

High flow - Cv of 1.2 to 49.5

Durable, robust construction

Two mounting styles: inline or subbase

1/4" to 2" ports (BSPP or PTF threads)

Wide range of Air Pilot Operators available

Four functional types: available in 2/2, 3/2, 3/2 multi-directional and 4/2 configurations



Technical data

Medium:

Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:

Poppet valve air pilot actuated.

Mounting:

Through-holes in valve body and subbase.

Port Size:

1/4" to 2" PTF, BSPP

Operating Pressure:

300 psig (Maximum 20.7 bar). For details see overleaf.

Flow Characteristics:

Basic size	Function	Cv*
1/4"	3/2 & 4/2	1.2 - 1.8
1/2"	2/2, 3/2 & 4/2	3.2 - 5.8
1"	2/2, 3/2 & 4/2	10.3 - 17.7
2"	2/2 & 3/2	39.6 - 49.5

*See VAL-12-58 for additional flow information.

Operating Temperature:

-20°F to 175°F** (-29°C to 79°C)

**Consult Technical Service for use below 35°F (+2°C).

Materials

Body: Aluminum alloy body, piston, poppets and subbase.

Operators: Zinc or aluminum air pilot operators.

Elastomers: Nitrile rubber seals.

(Fluorocarbon seals are optional, contact Technical Services.)

Fluids

Filtered and lubricated compressed air or vacuum. Prospector poppet valves with A1, AA, or A4 air operators or with C, D, F, or X series solenoid operators may be used with filtered, non-lubricated compressed air or vacuum, although tests indicate that service life will be reduced. Valves with other operators must not be used in non-lubricated service.

Seal Compatibility

Prospector poppet valve seals are compatible with most good quality O-ring lubricants, including:

DC BR-2+ grease (Dow Corning)

DC 44 grease (Dow Corning)

Magnalube G (Saunders Industries)

Non-detergent mineral based oil such as Mobil DTE light oil.

Poppet valve seals are not compatible with WD-40 or commonly used deicer fluids. Consult factory to verify compatibility of lubricants or fluids not listed above.

Valve Exhaust

The valve exhaust port must not be restricted with anything more than a muffler or equal pipe size (most exhaust ports are larger than the inlet port). Back pressure on the exhaust side of the valve poppets can, under some conditions, result in failure to operate. If exhaust is to be piped away, piping should be installed horizontally or at a downward angle from the valve to provide drainage and minimize sludge formation.

Use of Speed Controls

Speed controls may be installed in the exhaust port on Norgren 3-port/2-position multi-direction poppet valves. Note: On all other poppet valves, speed controls should only be installed in the air line between the valve and the air-operated device and as close as possible to the device.

