

Features

- Miniature size
- Poppet design contributes to long product life
- Seven input options
- Swivel input port to accommodate critical alignment
- Closed crossover (NC *Only*)
- Non-threaded exhaust port



2 & 3-Way Valves

“O” Series

The highly reliable “O” Series valve is available in 2-Way or 3-Way normally open or normally closed. Ideal for limited space applications (OAL not more than 2.43”) this miniature valve features seven swivel input options- virtually eliminating the need for additional fittings!

Closed cross-over The normally closed “O” Series features a stem and poppet that work in conjunction with one another. The poppet seals the exhaust port before it opens to flow (normally closed). There is no transitional state from one function to the next providing the user precise control between positions.

Swivel input port to accommodate critical alignment

Performance Data

Temperature Range	Operating Pressure	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
			50 psi	125 psi		
-20° to 160° F	0 to 125 psi	.24	8.2	17.3	.02	.06

C_v per ANSI / (NFPA) T3.21.3

Actuation Force

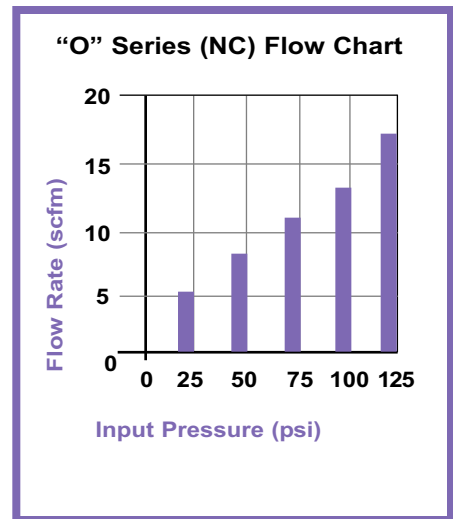
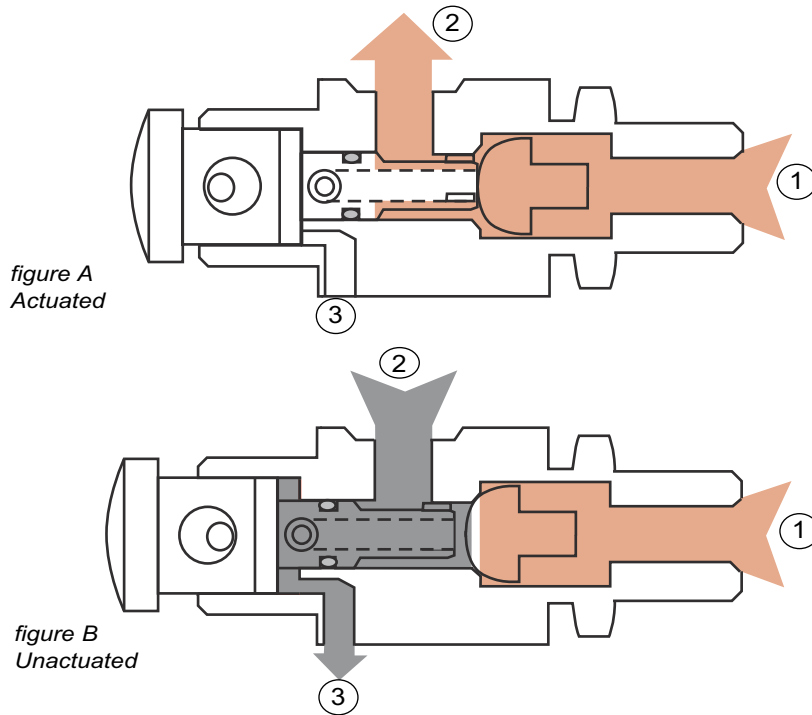
Actuator Style	2-Way Valve		3-Way Valve	
	50 psi	125 psi	50 psi	125 psi
Nylon Toggle	4 oz	6 oz	4 oz	6 oz
Push Button	3 lbs	5 1/2 lbs	3 lbs	5 1/2 lbs

Actuation force for NC **ONLY**

Materials

Aluminum/ Anodize or Brass/ Electroless Nickel, Acetal, Stainless Steel, Nylon, Buna-N (optional seals available- contact factory)

“O” Series Cross Section 3-Way Normally Closed



Port Options

Definition	Options
Port 1 Swivel Input	<ul style="list-style-type: none"> ● 1/8 NPT / 10-32 (F) ● 10-32 (F) Elbow ● 10-32 (F) Tee ● 1/8 NPT (F) ● 170 Barb* ● 1/4 Push-in ● 5/32 Push-in
Port 2 Output	10-32 (F)
Port 3 Exhaust	non-threaded, exhausts to atmosphere

*170 barb- recommended for use with .170 ID PUR or .170 ID PE

Swivel input is NOT to be used as a rotary union

Mounting Method

Panel	Surface
Nominal mounting hole dimension 31/64"	MB-1 or MB-1F Mounting Bracket

(2) nuts and (1) lockwasher provided

Function

When a 3-Way normally closed valve is actuated (figure A) the stem unseats the poppet allowing flow through port 1 around the poppet and stem and out port 2.

In the unactuated position (figure B) the poppet is seated. When flow enters from port 2 it travels through the hollow stem and exhausts to atmosphere through port 3. The poppet design provides a large durable surface that can withstand millions of cycles.

The *normally open* “O” Series features a stem design with standard Buna-N O-rings.

Normally Open valves are clear anodized for corrosion resistance

Ordering Information

- To order standard product refer to Product Information listing.
- Optional seals available- contact factory.
- Metal push button available- use an "M" as the second character to indicate metal.
- Nylon toggles and push buttons are available in seven colors with black as standard. To order colored actuator specify the color, by code, as a "-code#" suffix following the part number (see color code chart).

Product Information

2-Way Normally Closed

	Part Number	Input
Push Button	AO-20-1	1/8 NPT /10-32 (F)
	AO-20-2	10-32 (F) Elbow
	AO-20-3	10-32 (F) Tee
	AO-20-4	1/8 NPT (F)
	AO-20-5	170 Barb
	AO-20-6	1/4 Push-in
	AO-20-7	5/32 Push-in
Detented Toggle	HO-20-1	1/8 NPT /10-32 (F)
	HO-20-2	10-32 (F) Elbow
	HO-20-3	10-32 (F) Tee
	HO-20-4	1/8 NPT (F)
	HO-20-5	170 Barb
	HO-20-6	1/4 Push-in
	HO-20-7	5/32 Push-in
Momentary Toggle	FO-20-1	1/8 NPT /10-32 (F)
	FO-20-2	10-32 (F) Elbow
	FO-20-3	10-32 (F) Tee
	FO-20-4	1/8 NPT (F)
	FO-20-5	170 Barb
	FO-20-6	1/4 Push-in
	FO-20-7	5/32 Push-in

3-Way Normally Closed

	Part Number	Input
Push Button	AO-30-1	1/8 NPT /10-32 (F)
	AO-30-2	10-32 (F) Elbow
	AO-30-3	10-32 (F) Tee
	AO-30-4	1/8 NPT (F)
	AO-30-5	170 Barb
	AO-30-6	1/4 Push-in
	AO-30-7	5/32 Push-in
Detented Toggle	HO-30-1	1/8 NPT /10-32 (F)
	HO-30-2	10-32 (F) Elbow
	HO-30-3	10-32 (F) Tee
	HO-30-4	1/8 NPT (F)
	HO-30-5	170 Barb
	HO-30-6	1/4 Push-in
	HO-30-7	5/32 Push-in
Momentary Toggle	FO-30-1	1/8 NPT /10-32 (F)
	FO-30-2	10-32 (F) Elbow
	FO-30-3	10-32 (F) Tee
	FO-30-4	1/8 NPT (F)
	FO-30-5	170 Barb
	FO-30-6	1/4 Push-in
	FO-30-7	5/32 Push-in

2-Way Normally Open

	Part Number	Input
Push Button	AO-21-1	1/8 NPT /10-32 (F)
	AO-21-2	10-32 (F) Elbow
	AO-21-3	10-32 (F) Tee
	AO-21-4	1/8 NPT (F)
	AO-21-5	170 Barb
	AO-21-6	1/4 Push-in
	AO-21-7	5/32 Push-in
Detented Toggle	HO-21-1	1/8 NPT /10-32 (F)
	HO-21-2	10-32 (F) Elbow
	HO-21-3	10-32 (F) Tee
	HO-21-4	1/8 NPT (F)
	HO-21-5	170 Barb
	HO-21-6	1/4 Push-in
	HO-21-7	5/32 Push-in
Momentary Toggle	FO-21-1	1/8 NPT /10-32 (F)
	FO-21-2	10-32 (F) Elbow
	FO-21-3	10-32 (F) Tee
	FO-21-4	1/8 NPT (F)
	FO-21-5	170 Barb
	FO-21-6	1/4 Push-in
	FO-21-7	5/32 Push-in

3-Way Normally Open

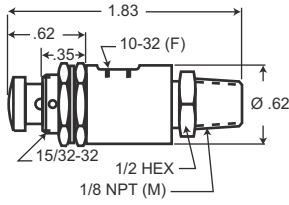
	Part Number	Input
Push Button	AO-31-1	1/8 NPT /10-32 (F)
	AO-31-2	10-32 (F) Elbow
	AO-31-3	10-32 (F) Tee
	AO-31-4	1/8 NPT (F)
	AO-31-5	170 Barb
	AO-31-6	1/4 Push-in
	AO-31-7	5/32 Push-in
Detented Toggle	HO-31-1	1/8 NPT /10-32 (F)
	HO-31-2	10-32 (F) Elbow
	HO-31-3	10-32 (F) Tee
	HO-31-4	1/8 NPT (F)
	HO-31-5	170 Barb
	HO-31-6	1/4 Push-in
	HO-31-7	5/32 Push-in
Momentary Toggle	FO-31-1	1/8 NPT /10-32 (F)
	FO-31-2	10-32 (F) Elbow
	FO-31-3	10-32 (F) Tee
	FO-31-4	1/8 NPT (F)
	FO-31-5	170 Barb
	FO-31-6	1/4 Push-in
	FO-31-7	5/32 Push-in

**Pneumadyne
"O" Series Valves
have been customer
tested over
40 million cycles!**

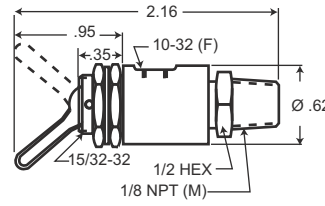
- Refer to **Product Number Diagram** ([page 14](#))

Push Button Actuator

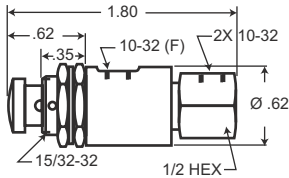
Toggle Actuator



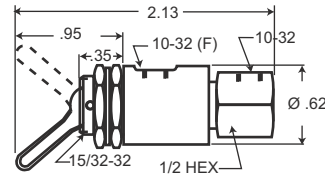
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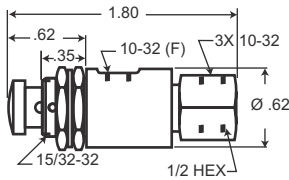
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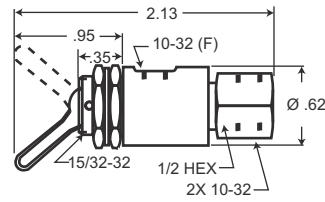
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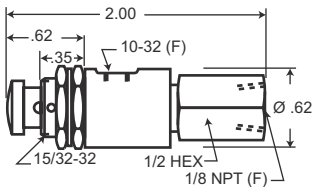
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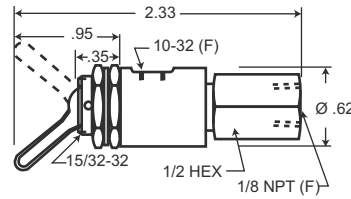
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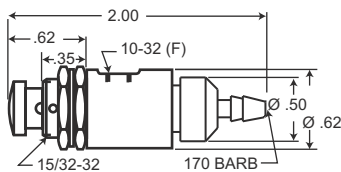
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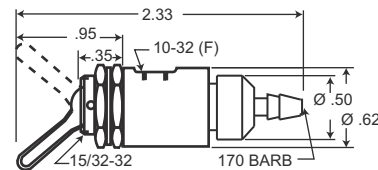
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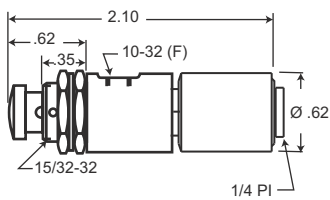
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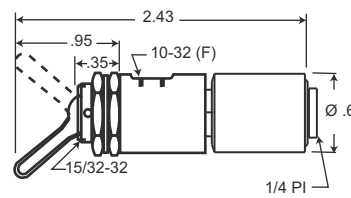
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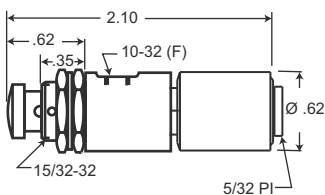
"-5" Input



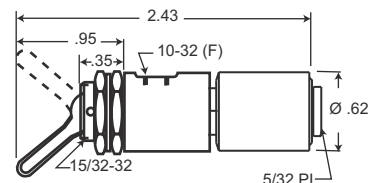
"-6" Input



"-6" Input



"-7" Input



"-7" Input

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- Fully ported
- 3-Way normally closed
- Poppet design contributes to long product life
- Seven input options
- Closed crossover
- Swivel Input Port



3-Way Valves

“3” Series

Pneumadyne’s “3” Series are 3-Way normally closed, fully ported valves.

Closed cross-over The internal design of the “3” Series features a stem and poppet that work in conjunction with one another. The poppet seals the exhaust port before it opens to flow. There is no transitional state from one function to the next providing the operator precise control between positions.

The addition of the **threaded exhaust port** makes it possible to direct and capture the exhaust flow in liquid, clean-room or lubricated air applications.

Mufflers can also be threaded in the exhaust port for noise control.

Performance Data

Temperature Range	Operating Pressure	Flow Path	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
				50 psi	125 psi		
-20° to 160° F	0 to 125 psi	1-2	.23	7.2	15.4	.02	.04
		3-2	.09	3.7	8.0	.07	N/A

C_v per ANSI / (NFPA) T3.21.3

Actuation Force

Actuator Style	3-Way Valve	
	50 psi	125 psi
Nylon Toggle	8 oz	14 oz
Push Button	3-1/2 lbs	6 lbs

Materials

Aluminum/ Anodize or Brass/ Electroless Nickel, Acetal, Stainless Steel, Nylon, Buna-N (optional seals available -contact factory)

“3” Series Cross Section 3-Way Normally Closed

figure A
Actuated

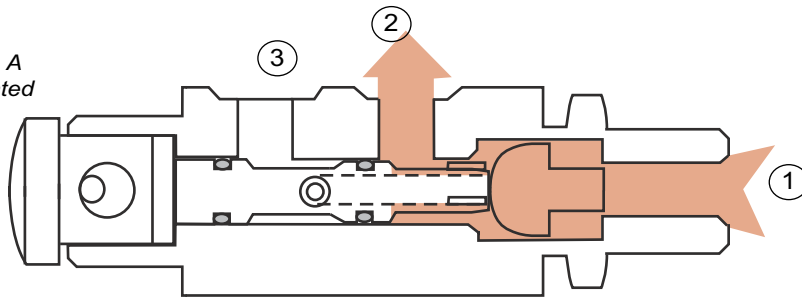
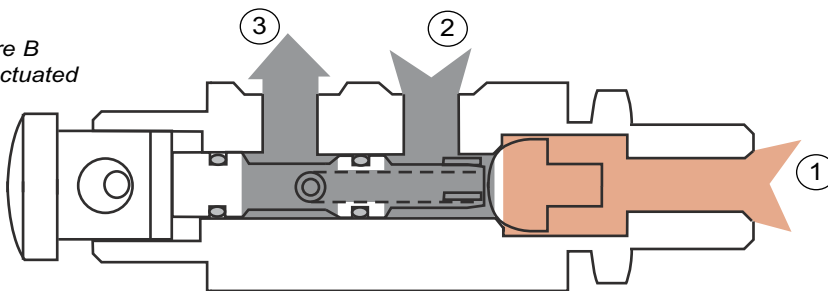


figure B
Unactuated



Function

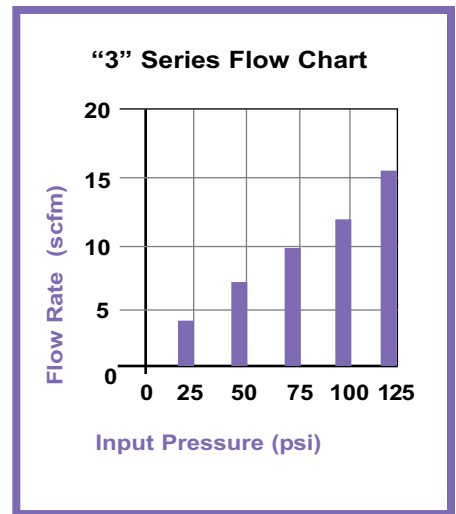
When a 3-Way normally closed valve is actuated (figure A) the stem unseats the poppet allowing flow through port 1 around the poppet and stem and out port 2.

In the unactuated position (figure B) the **poppet** is seated. When flow enters from port 2 it travels through the hollow stem and exhausts to atmosphere through port 3. The poppet design provides a large durable surface that can withstand millions of cycles.

This versatile valve can be plumbed as a selector with pressure in port 1 and vacuum plumbed in port 3.

Pick-and-place applications use selector valves to pick up an object, often with a suction cup at port 2, and release the object by breaking the vacuum pressure at port 1.

The “3” Series cannot be plumbed as normally open, we recommend using our “300” Series 10-32 fully ported valve.



Port Options

Definition	Options
Port 1 Swivel Input	<ul style="list-style-type: none"> ● 1/8 NPT / 10-32 (F) ● 10-32 (F) Elbow ● 10-32 (F) Tee ● 1/8 NPT (F) ● 170 Barb* ● 1/4 Push-in ● 5/32 Push-in
Port 2 Output	10-32 (F)
Port 3 Exhaust	10-32 (F)

*170 barb- recommended for use with .170 ID PUR or .170 ID PE

Swivel input is NOT to be used as a rotary union

Mounting Method

Panel	Surface
Nominal mounting hole dimension 31/64"	MB-1 or MB-1F Mounting Bracket

(2) nuts and (1) lockwasher provided

The input port swivels to accommodate critical alignment

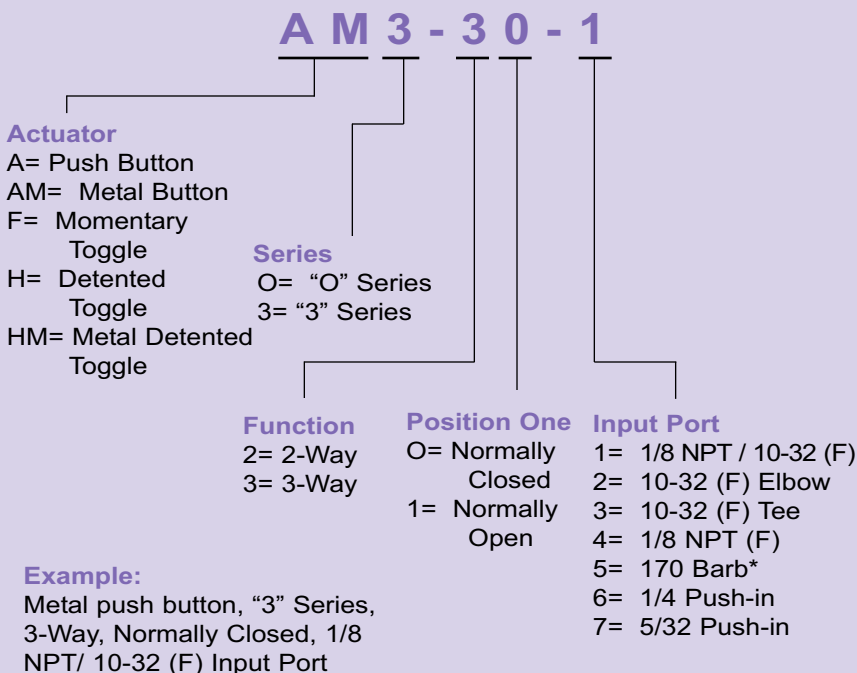
Product Information

3-Way Normally Closed

	Part Number	Input
Push Button	A3-30-1	1/8 NPT/ 10-32 (F)
	A3-30-2	10-32 (F) Elbow
	A3-30-3	10-32 (F) Tee
	A3-30-4	1/8 NPT (F)
	A3-30-5	170 Barb
	A3-30-6	1/4 Push-in
	A3-30-7	5/32 Push-in
Detented Toggle	H3-30-1	1/8 NPT/ 10-32 (F)
	H3-30-2	10-32 (F) Elbow
	H3-30-3	10-32 (F) Tee
	H3-30-4	1/8 NPT (F)
	H3-30-5	170 Barb
	H3-30-6	1/4 Push-in
	H3-30-7	5/32 Push-in
Momentary Toggle	F3-30-1	1/8 NPT/ 10-32 (F)
	F3-30-2	10-32 (F) Elbow
	F3-30-3	10-32 (F) Tee
	F3-30-4	1/8 NPT (F)
	F3-30-5	170 Barb
	F3-30-6	1/4 Push-in
	F3-30-7	5/32 Push-in

Product Number Diagram

"O" Series & "3" Series



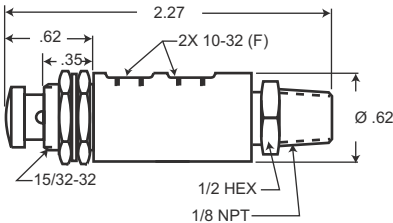
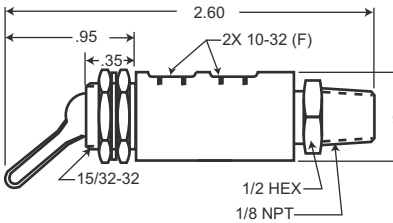
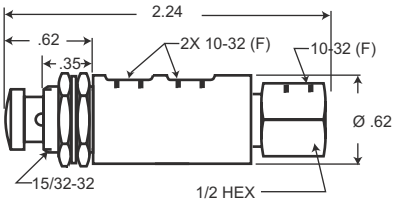
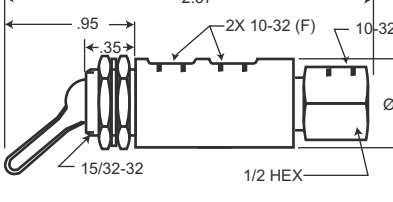
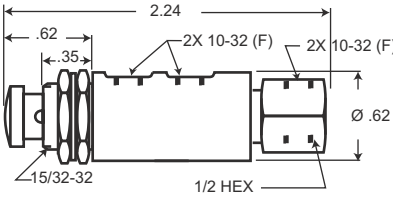
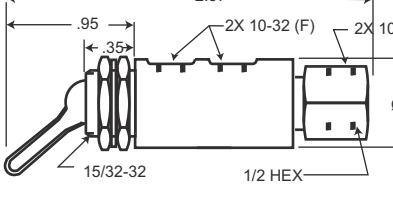
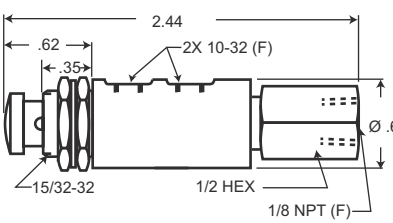
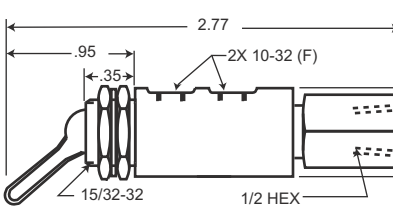
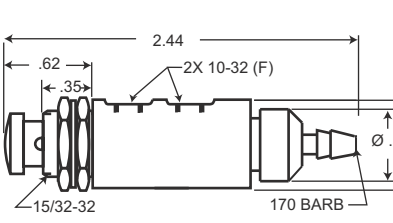
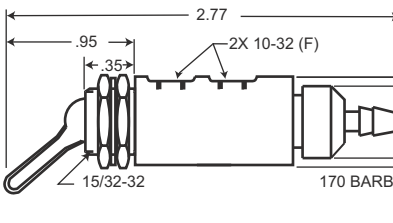
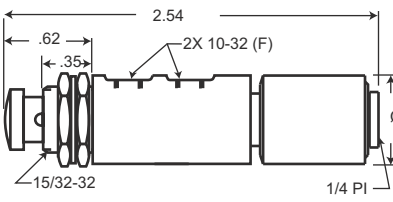
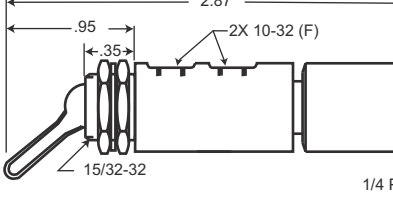
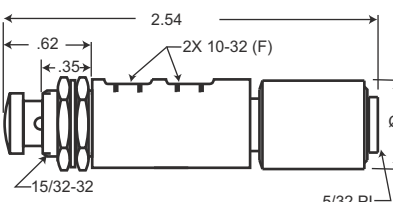
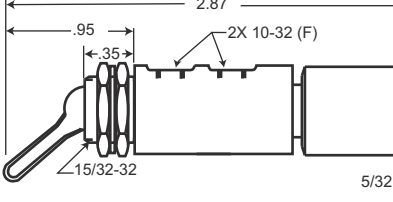
*170 barb- recommended for use with .170 ID PUR or .170 ID PE

Ordering Information

- To order standard product refer to Product Information listing.
- Metal push button available- use "AM" as the prefix to indicate metal.
- Optional seals available- contact factory.
- Nylon toggles and push buttons are available in seven colors with black as standard. To order colored actuator specify the color, by code, as a "-code#" suffix following the part number (see color code chart).

Push Button Actuator

Toggle Actuator

 <p>2.27 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX 1/8 NPT</p>	 <p>2.60 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX 1/8 NPT</p>
 <p>2.24 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX 10-32 (F)</p>	 <p>2.57 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX 10-32 (F)</p>
 <p>2.24 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX 2X 10-32 (F)</p>	 <p>2.57 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX 2X 10-32 (F)</p>
 <p>2.44 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX 1/8 NPT (F)</p>	 <p>2.77 Ø .62 2X 10-32 (F) 15/32-32 1/2 HEX</p>
 <p>2.44 Ø .62 Ø .50 Ø .62 2X 10-32 (F) 15/32-32 170 BARB</p>	 <p>2.77 Ø .62 Ø .50 Ø .62 2X 10-32 (F) 15/32-32 170 BARB</p>
 <p>2.54 Ø .62 2X 10-32 (F) 15/32-32 1/4 PI</p>	 <p>2.87 Ø .62 2X 10-32 (F) 15/32-32 1/4 PI</p>
 <p>2.54 Ø .62 2X 10-32 (F) 15/32-32 5/32 PI</p>	 <p>2.87 Ø .62 2X 10-32 (F) 15/32-32 5/32 PI</p>

● When design makes a dimension critical- contact factory for confirmation.
All dimensions shown subject to change without notice.

Features

- 158 possible configurations
- Four input options
- Swivel output port
- High flow
- Poppet design contributes to long product life
- Closed crossover (NC Only)



2 & 3-Way Valves “11” Series

The “11” Series features 1/8 NPT female and 1/4 push-to-connect connections contributing to higher flow rates. Push-in connections are available on both the input and output ports for plumbing convenience.

Closed cross-over The normally closed “11” Series features a stem and poppet that work in conjunction with one another. The poppet seals the exhaust port before it opens to flow (normally closed). There is no transitional state from one function to the next providing the operator precise control between positions.

Performance Data

Temperature Range	Operating Pressure	Type	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
				50 psi	125 psi		
-20° to 160° F	0 to 125 psi	Normally Open	.23	8.6	19.0	.015	.035
		Normally Closed	.29	10.2	22.1	.01	.05

C_v per ANSI / (NFPA) T3.21.3

Actuation Force

Actuator Style	Normally Open		Normally Closed	
	50 psi	125 psi	50 psi	125 psi
Nylon Toggle	8 oz	19 oz	8 oz	14 oz
Push Button	7 1/2 lbs	11 lbs	3 1/2 lbs	7 lbs

Materials

Aluminum/ Anodize, Brass/ Electroless Nickel, Stainless Steel, Nylon, Acetal Copolymer, Buna-N (optional seals available-contact factory)

“11” Series Cross Section 3-Way Normally Closed

figure A
Actuated

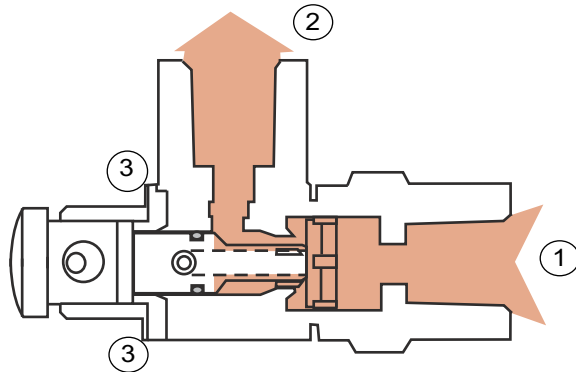
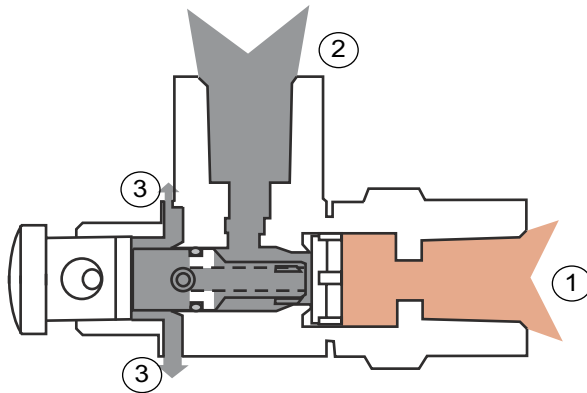


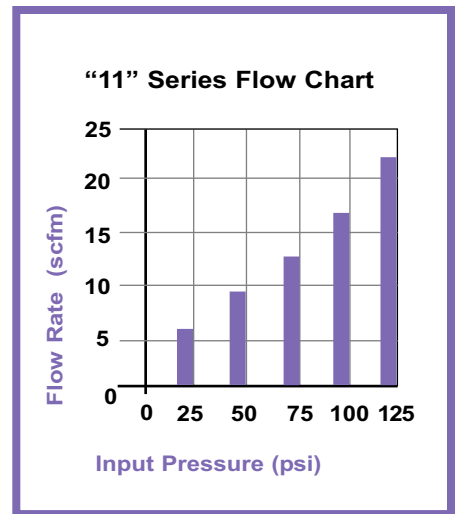
figure B
Unactuated



Function

When a 3-Way normally closed valve is actuated (figure A) the stem unseats the poppet allowing flow through port 1 around the poppet and stem and out port 2.

