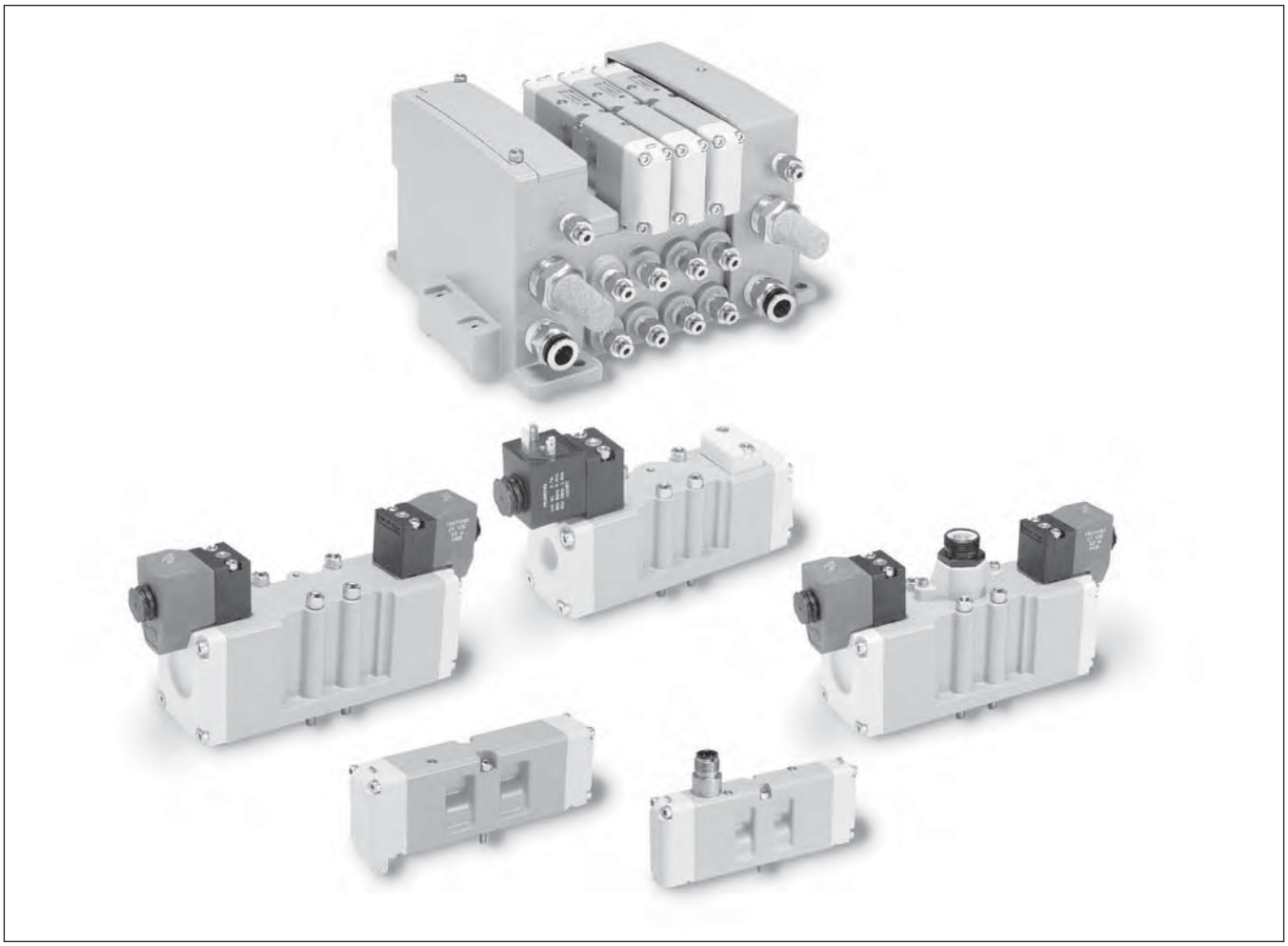
Isys ISO Series

ISO Air Control Valves

15407-2 & 15407-1, 5599-2 & 5599-1
Sizes 18mm, 26mm, 1, 2, & 3

Section E

www.parker.com/pneu/Isys



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BOLD ITEMS ARE MOST POPULAR.

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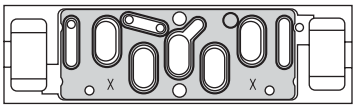
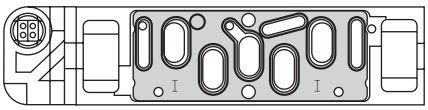
ISO Pneumatic Valve Standard Definitions

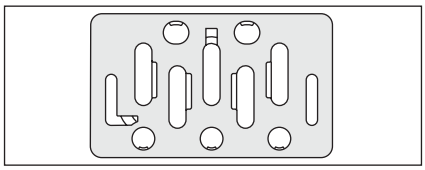
15407-1: Non-Plug-in Standards for Size 01 (26mm) & Size 02 (18mm) Wide Valves



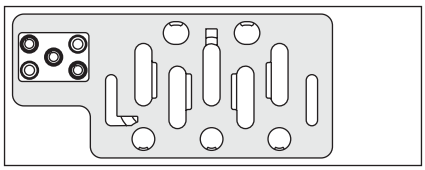
15407-2: Plug-in Standards for Size 01 (26mm) & Size 02 (18mm) Wide Valves



5599-1: Non-Plug-in Standards for Sizes 1, 2, 3

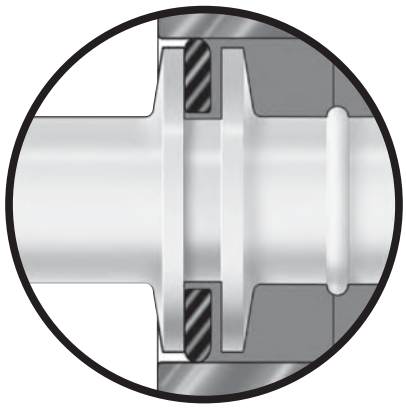


5599-2: Plug-in Standards for Size 1, 2, 3



*W*ear 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.



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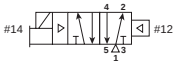
Basic Valve Functions

Single Solenoid

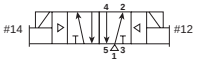


Single Pressure At Inlet Port 1:

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.

Double Solenoid

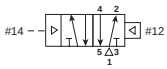


Single Pressure At Inlet Port 1:

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.

Single Remote Pilot

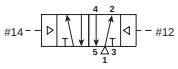


Single Pressure At Inlet Port 1:

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.

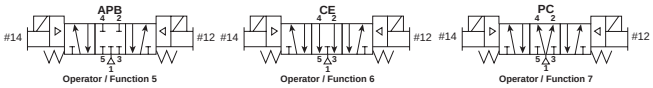
Double Remote Pilot



Single Pressure At Inlet Port 1:

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 3-Position

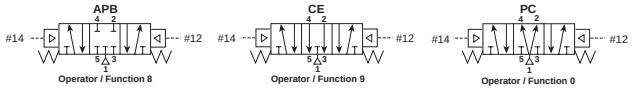
With #12 operator energized – inlet port 1 connected to cylinder port 2, cylinder port 4 connected to exhaust port 5.

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 3-Position

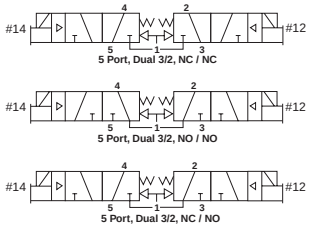
With #12 operator signaled – inlet port 1 connected to cylinder port 2, cylinder port 4 connected to exhaust port 5.

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.



Double Solenoid / Remote Pilot Dual 3-Way, 2-Position NC / NC (NNP)

With #14 & #12 operators both de-energized – pressure at inlet port 1 blocked, outlet port 4 connected to exhaust port 5, outlet port 2 connected to exhaust port 3.

With #14 operator energized – pressure at inlet port 1 connected to outlet port 4, exhaust port 5 blocked, outlet port 2 connected to exhaust port 3.

With #12 operator energized – pressure at inlet port 1 connected to outlet port 2, exhaust port 3 blocked, outlet port 4 connected to exhaust port 5.

With #14 & #12 operators both energized – pressure at inlet port 1 connected to outlet ports 4 & 2, exhaust ports 3 & 5 blocked.

Dual Pressure:

May be used for dual pressure service with pressure at ports 3 & 5. (Use either external pilot source option “L” or “X” or internal pilot source option “B”.) If pilot source “B” is selected, the high pressure must be at port #3. If pilot source “L” or “X” is selected, the external pilot must be plumbed to either port #14 or #12 respectively. 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.

Dual 3-Way, 2-Position NO / NO (NP)

With #14 & #12 operators both de-energized – pressure at inlet port 1 connected to outlet ports 4 & 2, exhaust ports 3 & 5 blocked.

With #14 operator energized – pressure at inlet port 1 connected to outlet port 2, exhaust port 3 blocked, outlet port 4 connected to exhaust port 5.

With #12 operator energized – pressure at inlet port 1 connected to outlet port 4, exhaust port 5 blocked, outlet port 2 connected to exhaust port 3.

With #14 & #12 operators both energized – pressure at inlet port 1 blocked, outlet port 4 connected to exhaust port 5, outlet port 2 connected to exhaust port 3.

Dual 3-Way, 2-Position 14 End NC / 12 End NO (NNP / NP)

With #14 & #12 operators both de-energized – pressure at inlet port 1 connected to outlet port 2, exhaust port 3 blocked, outlet port 4 connected to exhaust port 5.

With #14 operator energized – pressure at inlet port 1 connected to outlet ports 4 & 2, exhaust ports 3 & 5 blocked.

With #12 operator energized – pressure at inlet port 1 blocked, outlet port 4 connected to exhaust port 5, outlet port 2 connected to exhaust port 3.

With #14 & #12 operators both energized – pressure at inlet port 1 connected to outlet port 4, exhaust port 5 blocked, outlet port 2 connected to exhaust port 3.

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15407-2 15407-1

Specifications

HB **HB (18mm)**: 0.55 Cv
C = 1.5 Nl/s x bar, b = 0.25
Qn = 390 l/min,
Qmax = 648 l/min

HA **HA (26mm)**: 1.1 Cv
C = 3.6 Nl/s x bar, b = 0.30
Qn = 918 l/min,
Qmax = 1518 l/min

Materials of Construction

- End Caps: PBT
- Fasteners: Zinc Plated Steel
- Valve Body: Aluminum
- Coils: Thermoset Plastic

Operating Pressure

- Vacuum to 145 PSIG
- Minimum Operating Pressure
  – 2-Position: 25 PSI
  – 3-Position: 35 PSI

Ports

- NPT and BSPP “G” Standard

Manifolds

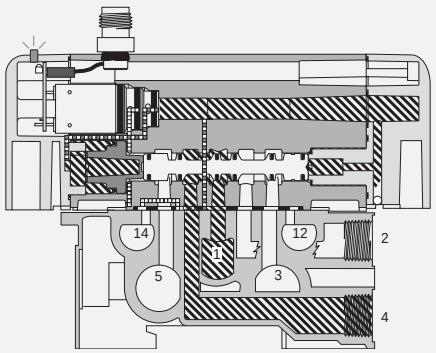
- Terminal Block Wiring (HA Only)
- Collective Wiring
  – 25-Pin, D-Sub
  – 19-Pin, Brad Harrison
  – 16 Point Terminal Strip
  – 12-Pin, M23
  – 19-Pin, M23
  – Moduflex Fieldbus
  – Isysnet Fieldbus

Certification / Approval

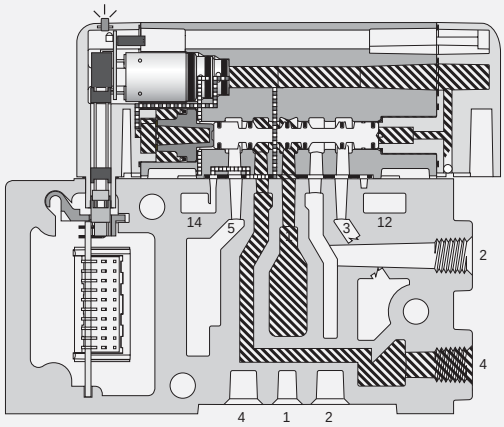
- CSA / C-US Approved
- NEMA 4
- IP65
- BSPP Manifold and Subbase Ports
  Meet ISO 1179 Specifications

Solenoids

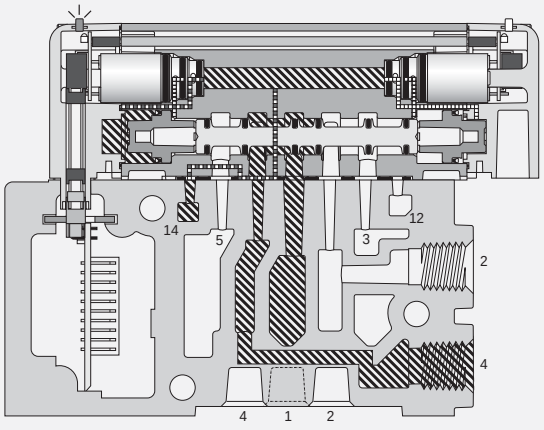
- Bi-Polar
- Surge Suppression (Standard)
- Low Watt – 1.0, 24VDC, 2.0VA, 120VAC
- Indicator Lights



15407-1 18mm Single Solenoid Internal Pilot Manifold Mounted



15407-2 18mm Single Solenoid Internal Pilot Manifold Mounted



15407-2 26mm Double Solenoid External Pilot Manifold Mounted

Pressure **Exhaust**

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5599-2 5599-1

Specifications

H1 **H1 (Size 1)**: 1.5 Cv
C = 5.0 Nl/s x bar, b = 0.25
Qn = 1248 l/min,
Qmax = 2070 l/min

H2 **H2 (Size 2)**: 3.0 Cv
C = 9.7 Nl/s x bar, b = 0.35
Qn = 2520 l/min,
Qmax = 4140 l/min

H3 **H3 (Size 3)**: 6.0 Cv
C = 18.7 Nl/s x bar, b = 0.35
Qn = 5022 l/min,
Qmax = 7848 l/min

Materials of Construction

- End Caps: PBT
- Fasteners: Zinc Plated Steel
- Valve Body: Die Cast Aluminum
- Coils: Thermoset Plastic

Operating Pressure

- Vacuum to 145 PSIG
- Minimum Operating Pressure
  - 2-Position: 25 PSI
  - 3-Position: 35 PSI

Ports

- NPT and BSPP “G”

Manifolds

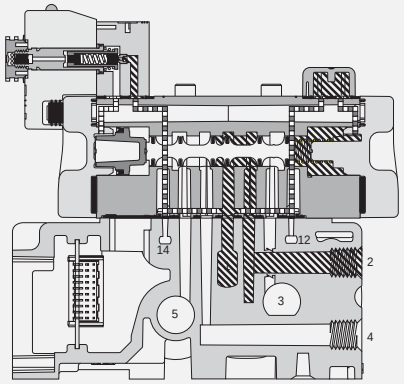
- Flying Leads
- Terminal Block Wiring
- Connector in the Base
- Collective Wiring
  - 25-Pin, D-Sub
  - 19-Pin, Brad Harrison
  - 12-Pin, M23
  - 19-Pin, M23
  - Moduflex Fieldbus
  - Isysnet Fieldbus

Certification / Approval

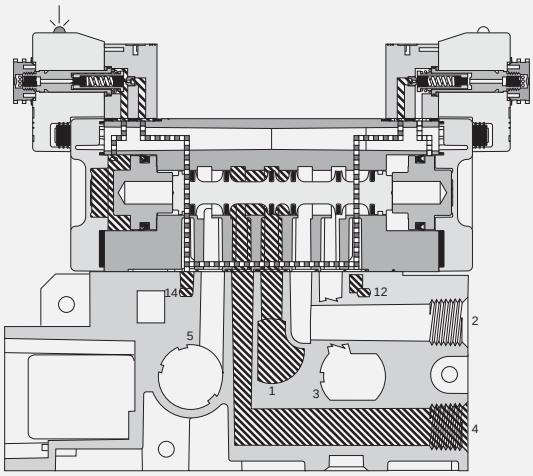
- CSA / C-US Approved
- NEMA 4
- IP65
- BSPP Manifold and Subbase Ports Meet ISO 1179 Specifications

Solenoids

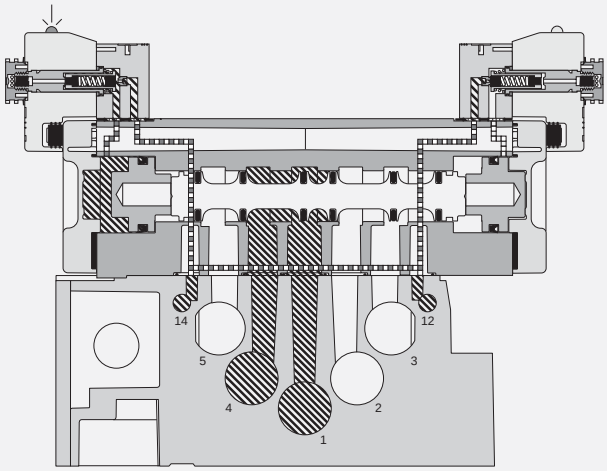
- Bi-Polar
- Surge Suppression (On Lighted Coils)
- Low Watt – 3.2, 24VDC, 4.5VA, 120VAC
- Indicator Lights, 24VDC & 120VAC



H1 5599-2 Single Solenoid Internal Pilot Manifold Mounted



H2 5599-2 Double Solenoid External Pilot Manifold Mounted



H3 5599-2 Double Solenoid External Pilot Subbase Mounted

Pressure **Exhaust**

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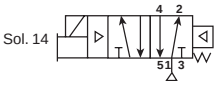
15407-2, Plug-in, Size 18mm (HB) & 26mm (HA)

Single Solenoid
2-Position

HB: 18mm

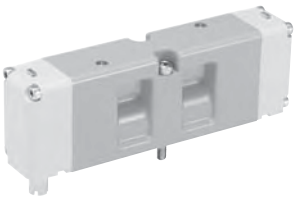
HA: 26mm



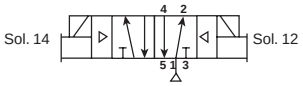
HB	**HBEVXBG023A**	120VAC	0.55 Cv C = 1.5 Nl/s x bar, b = 0.25 Qn = 390 l/min, Qmax = 648 l/min
	HBEVXBG0G9A	24VDC	
HA	**HAEVXBG023A**	120VAC	1.1 Cv C = 3.6 Nl/s x bar, b = 0.30 Qn = 918 l/min, Qmax = 1518 l/min
	HAEVXBG0G9A	24VDC	

Double Solenoid
2-Position

HB: 18mm



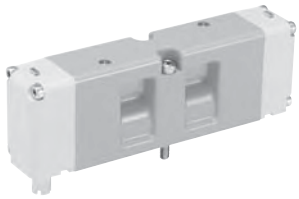
HA: 26mm



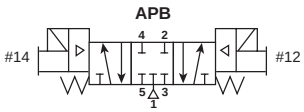
HB	**HB2VXBG023A**	120VAC	0.55 Cv C = 1.5 Nl/s x bar, b = 0.25 Qn = 390 l/min, Qmax = 648 l/min
	HB2VXBG0G9A	24VDC	
HA	**HA2VXBG023A**	120VAC	1.1 Cv C = 3.6 Nl/s x bar, b = 0.30 Qn = 918 l/min, Qmax = 1518 l/min
	HA2VXBG0G9A	24VDC	

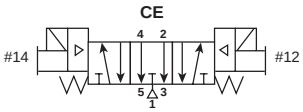
Double Solenoid
3-Position APB
3-Position CE
3-Position PC

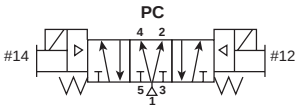
HB: 18mm



HA: 26mm







APB			
HB	**HB5VXBG023A**	120VAC	0.50 Cv C = 1.4 Nl/s x bar, b = 0.25 Qn = 360 l/min, Qmax = 595 l/min
	HB5VXBG0G9A	24VDC	
HA	**HA5VXBG023A**	120VAC	1.0 Cv C = 3.3 Nl/s x bar, b = 0.30 Qn = 845 l/min, Qmax = 1395 l/min
	HA5VXBG0G9A	24VDC	
CE			
HB	**HB6VXBG023A**	120VAC	0.50 Cv C = 1.4 Nl/s x bar, b = 0.25 Qn = 360 l/min, Qmax = 595 l/min
	HB6VXBG0G9A	24VDC	
HA	**HA6VXBG023A**	120VAC	1.0 Cv C = 3.3 Nl/s x bar, b = 0.30 Qn = 845 l/min, Qmax = 1395 l/min
	HA6VXBG0G9A	24VDC	

PC			
HB	**HB7VXBG023A**	120VAC	0.50 Cv C = 1.4 Nl/s x bar, b = 0.25 Qn = 360 l/min, Qmax = 595 l/min
	HB7VXBG0G9A	24VDC	
HA	**HA7VXBG023A**	120VAC	1.0 Cv C = 3.3 Nl/s x bar, b = 0.30 Qn = 845 l/min, Qmax = 1395 l/min
	HA7VXBG0G9A	24VDC	

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15407-2, Plug-in, Size 18mm (HB) & 26mm (HA)

BOLD OPTIONS ARE MOST POPULAR.

HB 1 VX B G 0 G9 A

Basic Series 15407-2	
ISO 15407-2 18mm	HB
ISO 15407-2 26mm	HA

15407-2 Operator / Function	
Single Solenoid, 2-Position - Air Return	1
Double Solenoid, 2-Position	2
Double Solenoid, 3-Position - APB	5
Double Solenoid, 3-Position - CE	6
Double Solenoid, 3-Position - PC	7
Single Solenoid, 2-Position - Air Return, Spring Assist	E
Double Solenoid, Dual 3/2, NC/NC	N*
Double Solenoid, Dual 3/2, NO/NO	P*
Double Solenoid, Dual 3/2, 14 End NC – 12 End NO	Q*

*Available on HB Only, must use Internal Pilot Source Option "B".

Mounting	
15407-2 Valve Less Base	VX

15407-2 Pilot Source / Pilot Exhaust	
Internal Pilot, Port #1 / Vented	B
External Pilot #14 Port / Vented	L*

* Must be specified when using Sandwich Regulators.

15407-2 Overrides / Lights	
G	Non-Locking, Flush, Push - w/ Light
H	Locking, Flush, Push / Turn - w/ Light

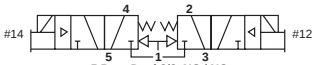
15407-2 Enclosure / Lead Length	
0	Valve Less Base

15407-2 Voltage & Frequency				
	AC		DC	Light & Surge Suppression
	60Hz	50Hz		
G9			24	LED & Suppression
23	120	115		LED & Suppression

15407-2 Engineering Level	
A	Current

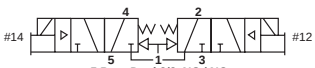
Double Solenoid
Dual 3/2 NC/NC
Dual 3/2 NO/NO
Dual 3/2 NC/NO

HB: 18mm



5 Port, Dual 3/2, NC / NC

5 Port, Dual 3/2, NO / NO



5 Port, Dual 3/2, NC / NO

NC / NC			
HB	HBNVXBG023A	120VAC	0.45 Cv C = 1.25 Nl/s x bar, b = 0.25 Qn = 320 l/min, Qmax = 535 l/min
	HBNVXBG0G9A	24VDC	
NO / NO			
HB	HBPVXBG023A	120VAC	0.45 Cv C = 1.25 Nl/s x bar, b = 0.25 Qn = 320 l/min, Qmax = 535 l/min
	HBPVXBG0G9A	24VDC	

NC / NO - 14 End NC			
HB	HBQVXBG023A	120VAC	0.45 Cv C = 1.25 Nl/s x bar, b = 0.25 Qn = 320 l/min, Qmax = 535 l/min
	HBQVXBG0G9A	24VDC	

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15407-2, Plug-in, Size 18mm (HB) & 26mm (HA) Manifold / Subbase Kits

PS551113 C P

Mounting Style / Port Size	
ISO 15407-2, 18mm HB	
Manifold with 1/8 NPT End Ports	**PS561151**
Manifold with 1/8 BSPP End Port	PS561152*
Manifold with 1/8 NPT Bottom / End Port	PS561161
Manifold with 1/8 BSPP Bottom / End Port	PS561162*
ISO 15407-2, 26mm HA	
Subbase with 1/4 NPT Side Ports	**PS551113**
Subbase with 1/4 BSPP Side Ports	PS551114*
Subbase with 1/4 NPT Bottom / Side Port	PS551123
Subbase with 1/4 BSPP Bottom / Side Port	PS551124*
Manifold with 1/4 NPT End Port	**PS551153**
Manifold with 1/4 BSPP End Port	PS551154*
Manifold with 1/4 NPT Bottom / End Port	PS551163
Manifold with 1/4 BSPP Bottom / End Port	PS551164*

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

Enclosures / Lead Length	
Individually Wired Base	
C†	**Terminal Strip**
Collective Wired Base	
J*	Circuit Board, Single Address
M*	**Circuit Board, Double Address**
N*§	Single Address Circuit Board with 32 Output Expansion
P*‡	Double Address Circuit Board with 32 Output Expansion

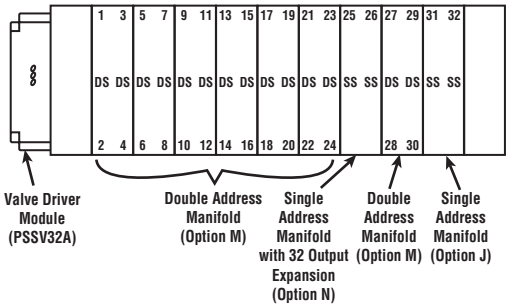
* Manifolds Only.

† Available with HA (26mm). Conduit port included on left hand end plate for wires to exit.

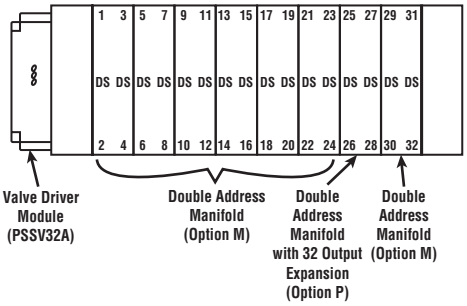
§ When using an HA or HB manifold base with the "N" Enclosure / Lead Length option:
- Outputs 1 – 24 can be single or double address bases. Use a base with "J" or "M" Enclosure / Lead Length option.
- Outputs 25 – 26 are a single address base. Use a base with "N" Enclosure / Lead Length option (this is a single address board with a ribbon connection from the valve driver module, PSSV32A).
- Outputs 27 – 32 can be single or double. Use a base with "J" or "M" Enclosure / Lead Length option.

‡ When using an HA or HB manifold base with the "P" Enclosure / Lead Length option:
- Outputs 1 – 24 can be single or double address bases. Use a base with "J" or "M" Enclosure / Lead Length option.
- Outputs 25 – 28 are a double address base. Use a base with "P" Enclosure / Lead Length option (this is a double address board with a ribbon connection from the valve driver module, PSSV32A).
- Outputs 29 – 32 can be single or double. Use a base with "J" or "M" Enclosure / Lead Length option.

BOLD OPTIONS ARE MOST POPULAR.



Option "N"



Option "P"

Subbase Kits

HA Series Subbase

Manifold Kits

HB Series 2-Station Manifold

HA Series 2-Station Manifold

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Plug-in, 15407-2, Size 18mm (HB) & 26mm (HA) End Plate Kits

HB HA

BOLD OPTIONS ARE MOST POPULAR.

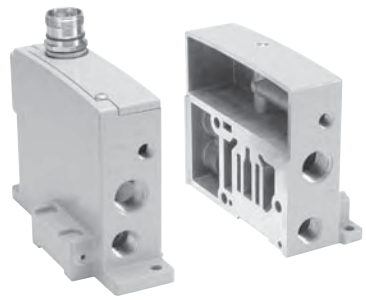
PS5620L6 0 P

Thread Type	
0	**NPT**
1*	BSPP "G"

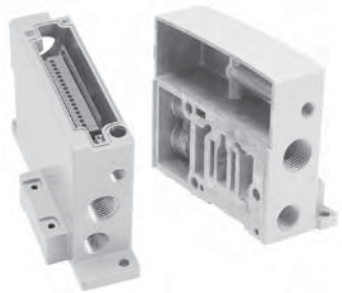
* BSPP Conforms to ISO 1179-1 w 228-1 Threads

End Plate Type	
PS563101	**No Connector - Use with Individually Wired Base**
PS5620L2*	**25-Pin, D-Sub**
PS5620L3	**19-Pin, Round, Brad Harrison**
PS5620L4	12-Pin, M23
PS5620L5	16-Point Terminal Strip
PS5620M2	19-Pin, M23
PS5620M4	**Moduflex Fieldbus**
PS5620L6	**Isysnet, with Valve Driver Module**
PS5620T1	**Turck Fieldbus with Valve Driver Module - 16 outputs**
PS5620T2	**Turck Fieldbus with Valve Driver Module - 32outputs**

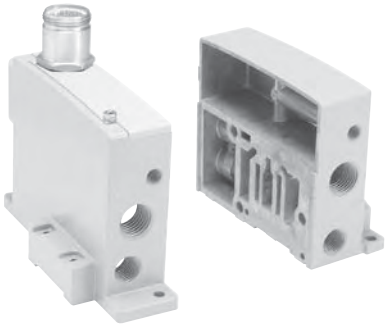
* 120VAC is not CSA rated.
Turck, Isysnet, and Moduflex communication modules must be ordered separately.
See Fieldbus Section for more information.