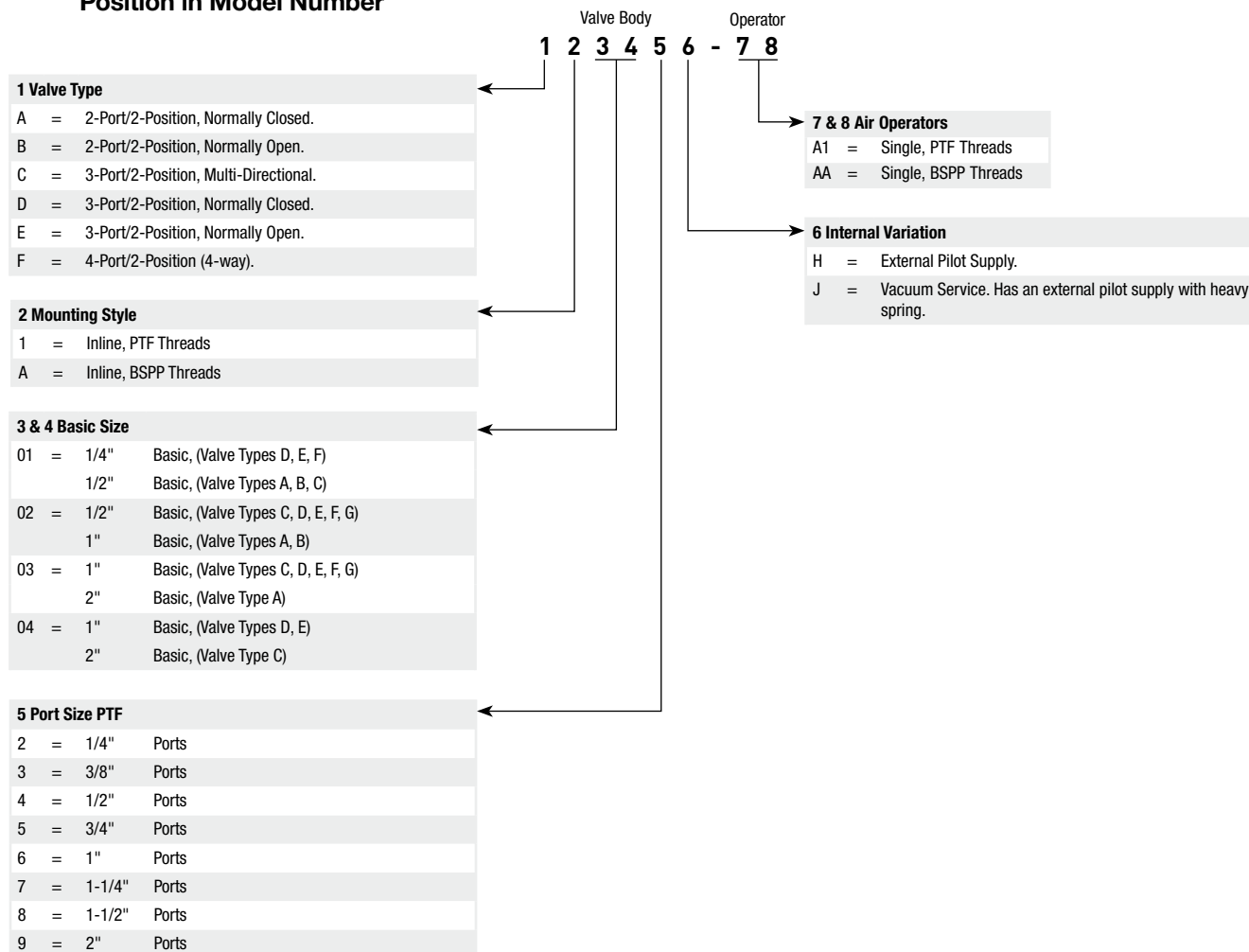
Vacuum Service

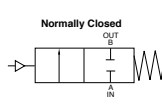
Valves that can be used in vacuum service are identified by a "J" in the 6th position of the model number. For on-off application of vacuum, use a normally closed 2-port/2-position (2-way) valve. Connect the vacuum to the inlet port. When the valve is actuated, vacuum will be applied to the outlet port. For selecting alternately between vacuum and pressure, use a normally open 3-port/2-position (3-way) valve. Connect the vacuum to the exhaust port and vent the inlet port. When the valve is actuated, vacuum will be applied to the outlet port.

In addition, 4-port/2-position (4-way) valves can be connected the same way as 3-port/2-position (3-way) valves for selecting alternately between vacuum and pressure or vacuum and vent. That is, connect the vacuum to the exhaust port and pressure or vent to the inlet port. When the valve is actuated, the cylinder ports (outlets) will be alternately switched between vacuum and pressure or vacuum and vent.

Use this chart as a product deconfigurator. It is not designed to "build" model numbers.

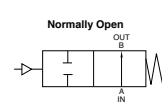
Position in Model Number



Air Pilot Version
2/2 Normally Closed air to operate/spring return


	Model	Port Size	Cv Port A to B	Pilot Port Size	Operating Pressure*	Pilot Pressure*	Repair Kit
	A1012H-A1	1/4" PTF	2.1	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	AA012H-AA	1/4" BSPP	2.1	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	A1013H-A1	3/8" PTF	3.4	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	AA013H-AA	3/8" BSPP	3.4	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	A1014H-A1	1/2" PTF	5.3	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	AA014H-AA	1/2" BSPP	5.3	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	A1015H-A1	3/4" PTF	6.5	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	AA015H-AA	3/4" BSPP	6.5	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	A1025H-A1	3/4" PTF	10.7	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	AA025H-AA	3/4" BSPP	10.7	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	A1026H-A1	1" PTF	13.5	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	AA026H-AA	1" BSPP	13.5	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	A1027H-A1	1-1/4" PTF	16.3	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	AA027H-AA	1-1/4" BSPP	16.3	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	A1038H-A1	1-1/2" PTF	34	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53822-01
	AA038H-AA	1-1/2" BSPP	34	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53822-01
	A1039H-A1	2" PTF	39.6	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53822-01
	AA039H-AA	2" BSPP	39.6	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53822-01

* Vacuum service replace the 6 digit "H" with a "J", this will then allow the operating pressure down to 29" Hg, with a pilot pressure of 30-150 psig

