 (2), 13 (2), grease packet
- Item 2, 6, 9, 14, grease packet
- Item 2, 6, 9, 14, grease packet

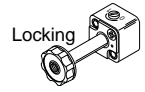
Armature / Override Kit –

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

PS2844BP Non-Locking



PS2844CP Locking



PS2892P

Solenoid Nut - Item 57 (10)

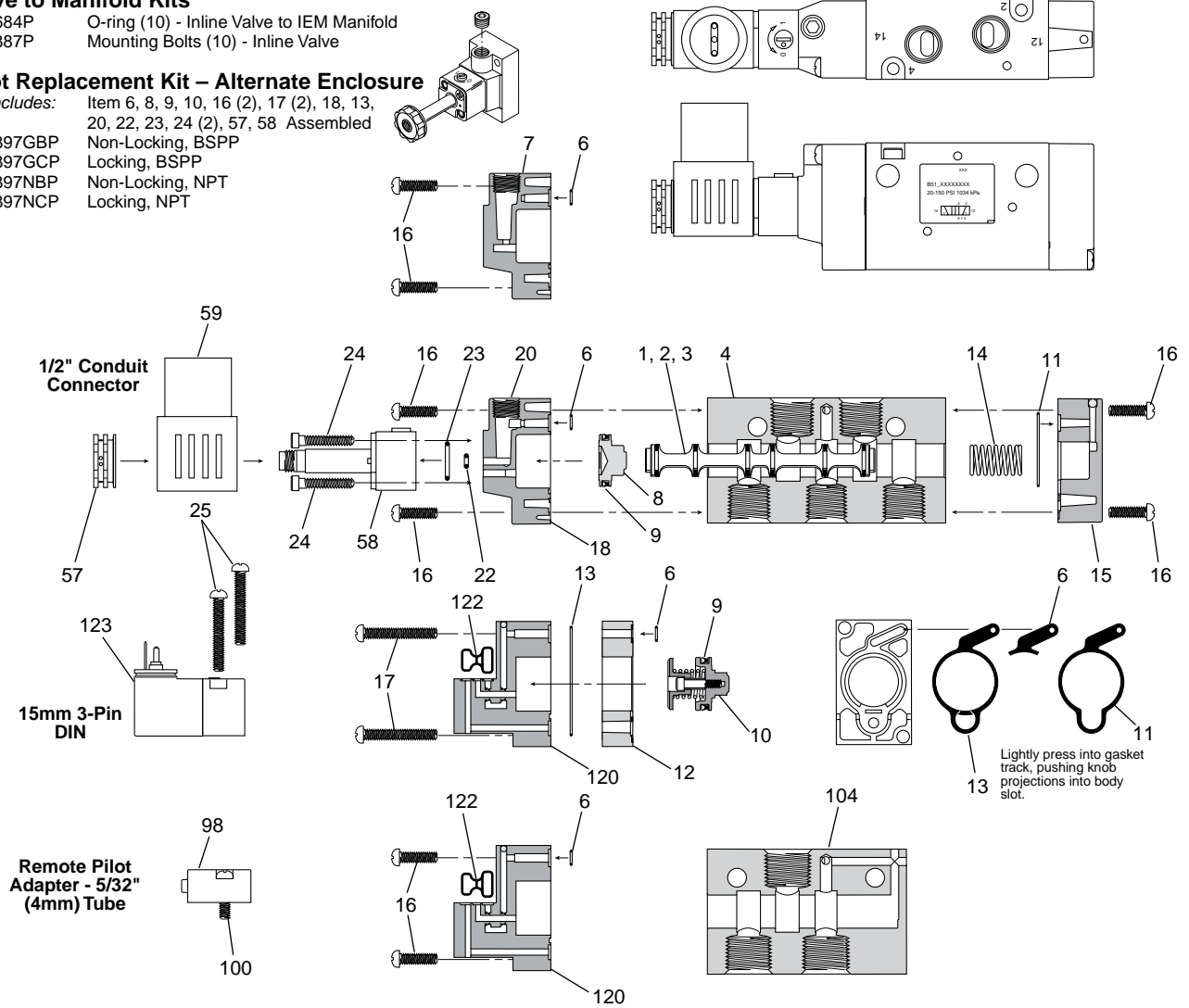
Valve to Manifold Kits

- 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



Item List – Parts not sold separately.

| Item | Description | Item | Description | Item | Description |
|------|--|------|--|------|--|
| 1* | Spool Seal | 15a | Return Operator | 58b* | Solenoid Base Assembly - Non Locking |
| 2* | Spool - 2-Position (Seals Assembled) | 15b | Return Operator - CSA Option | 59* | Coil - Alternate Enclosure (see Page 27) |
| 3* | Spool - 3-Position (Seals Assembled) | 16* | Screws - Operator Adapter - 2-Position | 98* | Remote Pilot Adapter - 5/32" Tube (PVAP111) |
| 4 | Inline Body - 4-Way | 17* | Screws - Operator Adapter - 3-Position | 100 | Screws - Remote Pilot Adapter |
| 6* | Gasket - Body to Operator | 18* | Operator Adapter - Alt Enclosure | 104 | Inline Body - 3-Way |
| 7 | Remote Pilot Operator | 20* | 1/8" NPT Pipe Plug | 120a | Solenoid Adapter - Vent Exhaust |
| 8 | Operator Piston - 2-Position | 22* | O-ring - Small - Solenoid Base | 120b | Solenoid Adapter - Tapped Exhaust |
| 9* | Lip Seal - Operator Piston | 23* | O-ring - Large - Solenoid Base | 120c | Solenoid Adapter - Ext Pilot, Vent Exhaust |
| 10 | Operator Piston Mechanism - 3-Position | 24* | Bolts - Solenoid Base | 120d | Solenoid Adapter - Ext Pilot, Tapped Exhaust |
| 11* | Gasket - Body to Return Cap | 25* | Self Tapping Screw - Solenoid (Effective Jan 00) | 122* | Gasket - Solenoid to Adapter |
| 12 | Adapter - 3-Position | 57* | Solenoid Nut | 123* | 15mm Solenoid (see Page 27) |
| 13 | Gasket - 3-Position Adapter to Body | 58a* | Solenoid Base Assembly - Locking | | |
| 14* | Spring, Return Assist | | | | |

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, 14, 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, 14, grease packet |
| PS257102P | 3-Way, 2-Pos, NO | Item 2, 6, 9, 14, grease packet |

Kit Includes:

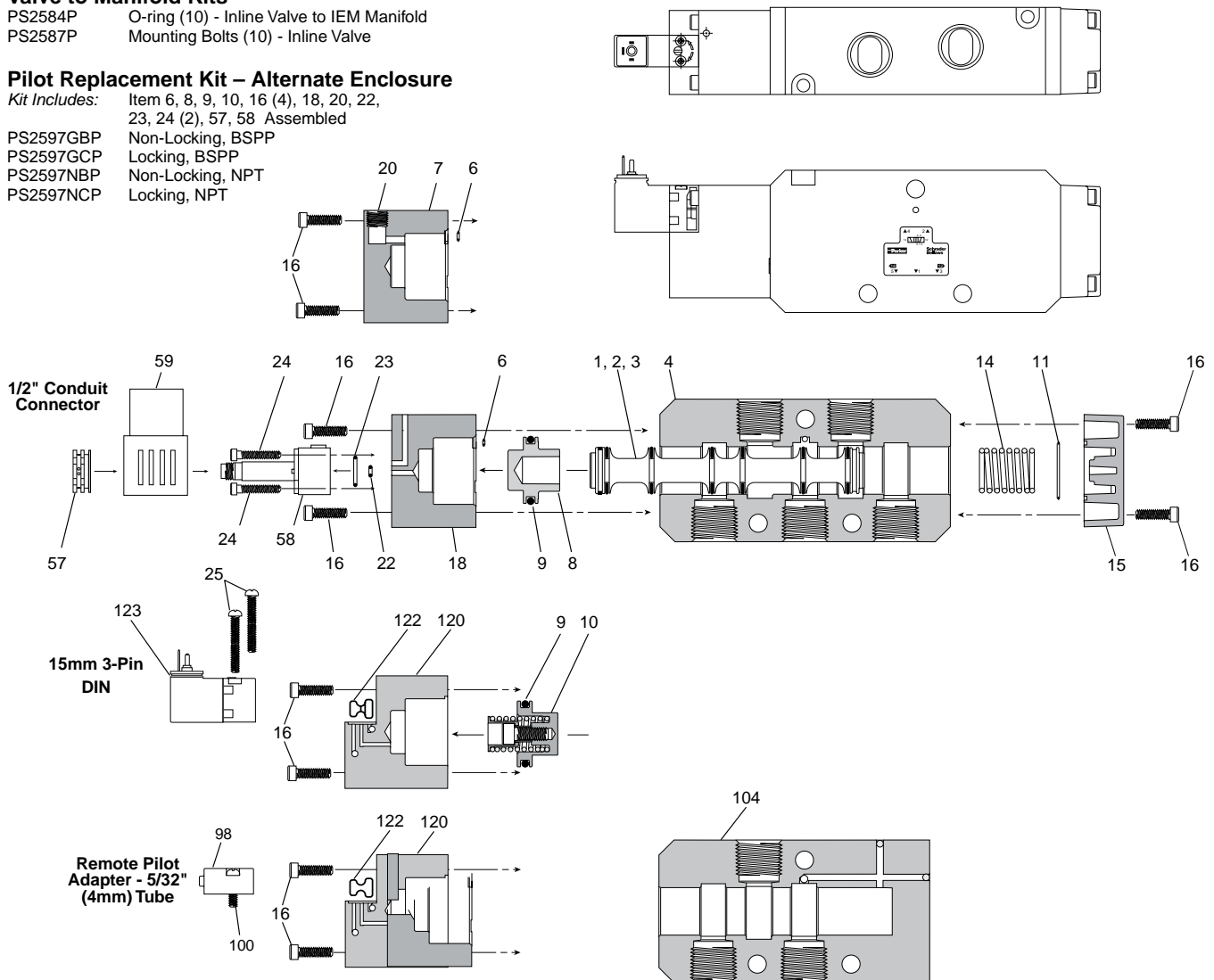
Valve to Manifold Kits

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

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 | | |
| 11* | Gasket - Body to Return Cap | 58b* | Solenoid Base Assembly - Non Locking | | |
| 14* | Spring, Return Assist | 59* | Coil - Alternate Enclosure (see Page 26) | | |
| 15a | Return Operator | | | | |

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



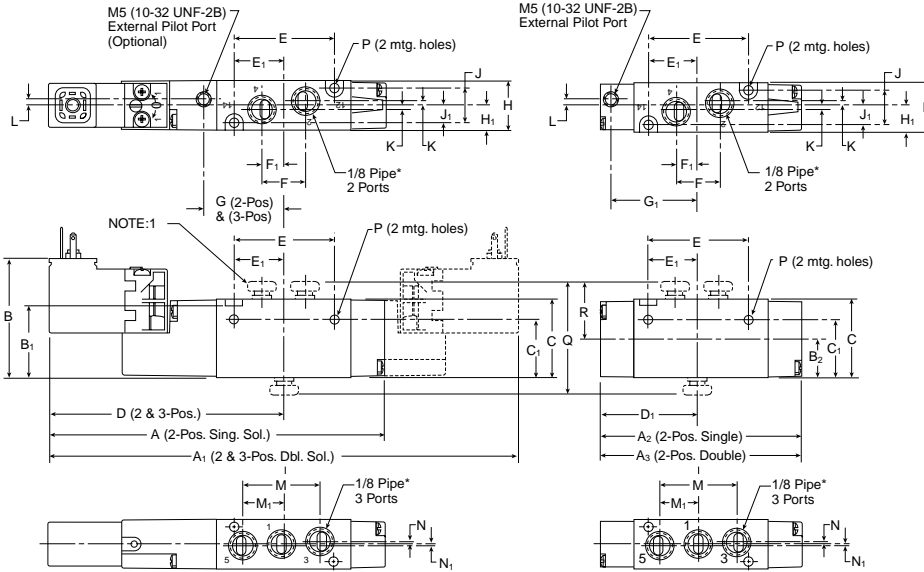
B3

Single & Double Operators – 4-Way Inline

Solenoid

Remote Pilot

B3 4-Way Inline



NOTE 1: Series B3 valves with integral PRESTOLOK ports must use Parker PARFLEX tubing, which has the required O.D. tolerances for use. Be sure to use the tube support (part no. 63PTU) when using the series U polyurethane tubing. All applications should be carefully tested through the range of conditions which may be encountered prior to use.