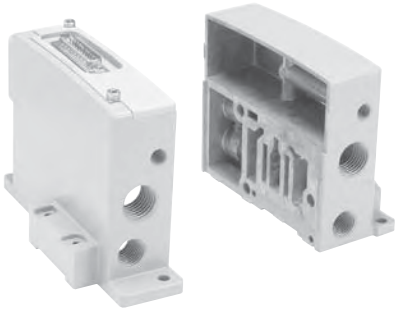
L4 or M2: **HB - HA M23 with 12-Pin or 19-Pin End Plates**



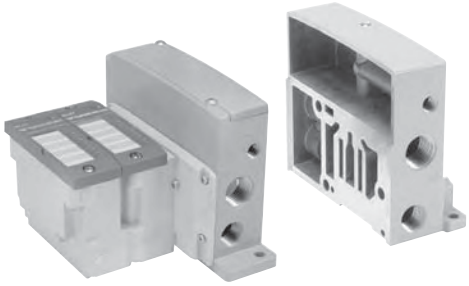
L5: **HB - HA 16-Point Terminal Strip End Plates**



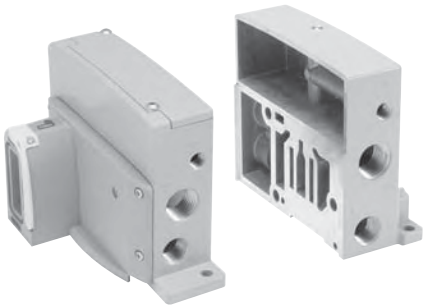
L3: **HB - HA 19-Pin Brad Harrison End Plates**



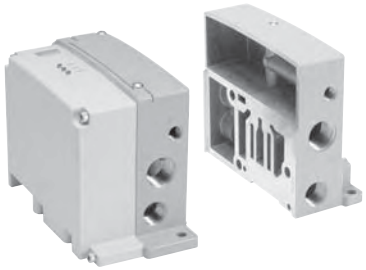
L2: **HB - HA 25-Pin End Plates**



T1, T2: **Isys HA Turck End Plates**



M4: **HB - HA Moduflex Fieldbus End Plates**



L6: **HB - HA Isysnet Fieldbus End Plates**

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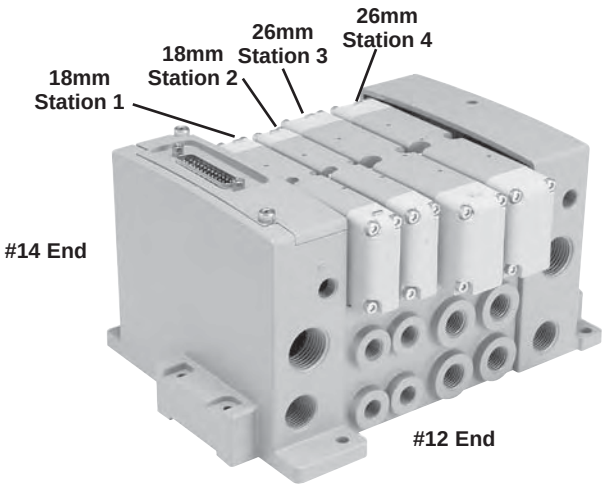
How To Order Plug-in Add-A-Fold Assemblies

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete Valve, Regulator, Flow Control and Base model number. List left to right, LOOKING AT THE CYLINDER PORTS on 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 and the individual manifold number in the station specified.)



Example:
4-Station Manifold with (2) 18mm and (2) 26mm Valves On Manifold Bases

Maximum Number of Solenoids
(Maximum Energized Simultaneously)

HA / HB	Voltage Code	25-Pin D-Sub	19-Pin Brad Harrison	12-Pin M23	19-Pin M23	Moduflex	Isysnet
24VDC	G9	24 (24)	16 (16)	8 (8)	16 (16)	16 (16)	32 (32)
120VAC*	23	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A

* Not CSA certified for 25-Pin, D-Sub option.

Add-A-Fold Assembly Model Number

AA	HB	D	0	04	

Valve Series

Right & Left End Plate 15407-2 (Plug-in, HB 18mm & HA 26mm)	HB*

* Common End Plates for HA & HB.

End Plate Type

Turck Fieldbus with Valve Driver Module - 16 Outputs	A
Turck Fieldbus with Valve Driver Module - 32 Outputs	B
25-Pin, D-Sub	D
19-Pin, Brad Harrison	E
16 Point Terminal Strip	F
12-Pin, M23	G
19-Pin, M23	H
Moduflex Fieldbus	T*
Isysnet, with Valve Driver Module	Y*

* Must order communication modules separately.

Thread Type

0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

Number of Stations*

02
04
•
24
•
32

* Must be ordered in multiples of (2) unless using the HB/HA to H2 Transition Plate.

Transition Plate

Blank	No Transition Plate
B	HB / HA to H2

Example

Application requires a 4-Station manifold.
(Two 18mm + Two 26mm Stations)

Item	Qty.	Part No.	Location
01	1	AAHBD004	
02	1	HB1VXBG0G9A	Station 1
03	1	HB2VXLG0G9A	Station 2
04	1	PS561151MP	Station 1 & 2
05	2	HA1VXBG0G9A	Station 3 & 4
06	1	PS551151MP	Station 3 & 4

NOTE: Construct manifold assemblies from left to right while looking at the ports. Valves must be ordered as External Pilot when using Sandwich Regulator.

When using an HA or HB manifold base with the "N" Enclosure / Lead Length option:

- Outputs 1 – 24 can be single or double address bases. Use a base with "J" or "M" Enclosure / Lead Length option.
- Outputs 25 – 26 are a single address base. Use a base with "N" Enclosure / Lead Length option (this is a single address board with a ribbon connection from the valve driver module, PSSV32A).
- Outputs 27 – 32 can be single or double. Use a base with "J" or "M" Enclosure / Lead Length option.

When using an HA or HB manifold base with the "P" Enclosure / Lead Length option:

- Outputs 1 – 24 can be single or double address bases. Use a base with "J" or "M" Enclosure / Lead Length option.
- Outputs 25 – 28 are a double address base. Use a base with "P" Enclosure / Lead Length option (this is a double address board with a ribbon connection from the valve driver module, PSSV32A).
- Outputs 29 – 32 can be single or double. Use a base with "J" or "M" Enclosure / Lead Length option.

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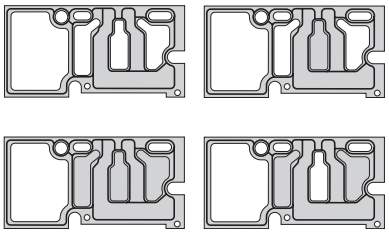
Blanking Plate Kits

Size	Kit Number
HB	PS5634P
HA	PS5534P

Kit includes: Blanking Plate, Gasket, and Mounting Bolts.

Manifold to Manifold Gasket Kits

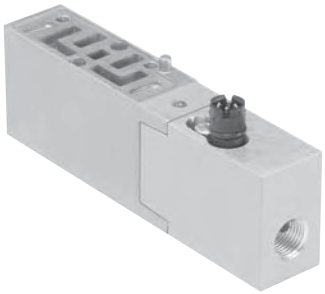
15407 PS5511 & PS5611 Manifolds				
Size	Standard	Blocked #1 Port	Blocked #1, 3, 5 Ports	Blocked #3, 5 Ports
HB / HA	PS561AP	PS561BP	PS561CP	PS561DP



Sandwich Supply & Exhaust Modules

Valve Size		Port Size	NPT	BSPP "G"
HB / 15407-2	Supply	1/8"	PS561600P	PS561601P
	Exhaust		PS561700P	PS561701P
HA / 15407-2	Supply	1/4"	PS551600P	PS551601P
	Exhaust		PS551700P	PS551701P

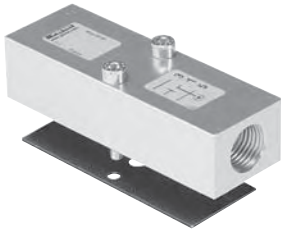
Quantity 1
- Used on HB & HA valves to provide a pressure or exhaust path to individual valves.



Intermediate Air Supply Base 15407

Size	Port Size	Kit Number
		NPT
HB	1/8"	D02P-01-80
HA	1/4"	D01P-02-80

Kit includes: Gasket and Mounting Bolts.



D01P-02-80 Shown

Sandwich Flow Controls

- Both adjustment screws are located on the 12 end of the unit.
- Sandwich Flow Control mounts with its own studs, which means the valve uses standard bolts for mounting.
- Sandwich Flow Control is not to be used as a shut off device and is not bubble tight when needles are fully turned down.

Valve Size	Plug-In 15407-2
HB	PS5635P
HA	PS5535P

Plug-in
15407-2
18mm Shown

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BOLD OPTIONS ARE MOST POPULAR

PS5638 | 1 | 6 | 6 | P

Basic Series	
HB	
15407-2, 18mm, Plug-in	**PS5638**
HA	
15407-2, 26mm, Plug-in	**PS5538**

Regulator Function	
Common Pressure Regulator	**1**
Independent Pressure Regulator	**2**

#2 Port Regulator / Gauge*	
5	2-60 PSIG w/Gauge
6	**5-125 PSIG w/Gauge**

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

#4 Port Regulator / Gauge*	
5	2-60 PSIG w/Gauge
6	**5-125 PSIG w/Gauge**

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

Ordering Components
- *Sandwich Regulator Kit configured for Internal Pilot as standard.*
- *Order valve as External Pilot.*

HB - 18mm
(Independent Dual Port Regulator Shown)

HA - 26mm
(Common Port Regulator Shown)

How to Configure Sandwich Regulator / Valve Combinations

Internal Pilot Configuration of Sandwich Regulator HA, HB
Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

Gauge Adapter Kit

Included with all HB Regulators. Both kits are required on all HA & HB Regulators when the Regulator is on the last Station on the Right (14) End.

Description	Part Number
Gauge Kit	PS5651160P
1/8" Female to 1/8" Female Coupling	207P-2*
1/8" Male to 1/8" Male Long Nipple	VS215PNL-2-15*

* Included in Gauge Kit PS5651160P

Sandwich Regulator Cv Flow Chart*

	Common Pressure Code 166				Dual Pressure Code 266			
	1-2	**1-4**	**2-3**	**4-5**	**1-2**	**1-4**	**2-3**	**4-5***
HB	0.20	0.20	0.41	0.34	0.23	0.19	0.28	0.27
HA	0.41	0.43	0.87	0.89	0.42	0.45	0.68	0.66

* Regulator Port exhaust through Base Port 3.
Note: All Cv's calculated with regulator adjusted full open.

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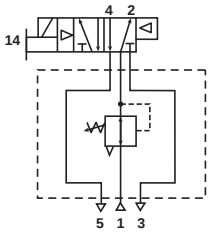
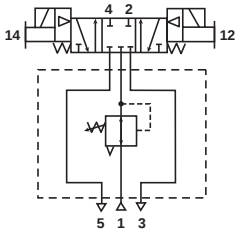
Plug-in, HB & HA Common Port Regulation

Provides adjustable regulated air pressure to the valve's #1 port which gives the same pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

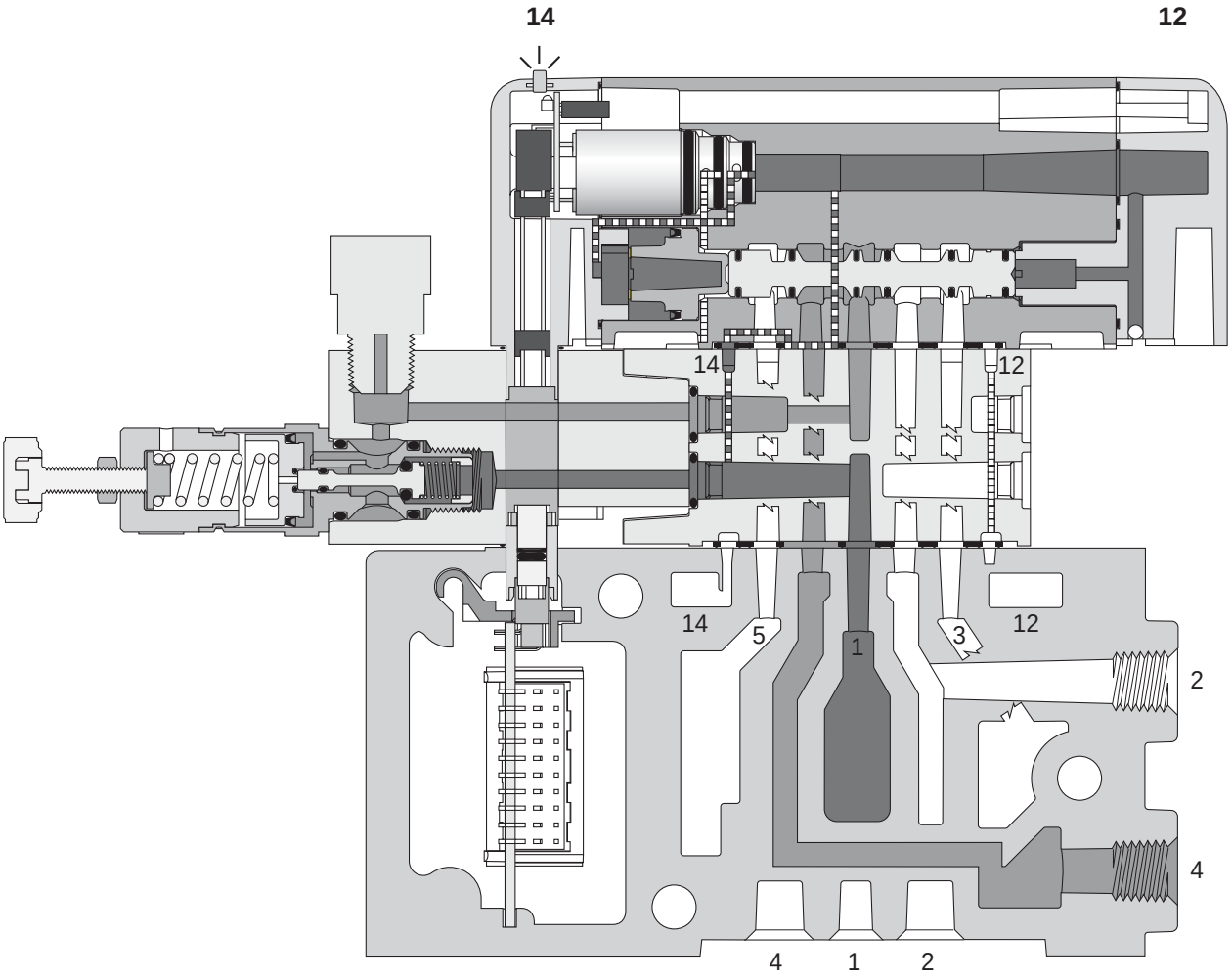
Common Port Regulator with 4-Way, 2-Position Single Solenoid Valve



Common Port Regulator with 4-Way, 3-Position APB Valve



HB Common Port Regulator Shown - Single Solenoid, 14 Energized



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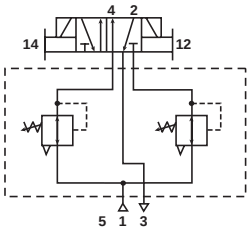
Plug-in, HB & HA Independent Dual Port Regulation

Dual Port Regulator

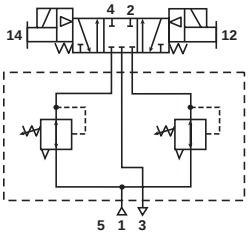
Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. (See schematics on right.)

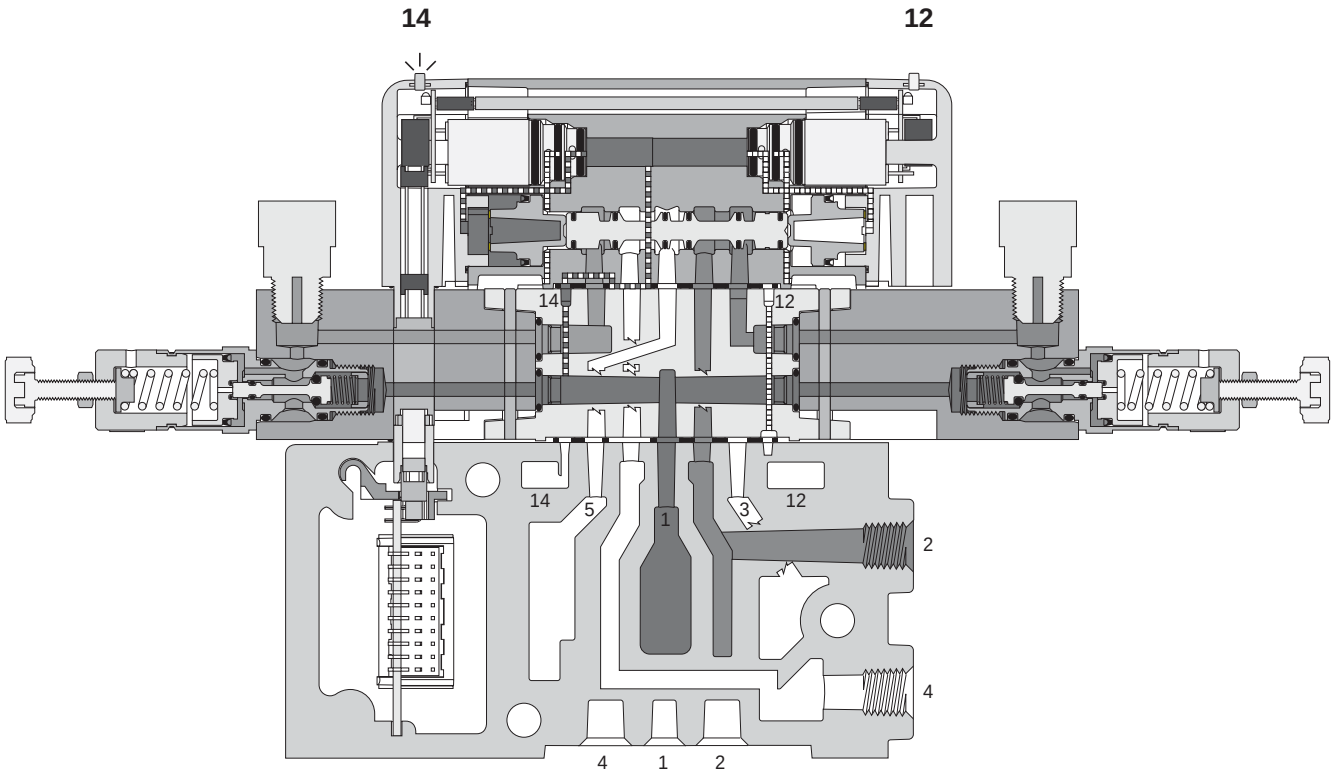
Independent Dual Port Regulator with 4-Way, 2-Position Double Solenoid Valve



Independent Dual Port Regulator with 4-Way, 3-Position Double Solenoid Valve



HB Independent Dual Port Regulator Shown - Double Solenoid, 14 Energized



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Plug-in, 15407-2 Transition Plate Kits

BOLD OPTIONS ARE MOST POPULAR.

HA HB

PS5624 L2 0 P

Transition Plate Type*	
HA / HB to H2	PS5624

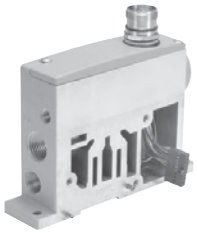
* Includes Left Hand and Right Hand End Plates

	Thread Type
0	**NPT**
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Threads.

	Options
L2	**25-Pin, D-Sub**
L3	**19-Pin, Round, Brad Harrison**
L4	12-Pin, M23
L5	16-Pt. Terminal Strip
M2	19-Pin, M23
M4*	**Moduflex Fieldbus**
L6*	**Isysnet, with Valve Driver Module**
T1*	**Turck Fieldbus with Valve Driver Module - 16 Outputs**
T2*	**Turck Fieldbus with Valve Driver Module - 32 Outputs**

* Must Order Communication Miodule Seperately.



Left Hand End Plate

Transition Plate

Right Hand End Plate

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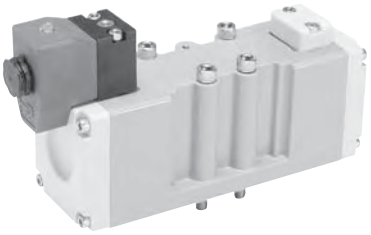
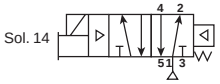
Plug-in, 5599-2, Size 1, 2, & 3

Single Solenoid

2-Position, Spring / Air Return

(H2 Series Shown)



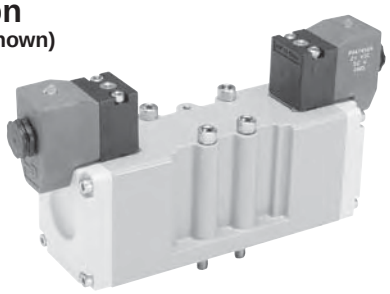


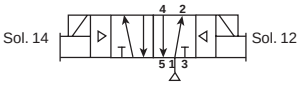
H1	**H1EVXBG023C**	120VAC	1.5 Cv C = 5.0 Nl/s x bar, b = 0.30 Qn = 1248 l/min, Qmax = 2070 l/min
	H1EVXBG0B9C	24VDC	
H2	**H2EVXBG023C**	120VAC	3.0 Cv C = 9.7 Nl/s x bar, b = 0.35 Qn = 2520 l/min, Qmax = 4140 l/min
	H2EVXBG0B9C	24VDC	
H3	**H3EVXBG023C**	120VAC	6.0 Cv C = 18.7 Nl/s x bar, b = 0.35 Qn = 5022 l/min, Qmax = 7848 l/min
	H3EVXBG0B9C	24VDC	

Double Solenoid

2-Position

(H2 Series Shown)





H1	**H12VXBG023C**	120VAC	1.5 Cv C = 5.0 Nl/s x bar, b = 0.30 Qn = 1248 l/min, Qmax = 2070 l/min
	H12VXBG0B9C	24VDC	
H2	**H22VXBG023C**	120VAC	3.0 Cv C = 9.7 Nl/s x bar, b = 0.35 Qn = 2520 l/min, Qmax = 4140 l/min
	H22VXBG0B9C	24VDC	
H3	**H32VXBG023C**	120VAC	6.0 Cv C = 18.7 Nl/s x bar, b = 0.35 Qn = 5022 l/min, Qmax = 7848 l/min
	H32VXBG0B9C	24VDC	

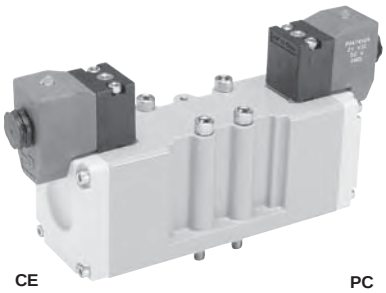
Double Solenoid

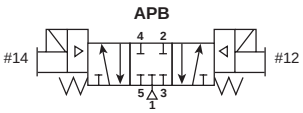
3-Position APB

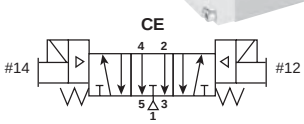
3-Position CE

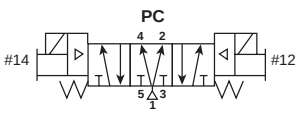
3-Position PC

(H2 Series Shown)









APB			
H1	**H15VXBG023C**	120VAC	1.2 Cv C = 4.1 Nl/s x bar, b = 0.30 Qn = 1000 l/min, Qmax = 1660 l/min
	H15VXBG0B9C	24VDC	
H2	**H25VXBG023C**	120VAC	2.8 Cv C = 9.0 Nl/s x bar, b = 0.35 Qn = 2340 l/min, Qmax = 3860 l/min
	H25VXBG0B9C	24VDC	
H3	**H35VXBG023C**	120VAC	5.0 Cv C = 15.4 Nl/s x bar, b = 0.35 Qn = 4185 l/min, Qmax = 6545 l/min
	H35VXBG0B9C	24VDC	
CE			
H1	**H16VXBG023C**	120VAC	1.2 Cv C = 4.1 Nl/s x bar, b = 0.30 Qn = 1000 l/min, Qmax = 1660 l/min
	H16VXBG0B9C	24VDC	
H2	**H26VXBG023C**	120VAC	2.8 Cv C = 9.0 Nl/s x bar, b = 0.35 Qn = 2340 l/min, Qmax = 3860 l/min
	H26VXBG0B9C	24VDC	
H3	**H36VXBG023C**	120VAC	5.0 Cv C = 15.4 Nl/s x bar, b = 0.35 Qn = 4185 l/min, Qmax = 6545 l/min
	H36VXBG0B9C	24VDC	

PC			
H1	**H17VXBG023C**	120VAC	1.2 Cv C = 4.1 Nl/s x bar, b = 0.30 Qn = 1000 l/min, Qmax = 1660 l/min
	H17VXBG0B9C	24VDC	
H2	**H27VXBG023C**	120VAC	2.8 Cv C = 9.0 Nl/s x bar, b = 0.35 Qn = 2340 l/min, Qmax = 3860 l/min
	H27VXBG0B9C	24VDC	
H3	**H37VXBG023C**	120VAC	5.0 Cv C = 15.4 Nl/s x bar, b = 0.35 Qn = 4185 l/min, Qmax = 6545 l/min
	H37VXBG0B9C	24VDC	

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Plug-in, 5599-2, Size 1, 2, & 3

BOLD OPTIONS ARE MOST POPULAR.

H1	E	VX	B	G	0	B9	C

Basic Series 5599-2	
ISO 5599-2 Size 1	H1
ISO 5599-2 Size 2	H2
ISO 5599-2 Size 3	H3

5599-2 Engineering Level	
C	Current

5599-2 Operator / Function	
Single Solenoid, 2-Position - Air Return	1
Double Solenoid, 2-Position	2
Double Solenoid, 3-Position - APB	5
Double Solenoid, 3-Position - CE	6
Double Solenoid, 3-Position - PC	7
Single Solenoid, 2-Position - Air Return, Spring Assist	E

5599-2 Voltage & Frequency				
	AC		DC	Light & Surge Suppression
	60Hz	50Hz		
42	24			
45			12	
B9			**24**	**LED & Suppression**
23	**120**	**115**		**LED & Suppression**
57	240			

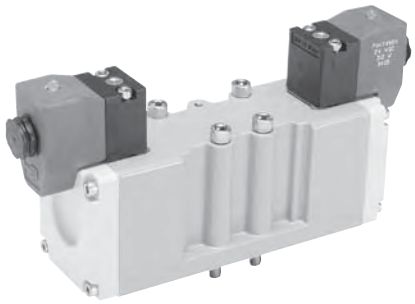
5599-2 Mounting	
5599-2 Valve Less Base	VX

5599-2 Enclosure / Lead Length	
0	None, Valve Less Base

5599-2 Pilot Source / Pilot Exhaust	
Internal Pilot, Port #1 / Vented	B
External Pilot #12 or #14 Port / Vented	X*

* Must be specified when using Sandwich Regulators.

5599-2 Overrides / Lights		
	Voltage Code	
B	**42, 45, 57**	**Non-Locking, Flush, Push - w/o Light**
C	42, 45, 57	Locking, Flush, Push / Turn - w/o Light
G	**B9, 23**	**Non-Locking, Flush, Push - w/ Light**
H	B9, 23	Locking, Flush, Push / Turn - w/ Light



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Plug-in, 5599-2, Size 1, 2 & 3 Manifold / Subbase Kits

BOLD OPTIONS ARE MOST POPULAR.

PS401155 M [ ] C P

Wiring Options	
Blank	**None**
C	Chrysler
F	**SAE / Ford**
G	General Motors

Enclosures / Lead Length	
Individually Wired Base**	
7†	3-Pin Mini Connector in Base
8†	4-Pin M12 Micro Connector in Base
9†	5-Pin Mini Connector in Base
A	**6" Leads**
C	Terminal Block
Collective Wired Base	
J*	Circuit Board, Single Address
M*	**Circuit Board, Double Address**

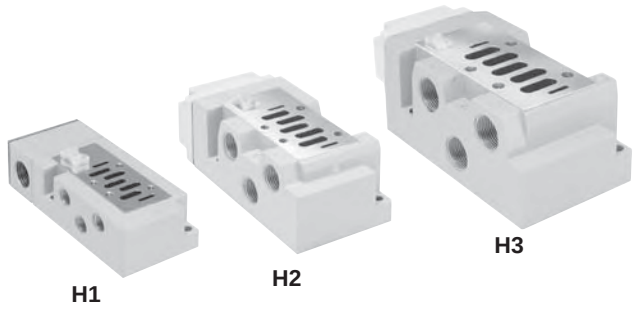
* Not Available with Subbase Kits.
** Use Plate with No Connection.
† Must Specify Valve Auto Wiring Option "C", "F", or "G".

Note:
When using the Enclosure / Lead Length "J" or "M" option:
12VDC - Maximum number of coils energized simultaneously is 13
24VDC - Maximum number of coils energized simultaneously is 21
120VAC - Coils limited by the number of pins available in the connector (25-Pin D-Sub = 24 coils, 19-Pin Brad Harrison = 16, 12-Pin M23 = 8)
240VAC - Must use "A" or "C" Option, Lead Wires or Terminal Blocks

Mounting Base Style / Port Size					
ISO 5599-2, Size 1 H1 Series		ISO 5599-2, Size 2 H2 Series		ISO 5599-2, Size 3 H3 Series	
Subbase: 3/8 NPT Side Ports	**PS401115**	**Subbase: 1/2 NPT Side Ports**	**PS411117**	**Subbase: 3/4 NPT Side Ports**	**PS421119**
Subbase: 3/8 BSPP Side Ports	PS401116	Subbase: 1/2 BSPP Side Ports	PS411118*	Subbase: 3/4 BSPP Side Port	PS421110*
Manifold: 3/8 NPT End Ports	**PS401155**	**Manifold: 1/2 NPT End Port**	**PS411157**	**Manifold: 3/4 NPT End Port**	**PS421159**
Manifold: 3/8 BSPP End Ports	PS401156*	Manifold: 1/2 BSPP End Ports	PS411158*	Manifold: 3/4 BSPP End Port	PS421150*
Manifold: 3/8 NPT Bottom / End Port	PS401165†	Manifold: 1/2 NPT Bottom / End Port	PS411167	Manifold: 3/4 NPT Bottom / End Port	PS421169
Manifold: 3/8 BSPP Bottom / End Port	PS401166*†	Manifold: 1/2 BSPP Bottom / End Port	PS411168*	Manifold: 3/4 BSPP Bottom / End Port	PS421160*

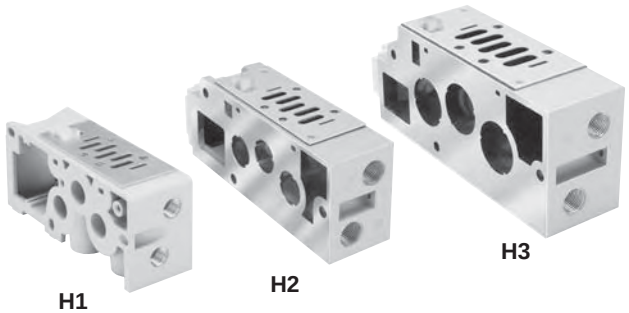
* BSPP Conforms to ISO 1179-1 w 228-1 Theads.
† #1 Bottom Port - 1/4".