2/2 Normally Closed air to operate/spring return


	Model	Port Size	Cv Port A to B	Pilot Port Size	Operating Pressure*	Pilot Pressure*	Repair Kit
	B1012H-A1	1/4" PTF	2.3	1/8" PTF	30-150 psig	30 psig or greater than supply pressure	53474-03
	BA012H-AA	1/4" BSPP	2.3	1/8" BSPP	30-150 psig	30 psig or greater than supply pressure	53474-03
	B1013H-A1	3/8" PTF	3.8	1/8" PTF	30-150 psig	30 psig or greater than supply pressure	53474-03
	BA013H-AA	3/8" BSPP	3.8	1/8" BSPP	30-150 psig	30 psig or greater than supply pressure	53474-03
	B1014H-A1	1/2" PTF	5.4	1/8" PTF	30-150 psig	30 psig or greater than supply pressure	53474-03
	BA014H-AA	1/2" BSPP	5.4	1/8" BSPP	30-150 psig	30 psig or greater than supply pressure	53474-03
	B1015H-A1	3/4" PTF	6.3	1/8" PTF	30-150 psig	30 psig or greater than supply pressure	53474-03
	BA015H-AA	3/4" BSPP	6.3	1/8" BSPP	30-150 psig	30 psig or greater than supply pressure	53474-03
	B1025H-A1	3/4" PTF	12.0	1/8" PTF	30-150 psig	30 psig or greater than supply pressure	53475-01
	BA025H-AA	3/4" BSPP	12.0	1/8" BSPP	30-150 psig	30 psig or greater than supply pressure	53475-01
	B1026H-A1	1" PTF	15.4	1/8" PTF	30-150 psig	30 psig or greater than supply pressure	53475-01
	BA026H-AA	1" BSPP	15.4	1/8" BSPP	30-150 psig	30 psig or greater than supply pressure	53475-01
	B1027H-A1	1-1/4" PTF	17.9	1/8" PTF	30-150 psig	30 psig or greater than supply pressure	53475-01
	BA027H-AA	1-1/4" BSPP	17.9	1/8" BSPP	30-150 psig	30 psig or greater than supply pressure	53475-01

* Vacuum service replace the 6 digit "H" with a "J", this will then allow the operating pressure down to 29" Hg, with a pilot pressure of 30-150 psig

Air Pilot Version

3/2 Normally Closed air pilot to operate/spring return

	Model	Port Size	Cv In to Out port	Cv Out to Exh port	Pilot Port Size	Operating Pressure*	Pilot Pressure*	Repair Kit
	D1012H-A1	1/4" PTF	1.5	1.8	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53473-05
	DA012H-AA	1/4" BSPP	1.5	1.8	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53473-05
	D1013H-A1	3/8" PTF	1.7	1.8	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53473-05
	DA013H-AA	3/8" BSPP	1.7	1.8	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53473-05
	D1022H-A1	1/4" PTF	2.7	3.9	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	DA022H-AA	1/4" BSPP	2.7	3.9	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	D1023H-A1	3/8" PTF	3.6	4.9	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	DA023H-AA	3/8" BSPP	3.6	4.9	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	D1024H-A1	1/2" PTF	4.6	5.8	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	DA024H-AA	1/2" BSPP	4.6	5.8	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	D1025H-A1	3/4" PTF	5.4	6.2	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	DA025H-AA	3/4" BSPP	5.4	6.2	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	D1035H-A1	3/4" PTF	11.2	13.3	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	DA035H-AA	3/4" BSPP	11.2	13.3	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	D1036H-A1	1" PTF	13.2	14.6	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	DA036H-AA	1" BSPP	13.2	14.6	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	D1047H-A1	1-1/4" PTF	16.6	18.4	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	DA047H-AA	1-1/4" BSPP	16.6	18.4	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01

* Vacuum service replace the 6 digit "H" with a "J", this will then allow the operating pressure down to 29" Hg, with a pilot pressure of 30-150 psig

3/2 Normally Open air pilot to operate/spring return

	Model	Port Size	Cv In to Out port	Cv Out to Exh port	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	E1012H-A1	1/4" PTF	1.5	1.8	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53473-05
	EA013H-A1	3/8" PTF	1.7	1.8	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53473-05
	E1024H-A1	1/2" PTF	4.6	5.8	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	EA024H-AA	1/2" BSPP	4.6	5.8	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	E1025H-A1	3/4" PTF	5.4	6.2	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	EA025H-AA	3/4" BSPP	5.4	6.2	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	E1036H-A1	1" PTF	13.2	14.6	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	EA036H-AA	1" BSPP	13.2	14.6	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	E1047H-A1	1-1/4" PTF	16.6	18.4	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	EA047H-AA	1-1/4" BSPP	16.6	18.4	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01