| | | | | |
|--|--|--------------------------------------|--|---|
| A 4.67 (119) | A₁ 6.44 (164) | A₂ 3.12 (79) | A₃ 3.33 (85) | B 1.66 (42) |
| B₁ 1.05 (27) | B₂ .57 (14) | C 1.13 (39) | C₁ .84 (21) | D 3.22 (82) |
| D₁ 1.66 (42) | E 1.47 (37) | E₁ .732 (19) | F .63 (16) | F₁ .32 (8) |
| G 1.13 (29) | G₁ 1.50 (38) | H .71 (18) | H₁ .36 (9) | J .51 (13) |
| J₁ .26 (7) | K .06 (2) | L .11 (3) | M 1.12 (28) | M₁ .56 (14) |
| N .05 (1) | N₁ .05 (1) | P Ø .13 Ø (3.3) | Q 5/32 Prestolok 1.54 (39) | Q 1/4 Prestolok 1.58 (40) |
| Q 1/4 Prestolok .77 (20) | R 1/4 Prestolok .79 (20) | | | |

Inches (mm)

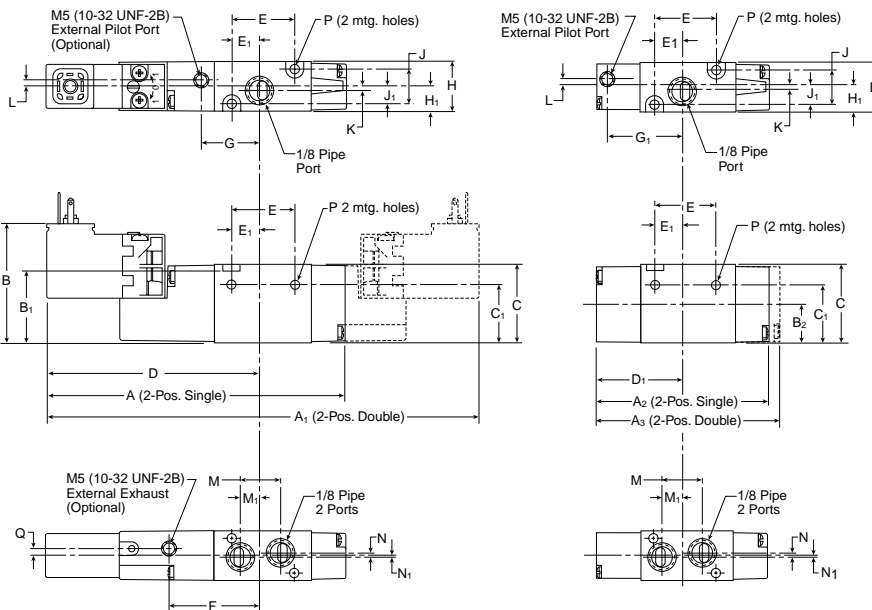
B3

Single & Double Operators – 3-Way Inline

Solenoid

Remote Pilot

B3 3-Way Inline



| | | | | |
|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|------------------------------------|
| A 4.20 (107) | A₁ 5.96 (151) | A₂ 2.65 (67) | A₃ 2.86 (73) | B 1.66 (42) |
| B₁ 1.05 (27) | B₂ .57 (14) | C 1.13 (29) | C₁ .84 (21) | D 2.93 (74) |
| D₁ 1.38 (35) | E .98 (25) | E₁ .44 (11) | F 1.32 (34) | G .85 (22) |
| G₁ 1.22 (31) | H .71 (18) | H₁ .36 (9) | J .51 (13) | J₁ .26 (7) |
| K .06 (2) | L .11 (3) | M .63 (16) | M₁ .27 (7) | N .12 (3) |
| N₁ .06 (2) | P Ø .13 Ø (3.3) | Q .08 (2) | | |

Inches (mm)



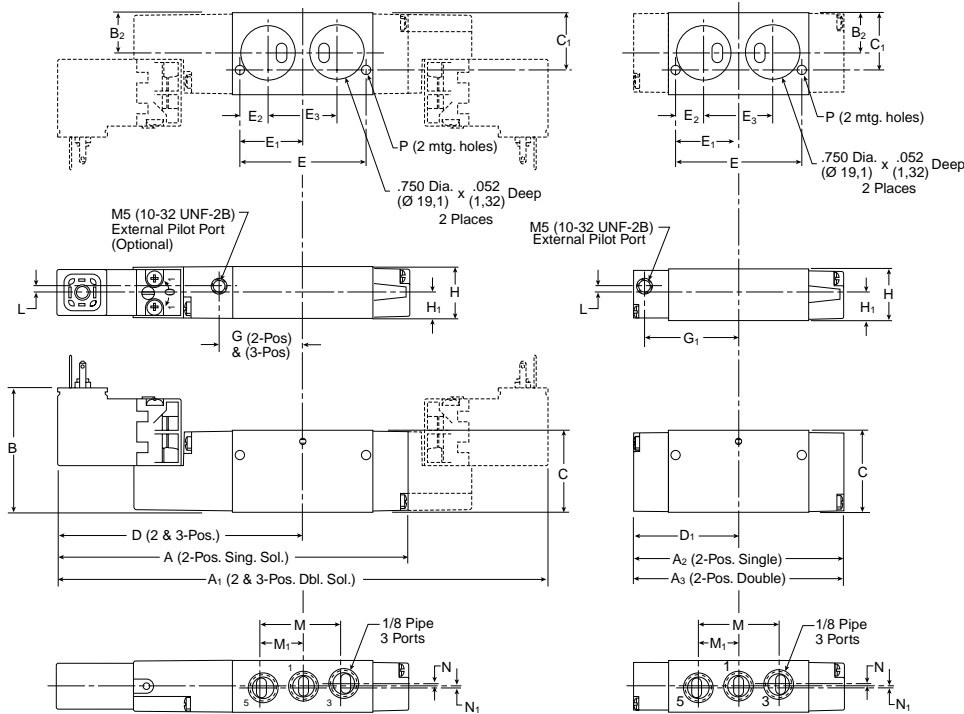
B3

Single & Double Operators – 4-Way Face Mount

Solenoid

Remote Pilot

B3 4-Way Face Mount



| | | | | |
|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| A 4.67 (119) | A₁ 6.44 (164) | A₂ 3.12 (79) | A₃ 3.33 (85) | B 1.66 (42) |
| B₂ .58 (15) | C 1.13 (29) | C₁ .81 (21) | D 3.22 (82) | D₁ 1.66 (42) |
| E 1.74 (44) | E₁ .87 (22) | E₂ .39 (10) | E₃ .95 (24) | G 1.13 (29) |
| G₁ 1.50 (38) | H .71 (18) | H₁ .36 (9) | L .11 (3) | M 1.12 (28) |
| M₁ .56 (14) | N .05 (1) | N₁ .05 (1) | P Ø .13 (3.3) | |

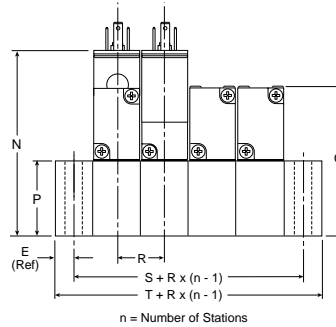
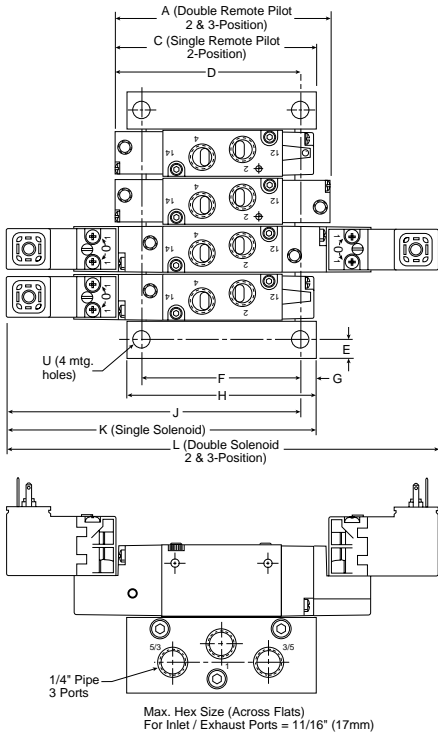
Inches (mm)

J



B3

Single & Double Operators – 4-Way IEM Stackable



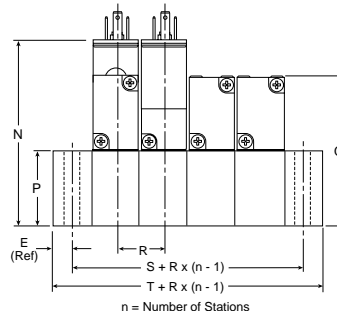
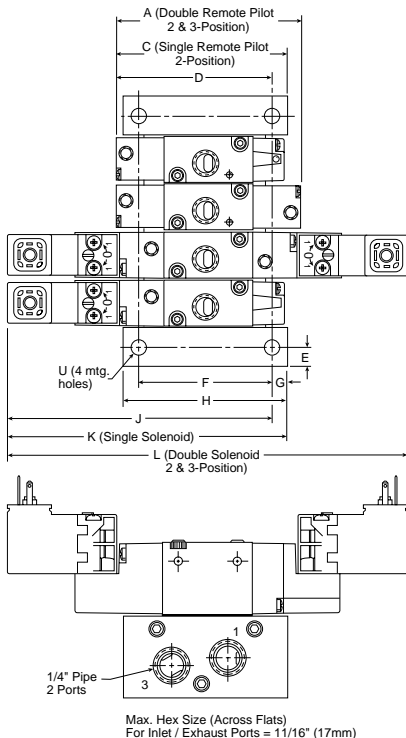
B3 4-Way IEM Stackable

| | | | | |
|----------------------------|----------------------------|------------------------------|-------------------------------------|-----------------------------|
| A 3.33 (84,6) | C 3.12 (79,2) | D 2.91 (73,9) | E .30 (7,6) | F 2.49 (63,3) |
| G .25 (6,4) | H 3.00 (76,2) | J 4.46 (113,3) | K 4.67 (118,6) | L 6.43 (163,3) |
| N 2.91 (73,9) | P 1.25 (31,8) | Q 2.38 (60,5) | R .74 ±.01 (18,8) ± .3 | |
| S 1.34 (34,0) | T 1.94 (49,3) | U Ø .28 Ø (7,1) | | |

Inches (mm)