Subbase Kits



Automotive Connectors
Mounted in 1/2" Conduit Port
- *3-Pin - Wired for Single Solenoid*
- *4-Pin / 5-Pin - Wired for Double Solenoid*

Manifold Kits



Automotive Connectors
Mounted in Individual Manifold Conduit Cover
- *3-Pin - Wired for Single Solenoid*
- *4-Pin / 5-Pin - Wired for Double Solenoid*

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Plug-in, 5599-2 End Plate Kits

BOLD OPTIONS ARE MOST POPULAR.

H1 H2 H3

PS40 | 20L2 | 0 | C | P

Basic Series	
ISO 5599, Size 1	PS40
ISO 5599, Size 2	PS41
ISO 5599, Size 3	PS42

Engineering Level	
C	Current

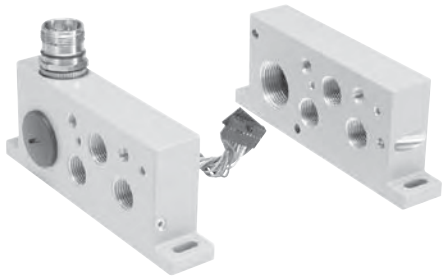
Thread Type	
0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Threads

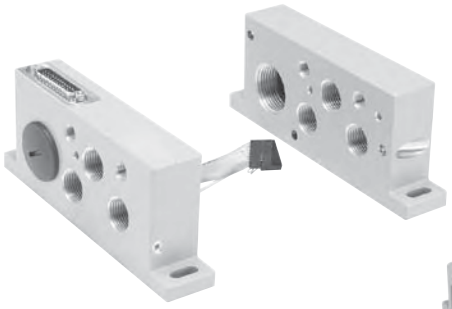
Options	
No Connector - Use with Individually Wired Base	**3101**
25-Pin, D-Sub	**20L2***
19-Pin, Round, Brad Harrison	**20L3**
12-Pin, M23	20L4
19-Pin, M23	20M2
Moduflex Fieldbus	**20M4**
Isysnet, with Valve Driver Module	**20L6**
Turck Fieldbus with Valve Driver Module - 16 Outputs	**20T1**
Turck Fieldbus with Valve Driver Module - 32 Outputs	**20T2**

* 120VAC is Not CSA Rated.

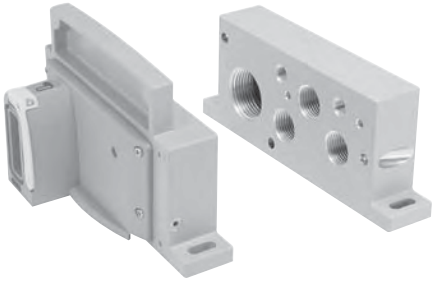
Turck, Isysnet, and Moduflex communication modules must be ordered separately. See Fieldbus Section for more information.



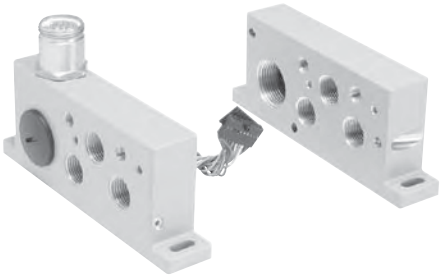
L4 or M2: **H1, M23, 12-Pin or 19-Pin End Plates**



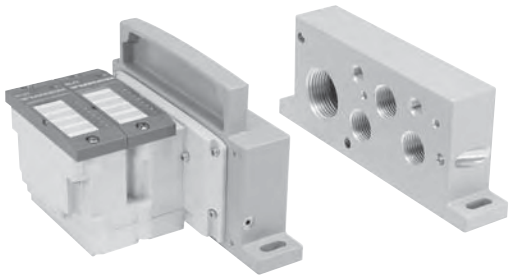
L2: **H1 25-Pin D-Sub End Plates**



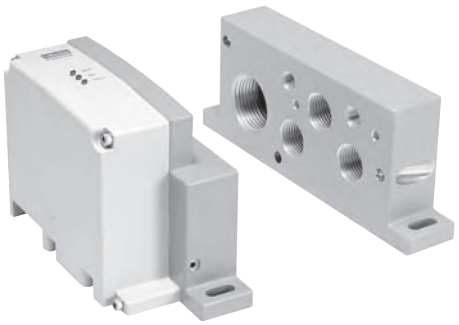
M4: **H1 Moduflex Fieldbus End Plates**



L3: **H1 19-Pin Brad Harrison End Plates**



T1, T2: **Turck Fieldbus with Valve Driver Module End Plates**



L6: **H1 Isysnet Fieldbus End Plates**

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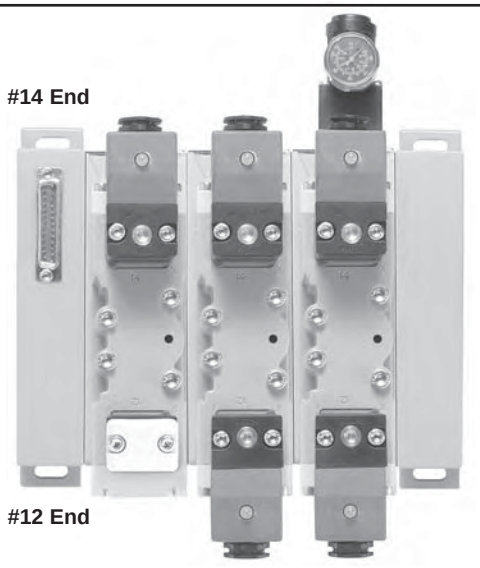
How To Order Plug-in Add-A-Fold Assemblies

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete Valve, Regulator, Flow Control and Base model number. List left to right, LOOKING AT THE CYLINDER PORTS on 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 and the individual manifold number in the station specified.)



Example:
3-Station Manifold with (3) H1 Valves On Manifold Bases and Regulator at Station 3

Maximum Number of Solenoids
(Maximum Energized Simultaneously)

H1	Voltage Code	25-Pin D-Sub	19-Pin Brad Harrison	12-Pin M23	19-Pin M23	Moduflex	Isysnet
12VDC	45	24 (13)	16 (13)	8 (8)	16 (13)	N/A	N/A
24VAC*	42	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A
24VDC	B9	24 (20)	16 (16)	8 (8)	16 (16)	16 (16)	24 (21)
120VAC*	23	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A

* Not CSA certified for 25-Pin, D-Sub option.

Add-A-Fold Assembly Model Number

AA	H1	D	0	03	

Valve Series

Right & Left End Plate	H1

End Plate Type

Turck Fieldbus with Valve Driver Module - 16 Outputs	A
Turck Fieldbus with Valve Driver Module - 32 Outputs	B
25-Pin, D-Sub	D
19-Pin, Brad Harrison	E
12-Pin, M23	G
19-Pin, M23	H
Moduflex Fieldbus	T*
Isysnet, with Valve Driver Module	X*

* Must order Communication Modules Separately.

Thread Type

0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

Number of Stations

01
02
03
04
•
•
24

Transition Plate

Blank	No Transition Plate
C	H1 to H2
D	H1 to H3

Example

Application requires a 3-Station manifold with a valve, regulator on Station 3.

Item	Qty.	Part No.	Location
01	1	AAH1D003	
02	1	H11VXBG0B9C	Station 1
03	1	PS401155MCP	Station 1
04	1	H12VXBG0B9C	Station 2
05	1	PS401155MCP	Station 2
06	1	H12VXXG0B9C	Station 3
07	1	PS4038166CP	Station 3
08	1	PS401155MCP	Station 3

NOTE:
Construct manifold assemblies from left to right while looking at the cylinder ports.

Valves must be ordered as External Pilot when using Sandwich Regulator.

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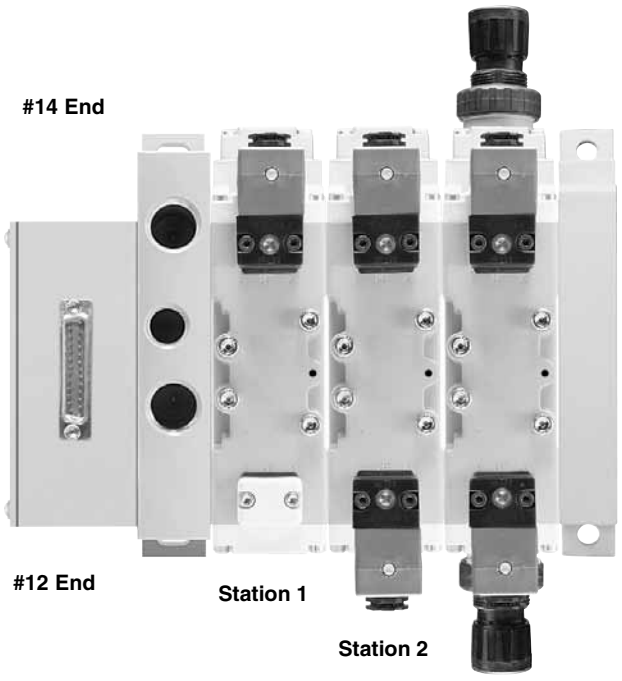
How To Order Plug-in Add-A-Fold Assemblies

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete Valve, Regulator, Flow Control and Base model number. List left to right, LOOKING AT THE CYLINDER PORTS on 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 and the individual manifold number in the station specified.)



Example:
3-Station Manifold with (3) H2 Valves on Manifold Bases and Regulator at Station 3

Maximum Number of Solenoids
(Maximum Energized Simultaneously)

H2 / H3	Voltage Code	25-Pin D-Sub	19-Pin Brad Harrison	12-Pin M23	19-Pin M23	Moduflex	Isysnet
12VDC	45	24 (13)	16 (13)	8 (8)	16 (13)	N/A	N/A
24VAC*	42	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A
24VDC	B9	24 (20)	16 (16)	8 (8)	16 (16)	16 (16)	24 (21)
120VAC*	23	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A

* Not CSA certified for 25-Pin, D-Sub option.

Add-A-Fold Assembly Model Number

AA	H2	D	0	03	

Valve Series	
Right & Left End Plate	H2
Right & Left End Plate	H3

End Plate Type	
Turck Fieldbus with Valve Driver Module - 16 Outputs	A
Turck Fieldbus with Valve Driver Module - 32 Outputs	B
25-Pin, D-Sub	D†
19-Pin, Brad Harrison	E†
12-Pin, M23	G†
19-Pin, M23	H†
Moduflex Fieldbus	T*
Isysnet, with Valve Driver Module	Y*

* Must order Communication Modules Separately.
† Collective Wiring Module Included.

Thread Type	
0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

Number of Stations
01
02
03
04
•
•
24

Transition Plate	
Blank	No Transition Plate
E*	H2 to H3

* Must Specify Valve Series H3.

Example

Application requires a 3-Station manifold with a valve and regulator on Station 3.

Item	Qty.	Part No.	Location
01	1	AAH2D003	
02	1	H21VXBG0B9D	Station 1
03	1	PS411157MCP	Station 1
04	1	H22VXBG0B9D	Station 2
05	1	PS411157MCP	Station 2
06	1	H22VXXG0B9D	Station 3
07	1	PS4138166CP	Station 3
08	1	PS411157MCP	Station 3

NOTE: Construct manifold assemblies from left to right while looking at the cylinder ports.
Valves must be ordered as External Pilot when using Sandwich Regulator.

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Blanking Plate Kits

Size	Kit Number
H1	PS4034CP
H2	PS4134CP
H3	PS4234CP

Kit includes: Blanking Plate, Gasket, and Mounting Bolts.

Manifold Port Isolation Kits

Main Galley (1, 3, 5)

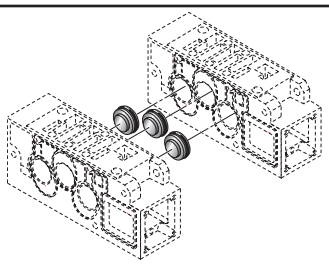
Size	Kit Number
H1	PS4032CP
H2	PS4132CP
H3	PS4232CP

Kit includes: Plug with O-rings.

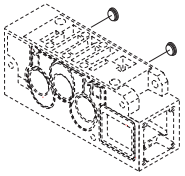
Pilot Galley

Size	Kit Number
H1 H2 H3	PS4033CP

Kit includes: Plug with O-rings.



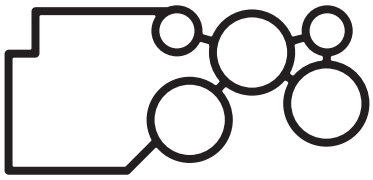
H1, H2, H3 Main Galley



H1, H2, H3 Pilot Galley

Manifold to Manifold Gasket Kits

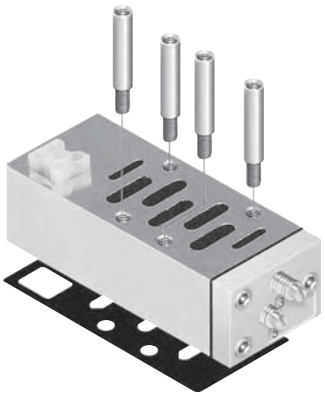
5599 PS4011, PS4111 & PS4211 Manifolds	
H1	PS4013P
H2	PS4113P
H3	PS4213P



Sandwich Flow Controls

Size	Plug-in 5599-2
H1	PS4035CP
H2	PS4135CP
H3	PS4235CP

A Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator.



Plug-in 5599-2 Size 2 Shown

H1 Auxiliary Access Plate Kits

Size	Port Size	Kit Number	
		NPT	BSPP "G"
H1	1/4" & 3/8"	PS403000CP	PS403001CP

Kit includes: Pilot Port Access Plate, Gasket and Mounting Screws.
- Used on H1 Manifolds to provide auxiliary access to Ports 1, 3 & 5.
- Port 1: 1/4", Ports 3 & 5: 3/8". Height: .72 Inch

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BOLD OPTIONS ARE MOST POPULAR

PS4038 1 6 6 C P

Basic Series	
H1	
5599-2, Plug-in	**PS4038**
H2	
5599-2, Plug-in	**PS4138**
H3	
5599-2, Plug-in	**PS4238**

Regulator Function	
Common Pressure Regulator	**1**
Independent Pressure Regulator	**2**

	#2 Port Regulator / Gauge*
0**	**Line By-Pass Plate**
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	**5-125 PSIG w/Gauge**

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

** Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

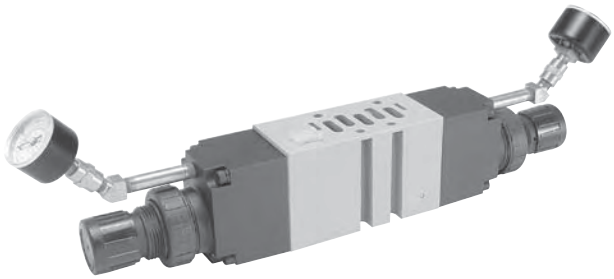
	#4 Port Regulator / Gauge*
0**	**Line By-Pass Plate**
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	**5-125 PSIG w/Gauge**

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

** Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

Ordering Components
- *Sandwich Regulator Kit configured for Internal Pilot as standard.*
- *Order valve as External Pilot.*

H1 - Size 1
(Independent Dual Port Regulator Shown)



H2 - Size 2
(Independent Dual Port Regulator Shown)

How to Configure Sandwich Regulator / Valve Combinations

Internal Pilot Configuration of Sandwich Regulator H1, H2 & H3
Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

External Pilot Configuration of Sandwich Regulator H1, H2, H3
An External Pilot pressure in Port 12 or 14 of the base feeds thru the Sandwich Regulator 12 or 14 galley directly to the 12/14 pilot of the valve. This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

Sandwich Regulator Cv Flow Chart*

	Common Pressure Code 166				Single Pressure 2 Code 266				Single Pressure 4 Code 260				Dual Pressure Code 266			
	1-2	**1-4**	**2-3**	**4-5**	**1-2**	**1-4**	**2-3**	**4-5***	**1-2**	**1-4**	**2-3**	**4-5***	**1-2**	**1-4**	**2-3**	**4-5***
H1	0.62	0.61	1.28	1.18	0.73	0.96	0.96	0.93	0.34	0.70	0.94	0.98	0.52	0.48	0.86	0.88
H2	1.47	1.60	2.41	2.33	1.71	1.90	1.52	1.75	1.74	1.67	1.73	1.79	1.61	1.62	1.50	1.67
H3	2.37	2.39	4.30	4.47	2.37	2.81	2.75	3.01	2.65	2.59	2.68	2.74	2.43	2.41	3.16	3.04

* Regulator Port exhaust through Base Port 3.
Note: All Cv's calculated with regulator adjusted full open.

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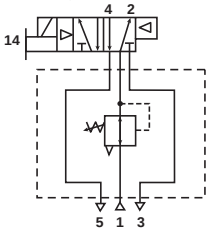
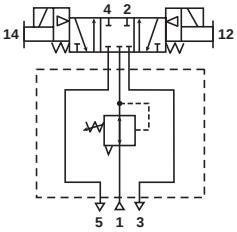
Plug-in, H1, H2, H3 Common Port Regulation

Provides adjustable regulated air pressure to the valve's #1 port which gives the same regulated pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

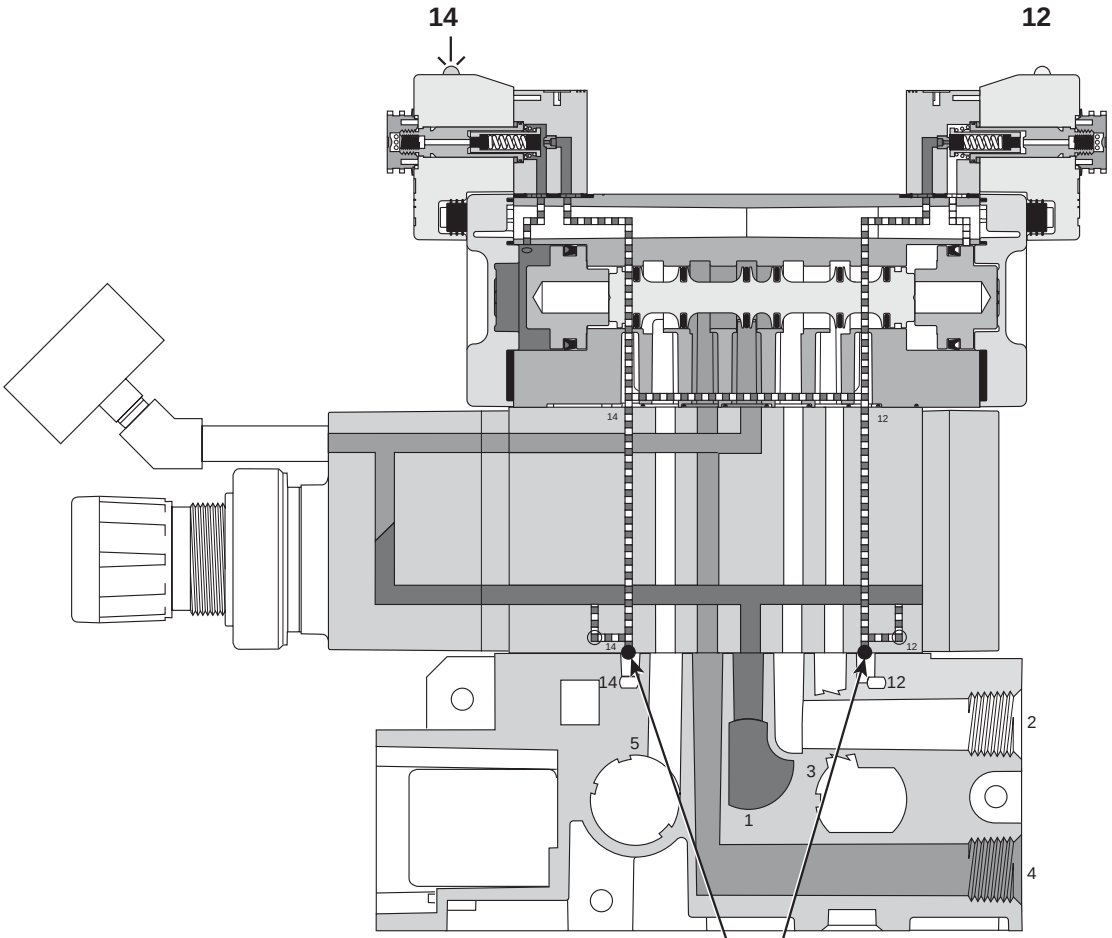
Common Port Regulator with 4-Way, 2-Position Single Solenoid Valve



Common Port Regulator with 4-Way, 3-Position APB Valve



H2 Common Port Regulator Shown - Double Solenoid, 14 Energized, Internal Pilot



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom of the I & E Pilot Holes which prevents line pressure from escaping through the manifold.

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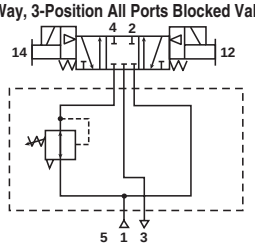
Plug-in, H1, H2, H3 Independent Port Regulation

Single Port Regulator

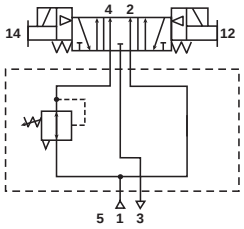
Provides regulated pressure to one of the ports and full line pressure to the other by use of the Line Pressure By-Pass Plate. Pressure regulation can occur out of the #4 port of the valve.

When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. (See schematics on right.)

Independent Port Regulator with 4-Way, 3-Position All Ports Blocked Valve

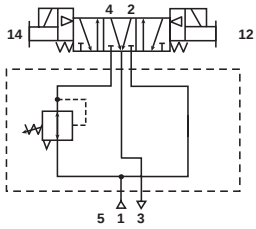


Independent Port Regulator with 4-Way, 3-Position, Inlet to Cylinder Function



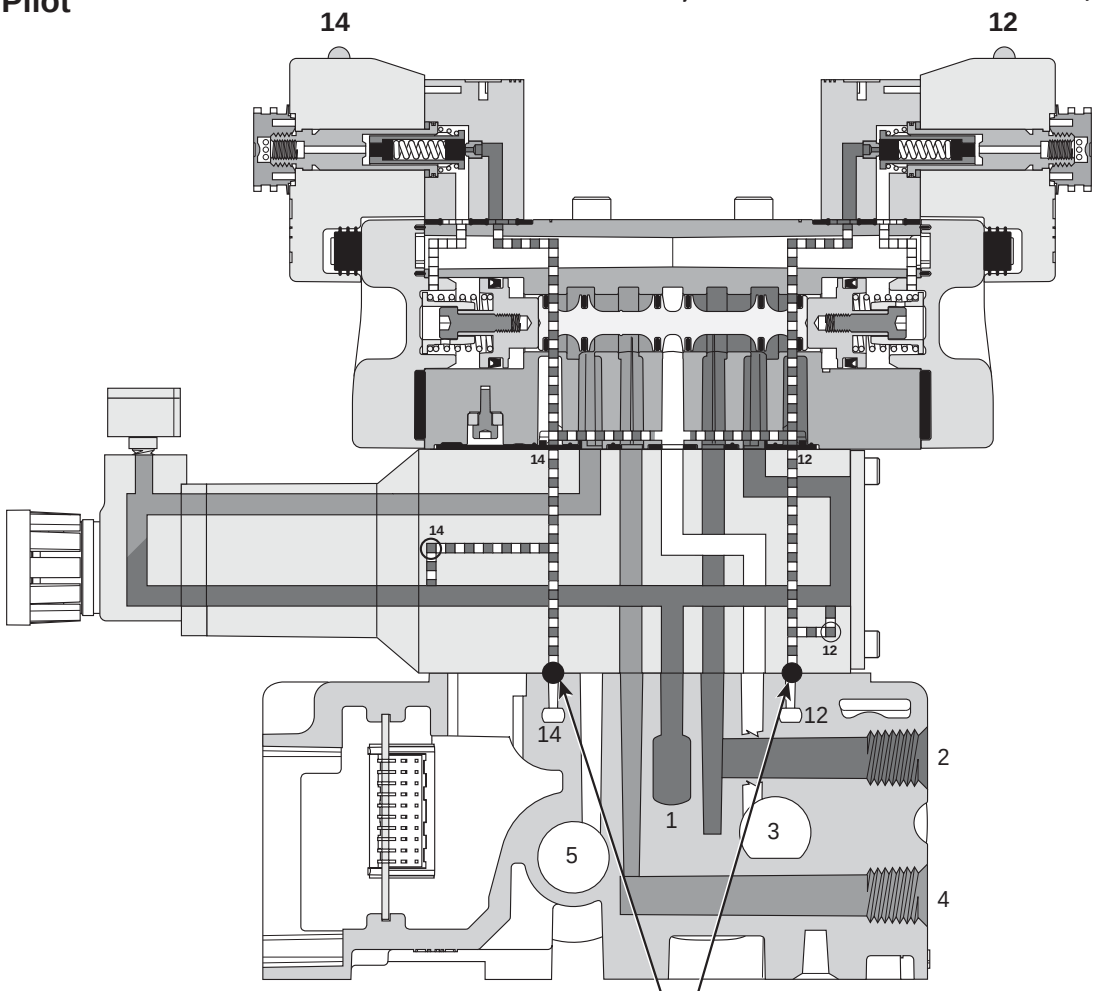
⚠ CAUTION: Requires 4-Way, 3-Position, Cylinder to Exhaust Valve

Independent Port Regulator with 4-Way, 3-Position, Cylinder to Exhaust Function



⚠ CAUTION: Requires 4-Way, 3-Position, Inlet to Cylinder Valve

H1 Independent Port Regulator Shown - Double Solenoid, De-energized, Internal Pilot



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom #12 and #14 Pilot Hole which prevents line pressure from escaping through the manifold.

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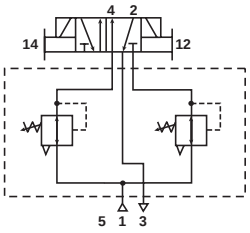
Plug-in, H1, H2, H3 Independent Dual Port Regulation

Dual Port Regulator

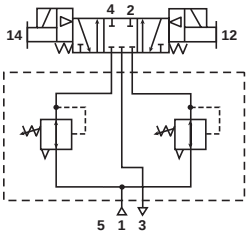
Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. (See schematics on right.)

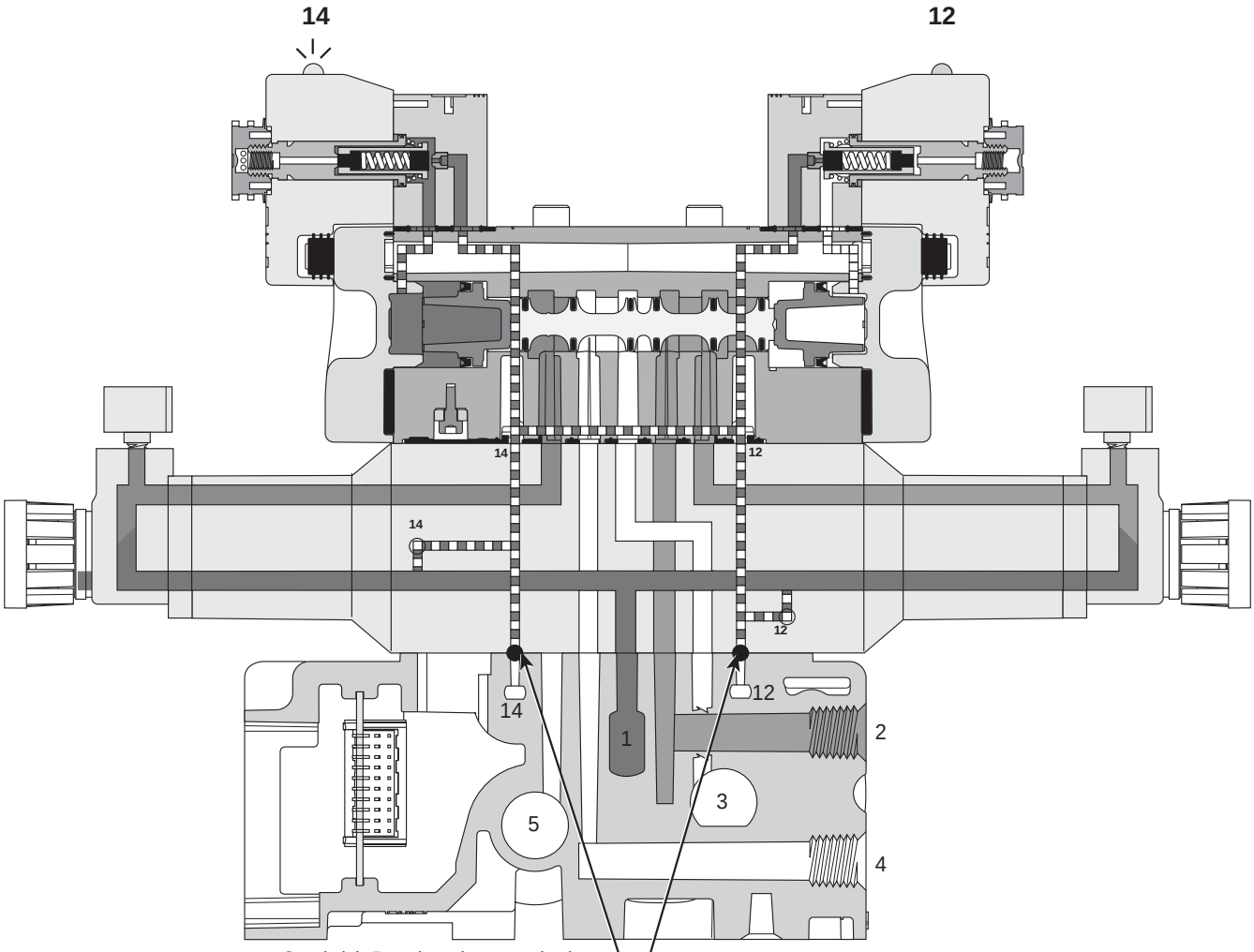
Independent Dual Port Regulator with 4-Way, 2-Position Double Solenoid Valve



Independent Dual Port Regulator with 4-Way, 3-Position Double Solenoid Valve



H1 Independent Dual Port Regulator Shown - Double Solenoid, 14 Energized, Internal Pilot



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom #12 and #14 Pilot Hole which prevents line pressure from escaping through the manifold.