Air Pilot Version
3/2 Multi-directional air pilot to operate/spring return

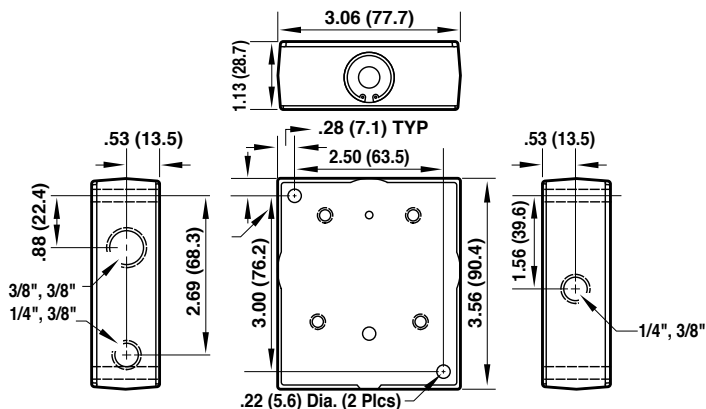
	Model	Port Size	Cv A to C port	Cv A to B port	Pilot Port Size	Operating Pressure*	Pilot Pressure*	Repair Kit
 <p>Distributor</p>	C1012H-A1	1/4" PTF	2.50	2.00	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	CA012H-AA	1/4" BSPP	2.50	2.00	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	C1013H-A1	3/8" PTF	4.00	2.70	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	CA013H-AA	3/8" BSPP	4.00	2.70	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
 <p>Selector</p>	C1014H-A1	1/2" PTF	5.70	3.40	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	CA014H-AA	1/2" BSPP	5.70	3.40	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
	C1025H-A1	3/4" PTF	6.10	4.00	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-03
	CA025H-AA	3/4" BSPP	6.10	4.00	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-03
 <p>Normally Closed</p>	C1035H-A1	3/4" PTF	14.80	10.30	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	CA035H-AA	3/4" BSPP	14.80	10.30	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	C1036H-A1	1" PTF	17.70	13.20	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	CA036H-AA	1" BSPP	17.70	13.20	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
 <p>Normally Open</p>	C1037H-A1	1-1/4" PTF	18.30	14.00	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-01
	CA037H-AA	1-1/4" BSPP	18.30	14.00	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-01
	C1048H-A1	1-1/2" PTF	44.80	33.10	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53822-01
	CA048H-AA	1-1/2" BSPP	44.80	33.10	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53822-01
	C1049H-A1	2" PTF	49.50	40.00	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53822-01
	CA049H-AA	2" BSPP	49.50	40.00	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53822-01

4/2 air pilot to operate/spring return

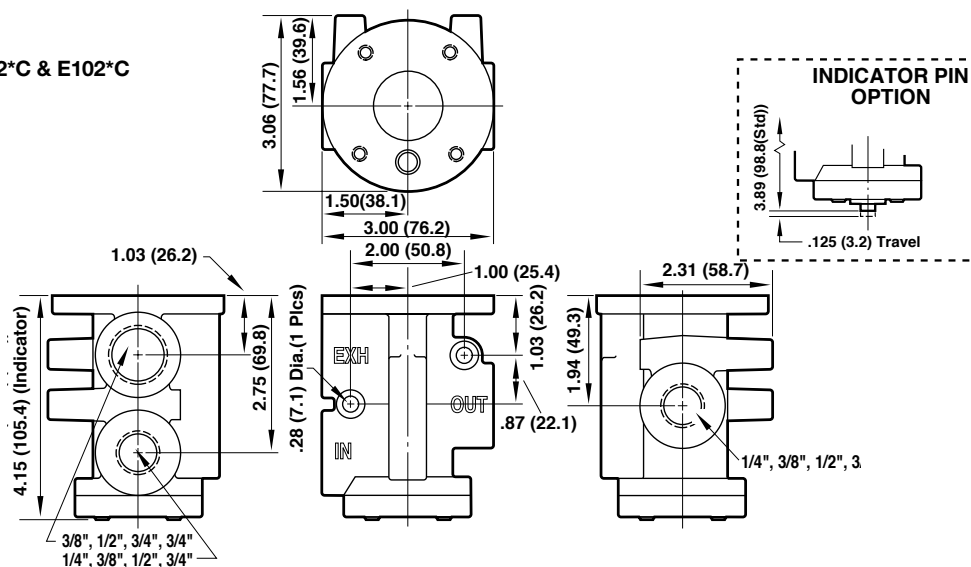
	Model	Port Size	Cv In to CY2	Cv CY1 to Exh	Cv In to CY1	Cv CY2 to Exh	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	F1012H-A1	1/4" PTF	1.2	1.6	1.2	1.6	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53473-05
	FA012H-AA	1/4" BSPP	1.2	1.6	1.2	1.6	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53473-05
	F1013H-A1	3/8" PTF	1.4	1.6	1.4	1.6	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53473-05
	FA013H-AA	3/8" BSPP	1.4	1.6	1.4	1.6	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53473-05
	F1023H-A1	3/8" PTF	3	4.5	3.1	4.3	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-06
	FA023H-AA	3/8" BSPP	3	4.5	3.1	4.3	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-06
	F1024H-A1	1/2" PTF	4	5.4	4.1	5.1	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-06
	FA024H-AA	1/2" BSPP	4	5.4	4.1	5.1	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-06
	F1025H-A1	3/4" PTF	4.8	5.8	5	5.4	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53474-06
	FA025H-AA	3/4" BSPP	4.8	5.8	5	5.4	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53474-06
	F1035H-A1	3/4" PTF	10.3	13.1	11	12.5	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-06
	FA035H-AA	3/4" BSPP	10.3	13.1	11	12.5	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-06
	F1036H-A1	1" PTF	11.3	14.3	12.9	13.4	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-06
	FA036H-AA	1" BSPP	11.3	14.3	12.9	13.4	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-06
	F1037H-A1	1-1/4" PTF	11.6	14.5	14.3	13.7	1/8" PTF	0-150 psig	30 psig or greater than supply pressure	53475-06
	FA037H-AA	1-1/4" BSPP	11.6	14.5	14.3	13.7	1/8" BSPP	0-150 psig	30 psig or greater than supply pressure	53475-06