In the unactuated position (figure B) the poppet is seated. When flow enters from port 2 it travels through the hollow stem and exhausts to atmosphere through port 3. The specially designed **poppet** has a Buna-N sealing surface which can withstand millions of cycles.



Port Options

Definition	Options
Port 1 Input	<ul style="list-style-type: none"> ● 1/8 NPT / 10-32 (F) ● 1/8 NPT (F) ● 1/4 Push-in ● 5/32 Push-in
Port 2 Swivel Output	<ul style="list-style-type: none"> ● 1/8 NPT (F) ● 1/4 Push-in ● 5/32 Push-in
Port 3 Exhaust	non-threaded, exhausts to atmosphere

Swivel output is NOT to be used as a rotary union

Mounting Method

Panel	Surface
Nominal mounting hole dimension 31/64"	MB-1 or MB-1F Mounting Bracket

(2) nuts and (1) lockwasher provided



1/8 NPT male or 1/4 NPT male output ports available- contact factory



Push-to-connect connections are available on both the input and output ports

The "11" Series specially designed poppet has a Buna-N sealing surface which can withstand millions of cycles

Product Information

2-Way Normally Closed

Part Number	Input	Output
A11-20-14	1/8 NPT	1/8 NPT (F)
A11-20-16	NPT	1/4 Push-in
A11-20-17		5/32 Push-in
A11-20-44	1/8 NPT	1/8 NPT (F)
A11-20-46	NPT (F)	1/4 Push-in
A11-20-47		5/32 Push-in
A11-20-64		1/8 NPT (F)
A11-20-66	1/4 Push-in	1/4 Push-in
A11-20-67		5/32 Push-in
A11-20-74		1/8 NPT (F)
A11-20-76	5/32 Push-in	1/4 Push-in
A11-20-77		5/32 Push-in
H11-20-14	1/8 NPT	1/8 NPT (F)
H11-20-16	NPT	1/4 Push-in
H11-20-17		5/32 Push-in
H11-20-44	1/8 NPT	1/8 NPT (F)
H11-20-46	NPT (F)	1/4 Push-in
H11-20-47		5/32 Push-in
H11-20-64		1/8 NPT (F)
H11-20-66	1/4 Push-in	1/4 Push-in
H11-20-67		5/32 Push-in
H11-20-74		1/8 NPT (F)
H11-20-76	5/32 Push-in	1/4 Push-in
H11-20-77		5/32 Push-in
F11-20-14	1/8 NPT	1/8 NPT (F)
F11-20-16	NPT	1/4 Push-in
F11-20-17		5/32 Push-in
F11-20-44	1/8 NPT	1/8 NPT (F)
F11-20-46	NPT (F)	1/4 Push-in
F11-20-47		5/32 Push-in
F11-20-64		1/8 NPT (F)
F11-20-66	1/4 Push-in	1/4 Push-in
F11-20-67		5/32 Push-in
F11-20-74		1/8 NPT (F)
F11-20-76	5/32 Push-in	1/4 Push-in
F11-20-77		5/32 Push-in

2-Way Normally Open

Part Number	Input	Output
A11-21-14	1/8 NPT	1/8 NPT (F)
A11-21-16	NPT	1/4 Push-in
A11-21-17		5/32 Push-in
A11-21-44	1/8 NPT	1/8 NPT (F)
A11-21-46	NPT (F)	1/4 Push-in
A11-21-47		5/32 Push-in
A11-21-64		1/8 NPT (F)
A11-21-66	1/4 Push-in	1/4 Push-in
A11-21-67		5/32 Push-in
A11-21-74		1/8 NPT (F)
A11-21-76	5/32 Push-in	1/4 Push-in
A11-21-77		5/32 Push-in
H11-21-14	1/8 NPT	1/8 NPT (F)
H11-21-16	NPT	1/4 Push-in
H11-21-17		5/32 Push-in
H11-21-44	1/8 NPT	1/8 NPT (F)
H11-21-46	NPT (F)	1/4 Push-in
H11-21-47		5/32 Push-in
H11-21-64		1/8 NPT (F)
H11-21-66	1/4 Push-in	1/4 Push-in
H11-21-67		5/32 Push-in
H11-21-74		1/8 NPT (F)
H11-21-76	5/32 Push-in	1/4 Push-in
H11-21-77		5/32 Push-in
F11-21-14	1/8 NPT	1/8 NPT (F)
F11-21-16	NPT	1/4 Push-in
F11-21-17		5/32 Push-in
F11-21-44	1/8 NPT	1/8 NPT (F)
F11-21-46	NPT (F)	1/4 Push-in
F11-21-47		5/32 Push-in
F11-21-64		1/8 NPT (F)
F11-21-66	1/4 Push-in	1/4 Push-in
F11-21-67		5/32 Push-in
F11-21-74		1/8 NPT (F)
F11-21-76	5/32 Push-in	1/4 Push-in
F11-21-77		5/32 Push-in

- Refer to Product Number Diagram

Product Information

3-Way Normally Closed

	Part Number	Input	Output
Push Button	A11-30-14	1/8 NPT	1/8 NPT (F)
	A11-30-16	NPT	1/4 Push-in
	A11-30-17		5/32 Push-in
	A11-30-44	1/8 NPT	1/8 NPT (F)
	A11-30-46	NPT (F)	1/4 Push-in
	A11-30-47		5/32 Push-in
	A11-30-64		1/8 NPT (F)
Detented Toggle	A11-30-66	1/4 Push-in	1/4 Push-in
	A11-30-67		5/32 Push-in
	A11-30-74		1/8 NPT (F)
	A11-30-76	5/32 Push-in	1/4 Push-in
	A11-30-77		5/32 Push-in
	H11-30-14	1/8 NPT	1/8 NPT (F)
	H11-30-16	NPT	1/4 Push-in
Momentary Toggle	H11-30-17		5/32 Push-in
	H11-30-44	1/8 NPT	1/8 NPT (F)
	H11-30-46	NPT (F)	1/4 Push-in
	H11-30-47		5/32 Push-in
	H11-30-64		1/8 NPT (F)
	H11-30-66	1/4 Push-in	1/4 Push-in
	H11-30-67		5/32 Push-in
Momentary Toggle	H11-30-74		1/8 NPT (F)
	H11-30-76	5/32 Push-in	1/4 Push-in
	H11-30-77		5/32 Push-in
	F11-30-14	1/8 NPT	1/8 NPT (F)
	F11-30-16	NPT	1/4 Push-in
	F11-30-17		5/32 Push-in
	F11-30-44	1/8 NPT	1/8 NPT (F)
F11-30-46	NPT (F)	1/4 Push-in	
F11-30-47		5/32 Push-in	
F11-30-64		1/8 NPT (F)	
F11-30-66	1/4 Push-in	1/4 Push-in	
F11-30-67		5/32 Push-in	
F11-30-74		1/8 NPT (F)	
F11-30-76	5/32 Push-in	1/4 Push-in	
F11-30-77		5/32 Push-in	

3-Way Normally Open

	Part Number	Input	Output
Push Button	A11-31-14	1/8 NPT	1/8 NPT (F)
	A11-31-16	NPT	1/4 Push-in
	A11-31-17		5/32 Push-in
	A11-31-44	1/8 NPT	1/8 NPT (F)
	A11-31-46	NPT (F)	1/4 Push-in
	A11-31-47		5/32 Push-in
	A11-31-64		1/8 NPT (F)
Detented Toggle	A11-31-66	1/4 Push-in	1/4 Push-in
	A11-31-67		5/32 Push-in
	A11-31-74		1/8 NPT (F)
	A11-31-76	5/32 Push-in	1/4 Push-in
	A11-31-77		5/32 Push-in
	H11-31-14	1/8 NPT	1/8 NPT (F)
	H11-31-16	NPT	1/4 Push-in
Momentary Toggle	H11-31-17		5/32 Push-in
	H11-31-44	1/8 NPT	1/8 NPT (F)
	H11-31-46	NPT (F)	1/4 Push-in
	H11-31-47		5/32 Push-in
	H11-31-64		1/8 NPT (F)
	H11-31-66	1/4 Push-in	1/4 Push-in
	H11-31-67		5/32 Push-in
Momentary Toggle	H11-31-74		1/8 NPT (F)
	H11-31-76	5/32 Push-in	1/4 Push-in
	H11-31-77		5/32 Push-in
	F11-31-14	1/8 NPT	1/8 NPT (F)
	F11-31-16	NPT	1/4 Push-in
	F11-31-17		5/32 Push-in
	F11-31-44	1/8 NPT	1/8 NPT (F)
F11-31-46	NPT (F)	1/4 Push-in	
F11-31-47		5/32 Push-in	
F11-31-64		1/8 NPT (F)	
F11-31-66	1/4 Push-in	1/4 Push-in	
F11-31-67		5/32 Push-in	
F11-31-74		1/8 NPT (F)	
F11-31-76	5/32 Push-in	1/4 Push-in	
F11-31-77		5/32 Push-in	



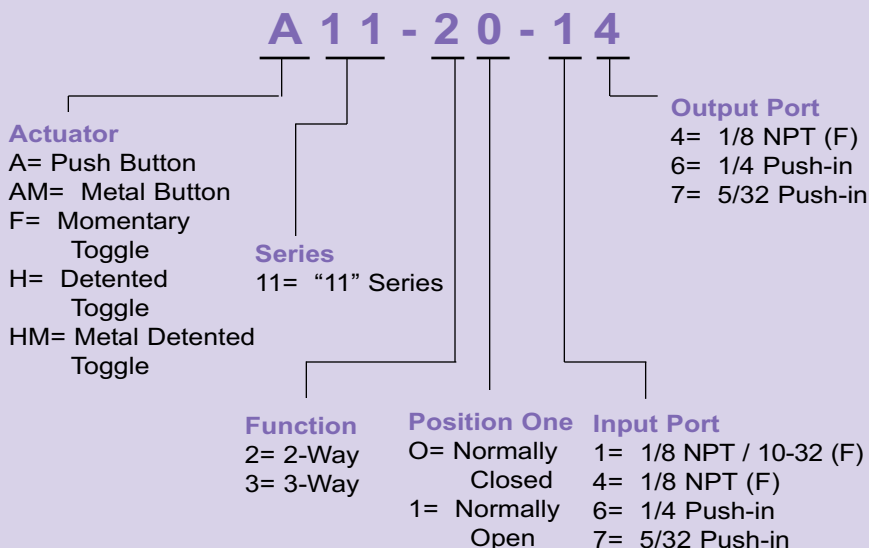
Ordering Information

- To order standard product refer to Product Information listing.
- To order metal push button- use "AM" as the prefix to indicate metal.
- Optional seals available- contact factory.
- Nylon toggles and push buttons are available in seven colors with black as standard. To order colored actuator specify the color, by code, as a "-code#" suffix following the part number (see color code chart).



The standard "11" Series valve output port swivels to accommodate critical alignment

Product Number Diagram
"11" Series Valves



Example:
 Nylon push button, "11" Series, 2-Way, Normally Closed, 1/8 NPT /10-32 (F) Input Port, 1/8 (F) Output

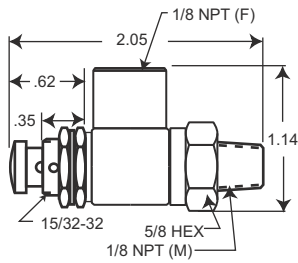
System 11 is a method of consolidating 2 to 10 components with a common pressure source.

This custom product is shown with "11" Series valves.

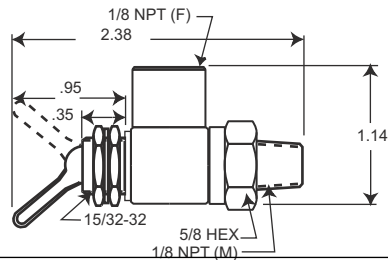


Push Button Actuator

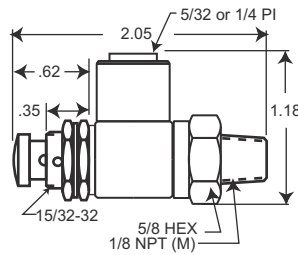
Toggle Actuator



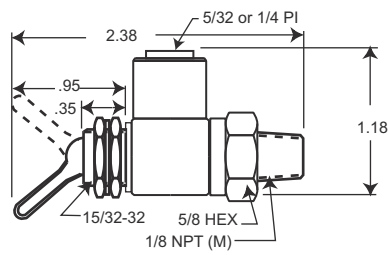
"-14" Porting



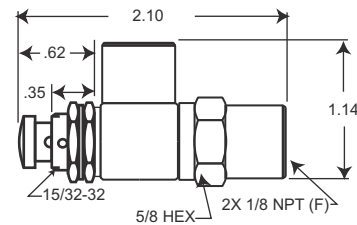
"-14" Porting



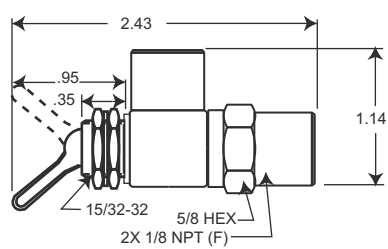
**"-16" Porting
"-17" Porting**



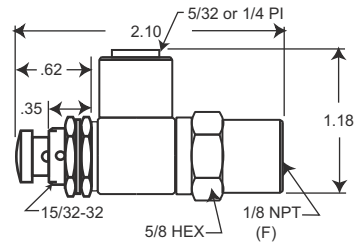
**"-16" Porting
"-17" Porting**



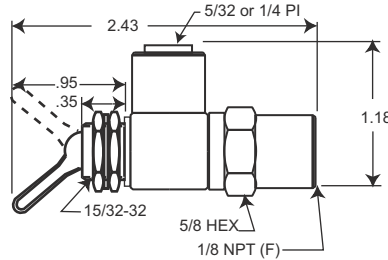
"-44" Porting



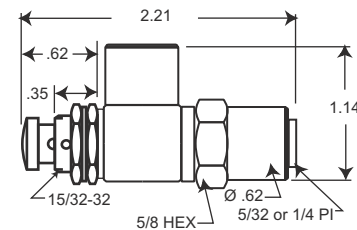
"-44" Porting



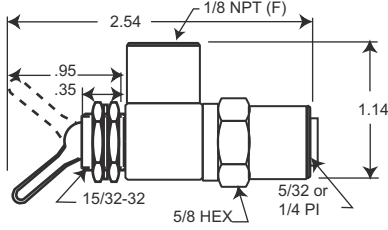
**"-46" Porting
"-47" Porting**



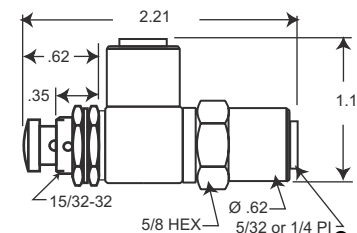
**"-46" Porting
"-47" Porting**



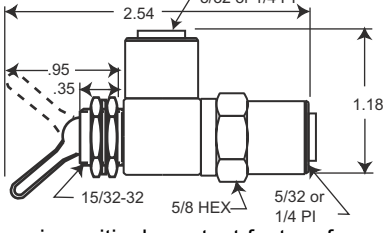
**"-64" Porting
"-74" Porting**



**"-64" Porting
"-74" Porting**



**"-66" Porting
"-67" Porting
"-76" Porting
"-77" Porting**



**"-66" Porting
"-67" Porting
"-76" Porting
"-77" Porting**

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- Single stem design
- Compact size
- Four input options
- Numerous porting configurations
- Fully ported design offers plumbing versatility
- Vacuum applications to 26" Hg



2 & 3-Way Valves "200" & "300" Series

The "200" & "300" Series valves feature miniature size and a single stem design. The "200" Series valve features 1/16 barbed porting and is ideal for use as a pilot service device. The "300" Series is available with five porting configurations offering the following:

10-32 (F) Input/Output: Ideal for use as a pilot actuating device and for basic on/off functions

Rear Ported: Streamlined profile with side-by-side porting for use in space constrained applications

1/8 NPT Input: Ideal for direct mounting in a manifold or other machine member

Cartridge: Ideal for use in manifold systems and custom applications where space is limited

10-32 (F) Fully ported: Threaded exhaust port can be used in applications to direct and capture exhaust flow- [see alternative plumbing options](#)

Performance Data

Temperature Range	Operating Pressure
-20° to 160° F	26" Hg to 125 psi

Product	C _v		Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
	Port 1-2	Port 2-3	Port 1-2			
			50 psi	125 psi		
"200" Series Barbed N.C.	.026	N/A	.93	2.10	.14	.20
"200" Series Barbed N.O.	.030	N/A	1.08	2.33	.12	.19
"300" Series 10-32 (F) Input/output	.20	N/A	7.2	15.5	.02	.04
"300" Series 10-32 (F) Fully ported	.27	.25	9.0	20.0	.014	.035
"300" Series 1/8 NPT Input	.24	N/A	8.3	17.8	.014	.039

- 2-Way valves ideal for use in liquid applications compatible with materials of construction

C_v per ANSI / (NFPA) T3.21.3

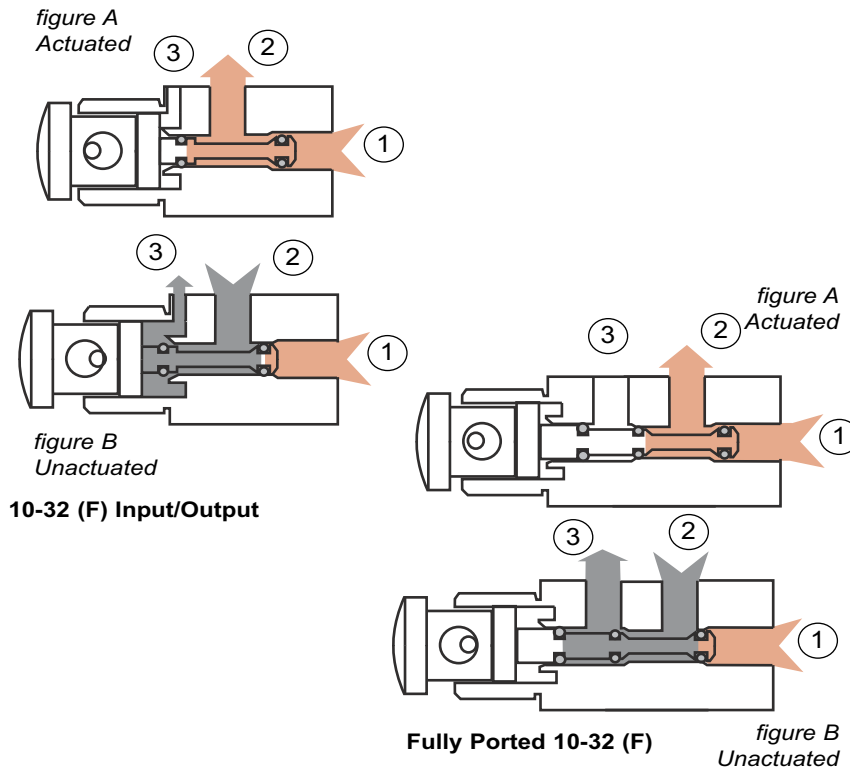
Actuation Force

Actuator Style	"200" Series Barbed		"300" Series 10-32 input		"300" Series Fully ported 10-32 (F)	
	50 psi	125 psi	50 psi	125 psi	50 psi	125 psi
Toggle	6 oz	11 oz	6 oz	11 oz	6 oz	11 oz
Ball	29 oz	51 oz	29 oz	51 oz	29 oz	51 oz
Push Button	29 oz	51 oz	29 oz	51 oz	29 oz	51 oz
Integral Air Pilot	-	-	30 psi	40 psi	30 psi	40 psi

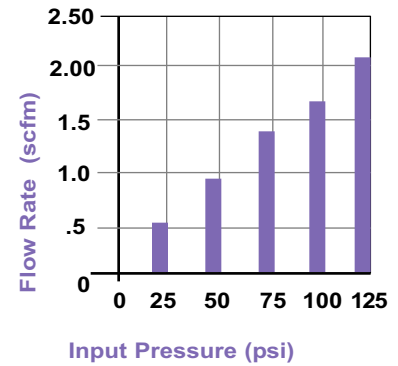
Materials

Brass/ Electroless Nickel, Aluminum/ Anodize, Stainless Steel, Buna-N (optional seals available- contact factory)

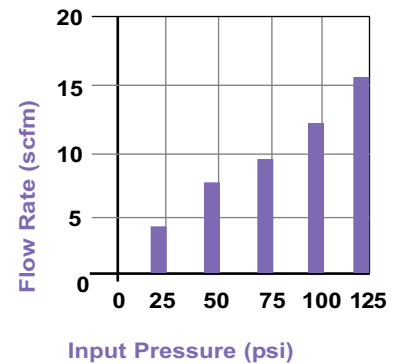
“300” Series Cross Section 3-Way Normally Closed



“200” Series Flow Chart



“300” Series Flow Chart



Function

In the actuated position (figure A) air flows through port 1 travels around the lower O-ring and flows out port 2- the upper O-ring seals the passage preventing exhaust flow out of the valve.

In the unactuated position (figure B) the lower O-ring seals the flow at port 1, allowing flow to enter port 2 travel around the upper seal and exhaust to atmosphere through port 3.

The **10-32 (F) fully ported** valve allows the capture and removal of exhaust flow. (See [Plumbing Options for Fully Ported Valves](#) alternative plumbing methods.)

Port Options

Valve	Input 1	Output 2	Exhaust
Barbed	062 Barb	062 Barb	non-threaded
10-32 (F) Input/Output	10-32 (F)	10-32 (F)	non-threaded
Rear Ported	10-32 (F)	10-32 (F)	non-threaded
1/8 NPT Input	1/8 NPT	10-32 (F)	non-threaded
*Cartridge	non-threaded	non-threaded	non-threaded
10-32 (F) Fully Ported	10-32 (F)	10-32 (F)	10-32 (F)

[*Cartridge valve mounting drawing](#)

Mounting Method

Panel	Surface
Nominal mounting hole dimension 31/64"	MB-1 or MB-1F Mounting Bracket

(2) nuts and (1) lockwasher provided



Stainless Steel 10-32 Fully Ported valve with M5 threads available- contact factory

Viton® is a registered trademark of Dupont Dow Elastomers

Product Information

"200" Series Barbed Valve 1/16 Tube ID Barb

Part Number	Operator
2-Way Normally Closed	
C021701	Toggle Detented
C021703	Toggle Momentary
C021705	Nylon Button
C021707	Nylon Ball
C021721	Metal Toggle Detented
C021723	Metal Toggle Momentary
C021725	Metal Button
C021727	Stainless Steel Ball

2-Way Normally Open	
C021501	Toggle Detented
C021503	Toggle Momentary
C021505	Nylon Button
C021507	Nylon Ball
C021521	Metal Toggle Detented
C021523	Metal Toggle Momentary
C021525	Metal Button
C021527	Stainless Steel Ball

3-Way Normally Closed	
C021601	Toggle Detented
C021603	Toggle Momentary
C021605	Nylon Button
C021607	Nylon Ball
C021621	Metal Toggle Detented
C021623	Metal Toggle Momentary
C021625	Metal Button
C021627	Stainless Steel Ball

3-Way Normally Open	
C021401	Toggle Detented
C021403	Toggle Momentary
C021405	Nylon Button
C021407	Nylon Ball
C021421	Metal Toggle Detented
C021423	Metal Toggle Momentary
C021425	Metal Button
C021427	Stainless Steel Ball

"300" Series Standard 10-32 (F)

Part Number	Operator
2-Way Normally Closed	
C030201	Toggle Detented
C030203	Toggle Momentary
C030205	Nylon Button
C030207	Nylon Ball
C030209	062 Barb Integral Air Pilot
C030221	Metal Toggle Detented
C030223	Metal Toggle Momentary
C030225	Metal Button
C030227	Stainless Steel Ball

3-Way Normally Closed	
C030101	Toggle Detented
C030103	Toggle Momentary
C030105	Nylon Button
C030107	Nylon Ball
C030109	062 Barb Integral Air Pilot
C030121	Metal Toggle Detented
C030123	Metal Toggle Momentary
C030125	Metal Button
C030127	Stainless Steel Ball

"300" Series Standard 10-32 (F)

Part Number	Operator
2-Way Normally Open	
C030401	Toggle Detented
C030403	Toggle Momentary
C030405	Nylon Button
C030407	Nylon Ball
C030421	Metal Toggle Detented
C030423	Metal Toggle Momentary
C030425	Metal Button
C030427	Stainless Steel Ball

3-Way Normally Open	
C030301	Toggle Detented
C030303	Toggle Momentary
C030305	Nylon Button
C030307	Nylon Ball
C030321	Metal Toggle Detented
C030323	Metal Toggle Momentary
C030325	Metal Button
C030327	Stainless Steel Ball

Product Information



“300” Series Standard Stainless Steel 10-32 (F)

<u>Part Number</u>	<u>Operator</u>
2-Way Normally Closed	
C032101	Toggle Detented
C032103	Toggle Momentary
C032105	Nylon Button
C032107	Nylon Ball
C032121	Metal Toggle Detented
C032123	Metal Toggle Momentary
C032125	Metal Button
C032127	Stainless Steel Ball
3-Way Normally Closed	
C032201	Toggle Detented
C032203	Toggle Momentary
C032205	Nylon Button
C032207	Nylon Ball
C032221	Metal Toggle Detented
C032223	Metal Toggle Momentary
C032225	Metal Button
C032227	Stainless Steel Ball

“300” Series Rear Ported 10-32 (F)

<u>Part Number</u>	<u>Operator</u>
2-Way Normally Closed	
C031001	Toggle Detented
C031003	Toggle Momentary
C031005	Nylon Button
C031007	Nylon Ball
C031021	Metal Toggle Detented
C031023	Metal Toggle Momentary
C031025	Metal Button
C031027	Stainless Steel Ball
3-Way Normally Closed	
C030901	Toggle Detented
C030903	Toggle Momentary
C030905	Nylon Button
C030907	Nylon Ball
C030921	Metal Toggle Detented
C030923	Metal Toggle Momentary
C030925	Metal Button
C030927	Stainless Steel Ball

“300” Series 1/8 NPT Input

<u>Part Number</u>	<u>Operator</u>
2-Way Normally Closed	
C030701	Toggle Detented
C030703	Toggle Momentary
C030705	Nylon Button
C030707	Nylon Ball
C030721	Metal Toggle Detented
C030723	Metal Toggle Momentary
C030725	Metal Button
C030727	Stainless Steel Ball
3-Way Normally Closed	
C030601	Toggle Detented
C030603	Toggle Momentary
C030605	Nylon Button
C030607	Nylon Ball
C030621	Metal Toggle Detented
C030623	Metal Toggle Momentary
C030625	Metal Button
C030627	Stainless Steel Ball

“300” Series Cartridge

<u>Part Number</u>	<u>Operator</u>
2-Way Normally Closed	
C032401	Toggle Detented
C032403	Toggle Momentary
C032405	Nylon Button
C032407	Nylon Ball
C032421	Metal Toggle Detented
C032423	Metal Toggle Momentary
C032425	Metal Button
C032427	Stainless Steel Ball
3-Way Normally Closed	
C032301	Toggle Detented
C032303	Toggle Momentary
C032305	Nylon Button
C032307	Nylon Ball
C032321	Metal Toggle Detented
C032323	Metal Toggle Momentary
C032325	Metal Button
C032327	Stainless Steel Ball

“300” Series 10-32 Fully Ported

<u>Part Number</u>	<u>Operator</u>
3-Way Normally Closed	
C030501	Toggle Detented
C030503	Toggle Momentary
C030505	Nylon Button
C030507	Nylon Ball
C030509	062 Barb Integral Air Pilot
C030510	Pin
C030521	Metal Toggle Detented
C030523	Metal Toggle Momentary
C030525	Metal Button
C030527	Stainless Steel Ball



“300” Series 10-32 Fully Ported Stainless Steel

<u>Part Number</u>	<u>Operator</u>
3-Way Normally Closed	
C032001	Toggle Detented
C032003	Toggle Momentary
C032005	Nylon Button
C032007	Nylon Ball
C032021	Metal Toggle Detented
C032023	Metal Toggle Momentary
C032025	Metal Button
C032027	Stainless Steel Ball



Look for this symbol next to the part number listing to easily locate stainless steel products.