B3

Single & Double Operators – 3-Way IEM Stackable



B3 3-Way IEM Stackable

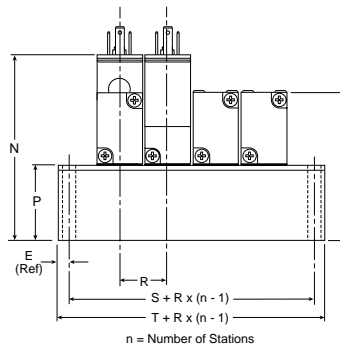
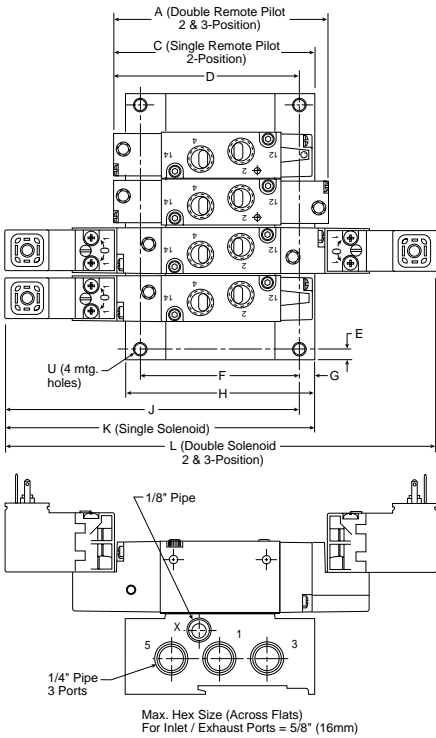
| | | | | |
|----------------------------|----------------------------|------------------------------|-------------------------------------|-----------------------------|
| A 2.86 (72,6) | C 2.65 (67,3) | D 2.45 (62,2) | E .30 (7,6) | F 2.05 (52,0) |
| G .24 (6,0) | H 2.52 (64,0) | J 4.00 (101,7) | K 4.20 (106,7) | L 5.96 (151,4) |
| N 2.91 (73,9) | P 1.25 (31,8) | Q 2.38 (60,5) | R .74 ±.01 (18,8) ± .3 | |
| S 1.34 (34,0) | T 1.94 (49,3) | U Ø .28 Ø (7,1) | | |

Inches (mm)



B3

Single & Double Operators – 4-Way IEM Aluminum Bar



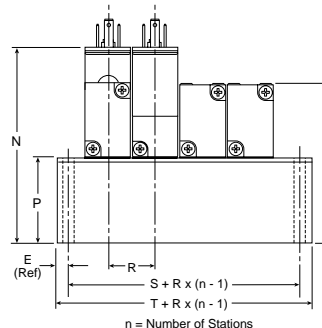
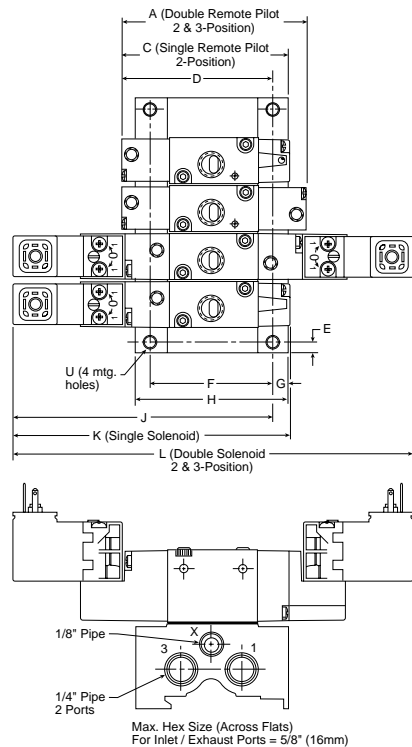
B3 4-Way IEM Aluminum Bar Manifold

| | | | | |
|----------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|
| A 3.33 (84,6) | C 3.17 (80,5) | D 2.94 (74,7) | E .25 (6,4) | F 2.54 (64,5) |
| G .23 (5,9) | H 3.00 (76,2) | J 4.50 (114,2) | K 4.73 (120,1) | L 6.43 (163,3) |
| N 2.94 (74,7) | P 1.28 (32,5) | Q 2.41 (61,2) | R .81 (20,5) | S 1.13 (28,8) |
| T 1.64 (41,6) | U Ø .23 Ø (5,8) | | | |

Inches (mm)

B3

Single & Double Operators – 3-Way IEM Aluminum Bar



B3 4-Way IEM Aluminum Bar Manifold

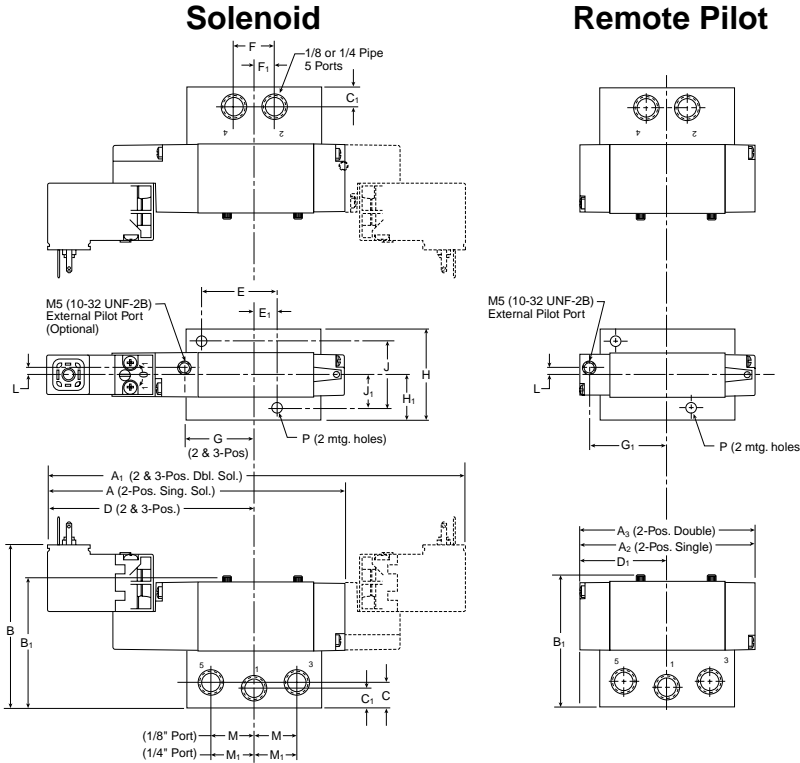
| | | | | |
|----------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|
| A 2.86 (72,6) | C 2.65 (67,3) | D 2.33 (59,2) | E .25 (6,4) | F 1.80 (45,7) |
| G .23 (5,9) | H 2.25 (57,2) | J 3.88 (98,6) | K 4.20 (106,7) | L 5.96 (151,4) |
| N 2.93 (74,5) | P 1.27 (32,4) | Q 2.40 (61,1) | R .81 (20,5) | S 1.13 (28,8) |
| T 1.64 (41,6) | U Ø .23 Ø (5,8) | | | |

Inches (mm)

J



B3 Single & Double Operators – 4-Way Single Subbase

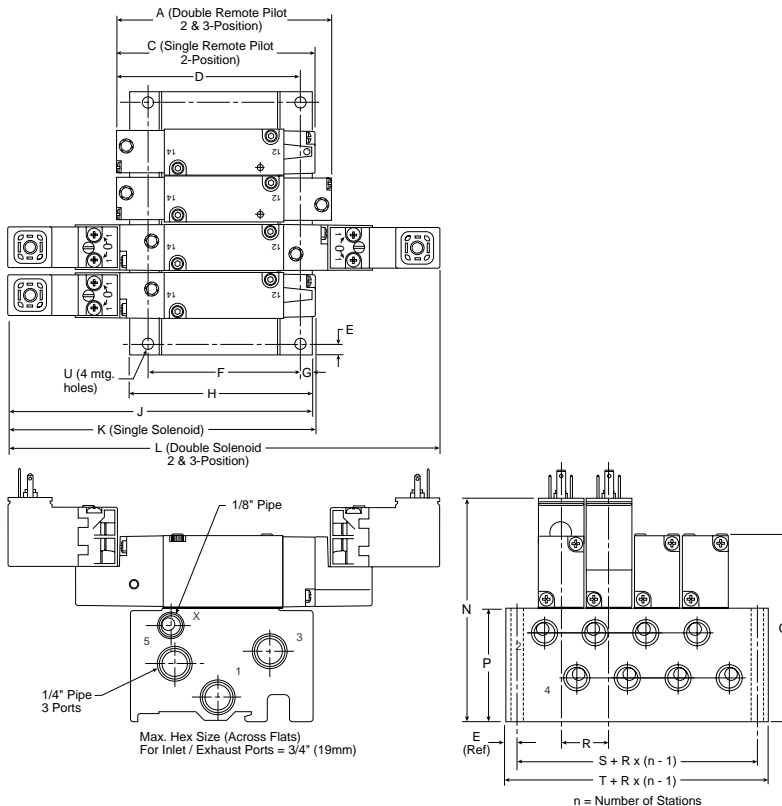


B3 4-Way Single Subbase

| | | | | |
|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| A 4.67 (119) | A₁ 6.44 (164) | A₂ 3.12 (79) | A₃ 3.33 (85) | B 2.63 (67) |
| B₁ 2.21 (56) | C .47 (12) | C₁ .37 (9) | D 3.22 (82) | D₁ 1.66 (42) |
| E 1.25 (32) | E₁ .38 (10) | F .69 (18) | F₁ .34 (9) | G 1.13 (29) |
| G₁ 1.50 (38) | H 1.50 (38) | H₁ .75 (19) | J 1.12 (28) | J₁ .56 (14) |
| M .71 (18) | M₁ .76 (19) | P Ø .18 Ø (4) | | |

Inches (mm)

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



B3 5-Port Subbase Bar Manifold

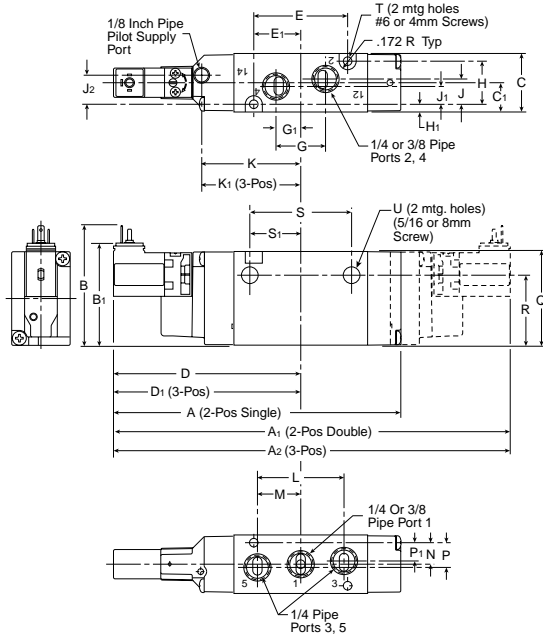
| | | | | |
|----------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|
| A 3.33 (84,6) | C 3.12 (79,2) | D 2.88 (73,2) | E .25 (6,3) | F 2.43 (61,7) |
| G .22 (5,5) | H 2.93 (74,5) | J 4.66 (118,3) | K 4.67 (118,6) | L 6.43 (166,3) |
| N 3.47 (88,2) | P 1.81 (46,0) | Q 2.94 (74,7) | R .81 (20,5) | S 1.39 (35,4) |
| T 1.89 (48,0) | U Ø .22 Ø (5,6) | | | |

Inches (mm)