3/2 Inline Bodies

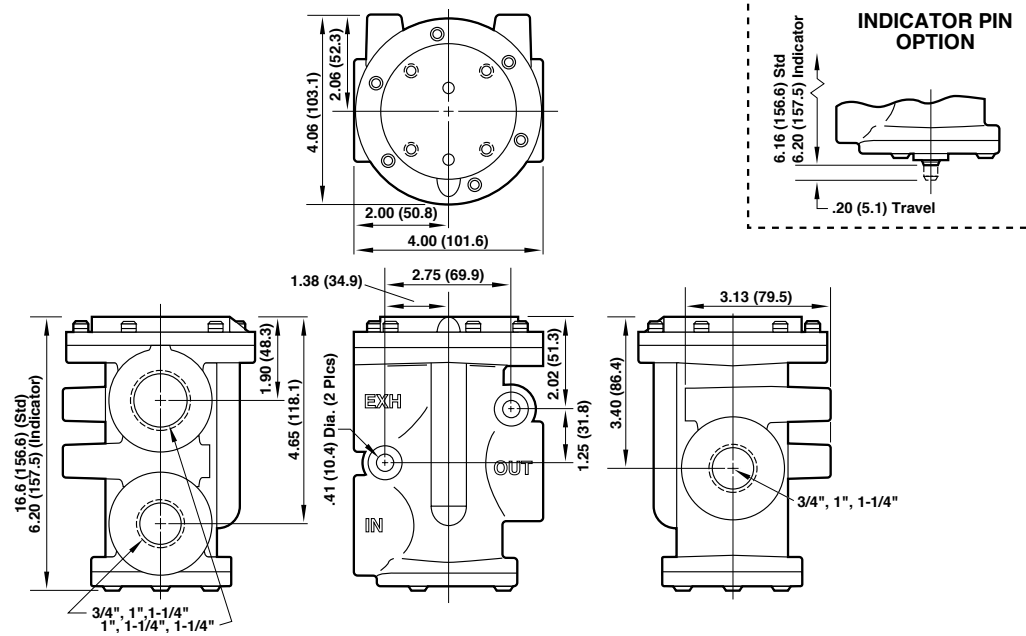
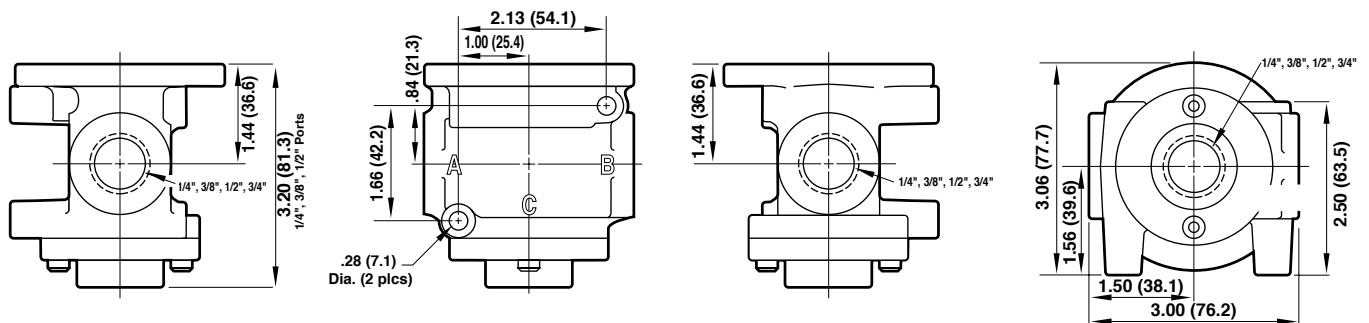
Basic 1/4-Inch Body D101*B & E101*B
(3-Port/2-Position Pilot Operated Valve)



Basic 1/2 - Inch Body D102*C & E102*C
(3/2 Pilot Operated Valve)