The threaded exhaust port can be used in applications to direct and capture exhaust flow

“200” & “300” Series valves feature miniature size and a single stem design

Product Number Diagram

“200 & 300” Series

C O 2 1 6 0 1

Seals

- O= Buna-N
- E= Ethylene Propylene
- V= Viton®

Actuator

- 01= Detented Nylon Toggle
- 03= Momentary Nylon Toggle
- 05= Nylon Button
- 07= Nylon Ball
- 09= 062 Barb Integral Air Pilot
- 10= Pin
- 21= Metal Detented Toggle
- 23= Metal Momentary Toggle
- 25= Metal Button
- 27= Stainless Steel Ball

Style and Function

- | | |
|-----------------------|--------------------------|
| *214 Barbed 3WNO | 306 1/8 NPT Input 3WNC |
| *215 Barbed 2WNO | 307 1/8 NPT Input 2WNC |
| *216 Barbed 3WNC | 309 Rear Ported 3WNC |
| *217 Barbed 2WNC | 310 Rear Ported 2WNC |
| 301 Standard 3WNC | 320 Fully Ported SS 3WNC |
| 302 Standard 2WNC | 321 Standard SS 2WNC |
| 303 Standard 3WNO | 322 Standard SS 3WNC |
| 304 Standard 2WNO | 323 Cartridge 3WNC |
| 305 Fully Ported 3WNC | 324 Cartridge 2WNC |

Example: 200 Series - Buna N O-rings, 3-Way Normally Closed, with Detented Toggle

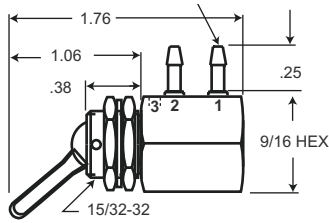
* 062 barb- recommended for use with 1/16 ID PUR tubing

Ordering Information

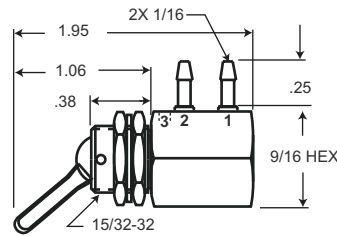
- To order standard product refer to Product Information listing.
- With Ethylene Propylene O-ring seal, change the “CO” in the part number to “CE”.
- With Viton® O-ring seal, change the “CO” in the part number to “CV”.
- Nylon toggle and push buttons are available in seven colors with black as standard. To order colored actuators specify the color, by code, as a “-code#” suffix following the part number ([see color code chart](#)).

Barbed Ports
Normally Closed

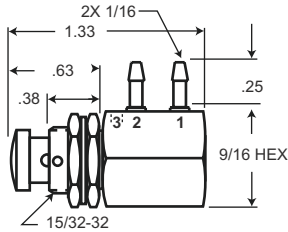
Barbed Ports
Normally Open



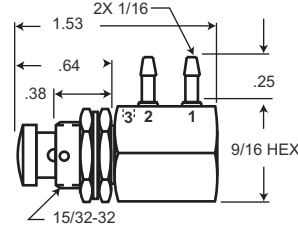
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C021603
C021701
C021703



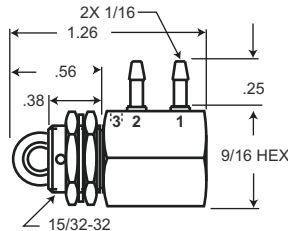
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C021403
C021501
C021503



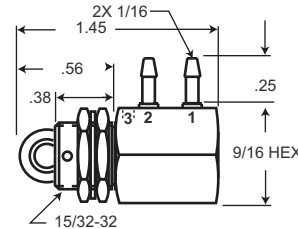
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C021625
C021705
C021725



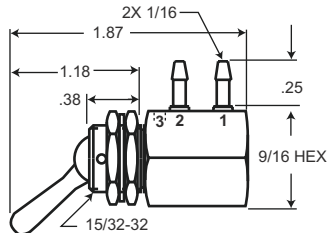
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C021425
C021505
C021525



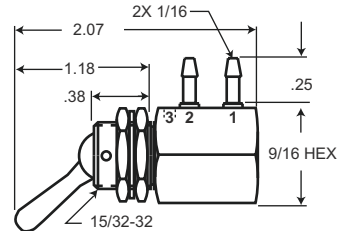
C021607
C021627
C021707
C021727



C021407
C021427
C021507
C021527



C021621
C021623
C021721
C021723



C021421
C021423
C021521
C021523

● Refer to **Product Number Diagram** for part number description

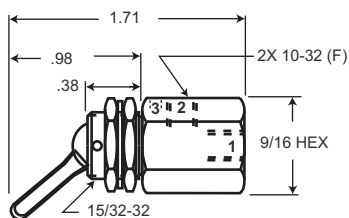
● Port 3 is for 3-Way products only

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

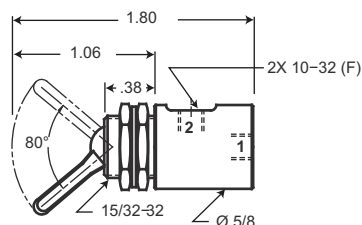
Standard

Standard

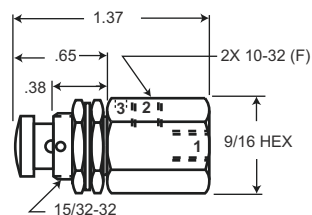
Stainless Steel



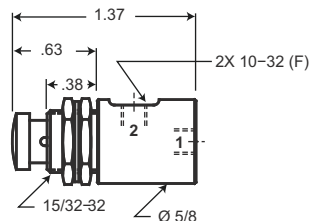
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C030201 **C030203**
C030301 **C030303**
C030401 **C030403**



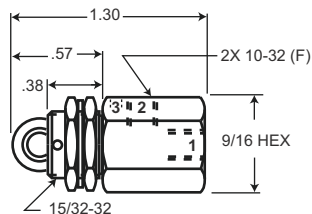
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C032103
C032201
C032203



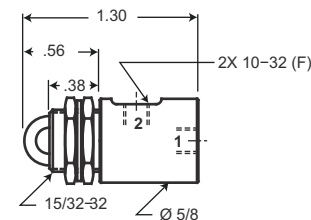
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C030205 **C030225**
C030305 **C030325**
C030405 **C030425**



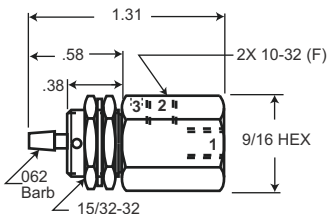
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C032205
C032225



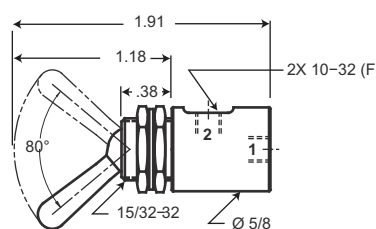
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C030207 **C030227**
C030307 **C030327**
C030407 **C030427**



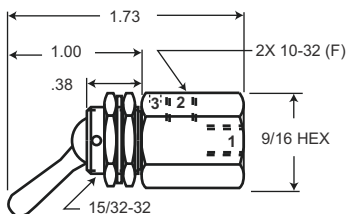
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C032207
C032227



C030109
C030209



C032121
C032123
C032221
C032223



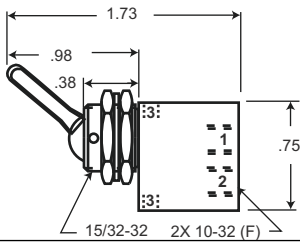
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C030221 **C030223**
C030321 **C030323**
C030421 **C030423**

● Refer to **Product Number Diagram** for part number description

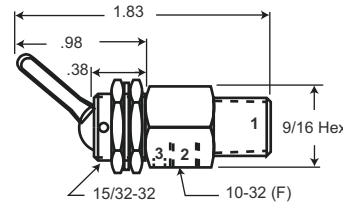
● Port 3 is for 3-Way products only

Rear Ported

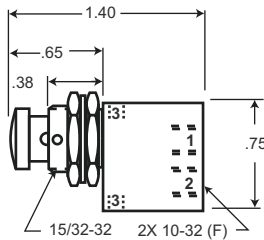
1/8 NPT Input



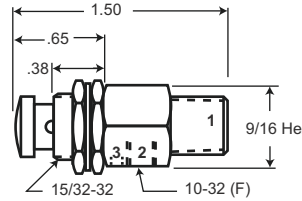
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C030903
C031001
C031003



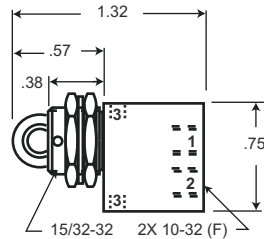
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C030603
C030701
C030703



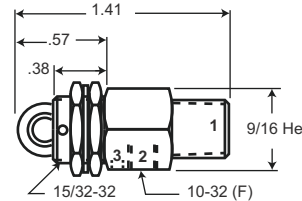
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C031005
C031025



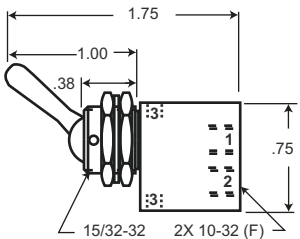
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C030725



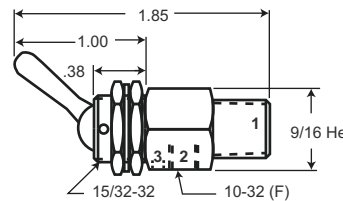
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C030607
C030627
C030707
C030727



C030921
C030923
C031021
C031023



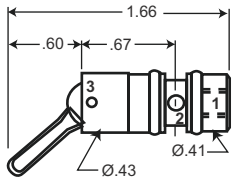
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C030623
C030721
C030723

● Refer to **Product Number Diagram** for part number description

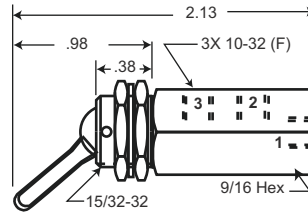
- Port 3 is for 3-Way products only
- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Cartridge

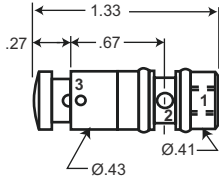
Fully Ported



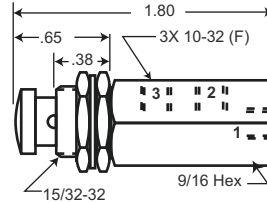
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C032303
C032401
C032403



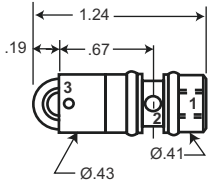
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C030503



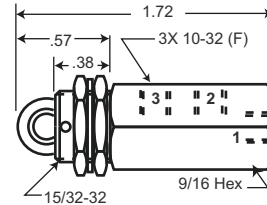
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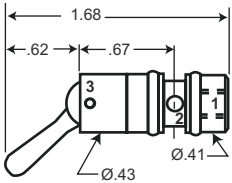
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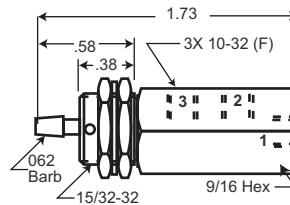
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C032327
C032407
C032427



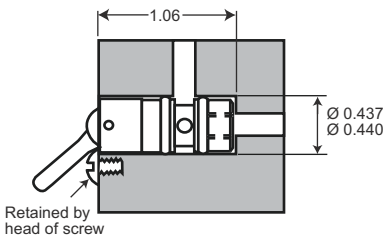
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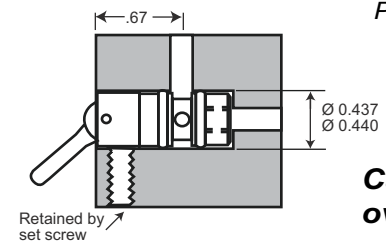
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C030509

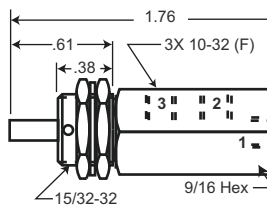


Mounting Options

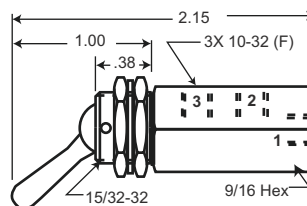


Preferred Method

Caution- do NOT over torque retention screw

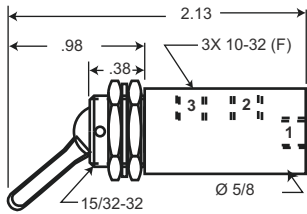


C030510



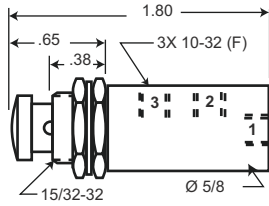
C030521
C030523

Fully Ported
Stainless Steel



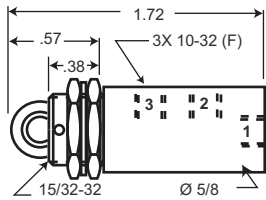
 C032001

 C032003



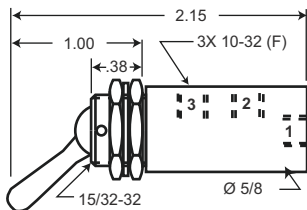
 C032005

 C032025



 C032007

 C032027



 C032021

 C032023

● Refer to **Product Number Diagram** for part number description

- Port 3 is for 3-Way products only
- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- Compact size (1.5" OAL)
- 4 Porting configurations
- High flow
- Single stem design
- Plumbing versatility
- Mounting versatility
- Vacuum applications to 26" Hg



2 & 3-Way Valves "400" Series

The "400" Series valves offer 2 and 3-Way Normally Closed functions and feature several configurations for plumbing convenience.

The **1/8 NPT (F) Standard Ported** valve features 1/8 NPT female bottom input and side output ports. The exhaust port is non-threaded and is located opposite the output port.

The **1/8 NPT (F) Fully Ported** and **1/8 NPT (F) Side Ported** valves feature a threaded exhaust port that can be used in applications to direct and capture exhaust flow.

The **cartridge** valve is ideal for use in manifold systems and custom applications where space is limited.

The **1/8 NPT (F) Rear Ported** valve features parallel bottom input and output porting with a streamlined design ideal for use in space constrained applications.

Performance Data

Temperature Range	Operating Pressure	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
			50 psi	125 psi		
-20° to 160° F	26" Hg to 125 psi	.42	15.0	33.0	.01	.03

- Flow information supplied for flow path 1-2.

Plumbing Options for Fully Ported Valves

Function	Port 1	Port 2	Port 3
3-Way N.C.	Input	Output	Exhaust
3-Way N.O.	Exhaust	Output	Input
3-Way Vacuum	Input	Output	Exhaust
2-Way Diverter	Output	Input	Output
2-Way Selector	Input	Output	Input
2-Way Vacuum	Output	Input	N/A

Note: Alternative plumbing methods for fully ported valves **only**.

C_v per ANSI / (NFPA) T3.21.3

Materials

Aluminum/ Anodize, Brass/ Electroless Nickel, Acetal, Stainless Steel, Nylon, Brass, Buna-N (optional seals available - contact factory)

“400” Series Cross Section
3-Way Normally Closed

figure A
Actuated

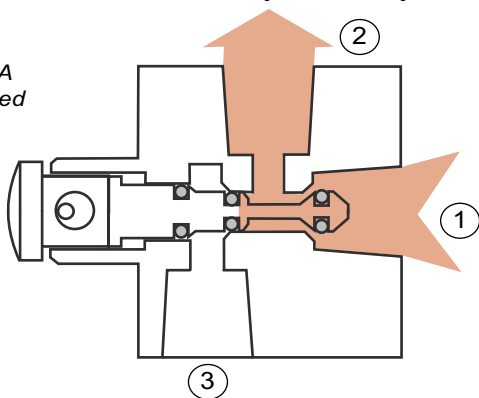
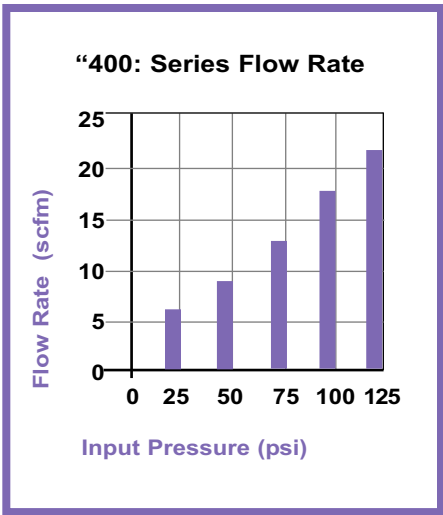
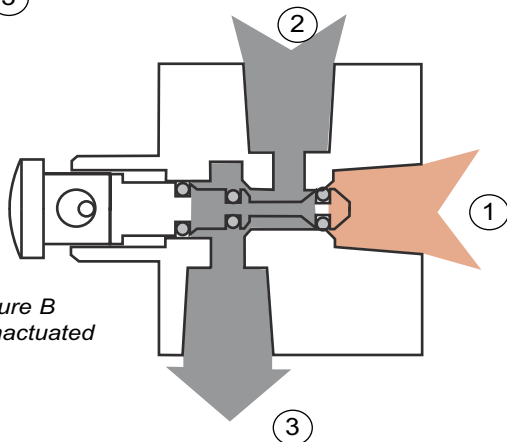


figure B
Unactuated



“400” Series 1/8 NPT Side Ported Valves

Function

In the actuated position (figure A) air flows through port 1 travels around the lower O-ring and out port 2. The center O-ring seals the passage blocking exhaust flow.

In the unactuated position (figure B) the lower O-ring seals port 1 allowing return flow to enter port 2, travel around the center seal and exhaust to atmosphere through port 3.

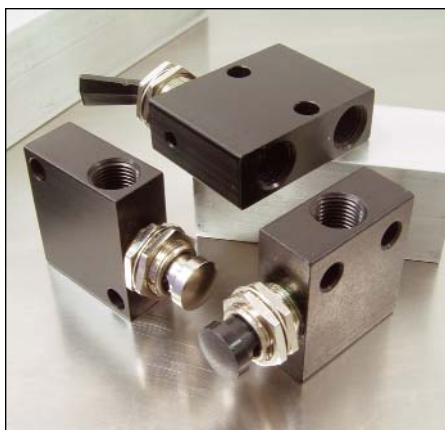
Port Options

Definition	1/8 NPT Standard	1/8 NPT Rear Ported	1/8 NPT Fully Ported	1/8 NPT Side Ported
Port 1 Input	1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)
Port 2 Output	1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)
Port 3 Exhaust	*non-threaded	*non-threaded	1/8 NPT (F)	1/8 NPT (F)

* Exhausts to atmosphere

Actuation Force

Actuator Style	50 psi	125 psi
Toggle	13 oz	19 oz
Ball	3 1/2 lbs	5 1/2 lbs
Push Button	3 1/2 lbs	5 1/2 lbs



Eight standard operators options are available on the "400" Series valves



The cartridge valve is ideal for use in manifold systems and custom applications where space is limited

Product Information "400" Series

1/8 NPT Standard

Part Number	Operator
2-Way Normally Closed	
C040201	Toggle Detented
C040203	Toggle Momentary
C040205	Nylon Button
C040207	Nylon Ball
C040221	Metal Toggle Detented
C040223	Metal Toggle Momentary
C040225	Metal Button
C040227	Stainless Steel Ball
3-Way Normally Closed	
C040101	Toggle Detented
C040103	Toggle Momentary
C040105	Nylon Button
C040107	Nylon Ball
C040121	Metal Toggle Detented
C040123	Metal Toggle Momentary
C040125	Metal Button
C040127	Stainless Steel Ball

1/8 NPT Side Ported

Part Number	Operator
3-Way Normally Closed	
C040401	Toggle Detented
C040403	Toggle Momentary
C040405	Nylon Button
C040407	Nylon Ball
C040421	Metal Toggle Detented
C040423	Metal Toggle Momentary
C040425	Metal Button
C040427	Stainless Steel Ball

Mounting Method

Panel	Surface
Nominal mounting hole dimension 31/64"	(2) .20 diam. thru holes

(2) nuts and (1) lockwasher provided

Product Information “400” Series

1/8 NPT Fully Ported

<u>Part Number</u>	<u>Operator</u>
3-Way Normally Closed	
C040501	Toggle Detented
C040503	Toggle Momentary
C040505	Nylon Button
C040507	Nylon Ball
C040521	Metal Toggle Detented
C040523	Metal Toggle Momentary
C040525	Metal Button
C040527	Stainless Steel Ball

Cartridge

<u>Part Number</u>	<u>Operator</u>
2-Way Normally Closed	
C040701	Toggle Detented
C040703	Toggle Momentary
C040705	Nylon Button
C040721	Metal Toggle Detented
C040723	Metal Toggle Momentary
C040725	Metal Button
3-Way Normally Closed	
C040601	Toggle Detented
C040603	Toggle Momentary
C040605	Nylon Button
C040621	Metal Toggle Detented
C040623	Metal Toggle Momentary
C040625	Metal Button

1/8 NPT Rear Ported

<u>Part Number</u>	<u>Operator</u>
2-Way Normally Closed	
C041001	Toggle Detented
C041003	Toggle Momentary
C041005	Nylon Button
C041007	Nylon Ball
C041021	Metal Toggle Detented
C041023	Metal Toggle Momentary
C041025	Metal Button
C041027	Stainless Steel Ball
3-Way Normally Closed	
C040901	Toggle Detented
C040903	Toggle Momentary
C040905	Nylon Button
C040907	Nylon Ball
C040921	Metal Toggle Detented
C040923	Metal Toggle Momentary
C040925	Metal Button
C040927	Stainless Steel Ball



Panel mount or surface mount
1/8 NPT input valves



The “400” Series valves feature
plumbing versatility

*The 1/8 NPT Rear
Ported valve features
parallel porting in a
compact design*



The "400" Series valves are available in a 2-Way function featuring several configurations for plumbing convenience.

The 1/8 NPT Side Ported Valve is able to accommodate reverse flow applications- contact factory

Product Number Diagram "400" Series

C O 4 0 1 0 1

Seals

- O= Buna-N
- E= Ethylene Propylene
- V= Viton®

Actuator

- 01= Detented Nylon Toggle
- 03= Momentary Nylon Toggle
- 05= Nylon Button
- 07= Nylon Ball
- 21= Metal Detented Toggle
- 23= Metal Momentary Toggle
- 25= Metal Button
- 27= Stainless Steel Ball

Style and Function

- 401= Standard 3WNC
- 402= Standard 2WNC
- 404= Side Ported 3WNC
- 405= Fully Ported 3WNC
- 406= Cartridge 3WNC
- 407= Cartridge 2WNC
- 409= Rear Ported 3WNC
- 410= Rear Ported 2WNC

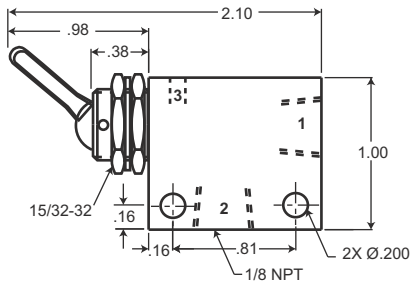
Example: 400 Series - Buna N O-rings, Standard 3-Way Normally Closed, with Detented Nylon Toggle

Ordering Information

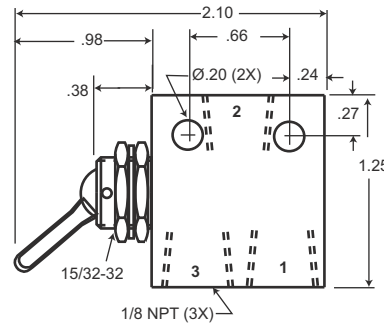
- To order standard product refer to Product Information listing.
- With Ethylene Propylene O-ring seal, change the "CO" in the part number to "CE".
- With Viton® O-ring seal, change the "CO" in the part number to "CV".
- Nylon toggle and push buttons are available in seven colors with black as standard. To order colored actuators specify the color, by code, as a "-code" suffix following the part number ([see color code chart](#)).

Standard

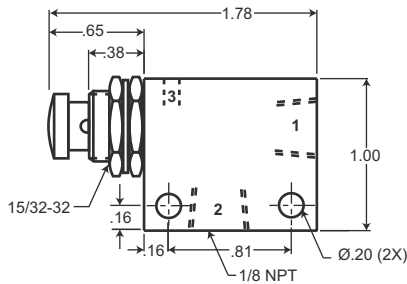
Side Ported



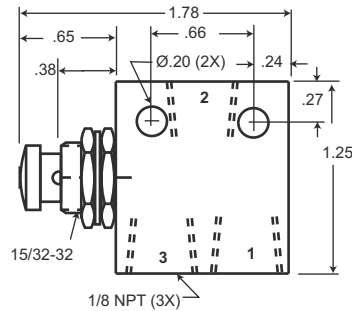
**C040101
C040103
C040201
C040203**



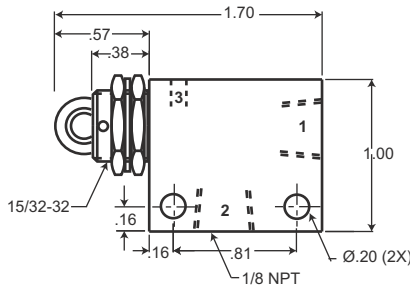
**C040401
C040403**



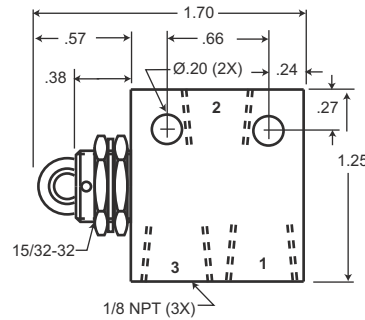
**C040105
C040125
C040205
C040225**



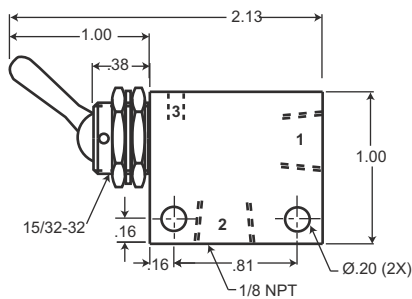
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C040425**



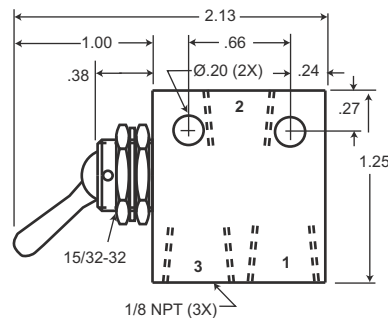
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C040127
C040207
C040227**



**C040407
C040427**



**C040121
C040123
C040221
C040223**

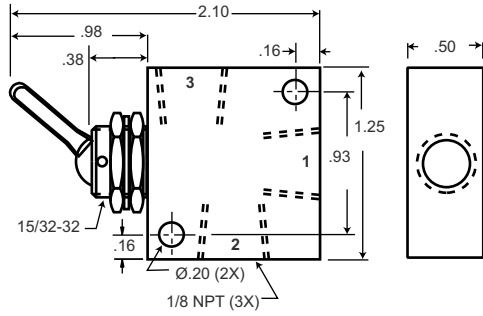


**C040421
C040423**

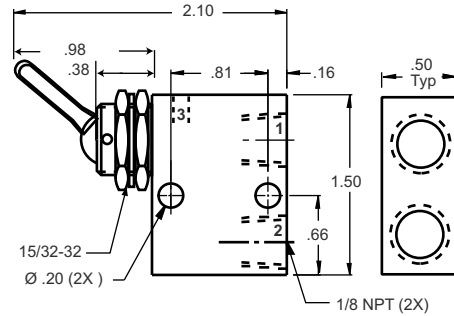
- Port 3 is for 3-Way products only
- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Fully Ported

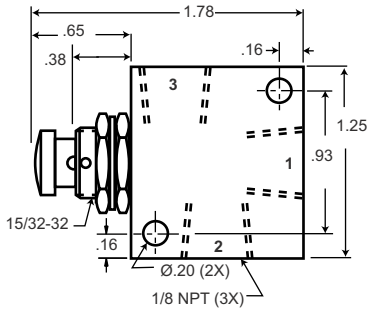
Rear Ported



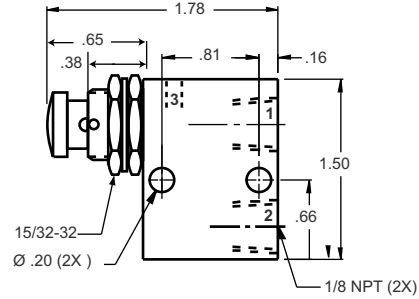
**C040501
C040503**



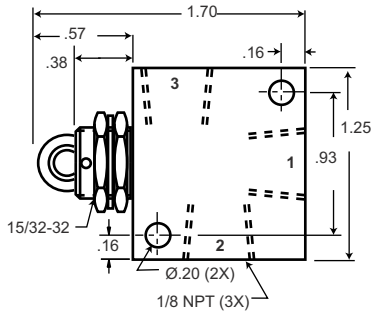
**C040901
C040903
C041001
C041003**



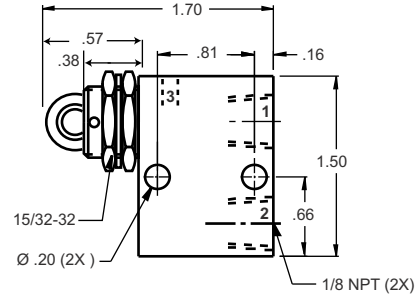
**C040505
C040525**



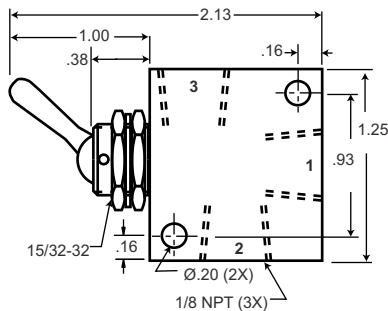
**C040905
C040925
C041005
C041025**



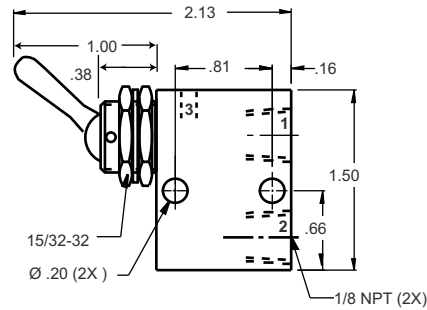
**C040507
C040527**



**C040907
C040927
C041007
C041027**



**C040521
C040523**

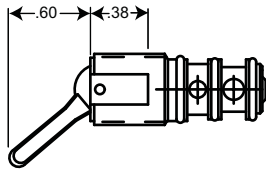


**C040921
C040923
C041021
C041023**

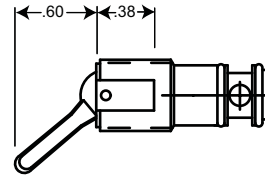
- Port 3 is for 3-Way products only
- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

3-Way Cartridge

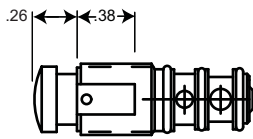
2-Way Cartridge



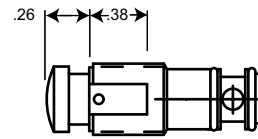
C040601
C040603



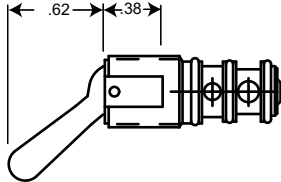
C040701
C040703



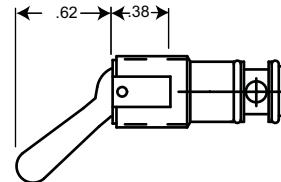
C040605
C040625



C040705
C040725



C040621
C040623



C040721
C040723

- Contact factory for cavity dimension drawing
- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- 2-Way & 3-Way
- Normally Closed or Normally Open
- PneuTef™ plated for longer life
- Lubricated and non-lubricated air
- High flow rate
- Compact size

Pilot Operated Cartridge Valves

Pneumadyne's new Pilot Operated Cartridge Valves offer a high flow rate in a compact package. Designed for integration in a pneumatic circuit's valve block, these .250 inch and .500 inch orifice valves can be used as either a 2-Way or 3-Way function (see plumbing options).