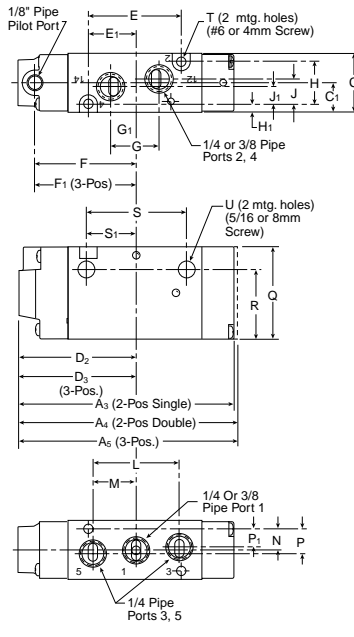
B5

Single & Double Operators – 4-Way Inline

Solenoid



Remote Pilot



B5 4-Way Inline

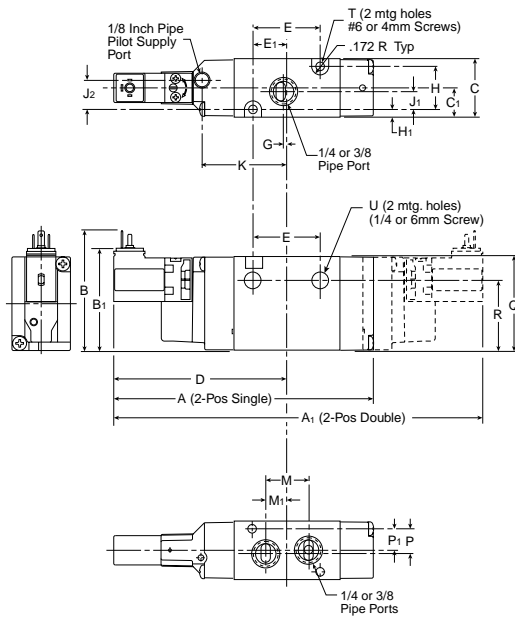
| | | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| A 5.78 (147) | A₁ 7.51 (191) | A₂ 8.45 (215) | A₃ 4.37 (110) | A₄ 4.70 (119) |
| A₅ 5.64 (143) | B 2.41 (61) | B₁ 2.06 (52) | C 1.18 (30) | C₁ .59 (15) |
| D 3.76 (96) | D₁ 4.23 (107) | D₂ 2.35 (60) | D₃ 2.82 (72) | E 1.89 (48) |
| E₁ .95 (24) | F 2.01 (51) | F₁ 2.47 (63) | G 1.00 (25) | G₁ .50 (13) |
| H .87 (22) | H₁ .16 (4) | J .51 (13) | J₁ .36 (9) | J .58 (15) |
| K 2.00 (51) | K₁ 2.47 (63) | L 1.75 (44) | M .88 (22) | N .43 (48) |
| P .50 (13) | P₁ .37 (92) | Q 1.89 (48) | R 1.41 (36) | S 2.05 (52) |
| S₁ 1.03 (26) | T Ø .177 (4,5) | U Ø .34 (9) | | |

Inches (mm)

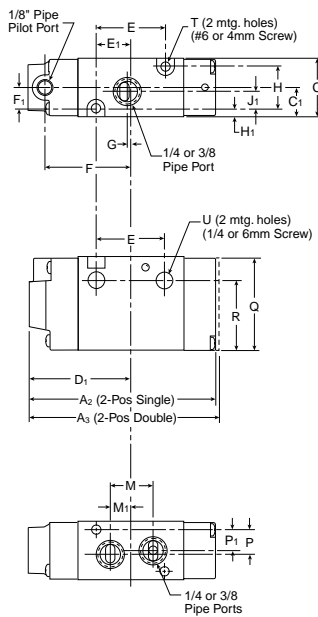
B5

Single & Double Operators – 3-Way Inline

Solenoid



Remote Pilot



B5 3-Way Inline

| | | | | |
|--------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| A 5.29 (134) | A₁ 7.03 (179) | A₂ 3.88 (99) | A₃ 4.21 (107) | B 2.41 (61) |
| B₁ 2.06 (52) | C 1.18 (30) | C₁ .59 (15) | D 3.43 (87) | D₁ 2.11 (54) |
| E 1.40 (36) | E₁ .70 (18) | F 1.77 (45) | F₁ .43 (11) | G .06 (2) |
| H .87 (22) | H₁ .16 (4) | J₁ .36 (9) | J₂ .58 (15) | K 1.67 (42) |
| M .88 (22) | M₁ .44 (11) | P .50 (13) | P₁ .37 (9) | Q 1.89 (48) |
| R 1.41 (36) | T Ø .177 (4,5) | U Ø .26 (6,6) | | |

Inches (mm)

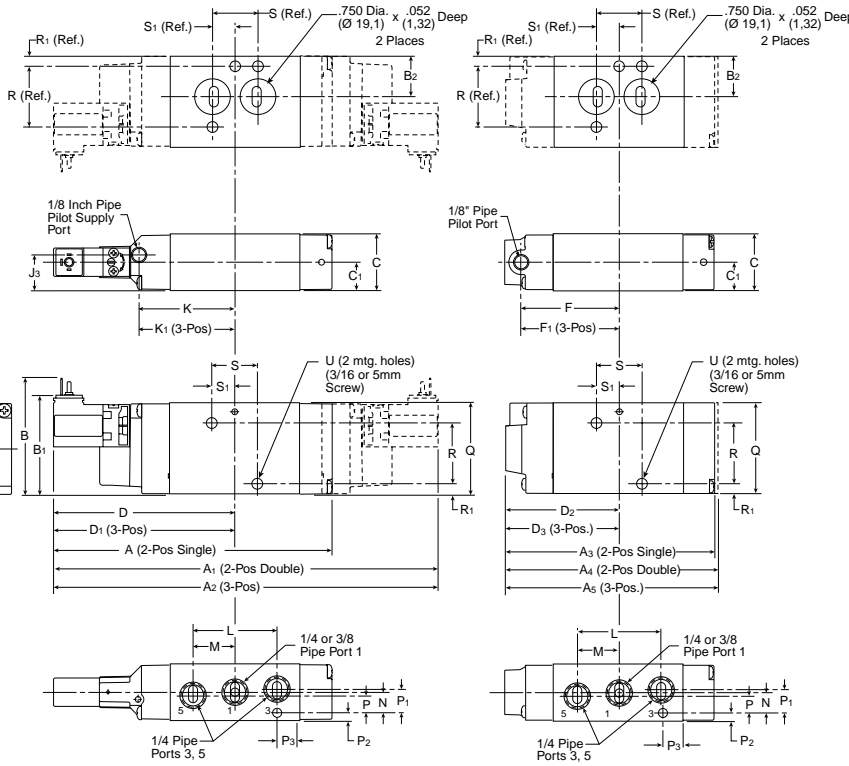
B5

Single & Double Operators – 4-Way NAMUR Mount

Solenoid

Remote Pilot

B5 4-Way NAMUR Mount

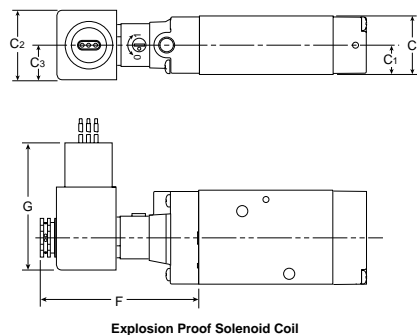


| | | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| A 5.78 (147) | A₁ 7.51 (191) | A₂ 8.45 (215) | A₃ 4.37 (110) | A₄ 4.70 (119) |
| A₅ 5.64 (143) | B 2.41 (61) | B₁ 2.06 (52) | B₂ .84 (21) | C 1.18 (30) |
| C₁ .59 (15) | D 3.76 (96) | D₁ 4.23 (107) | D₂ 2.35 (60) | D₃ 2.82 (72) |
| F 2.01 (51) | F₁ 2.47 (63) | J₃ .74 (19) | K 2.00 (51) | K₁ 2.47 (63) |
| L 1.75 (44) | M .88 (22) | N .44 (11) | P .37 (9,4) | P₁ .50 (13) |
| P₂ .16 (4) | P₃ .40 (10) | Q 1.89 (48) | R 1.26 (32) | R₁ .21 (5) |
| S .94 (24) | S₁ .47 (12) | U Ø .224 Ø (5,7) | | |

Inches (mm)

B5

Alternative Electrical Enclosure Option F



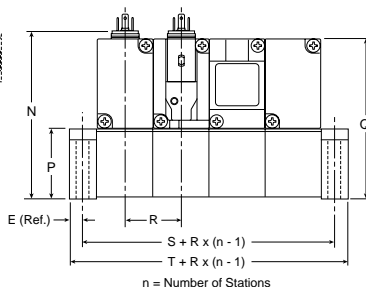
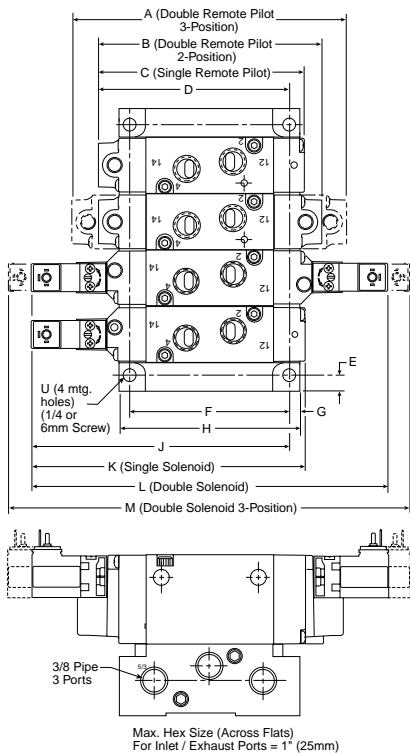
B5 4-Way NAMUR Mount with Option F Enclosure

| | | | | |
|--------------------------|-------------------------------------|--------------------------------------|-------------------------------------|--------------------------|
| C 1.18 (30) | C₁ .59 (15) | C₂ 1.42 (36) | C₃ .71 (18) | F 3.15 (80) |
| G 2.60 (66) | | | | |

Inches (mm)

B5

Single & Double Operators – 4-Way IEM Stackable



B5 4-Way IEM Stackable

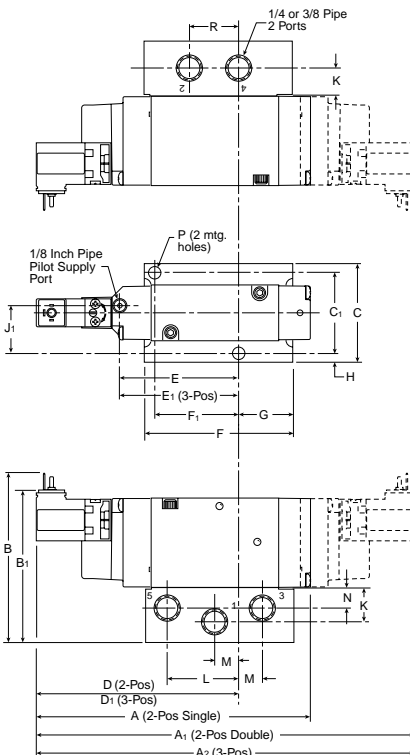
| | | | | |
|---|-----------------------------|-----------------------------|------------------------------|-----------------------------|
| A 5.64 (143,3) | B 4.70 (119,4) | C 4.37 (110,0) | D 4.29 (109,0) | E .29 (7,4) |
| F 3.44 (87,4) | G .24 (6,1) | H 3.92 (99,6) | J 5.48 (139,2) | K 5.78 (146,8) |
| L 7.52 (191,0) | M 8.46 (214,9) | N 3.56 (90,4) | P 1.50 (38,1) | Q 3.42 (86,9) |
| R 1.21 ± .01 (30,7) ± (.3) | S 1.79 (45,5) | T 2.37 (60,2) | U Ø .28 Ø (7,1) | |

Inches (mm)