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Plug-in, 5599-2 Transition Plate Kits

BOLD OPTIONS ARE MOST POPULAR.

H1 H2 H3

PS4026 L2 0 C P

Transition Plate Type*	
H1 to H2 to H3	**PS4025**
H1 to H3	**PS4026**
H1 to H2	**PS4027**
H2 to H3	**PS4028**

* Includes Left Hand and Right Hand End Plates

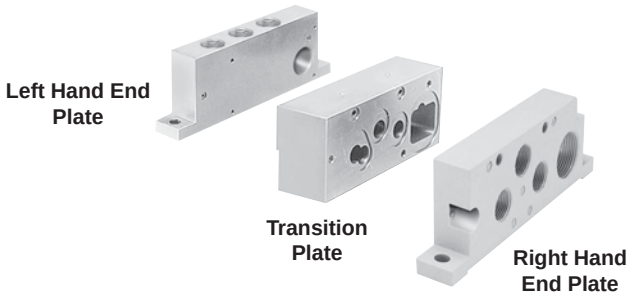
Engineering Level	
C	**Basic Series PS40**

Thread Type	
0	**NPT**
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Threads.

Options	
25-Pin, D-Sub	**L2**
19-Pin, Round, Brad Harrison	**L3**
12-Pin, M23	L4
19-Pin, M23	M2
Moduflex Fieldbus	**M4***
Isysnet, with Valve Driver Module	**L6***
Turck Fieldbus with Valve Driver Module - 16 Outputs	**T1**
Turck Fieldbus with Valve Driver Module - 32 Outputs	**T2**

* Must Order Communication Miodule Seperately
Turck, Isysnet, and Moduflex communication modules must be ordered separately. See Fieldbus Section for more information.



H1 to H2 Shown

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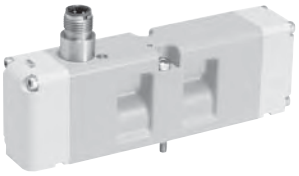
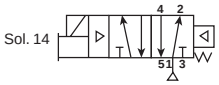
Non Plug-in, 15407-1, Size 18mm (HB) & 26mm (HA)

Single Solenoid
2-Position

HB: 18mm



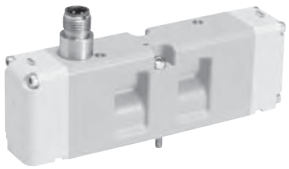
HA: 26mm



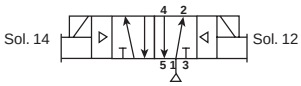
HB **HBEWXBG2G9000FA**	24VDC	0.55 Cv C = 1.5 Nl/s x bar, b = 0.25 Qn = 390 l/min, Qmax = 648 l/min
HA **HAEWXBG2G9000FA**	24VDC	1.1 Cv C = 3.6 Nl/s x bar, b = 0.30 Qn = 918 l/min, Qmax = 1518 l/min

Double Solenoid
2-Position

HB: 18mm



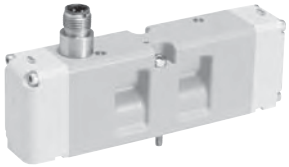
HA: 26mm



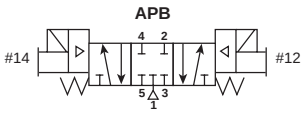
HB **HB2WXBG2G9000FA**	24VDC	0.55 Cv C = 1.5 Nl/s x bar, b = 0.25 Qn = 390 l/min, Qmax = 648 l/min
HA **HA2WXBG2G9000FA**	24VDC	1.1 Cv C = 3.6 Nl/s x bar, b = 0.30 Qn = 918 l/min, Qmax = 1518 l/min

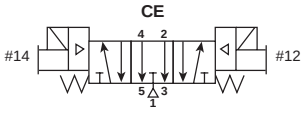
Double Solenoid
3-Position APB
3-Position CE
3-Position PC

HB: 18mm

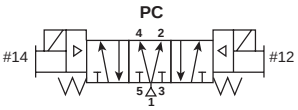


HA: 26mm





APB		
HB **HB5WXBG2G9000FA**	24VDC	0.50 Cv C = 1.4 Nl/s x bar, b = 0.25 Qn = 360 l/min, Qmax = 595 l/min
HA **HA5WXBG2G9000FA**	24VDC	1.0 Cv C = 3.3 Nl/s x bar, b = 0.30 Qn = 845 l/min, Qmax = 1395 l/min
CE		
HB **HB6WXBG2G9000FA**	24VDC	0.50 Cv C = 1.4 Nl/s x bar, b = 0.25 Qn = 360 l/min, Qmax = 595 l/min
HA **HA6WXBG2G9000FA**	24VDC	1.0 Cv C = 3.3 Nl/s x bar, b = 0.30 Qn = 845 l/min, Qmax = 1395 l/min



HB **HB7WXBG2G9000FA**	24VDC	0.50 Cv C = 1.4 Nl/s x bar, b = 0.25 Qn = 360 l/min, Qmax = 595 l/min
HA **HA7WXBG2G9000FA**	24VDC	1.0 Cv C = 3.3 Nl/s x bar, b = 0.30 Qn = 845 l/min, Qmax = 1395 l/min

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Non Plug-in, 15407-1, Size 18mm (HB) & 26mm (HA)

BOLD OPTIONS ARE MOST POPULAR.

HB E WX B G 2 G9 000F A

Basic Series 15407-1	
ISO 15407-1 18mm	HB
ISO 15407-1 26mm	HA

15407-1 Operator / Function	
Single Solenoid, 2-Position - Air Return	**1**
Double Solenoid, 2-Position	**2**
Double Solenoid, 3-Position - APB	**5**
Double Solenoid, 3-Position - CE	**6**
Double Solenoid, 3-Position - PC	7
Single Solenoid, 2-Position - Air Return, Spring Assist	**E**
Double Solenoid, Dual 3/2, NC/NC	**N†**
Double Solenoid, Dual 3/2, NO/NO	**P†**
Double Solenoid, Dual 3/2, 14 End NC – 12 End NO	**Q†**

† Available on HB Only, must use Internal Pilot Source Option "B".

15407-1 Mounting	
Valve Less Base	**WX**

15407-1 Pilot Source / Pilot Exhaust	
B	**Internal Pilot, Port #1 / Vented**
L*	External Pilot #14 Port / Vented

* Must be specified when using Sandwich Regulators.

15407-1 Overrides / Lights	
G	**Non-Locking, Flush, Push - w/ Light**
H	Locking, Flush, Push / Turn - w/ Light

15407-1 Enclosure / Lead Length	
2	**4-Pin, M12 Micro, Straight Connector**

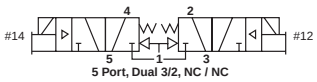
15407-1 Voltage & Frequency		
G9	**24VDC**	**LED & Suppression**

15407-1 Central Connector Wiring Options	
000F	**SAE / Ford, ISO 20401**

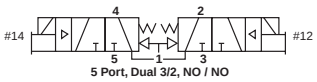
15407-1 Engineering Level	
A	**Current**

Double Solenoid
Dual 3/2 NC/NC
Dual 3/2 NO/NO
Dual 3/2 NC/NO

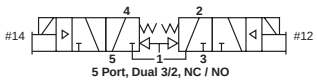
HB: 18mm



5 Port, Dual 3/2, NC / NC



5 Port, Dual 3/2, NO / NO



5 Port, Dual 3/2, NC / NO

NC / NC		
HB **HBNWXBG2G9000FA**	24VDC	0.45 Cv C = 1.25 Nl/s x bar, b = 0.25 Qn = 320 l/min, Qmax = 535 l/min
NO / NO		
HB **HBPWXBG2G9000FA**	24VDC	0.45 Cv C = 1.25 Nl/s x bar, b = 0.25 Qn = 320 l/min, Qmax = 535 l/min

NC / NO - 14 End NC		
HB **HBQWXBG2G9000FA**	24VDC	0.45 Cv C = 1.25 Nl/s x bar, b = 0.25 Qn = 320 l/min, Qmax = 535 l/min

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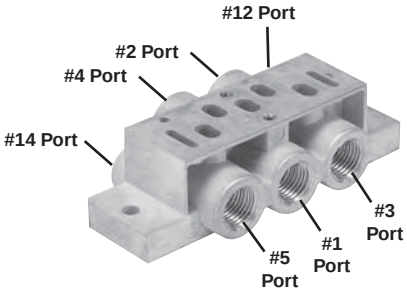
Non Plug-in, 15407-1, Size 18mm (HB) & 26mm (HA) Manifold / Subbase Kits

Individual Subbase Kit
with Side Ports

Size	Port Size	Kit Number	
		NPT	BSPP "G"
HB	1/8"	**PL02-01-80**	PL02-01-70
HA	1/4"	**PL01-02-80**	PL01-02-70

Note: Can be used for external, single, or double remote pilot.



Two Station Manifold Base
with End Ports

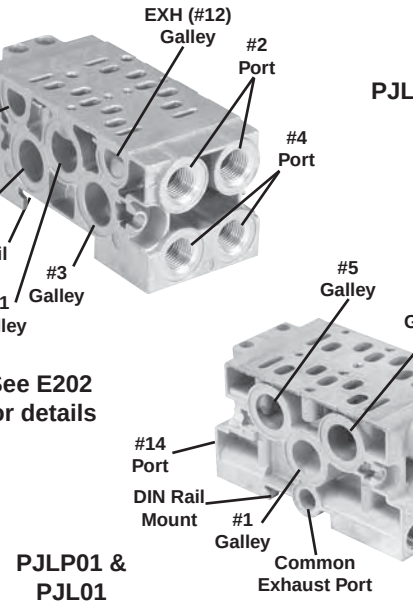
Size	Port Size	Kit Number	
		NPT	BSPP "G"
HB	1/8"	**PJLP02-201-80***	PJLP02-201-70*
HA	1/4"	**PJLP01-202-80***	PJLP01-202-70*

***** Can be used for external pilot, not remote pilot.
Note: Gaskets and assembly hardware included.

Two Station Manifold Base
with End Ports

Size	Port Size	Kit Number	
		NPT	BSPP "G"
HA	1/4"	**PJL01-202-80***	PJL01-202-70*

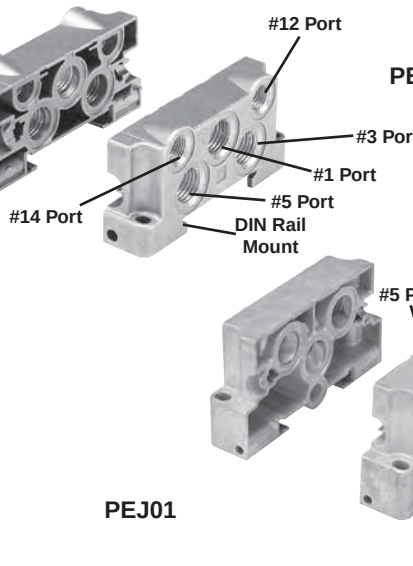
***** Can be used for single and double remote pilot and external pilot using the #14 Port.
Note: Gaskets and assembly hardware included.



End Plate Kit
for End Ported Two Station Manifold Base

Size	Port Size	Kit Number	
		NPT	BSPP "G"
HB	1/4"	**PEJ02-02-80***	PEJ02-02-70*
HA	3/8"	**PEJ01-03-80**†	PEJ01-03-70†

***** Use with PJLP02.....
† Use with PJLP01 or PJL01.....



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Non Plug-in, 15407-1, Size 18mm (HB) & 26mm (HA) Manifold / Subbase Kits

PS561151 | **0** | **P**

Enclosures / Lead Length	
0	None, No Electrical Plug - 15407-1

Mounting Style / Port Size			
ISO 15407-1, 18mm, HB		15407-1, 26mm, HA	
Manifold with 1/8 NPT End Ports	**PS561151**	**Subbase with 1/4 NPT Side Ports**	**PS551113**
Manifold with 1/8 BSPP End Port	PS561152*	Subbase with 1/4 BSPP Side Ports	PS551114*
Manifold with 1/8 NPT Bottom / End Port	PS561161	Subbase with 1/4 NPT Bottom / Side Port	PS551123
Manifold with 1/8 BSPP Bottom / End Port	PS561162*	Subbase with 1/4 BSPP Bottom / Side Port	PS551124*
		Manifold with 1/4 NPT End Port	**PS551153**
		Manifold with 1/4 BSPP End Port	PS551154*
		Manifold with 1/4 NPT Bottom / End Port	PS551163
		Manifold with 1/4 BSPP Bottom / End Port	PS551164*

BOLD OPTIONS ARE MOST POPULAR.

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

Subbase Kits

HA

Manifold Kits

HB

HA

Non-Plug-in, 15407-1, Size 18mm (HB) & 26mm (HA) End Plate Kits

HB HA

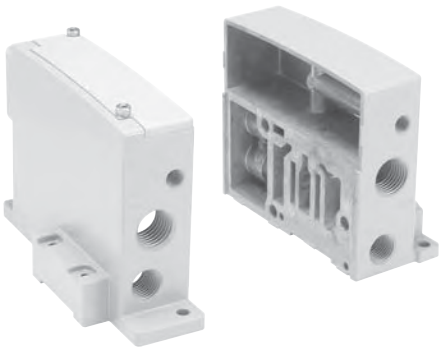
PS563101 | **0** | **P**

Basic Series	
ISO 15407, Size HB, 18mm & HA, 26mm End Plate, Non-Collective Wiring	PS563101

Thread Type	
0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

BOLD OPTIONS ARE MOST POPULAR.



HB - HA Non-Collective Wiring End Plates

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Richland, Michigan
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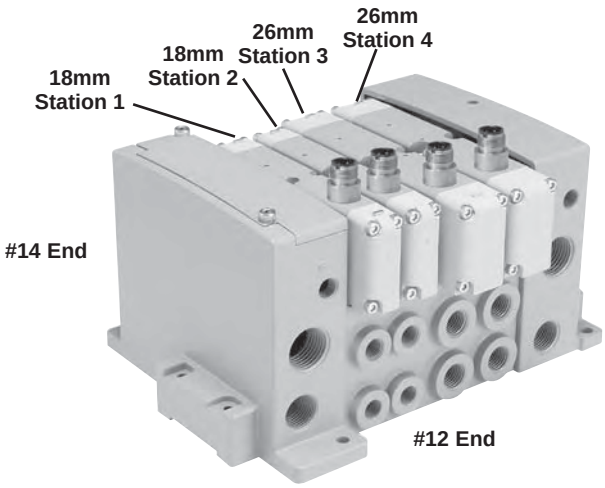
www.comoso.com

How To Order Non-Plug-in Add-A-Fold Assemblies

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete Valve, Regulator, Flow Control and Base model number. List left to right, LOOKING AT THE CYLINDER PORTS on 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 and the individual manifold number in the station specified.)



Example:
4-Station Manifold with (2) 18mm and (2) 26mm Valves On Manifold Bases

Add-A-Fold Assembly Model Number

AA	HBS	0	04	

Valve Series	
Right & Left End Plate 15407-1 (Non Plug-in, HA 26mm)	01U*
Right & Left End Plate 15407-1 (Non Plug-in, HB 18mm)	02U**
Right & Left End Plate 15407-1 (HB 18mm & HA 26mm)	HBS†

* For use with PJLP01 or PJL01 Manifolds.
** For use with PJLP02 Manifolds.
† For use with PS5511 and PS5611 Manifolds.

Transition Plate	
Blank	No Transition Plate
B*	HB / HA to H2

* Not Available with End Plate Type "01U or 02U".

Number of Stations*
02
04
•
24
•
32

* Must be ordered in multiples of (2) unless using the HB/HA to H2 Transition Plate.

Thread Type	
0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads for End Plate Type "S".

Example

Application requires a 4-Station manifold.
(Two 18mm + Two 26mm Stations)

Item	Qty.	Part No.	Location
01	1	AAHBS004	
02	1	HB1WXBG2G9000FA	Station 1
03	1	HB2WXBG2G9000FA	Station 2
04	1	PS5611510P	Station 1 & 2
05	2	HA1WXBG2G9000FA	Station 3 & 4
06	1	PS5511510P	Station 3 & 4

NOTE: Construct manifold assemblies from left to right while looking at the ports. Valves must be ordered as External Pilot when using Sandwich Regulator.

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Blanking Plate Kits

Size	Kit Number
HB	PS5634P
HA	PS5534P

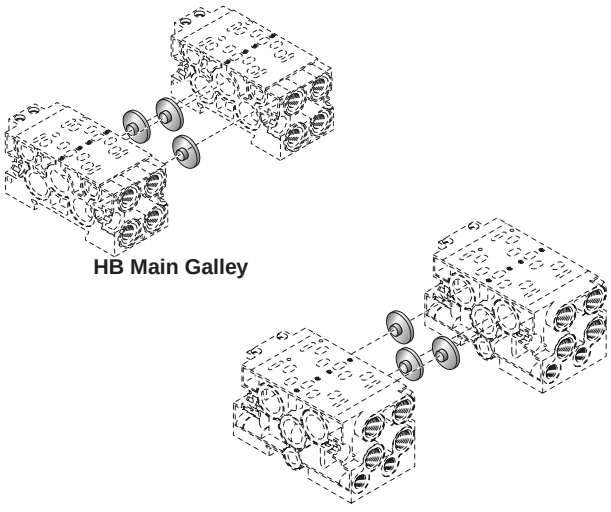
Kit includes: Blanking Plate, Gasket, and Mounting Bolts.

Manifold Port Isolation Kits

Main Galley (1, 3, 5)

Size	Kit Number
HB	D02BD0*
HA	D01BD0*

* For use on PJLP and PJL Series Manifolds.
Kit includes: Plugs with O-rings.

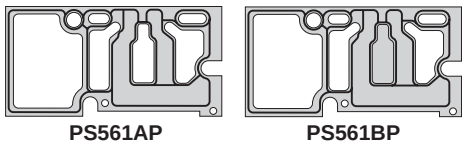


HB Main Galley

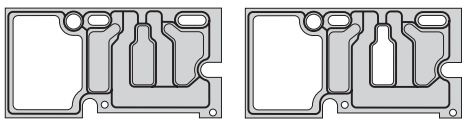
HA Main Galley

Manifold to Manifold Gasket Kits

15407 PS5511 & PS5611 Manifolds				
Size	**Standard**	**Blocked #1 Port**	**Blocked #1, 3, 5 Ports**	**Blocked #3, 5 Ports**
HB / HA	PS561AP	PS561BP	PS561CP	PS561DP
15407 PJLP & PJL Manifolds				
HB	DX02M2MGSKT (PJLP02)			
HA	DX01M2MGSKT (PJLP01)			

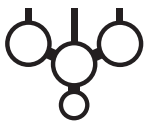


PS561AP PS561BP



PS561CP PS561DP

DX02M2MGSKT (PJLP02)



DX01M2MGSKT (PJLP01)

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Sandwich Supply & Exhaust Modules

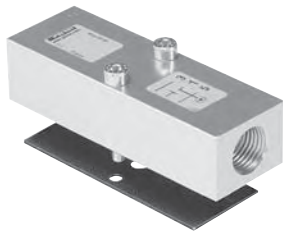
Valve Size		Port Size	NPT	BSPP "G"
HB	Supply	1/8"	PS562600P	PS562601P
15407-1	Exhaust		PS562700P	PS562701P
HA	Supply	1/4"	PS552600P	PS552601P
15407-1	Exhaust		PS552700P	PS552701P

Quantity 1
- Used on HB & HA valves to provide a pressure or exhaust path to individual valves.

Intermediate Air Supply Base 15407

Size	Port Size	Kit Number
		NPT
HB	1/8"	D02P-01-80
HA	1/4"	D01P-02-80

Kit includes: Gasket and Mounting Bolts.



D01P-02-80 Shown

Sandwich Flow Control

- Both adjustment screws are located on the 12 end of the unit.
- Sandwich Flow Control mounts with its own studs, which means the valve uses standard bolts for mounting.
- Sandwich Flow Control is not to be used as a shut off device and is not bubble tight when needles are fully turned down.

Valve Size	Non Plug-In 15407-1
HB	PS5642P
HA	PS5542P

A Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator.

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BOLD OPTIONS ARE MOST POPULAR

PS5637 | 1 | 6 | 6 | P

Basic Series	
HB	
15407-1, 18mm, Non Plug-In	PS5637
HA	
15407-1, 26mm, Non Plug-In	PS5537

Regulator Function	
Common Pressure Regulator	1
Independent Pressure Regulator	2

#2 Port Regulator / Gauge*	
5	2-60 PSIG w/Gauge
6	**5-125 PSIG w/Gauge**

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

#4 Port Regulator / Gauge*	
5	2-60 PSIG w/Gauge
6	**5-125 PSIG w/Gauge**

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

HB - 18mm
(Independent Dual Port Regulator Shown)

HA - 26mm
(Common Port Regulator Shown)

Gauge Adapter Kit

Included with all HB Regulators. Both kits are required on all HA & HB Regulators when the Regulator is on the last Station on the Right (14) End.

Description	Part Number
Gauge Kit	PS5651160P
1/8" Female to 1/8" Female Coupling	207P-2*
1/8" Male to 1/8" Male Long Nipple	VS215PNL-2-15*

* Included in Gauge Kit PS5651160P

Ordering Components
- *Manifold or Subbase Kit required.*
- *Sandwich Regulator Kit configured for Internal Pilot as standard.*
- *Order valve as External Pilot.*

How to Configure Sandwich Regulator / Valve Combinations

Internal Pilot Configuration of Sandwich Regulator HA, HB
Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

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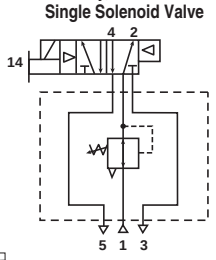
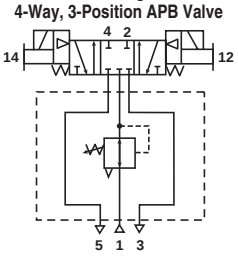
Non Plug-in, HB & HA Common Port Regulation

Provides adjustable regulated air pressure to the valve's #1 port which gives the same pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

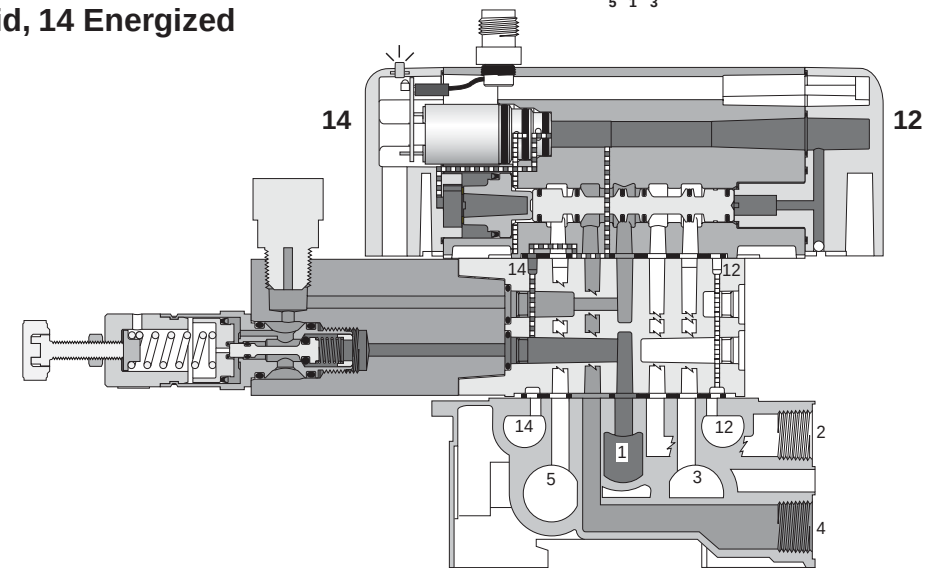
Common Port Regulator with 4-Way, 2-Position Single Solenoid Valve



Common Port Regulator with 4-Way, 3-Position APB Valve



HB Common Port Regulator Shown - Single Solenoid, 14 Energized

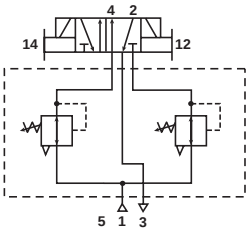


HB & HA Independent Dual Port Regulation

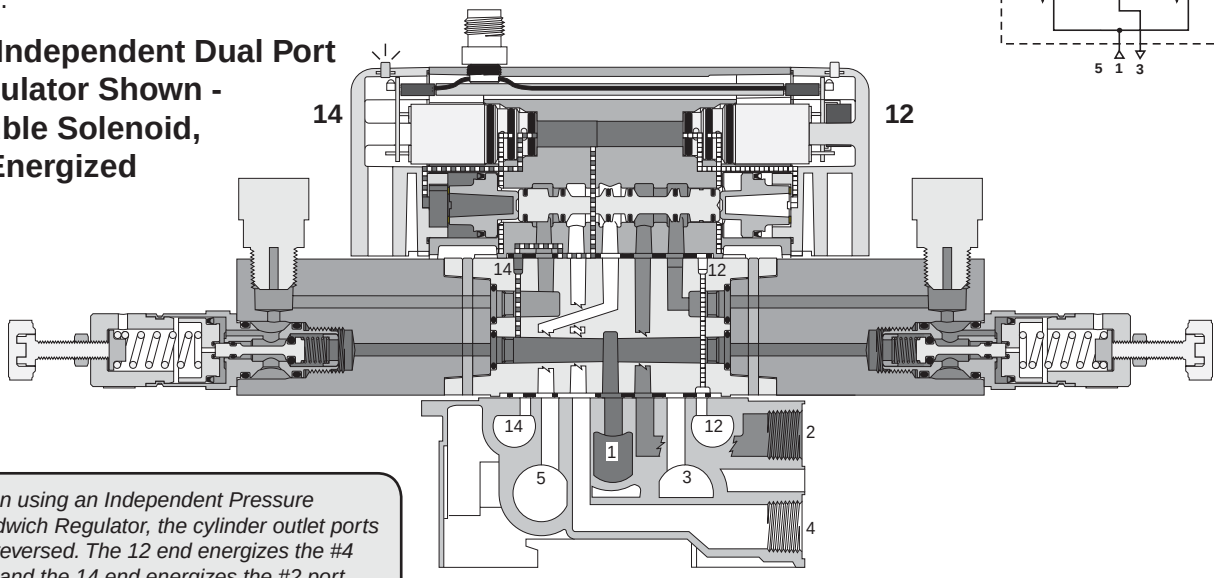
Dual Port Regulator

Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

Independent Dual Port Regulator with 4-Way, 2-Position Double Solenoid Valve



HB Independent Dual Port Regulator Shown - Double Solenoid, 14 Energized



When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. (See schematics above.)

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www.parker.com/pneumatics

Non Plug-in, 15407-1 Transition Plate Kits

BOLD OPTIONS ARE MOST POPULAR.

HB HA H1 H2 H3

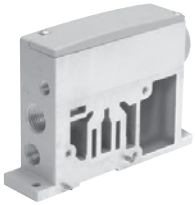
PS562401 0 P

Transition Plate Type*	
HA / HB to H2	PS562401

* Includes Left Hand and Right Hand End Plates.
Use with PS5511 and PS5611 Manifolds Only.

	Thread Type
0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Threads.