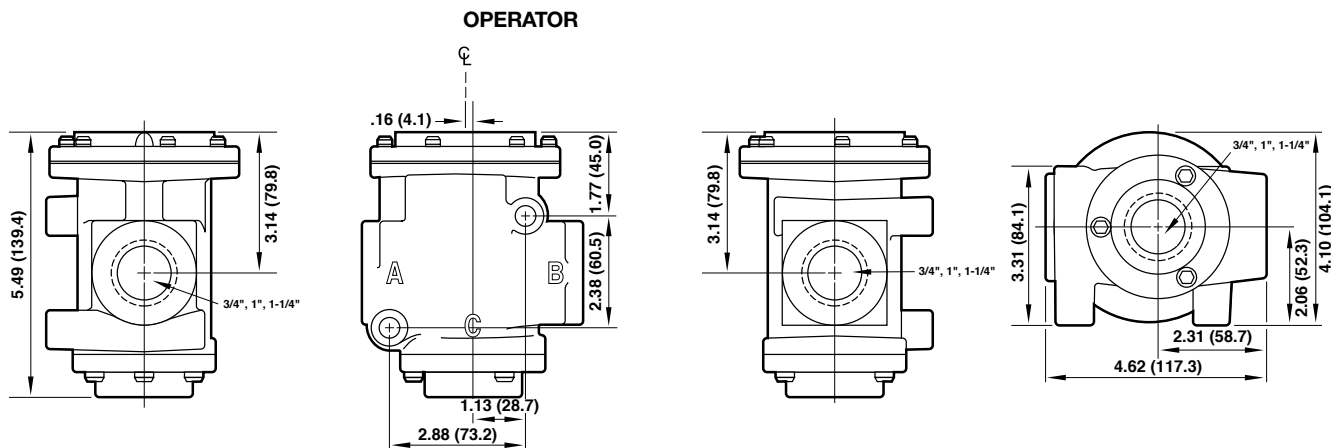


Dimensions in inches (mm)

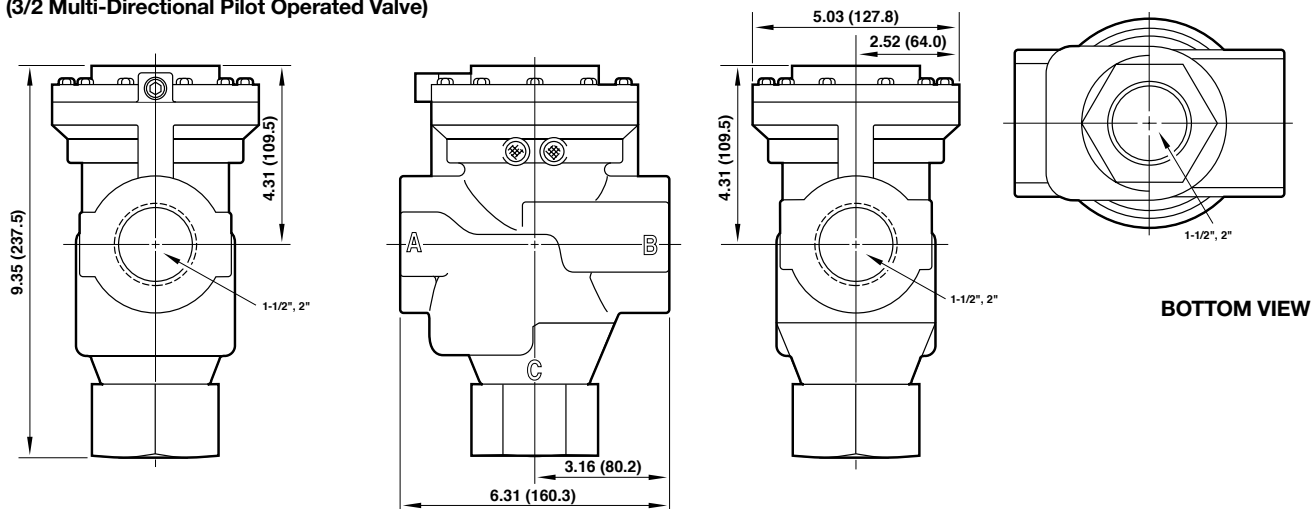
Basic 1 - Inch Body D103*C, D104*C, E103*C & E104*C
(3/2 Pilot Operated Valve)**3/2 Multi-Directional Inline Bodies****Basic 1/2 - Inch Body C101*C, C102*C, C105*C & C106*C**
(3/2 Multi-Directional Pilot Operated Valve)**BOTTOM VIEW**

Dimensions in inches (mm)

Basic 1 - Inch Body C103*C
(3/2 Multi-Directional Pilot Operated Valve)