Our exclusive PneuTef™ plating process results in a smooth, slippery finish which extends product life and also allows the valves to be used in both lubricated and non-lubricated air applications.



Pilot Operated Cartridge Valves

Performance Data

Temperature Range	Operating Pressure	Media
-20° to 160° F	0 to 125 psi	Air

Plumbing Options

Function	Port 1	Port 2	Port 3
3-Way N.C.	Input	Output	Exhaust
3-Way N.O.	Exhaust	Output	Input
2-Way N.C.	Input	Output	omit
2-Way N.O.	omit	Output	Input

Pilot Pressure Ratio

Part No.	Input	Pilot
C250	0-40 psi	30 psi min
	40 psi+	80% of Input
C500	0-30 psi	20 psi min
	30 psi +	70% of Input

Materials

Body: Aluminum/PneuTef™ plated
 Spool: Aluminum/Anodized
 Seals: Buna-N
 Spring: Stainless Steel

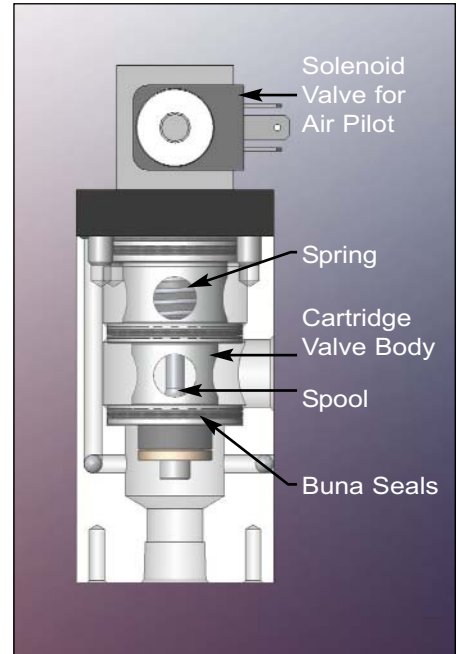
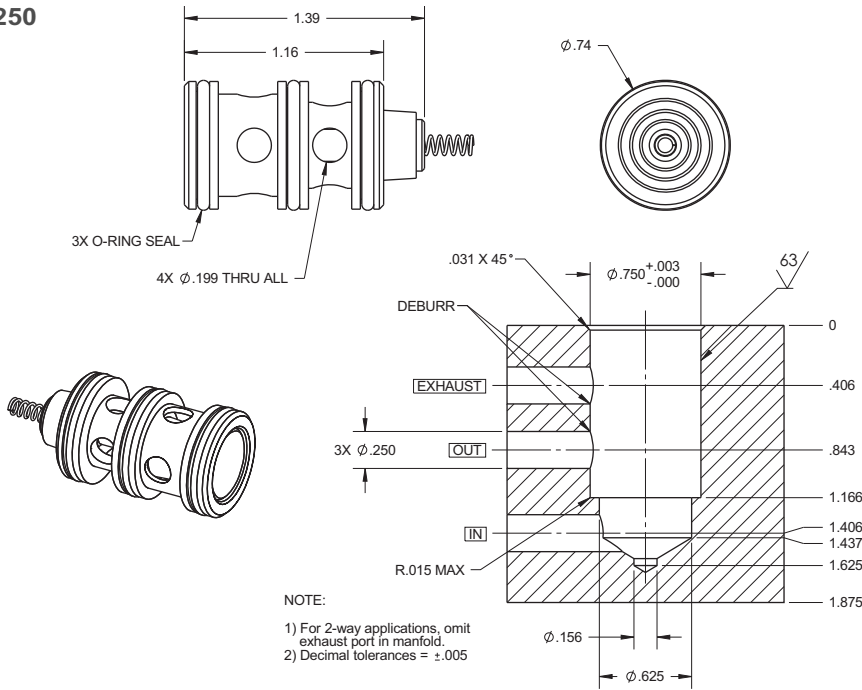
Pilot Operated Cartridge Valves

Product Information

Pilot Operated Cartridge Valves

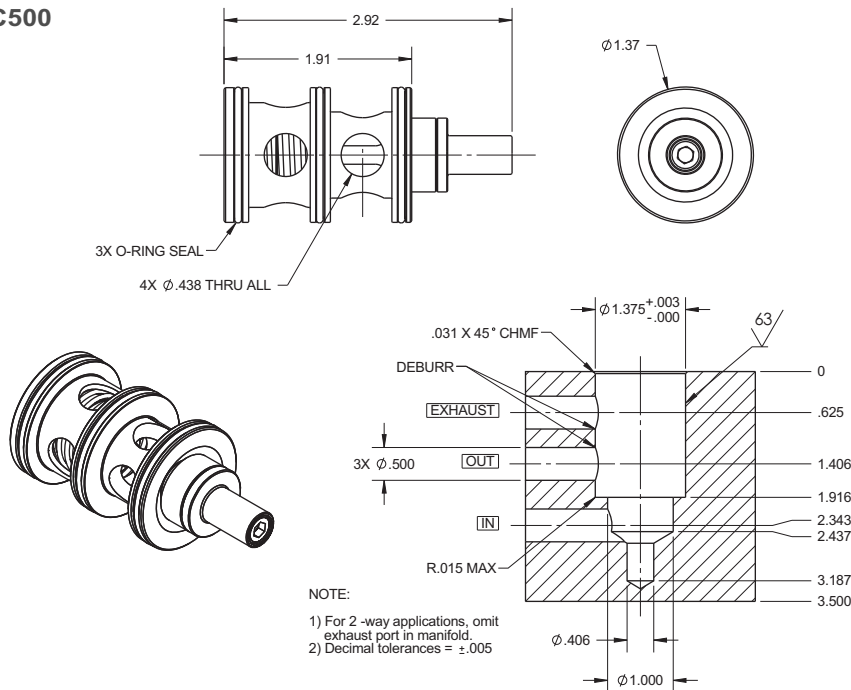
Part Number	Description
C250	Cartridge Valve, .250 in. Orifice
C500	Cartridge Valve, .500 in. Orifice

C250



Pilot Operated Cartridge Valve shown installed in a custom valve block manufactured by Pneumadyne.

C500



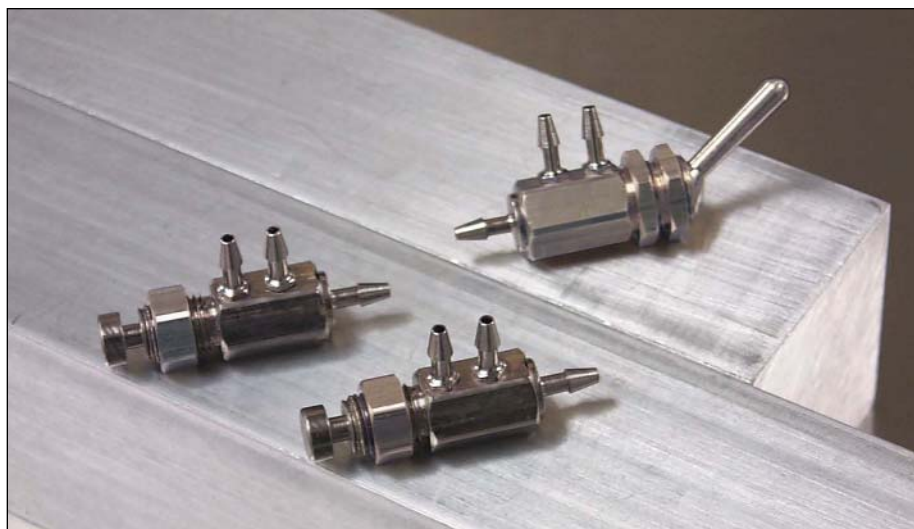
Ordering Information

- To order standard product refer to Product Information listing.
- Contact Pneumadyne for custom valve blocks or manifolds for use with the Cartridge Valves.
- Cavity drawings available, contact factory.

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- Plumbing versatility
- Metal actuators
- 1/16 barbs
- Precision machined
- Robust design



2 & 3-Way Valves Sub-Micro

Pneumadyne's Sub-Micro valves offer a higher flow rate than similar subminiature valves in the marketplace. An impressive flow rate of 2.9 scfm at 125 psi produces a C_v of .04. In addition to accommodating vacuum applications, the versatile design allows these 3-Way valves to be plumbed as normally closed or normally open. Metal actuators enhance the robust design of Pneumadyne's sub-micro valves. The unique design of the detented toggle offers roller ball-like actuation resulting in less wear and longer product life. Flats on the threaded neck ensure that the valve will not rotate when panel mounted. Electroless nickel plating provides corrosion resistance and a pleasing appearance.

Performance Data

Temperature Range	Operating Pressure	C_v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
			50 psi	125 psi		
-20° to 160° F	20" Hg vacuum to 125 psi	.04	1.27	2.90	.11	.19

C_v per ANSI / (NFPA) T3.21.3

Actuation Force

Actuator Style	2-Way Valve		3-Way Valve	
	50 psi	125 psi	50 psi	125 psi
Push Button	24 oz	41 oz	24 oz	41 oz
Toggle	7 oz	11 oz	7 oz	11 oz

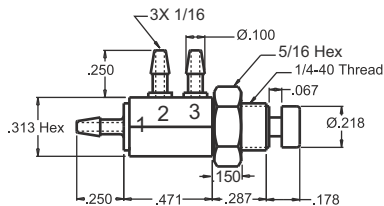
Plumbing Options for Fully Ported Valves

Function	Port 1	Port 2	Port 3
3-Way N.C.	Exhaust	Output	Input
3-Way N.O.	Input	Output	Exhaust
2-Way Diverter	Output	Input	Output
2-Way Selector	Input	Output	Input

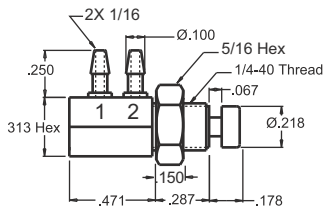
Note: For vacuum application, plumb vacuum source at port 3

C_v per ANSI / (NFPA) T3.21.3

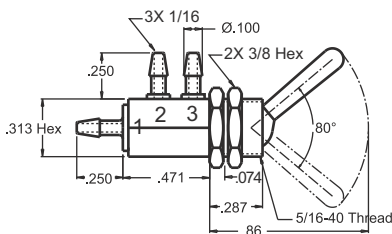
Sub-Micro Valve



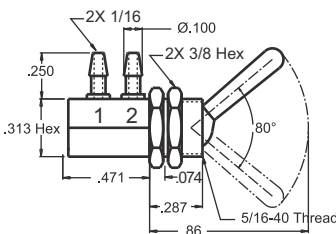
AMM-30-1616



AMM-20-1616

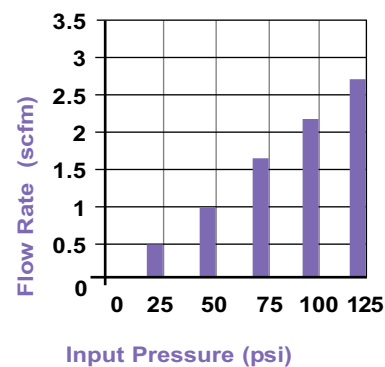


HMM-30-1616



HMM-20-1616

**Sub-Micro Valve
Flow Chart 3WNC**



Materials

Brass / Electroless Nickel, Stainless Steel, Buna-N, Phosphate

Mounting Method

Nominal panel mounting hole dimension

AMM-*0-1616	Ø 17/64"	(1) nut provided
HMM-*0-1616	Ø 21/64"	(2) nuts provided

Ordering Information

- To order standard product refer to Product Information listing.
- Mounting nuts provided.

Product Information

Sub-Micro Valves

Part Number	Operator
2-Way Normally Closed	
AMM-20-1616	Metal Button
HMM-20-1616	Toggle Detented
3-Way Normally Closed	
AMM-30-1616	Metal Button
HMM-30-1616	Toggle Detented

The Sub-Micro valve features an impressive flow rate of 2.9 scfm at 125 psi producing a C_v of .04

1/16 barbs recommended for use with 1/16 ID PUR tubing

Features

- 1/8 NPT (F) ports
- Heavy duty toggle available
- 2-Way or 3-Way function
- Detented & Momentary actuation
- Panel or surface mount
- Anodized for corrosion resistance

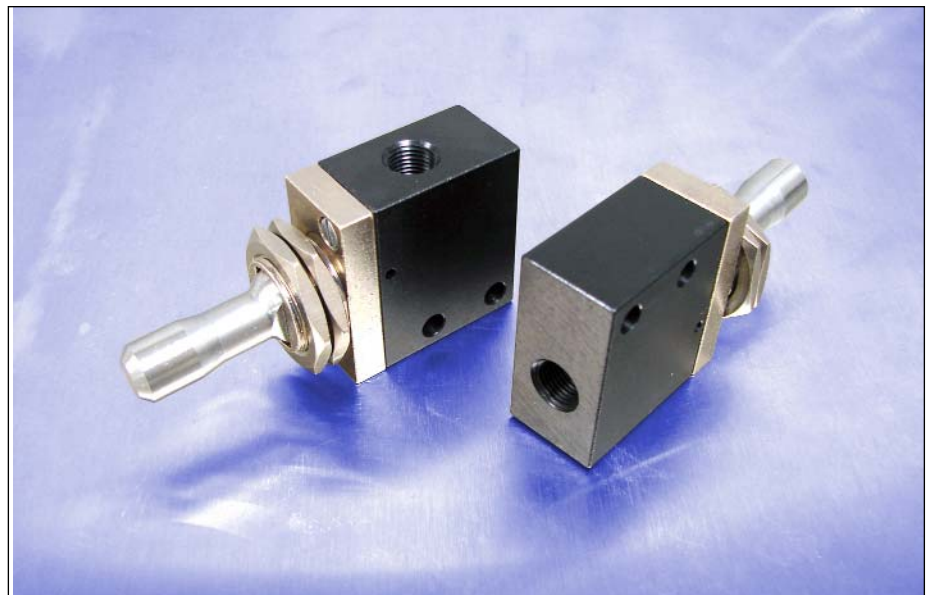
2 & 3-Way Valves 2-Position Toggle

Pneumadyne's new 2-Position Valves are ideal for use in rugged applications. The combination of the solid aluminum body and stainless steel toggle provides the strength needed to withstand harsh conditions.

These 2-Way and 3-Way valves feature 1/8 NPT (F) ports and provide a flow rate of 41 scfm at 125 psi. Both detented and momentary toggles are offered to fit actuation requirements. For extreme environments, heavy duty toggles are also available (-HD option).

Actuation Force

Pressure	2-Way	3-Way
50 psi	72 oz	72 oz
125 psi	7-1/2 lbs	7-1/2 lbs



2-Position Toggle valves shown with Heavy Duty actuator for use in extreme environments. Standard detented and momentary toggles differ in appearance.

2-Position Valve

Performance Data

Temperature Range	Operating Pressure	Media
-20° to 160° F	0 to 125 psi	Compatible w/ seals

Product	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
		50 psi	125 psi		
C04220X & C04230X	.47	19	41	.006	.030

Materials

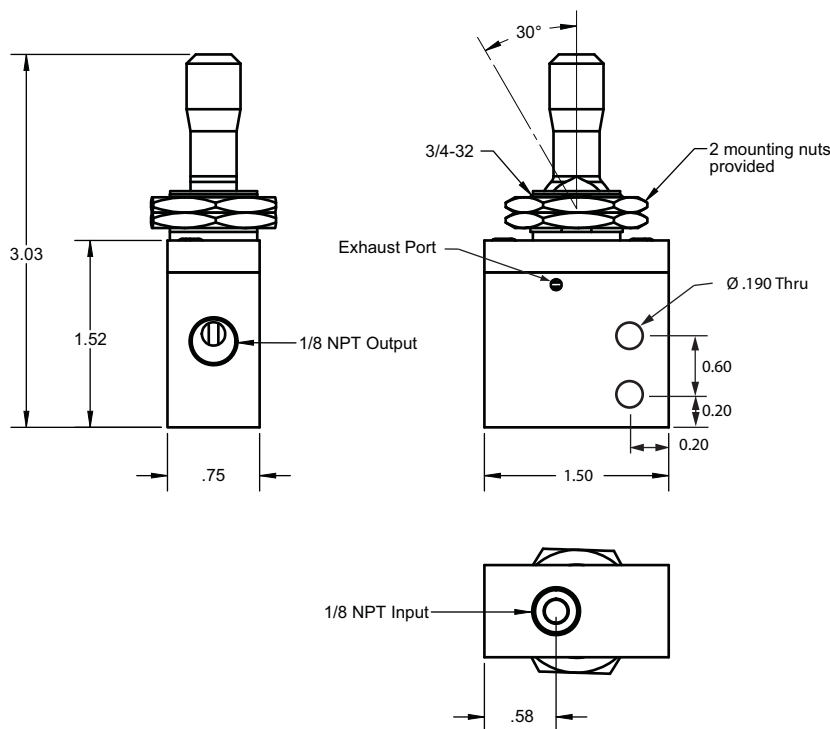
Aluminum/Anodize, Brass/Electroless Nickel, Stainless Steel, Buna-N (other seals available contact factory)

Mounting Method

Panel	Surface
Nominal hole dimension 25/32" (2) nuts provided	(2) .19 diam. thru holes

2-Position Valve

C04230x-HD



Product Information

“400” Series
2-Position Toggle Valve

Part Number Porting Actuation*

2-Way Normally Closed		
C042201	1/8 NPT (F)	Det
C042203	1/8 NPT (F)	Mom
(Heavy Duty Toggle)		
C042201-HD	1/8 NPT (F)	Det
C042203-HD	1/8 NPT (F)	Mom
3-Way Normally Closed		
C042301	1/8 NPT (F)	Det
C042303	1/8 NPT (F)	Mom
(Heavy Duty Toggle)		
C042301-HD	1/8 NPT (F)	Det
C042303-HD	1/8 NPT (F)	Mom

*Det= Detented

*Mom= Momentary

Accessory

Part Number	Description
PPB-3/4	Silicone protective boot for use with momentary style 2-Position Toggle Valves Only

3-Way valves exhaust to atmosphere

- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Ordering Information

- To order standard product refer to Product Information listing.
- With Buna-N O-ring seal, part number listed in chart.
- With Ethylene Propylene O-ring seal, change the “CO” in the part number to “CE”.
- With Viton® O-ring seal, change the “CO” in the part number to “CV”.



2-Position toggle valve shown with Heavy Duty toggle style (at left) and with Silicone Protective Boot (sold separately) installed (at right)

Features

- Maximum flow rate for miniature valve line
- Dual function
- Mounting versatility
- Push-to-connect fittings available
- Available with 1/8 NPT or 1/4 NPT porting



2 & 3-Way Valves 3-Position Toggle

The 3-Position Toggle Valve offers the highest flow rate of the Pneumadyne valve line. This dual function product contains two valves in one body with a common input and common exhaust. The 2-Way **high flow valves** (C042803 & C042903) feature a red anodized body for easy identification.

The smaller electroless nickel version (C04240X) is ideal in limited space applications.

Performance Data

		Temperature Range		-20° to 160° F			
Product	Flow Path	Operating Pressure	C _v	Flow Rate (scfm)		Fill Time	Exhaust Time
				50 psi	125 psi	sec/ in ³ 0-90 psi	sec/ in ³ 100-10 psi
C04240X	1-2	0 to 125 psi	.14	5	11	.03	.05
C04250X C04260X	1-2		.54	23	50	.006	.02
C04280X C04290X	1-2/ 2-1	0 to 150 psi	.70	27	57	.005	.009

Caution: ONLY High Flow version can be plumbed with input at Port 2.
C_v per ANSI / (NFPA) T3.21.3

Actuation Force

Product	2-Way Valve		3-Way Valve	
	50 psi	125 psi	50 psi	125 psi
C04240X	N/A	N/A	56 oz	72 oz
C04250X & C04260X	72 oz	7-1/2 lbs	72 oz	7-1/2 lbs
C04280X & C04290X	64 oz	84 oz	N/A	N/A

Materials

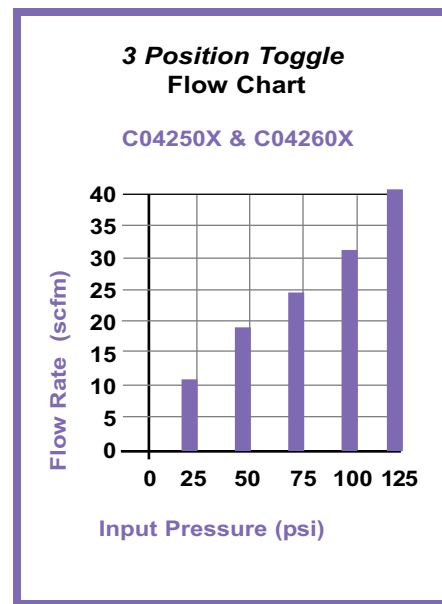
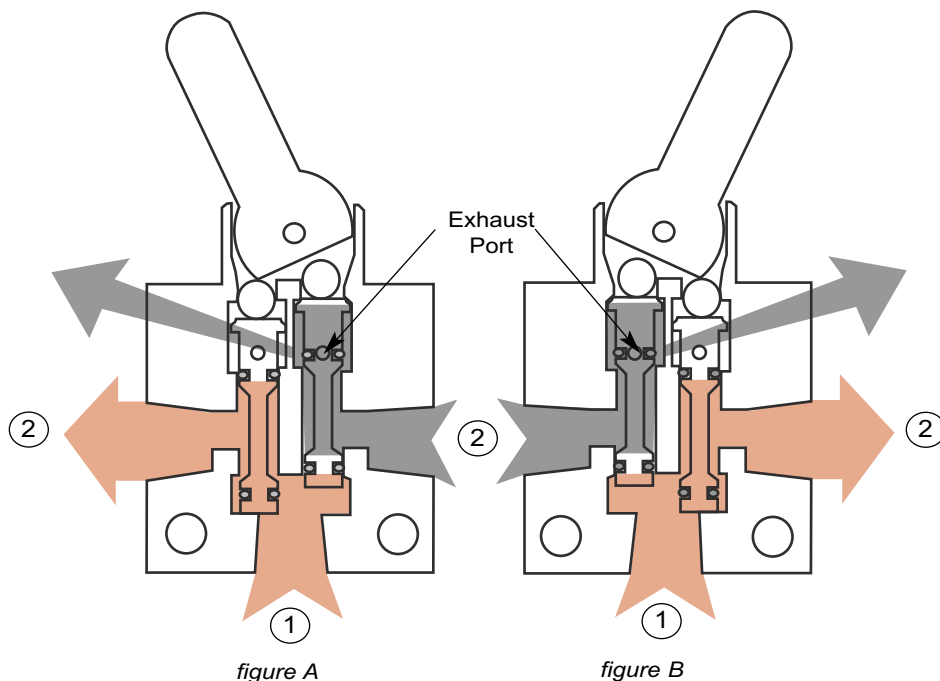
Aluminum/ Anodize, Brass/ Electroless Nickel, Stainless Steel, Buna-N (other seals available contact factory)



3-Position toggle valve shown with Heavy Duty Toggle style (at left) and with Silicone Protective Boot (sold separately) installed (at right)

3 Position Toggle Cross Section

3-Way Normally Closed



3-Position toggle valve (C042403) features a black anodized body for corrosion and wear resistance.

Function

When the toggle is centered in the 2-Way configuration all ports are blocked, in the 3-Way configuration both output ports are open to exhaust.

Port Options

Port 1 Input	● 1/8 NPT (F) ● 1/4 NPT (F)
Port 2 Output	● 1/8 NPT (F) ● 1/4 NPT (F)
Exhaust	<i>non-threaded (3-Way exhausts to atmosphere)</i>

Mounting Method

	Panel	Surface	Hardware
C04240X	Nominal hole dimension 21/32"	(2) .20 diam. thru holes	(1) nuts provided
C04250X C04260X C04280X C04290X	Nominal hole dimension 25/32"	(2) .20 diam. thru holes	(2) nuts provided

The 3-Position Toggle Valve offers the highest flow rate of the Pneumadyne valve line

Product Information

"400" Series

3-Position Toggle Valve

Part Number	Porting	Actuation
2-Way (Standard)		
C042601	1/8 NPT (F)	Det/ Det
C042602	1/8 NPT (F)	Det/ Mom
C042603	1/8 NPT (F)	Mom/ Mom
2-Way (High Flow)		
C042801	1/8 NPT (F)	Det/ Det
C042802	1/8 NPT (F)	Det/ Mom
C042803	1/8 NPT (F)	Mom/ Mom
C042901	1/4 NPT (F)	Det/ Det
C042903	1/4 NPT (F)	Mom/ Mom
2-Way (Heavy Duty Toggle)		
C042601-HD	1/8 NPT (F)	Det/ Det
C042602-HD	1/8 NPT (F)	Det/ Mom
C042603-HD	1/8 NPT (F)	Mom/ Mom

3-Way (Mini)

C042401	1/8 NPT (F)	Det/ Det
C042402	1/8 NPT (F)	Det/ Mom
C042403	1/8 NPT (F)	Mom/ Mom

3-Way (Standard)

C042501	1/8 NPT (F)	Det/ Det
C042502	1/8 NPT (F)	Det/ Mom
C042503	1/8 NPT (F)	Mom/ Mom

3-Way (Heavy Duty Toggle)

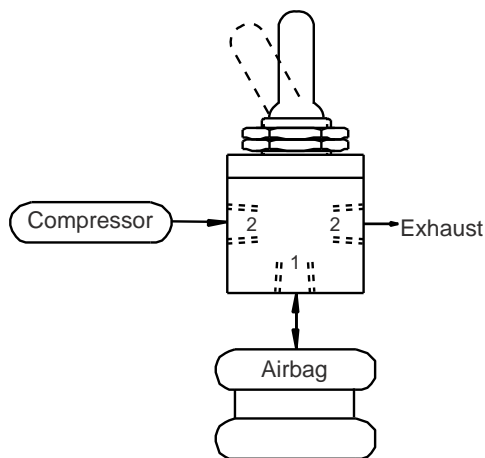
C042501-HD	1/8 NPT (F)	Det/ Det
C042502-HD	1/8 NPT (F)	Det/ Mom
C042503-HD	1/8 NPT (F)	Mom/ Mom

Accessory

Part Number	Description
PPB-3/4	Silicone protective boot for use with momentary style 3-Position Toggle Valves Only

Application Idea

Dual Function Use:



2-Way High Flow

C042803 & C042903 Flow Path 2-1

- Inflate and deflate an air bag lift device (shown above)
- Dual pressure selector

3-Way Standard

C04250X Flow Path 1-2 (not shown)

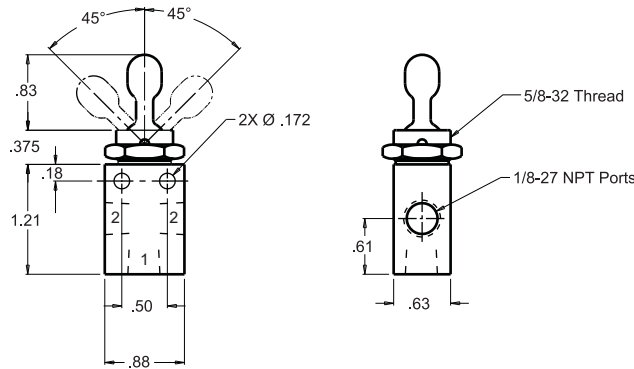
- Can be used in 4-Way applications (open center) to extend and retract cylinders
- Pneumatic pilot control on a hydraulic valve

Ordering Information

- With Buna-N O-ring seal, part number listed in chart.
- With Ethylene Propylene O-ring seal, change the "CO" in the part number to "CE".
- With Viton® O-ring seal, change the "CO" in the part number to "CV".