Left Hand End Plate

Transition Plate

Right Hand End Plate

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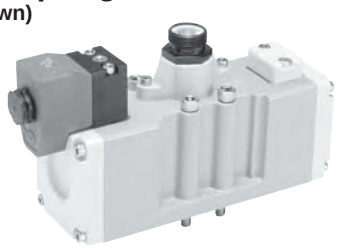
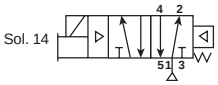
Non Plug-in, 5599-1, Central Connector - Size 1, 2, & 3

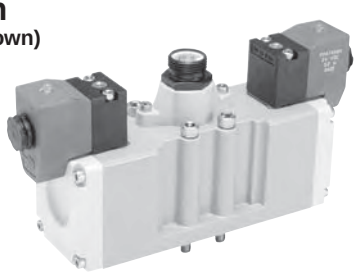
Single Solenoid
2-Position, Spring / Air Return
(H2 Series Shown)

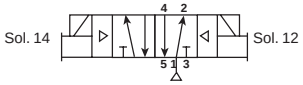




H1	**H1EWXBG323000*C**	120VAC	1.5 Cv, C = 5.0 Nl/s x bar, b = 0.30, Qn = 1248 l/min, Qmax = 2070 l/min
	H1EWXBG2B9000*C	24VDC	
H2	**H2EWXBG323000*C**	120VAC	3.0 Cv, C = 9.7 Nl/s x bar, b = 0.35, Qn = 2520 l/min, Qmax = 4140 l/min
	H2EWXBG2B9000*C	24VDC	
H3	**H3EWXBG323000*C**	120VAC	6.0 Cv, C = 18.7 Nl/s x bar, b = 0.35, Qn = 5022 l/min, Qmax = 7848 l/min
	H3EWXBG2B9000*C	24VDC	

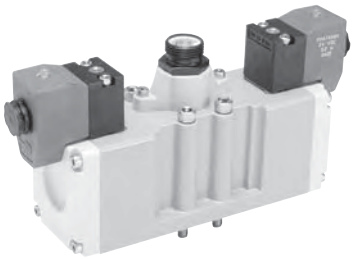
Double Solenoid
2-Position
(H2 Series Shown)



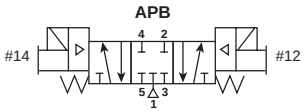


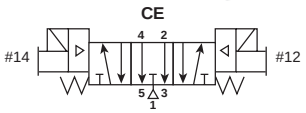
H1	**H12WXBG323000*C**	120VAC	1.5 Cv, C = 5.0 Nl/s x bar, b = 0.30, Qn = 1248 l/min, Qmax = 2070 l/min
	H12WXBG2B9000*C	24VDC	
H2	**H22WXBG323000*C**	120VAC	3.0 Cv, C = 9.7 Nl/s x bar, b = 0.35, Qn = 2520 l/min, Qmax = 4140 l/min
	H22WXBG2B9000*C	24VDC	
H3	**H32WXBG323000*C**	120VAC	6.0 Cv, C = 18.7 Nl/s x bar, b = 0.35, Qn = 5022 l/min, Qmax = 7848 l/min
	H32WXBG2B9000*C	24VDC	

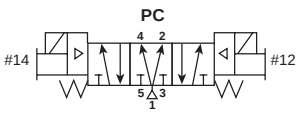
Double Solenoid
3-Position APB
3-Position CE
3-Position PC
(H2 Series Shown)



*** Specify Automotive Wiring Code**
C - Chrysler
F - SAE / Ford
G - GM







APB			
H1	**H15WXBG323000*C**	120VAC	1.2 Cv, C = 4.1 Nl/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min
	H15WXBG2B9000*C	24VDC	
H2	**H25WXBG323000*C**	120VAC	2.8 Cv, C = 9.0 Nl/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min
	H25WXBG2B9000*C	24VDC	
H3	**H35WXBG323000*C**	120VAC	5.0 Cv, C = 15.4 Nl/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min
	H35WXBG2B9000*C	24VDC	
CE			
H1	**H16WXBG323000*C**	120VAC	1.2 Cv, C = 4.1 Nl/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min
	H16WXBG2B9000*C	24VDC	
H2	**H26WXBG323000*C**	120VAC	2.8 Cv, C = 9.0 Nl/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min
	H26WXBG2B9000*C	24VDC	
H3	**H36WXBG323000*C**	120VAC	5.0 Cv, C = 15.4 Nl/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min
	H36WXBG2B9000*C	24VDC	

PC			
H1	**H17WXBG323000*C**	120VAC	1.2 Cv, C = 4.1 Nl/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min
	H17WXBG2B9000*C	24VDC	
H2	**H27WXBG323000*C**	120VAC	2.8 Cv, C = 9.0 Nl/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min
	H27WXBG2B9000*C	24VDC	
H3	**H37WXBG323000*C**	120VAC	5.0 Cv, C = 15.4 Nl/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min
	H37WXBG2B9000*C	24VDC	

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Non Plug-in, 5599-1, Central Connector - Size 1, 2, & 3

BOLD OPTIONS ARE MOST POPULAR

H1 **E** **WX** **B** **G** **2B9** **000F** **C**

Basic Series 5599-1	
ISO 5599-1 Size 1	**H1**
ISO 5599-1 Size 2	**H2**
ISO 5599-1 Size 3	**H3**

5599 -1 Engineering Level	
C	**Current**

5599-1 Central Connector Wiring Options	
000C	**Chrysler**
000F*	**SAE / Ford, ISO 20401**
000G	General Motors

* Complies to ISO 20401 with Enclosure Lead Length "2".

5599-1 Operator / Function	
Single Solenoid, 2-Position - Air Return	**1**
Double Solenoid, 2-Position	**2**
Double Solenoid, 3-Position - APB	**5**
Double Solenoid, 3-Position - CE	**6**
Double Solenoid, 3-Position - PC	7
Single Solenoid, 2-Position - Air Return, Spring Assist	**E**

5599-1 Mounting	
Valve Less Base	**WX**

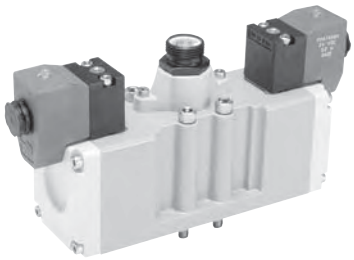
5599-1 Pilot Source / Pilot Exhaust	
Internal Pilot, Port #1 / Vented	**B**
External Pilot #12 or #14 Port / Vented	X*

* Must be specified when using Sandwich Regulators.

5599-1 Overrides / Lights	
Non-Locking, Flush, with Light	**G**
Locking, Flush, with Light	H

Enclosure / Lead Length / Voltage*		AC		DC
		60Hz	50Hz	
1B9†	3-Pin, Central Mini Connector			24
123†	3-Pin, Central Mini Connector	120	115	
2B9	**4-Pin, Central M12 Connector**			**24**
3B9	5-Pin, Central Mini Connector			24
323	5-Pin, Central Mini Connector	120	115	
619‡	2-Pin, M12 Connector On Coil			24

* All Coils Include LED & Suppression
† Operator Function "1" or "E"
‡ Only Available with Wiring Option "000F"



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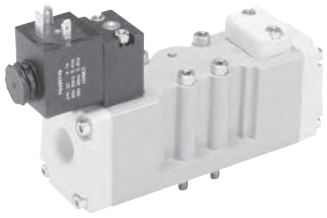
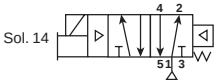
Non Plug-in, 5599-1, CNOMO - Size 1, 2, & 3

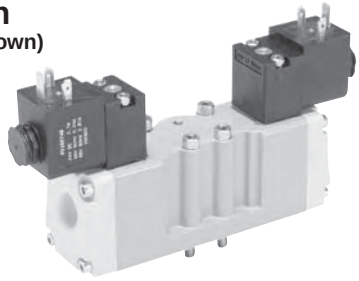
Single Solenoid
2-Position, Spring / Air Return
(H1 Series Shown)

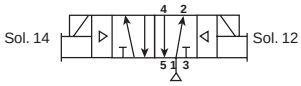




H1	**H1EWXBBL53C**	120VAC	1.5 CvI, C = 5.0 Nl/s x bar, b = 0.30, Qn = 1248 l/min, Qmax = 2070 l/min
	H1EWXBBL49C	24VDC	
H2	**H2EWXBBL53C**	120VAC	3.0 Cv, C = 9.7 Nl/s x bar, b = 0.35, Qn = 2520 l/min, Qmax = 4140 l/min
	H2EWXBBL49C	24VDC	
H3	**H3EWXBBL53C**	120VAC	6.0 Cv, C = 18.7 Nl/s x bar, b = 0.35, Qn = 5022 l/min, Qmax = 7848 l/min
	H3EWXBBL49C	24VDC	

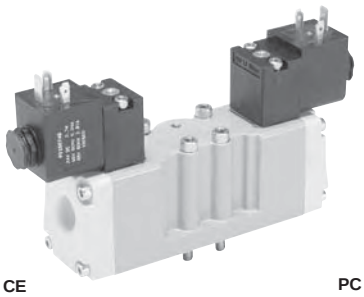
Double Solenoid
2-Position
(H1 Series Shown)

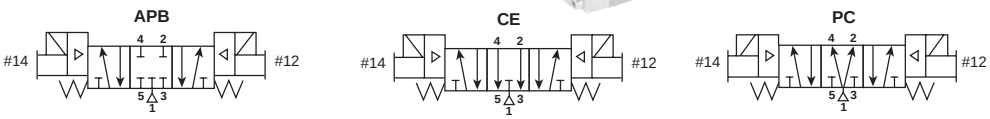




H1	**H12WXBBL53C**	120VAC	1.5 Cv, C = 5.0 Nl/s x bar, b = 0.30, Qn = 1248 l/min, Qmax = 2070 l/min
	H12WXBBL49C	24VDC	
H2	**H22WXBBL53C**	120VAC	3.0 Cv, C = 9.7 Nl/s x bar, b = 0.35, Qn = 2520 l/min, Qmax = 4140 l/min
	H22WXBBL49C	24VDC	
H3	**H32WXBBL53C**	120VAC	6.0 Cv, C = 18.7 Nl/s x bar, b = 0.35, Qn = 5022 l/min, Qmax = 7848 l/min
	H32WXBBL49C	24VDC	

Double Solenoid
3-Position APB
3-Position CE
3-Position PC
(H1 Series Shown)





APB			
H1	**H15WXBBL53C**	120VAC	1.2 Cv, C = 4.1 Nl/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min
	H15WXBBL49C	24VDC	
H2	**H25WXBBL53C**	120VAC	2.8 Cv, C = 9.0 Nl/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min
	H25WXBBL49C	24VDC	
H3	**H35WXBBL53C**	120VAC	5.0 Cv, C = 15.4 Nl/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min
	H35WXBBL49C	24VDC	
CE			
H1	**H16WXBBL53C**	120VAC	1.2 Cv, C = 4.1 Nl/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min
	H16WXBBL49C	24VDC	
H2	**H26WXBBL53C**	120VAC	2.8 Cv, C = 9.0 Nl/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min
	H26WXBBL49C	24VDC	
H3	**H36WXBBL53C**	120VAC	5.0 Cv, C = 15.4 Nl/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min
	H36WXBBL49C	24VDC	

PC			
H1	**H17WXBBL53C**	120VAC	1.2 Cv, C = 4.1 Nl/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min
	H17WXBBL49C	24VDC	
H2	**H27WXBBL53C**	120VAC	2.8 Cv, C = 9.0 Nl/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min
	H27WXBBL49C	24VDC	
H3	**H37WXBBL53C**	120VAC	5.0 Cv, C = 15.4 Nl/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min
	H37WXBBL49C	24VDC	

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Non Plug-in, 5599-1, CNOMO - Size 1, 2, & 3

BOLD OPTIONS ARE MOST POPULAR.

H1	E	WX	B	B	L53	C

Basic Series 5599-1	
ISO 5599-1 Size 1	**H1**
ISO 5599-1 Size 2	**H2**
ISO 5599-1 Size 3	**H3**

5599-1 Operator / Function	
Single Solenoid, 2-Position - Air Return	**1**
Double Solenoid, 2-Position	**2**
Double Solenoid, 3-Position - APB	**5**
Double Solenoid, 3-Position - CE	**6**
Double Solenoid, 3-Position - PC	7
Single Solenoid, 2-Position - Air Return, Spring Assist	**E**

5599-1 Mounting	
Valve Less Base	**WX**

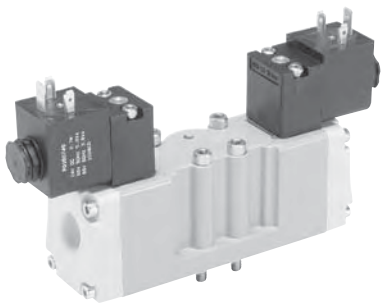
5599-1 Pilot Source / Pilot Exhaust	
Internal Pilot, Port #1 / Vented	**B**
External Pilot #12 or #14 Port / Vented	X*

* Must be specified when using Sandwich Regulators.

5599-1 Overrides / Lights	
B	**Non-Locking, Flush, Push - No Light**
C	Locking, Flush, Push / Turn - No Light

5599-1 Engineering Level	
C	**Current**

Enclosure / Lead Length / Voltage		AC 60Hz	AC 50Hz	DC
L42	3-Pin, 30mm DIN 43650A with CNOMO Connector	24		
L45	3-Pin, 30mm DIN 43650A with CNOMO Connector			12
L49	**3-Pin, 30mm DIN 43650A with CNOMO Connector**			**24**
L53	**3-Pin, 30mm DIN 43650A with CNOMO Connector**	**120**	**115**	
L57	3-Pin, 30mm DIN 43650A with CNOMO Connector	240		
NXX	Valve Less Coil			



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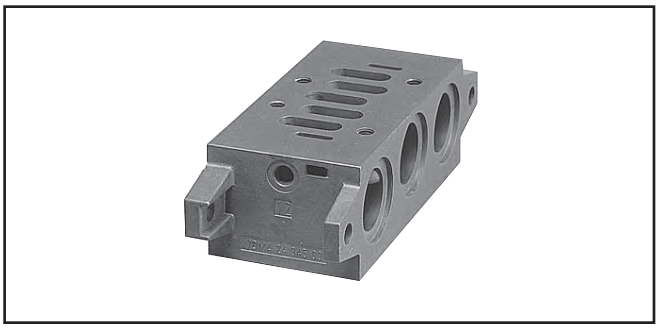
Non Plug-in, 5599-1, VDMA - Size 1, 2, & 3 Manifold / Subbase Kits

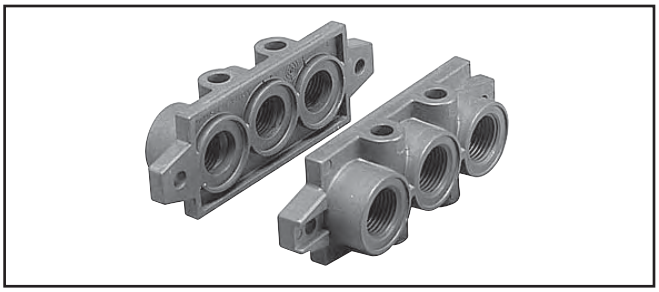
Manifold VDMA – Form C Bottom Port

Size	Port Size	Kit Number
		BSPP "G"
H1	1/4"	P2N-VM512MB
H2	3/8"	P2N-WM513MB
H3	1/2"	P2N-YM514MB



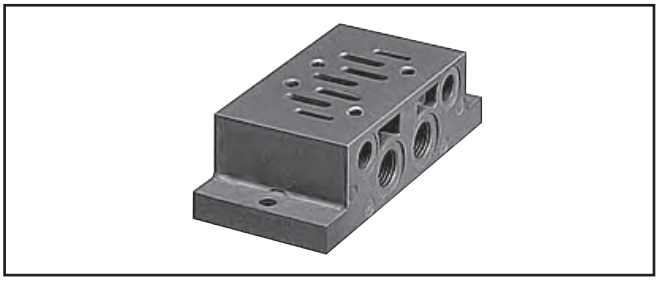
VDMA End Plates – Form D

Size	Port Size	Kit Number
		BSPP "G"
H1	3/8"	P2N-VM513ES
H2	1/2"	P2N-WM514ES
H3	1"	P2N-YM518ES



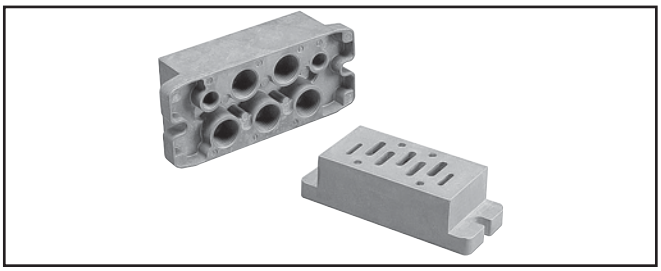
Subbase – Side Ports (5599-1 & VDMA)

Size	Port Size	5599-1 Kit Number		VDMA Kit
		NPT	BSPP "G"	BSPP "G"
H1	1/4"	**PL1-1/4-80**	PL1-1/4-70	P2N-VS512SD
H2	3/8"	**PL2-3/8-80**	PL2-3/8-70	P2N-WS513SD
H3	1/2"	PL3-1/2-80	PL3-1/2-70	P2N-YS514SD



Subbase – Bottom Ports

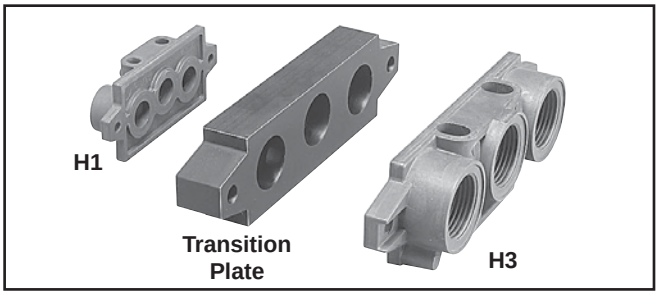
Size	Port Size	5599-1 Kit Number	
		NPT	BSPP "G"
H1	1/4"	PD1-1/4-80	PD1-1/4-70
H2	3/8"	PD2-3/8-80	PD2-3/8-70



VDMA Transition Plate

Kit Number
P2N-VM500AK

Kit includes: Transition Plate Only. Order P2N-VM513ES and P2N-YM518ES Separately to Assemble Add-A-Fold



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Non Plug-in, 5599-1, Size 1, 2, & 3 Manifold / Subbase Kits

BOLD OPTIONS ARE MOST POPULAR.

PS401155 | 0 | C | P

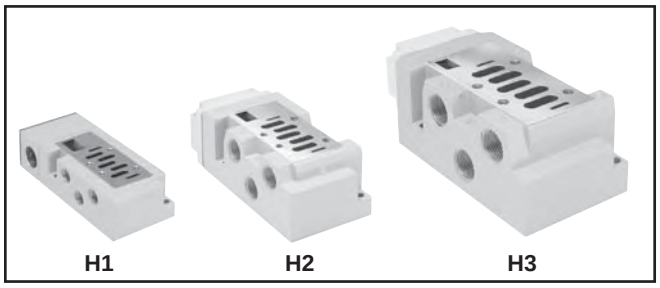
Enclosures / Lead Length	
0	None, No Electrical Plug - 5599-1

Mounting Base Style / Port Size					
H1 Series		H2 Series		H3 Series	
Subbase: 3/8 NPT Side Ports	**PS401115**	**Subbase: 1/2 NPT Side Ports**	**PS411117**	**Subbase: 3/4 NPT Side Ports**	**PS421119**
Subbase: 3/8 BSPP Side Ports	PS401116	Subbase: 1/2 BSPP Side Ports	PS411118*	Subbase: 3/4 BSPP Side Port	PS421110*
Manifold: 3/8 NPT End Ports	**PS401155**	**Manifold: 1/2 NPT End Port**	**PS411157**	**Manifold: 3/4 NPT End Port**	**PS421159**
Manifold: 3/8 BSPP End Ports	PS401156*	Manifold: 1/2 BSPP End Ports	PS411158*	Manifold: 3/4 BSPP End Port	PS421150*
Manifold: 3/8 NPT Bottom / End Port	PS401165†	Manifold: 1/2 NPT Bottom / End Port	PS411167	Manifold: 3/4 NPT Bottom / End Port	PS421169
Manifold: 3/8 BSPP Bottom / End Port	PS401166*†	Manifold: 1/2 BSPP Bottom / End Port	PS411168*	Manifold: 3/4 BSPP Bottom / End Port	PS421160*

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

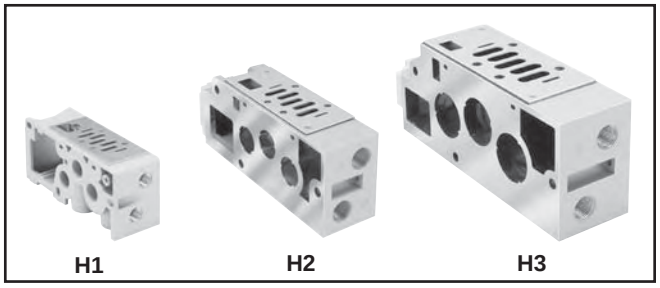
† #1 Bottom Port - 1/4".

Subbase Kits



H1 H2 H3

Manifold Kits



H1 H2 H3

Non-Plug-in, 5599-1, End Plate Kits

BOLD OPTIONS ARE MOST POPULAR.

H1 H2 H3

PS403101 | 0 | C | P

Basic Series	
ISO 5599, Size 1	PS403101
ISO 5599, Size 2	PS413101
ISO 5599, Size 3	PS423101

Thread Type	
0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

H1 Non-Collective Wiring End Plates

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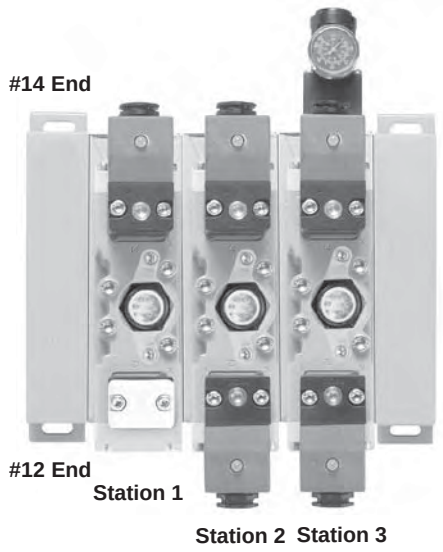
How To Order Non Plug-in Add-A-Fold Assemblies

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete Valve, Regulator, Flow Control and Base model number. List left to right, LOOKING AT THE CYLINDER PORTS on 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 and the individual manifold number in the station specified.)



Example:
3-Station Manifold with (3) H1 Valves On Manifold Bases and Regulator at Station 3

Add-A-Fold Assembly Model Number

AA	H1	S	0	03	

Valve Series

Right & Left End Plate	H1

End Plate Type

Standard - Non-Collective Wiring	S†
VDMA 5599-1	V*

* Not Available in NPT. For use with P2N Style Manifolds.
† For use with PS4... Style Manifolds.

Transition Plate

Blank	No Transition Plate
C*	H1 to H2
D	H1 to H3

* Not Available with Type "V".

Number of Stations

01
02
03
04
•
•
24

Thread Type

0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

Example

Application requires a 3-Station manifold with a valve, regulator on Station 3.

Item	Qty.	Part No.	Location
01	1	AAH1S003	
02	1	H11WXBG3B9000FC	Station 1
03	1	PS4011550CP	Station 1
04	1	H12WXBG3B9000FC	Station 2
05	1	PS4011550CP	Station 2
06	1	H12WXXG3B9000FC	Station 3
07	1	PS4037166CP	Station 3
08	1	PS4011550CP	Station 3

NOTE:
Construct manifold assemblies from left to right while looking at the cylinder ports.

Valves must be ordered as External Pilot when using Sandwich Regulator.

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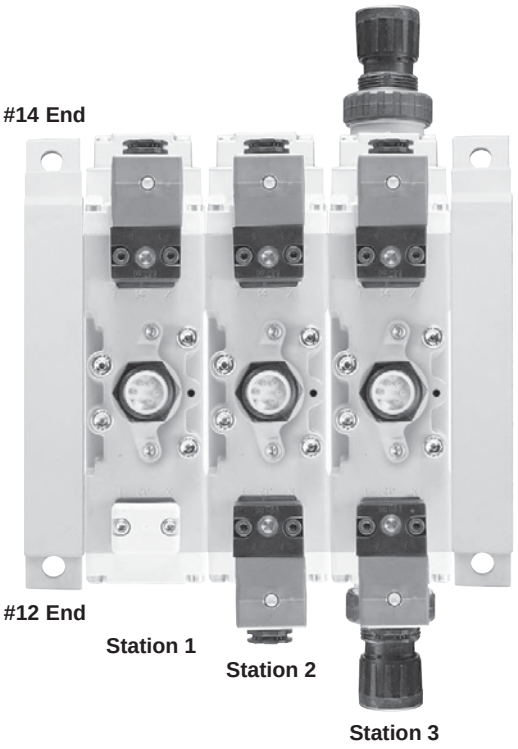
How To Order Non Plug-in Add-A-Fold Assemblies

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete Valve, Regulator, Flow Control and Base model number. List left to right, LOOKING AT THE CYLINDER PORTS on 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 and the individual manifold number in the station specified.)



Example:
3-Station Manifold with (3) H2 Valves On Manifold Bases and Regulator at Station 3

Add-A-Fold Assembly Model Number

AA	H2	S	0	03	

Valve Series

Right & Left End Plate	H2
Right & Left End Plate	H3

End Plate Type

Standard - Non-Collective Wiring	S†
VDMA 5599-1	V*

* Not Available in NPT. For use with P2N Style Mmanifolds.
† For use with PS4... Style Manifolds.

Transition Plate

Blank	No Transition Plate
E*	H2 to H3

* Use Largest Size (H3) Number. Not Available with Type "V".

Number of Stations

01
02
03
04
•
•
24

Thread Type

0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Theads.

Example

Application requires a 3-Station manifold with a valve and regulator on Station 3.

Item	Qty.	Part No.	Location
01	1	AAH2S003	
02	1	H21WXBG3B9000C	Station 1
03	1	PS4111570CP	Station 1
04	1	H22WXBG3B9000C	Station 2
05	1	PS4111570CP	Station 2
06	1	H22WXXG3B9000C	Station 3
07	1	PS4137166CP	Station 3
08	1	PS4111570CP	Station 3

NOTE: Construct manifold assemblies from left to right while looking at the cylinder ports.
Valves must be ordered as External Pilot when using Sandwich Regulator.

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Blanking Plate Kits

Size	Kit Number
H1	PS4034CP
H2	PS4134CP
H3	PS4234CP

Kit includes: Blanking Plate, Gasket, and Mounting Bolts.

Manifold Port Isolation Kits

Main Galley (1, 3, 5)

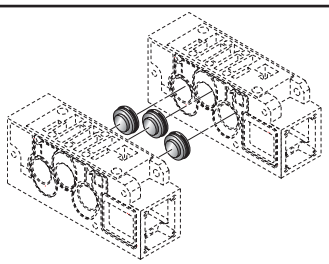
Size	Kit Number	
	PS4 Manifolds	P2N Manifolds
H1	PS4032CP	P2N-VK0P
H2	PS4132CP	P2N-WK0P
H3	PS4232CP	—

Kit includes: Plugs with O-rings.

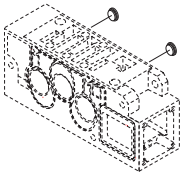
Pilot Galley

Size	Kit Number
H1 H2 H3	PS4033CP

Kit includes: Plugs with O-rings.
For use on PS4... Series Manifolds.



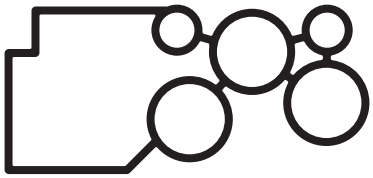
H1, H2, H3 Main Galley



H1, H2, H3 Pilot Galley

Manifold to Manifold Gasket Kits

5599 PS4011, PS4111 & PS4211 Manifolds	
H1	PS4013P
H2	PS4113P
H3	PS4213P



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H1 Auxiliary Access Plate Kits

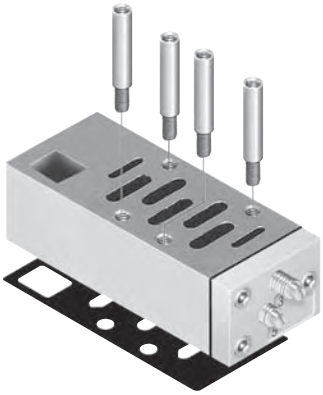
Size	Port Size	Kit Number	
		NPT	BSPP "G"
H1	1/4" & 3/8"	PS403000CP	PS403001CP

Kit includes: Pilot Port Access Plate, Gasket and Mounting Screws.
- Used on H1 Manifolds to provide auxiliary access to Ports 1, 3 & 5.
- Port 1: 1/4", Ports 3 & 5: 3/8". Height: .72 Inch

Sandwich Flow Controls

Size	Kit Number
H1	PS4042CP
H2	PS4142CP
H3	PS4242CP

A Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator.



Non Plug-in
5599-1
Size 2 Shown

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BOLD OPTIONS ARE MOST POPULAR

PS4037 1 6 6 C P

Basic Series	
H1	
5599-1, Non Plug-in	PS4037
H2	
5599-1, Non Plug-in	PS4137
H3	
5599-1,Non Plug-in	PS4237

Regulator Function	
Common Pressure Regulator	1
Independent Pressure Regulator	2

#2 Port Regulator / Gauge*	
0**	Line By-Pass Plate
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	5-125 PSIG w/Gauge

* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

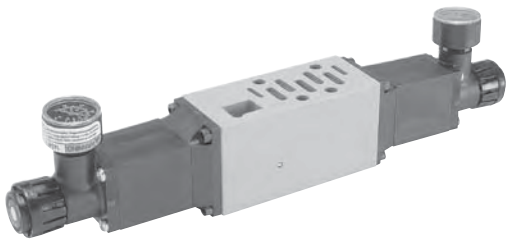
** Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

#4 Port Regulator / Gauge*	
0**	Line By-Pass Plate
4	1-30 PSIG w/Gauge
5	2-60 PSIG w/Gauge
6	5-125 PSIG w/Gauge

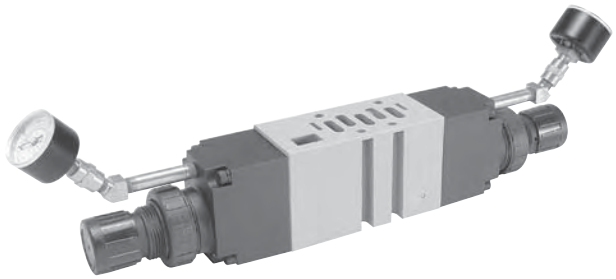
* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

** Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

Ordering Components
- *Sandwich Regulator Kit configured for Internal Pilot as standard.*
- *Order valve as External Pilot.*



H1 - Size 1
(Independent Dual Port Regulator Shown)



H2 - Size 2
(Independent Dual Port Regulator Shown)

How to Configure Sandwich Regulator / Valve Combinations

Internal Pilot Configuration of Sandwich Regulator H1, H2 & H3
Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

External Pilot Configuration of Sandwich Regulator H1, H2, H3
An External Pilot pressure in Port 12 or 14 of the base feeds thru the Sandwich Regulator 12 or 14 galley directly to the 12/14 pilot of the valve. This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

Sandwich Regulator Cv Flow Chart*

	Common Pressure Code 166				Single Pressure 2 Code 266				Single Pressure 4 Code 260				Dual Pressure Code 266			
	1-2	1-4	2-3	4-5	1-2	1-4	2-3	4-5*	1-2	1-4	2-3	4-5*	1-2	1-4	2-3	4-5*
H1	0.62	0.61	1.28	1.18	0.73	0.96	0.96	0.93	0.34	0.70	0.94	0.98	0.52	0.48	0.86	0.88
H2	1.47	1.60	2.41	2.33	1.71	1.90	1.52	1.75	1.74	1.67	1.73	1.79	1.61	1.62	1.50	1.67
H3	2.37	2.39	4.30	4.47	2.37	2.81	2.75	3.01	2.65	2.59	2.68	2.74	2.43	2.41	3.16	3.04

* Regulator Port exhaust through Base Port 3.
Note: All Cv's calculated with regulator adjusted full open.