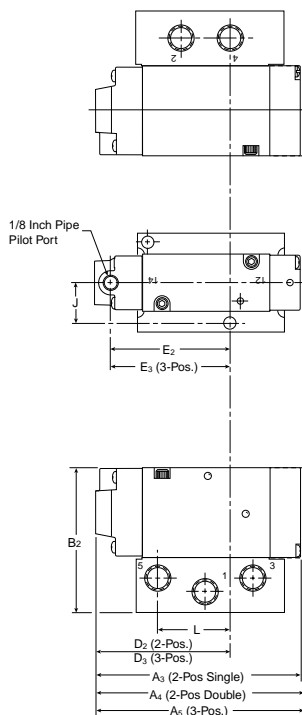
B5

Single & Double Operators – 4-Way Single Subbase

Solenoid



Remote Pilot



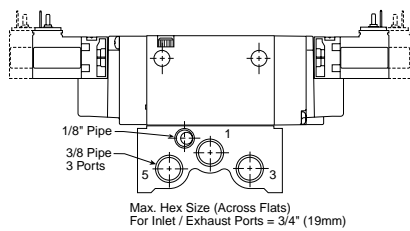
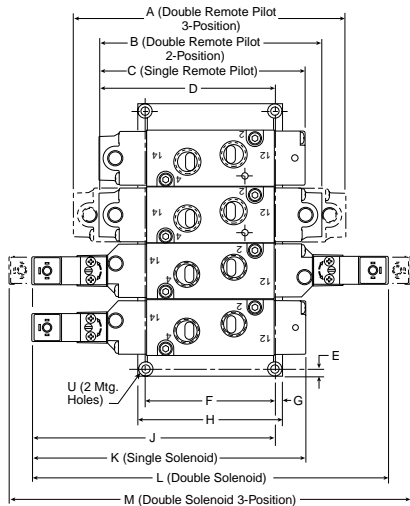
B5 4-Way Subbase

| | | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| A 5.78 (147) | A₁ 7.52 (191) | A₂ 8.46 (215) | A₃ 4.37 (110) | A₄ 4.70 (119) |
| A₅ 5.64 (143) | B 3.56 (90) | B₁ 3.21 (82) | B₂ 3.03 (77) | C 2.12 (54) |
| C₁ 1.69 (43) | D 4.26 (108) | D₁ 4.73 (120) | D₂ 2.85 (72) | D₃ 3.32 (40) |
| E 2.51 (65) | E₁ 2.98 (76) | E₂ 2.60 (66) | E₃ 3.07 (80) | F 2.90 (74) |
| F₁ 1.69 (43) | G .95 (24) | H .22 (5) | J .84 (21) | J₁ .99 (25) |
| K .71 (18) | L 1.50 (38) | M .50 (13) | N .46 (12) | P Ø .27 Ø (7) |
| R 1.00 (25) | | | | |

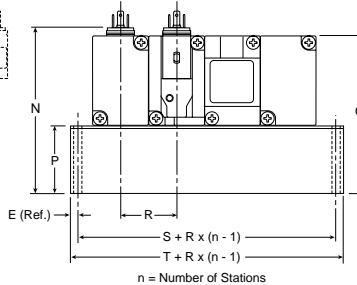
Inches (mm)

J

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



Max. Hex Size (Across Flats)
For Inlet / Exhaust Ports = 3/4" (19mm)



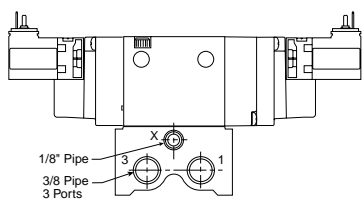
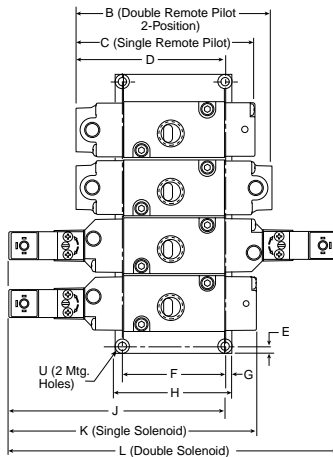
n = Number of Stations

B5 4-Way IEM Aluminum Bar Manifold

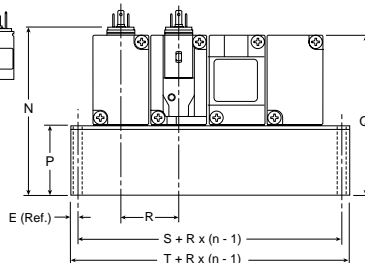
| | | | | |
|-----------------------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|
| A 5.64 (143,3) | B 4.70 (119,4) | C 4.37 (110,0) | D 3.74 (95,0) | E .18 (4,6) |
| F 2.78 (70,6) | G .17 (4,3) | H 3.12 (79,2) | J 5.15 (130,8) | K 5.78 (146,8) |
| L 7.52 (191,0) | M 8.46 (214,9) | N 3.50 (89,0) | P 1.44 (36,6) | Q 3.36 (85,3) |
| R 1.26 (32,0) | S 1.78 (45,2) | T 2.14 (54,4) | U Ø .22 Ø (5,5) | |

Inches (mm)

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



Max. Hex Size (Across Flats)
For Inlet / Exhaust Ports = 13/16" (20mm)



n = Number of Stations

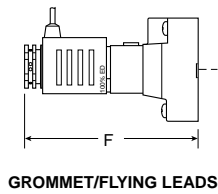
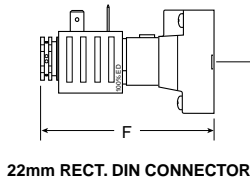
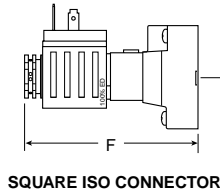
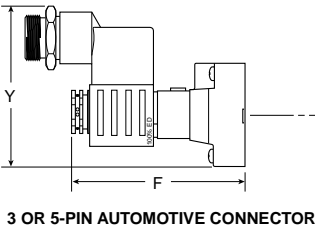
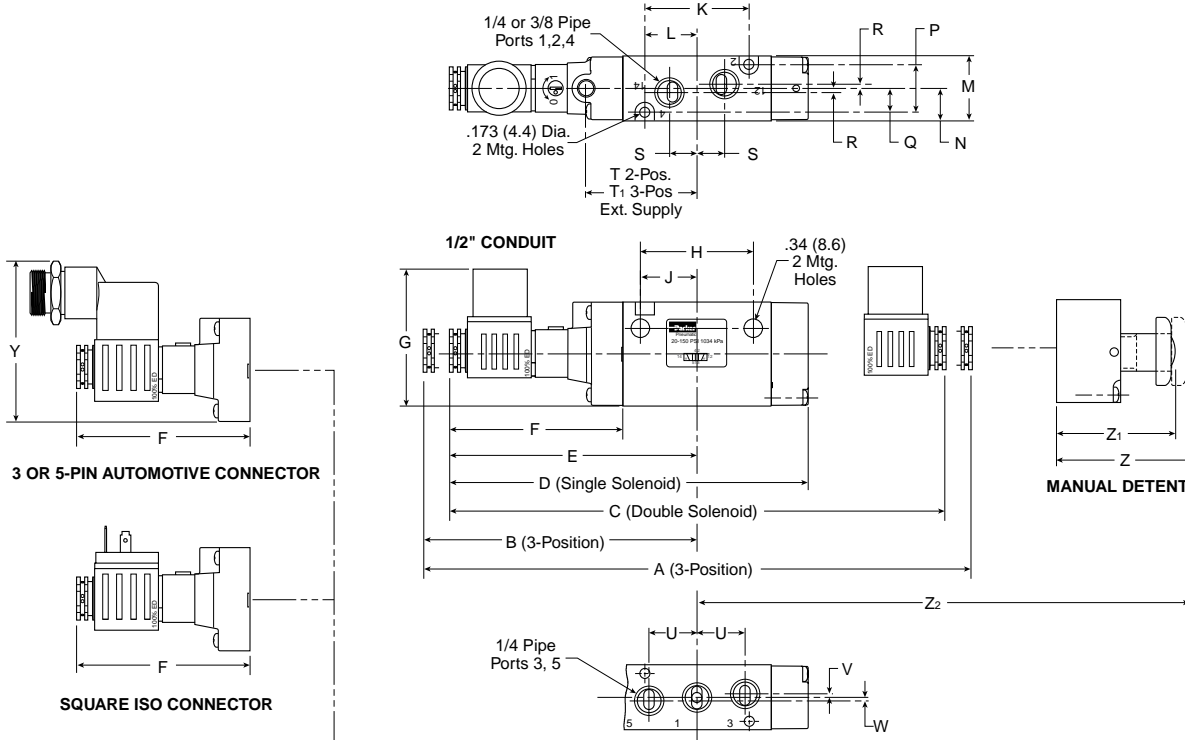
B5 3-Way IEM Aluminum Bar Manifold

| | | | | |
|-----------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|
| B 4.21 (106,9) | C 3.88 (98,6) | D 3.41 (86,6) | E .18 (4,6) | F 2.12 (53,8) |
| G .17 (4,3) | H 2.46 (62,5) | J 4.82 (122,4) | K 5.29 (134,4) | L 7.03 (178,6) |
| N 3.50 (89,0) | P 1.44 (36,6) | Q 3.36 (85,3) | R 1.26 (32,0) | S 1.76 (44,7) |
| T 2.12 (53,8) | U Ø .18 Ø (4,6) | | | |

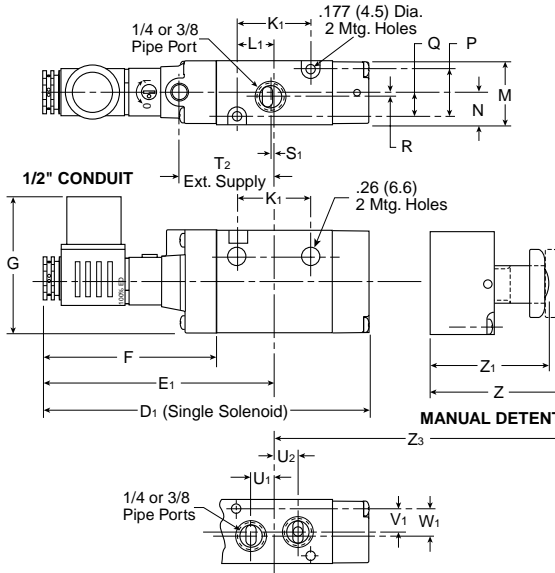
Inches (mm)

B5

4-Way Alternative Electrical Enclosures



3-Way Alternative Electrical Enclosures



B5 Alternative – Electrical Enclosures Inches (mm)

| | | | | | | | | | | | | |
|--|---|---------------------------------------|-----------------------------|--------------------------------------|---|-------------------------------------|---|----------------------------|--|--|---|--|
| A 9.94 (252,5) | A₁ .872 (221,4) | B 4.97 (126,2) | C 9.00 (228,6) | D 6.52 (165,6) | D₁ 6.02 (152,9) | E 4.50 (114,3) | E₁ 4.26 (108,1) | F 3.15 (80,0) | G 2.47 (62,8) | H 2.05 (52,1) | J 1.03 (26,2) | K 1.89 (48,0) |
| K₁ 1.40 (35,5) | L .95 (24,1) | L₁ .70 (17,8) | M 1.18 (30,0) | N .59 (15,0) | P .87 (22,1) | Q .43 (10,9) | R .08 (2,0) | S .50 (12,7) | S₁ .06 (1,5) | T 2.01 (51,1) | T₁ 2.47 (62,7) | T₂ 1.76 (44,8) |
| U .87 (22,1) | U₁ .43 (10,9) | U₂ .45 (11,3) | V .06 (1,5) | V₁ .37 (9,3) | W .07 (1,8) | W₁ .50 (13) | Y 2.90 (73,6) | Z 2.40 (60,9) | Z₁ 2.12 (53,8) | Z₂ 3.75 (95,2) | Z₃ 4.17 (105,8) | |