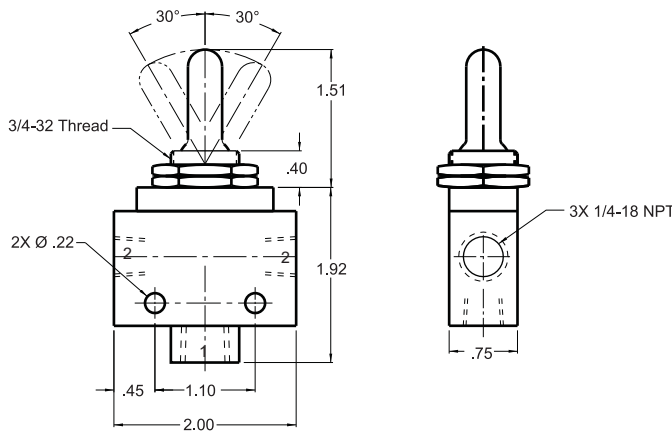
3-Position Toggle

**Mini
C04240X**

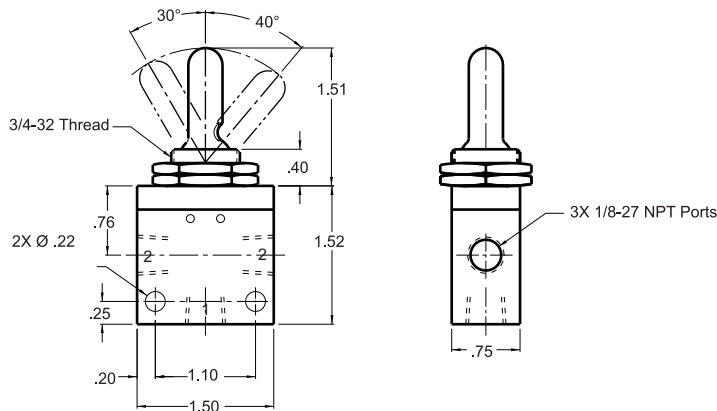


The smaller electroless nickel version (C04240X) is ideal in limited space applications.

**1/4 NPT
C04290X**



**1/8 NPT
C04250X
C04260X
C04280X**



1/8", 5/32", and 1/4" push-to-connect fittings available

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- 6-positions
- Common input
- Detented knob
- Two styles of actuation
- Black anodized for corrosion resistance
- Panel mount
- 10-32 (F) ports



6-Position Selector Valve

Selector Valves allow the actuation of up to six individual circuits from a common input port. Two styles of valves, Standard and Shut-off, are available to accommodate application requirements.

The **Standard Selector Valve** directs flow through each output port as the knob is turned. The **Shut-off Selector Valve** requires the knob to be pushed-in and turned, blocking flow to the output ports until a position is selected. These 3-Way valves exhaust to atmosphere upon selection of a new output port.

A spring-loaded “wear compensating seat” retains a tight fit ensuring that the valve will not leak with wear.

Pneumadyne’s O-ring style and Push-to-Connect fittings are ideal for use in the 10-32 (F) input and output ports.

Performance Data

Temperature Range	Operating Pressure
-20° to 160° F	0 to 125 psi

Product	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
		50 psi	125 psi		
MPS-6-100	.11	4.0	8.8	.0313	0.0313
MPS-6-100-S	.09	3.2	6.7	.0428	.0428

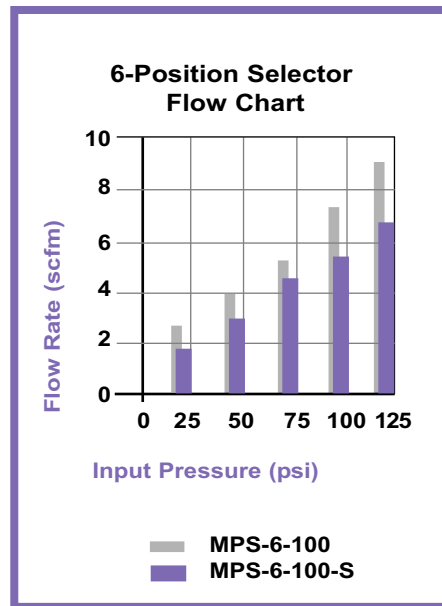
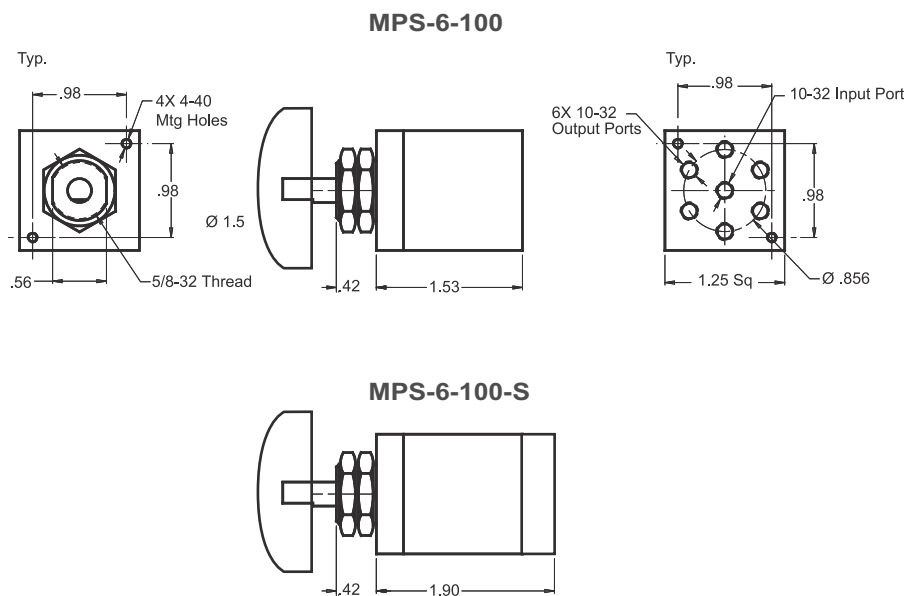
C_v per ANSI / (NFPA) T3.21.3

Materials

Aluminum/Anodize, Brass/Electroless Nickel, Stainless Steel, Buna-N, Acetal Copolymer, PTFE, Phenolic

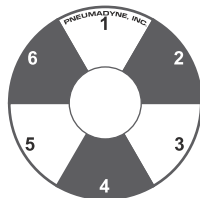
Pneumadyne’s Selector Valves allow the actuation of up to six individual circuits

6-Position Selector



Standard Products Ideal for use with Selector Valves

6-Position Selector Label (included)



- 2" dial label is included for use as a visual guide on a panel. Knob alignment: the set screw must be aligned with the flat on the stem.

O-ring Barb Fittings & Plugs (sold separately)



- Unused output ports can be plugged with SPG-10
- Reliability of a metal-to-metal mechanical fit
- Captured O-ring for superior seal
- Precision machined barb design
- Electroless nickel plated brass

Push-to-Connect Fittings (sold separately)
Product No.
 SF-125PI
 SF-156PI



- Push-to-Connect: 1/8" or 5/32" OD PU tube
- Collet design ensures superior clamping with various types of tubing
- Electroless nickel plated brass

Product Information

Part Number	Description
MPS-6-100	Standard Actuation
MPS-6-100-S	Shut-off Actuation

Mounting Method

Panel	Nominal mounting hole dimension
	41/64"

(2) nuts provided

Ordering Information

- To order standard product refer to Product Information listing.
- Contact factory for custom configurations.

Features

- 4-Way 2 position function
- Balanced spool design (45 Series)
- Heavy duty toggle available
- Panel or surface mount
- Push-to-connect fittings available



4-Way Valves “4” & “45” Series

4-Way valves are one of the most commonly used pneumatic components for directional control. A 4-Way has four distinct flow paths within the valve and is commonly used to cause reversible motion of a cylinder or motor.

Pneumadyne manufactures two complete series of 4-Way valves featuring multiple actuator and porting options.

The “4” **Series** valves feature five actuator options including a specially designed Heavy Duty Toggle for use in rugged applications.

The “45” **Series** valves feature higher flow rates and a balanced spool allowing the use of threaded exhaust ports to direct and capture exhaust flow. In addition to the standard toggles and buttons, a Double Push Button (-DP) has been added to accommodate circuitry requirements.

The Double Push Button is most commonly used in conjunction with air pilot operators. This combination allows two different pneumatic signals to actuate the valve and direct air flow. For plumbing convenience, push-to-connect fittings are also available.

Performance Data

Temperature Range	Operating Pressure	Media
-20° to 160° F	0 to 125 psi	Compatible w/ seals

Product	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
		50 psi	125 psi		
“45” Series 10-32 (F)	.23	7.8	17.3	.02	.03
“45” Series 1/8 NPT (F)	.37	12.1	27.2	.01	.02
“4” Series	.13	5.1	10.9	.03	.05

C_v per ANSI / (NFPA) T3.21.3

Port Options

Definition	Port 1 Input	Port 2, 4 Output	Port 3, 5 Exhaust
“45” Series 10-32 (F)	10-32 (F)	10-32 (F)	10-32 (F)
“45” Series 1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)
“4” Series	<ul style="list-style-type: none"> ● (x3) 10-32 (F) ● (x3) 5/32” PI ● (x3) 1/8 NPT (F) 	<ul style="list-style-type: none"> ● (x3) 1/4” PI ● (x3) 1/8” PI 	non-threaded NOT TO BE RESTRICTED

Note: If the valve is used to select between two different pressures, the higher pressure must flow between ports 4 and 5, the lower pressure between port 2 and 3.

“4” Series Cross Section 4-Way 2-Position

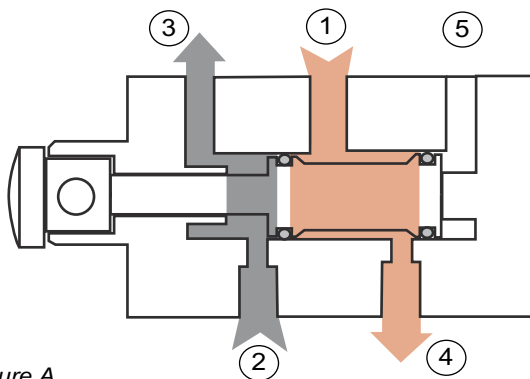


figure A

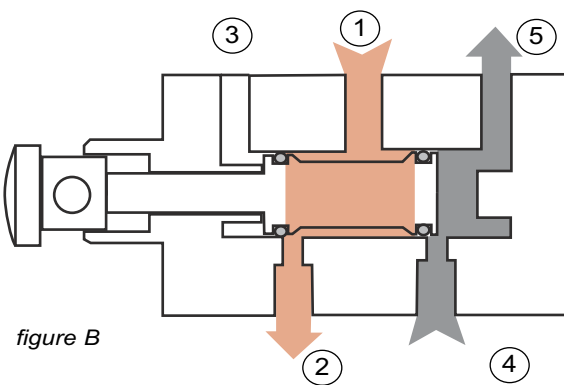


figure B

Function

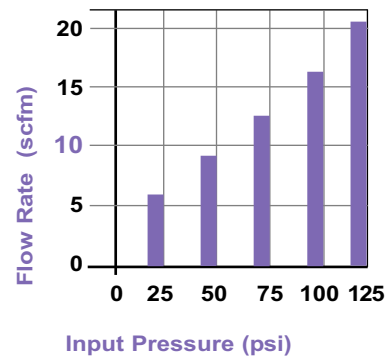
In the example above (figure A) flow is directed through port 1 to port 4 as port 2 exhausts to atmosphere through port 3.

In figure B the spool is reversed and the flow is directed through port 1 to 2 as port 4 exhausts to atmosphere through port 5.

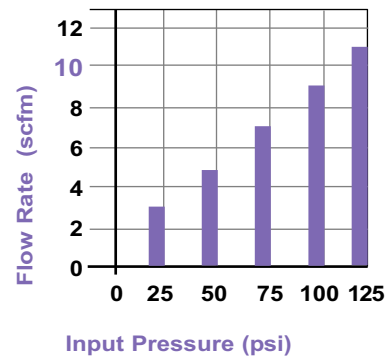
Actuation Force

Actuator Style	“45” Series: 10-32 (F)		“45” Series: 1/8 NPT (F)		“4” Series	
	50 psi	125 psi	50 psi	125 psi	50 psi	125 psi
Nylon Toggle	16 oz	16 oz	16 oz	20 oz	N/A	N/A
Metal Toggle	13 oz	13 oz	13 oz	16 oz	16 oz	16 oz
Push Button	5 lbs	8 lbs	5 lbs	8 lbs	3 lbs	3 lbs
Double Push Button	16 oz	3 lbs	16 oz	3 lbs	12 oz	12 oz

45 Series: 1/8 NPT (F)
Flow Chart



4 Series
Flow Chart



Materials

Aluminum/ Anodize, Brass/ Electroless Nickel, Acetal, Stainless Steel, Nylon, Nickel, Buna-N (other seals available - contact factory)

Mounting Method

Series	Panel	Surface
“45” Series 10-32 (F)	31/64”	MB-1 or MB-1F
“45” Series 1/8 NPT (F)	31/64”	(3) .14 diam. thru holes
“4” Series	31/64”	(2) .20 diam. thru holes
“4” Series Heavy Duty Toggle	21/32”	(2) .20 diam. thru holes



“4” Series valve with Heavy Duty Toggle and push-to-connect fittings

Ordering Information

- To order standard product refer to Product Information listing.
- Optional seals- contact factory.
- Spring Bias function available to custom orders.
- Push/Pull Knob (PK) now available in red. To order add a -3 suffix to the part number.
- Nylon toggles and push buttons are available in seven colors with black as standard. To order colored actuators specify the color, by code, as a “-code# ” suffix following the part number ([see color code chart](#)).

Product Number Diagram

“4” Series

A 4 C - 1 0 0 - D P

Actuator

- A= Push Button
- H= Heavy Duty Detent Toggle
- F= Heavy Duty Momentary Toggle

Series

- 4= “4” Series

Finish

- C= Black Anodize
- N= Electroless Nickel (10-32 Only)

Port Options

- 100= 10-32 (F)
- 125= 1/8” Push-in
- 156= 5/32” Push-in
- 250= 1/4” Push-in
- 1/8= 1/8 NPT (F)

Actuator Style

- DP= Double Push
- DT= Toggle Detent
- PK= Push/Pull Knob
- SR= Spring Return

Example:

“4” Series, Aluminum/ Black Anodize, 10-32 (F) ports, Double Push Button

“45” Series

A P 4 5 - 1 0 0 - S R

Actuator

- AP= Push Button
- AM= Metal Button
- FP= Momentary Toggle
- HP= Detented Toggle
- HM= Metal Detented Toggle

Series

- 45= “45” Series

Port Options

- 100= 10-32 (F)
- 1/8= 1/8 NPT (F)

Actuator Style

- DP= Double Push
- DT= Detented
- SR= Spring Return

Example:

“45” Series, Nylon Button, 10-32 Fully Ported, Spring Return

- Please use **Product Number Diagram** to interpret part numbers (*do not attempt to build part numbers*) see **Product Information** for part number listing.

Product Information

“4” Series Standard
4-Way 3 Port 2 Position

Porting	Part Number	Actuator
10-32 (F)	A4C-100-DP	Double Push Button
	A4C-100-PK	Push/Pull Knob
	A4C-100-SR	Button w/ Spring Return
	A4N-100-DP	Double Push Button- ENI
	A4N-100-PK	Push/Pull Knob- ENI
	A4N-100-SR	Button w/ Spring Return- ENI
	F4C-100-SR	Heavy Duty Toggle-Mom
	F4N-100-SR	Heavy Duty Toggle-Mom- ENI
	H4C-100-DT	Heavy Duty Toggle-Det
	H4N-100-DT	Heavy Duty Toggle- Det
1/8 NPT (F)	A4C-1/8-DP	Double Push Button
	A4C-1/8-PK	Push/Pull Knob
	A4C-1/8-SR	Button w/ Spring Return
	F4C-1/8-SR	Heavy Duty Toggle- Mom
H4C-1/8-DT	Heavy Duty Toggle-Det	
1/8" Push-in	A4C-125-DP	Double Push Button
	A4C-125-PK	Push/Pull Knob
	A4C-125-SR	Button w/ Spring Return
	F4C-125-SR	Heavy Duty Toggle-Mom
H4C-125-DT	Heavy Duty Toggle-Det	
5/32" Push-in	A4C-156-DP	Double Push Button
	A4C-156-PK	Push/Pull Knob
	A4C-156-SR	Button w/ Spring Return
	F4C-156-SR	Heavy Duty Toggle-Mom
H4C-156-DT	Heavy Duty Toggle-Det	

“4” Series Standard
4-Way 3 Port 2 Position

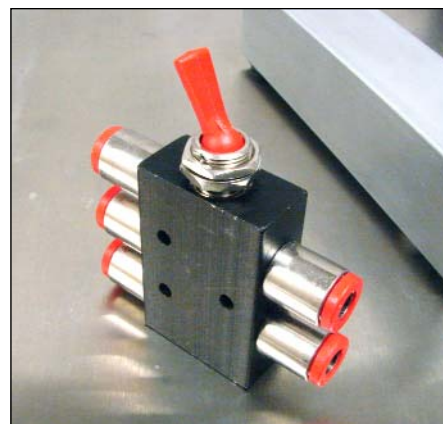
Porting	Part Number	Actuator
1/4" Push-in	A4C-250-DP	Double Push Button
	A4C-250-PK	Push/Pull Knob
	A4C-250-SR	Button w/ Spring Return
	F4C-250-SR	Heavy Duty Toggle-Mom
H4C-250-DT	Heavy Duty Toggle-Det	

“45” Series
10-32 (F) Fully Ported
4-Way 5 Port 2 Positions

Porting	Part Number	Actuator
10-32 (F)	AP45-100-DP	Double Push Button
	AP45-100-SR	Nylon Button
	AM45-100-SR	Metal Button
	FP45-100-SR	Nylon Tog Mom
	HP45-100-DT	Nylon Tog Det
	HM45-100-DT	Metal Tog Det

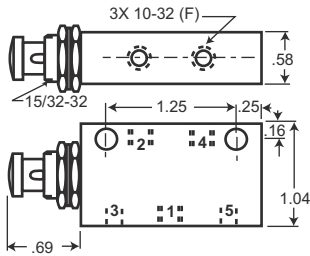
“45” Series
1/8 NPT (F) Fully Ported
4-Way 5 Port 2 Positions

Porting	Part Number	Actuator
1/8 NPT (F)	AP45-1/8-DP	Double Push Button
	AP45-1/8-SR	Nylon Button
	AM45-1/8-SR	Metal Button
	FP45-1/8-SR	Nylon Tog Mom
	HP45-1/8-DT	Nylon Tog Det
	HM45-1/8-DT	Metal Tog Det

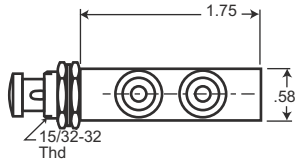


“45” series valves are also available with 1/8”, 5/32”, 1/4” and push-to-connect fittings

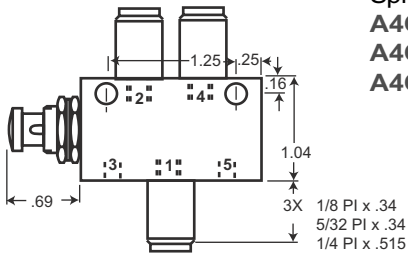
"4" Series



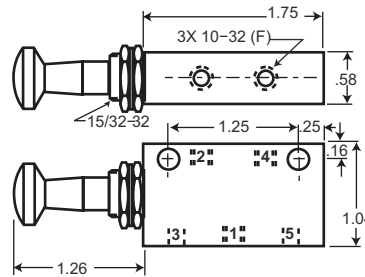
Spring Return
A4C-100-SR
A4N-100-SR



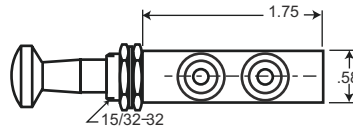
Spring Return
A4C-125-SR
A4C-156-SR
A4C-250-SR



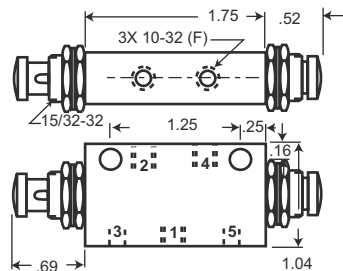
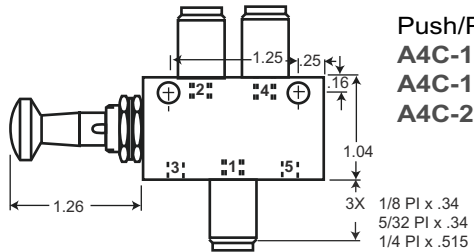
"4" Series



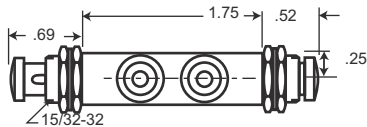
Push/Pull Knob
A4C-100-PK
A4N-100-PK



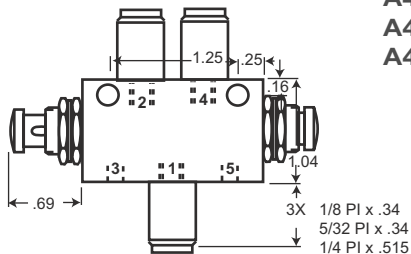
Push/Pull Knob
A4C-125-PK
A4C-156-PK
A4C-250-PK



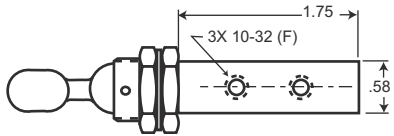
Double Push Button
A4C-100-DP
A4N-100-DP



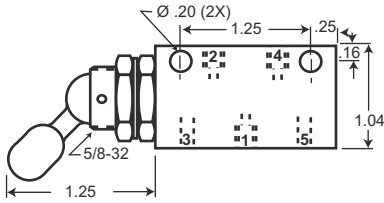
Double Push Button
A4C-125-DP
A4C-156-DP
A4C-250-DP



“4” Series



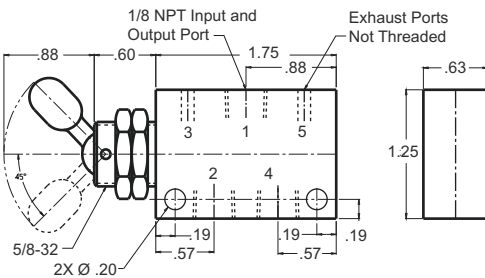
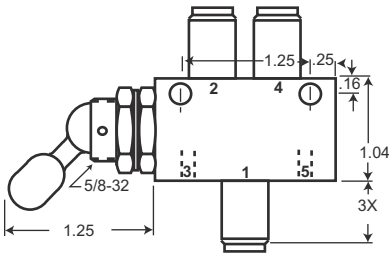
Heavy Duty Toggle
H4C-100-DT
H4N-100-DT
F4C-100-SR



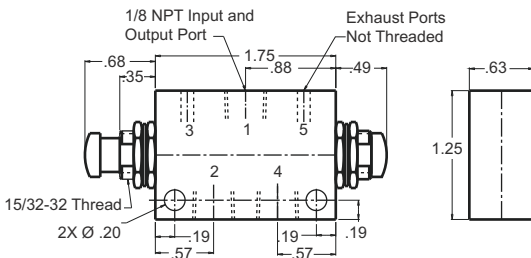
Heavy Duty Toggle

H4C-125-DT
H4C-156-DT
H4C-250-DT

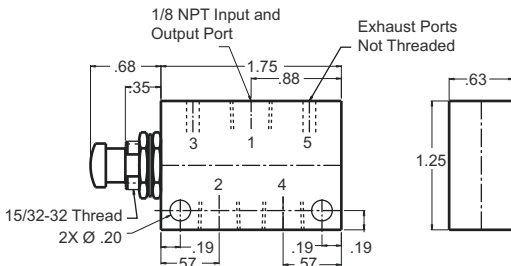
F4C-125-SR
F4C-156-SR
F4C-250-SR



Heavy Duty Toggle
F4C-1/8-SR
H4C-1/8-DT



Double Push Button
A4C-1/8-DP

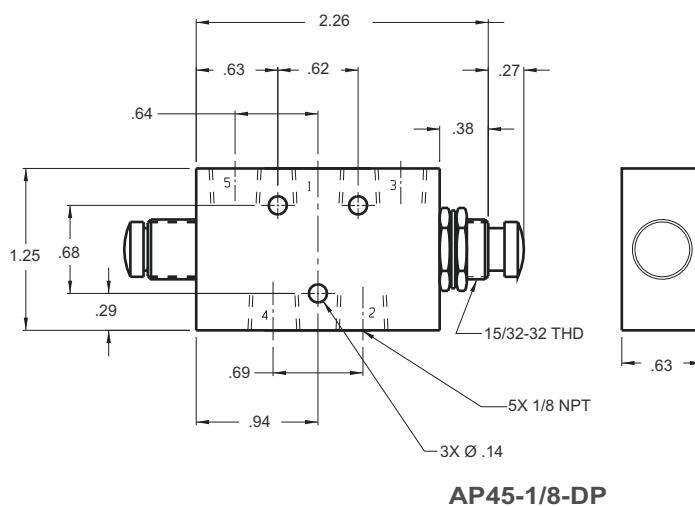
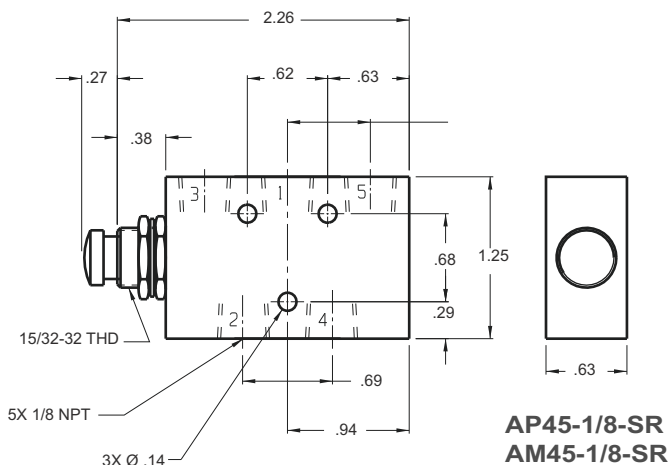
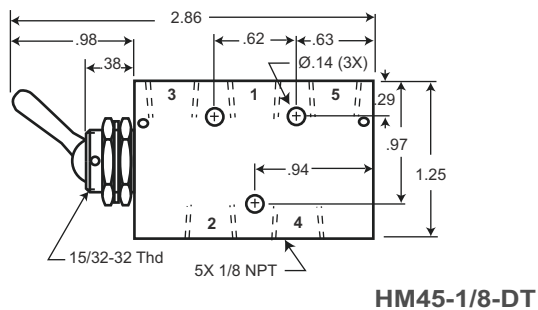
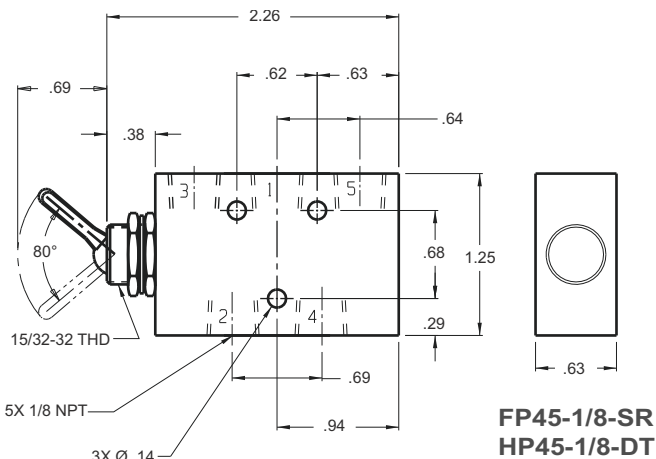


Spring Return
A4C-1/8-SR

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

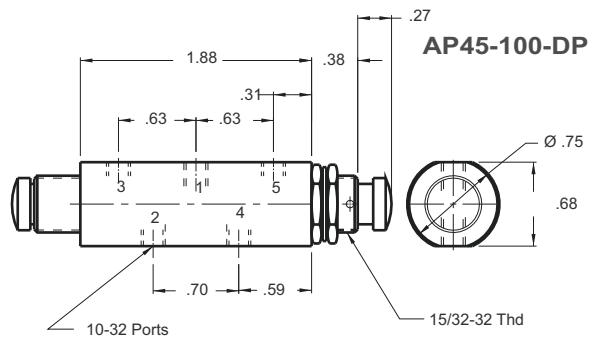
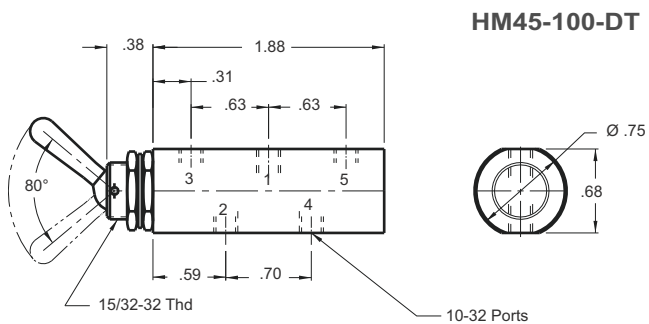
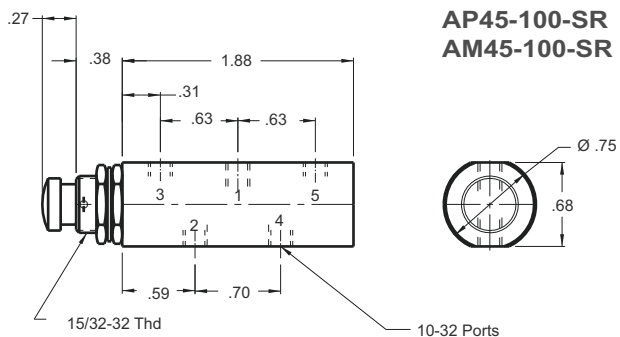
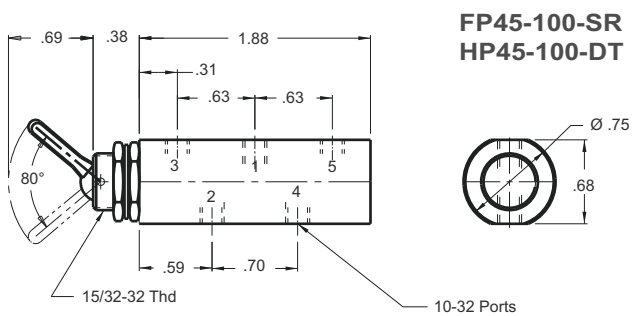
"45" Series

"45" Series



● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

"45" Series



Features

- Space Saving
- Variety of components on single pressure source
- Precision manufacturing ensures consistent valve centers
- Accessories available to enhance operation



System 11 Valve Consolidation

System 11 is a method of consolidating 2 to 10 components with a common pressure source. Components available for placement on the System 11 manifold include "11" Series Regulators, "11" Series Valves ("A" style recommended) and "11" Series Needle Valves. All products feature swivel output porting for alignment convenience.