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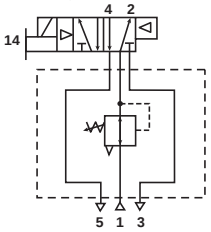
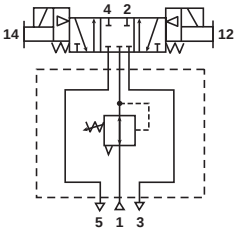
Non Plug-in, H1, H2, H3 Common Port Regulation

Provides adjustable regulated air pressure to the valve's #1 port which gives the same regulated pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

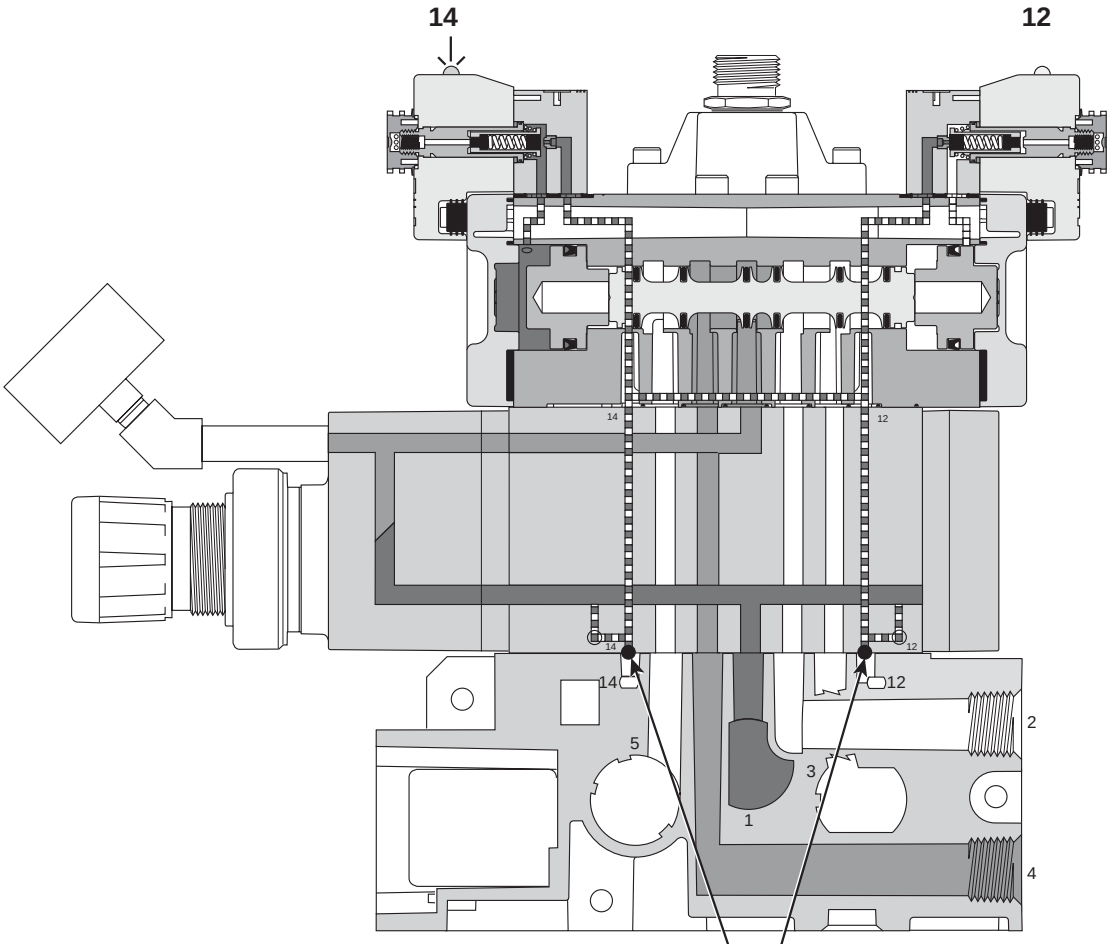
Common Port Regulator with 4-Way, 2-Position Single Solenoid Valve



Common Port Regulator with 4-Way, 3-Position APB Valve



H2 Common Port Regulator Shown - Double Solenoid, 14 Energized, Internal Pilot



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom of the I & E Pilot Holes which prevents line pressure from escaping through the manifold.

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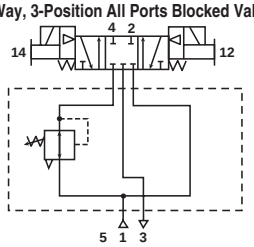
Non Plug-in, H1, H2, H3 Independent Port Regulation

Single Port Regulator

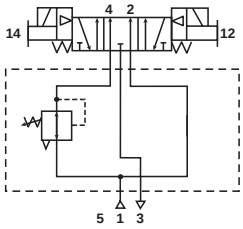
Provides regulated pressure to one of the ports and full line pressure to the other by use of the Line Pressure By-Pass Plate. Pressure regulation can occur out of the #4 port of the valve.

When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. (See schematics on right.)

Independent Port Regulator with 4-Way, 3-Position All Ports Blocked Valve

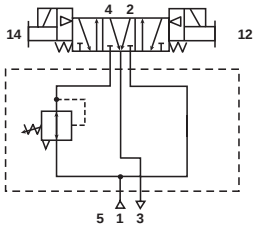


Independent Port Regulator with 4-Way, 3-Position, Inlet to Cylinder Function



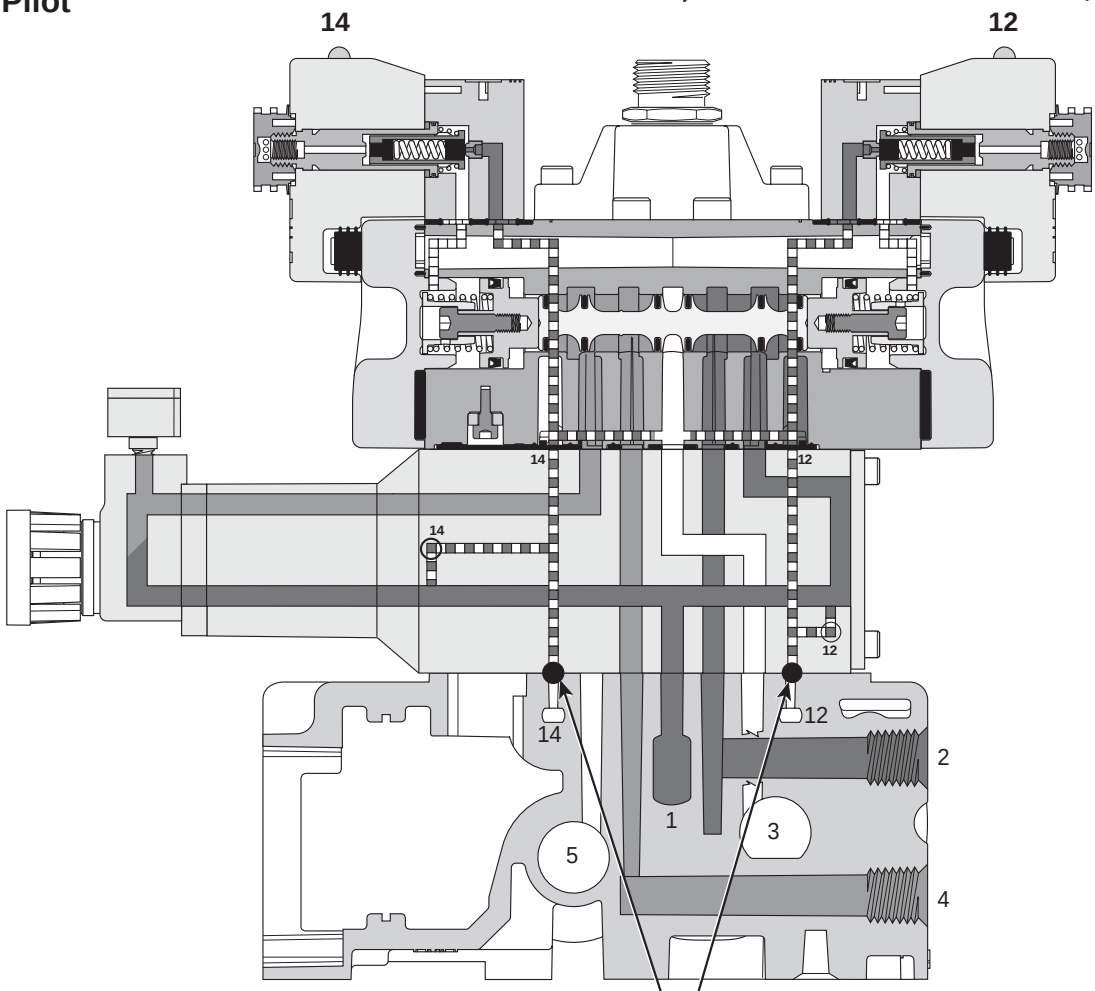
⚠ CAUTION: Requires 4-Way, 3-Position, Cylinder to Exhaust Valve

Independent Port Regulator with 4-Way, 3-Position, Cylinder to Exhaust Function



⚠ CAUTION: Requires 4-Way, 3-Position, Inlet to Cylinder Valve

H1 Independent Port Regulator Shown - Double Solenoid, De-energized, Internal Pilot



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom #12 and #14 Pilot Hole which prevents line pressure from escaping through the manifold.

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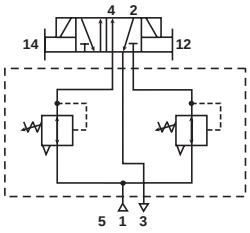
Non Plug-in, H1, H2, H3 Independent Dual Port Regulation

Dual Port Regulator

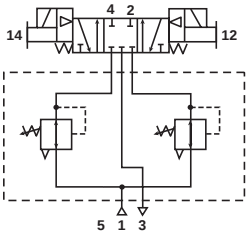
Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. (See schematics on right.)

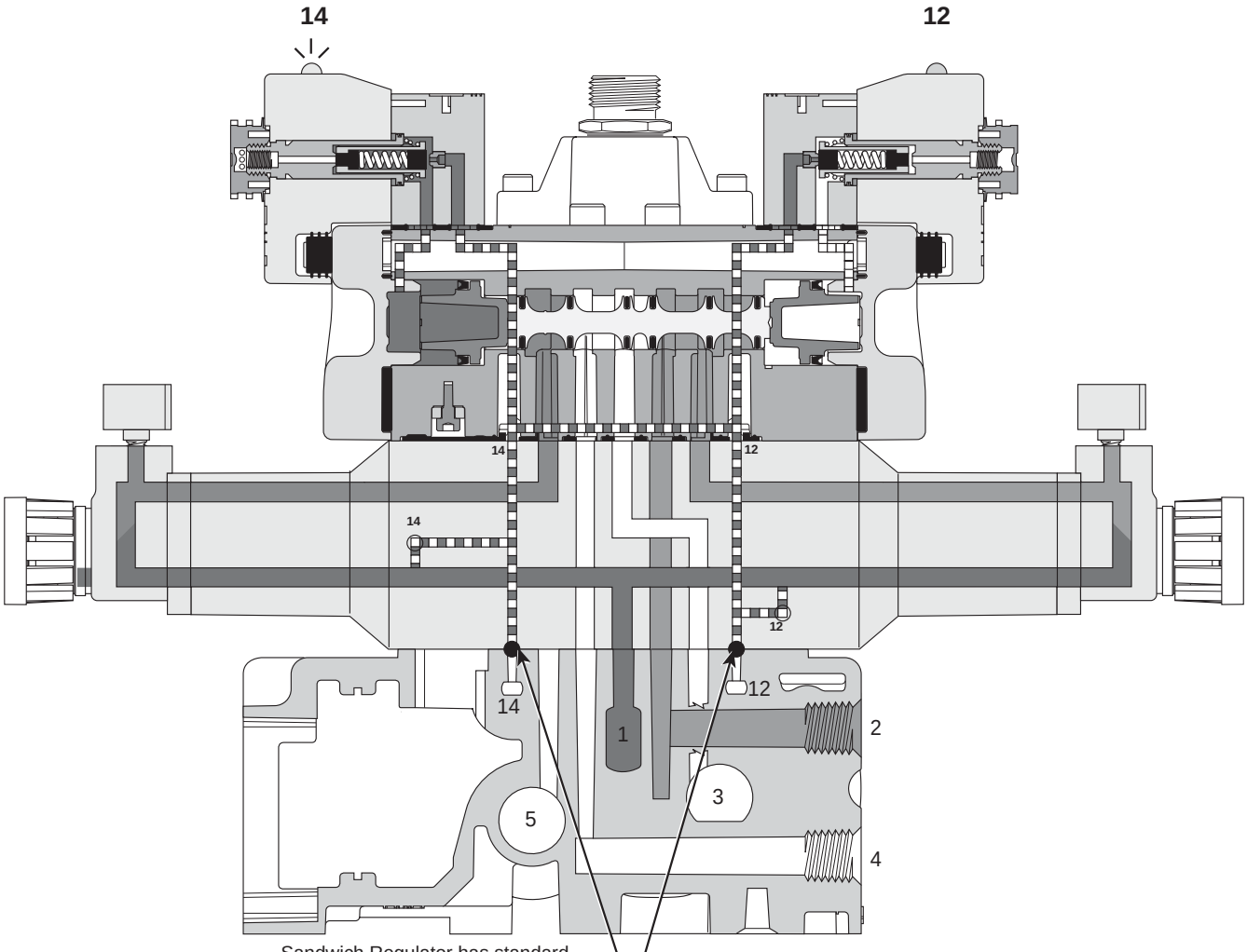
Independent Dual Port Regulator with 4-Way, 2-Position Double Solenoid Valve



Independent Dual Port Regulator with 4-Way, 3-Position Double Solenoid Valve



H1 Independent Dual Port Regulator Shown - Double Solenoid, 14 Energized, Internal Pilot



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom #12 and #14 Pilot Hole which prevents line pressure from escaping through the manifold.

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5599-1 Non Plug-in Transition Plate Kits

BOLD OPTIONS ARE MOST POPULAR.

H1 H2 H3

PS402601 0 C P

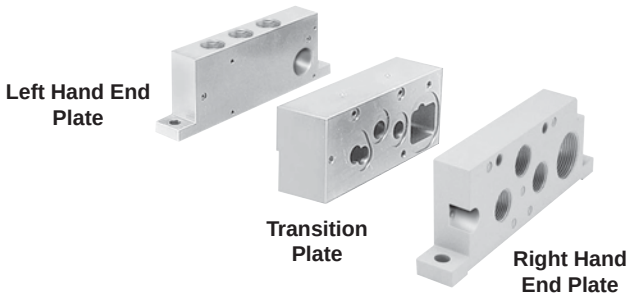
Transition Plate Type*	
H1 to H2 to H3	PS402501
H1 to H3	PS402601
H1 to H2	PS402701
H2 to H3	PS402801

* Includes Left Hand and Right Hand End Plates.
Use with PS4... Series Manifolds Only.

Engineering Level	
C	Current

Thread Type	
0	NPT
1*	BSPP "G"

* BSPP Conforms to ISO 1179-1 w 228-1 Threads.



H1 to H2 Shown

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Remote Pilot, Size 18mm (HB), 26mm (HA), H1, H2, & H3

BOLD OPTIONS ARE MOST POPULAR.

H1 **4** **WX000XX** **C**

Basic Series	
ISO 15407-1 18mm	HB
ISO 15407-1 26mm	HA*
ISO 5599-1 Size 1	H1*
ISO 5599-1 Size 2	H2*
ISO 5599-1 Size 3	H3*

* Must Order Remote Pilot Access Plates for Manifolds.

15407-1 Operator / Function	
Single Remote Pilot, 2-Position - Air Return	3
Double Remote Pilot, 2-Position	4
Double Remote Pilot, 3-Position - APB	8
Double Remote Pilot, 3-Position - CE	9
Double Remote Pilot, 3-Position - PC	0
Single Remote Pilot, 2-Position - Air Return, Spring Assist	F

Remote Pilot Valve	
WX000XX	Remote Pilot Valve

Engineering Level	
A	15407 Current
C	5599 Current

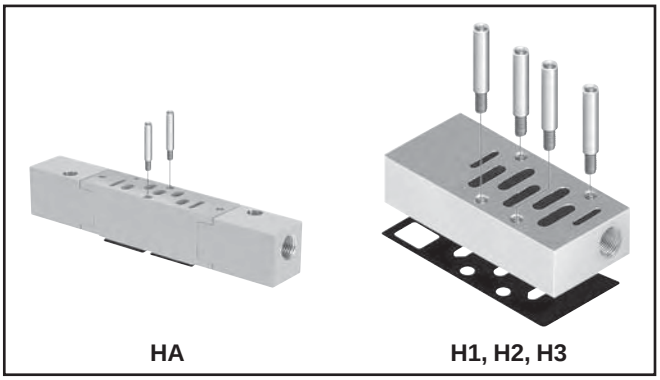
Note: For manifolds, end plates, and accessories, see 15407-1 & 5599-1 Non Plug-in valve section.

Note: HB 18mm Valve Remote Pilot Option only available with PL02 Individual Subbase Kits

Remote Pilot Access Plate Kits

Size	Port Size	Kit Number	
		NPT	BSPP "G"
HA	1/4"	PS551500P	PS551501P
H1	1/8"	PS401500CP	PS401501CP
H2	1/8"	PS411500CP	PS411501CP
H3	1/8"	PS421500CP	PS421501CP

Kit includes: Pilot Port Access Plate, Gasket and Mounting Studs.



HA H1, H2, H3

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Temperature Rating

HB	HA	H1	H2	H3
-15°C to 49°C (5°F to 120°F) Ambient.				

CSA / C-US

HB	HA	H1	H2	H3
Standard at - 1000kPa (145 PSIG)				

Flow Rating (Cv)

Valve Size	Port Size	2-Position	3-Position
HB	1/8"	0.55 Cv, C = 1.5 Nl/s x bar, b = 0.25, Qn = 390 l/min, Qmax = 648 l/min	0.50 Cv, C = 1.4 Nl/s x bar, b = 0.25, Qn = 360 l/min, Qmax = 595 l/min
HA	1/4"	1.1 Cv, C = 3.6 Nl/s x bar, b = 0.30, Qn = 918 l/min, Qmax = 1518 l/min	1.0 Cv, C = 3.3 Nl/s x bar, b = 0.30, Qn = 845 l/min, Qmax = 1395 l/min
H1	3/8"	1.5 Cv, C = 5.0 Nl/s x bar, b = 0.30, Qn = 1248 l/min, Qmax = 2070 l/min	1.2 Cv, C = 4.1 Nl/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min
H2	1/2"	3.0 Cv, C = 9.7 Nl/s x bar, b = 0.35, Qn = 2520 l/min, Qmax = 4140 l/min	2.8 Cv, C = 9.0 Nl/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min
H3	3/4"	6.0 Cv, C = 18.7 Nl/s x bar, b = 0.35, Qn = 5022 l/min, Qmax = 7848 l/min	5.0 Cv, C = 15.4 Nl/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min

Cv tested per ANSI / (NFPA) T3.21.3
Flow tested According to ISO 6358.

Response Time** (ms)

Valve Size	Port Size	0 Cu. In. Chamber		## Cu. In. Chamber	
		Fill	Exhaust	Fill	Exhaust
Single Solenoid 2-Position - Air Return / Spring Assist					
HB	1/8"	28	30	141	154
HA	1/4"	24	26	77	124
H1	3/8"	39	41	159	210
H2	1/2"	78	81	219	310
H3	3/4"	90	93	244	320

HB (12), HA (25), H1 (50), H2 (100), H3 (200)

** With 100 PSIG supply, time (ms) required to fill from 0 to 90 PSIG and Exhaust from 100 PSIG to 10 PSIG measured from the instant of energizing or de-energizing 24VDC solenoid.

Tested per ANSI / (NFPA) T3.21.8

Minimum Operating Voltage

	HB	HA	H1	H2	H3
MOV (24VDC)	20.4	20.4	20.4	20.4	20.4
MOV (120VAC)	102*	102*	102	102	102

* 120V AC coils have a dropout voltage of 10VAC when used with solid state relays. A pull-down resister may be necessary.

Operating Pressure

HB	HA	H1	H2	H3

Maximum: 145 PSIG (1000 kPa)
Minimum:

Operator / Function	Internal Pilot	PSIG (Min. kPa) HB	PSIG (Min. kPa) HA	PSIG (Min. kPa) H1	PSIG (Min. kPa) H2	PSIG (Min. kPa) H3
1	Single Solenoid - 2-Position	30 (207)	25 (173)	25 (173)	25 (173)	35 (241)
2	Double Solenoid- 2-Position					
3	Single Remote Pilot - 2-Position **	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
4	Double Remote Pilot - 2-Position**	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
5, 6, 7	Double Solenoid - 3-Position APB, CE, PC	35 (241)	35 (241)	35 (241)	50 (345)	50 (345)
8, 9, 0	Double Remote Pilot - 3-Position** APB, CE, PC	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
E	Single Solenoid Pilot - 2-Position Air Return / Spring Assist	30 (207)	30 (207)	35 (241)	45 (310)	45 (310)
F	Single Remote Pilot - 2-Position** Air Return / Spring Assist					
N, P, Q	Double Solenoid - Dual 3/2	30 (207)	N/A	N/A	N/A	N/A
	External Pilot*	*	*	*	*	*
All	Isys	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum

* External Pilot Pressure / Remote Pilot Supply - Must meet or exceed minimum pilot pressure for internal pilot option. Not available on Operator / Function N, P, or Q.

** Must be equal to or greater than operating pressure.

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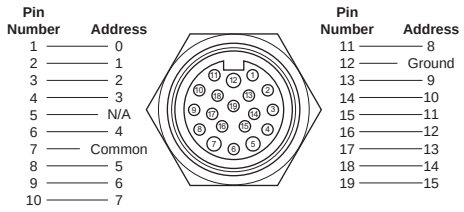
Maximum Number of Solenoids
(Maximum Energized Simultaneously)

HA / HB	Voltage Code	25-Pin D-Sub	19-Pin Brad Harrison	12-Pin M23	19-Pin M23	Moduflex	Isysnet
24VDC	G9	24 (24)	16 (16)	8 (8)	16 (16)	16 (16)	32 (32)
120VAC*	23	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A
H1 / H2 / H3	**Voltage Code**	**25-Pin D-Sub**	**19-Pin Brad Harrison**	**12-Pin M23**	**19-Pin M23**	**Moduflex**	**Isysnet**
12VDC	45	24 (13)	16 (13)	8 (8)	16 (13)	N/A	N/A
24VAC*	42	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A
24VDC	B9	24 (20)	16 (16)	8 (8)	16 (16)	16 (16)	24 (21)
120VAC*	23	24 (24)	16 (16)	8 (8)	16 (16)	N/A	N/A

* Not CSA certified for 25-Pin, D-Sub option.

19-Pin Round Brad Harrison



Face View - Male 19-Pin Connector

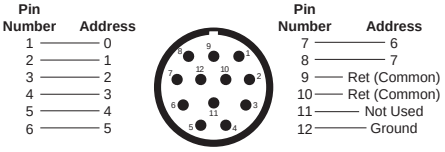
19-Pin Round Cable Specifications

Common Pin “7” is rated for 8 amps. Cable common wire must be greater than total amperage of solenoids on Add-A-Fold assembly.

Example: 8 station manifold, 16 solenoids,
120VAC - 16 x .039 amps = .63 total amp rating.

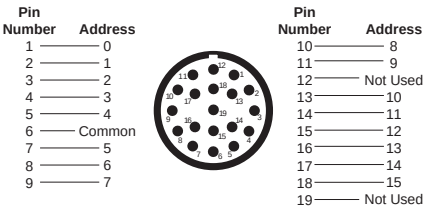
NEMA 4 rated with properly assembled NEMA 4 rated cable.

M23, 12-Pin Round Connector (Male)



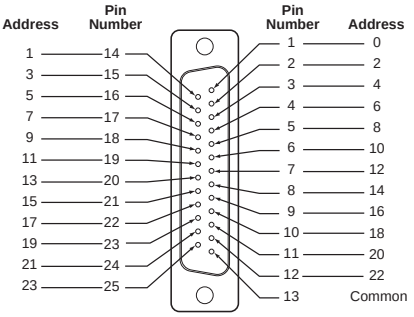
View into End Plate Connector - Male M23, 12-Pin

M23,19-Pin Round Connector (Male)



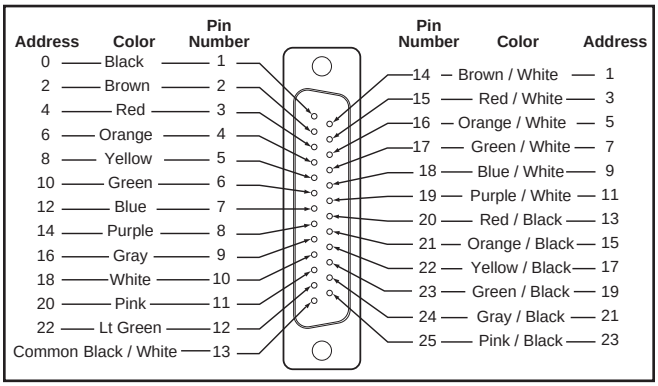
View into End Plate Connector - Male M23, 19-Pin

25-Pin, D-Sub Connector (Male)



View into End Plate Connector - Male D-Sub, 25-Pin

25-Pin, D-Sub Cable (Female)



Part Number	Description	Length
P8LMH25M3A	25-Pin, D-Sub Cable, IP20	3 Meters
SCD259D	25-Pin, D-Sub Cable, IP20	9 Meters
SCD253W	25-Pin, D-Sub Cable, IP65	3 Meters
SCD259WE	25-Pin, D-Sub Cable, IP65	9 Meters

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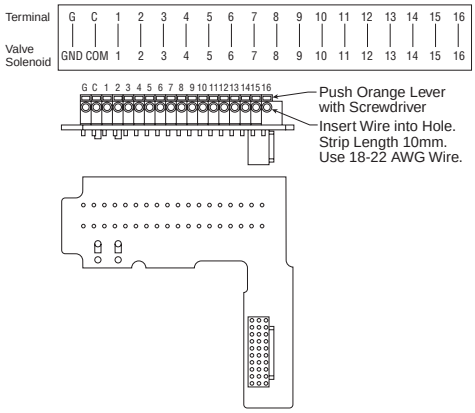
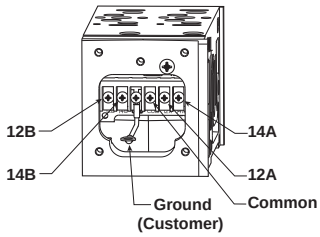
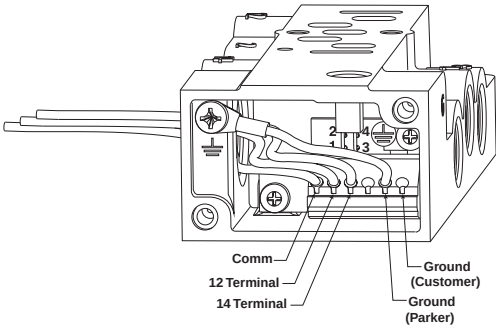
16-Point Terminal Strip



Manifold Wiring

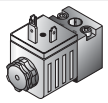


Subbase Wiring

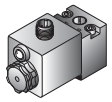


Electrical Connectors - Size 1, 2 & 3

5599-1 CNOMO



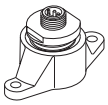
30mm 3-Pin ISO 4400 (DIN 43650A)



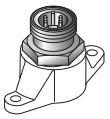
2-Pin M12 Euro

5599-1 AUTO

3-Pin Mini

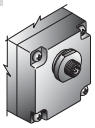


4-Pin Micro

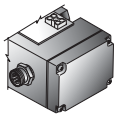


5-Pin Mini

5599-2



Manifold Auto Connector



Subbase Auto Connector

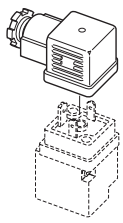
Connections

	14 Solenoid	12 Solenoid
Valves with Wires	Black Wires	Red Wires
Valves with Terminal Block (Will accept 18 to 24 Gauge Wires)	14 and Com Terminals	12 and Com Terminals

Female Electrical Connectors (IP65 Rated)

30mm 3-Pin ISO 4400 (DIN 43650A)

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



* With surge suppression.