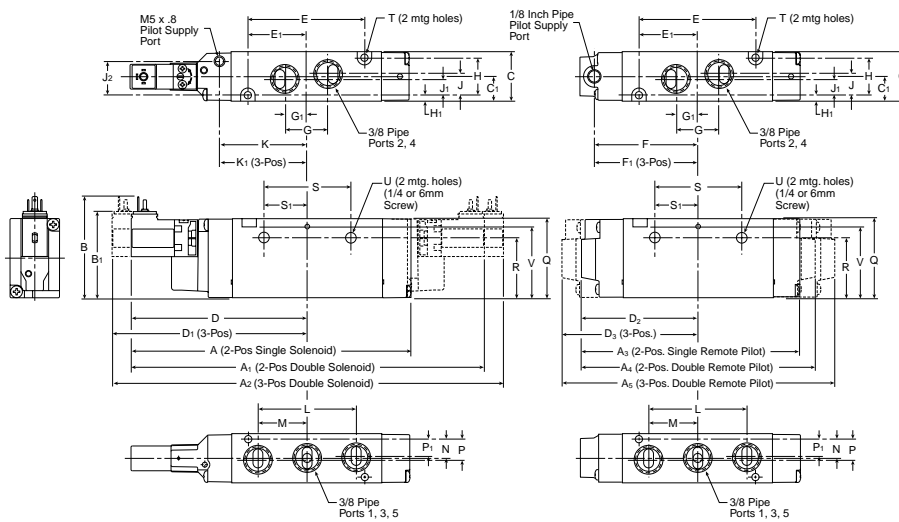
J

B6

Single & Double Operators – 4-Way Inline

Solenoid

Remote Pilot



B6 4-Way Inline

| | | | | |
|---|---|---|---|---|
| A 6.67 (169,5) | A₁ 8.41 (213,7) | A₂ 9.35 (237,6) | A₃ 5.26 (133,7) | A₄ 5.59 (142,1) |
| A₅ 6.54 (166,0) | B 2.41 (61,3) | B₁ 2.06 (52,3) | C 1.18 (30,0) | C₁ .59 (15,0) |
| D 4.21 (106,8) | D₁ 4.68 (118,8) | D₂ 2.80 (71,0) | D₃ 3.27 (83,0) | E 2.79 (70,8) |
| E₁ 1.39 (35,4) | F 2.45 (62,3) | F₁ 2.92 (74,3) | G 1.03 (26,1) | G₁ .51 (13,1) |
| H .91 (23,0) | H₁ .14 (3,5) | J .51 (13,1) | J₁ .39 (10,0) | J₂ .81 (20,6) |
| K 2.09 (53,0) | K₁ 2.56 (64,9) | L 2.34 (59,4) | M 1.17 (29,7) | N .45 (11,5) |
| P .49 (12,5) | P₁ .41 (10,5) | Q 1.89 (48,0) | R 1.45 (36,8) | S 2.09 (53,0) |
| S₁ 1.04 (26,5) | T Ø .17 (4,4) | U Ø .27 (6,9) | V 1.69 (43,0) | |

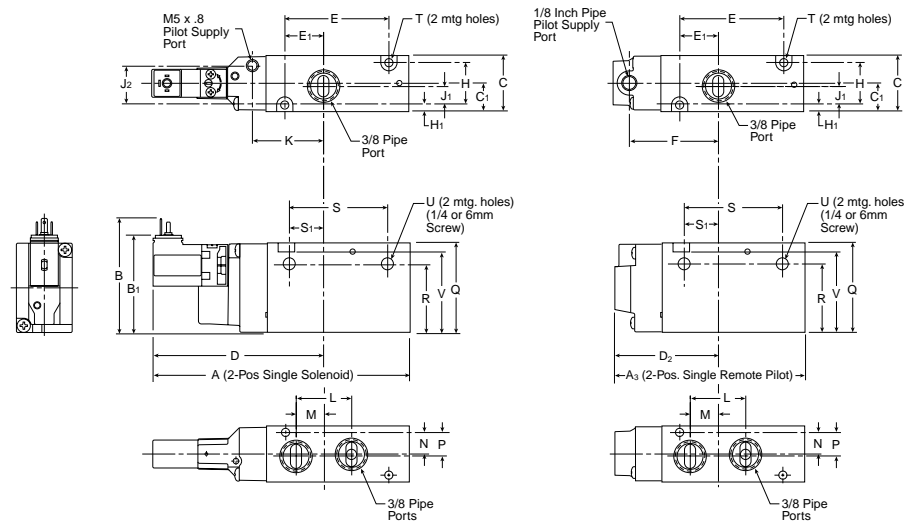
Inches (mm)

B6

Single Operators – 3-Way Inline

Solenoid

Remote Pilot



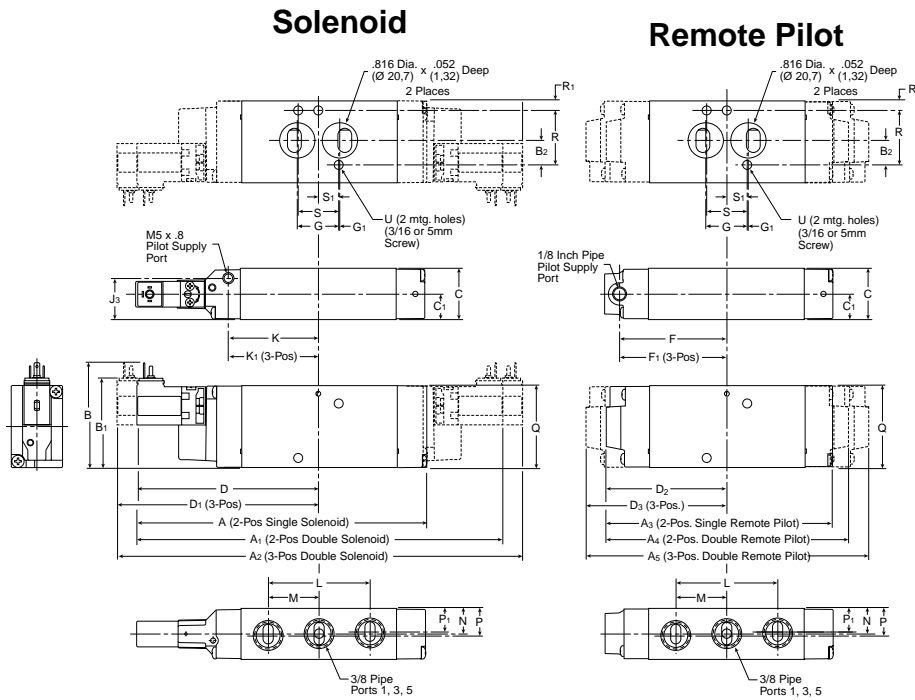
B6 3-Way Inline

| | | | | |
|---------------------------------------|---|--|--|--|
| A 5.42 (137,7) | A₃ 4.01 (101,9) | B 2.41 (61,3) | B₁ 2.06 (52,3) | C 1.18 (30,0) |
| C₁ .59 (15,0) | D 3.63 (92,1) | D₂ 2.22 (56,3) | E 2.19 (55,6) | E₁ 0.82 (20,7) |
| F 1.87 (47,6) | H .91 (23,0) | H₁ .14 (3,5) | J₁ .39 (10,0) | J₂ .81 (20,6) |
| K 1.51 (38,3) | L 1.17 (29,7) | M .59 (15,0) | N .45 (11,5) | P .49 (12,5) |
| Q 1.89 (48,0) | R 1.45 (36,8) | S 2.09 (53,0) | S₁ 0.76 (19,4) | T Ø .17 (4,4) |
| U Ø .27 (6,9) | V 1.69 (43,0) | | | |

Inches (mm)

B6

Single & Double Operators – 4-Way NAMUR Mount



B6 4-Way NAMUR Mount

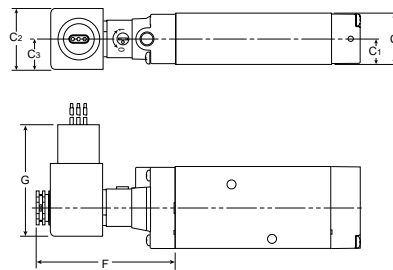
| | | | | |
|---|---|---|---|---|
| A 6.67 (169,5) | A₁ 8.41 (213,7) | A₂ 9.35 (237,6) | A₃ 5.26 (133,7) | A₄ 5.59 (142,1) |
| A₅ 6.54 (166,0) | B 2.41 (61,3) | B₁ 2.06 (52,3) | B₂ .57 (14,4) | C 1.18 (30,0) |
| C₁ .59 (15) | D 4.21 (106,8) | D₁ 4.68 (118,8) | D₂ 2.80 (71,0) | D₃ 3.27 (83,0) |
| F 2.45 (62,3) | F₁ 2.92 (74,3) | G .95 (24,2) | G₁ .02 (0,53) | J₃ .95 (24,1) |
| K 2.09 (53,0) | K₁ 2.56 (64,9) | L 2.34 (59,4) | M 1.17 (29,7) | N .59 (15) |
| P .63 (16) | P₁ .55 (14) | Q 1.89 (48,0) | R 1.26 (32) | R₁ .22 (5,5) |
| S .94 (24) | S₁ .47 (12) | T Ø .17 Ø (4,4) | U Ø .27 Ø (6,9) | |

Inches (mm)

J

B6

Alternative Electrical Enclosure Option F



**Hazardous Duty
 Solenoid Coil**

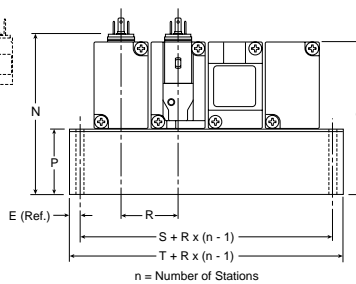
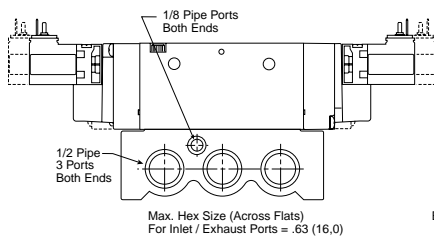
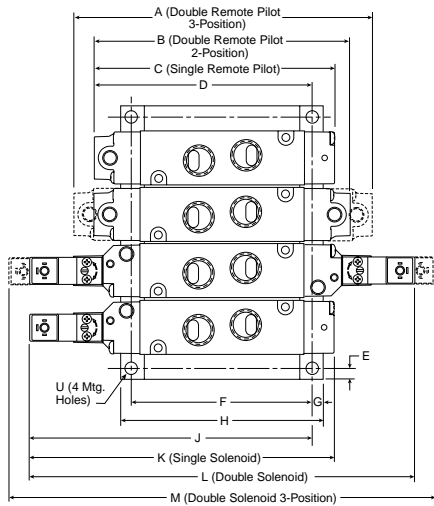
**B6 4-Way NAMUR Mount
 with Option F Enclosure**

| | | | | |
|--------------------------|-------------------------------------|--------------------------------------|-------------------------------------|--------------------------|
| C 1.18 (30) | C₁ .59 (15) | C₂ 1.42 (36) | C₃ .71 (18) | F 3.15 (80) |
| G 2.60 (66) | | | | |

Inches (mm)

B6

Single & Double Operators – 4-Way IEM Aluminum Bar



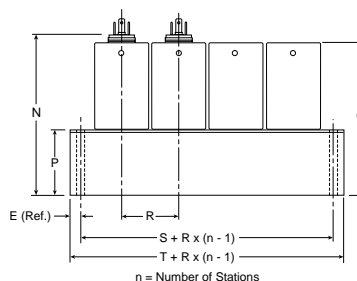
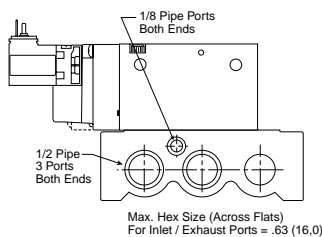
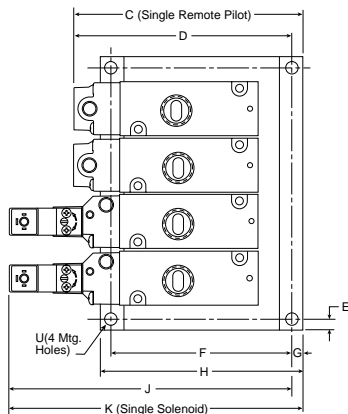
B6 4-Way IEM Aluminum Bar Manifold

| | | | | |
|-----------------------------|-----------------------------|-----------------------------|------------------------------|-----------------------------|
| A 6.54 (166,0) | B 5.59 (142,1) | C 5.26 (133,7) | D 4.76 (121,0) | E .24 (6,0) |
| F 3.94 (100,0) | G .24 (6,0) | H 4.41 (112,0) | J 6.17 (156,8) | K 6.67 (169,5) |
| L 8.41 (213,7) | M 9.35 (237,6) | N 3.60 (91,3) | P 1.54 (39,0) | Q 3.43 (87,0) |
| R 1.24 (31,5) | S 1.77 (45,0) | T 2.24 (57,0) | U ∅ .26 ∅ (6,5) | |