Optional Accessories

Products available to enhance the operation of the System 11 include:

- Air Pilot Operator
- Micro Gauges
- Thumb Operator
- Armored Push Button Operator

See [pgs 64-69](#) for additional information.

Performance Information

To avoid a starved system input supply should exceed total output demand.

Mounting Methods

The System 11 manifold can be **panel** mounted or **surface** mounted. For panel mounting all components must be the same height. Exact 1" center-to-center spacing makes it easy to predrill and insert the System 11 components through the panel and tighten down. For surface mounting to a machine member use either of the two sets of mounting holes provided.

Ordering Information

All System 11 assemblies are designed per order. Contact the factory for technical support regarding system requirements and to determine product configuration and part number.

1. Select component requirements.
2. Determine the sequence for component placement.
3. The quantity of manifold stations is determined by #1.
4. Select optional accessories.

All System 11 assemblies are assembled at the factory (System 11 manifolds are not sold separately). For component information refer to standard catalog information.

Product Information

System 11

"11" Series Regulators

	Part Number	Output
Relieving		
Knurled Knob	R11-RK-14	1/8 NPT (F)
	R11-RK-16	1/4 Push-in
	R11-RK-17	5-32 Push-in
Panel Knob	R11-RP-14	1/8 NPT (F)
	R11-RP-16	1/4 Push-in
	R11-RP-17	5-32 Push-in
Non-Relieving		
Knurled Knob	R11-NK-14	1/8 NPT (F)
	R11-NK-16	1/4 Push-in
	R11-NK-17	5-32 Push-in
Panel Knob	R11-NP-14	1/8 NPT (F)
	R11-NP-16	1/4 Push-in
	R11-NP-17	5-32 Push-in

"11" Series Needle Valves

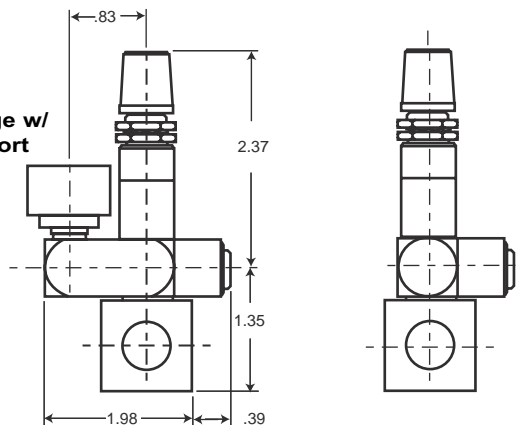
Part Number	Output
PNV11-14	1/8 NPT (F)
PNV11-16	1/4 Push-in
PNV11-17	5-32 Push-in

"11" Series Valves

Part Number	Output
2-Way Normally Closed	
*11-20-14	1/8 NPT (F)
*11-20-16	1/4 Push-in
*11-20-17	5-32 Push-in
2-Way Normally Open	
*11-21-14	1/8 NPT (F)
*11-21-16	1/4 Push-in
*11-21-17	5-32 Push-in
3-Way Normally Closed	
*11-30-14	1/8 NPT (F)
*11-30-16	1/4 Push-in
*11-30-17	5-32 Push-in
3-Way Normally Open	
*11-31-14	1/8 NPT (F)
*11-31-16	1/4 Push-in
*11-31-17	5-32 Push-in

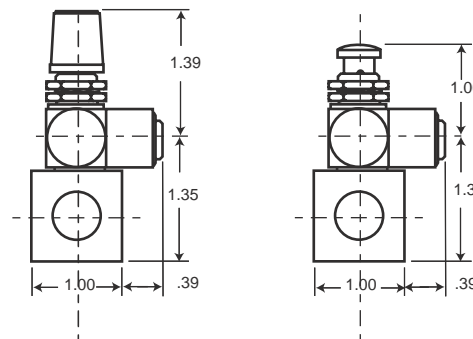
To indicate actuator selection replace the "*" in the above **Part Number** with one of the following:
 A= Push Button
 F= Momentary Toggle
 H= Detented Toggle

"11" Series Regulator Micro Gauge w/ extended port housing



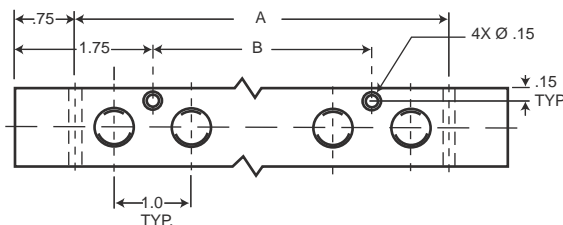
"11" Series Regulator mounted on manifold

"11" Series Needle Valve mounted on manifold



"11" Series Valve mounted on manifold

System 11 Manifold



System 11 Manifold

Number of Stations	Mounting Dimension		OAL
	A	B	
M11-2	2	-	3.5
M11-3	3	1	4.5
M11-4	4	2	5.5
M11-5	5	3	6.5
M11-6	6	4	7.5
M11-7	7	5	8.5
M11-8	8	6	9.5
M11-9	9	7	10.5
M11-10	10	8	11.5

All measurements are given in inches unless otherwise specified.

The System 11 components are modified for use only on the System 11 manifold

For additional component information and performance data please refer to standard product sections

System 11 manifolds feature 1/4 NPT (F) input ports

Features

- Rugged design
- Several styles in an assortment of colors
- Oil and water tight
- 30 mm diameter
- Panel mount
- Matches electrical controls
- For use with Pneumadyne push button valves



Oil Tight Operators

Pneumadyne’s offering of Oil Tight Operators provides a selection of push buttons in flush, raised and mushroom styles as well as key, knob and lever operators. All operators offer easy actuation and several are available in assorted colors, useful in coding control panels.

The rugged design is oil and water tight, ensuring that liquids will not leak behind the operator and into your panel.

Oil Tight Operators can be used with Pneumadyne’s push button style valves. The AOT Adapter is required to install the operator on to the valve.

Product Information

Size 30 Part Number	Description	Available Color	Valve Lock Washer Req.
FPB-30-*	Flush Push Button	2,3,4,5,6	
KEY-30	Key Lock Push-in and turn clockwise to lock, turn counterclockwise to unlock. Key removable in both positions.	2	
MPB-30-*	Mushroom Push Button	2,3,5	
PMH-30-*	Palm Mushroom Button	2,3,5	
PP-30-*	Push-Pull Button	2,3,5	
RPB-30-*	Raised Push Button	2,3,4,5,6,7	
SEL-301-2	2 Position Knob Selector-Det	2	●
SEL-302-2	2 Position Knob Selector-Mom	2	●
SMB-30-*	Shrouded Mushroom Button	2,3	
TL-30-2	Toggle Lever - Detented	2	●
AOT	Oil Tight Adapter	2	

* Use color code to indicate color selection not *all* colors are available to *all* actuators see “Available Color” for possible selections

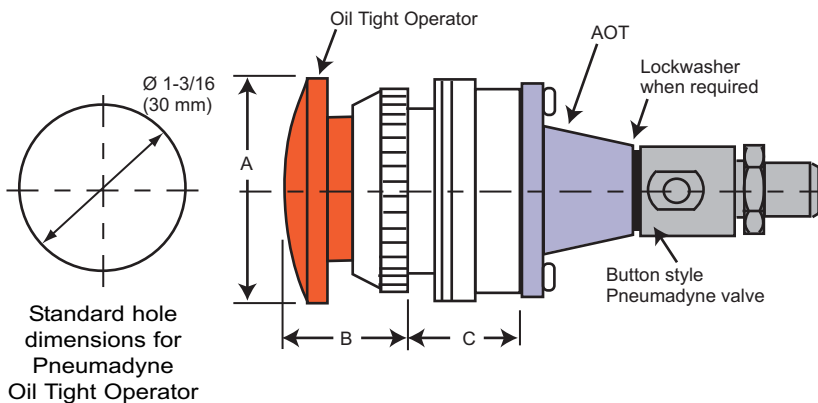
- | | | |
|----------|----------|-----------|
| 2= Black | 4= Blue | 6=Yellow |
| 3= Red | 5= Green | 7= Orange |

Pneumadyne custom designs products for use in definite purpose applications

- These styles require installation of a lockwasher on the valve neck before fixing the valve to the oil tight adapter.

Oil Tight Operators

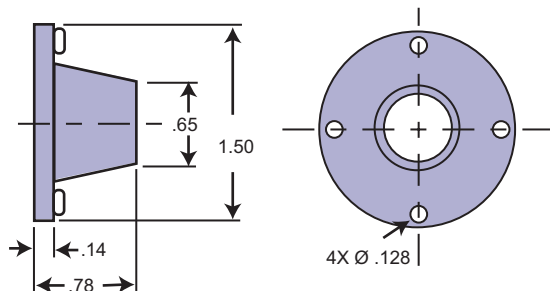
Typical Oil Tight Operator with Valve installed



Size 30 Part Number	Dimensions		
	A	B	C
FPB-30-*	1.378	.354	.669
KEY-30	1.378	.906	1.004
MPB-30-*	1.575	.827	.669
PMH-30-*	2.800	1.180	.669
PP-30-*	1.575	1.614	.945
RPB-30-*	.950	.610	.669
SEL-301-2	1.378	.866	.984
SEL-302-2	1.378	.866	.984
SMB-30-*	1.890	.906	.790
TL-30-*	1.378	.984	.591

- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Oil Tight Adapter



Part Number: AOT

Mounting screws included (2 each)

The Oil Tight Operators can be used with most Pneumadyne directional control valves

Ordering Information

- To order standard product refer to Product Information listing.
- All parts sold separately.
- Two keys are provided with the Key Lock Operator.

Features

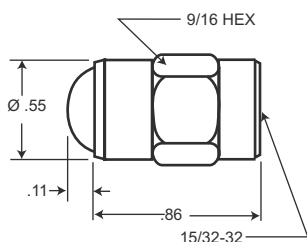
Accessories to customize and enhance our standard product line are sold separately

- **Operators:**
 - Armored button
 - Ball Operator
 - Air Pilot
 - Shrouded Button Operator
 - Heavy Duty Operator
 - Foot Pedal
 - Cam Operators
 - Thumb Operator
- **Mounting Brackets**
- **Dress Plates**
- **Micro Gauge**



Valve Accessories

Ball Operators



Note: One 5/64" thick locknut (provided) is required when installed without a mounting bracket.

Designed for use on Pneumadyne push button valves (15/32-32 Thd). A captured stainless steel ball bearing has direct contact with the valve button. (Not for use on "4" Series valves)

Product Information

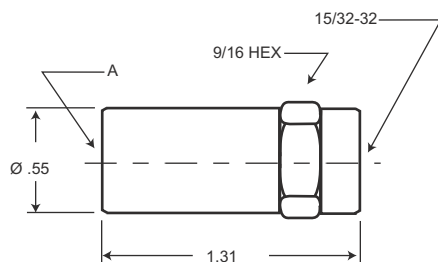
Part Number	Max. Stroke	Mounting
BA-1	.11"	15/32-32 (F)

- Refer to [Force to Actuate chart](#) for actuation information.

Materials

Brass/ Electroless Nickel, Stainless Steel

External Air Pilot Operators



Note: One 5/64" thick locknut (provided) is required when installed without a mounting bracket.

Designed for use on Pneumadyne push button valves (15/32-32 Thd) and available in two port sizes. A brass piston and Buna-N cup seal ensure consistent leakproof actuation (the valve returns the piston). Ideal for remote actuation of valves using a pneumatic signal.

Product Information

Part Number	Air Pilot Port "A"	Mounting
AP-1	10-32 (F)	15/32-32 (F)
AP-2	1/8 NPT (F)	15/32-32 (F)

- Refer to [Force to Actuate chart](#) for actuation information.

Materials

Brass/ Electroless Nickel, Buna-N

Low Pressure Air Pilot Operator

Designed for use with Pneumadyne push button valves. The design of the internal piston in conjunction with a low friction u-cup minimizes drag allowing faster valve actuation. 10-32 (F) pilot port for use with Pneumadyne o-ring style barb and push-to connect fittings.

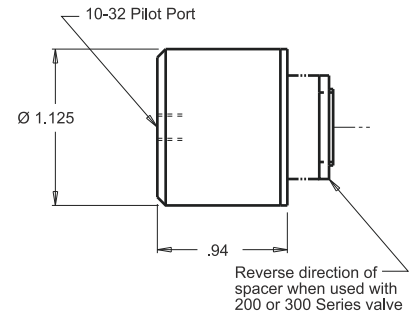
Product Information

Part Number	Mounting
APLP-1	15/32-32 (F)

- Refer to [Force to Actuate chart](#) for actuation information.

Materials

Aluminum/ Anodize, Aluminum/ Electroless Nickel, Aluminum, Buna-N



Note: One 5/64" thick locknut (provided) is required when installed without a mounting bracket.

Shrouded Button Operator

Designed for use with Pneumadyne push button valves, the Shrouded Button provides a larger tactile surface for actuation. Available in three colors. Replace the "X" in the part number with the desired color code number.

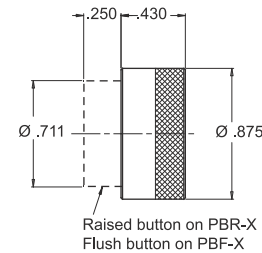
Product Information

Part Number	Mounting	Description	Standard Available Color
PBF-X	15/32-32 (F)	Flush	2= Black 3= Red 5= Green
PBR-X	15/32-32 (F)	Raised	

- Refer to [Force to Actuate chart](#) for actuation information.

Materials

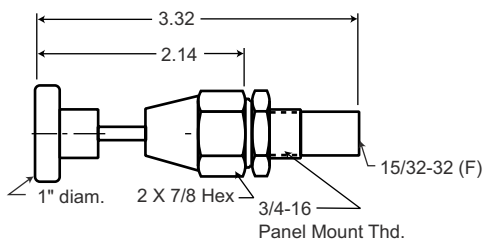
Aluminum/ Anodize, Aluminum/ Electroless Nickel, Brass



Note: One 5/64" thick locknut (provided) is required when installed without a mounting bracket.

- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Heavy Duty Operator



The heavy duty operator is designed for use on Pneumadyne push button valves and is available in **push** and **push-to-lock** styles. Ideal for heavy duty industrial use.

Product Information

Part Number	Style	Max Stroke	Mounting Holes
HDO	Push	.35	3/4"
HDOL	Push-to-Lock	.35	3/4"

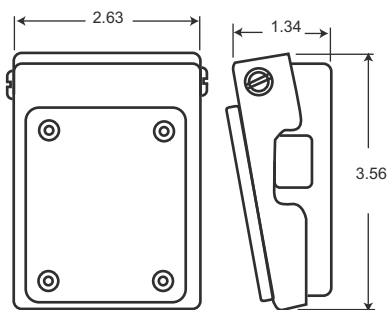
● Refer to [Force to Actuate chart](#) for actuation information.

Stroke ratio defined in glossary (pg 225)

Materials

Aluminum/ Black Anodize, Brass, Steel, Buna-N, Stainless Steel/ Zinc

Foot, Hand, Knee Operator



One locknut and designated spacer are required for installation (locknut supplied with valve)

Designed for use with Pneumadyne "O", "11" and "300" Series valves. An adhesive backed thick rubber pad is riveted to the steel pedal for skid resistance and comfort. (Not for use on "4" or "45" 1/8 NPT Series valves)

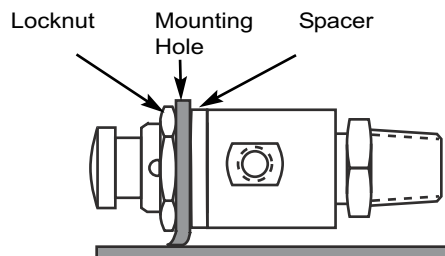
Product Information

Part Number	Max. Stroke
FPA	Approximately .20"

● Refer to [Force to Actuate chart](#) for actuation information.

Materials

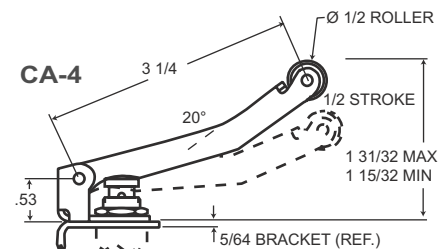
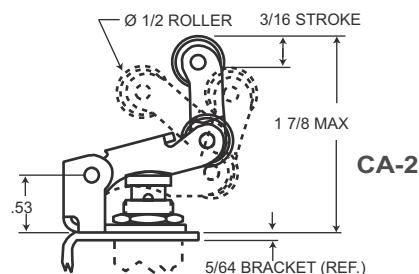
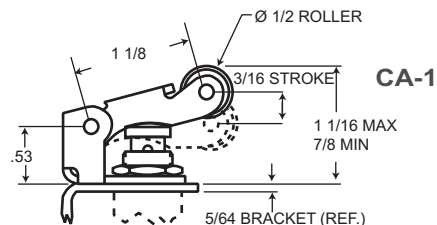
Steel/ Dichromate, Stainless Steel, Aluminum, Brass, Buna-N



Cam Operators

Designed for use on Pneumadyne push button valves and available in three styles. All are manufactured from steel with electro nickel plating. The roller is manufactured from durable acetal plastic. All cams feature a unique acetal pad which minimizes side load and virtually eliminates wear.

(Not for use on "4" Series valves)



Product Information

Part Number	Stroke Ratio	Mounting Holes
CA-1	2.1	31/64"
CA-2	2.5	31/64"
CA-4	6	31/64"

- Refer to [Force to Actuate chart](#) for actuation information.

Stroke ratio defined in glossary (pg 225)

Must be installed with a mounting bracket MB-1 or MB-1F, or 5/64" thick nut (supplied with valve).

Materials

Steel/ Electroless Nickel, Acetal, Stainless Steel

Thumb Operators

Designed for use on Pneumadyne push button valves to provide greater tactile surface and reduce operator fatigue. Features a unique acetal pad which minimizes side load and virtually eliminates wear. *(Not for use on "4" Series valves)*

Product Information

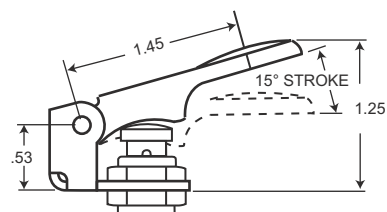
Part Number	Stroke Ratio	Mounting Holes
TA-1	2.7	31/64"

- Refer to [Force to Actuate chart](#) for actuation information.

Stroke ratio defined in glossary (pg 225)

Materials

Steel/ Electroless Nickel, Acetal, Stainless Steel



- To prevent pre-stroking **All** cam operators must be installed with a mounting bracket, MB-1 or MB-1F or 5/64" thick nut (supplied with the valve).

- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

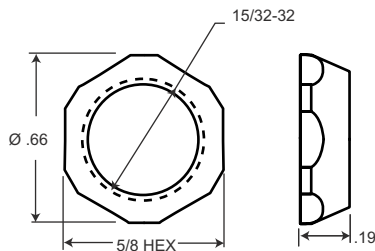
Force to Actuate

Valve Accessory Part Number

Pneumadyne Product Line Force to Actuate	AB-1 AB-2 Lbs	AP-1 AP-2 psi	APLP-1 psi	BA-1 Lbs	CA-1 Lbs	CA-2 Lbs	CA-4 Lbs	FPA Lbs	HDO Lbs	PBF-X PBR-X Lbs	TA-1 Lbs
	"O" Series; NO										
50 psi	3.00	25	3.6	3.00	1.50	1.25	.50	3-6	6.00	3.00	1.25
125 psi	5.30	44	6.4	5.30	2.50	2.25	1.00	3-6	8.75	5.30	2.25
"O" Series; NC											
50 psi	3.20	26	3.8	3.20	1.50	1.25	.75	3-6	6.25	3.20	1.25
125 psi	5.70	47	6.8	5.70	2.75	2.25	1.00	3-6	9.25	5.70	2.25
"3" Series											
50 psi	3.50	29	4.2	3.50	1.75	1.50	.75	3-6	6.50	3.50	1.50
125 psi	6.10	51	7.4	6.10	3.00	2.50	1.00	3-6	9.50	6.10	2.50
"11" Series; NO											
50 psi	7.60	63	9.2	7.60	3.75	3.00	1.25	3-6	10.50	7.60	3.00
125 psi	11.00	91	13.3	11.00	5.25	4.50	2.00	3-6	14.50	11.00	4.50
"11" Series; NC											
50 psi	3.80	32	4.7	3.80	2.00	1.50	.75	3-6	6.75	3.80	1.50
125	7.20	60	8.7	7.20	3.50	3.00	1.25	3-6	10.75	7.20	3.00
"200" Series											
50 psi	1.90	16	2.3	1.90	1.00	1.00	.50	3-6	5.00	1.90	1.00
125 psi	3.20	26	3.8	3.20	1.75	1.25	.75		6.75	3.20	1.25
"300" Series											
50 psi	2.50	21	3.1	2.50	1.25	1.00	.50	3-6	5.50	2.50	1.00
125 psi	3.20	26	3.8	3.20	1.50	1.25	.75	3-6	6.75	3.20	1.25
"400" Series											
50 psi	3.40	28	4.1	3.40	1.75	1.5	.75	3-6	6.50	3.40	1.50
125 psi	5.30	44	6.4	5.30	2.50	2.25	1.00	3-6	8.75	5.30	2.25
"4" Series											
50 psi	3.00	45	5.5	3.00					6.00	3.00	
125 psi	3.00	45	5.5	3.00					6.00	3.00	
"45" Series											
50 psi	5.00	45	5.5	5.00	2.50	2.00	1.00	3-6	8.00	5.00	2.00
125 psi	8.00	45	5.5	8.00	4.00	3.25	1.50	3-6	11.50	8.00	3.25

Dress Plate

Dress plates are manufactured from aluminum and are either black anodized or electroless nickel plated for appearance and corrosion resistance. To provide a finished look first install the dress plate *on the valve* then tighten from *behind* the control panel.



DP-11
DP-22

Product Information

Part Number	Thread	Finish
DP-11	15/32-32	Black Anodize
DP-22	15/32-32	Electroless Nickel

Materials

Aluminum/ Black Anodize or Aluminum/ Electroless Nickel

Mounting Brackets

The flat and angled mounting brackets are manufactured from steel and provide a convenient method for mounting valves to a machine member.

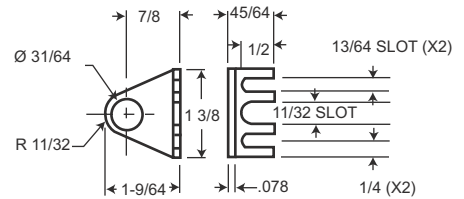
Product Information

Part Number	Description
MB-1	90° angle bracket
MB-1F	flat bracket

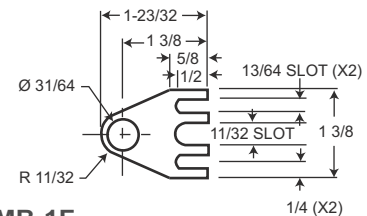
Materials

Steel/ Electro Nickel

* One locknut and washer required to secure mounting bracket against valve shoulder.



MB-1
90° angle mounting bracket



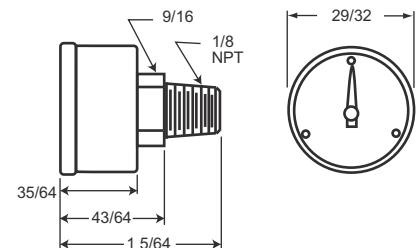
MB-1F
Flat mounting bracket

Micro Gauge

Ideal for space constrained applications that require separate pressure readings. The micro gauge is easily installed using the 1/8 NPT male thread. The micro gauge can be mounted on the Pneumadyne “11” Series regulators with an extended gauge port, providing a point of use pressure indicator.

Product Information

Part Number	Pressure Range	Temp. Range	Repeatability	Accuracy	Mounting	Hex
PMG-60	0-60 psi	-40° F to 150° F	+/-1%	+/- 5% Full Scale	1/8 NPT (M)	9/16
PMG-100	0-100 psi					
PMG-160	0-160 psi					



● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

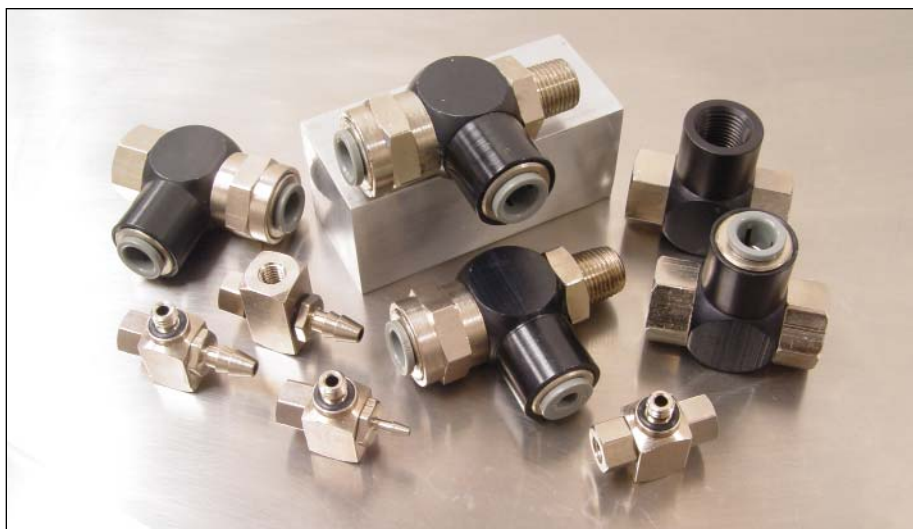
Materials

Bourdon Tube: Spiral Beryllium copper, soft soldered to socket
Pointer: Red painted brass
Dial: White/ Aluminum with black scale
Window: Polycarbonate
Fill: Dry
Case: Black ABS plastic



Features

- Multiple porting options including push-to-connect fittings
- Space saving
- Long service life
- Low cracking pressure
- Porting versatility-eliminates excess fitting requirements



Shuttle Valves

Shuttle valves, also known as “OR” valves, automatically select the higher of two pressures allowing flow from one input to the output port.

Pneumadyne offers a large variety of porting options for plumbing convenience. The **SSV-10A** Series features barbed ports and Pneumadyne’s popular 10-32 thread with captured o-ring seal. These miniature shuttle valves are ideal for applications with limited space. The **SV11** Series shuttle valves feature 1/8 NPT (F) threads and push-to-connect ports which contribute to higher flow rates. Push-to-connect ports also reduce installation time by a minimum of 40% and eliminate the need for additional fittings.

Performance Data

Product Prefix	Temperature Range	Operating Pressure	C _v	Flow Rate (scfm)		Cracking Pressure
				50 psi	125 psi	
SSV-10A	-20° to 160° F	0 to 125 psi	.17	5.2	11.4	less than 1.0 psi
SV11	-20° to 160° F	0 to 125 psi	.48	15.0	33	less than 1.0 psi

C_v per ANSI / (NFPA) T3.21.3

Porting Options

Valve	SSV-10A-xxx		SV11-xxx-xx
Port A Input	● 062 Barb ● 110 Barb	● 170 Barb ● 10-32 (F)	● 1/8 NPT (F) ● 1/4 Push-in ● 5/32 Push-in
Port B Input	● 062 Barb ● 110 Barb	● 170 Barb ● 10-32 (F)	● 1/8 NPT (F) ● 1/4 Push-in ● 5/32 Push-in
Port C Output	● 062 Barb ● 110 Barb ● 170 Barb	● 10-32 (F) ● 10-32 (M) ● 10-32 Adj. (M)	● 1/8 NPT (F) ● 1/8 NPT ● 1/4 Push-in ● 5/32 Push-in

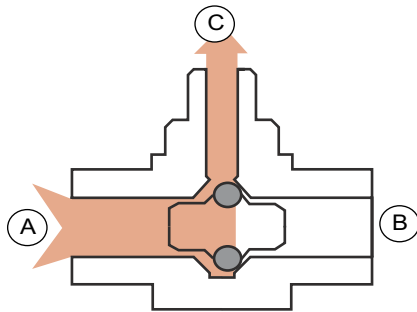
- See [Product Number Diagram](#)

Materials

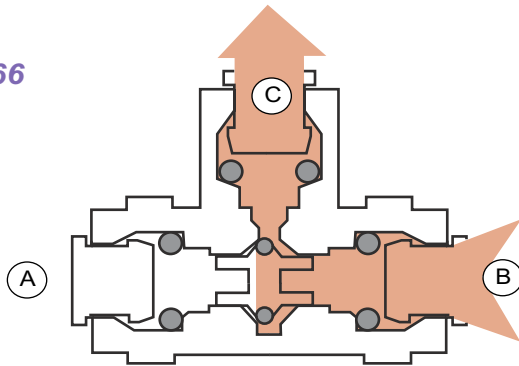
SSV-10A- Brass/ Electroless Nickel, Buna-N
 SV11- Aluminum/ Anodize, Buna-N, Acetal, Brass/ Electroless Nickel

Shuttle Valve Cross Section

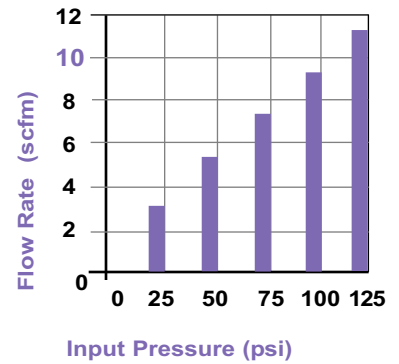
SSV-10A-MFF



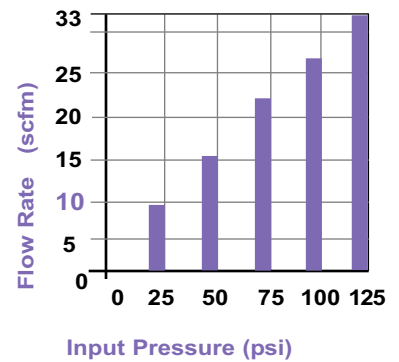
SV11-1/4PI-66



SSV-10A Series Flow Chart



SV-11 Series Flow Chart



Function

As pressure is applied to ports A & B, the higher of the two input pressures shifts the metal core blocking the other input port and allowing flow out port C.