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

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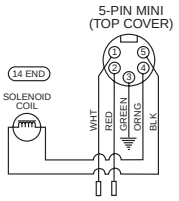
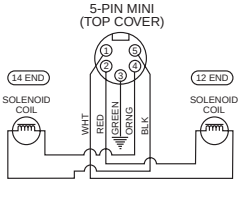
Automotive Connection – Wiring Options

'C' Chrysler Connection

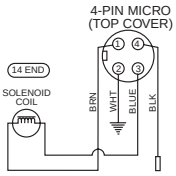
5-Pin Male / Single Solenoid
(Encl. Option 3, Auto Option C)



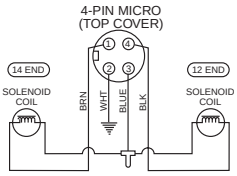
5-Pin Male / Double Solenoid
(Encl. Option 3, Auto Option C)



4-Pin Male / Single Solenoid
(Encl. Option 2, Auto Option C)

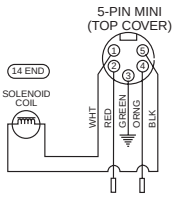


4-Pin Male / Double Solenoid
(Encl. Option 2, Auto Option C)

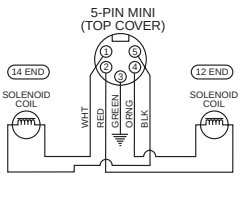


'F' SAE / Ford Wiring

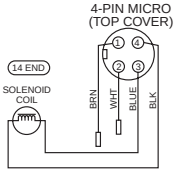
5-Pin Male / Single Solenoid
(Encl. Option 3, Auto Option F)



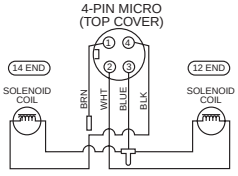
5-Pin Male / Double Solenoid
(Encl. Option 3, Auto Option F)



ISO 20401
4-Pin Male / Single Solenoid
(Encl. Option 2, Auto Option F)

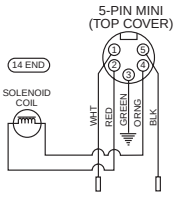


ISO 20401
4-Pin Male / Double Solenoid
(Encl. Option 2, Auto Option F)

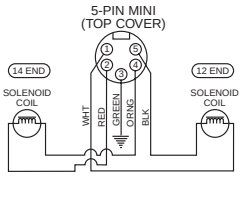


'G' GM Wiring

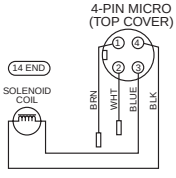
5-Pin Male / Single Solenoid
(Encl. Option 3, Auto Option G)



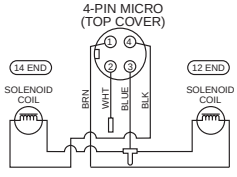
5-Pin Male / Double Solenoid
(Encl. Option 3, Auto Option G)



4-Pin Male / Single Solenoid
(Encl. Option 2, Auto Option G)

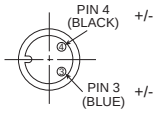


4-Pin Male / Double Solenoid
(Encl. Option 2, Auto Option G)

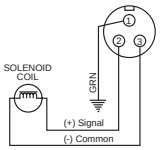


CNOMO Connection - Wiring Options

2-Pin Male / Single Solenoid
(Encl. Option 6, Auto Option F)

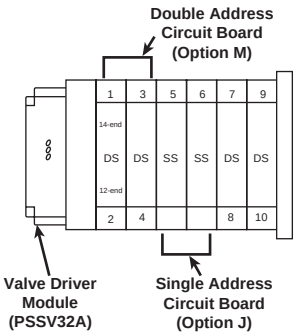


3-Pin Male / Single Solenoid
(Encl. Option 1, Auto Options C, F & G)

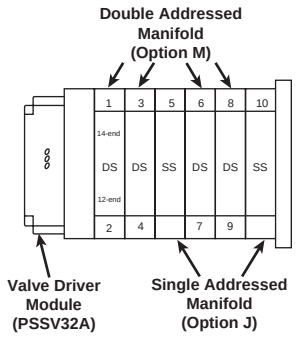


I/O Addressing Examples

HB & HA Example
Two Station Manifold Bases



H1, H2 & H3 Example:
Single Station Manifold Bases



Notes: SS = Single Solenoid Valve
DS = Double Solenoid Valve
First output address the #14 end of the valve closest to the valve driver module.

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5599-2 & 5599-1 AUTO Solenoid Kits

H1 H2 H3	
Voltage Code	**Coil Kit Number**
42 (24VAC)	PS404142P
45 (12VDC)	PS404145P
B9 (24VDC)	PS4041B9P
23 (120VAC)	PS404123P
57 (240VAC)	PS404157P

Quantity 1

5599-1 CNOMO Solenoid Kits

Voltage Code	3-Pin 30mm 'L' Coil Kit	2-Pin M12 Euro '6' Coil Kit
19	—	PS2828619P
42	P2FCA442	—
45	P2FCA445	—
49	P2FCA449	—
53	P2FCA453	—
57	P2FCA457	—

Quantity 1

Pilot Operator - CNOMO

Valve Size		Kit Number
H1 H2 H3	Locking	PS4052CP
	Non-Locking	PS4053CP

Manifold Hardware Kits – PS Series

Valve Size	Kit Number
HB	PS5612P
HA	PS5512P
H1	PS4012P
H2	PS4112P
H3	PS4212P

Quantity 12

Valve Bolt Kits

Valve Size	Kit Number
HB	PS5687P
HA	PS5587P
H1	PS4087CP
H2	PS4187CP
H3	PS4287CP

Quantity 12

Regulator Kits

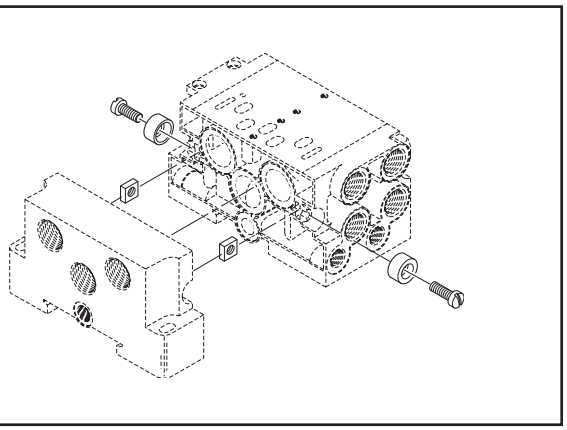
Valve Size	Kit Number
H1	PS4039P
H2 H3	PS4139P

Manifold Hardware Kit – PJL Series

Part Number	Items
DX02M2MB*	Bolt, Washer & Nut*

* Includes 10 Bolts, 10 Washers, 10 Nuts

** Use this number for both sizes, PJLP02 & PJLP01.



Valve to Base Gasket Kits

Valve Size	Standard	Remote Pilot	Dual Pressure #3	Dual Pressure #5
HB	PS5605P*	—	—	—
HA	PS5505P*	—	—	—
H1	PS4005CP	PS4006CP	PS40D3CP	—
H2	PS4105CP	PS4106CP	PS41D3CP	PS41D5CP
H3	PS4205CP	PS4206CP	PS42D3CP	PS42D5CP

Quantity 1
* Quantity 10

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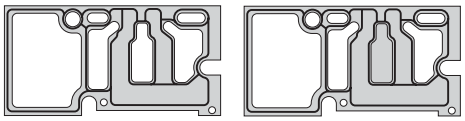
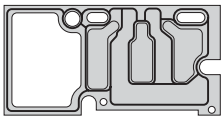
Manifold to Manifold Gasket Kits

15407 PS5511 & PS5611 Manifolds				
Size	**Standard**	**Blocked #1 Port**	**Blocked #1, 3, 5 Ports**	**Blocked #3, 5 Ports**
HB / HA	PS561AP	PS561BP	PS561CP	PS561DP
15407 PJLP & PJLManifolds				
HB	DX02M2MGSKT (PJLP02)			
HA	DX01M2MGSKT (PJLP01)			
5599 PS4011, PS4111 & PS4211 Manifolds				
H1	PS4013P	—	—	—
H2	PS4113P	—	—	—
H3	PS4213P	—	—	—

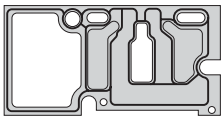


PS561AP

PS561BP

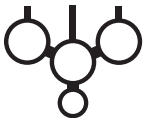


PS561CP

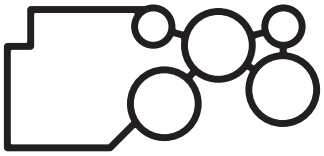


PS561DP

DX02M2MGSKT (PJLP02)



DX01M2MGSKT (PJLP01)



PS4013P

Regulator & Flow Control Mounting Studs

Type	HB	HA
Flow Control	PS5636P	PS5536P
Regulator	PS5636P	PS5536P

Type	H1	H2	H3
Flow Control	PS4036P	PS4136P	PS4236P
Regulator	PS4040P	PS4140P	PS4240P

Quantity 12

Regulator Gauge Kits – Size 1, 2 & 3

Gauge Type	Kit Number
1" Face Air - Standard	
0-60 PSIG	PS4051060BP
0-160 PSIG	**PS4051160BP**
1-1/2" Face Air - Large*	
0-60 PSIG	PS4053060BP
0-160 PSIG	PS4053160BP
1-1/2" Face Liquid*	
0-160 PSIG	PS4052160BP

* Includes brass pipe fitting extensions
Quantity 1

Regulator Spring Range Kits

Spring Range	H1	H2 / H3
0 to 30 PSIG	PS4050030P	PS4150030BP
2 to 60 PSIG	PS4050060P	PS4150060BP
5 to125 PSIG	PS4050125P	PS4150125BP

Quantity 1

Regulator Conversion Kits

Valve Size	Manual Bonnet Assembly (w/o Spring)	Air Pilot Bonnet Assembly	Independent By-Pass Plate
H1	PS4045BP	PS4047BP	PS4048BP
H2 / H3	PS4145BP	PS4147BP	PS4148BP

Quantity 1

Body Service Kits

Valve Size	2-Position	3-Position		
		APB	CE	PC
HB	PS5601P	PS5602P	PS5603P	PS5604P
HA	PS5501P	PS5502P	PS5503P	PS5504P
H1	PS4001CP	PS4002CP	PS4003CP	PS4004CP
H2	PS4101CP	PS4102CP	PS4103CP	PS4104CP
H3	PS4201CP	PS4202CP	PS4203CP	PS4204CP

HB / HA Kit Includes: Spool assembly with seals.

H1, H2, H3 Kit Includes: Spool assembly with seals, all piston seals, return spring, pilot selector gasket, coil to end cap gasket.

Quantity 1

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Pilot By-Pass Plate

Valve Size	Kit Number
H1 H2 H3	PS4051P

Quantity 10

Collective Wiring Module Kits Size 2 & 3

Size	Kit Number
25-Pin, D-Sub Module*†	**SCD251MC**
M23, 12-Pin*†	**SCM231MC**
19-Pin Heavy Duty Round*†	**SCC191MC**

*** Kit includes:** Wiring Module with Circuit Board Connection, Gasket, Tie Rods and Bolts.

† Available with Isys, ISO 5599-2, Sizes 2 & 3.

H2 H3

25-Pin, D-Sub Collective Wiring Module

19-Pin Heavy Duty Wiring Module

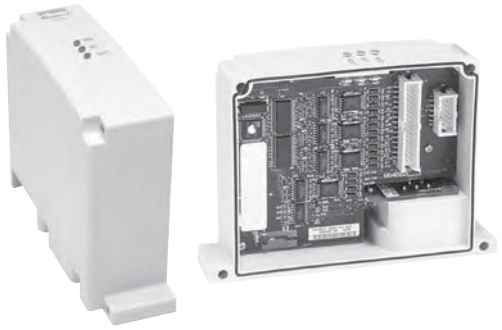
HB, HA, H1, H2, H3 25-Pin, D-Sub Cable

Valve Driver Module

Driver Module	Part Number
32 Point Module – HB, HA, H1, H2, H3	**PSSV32A*†**
24 Output Cable – HB, HA	**PS5624P †**
25 - 32 Output Cable – HB, HA	**PS5632P †**
24 Output Cable – H1, H2, H3	**PS4024P †**

* Reference Document E100P for Installation Instructions. See www.parker.com/pneu/Isysnet

† Isysnet Add-A-Fold assemblies and end plate kits include a valve driver module (PSSV32A) and cable.
HB / HA 24 output manifolds require a PS5624P.
HB / HA 32 output manifolds require a PS5624P + PS5632P.
H1, H2, H3 manifolds require a PS4024P, allowing 21 outputs.

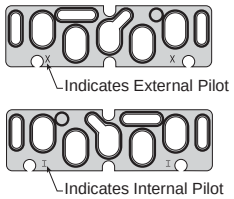


PSSV32A

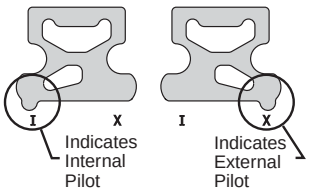
Pilot Select Gasket Kits

Valve Size	Kit Number
HB	PS5605P
HA	PS5505P
H1 H2 H3	PS4007P

Quantity 10



HB Shown



H1, H2, H3

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Subbases

Size	Port Numbers	Port Size	Acceptable Fittings	Notes
H1	#1 to #3 or #5	1/4" BSPP	EO Fittings; Prestolok; P6M Mufflers; EO Plugs	1, 2, 3, 4, 5
		3/8" BSPP	Prestolok; EO Plugs	1, 2, 3, 4, 5
	#2 to #4	1/4" BSPP	EO Fittings; Prestolok; EO Plugs	1, 2, 3, 4, 5
		3/8" BSPP	Prestolok; EO Plugs; EO Fittings	1, 3, 4, 5, 6
	#12 to #2 and #14 to #4	1/8" & 1/4" BSPP	EO Fittings; EO Plugs; Prestolok	1, 2, 3, 4, 5
		1/8" & 3/8" BSPP	Prestolok; EO Plugs	1, 2, 3, 4, 5
	#1 to #2 to #3 to #4 to #5 All Inclusive Bottom Ports	1/4" BSPP	EO Fittings; EO Plugs; Prestolok; P6M Mufflers	1, 2, 3, 4, 5
H2	#1 to #3 or #5	3/8" BSPP	EO Fittings; Prestolok; ES, ASN, P6M Mufflers	1, 2, 3, 4, 5
		1/2" BSPP	EO Fittings; Prestolok; EO Plugs; ASN, P6M Mufflers	1, 2, 3, 4, 5
	#2 to #4	3/8" BSPP	EO Fittings; Prestolok; EO Plugs	1, 2, 3, 4, 5
		1/2" BSPP	EO Fittings; Prestolok; EO Plugs	1, 2, 3, 4, 5
	#12 to #2 and #14 to #4	1/8" & 3/8" BSPP	EO Fittings; EO Plugs; Prestolok	1, 2, 3, 4, 5
		1/8" & 1/2" BSPP	EO Fittings; EO Plugs; Prestolok	1, 2, 3, 4, 5
	#1 to #2 to #3 to #4 to #5 All Inclusive Bottom Ports Also Includes #12 & #14	3/8" & 1/2" BSPP	EO Fittings; Prestolok; EO Plugs	1, 2, 3, 4, 5
H3	#1 to #3 or #5	1/2" BSPP	EO Fittings; EO Plugs; Prestolok; ES, ASN, P6M Mufflers	1, 2, 3, 4, 5
		3/4" BSPP	EO Fittings; EO Plugs; ES & P6M Mufflers	1, 3, 4, 5
	#2 to #4	1/2" BSPP	EO Fittings; EO Plugs; Prestolok	1, 2, 3, 4, 5
		3/4" BSPP	EO Fittings; EO Plugs	1, 3, 4, 5
	#12 to #2 and #14 to #4	1/8" & 1/2" BSPP	EO Fittings; EO Plugs; Prestolok	1, 2, 3, 4, 5
		1/8" & 3/4" BSPP	EO Fittings; EO Plugs	1,3, 4, 5
	#1 to #2 to #3 to #4 to #5 All Inclusive Bottom Ports Also Includes #12 & #14	1/2" & 3/4" BSPP	EO Fittings; EO Plugs; P6M Mufflers; Prestolok	1, 3, 4, 5, 7

Manifold Bases

Size	Port Numbers	Port Size	Acceptable Fittings	Notes
H1	End Ports #2 & #4	1/4" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	Bottom Ports #2 & #4	1/4" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	End Ports #2 & #4	3/8" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	Bottom Ports #2 & #4	3/8" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
H2	End Ports #2 & #4	3/8" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	Bottom Ports #1, #2, & #4	3/8" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	End Ports #2 & #4	1/2" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	Bottom Ports #1, #2, & #4	1/2" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
H3	End Ports #2 & #4	1/2" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	Bottom Ports #2 & #4	1/2" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	End Ports #2 & #4	3/4" BSPP	EO Fittings	1, 3, 4, 5
	Bottom Ports #2 & #4	3/4" BSPP	EO Fittings	1, 3, 4, 5

End Plates

Size	Port Numbers	Port Size	Acceptable Fittings	Notes
H1	#1 to #3 & #5	1/2" BSPP	EO Fittings; Prestolok	1, 2, 3, 4, 5
	#12 to #3	1/8" to 1/2" BSPP	EO Fittings; Prestolok; P6M Muffler	1, 2, 3, 4, 5
	#14 to #5	1/8" to 1/2" BSPP	EO Fittings; Prestolok; P6M Muffler	1, 2, 3, 4, 5
H2	#1 to #3 & #5	3/4" BSPP	EO Fittings	1, 3, 4, 5
	#12 to #3	1/8" to 3/4" BSPP	EO Fittings; EO Plugs; P6M Muffler	1, 3, 4, 5
	#14 to #5	1/8" to 3/4" BSPP	EO Fittings; EO Plugs; P6M Muffler	1, 3, 4, 5
H3	#1 to #3 & #5	1" BSPP	EO Fittings	1, 3, 4, 5
	#12 to #3	1/8" to 1" BSPP	EO Fittings; EO Plugs; P6M & ES Muffler	1, 3, 4, 5
	#14 to #5	1/8" to 1" BSPP	EO Fittings; EO Plugs; P6M & ES Muffler	1, 3, 4, 5

Collective Wiring Interface Plates

Size	Port Numbers	Port Size	Acceptable Fittings	Notes
H1	TOP #1 to #3 & #5	1/2" BSPP	Prestolok; P6M Muffler; EO Fittings	1, 2, 3, 4, 5
H2	TOP #1 to #3 & #5	3/4" BSPP	EO Fittings; P6M & ES Mufflers	1, 3, 4, 5
H3	TOP #1 to #3 & #5	1" BSPP	EO Fittings; P6M & ES Mufflers	1, 3, 4, 5

General Notes Applicable to Applications

1) **EO and EO2 Fittings** are metric tube ends and male BSPP threads to valve components – Light Duty Series – spot faces for B & E and G & H types of flat face sealing. Straights are the **BE-R-ED** Series and elbows are **WEE-R** Adjustable Lock Nut Series.
2) **Prestolok Fittings** are metric push-in fittings with tube ends and BSPP threads to valve components. Straights are the **F4PB** Series and elbows are **C64PB** Adjustable Series.
3) In most applications, there is not enough swing clearance to install elbows in adjacent ports.
4) In a few applications ay be necessary to remove the tube nut during installation.
5) In specifically identified installations, assembly with specific fittings is made provided that the hex points are not aligned along the port center to center line.
6) 3/8" EO fittings with 12 mm tubing only.
7) Prestolok available in 1/2" size only.

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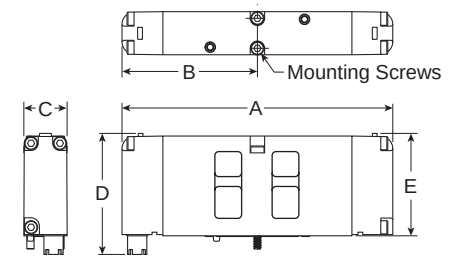
HB

15407-2

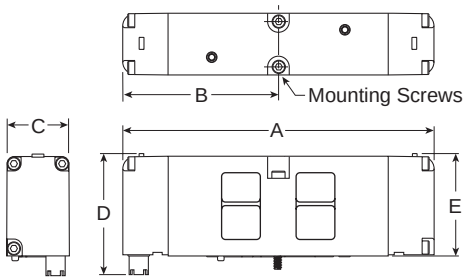


18mm Dimensions

A	B	C	D
4.43 (113)	2.22 (56)	.72 (18)	1.98 (50)
E			
1.68 (43)			

Inches (mm)

HA



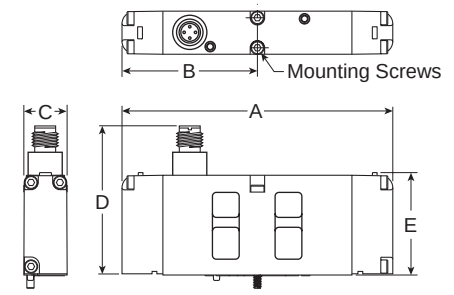
26mm Dimensions

A	B	C	D
5.10 (130)	2.55 (65)	1.02 (26)	1.98 (50)
E			
1.66 (42)			

Inches (mm)

HB

15407-1

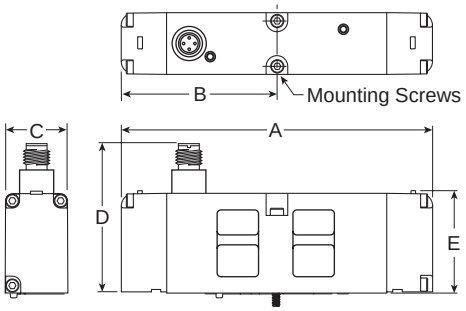


18mm Dimensions

A	B	C	D
4.43 (113)	2.22 (56)	.72 (18)	2.40 (61)
E			
1.68 (43)			

Inches (mm)

HA



26mm Dimensions

A	B	C	D
5.10 (130)	2.55 (65)	1.02 (26)	2.40 (61)
E			
1.66 (42)			

Inches (mm)

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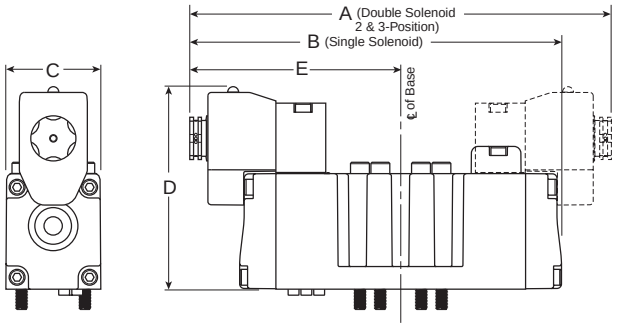
H1
H2
H3

5599-2

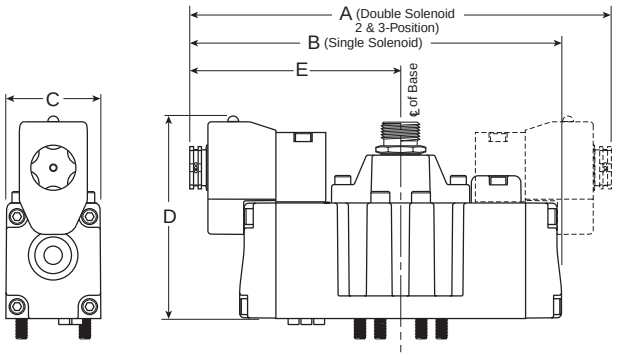


H1 Dimensions

A	A_1	B	C
7.32 (186)	5.59 (142)	6.46 (164)	1.65 (42)
D	**D_1**	**D_2**	**D_3**
3.54 (90)	4.29 (109)	4.29 (109)	2.50 (63.5)
D_4	**E**	**E_1**	
2.48 (63)	3.66 (93)	2.80 (71)	

Inches (mm)

5599-1 Auto



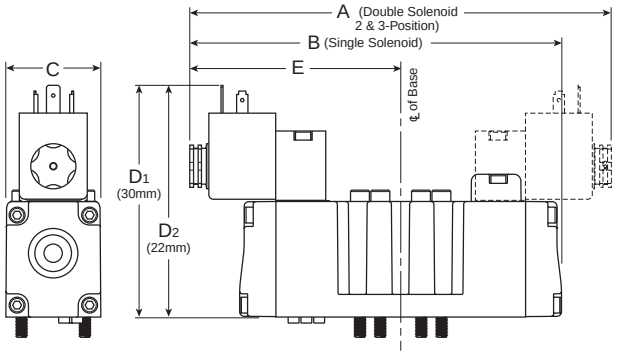
H2 Dimensions

A	A_1	B	C
8.35 (212)	6.62 (168)	7.48 (190)	2.17 (55)
D	**D_1**	**D_2**	**D_3**
4.05 (103)	4.80 (122)	4.57 (116)	2.99 (76)
E	**E_1**		
4.17 (106)	3.31 (84)		

Inches (mm)

H1 Valve Dimensions Shown

5599-1 CNOMO

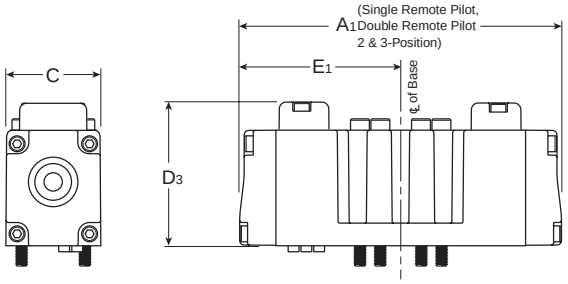


H3 Dimensions

A	A_1	B	C
9.49 (241)	6.98 (177)	8.23 (209)	2.17 (55)
D	**D_1**	**D_2**	**D_3**
4.05 (103)	4.80 (122)	4.57 (116)	2.99 (76)
E	**E_1**		
4.74 (121)	3.49 (89)		

Inches (mm)

5599-2 / 5599-1 Remote Pilot



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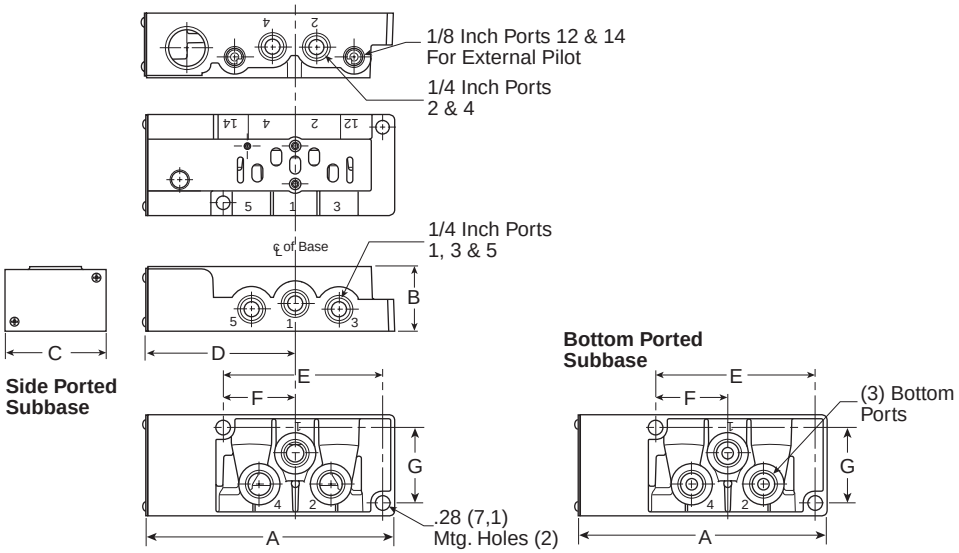
HA

HA 15407-2 & 15407-1, PS5511 Subbases



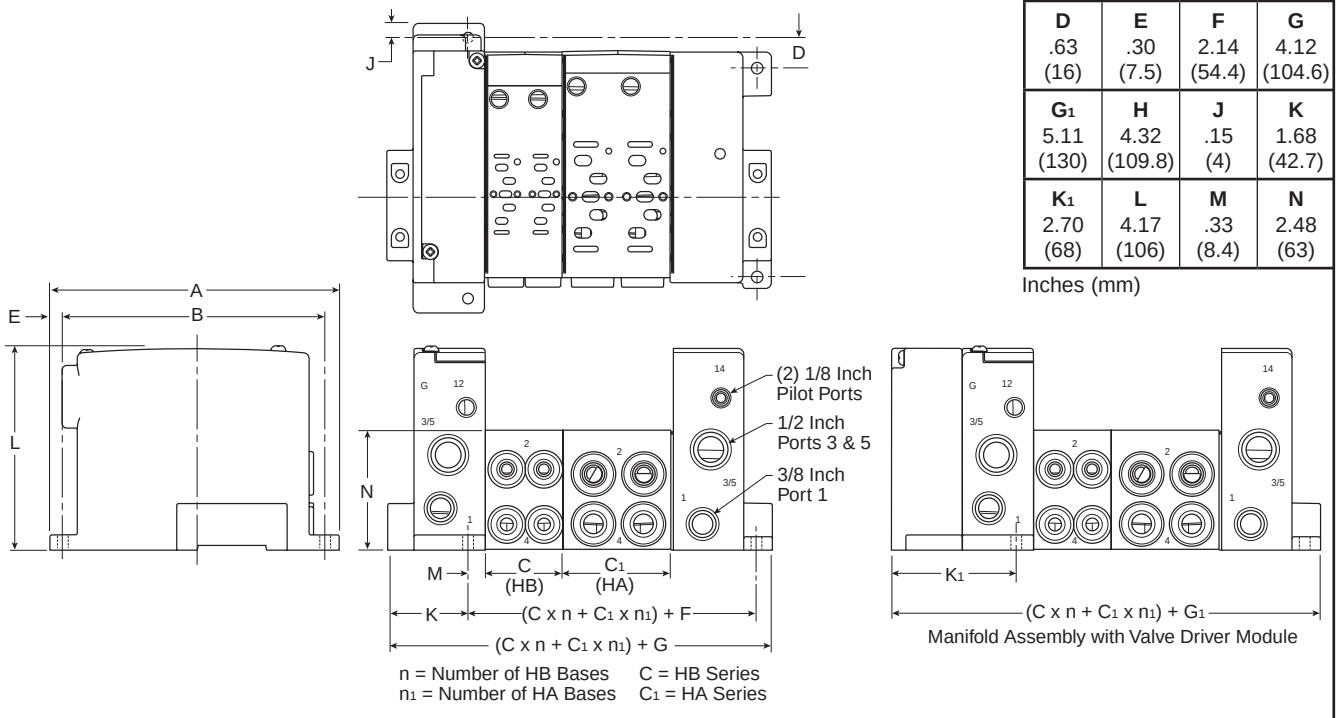
HA Dimensions

A	B	C	D
4.88 (124)	1.28 (32.5)	2.00 (50.8)	2.91 (74)
E	**F**	**G**	
1.43 (36.2)	3.16 (80.2)	1.49 (37.9)	

Inches (mm)

HB HA

HB & HA 15407-2 & 15407-1, PS5611 & PS5511 Manifolds



Manifold Assembly with Valve Driver Module

HB & HA Dimensions

A	B	C	C1
5.98 (152)	5.39 (137)	1.61 (40.8)	2.24 (56.8)
D	**E**	**F**	**G**
.63 (16)	.30 (7.5)	2.14 (54.4)	4.12 (104.6)
G1	**H**	**J**	**K**
5.11 (130)	4.32 (109.8)	.15 (4)	1.68 (42.7)
K1	**L**	**M**	**N**
2.70 (68)	4.17 (106)	.33 (8.4)	2.48 (63)