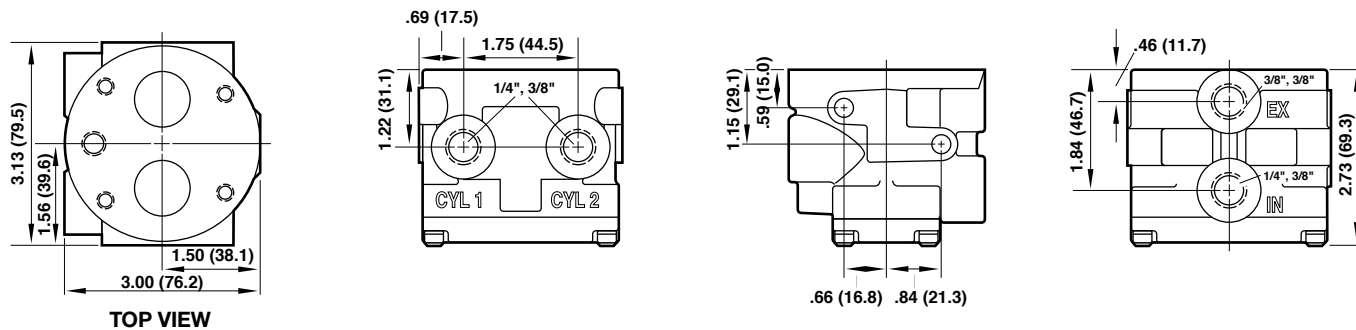
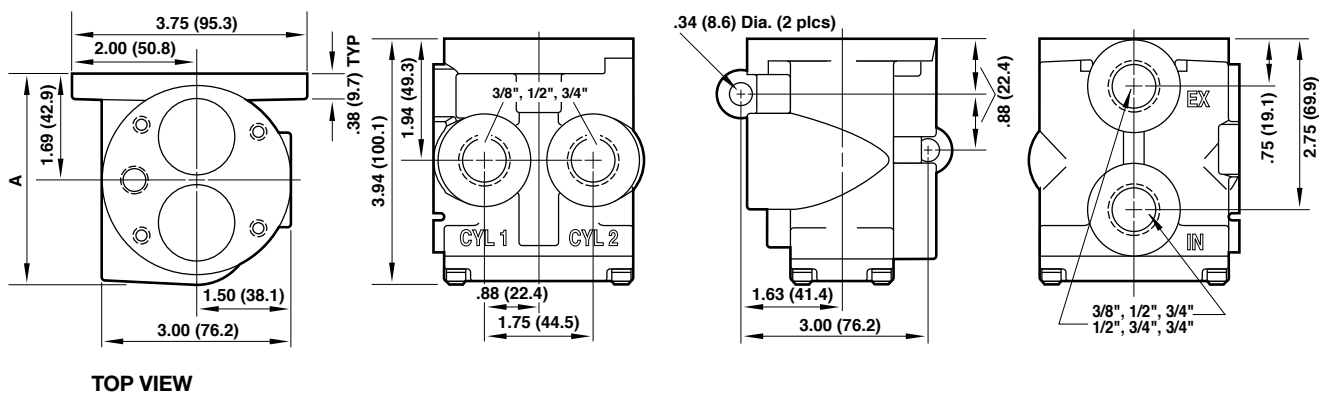
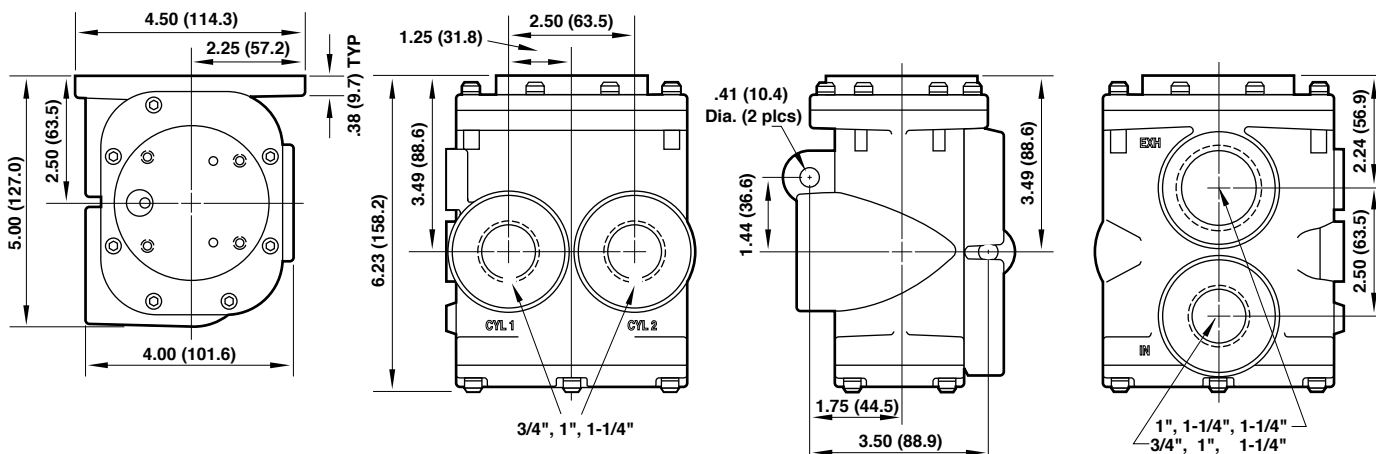


Basic 2 - Inch Body C104*C & C108*C
(3/2 Multi-Directional Pilot Operated Valve)



Dimensions in inches (mm)

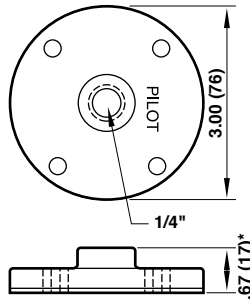
4/2 Inline Bodies

Basic 1/4 - Inch Body F101*
(4/2 Pilot Operated Valve)Basic 1/2 - Inch Body F102*
(4/2 Pilot Operated Valve)Basic 1 - Inch Body F103*
(4/2 Pilot Operated Valve)