Built-in port connectors, including push-to-connect fittings, reduce installation time by a minimum of 40%

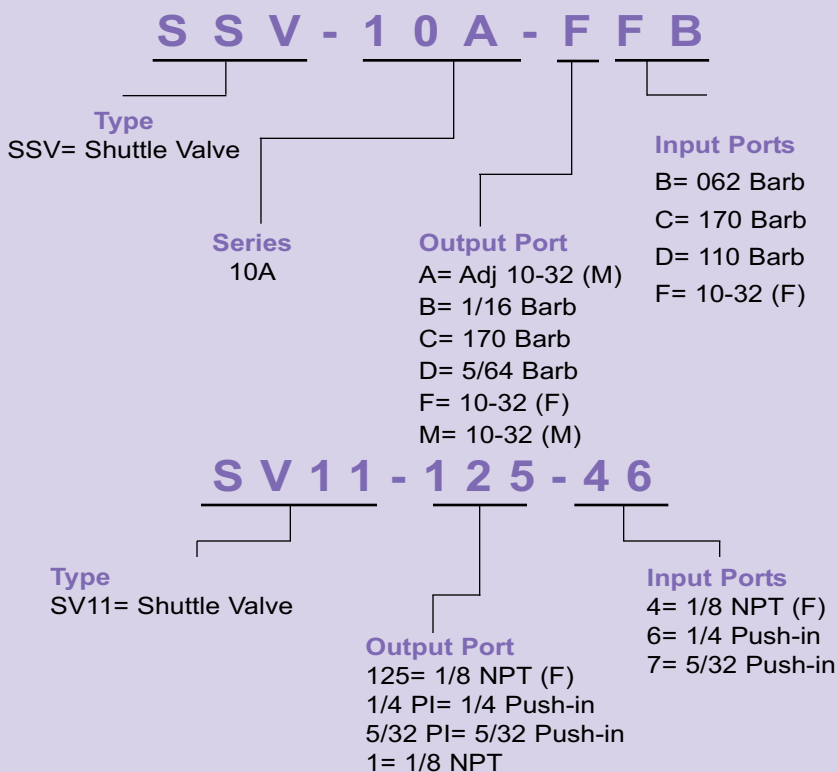


Product Information

SSV-10A-xxx

Part Number	Output x Input /Input
SSV-10A-ABB	10-32 Adj x 062 / 062
SSV-10A-ABC	10-32 Adj x 062 / 170
SSV-10A-ABD	10-32 Adj x 062 / 110
SSV-10A-ABF	10-32 Adj x 062 / 10-32 F
SSV-10A-ACC	10-32 Adj x 170 / 170
SSV-10A-ACF	10-32 Adj x 170 / 10-32 F
SSV-10A-ADC	10-32 Adj x 110 / 170
SSV-10A-ADD	10-32 Adj x 110 / 110
SSV-10A-AFD	10-32 Adj x 10-32 F / 110
SSV-10A-AFF	10-32 Adj x 10-32 F / 10-32 F
SSV-10A-BBB	062 x 062 / 062
SSV-10A-BBC	062 x 062 / 170
SSV-10A-BBD	062 x 062 / 110
SSV-10A-BBF	062 x 062 / 10-32 F
SSV-10A-BCC	062 x 170 / 170
SSV-10A-BCD	062 x 170 / 110
SSV-10A-BCF	062 x 170 / 10-32 F
SSV-10A-BDD	062 x 110 / 110
SSV-10A-BDF	062 x 110 / 10-32 F
SSV-10A-BFF	062 x 10-32 F / 10-32 F
SSV-10A-CBB	170 x 062 / 062
SSV-10A-CBC	170 x 062 / 170
SSV-10A-CBD	170 x 062 / 110
SSV-10A-CBF	170 x 062 / 10-32 F
SSV-10A-CCC	170 x 170 / 170
SSV-10A-CCD	170 x 170 / 110
SSV-10A-CCF	170 x 170 / 10-32 F
SSV-10A-CDD	170 x 110 / 110
SSV-10A-CDF	170 x 110 / 10-32 F
SSV-10A-CFF	170 x 10-32 F / 10-32 F
SSV-10A-DBB	110 x 062 / 062
SSV-10A-DBC	110 x 062 / 170
SSV-10A-DBD	110 x 062 / 110
SSV-10A-DBF	110 x 062 / 10-32 F
SSV-10A-DCC	110 x 170 / 170
SSV-10A-DCD	110 x 170 / 110
SSV-10A-DCF	110 x 170 / 10-32 F
SSV-10A-DDD	110 x 110 / 110
SSV-10A-DDF	110 x 110 / 10-32 F
SSV-10A-DFF	110 x 10-32 F / 10-32 F
SSV-10A-FBB	10-32 F x 062 / 062
SSV-10A-FBC	10-32 F x 062 / 170
SSV-10A-FBD	10-32 F x 062 / 110
SSV-10A-FCC	10-32 F x 170 / 170
SSV-10A-FCD	10-32 F x 170 / 110
SSV-10A-FDD	10-32 F x 110 / 110
SSV-10A-FFB	10-32 F x 10-32 F / 062
SSV-10A-FFC	10-32 F x 10-32 F / 170
SSV-10A-FFD	10-32 F x 10-32 F / 110
SSV-10A-FFF	10-32 F x 10-32 F / 10-32 F

Product Number Diagram Shuttle Valves



Tubing Recommendations:

- 062 barb for use with 1/16 ID Polyurethane Tubing
- 170 barb for use with 170 ID Polyethylene or .170 Polyurethane
- 110 barb for use with 7/64 ID Nylon or 5/64 ID Polyurethane

SSV-10A-xxx

Part Number	Output x Input /Input
SSV-10A-MBB	10-32 x 062 / 062
SSV-10A-MBC	10-32 x 062 / 170
SSV-10A-MBD	10-32 x 062 / 110
SSV-10A-MCC	10-32 x 170 / 170
SSV-10A-MCD	10-32 x 170 / 110
SSV-10A-MDD	10-32 x 110 / 110
SSV-10A-MFB	10-32 x 10-32 F / 062
SSV-10A-MFC	10-32 x 10-32 F / 170
SSV-10A-MFD	10-32 x 10-32 F / 110
SSV-10A-MFF	10-32 x 10-32 F / 10-32 F

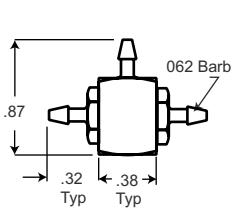
SV11-xxx-xx

Part Number	Output x Input/Input
SV11-1-44	1/8 x 1/8 F / 1/8 F
SV11-1-46	1/8 x 1/8 F / 1/4 PI
SV11-1-66	1/8 x 1/4 PI / 1/4 PI

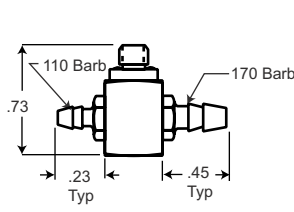
SV11-xxx-xx

Part Number	Output x Input/Input
SV11-1/4 PI-44	1/4 PI x 1/8 F / 1/8 F
SV11-1/4 PI-46	1/4 PI x 1/8 F / 1/4 PI
SV11-1/4 PI-66	1/4 PI x 1/4 PI / 1/4 PI
SV11-1/4 PI-74	1/4 PI x 5/32 PI / 1/8 F
SV11-1/4 PI-76	1/4 PI x 5/32 PI / 1/4 PI
SV11-1/4 PI-77	1/4 PI x 5/32 PI / 5/32 PI
SV11-125-44	1/8 F x 1/8 F / 1/8 F
SV11-125-46	1/8 F x 1/8 F / 1/4 PI
SV11-125-47	1/8 F x 1/8 F / 5/32 PI
SV11-125-66	1/8 F x 1/4 PI / 1/4 PI
SV11-125-67	1/8 F x 5/32 PI / 1/4 PI
SV11-125-77	1/8 F x 5/32 PI / 5/32 PI
SV11-5/32 PI-44	5/32 PI x 1/8 F / 1/8 F
SV11-5/32 PI-46	5/32 PI x 1/8 F / 1/4 PI
SV11-5/32 PI-47	5/32 PI x 1/8 F / 5/32 PI
SV11-5/32 PI-66	5/32 PI x 1/4 PI / 1/4 PI
SV11-5/32 PI-67	5/32 PI x 1/4 PI / 5/32 PI
SV11-5/32 PI-77	5/32 PI x 5/32 PI / 5/32 PI

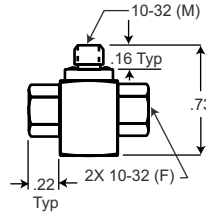
SSV-10A-xxx



SSV-10A-BBB



SSV-10A-MCD

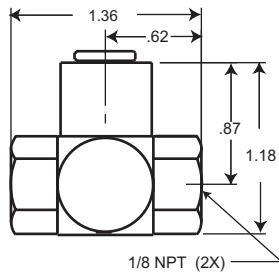


SSV-10A-MFF

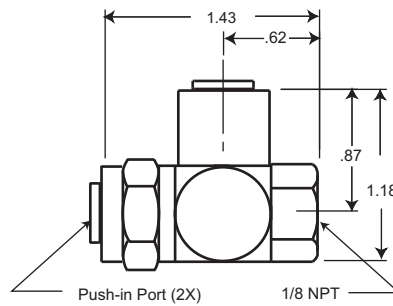
Ordering Information

- To order standard product refer to Product Information listing.
- Optional seals available- contact factory.

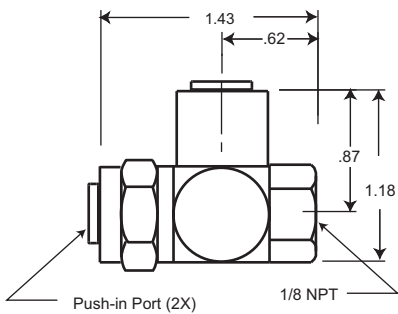
SV11-xxx-xx



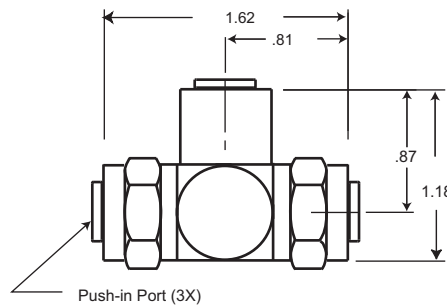
SV11-5/32 PI-44



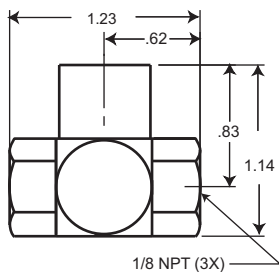
SV11-5/32 PI-47



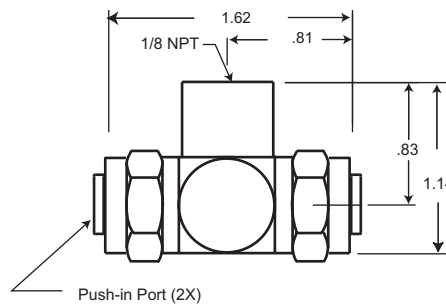
SV11-1/4 PI-46



SV11-1/4 PI-77



SV11-125-44



SV11-125-66



1/8 NPT male output ports available- contact factory

- When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- Multiple porting options
- Durable brass construction
- Low cracking pressure
- Compact in-line or port mounting styles



Check Valves

Check valves are used in pneumatic circuits which require free flow in one direction and no flow in the opposite direction.

Application

Check valves are generally used in systems as a bypass valve, allowing flow around components like needle valves which otherwise restrict flow in both directions.



Twenty-One check valve configurations available

Performance Data

Temperature Range	Operating Pressure
-20° to 160° F	0 to 125 psi

Porting Option In/ Out	C _v	Flow Rate (scfm)		Cracking Pressure	Fill sec/ in ³ 0-90 psi
		50 psi	125 psi		
062 Barb/ 062 (min. flow option)	.03	1.09	2.5	0.1	.13
10-32 Thd/ 10-32 Thd (max. flow option)	.09	4.5	9.5	0.1	.03
1/8 NPT (F)/ 1/8 NPT (F)*	.41	14.3	31.5	0.5	.01
1/8 NPT / 1/4 PI*	.32	9.7	24.5	0.5	.012
1/4 PI / 1/4 PI*	.26	9.0	19.5	0.5	.014

*other cracking pressures available- contact factory

Cv per ANSI / (NFPA) T3.21.3

- * 062 barb recommended for use with 1/16 ID PUR tubing
- * 110 barb recommended for use with 5/64 ID PUR tubing
- * 170 barb recommended for use with .170 ID PUR tubing

Materials

Brass/ Electroless Nickel, Buna-N, Stainless Steel

Check Valve Cross Section

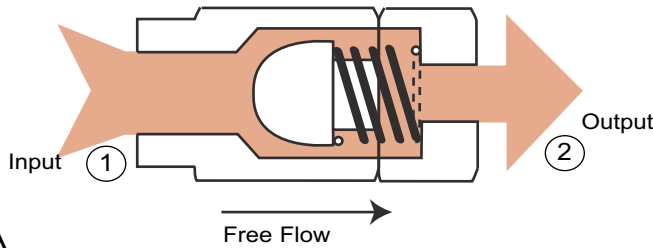


figure A

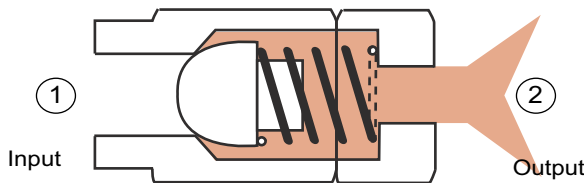


figure B

Function

Two internal designs were developed to ensure a low cracking pressure. The 1/8 NPT style utilizes a poppet and spring, whereas, the 10-32 / barb styles feature a batwing.

When system pressure at the check valve input 1 is high enough to overcome the low spring force (1/2 psi) the poppet is moved off its seat allowing flow out port 2. The flow of a fluid through the check valve is defined as "free flow". When fluid flow reverses the poppet is pushed into its seat, blocking or "checking" the system flow (figure B).

In comparison, the batwing in the 10-32 / barb styles flexes to allow flow through the output port when system pressure exceeds cracking pressure. When fluid flow reverses the batwing straightens, "checking" the system flow.

Product Information

Part Number	Input	Output
C050101	1/16 Barb	1/16 Barb
C050102	110 Barb	110 Barb
C050104	170 Barb	170 Barb
C050201	10-32 (M)	1/16 Barb
C050202	10-32 (M)	110 Barb
C050204	10-32 (M)	170 Barb
C050205	10-32 (M)	10-32 (M)
C050206	1/16 Barb	10-32 (M)
C050210	170 Barb	10-32 (M)
C050301	10-32 (M)	10-32 (F)
C050302	10-32 (F)	10-32 (M)
C050401	10-32 (F)	10-32 (F)
C050401-SS	10-32 (F)	10-32 (F)
C050501	1/8 NPT (F)	1/8 NPT (F)
C050501-SS	1/8 NPT (F)	1/8 NPT (F)
C050502	1/8 NPT (F)	1/8 NPT
C050503	1/8 NPT	1/8 NPT (F)
C050504	1/8 NPT	1/8 NPT
C050601	1/8 NPT (F)	1/4 PI
C050602	1/8 NPT	1/4 PI
C050603	1/4 PI	1/8 NPT (F)
C050604	1/4 PI	1/8 NPT
C050605	1/4 PI	1/4 PI

*-SS used to indicate stainless steel



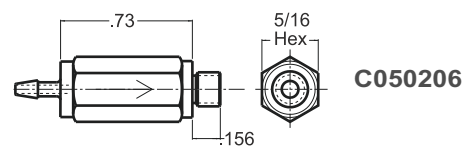
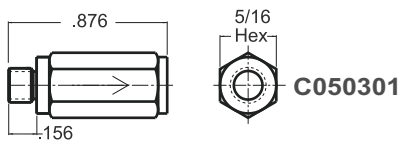
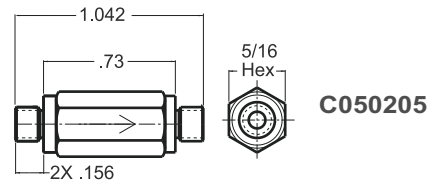
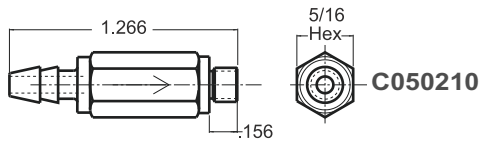
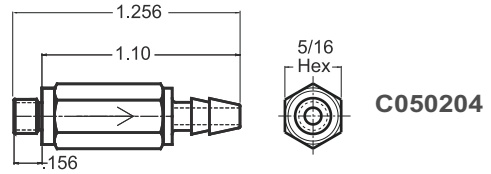
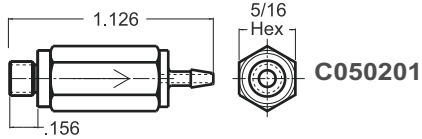
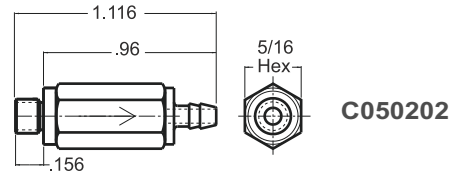
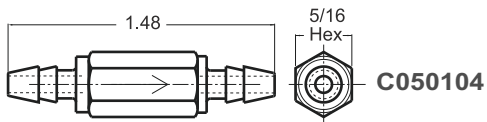
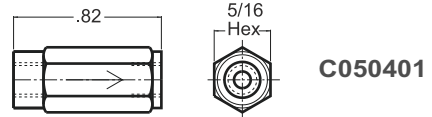
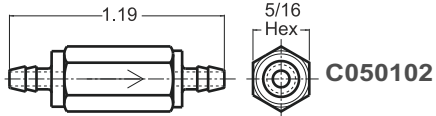
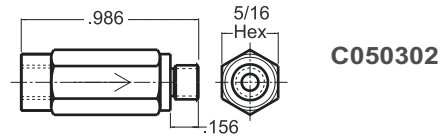
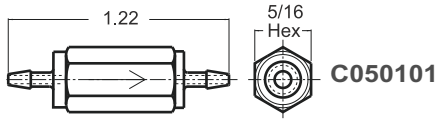
1/8 NPT (F) style utilizes a poppet and spring design

Ordering Information

- To order standard product refer to Product Information listing.
- Optional batwing materials available- contact factory.
- Custom barbs available- contact factory.

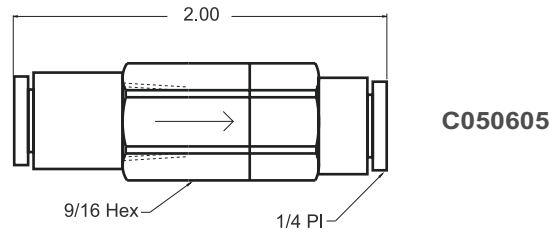
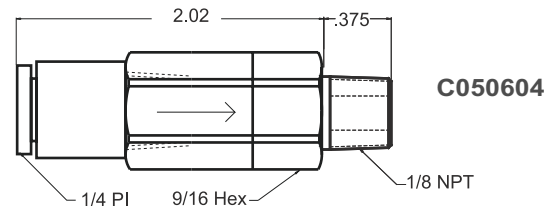
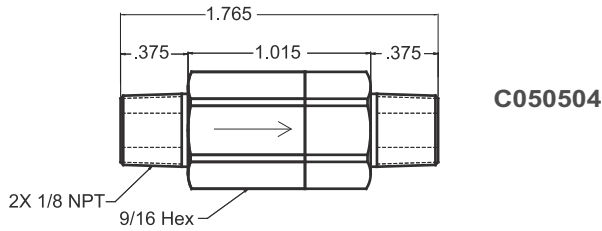
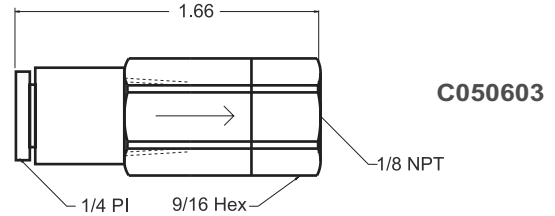
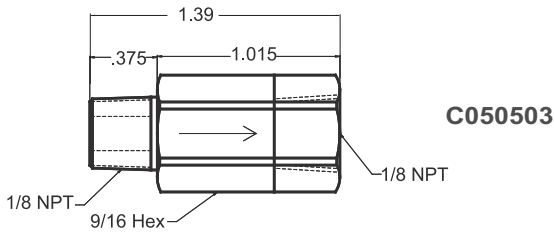
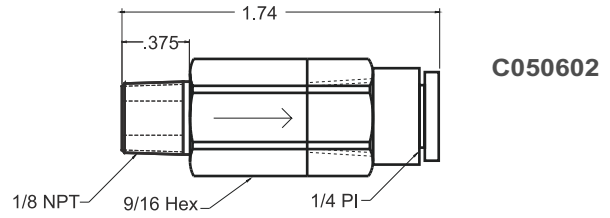
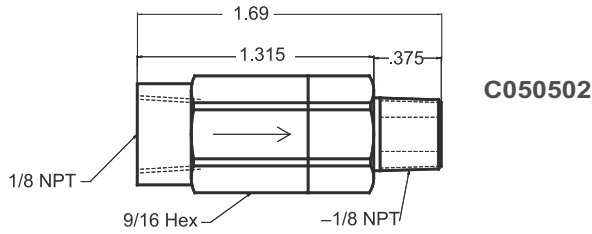
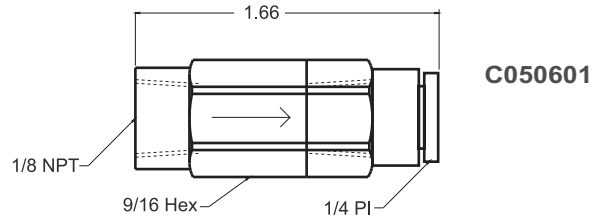
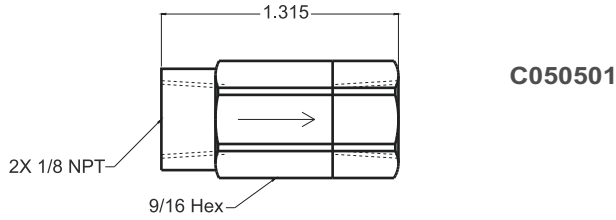
Check Valves

Check Valves



Check Valves

Check Valves



● When design makes a dimension critical-contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- Swivel input port
- Direct cylinder mount
- 10-32 (F) or 1/4 push-in pilot ports
- Plated for corrosion resistance
- Low cracking pressure
- Thread sealant standard on output ports



Pilot Operated Check Valves

Designed for use in applications requiring an actuator to be locked in position, Pilot Operated Check Valves allow free flow from the input port through the output port. Supplying a pilot pressure to the valve allows flow in the opposite direction.

Pneumadyne's new Pilot Operated Check Valves are ideal for reliably holding an actuator position in a variety of applications. These rugged valves feature a 1/4 or 1/8 NPT output port which mounts directly on a cylinder, minimizing space requirements and easing installation. The input port swivels to accommodate valve alignment and contains a 1/4 push-in connection to speed tubing installation. 10-32 (F) and 1/4 push-in pilot ports are available to fit plumbing specifications.

Mounting Method

Part Number	Direct Cylinder Mount	Max. Installation Torque
POC-41-F	1/8 NPT	5.1 ft-lbs
POC-61-F	1/8 NPT	5.1 ft-lbs
POC-68-F	1/4 NPT	12 ft-lbs
POC-68-6	1/4 NPT	12 ft-lbs

Performance Data

Part Number	Temperature Range	Operating Pressure (psi)	Maximum Supply Pressure (psi)	Cv	Cracking Pressure (psi)				
						Flow Rate (scfm) 1-2		Flow Rate (scfm) 2-1	
						50 psi	100 psi	50 psi	100 psi
POC-41-F	0° to 160°F	15 to 150	150	.23	10	2.8	5.2	3.1	5.7
POC-61-F									
POC-68-F	-40° to 240°F	0 to 150	150	.35	less than .1	13	22	13	22
POC-68-6									

Media: Lubricated and non-lubricated air
C_v per ANSI / (NFPA) T3.21.3

Materials

POC-41-F & POC-61-F

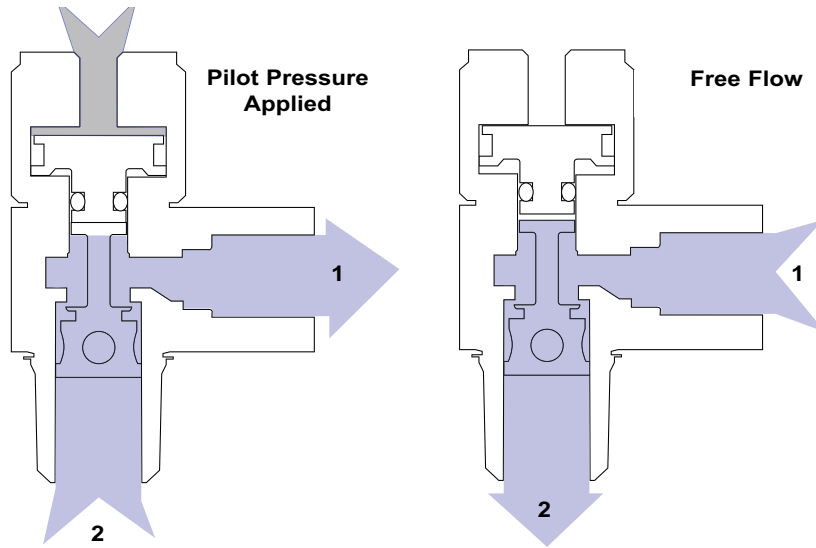
Body: Zinc Plated Brass & Anodized Aluminum
Internal Components: Brass, Stainless Steel & Polyamide
Seals: Buna-N
Spring: Stainless Steel

POC-68-F & POC-68-6

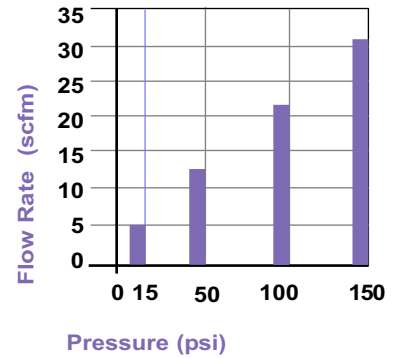
Body: Anodized Aluminum & Electroless Nickel Plated Brass
Stem: Brass
Seals: Buna-N
Spring: Stainless Steel

Ideal for reliably holding an actuator position in a variety of applications

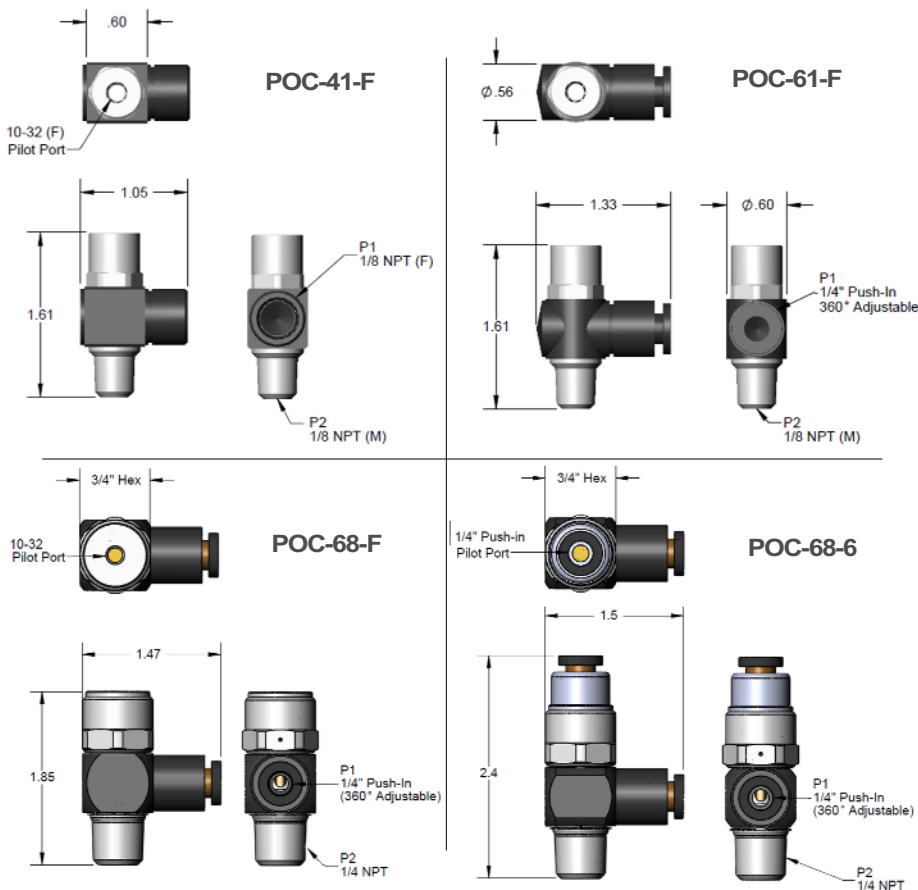
Pilot Operated Check Valves Cross Section



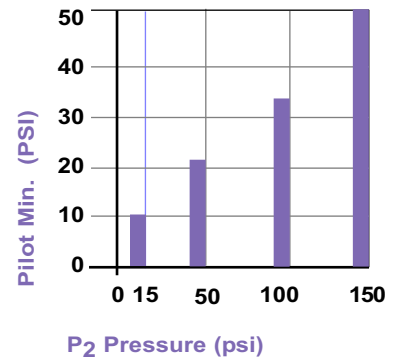
**Pilot Operated Check Valves
Flow Chart: POC-68-F**



Pilot Operated Check Valves



**Pilot Operated Check Valves
Pilot Pressure- POC-68-F**



Product Information

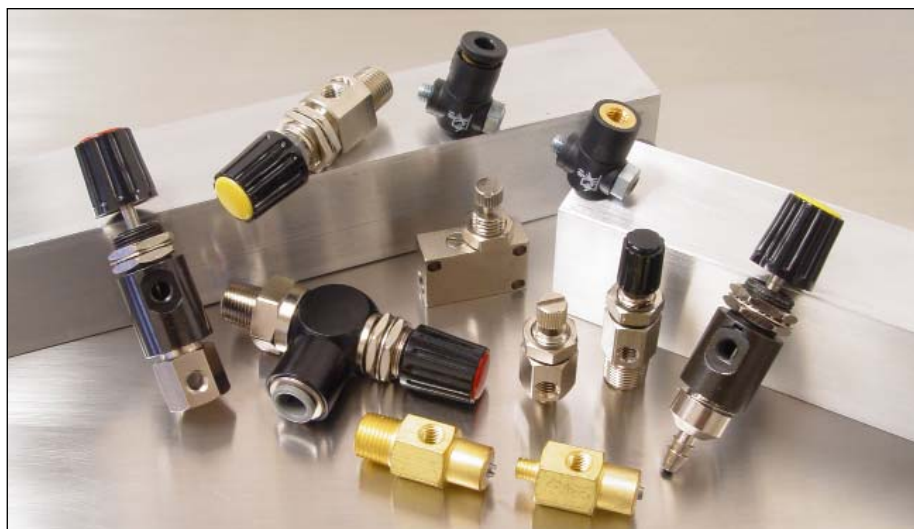
Part Number	Input	Output	Pilot
POC-41-F	1/8 NPT (F)	1/8 NPT	10-32 (F)
POC-61-F	1/4 PI	1/8 NPT	10-32 (F)
POC-68-F	1/4 PI	1/4 NPT	10-32 (F)
POC-68-6	1/4 PI	1/4 NPT	1/4 PI

Ordering Information

- To order standard product refer to Product Information listing.
- Optional seals available - contact factory.