Inches (mm)

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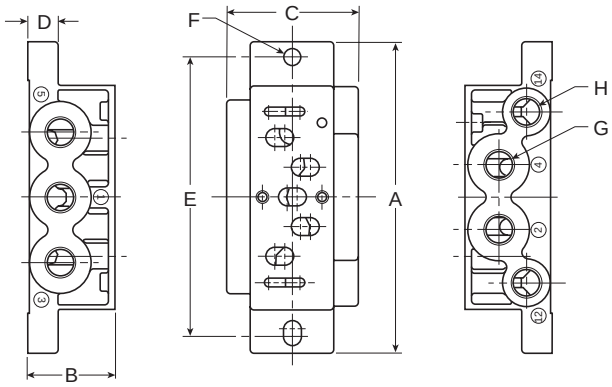
HB HA

Individual Subbase



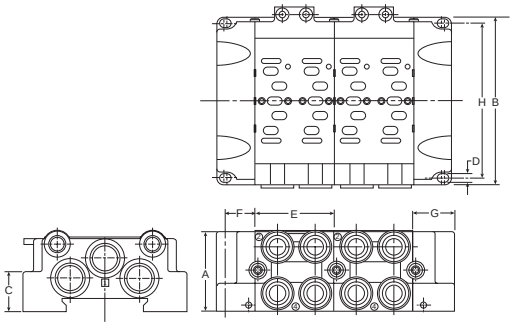
Series	Part Number	A	B	C	D	E	F	G	H
HB	PL02	3.15 (80)	.87 (22)	1.06 (27)	.31 (8)	2.76 (70)	.216 Dia. (Ø 5.5)	1/8	M5
HA	PL01	3.94 (100)	1.10 (28)	1.65 (42)	.39 (10)	3.54 (90)	.216 Dia. (Ø 5.5)	1/4	1/8

Inches (mm)

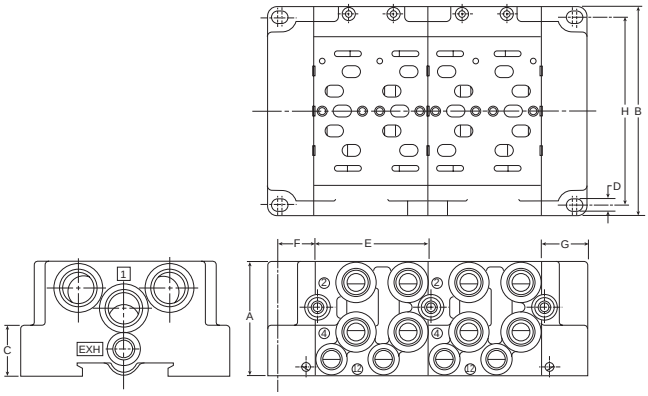
HB HA

2-Station Manifold Bases

HB Manifolds



HA Manifolds



Series	Part Number	A	B	C	D	E	F	G	H
HB	PJLP02 / PEJ02	1.52 (38.5)	3.15 (80)	.47 (12)	.165 Dia. (Ø 4.2)	1.50 (38)	.55 (14)	.71 (18)	2.83 (72)
HA	PJL01 / PJLP01 / PEJ01	2.17 (55)	3.94 (100)	.94 (24)	.216 Dia. (Ø 5.5)	2.13 (54)	.67 (17)	.87 (22)	3.54 (90)

Inches (mm)

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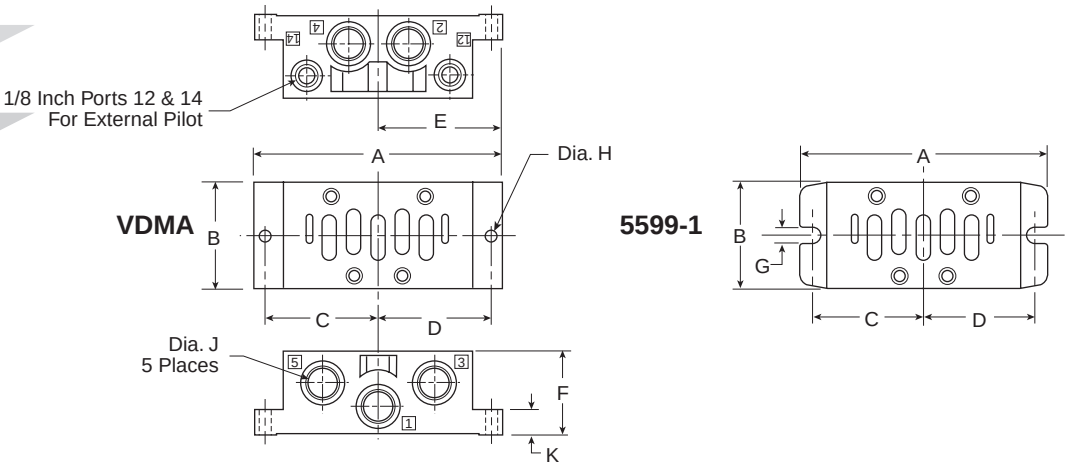
VDMA & 5599-1 Side Ported Subbase

H1
H2
H3

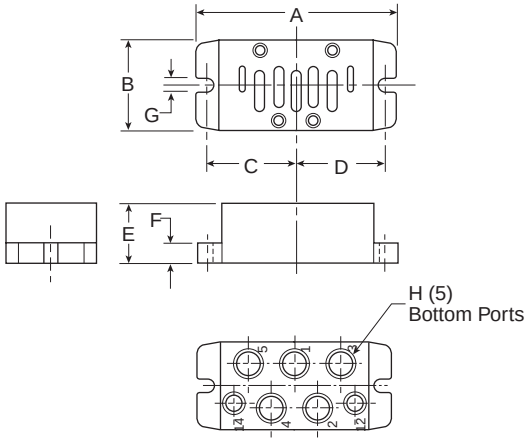


	Series	Part Number	J	A	B	C	D	E	F	G	H	K
VDMA	H1	P2N-VS512SD	BSPP G1/4	4.33 (110)	1.89 (48)	1.93 (49)	1.93 (49)	2.17 (55)	1.26 (32)	—	.22 (5.6)	.39 (9.9)
	H2	P2N-WS513SD	BSPP G3/8	4.88 (124)	2.20 (56)	2.21 (56)	2.21 (56)	2.44 (62)	1.57 (40)	—	.22 (5.5)	.51 (13)
	H3	P2N-YS514SD	BSPP G1/2	5.87 (149)	2.80 (71)	2.68 (68)	2.68 (68)	2.93 (74.5)	2.05 (52)	—	0.26 (6.6)	0.71 (18)
5599-1	H1	PL1-1/4-70	BSPP G1/4	4.33 (110)	1.81 (46)	1.93 (49)	1.93 (49)	2.17 (55)	1.14 (29)	0.22 (5.5)	—	0.24 (6)
		PL1-1/4-80	NPT 1/4									
	H2	PL2-3/8-70	BSPP G3/8	4.88 (124)	2.21 (56)	2.17 (55)	2.17 (55)	2.44 (62)	1.46 (37)	0.22 (5.5)	—	0.24 (6)
		PL2-3/8-80	NPT 3/8									
	H3	PL3-1/2-70	BSPP G1/2	5.87 (149)	2.80 (71)	2.68 (68)	2.68 (68)	2.93 (74.5)	2.36 (60)	0.26 (6.6)	—	0.71 (18)
		PL3-1/2-80	NPT 1/2									

Inches (mm)

5599-1 Bottom Ported Subbase

H1
H2



Bottom Ported Subbase

Series	Part Number	H	A	B	C	D	E	F	G
H1	PD1-1/4-70	BSPP G1/4	4.33 (110)	1.81 (46)	1.93 (49)	1.93 (49)	1.14 (29)	.24 (6)	0.22 (5.5)
	PD1-1/4-80	NPT1/4							
H2	PD2-3/8-70	BSPP G3/8	4.88 (124)	2.20 (56)	2.17 (55)	2.17 (55)	1.46 (37)	.24 (6)	.0.22 (5.5)
	PD2-3/8-80	NPT3/8							

Inches (mm)

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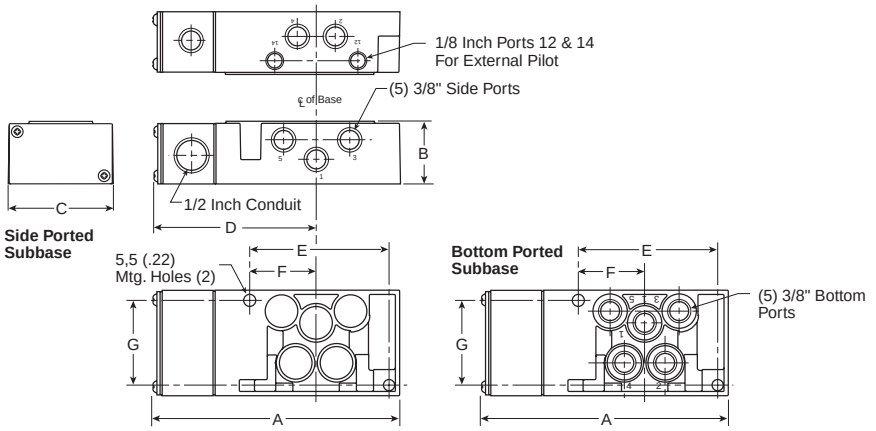
H1

PS4011 Subbase

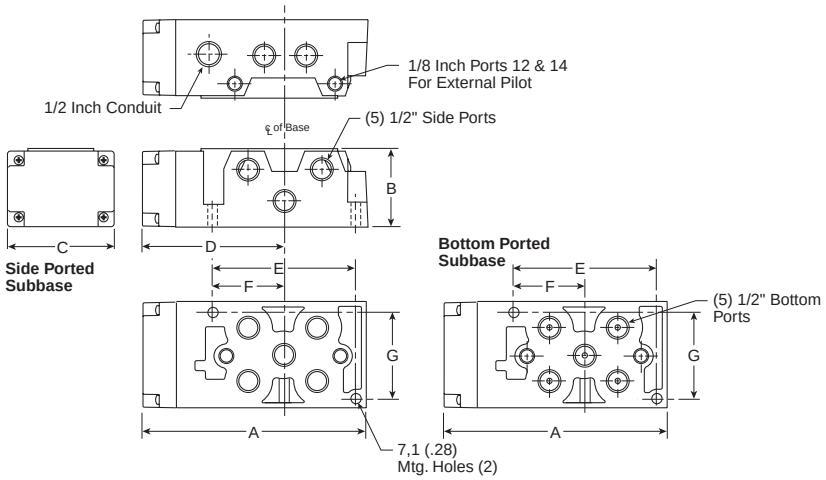


A	B	C	D
5.83 (148)	1.48 (38)	2.50 (64)	3.86 (98)
E	**F**	**G**	
3.29 (84)	1.57 (40)	2.00 (51)	

Inches (mm)

H2

PS4111 Subbase

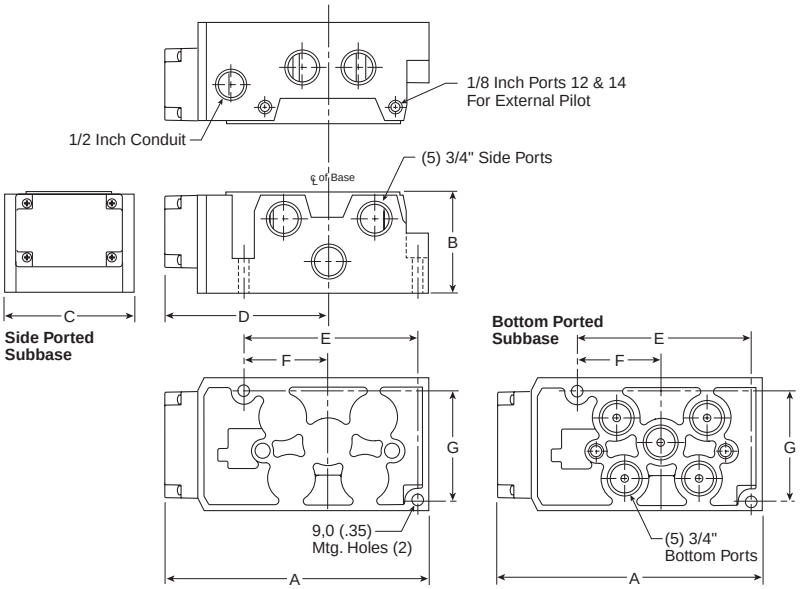


A	B	C	D
6.69 (170)	2.33 (59)	3.15 (80)	4.25 (108)
E	**F**	**G**	
4.21 (107)	2.07 (52)	2.56 (65)	

Inches (mm)

H3

PS4211 Subbase



A	B	C	D
7.90 (201)	2.96 (75)	3.90 (99)	4.92 (125)
E	**F**	**G**	
5.14 (131)	2.50 (64)	3.24 (82)	

Inches (mm)

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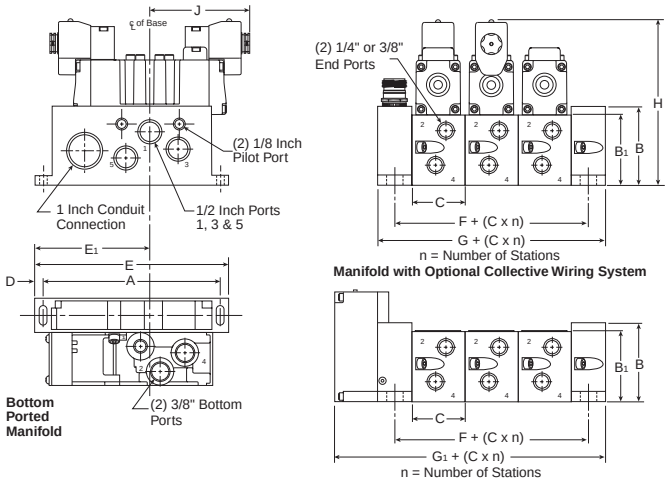
H1

PS4011 Manifold

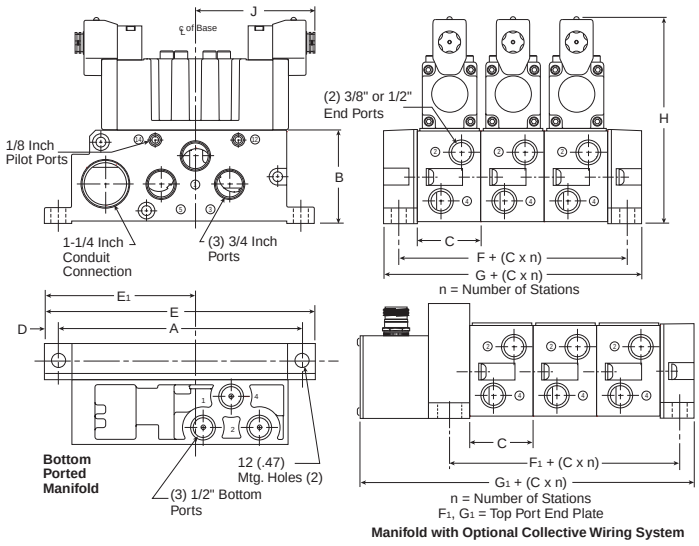


A	B	B1	C	D
6.50 (165)	2.87 (73)	2.64 (67)	1.96 (50)	.33 (8)
E	**E1**	**F**	**G**	**G1**
7.15 (182)	4.25 (108)	1.25 (32)	2.50 (63.5)	4.06 (86)
H	**J**			
6.18 (157)	3.66 (93)			

Inches (mm)

H2

PS4111 Manifold



A	B	C	D	E
8.46 (215)	3.35 (85)	2.20 (56)	.47 (12)	9.41 (239)
E1	**F**	**F1**	**G**	**G1***
5.28 (134)	1.18 (30)	1.30 (33)	2.36 (60)	3.78 (96)
H	**J**			
7.40 (188)	4.17 (106)			

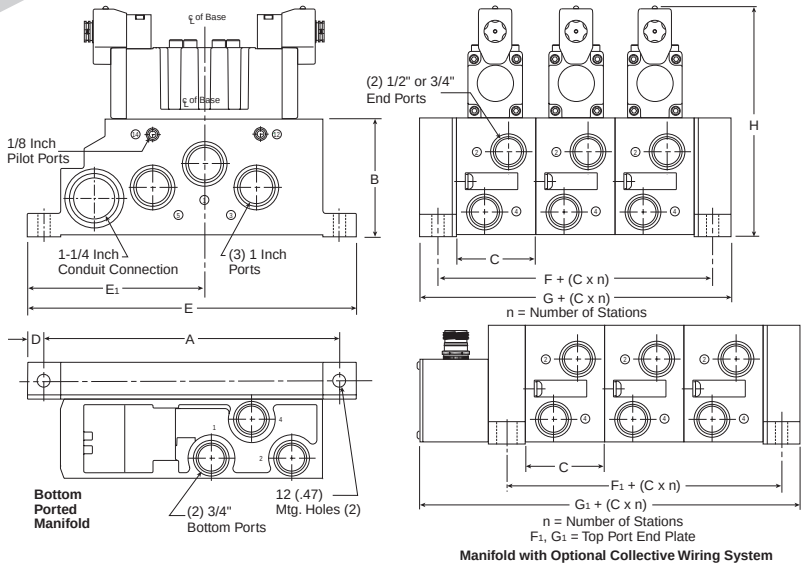
Inches (mm)

* For Isysnet End Plate, add 0.39" (10mm) to the G1 dimensions.

For 19-Pin Round Connector Module, add 1.08" (27.5mm) to the G1 dimensions.

H3

PS4211 Manifold



A	B	C	D	E
10.41 (265)	4.13 (105)	2.80 (71)	.59 (15)	11.61 (295)
E1	**F**	**F1**	**G**	**G1***
6.26 (159)	1.30 (33)	1.60 (41)	2.60 (63)	4.37 (111)
H				
8.19 (208)				

Inches (mm)

* For Isysnet End Plate, add 0.39" (10mm) to the G1 dimensions.

For 19-Pin Round Connector Module, add 1.08" (27.5mm) to the G1 dimensions.

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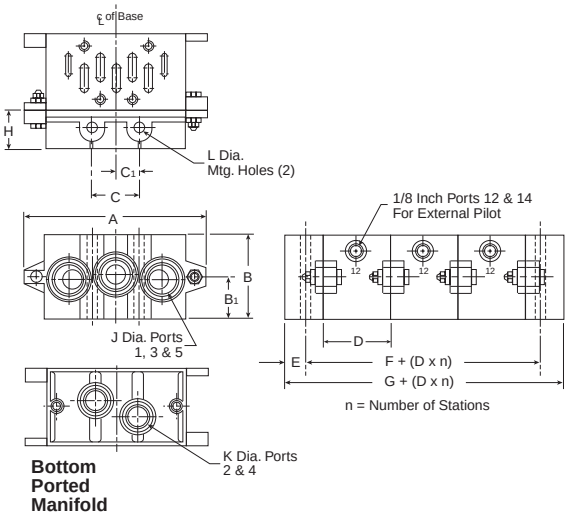
H1

H2

H3

5599-1 VDMA – Form C Manifold & 5599-1 VDMA - Form D End Plates



VDMA Form C Manifold

Series	Part Number	A	B	B_1	D	E	F	G	Ø J	Ø K
H1	P2N-VM512MB	4.33 (110)	1.81 (46)	0.94 (24)	1.69 (55)	0.43 (22)	0.87 (22)	1.73 (44)	BSPP G3/8	BSPP G1/4
H2	P2N-WM513MB	5.31 (135)	1.85 (47)	0.94 (24)	2.20 (56)	0.51 (13)	1.02 (26)	2.05 (52)	BSPP G1/2	BSPP G3/8
H3	P2N-YM514MB	7.48 (190)	2.20 (56)	1.34 (34)	2.80 (71)	0.59 (15)	1.18 (30)	2.36 (60)	BSPP G1	BSPP G1/2

VDMA Form D End Plate

Series	Part Number	A	B	B_1	C	C_1	H	Ø L
H1	P2N-VM513ES	4.33 (110)	1.81 (46)	0.94 (24)	1.10 (28)	0.55 (14)	0.87 (22)	0.28 (7)
H2	P2N-WM514ES	5.31 (135)	1.85 (47)	0.94 (24)	1.38 (35)	0.69 (18)	1.02 (26)	0.34 (9)
H3	P2N-YM518ES	7.48 (190)	2.20 (56)	1.34 (34)	2.05 (52)	1.03 (26)	1.18 (30)	0.47 (12)

Inches (mm)

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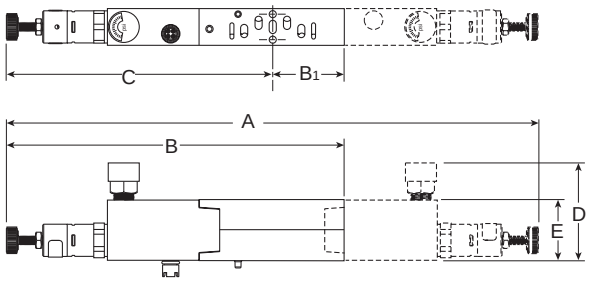
HB

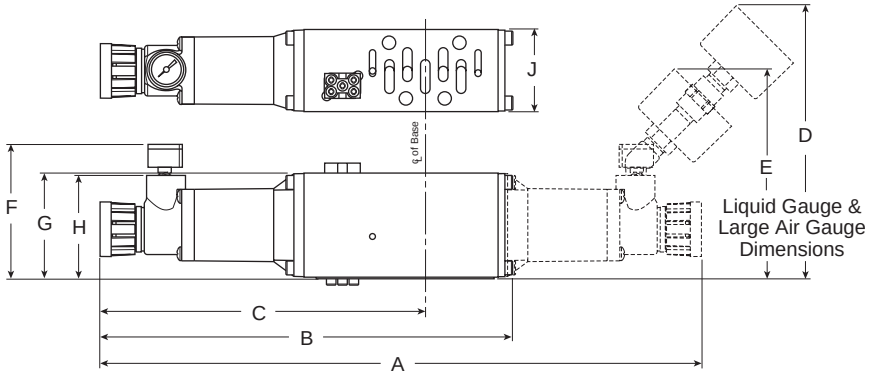
HA



Series	Part Number	A	B	B1	C	D	E
HB	PS5637	10.28 (261)	6.14 (156)	1.02 (26)	5.13 (130)	2.60 (66)	1.18 (30)
HA	PS5537	10.00 (254)	6.42 (163)	1.42 (36)	5.00 (127)	2.72 (69)	1.18 (30)

Inches
(mm)

H1



Series	Part Number	A	B	C	D	E	F	G	H	J
H1	PS4037	11.84 (301)	8.13 (207)	6.40 (163)	5.45 (138	4.25 (108)	2.85 (72)	2.09 (53)	2.05 (52)	1.63 (41)
	PS4038									

Inches
(mm)

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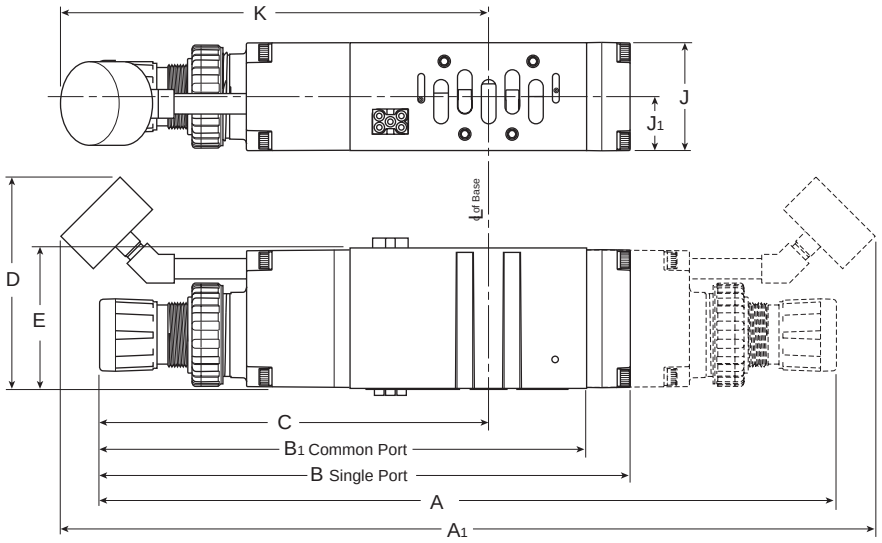
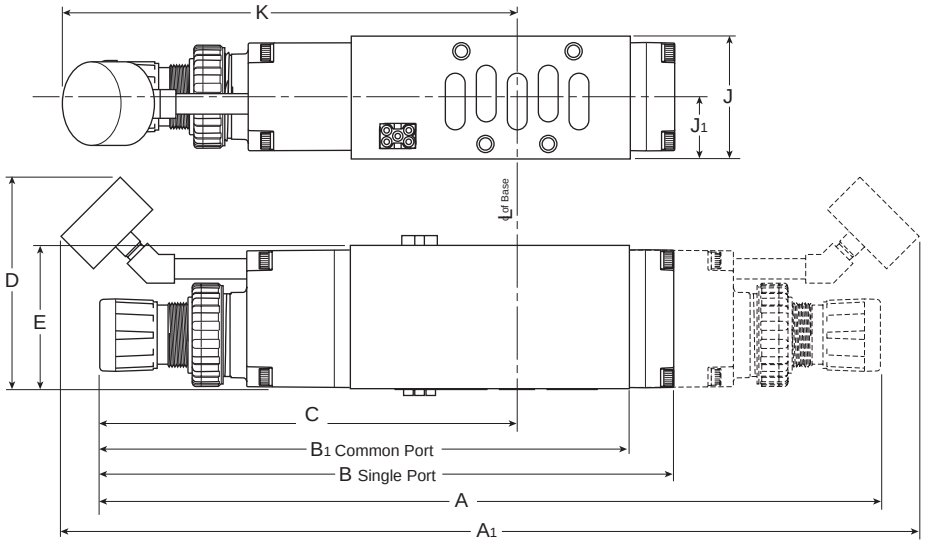
H2



Series	Part Number	A	A1	B	B1	C	D	E	J	J1	K
H2	PS4137	14.65 (372	16.18 (411)	10.56 (268)	9.84 (250	7.71 (196)	4.20 (107)	2.80 (71)	2.15 (55)	1.07 (27)	8.50 (216)
	PS4138										

Inches
(mm)

H3



Series	Part Number	A	A1	B	B1	C	D	E	J	J1	K
H3	PS4237	15.67 (398)	17.15 (436)	11.53 (293)	10.67 (271)	8.37 (213)	4.20 (107)	2.93 (75)	2.50 (64)	1.25 (32)	9.10 (231)
	PS4238										

Inches
(mm)

Parker Hannifin Corporation
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Richland, Michigan
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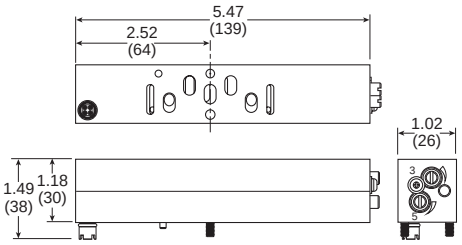
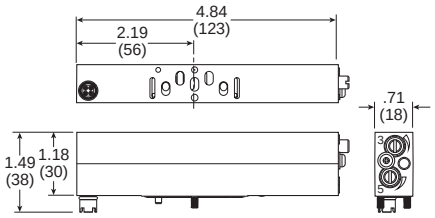
HA

HA Flow Control



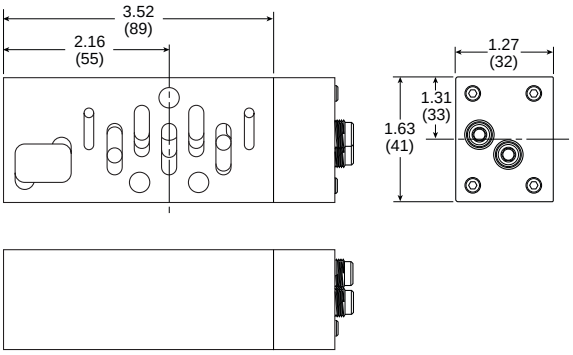
HB

HB Flow Control



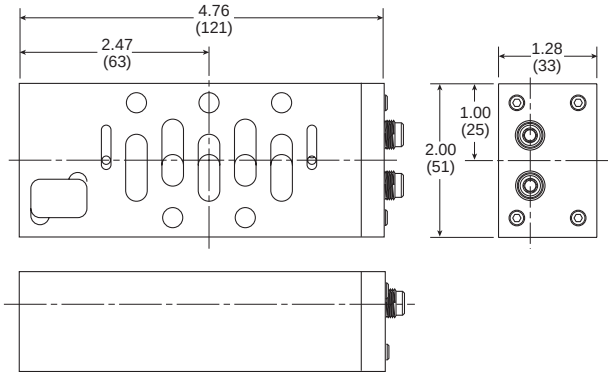
H1

H1 Flow Control



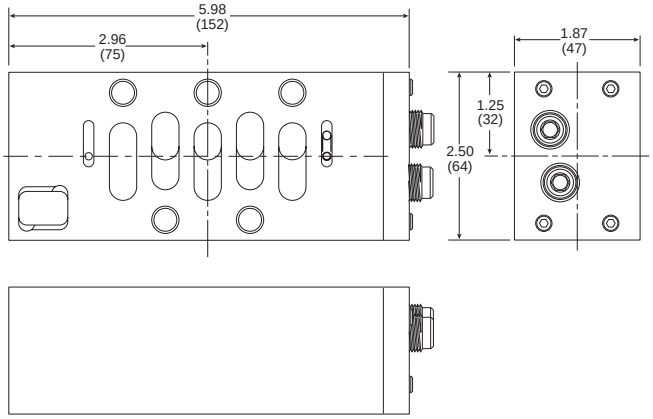
H2

H2 Flow Control



H3

H3 Flow Control



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