Dimensions in inches (mm)

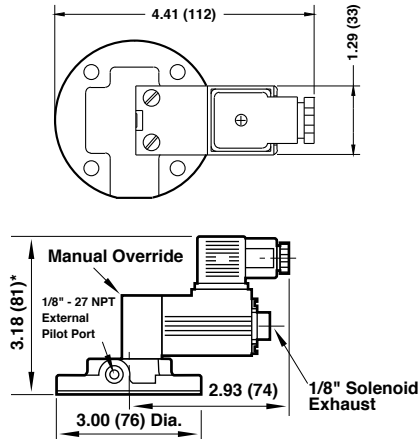
Valve Body Operator with Standard Cable Grip Connector

A1 and AA single

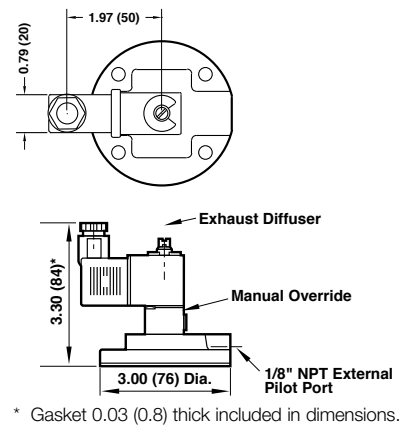


* Gasket 0.03 (0.8) thick included in dimensions.

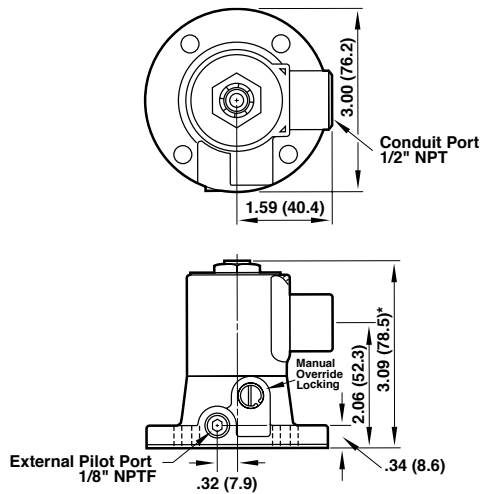
CC



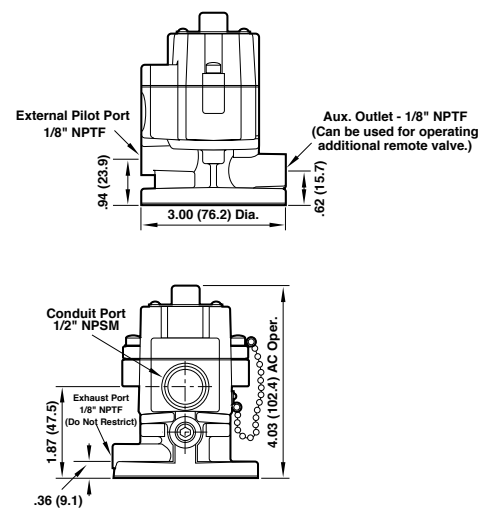
CE, CF, CY



Optional C Series Conduit Housing C0, C1

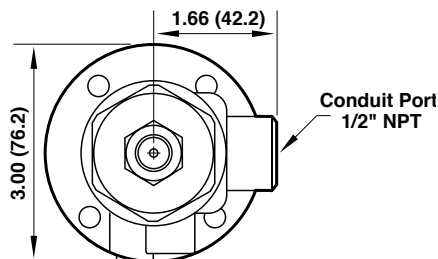


Optional P Series P1

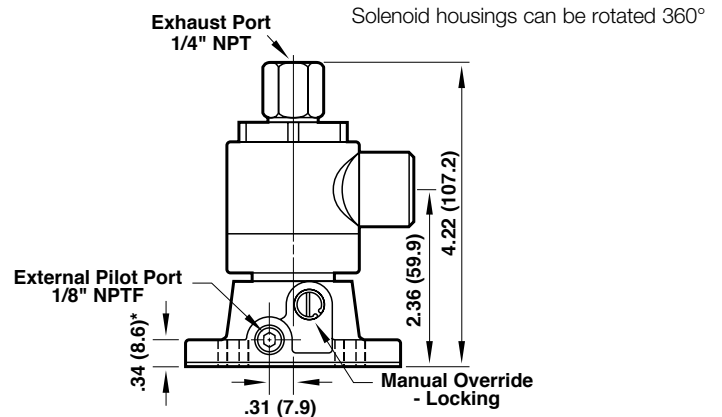


Valve body operator with optional X Series - Hazardous Location

X1



* Gasket 0.03 (0.8) thick included in dimensions.



Dimensions in inches (mm)