Inches (mm)

B6

Single Operators – 3-Way IEM Aluminum Bar



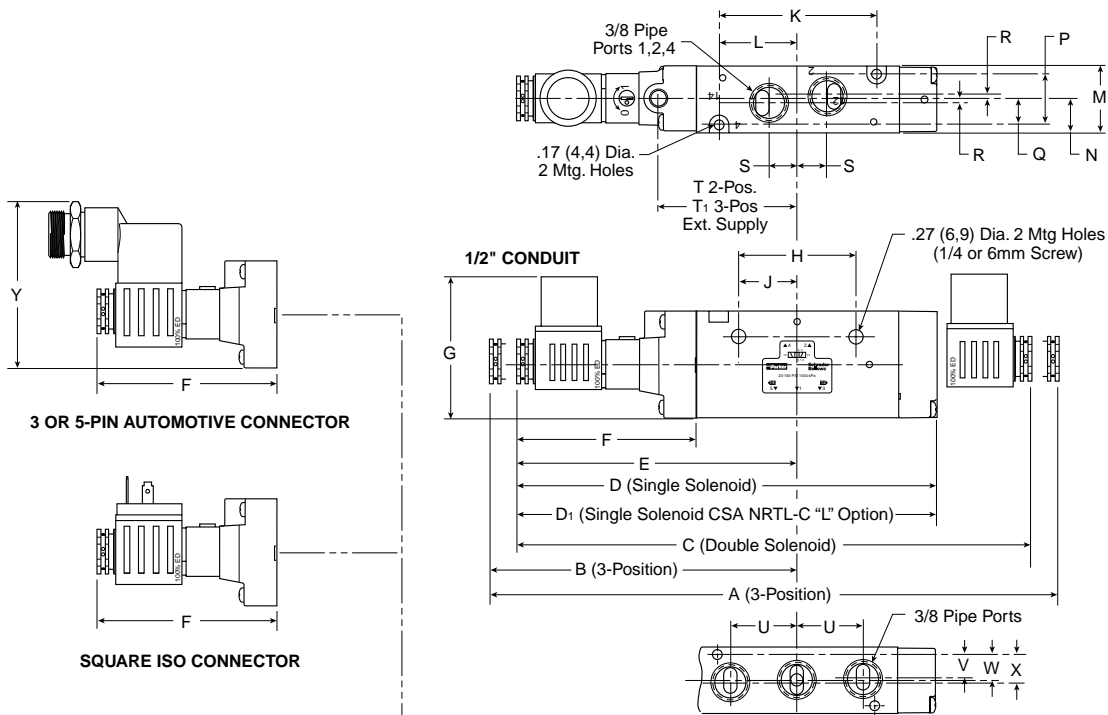
B6 3-Way IEM Aluminum Bar Manifold

| | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| C 5.00 (127,0) | D 4.76 (121,0) | E .24 (6,0) | F 3.94 (100,0) | G .24 (6,0) |
| H 4.41 (112,0) | J 6.17 (156,8) | K 6.41 (162,8) | N 3.60 (91,3) | P 1.54 (39,0) |
| Q 3.43 (87,0) | R 1.24 (31,5) | S 1.77 (45,0) | T 2.24 (57,0) | U ∅ .26 ∅ (6,5) |

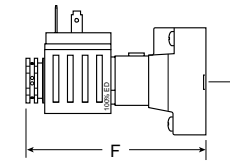
Inches (mm)

B6

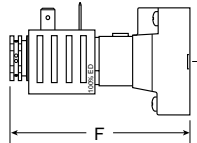
4-Way Alternative Electrical Enclosures



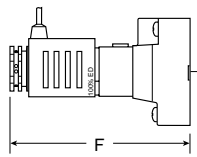
3 OR 5-PIN AUTOMOTIVE CONNECTOR



SQUARE ISO CONNECTOR

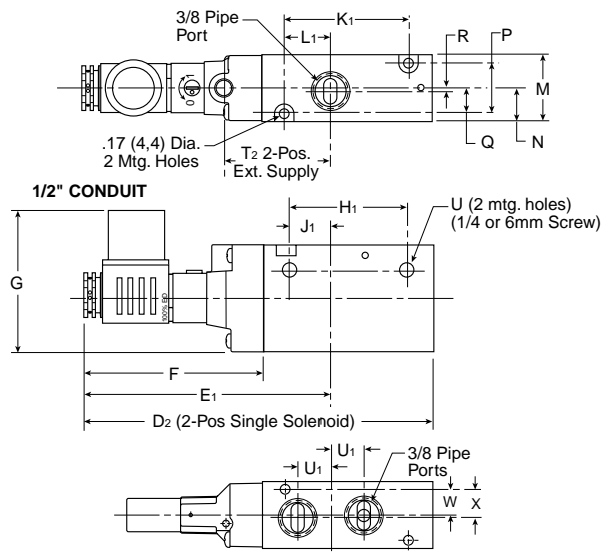


22mm RECT. DIN CONNECTOR



GROMMET/FLYING LEADS

3-Way Alternative Electrical Enclosures



B6 Alternative – Electrical Enclosures Inches (mm)

| | | | | | | | | | | | | |
|--|-----------------------------|--|-----------------------------|---|---|-----------------------------|---|----------------------------|----------------------------|----------------------------|--|--|
| A 10.84 (275,3) | B 5.41 (137,5) | C 9.89 (251,3) | D 7.41 (188,2) | D₁ 7.74 (196,6) | D₂ 6.17 (156,6) | E 4.94 (125,6) | E₂ 4.37 (111,0) | F 3.15 (80,0) | G 2.47 (62,8) | H 2.09 (53,0) | H₁ 2.09 (53,0) | J 1.04 (26,5) |
| J₁ 0.76 (19,4) | K 2.79 (70,8) | K₁ 2.19 (55,6) | L 1.39 (35,4) | L₁ .82 (20,7) | M 1.18 (30,0) | N .59 (15,0) | P .91 (23,0) | Q .45 (11,5) | R .06 (1,6) | S .51 (13,1) | T 2.45 (62,3) | T₁ 2.93 (29,7) |
| T₂ 1.89 (48,0) | U .59 (15,0) | U₁ .59 (15,0) | V .41 (10,5) | W .45 (11,5) | X .49 (12,5) | Y 2.90 (73,6) | | | | | | |

J

B7

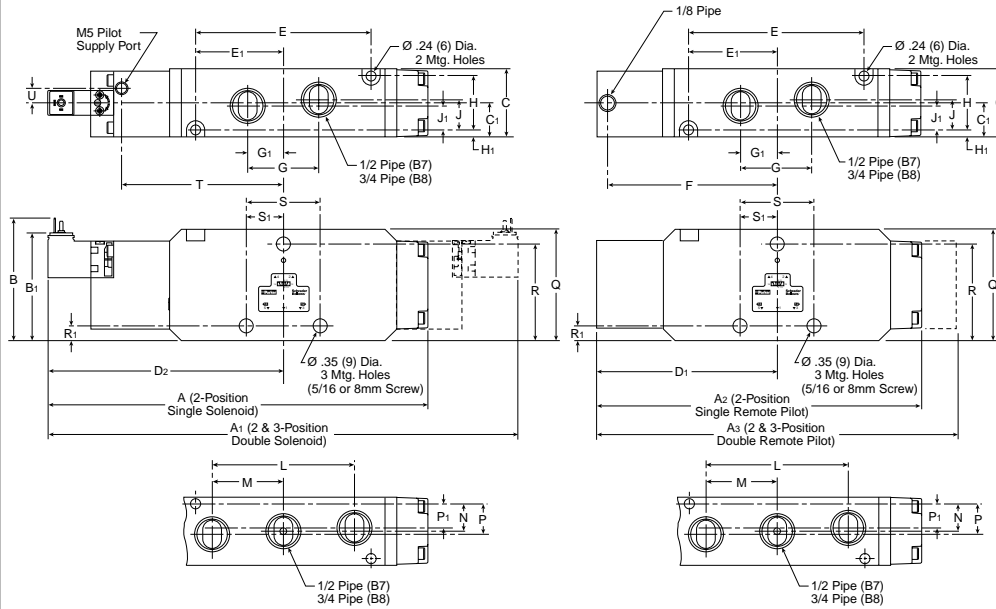
Single & Double Operators – 4-Way Inline

B8

Solenoid

Remote Pilot

B7 & B8 4-Way Inline



| | | | |
|---------------------------------------|--|---------------------------------------|---------------------------------------|
| A 9.13 (232) | A₁ 11.29 (287) | A₂ 7.79 (198) | A₃ 8.62 (219) |
| B 2.95 (75) | B₁ 2.59 (66) | C 1.65 (42) | C₁ .83 (21) |
| D₁ 4.29 (109) | D₂ 5.63 (143) | E 4.21 (107) | E₁ 2.13 (54) |
| F 4.06 (103) | G 1.73 (44) | G₁ .87 (22) | H 1.29 (33) |
| H₁ .16 (4) | J .75 (19) | J₁ .59 (15) | L 3.39 (86) |
| M 1.69 (43) | N .67 (17) | P .75 (19) | P₁ .59 (15) |
| Q 2.68 (68) | R 2.32 (59) | R₁ .35 (9) | S 1.81 (46) |
| S₁ .90 (23) | T 3.94 (100) | U .35 (9) | |

Inches (mm)

B7

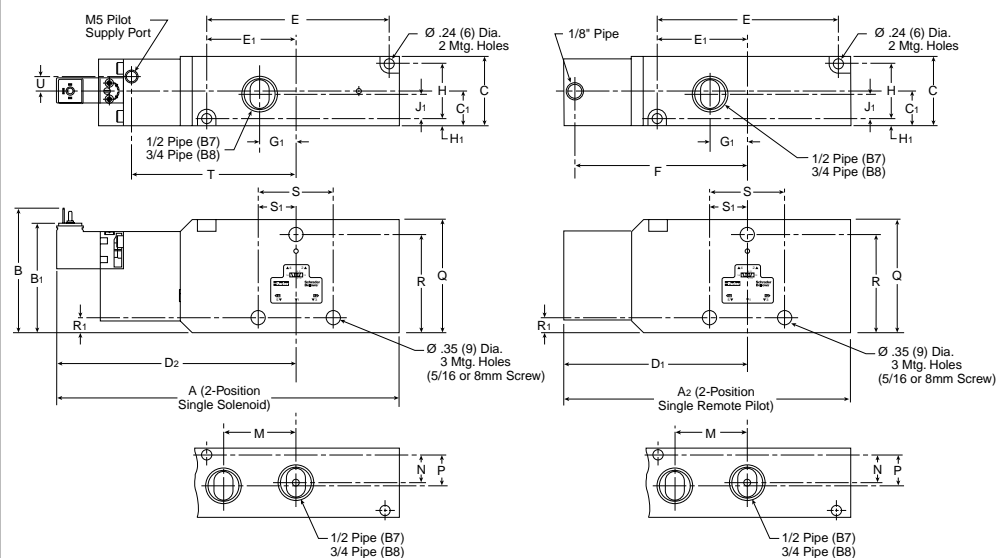
Single Operators – 3-Way Inline

B8

Solenoid

Remote Pilot

B7 & B8 3-Way Inline



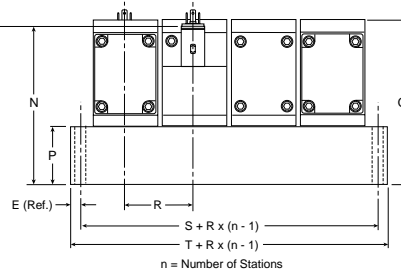
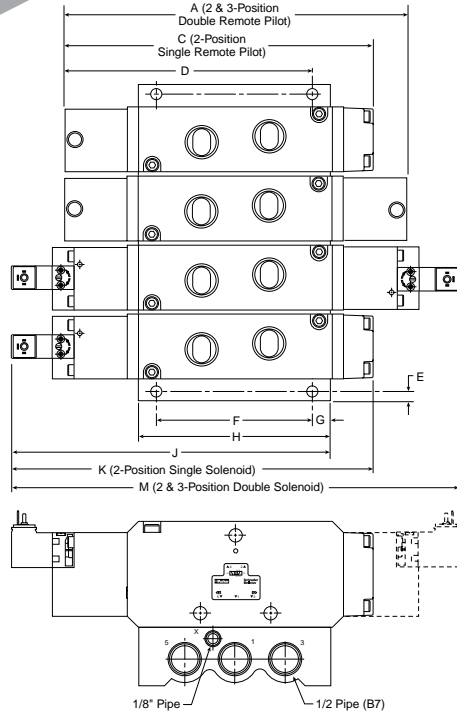
| | | | |
|------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| A 7.99 (203) | A₂ 6.65 (169) | B 2.95 (75) | B₁ 2.59 (66) |
| C 1.65 (42) | C₁ .83 (21) | D₁ 4.29 (109) | D₂ 5.63 (143) |
| E 4.21 (107) | E₁ 2.13 (54) | F 4.06 (103) | G₁ .86 (22) |
| H 1.29 (33) | H₁ .16 (4) | J₁ .59 (15) | M 1.69 (43) |
| N .67 (17) | P .75 (19) | Q 2.68 (68) | R 2.32 (59) |
| R₁ .35 (9) | S 1.81 (46) | S₁ .90 (23) | T 3.94 (100) |
| U .35 (9) | | | |

Inches (mm)

B7

Single & Double Operators – 4-Way IEM Aluminum Bar

B8



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

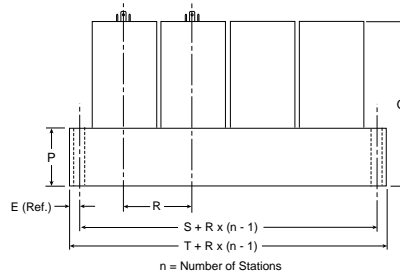
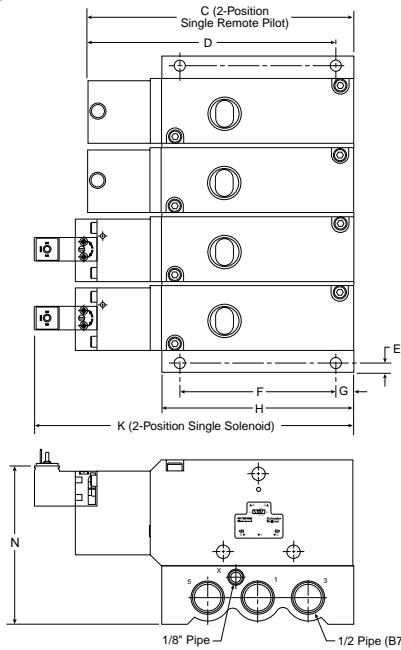
| | | | |
|-----------------------------|----------------------------|-----------------------------|----------------------------|
| A 7.79 (198) | C 8.62 (219) | D 6.26 (159) | E .24 (6) |
| F 3.94 (100) | G .45 (11,5) | H 4.84 (123) | J 8.07 (205) |
| K 9.13 (232) | M 11.29 (287) | N 4.00 (101,5) | P 1.48 (37,5) |
| Q 4.15 (105,5) | R 1.77 (45) | S 2.24 (57) | T 2.72 (69) |

Inches (mm)

B7

Single Operators – 3-Way IEM Aluminum Bar

B8



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

| | | | |
|----------------------------|-----------------------------|---------------------------|-----------------------------|
| C 6.65 (169) | D 4.92 (124,9) | E .24 (6) | F 3.94 (100) |
| G .45 (11,5) | H 4.84 (123) | K 7.99 (203) | N 4.00 (101,5) |
| P 1.48 (37,5) | Q 4.15 (105,5) | R 1.77 (45) | S 2.24 (57) |
| T 2.72 (69) | | | |

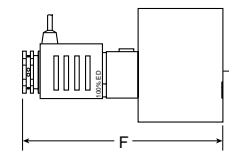
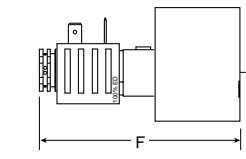
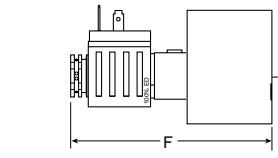
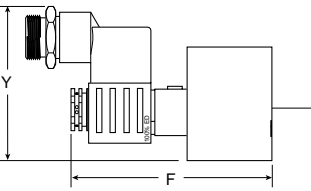
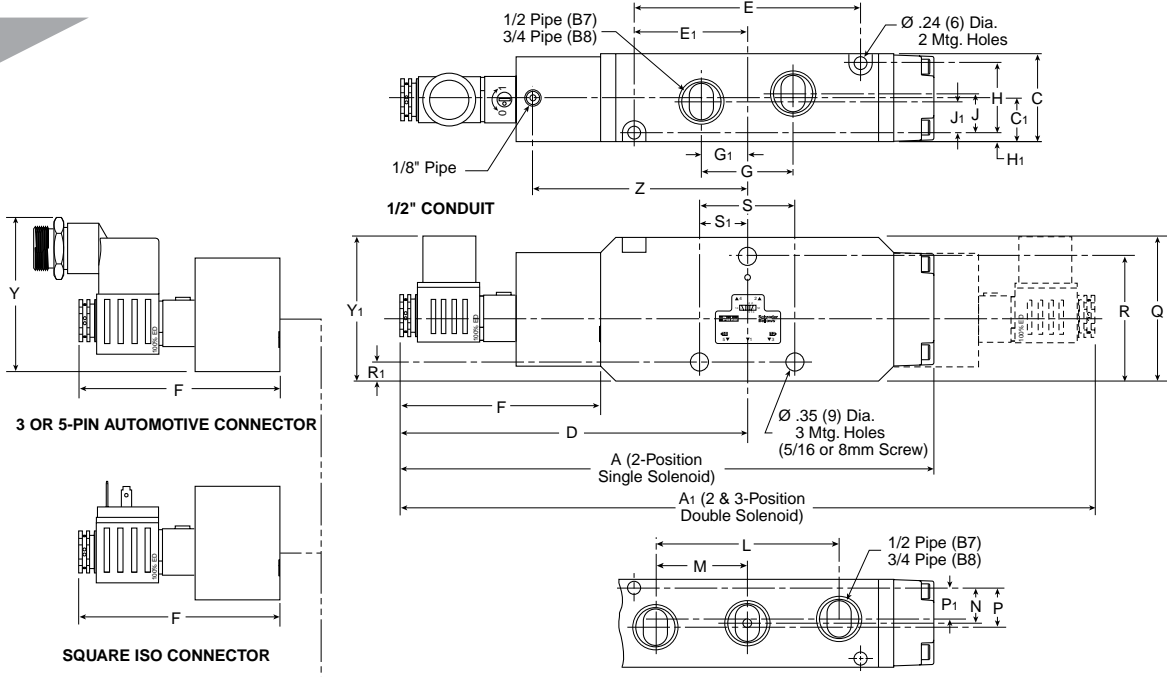
Inches (mm)

J

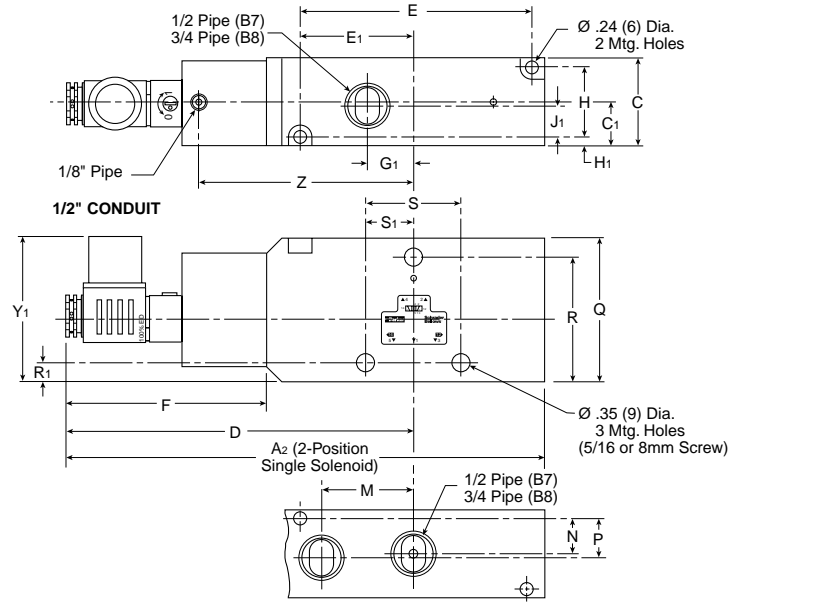
B7

B8

4-Way Alternative Electrical Enclosures



3-Way Alternative Electrical Enclosures



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

| | | | | | | | | | | | | |
|---------------------------|-----------------------------|----------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| A 9.92 (252) | A1 12.91 (328) | A2 8.78 (223) | C 1.65 (42) | C1 .83 (21) | D 6.46 (164) | E 4.21 (107) | E1 2.13 (54) | F 3.74 (95) | G 1.73 (44) | G1 .86 (22) | H 1.29 (33) | H1 .16 (4) |
| J .75 (19) | J1 .59 (15) | L 3.39 (86) | M 1.69 (43) | N .67 (17) | P .75 (19) | P1 .59 (15) | Q 2.68 (68) | R 2.32 (59) | R1 .35 (9) | S 1.81 (46) | S1 .90 (23) | Y 2.87 (73) |
| Y1 2.71 (69) | Z 3.98 (101) | | | | | | | | | | | |

Definitions

- CSA NRTL-C** 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 = 29.92 → 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.

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

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 | .155 | .102 | |
| 20 | 2.3 | .129 | .083 | .066 |
| 30 | 3.0 | .113 | .072 | .055 |
| 40 | 3.7 | .097 | .064 | .048 |
| 50 | 4.4 | .091 | .059 | .043 |
| 60 | 5.1 | .084 | .054 | .040 |
| 70 | 5.7 | .079 | .050 | .037 |
| 80 | 6.4 | .075 | .048 | .035 |
| 90 | 7.1 | .071 | .045 | .033 |
| 100 | 7.8 | .068 | .043 | .031 |
| 110 | 8.5 | .065 | .041 | .030 |
| 120 | 9.2 | .062 | .039 | .029 |
| 130 | 9.9 | .060 | .038 | .028 |
| 140 | 10.6 | .058 | .037 | .027 |
| 150 | 11.2 | .056 | .036 | .026 |
| 160 | 11.9 | .055 | .035 | .026 |
| 170 | 12.6 | .054 | .034 | .025 |
| 180 | 13.3 | .052 | .033 | .024 |
| 190 | 14.0 | .051 | .032 | .024 |
| 200 | 14.7 | .050 | .031 | .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