Features

- Multiple porting options-including push-to-connect fittings
- Flow controls available in *reverse flow*
- Compact size
- Panel mountable
- Instrument quality collet knob



Flow Control & Needle Valves

Flow controls and Needle valves are used to reduce the rate of flow in a leg of a system, consequently the restriction slows cylinder speed.

Finely threaded stems allow gradual adjustment of controlled flow to match system requirements.

Although the **basic function** is flow restriction, the fundamental difference between the two is the **needle valve** con-

trols flow in *both directions* (bi-directional) and the **flow control valve** controls flow in *only one direction* (allowing free flow in the opposite direction).

Function

In both the flow control and needle valve a finely threaded stem allows gradual adjustment of the amount of **controlled flow** passing through the valve. Flow enters port 1, travels through an orifice sized by the tapered stem and out port 2. The flow control features a by-pass check which allows rapid **free flow out** port 1.

Pneumadyne offers a **variety of configurations** with several flow rate options. Choose from twenty-five needle valves and thirty-nine flow controls- *the multiple porting options virtually eliminate the need for additional fittings.*

Identification

"O" Series	Flow Control:	Needle Valve:
"11" Series	Red Cap	Yellow Cap
"700" Series knob	Low Flow: Brass	General Flow: Brass/ Electroless Nickel
Mini	Contact factory	

Materials

"O" Series: Brass/ Black Dichromate, Brass/ Electroless Nickel, Stainless Steel, Nylon, Buna-N, Acetal collets

"11" Series: Aluminum/ Black Anodize, or Brass/ Electroless Nickel, Stainless Steel, Nylon, Buna-N, Acetal collets

"700" Series: Brass/ Electroless Nickel, Stainless Steel, Buna-N

Mini (non-mount): Brass, Acetal, Stainless Steel, Buna-N

Banjo: Brass/ Electroless Nickel, Buna-N, Stainless Steel, PA6 (plastic)

- Optional seals available- contact factory
- Pneumadyne Flow Controls and Needle Valves are not leak tight. Not to be used as a shut-off device.

Performance Data

Temperature Range	Operating Pressure
-20° to 160° F	0 to 125 psi

Flow Control & Needle Valve

Product Group	Flow Rate (scfm)		C _v	Cracking Pressure (FC Only)	Function Code
	50 psi	125 psi			
"O" Series	4.4	9.4	.13	.1 psi	MO, BI
"11" Series	12.0	27.0	.29	.1 psi	MO, BI
"700" Series	3.2	6.2	.09	.1 psi	MO, BI
Mini (FC & NV Series)	3.3	6.8	.10	.1 psi	MO, BI
Banjo Flow Control	4.0	8.7	.11	.1 psi	MO

Performance data operating full open at 125 psi

Flow Control: Reverse Control Flow (from 2-1)

Product Group	Flow Rate (scfm)		C _v	Cracking Pressure	Function Code
	50 psi	125 psi			
Banjo	5.1	11.3	.13	.1 psi	MI
"11" Series	12.0	27.0	.29	.1 psi	MI

C_v per ANSI / (NFPA) T3.21.3

Function Code

Code	Function	Controlled Flow	Free Flow
MO	*Meter Out	1 to 2	2 to 1
MI	Meter In	2 to 1	1 to 2
BI	Meter Bi-Directional	metered flow in both directions	N/A

*Standard product

Mounting Method

Product Group	Panel Nominal Mounting Hole Dimension	Surface
"O"	31/64"	MB-1 or MB-1F
"11"	31/64"	MB-1 or MB-1F
"700" FC	11/32"	(3) .14 diam. holes
"700" NV	11/32"	N/A
Mini	N/A	Inline/ direct port mount
Banjo	N/A	Inline/ direct port mount

Banjo flow control mounting requirements:

Ø 3/8 min. x .10 max. deep counter-bore required when mounting to a cylindrical surface

Nut(s) and lockwasher provided

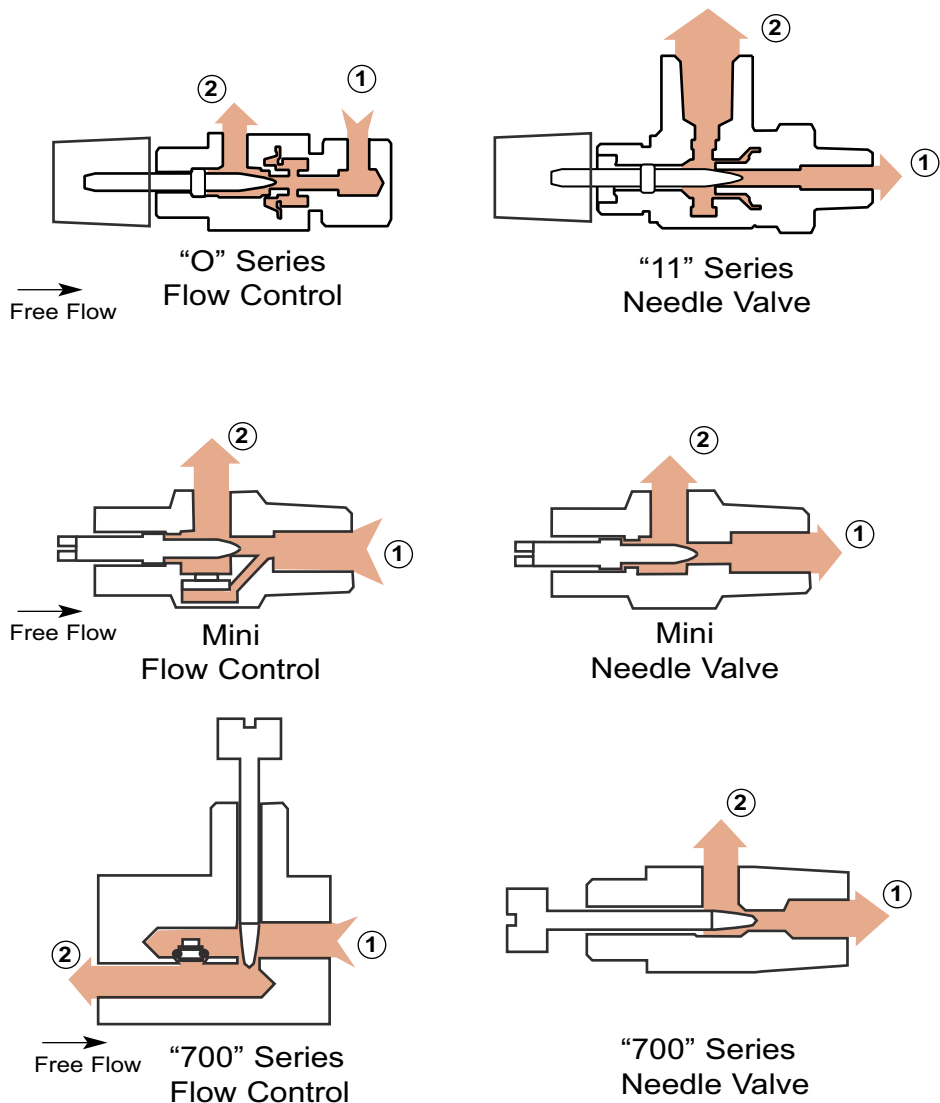
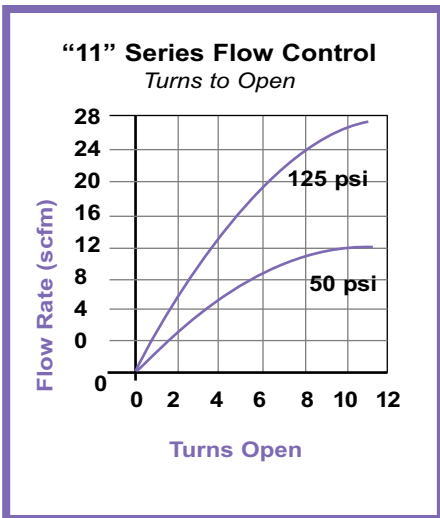
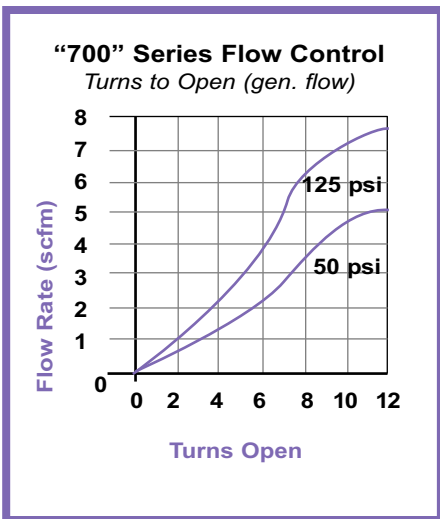
Port Options

	Def.	Options
"O" Series	Port 1 Swivel Input	● 10-32 (F) ● 1/8 NPT (F) ● 5/32 Push-in ● 1/8 NPT ● 1/4 Push-in ● 170 Barb*
	Port 2 Output	● 10-32 (F)
"11" Series	Port 1 Input	● 5/32 Push-in ● 1/8 NPT (F) ● 1/4 Push-in ● 1/8 NPT
	Port 2 Swivel Output	● 5/32 Push-in ● 1/4 Push-in ● 1/8 NPT (F) <i>Additional options available-contact factory</i>
"700" Series FC	Port 1 Input	● 10-32 (M)
	Port 2 Output	● 10-32 (F)
"700" Series NV	Port 1 Input	● 10-32 (M) ● 1/8 NPT
	Port 2 Output	● 10-32 (F)
Mini	Port 1 Input	● 10-32 (M) ● 1/8 NPT
	Port 2 Output	● 10-32 (F)
Banjo	Port 1 Input	● 10-32 (M)
	Port 2 Output	● 10-32 (F) ● 5/32 Push-in

*170 Barb recommended for use with .170 ID PUR or .170 ID PE

Mini Flow Controls and Needle Valves are ideal for use with miniature cylinders

Flow Control / Needle Valve Cross Section



Instrument quality panel knob now available for all "700" Series Valves - prevents excess seat stress

Flow Control Valve illustrations represent the controlled flow path; free flow is 2 to 1.

Note: Needle Valves control flow in both directions.

Standard Flow Control Valves meter out, flowing from 1 to 2.

Product Information

Flow Controls

Part Number	Input	Output
"O" Series		
PFC0-1	1/8 NPT / 10-32(F)	10-32(F)
PFC0-2	10-32 (F) Elbow	10-32(F)
PFC0-3	10-32 (F) Tee	10-32(F)
PFC0-4	1/8 NPT (F)	10-32(F)
PFC0-5	170 Barb	10-32(F)
PFC0-6	1/4 Push-in	10-32(F)
PFC0-7	5/32 Push-in	10-32(F)

"11" Series

PFC11-14		1/8 NPT (F)
PFC11-16	1/8 NPT / 10-32 (F)	1/4 Push-in
PFC11-17		5/32 Push-in
PFC11-44	1/8	1/8 NPT (F)
PFC11-46	NPT	1/4 Push-in
PFC11-47	(F)	5/32 Push-in
PFC11-64		1/8 NPT (F)
PFC11-66	1/4 Push-in	1/4 Push-in
PFC11-67		5/32 Push-in
PFC11-74	5/32	1/8 NPT (F)
PFC11-76	Push-in	1/4 Push-in
PFC11-77		5/32 Push-in

Reverse Flow

PFC11R-14		1/8 NPT (F)
PFC11R-16	1/8 NPT / 10-32 (F)	1/4 Push-in
PFC11R-17		5/32 Push-in
PFC11R-44	1/8	1/8 NPT (F)
PFC11R-46	NPT	1/4 Push-in
PFC11R-47	(F)	5/32 Push-in
PFC11R-64		1/8 NPT (F)
PFC11R-66	1/4 Push-in	1/4 Push-in
PFC11R-67		5/32 Push-in
PFC11R-74	5/32	1/8 NPT (F)
PFC11R-76	Push-in	1/4 Push-in
PFC11R-77		5/32 Push-in

"700" Series - panel knob available

C070501 <i>low</i>	10-32 (F)	10-32 (F)
C070503 <i>gen.</i>	10-32 (F)	10-32 (F)

Mini

FC-32	10-32 (M)	10-32 (F)
FC-52	1/8 NPT	10-32 (F)

Banjo Flow Control (Right Angle)

BFC-32	10-32 UNF	10-32 (F)
BFC-32P	10-32 UNF	5/32 Push-in

Reverse Flow

BFCR-32	10-32 UNF	10-32 (F)
BFCR-32P	10-32 UNF	5/32 Push-in

*170 Barb recommended use .170 ID PUR or .170 ID PE

Needle Valves

Part Number	Input	Output
"O" Series		
PNV0-0	10-32 (F)	10-32 (F)
PNV0-1	1/8 NPT / 10-32(F)	10-32 (F)
PNV0-2	10-32 (F) Elbow	10-32 (F)
PNV0-3	10-32 (F) Tee	10-32 (F)
PNV0-4	1/8 NPT (F)	10-32 (F)
PNV0-5	170 Barb	10-32 (F)
PNV0-6	1/4 Push-in	10-32 (F)
PNV0-7	5/32 Push-in	10-32 (F)
PNV0-1/8	1/8 NPT / 10-32 (F)	10-32 (F)

"11" Series

PNV11-14		1/8 NPT (F)
PNV11-16	1/8 NPT / 10-32 (F)	1/4 Push-in
PNV11-17		5/32 Push-in
PNV11-44		1/8 NPT (F)
PNV11-46	1/8 NPT	1/4 Push-in
PNV11-47	(F)	5/32 Push-in
PNV11-64		1/8 NPT (F)
PNV11-66	1/4 Push-in	1/4 Push-in
PNV11-67		5/32 Push-in
PNV11-74		1/8 NPT (F)
PNV11-76	5/32 Push-in	1/4 Push-in
PNV11-77		5/32 Push-in

"700" Series - panel knob available

C070301 <i>low</i>	10-32 (M)	10-32 (F)
C070303 <i>gen.</i>	10-32 (M)	10-32 (F)
C070601 <i>low</i>	1/8 NPT	10-32 (F)
C070603 <i>gen.</i>	1/8 NPT	10-32 (F)

Note:

The **Low Flow** option flows 1.2 scfm at 5 turns and 125 psi.

The **General Flow** option provides increased flow with fewer needle turns: 3.4 scfm at 5 turns and 125 psi.

Full open, both valves offer the same flow rate.

Mini

NV-32	10-32 (M)	10-32 (F)
NV-52	1/8 NPT	10-32 (F)

Ordering Information

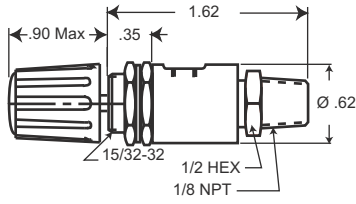
- To order standard product refer to Product Information listing.
- To order "700" Series valves with instrument quality panel knob- add a -PK suffix to the part number.
- Optional seals available- contact factory.
- Contact factory for reverse flow applications.

System 11 is a method of consolidating 2 to 10 components with a common pressure source.

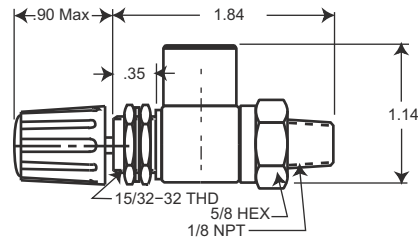


“O” Series

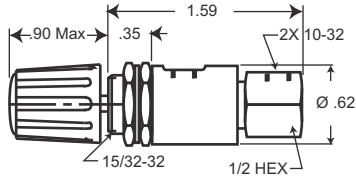
“11” Series



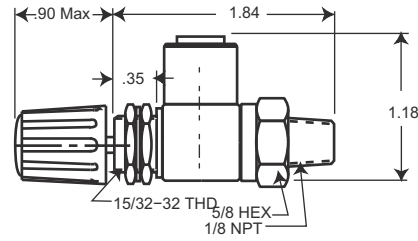
“-1” Input



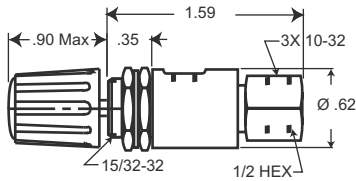
“-14” Porting



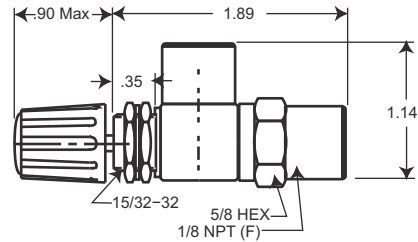
“-2” Input



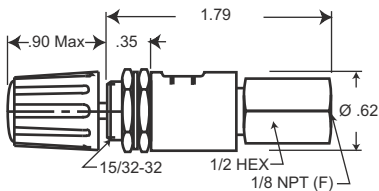
**“-16” Porting
“-17” Porting**



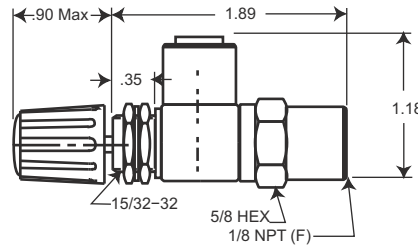
“-3” Input



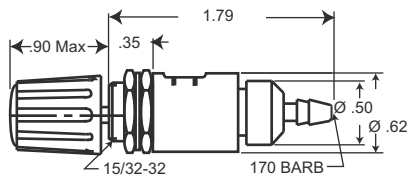
“-44” Porting



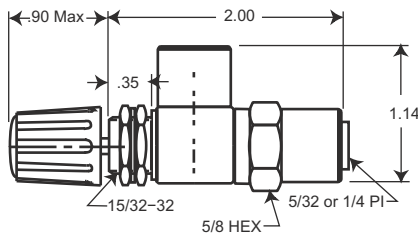
“-4” Input



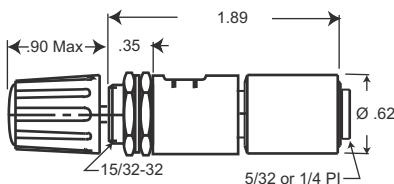
**“-46” Porting
“-47” Porting**



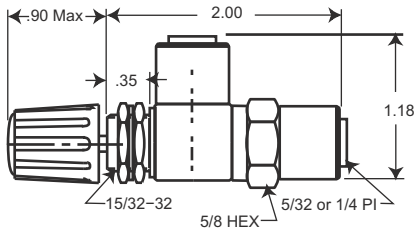
“-5” Input



**“-64” Porting
“-74” Porting**



**“-6” Input
“-7” Input**

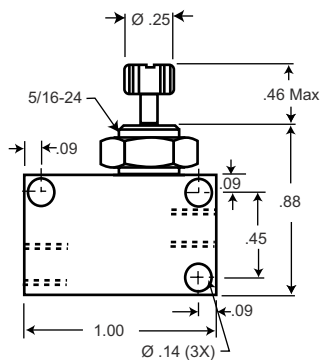


**“-66” Porting
“-67” Porting
“-76” Porting
“-77” Porting**

● When design makes a dimension critical- contact factory for confirmation.
All dimensions shown subject to change without notice.

“700” Series

Flow Control

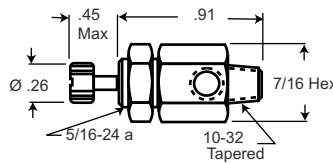


Product Number
C070501 low
C070503 general

Available with instrument quality panel knob, add **-PK** suffix to the part number (not shown)

“700” Series

Needle Valves

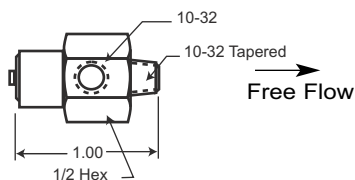


Product Number
C070301 low
C070303 general

Available with instrument quality panel knob, add **-PK** suffix to the part number (not shown)

Mini

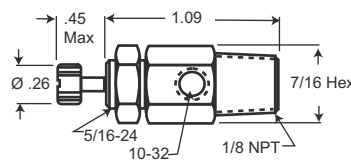
Flow Control



Product Number
FC-32

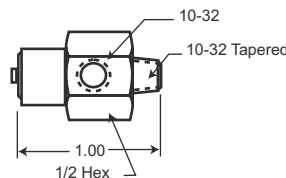
Product Number
C070601 low
C070603 general

Available with instrument quality panel knob, add **-PK** suffix to the part number (not shown)

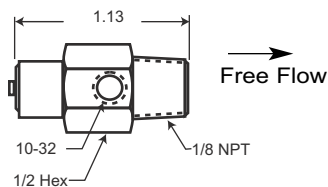


Mini

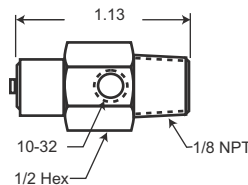
Needle Valves



Product Number
NV-32



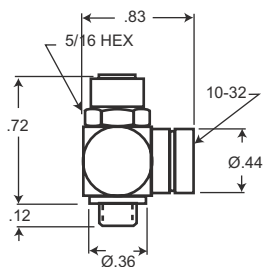
Product Number
FC-52



Product Number
NV-52

Banjo

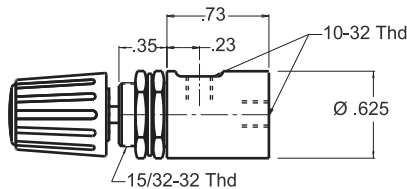
Flow Control



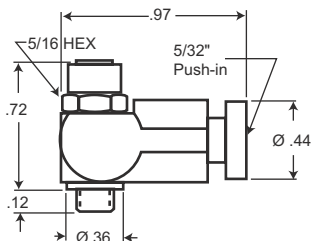
Product Number
BFC-32
BFCR-32

“O” Series

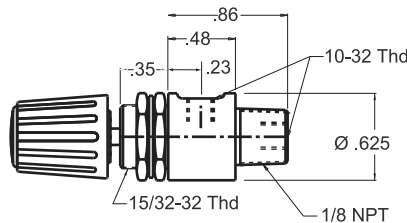
Needle Valves



Product Number
PNV0-0



Product Number
BFC-32P
BFCR-32P



Product Number
PNV0-1/8

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- 10-32 (F) ports
- Low cracking pressure
- Slotted knob for precision control
- Mounting versatility
- Compact size



Double Flow Control Valve

This unique component replaces two flow controls in a pneumatic system and allows the adjustment of cylinder extension and retraction from one location.

Function

The cylinder may be plumbed to either port of the Pneumadyne Double Flow Control. The adjustment knob closest to the cylinder controls the input or extension speed, the knob furthest from the cylinder controls the exhaust or retraction speed.

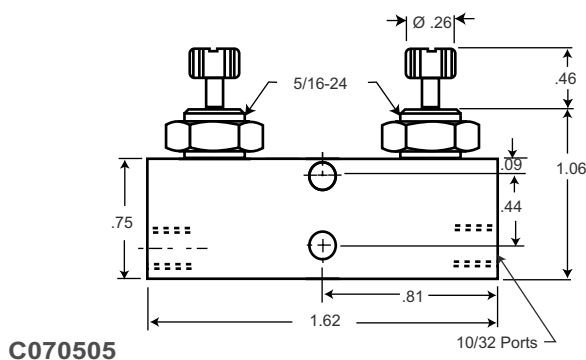
Performance Data

Temperature Range	Operating Pressure
-20°F to 160°F	Range: 0-125 psi

Part Number	C _v Full Open	Flow Rate (scfm)		Cracking Pressure
		50 psi	125 psi	
C070505	.07	2.75	6.2	.1 psi

C_v per ANSI / (NFPA) T3.21.3

Double Flow Control



Ordering Information

- To order standard product use part number **C070505**.

Materials

Brass/ Electroless Nickel, Stainless Steel, Buna-N



Features

- Convenient parallel porting
- Compact- 1.21" overall
- **Warning:** This product is **not intended** to serve as a two hand anti-tie down device

Performance Data

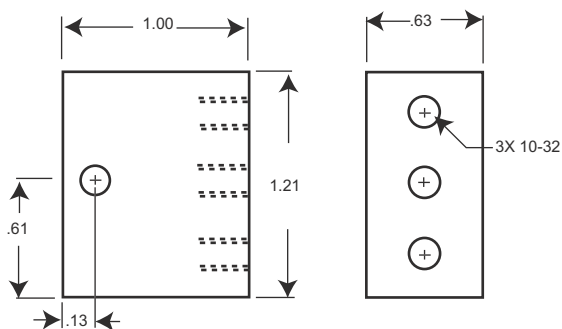
Temperature Range			Operating Pressure			
-20°F to 160°F			Range: 0-125 psi			
Part Number	Porting Information	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
			50 psi	125 psi		
PAV-10	10-32 (F)	.13	4.8	10.6	.03	.03

● Performance data shown for flow paths 1-2 and 3-2; C_v per ANSI / (NFPA) T3.21.3

The “AND” Valve

“AND” valves are used in circuit control applications that require a combination of inputs to produce a single output. This compact (overall 1.21”) and durable valve has been Pneumadyne tested to assure high performance and dependability.

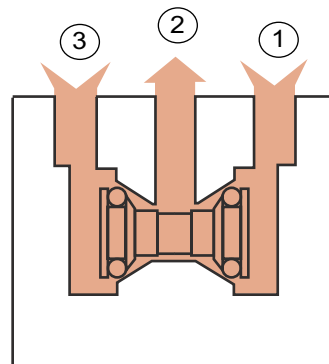
“AND” Valve



Function

When a signal is supplied to port 1 “AND” port 3 the output flows from port 2. The output flow will always be the lower of the two pressures. Both input pressures are required to open the valve (loss of input will cancel the output signal).

Cross Section



Ordering Information

- To order standard product use part number **PAV-10**.
- Optional seals available- contact factory.

Materials

Aluminum/ Black Anodize, Brass/ Electroless Nickel, Buna-N

Features

- $\pm 2\%$ Repeatability
- Mounting versatility
- Push-to-connect fittings available
- Output port rotates 360°
- Direct cylinder mount
- Direct gauge mount to output



Pressure Control Valves

Pneumadyne's Pressure Control Valve is ideal for applications requiring reduced pressure to a cylinder. It is designed for use between a valve output and a cylinder or other volume, where a reduced pressure is desired. A high volume check valve is built in to allow for rapid reverse flow. It is also ideal for continuous flow applications where reverse flow is *not* required.

Function

Output pressure is selected by adjusting the control knob when pressure is off (locking nut provided). Pneumadyne's gauge port and micro gauge are ideal for accurately setting output pressure. Air flowing through port 1 unseats the poppet and continues through port 2, pressurizing a downstream vessel (figure A). The flow stops when the down-

stream pressure is equal to the set pressure. As the cylinder retracts the Pressure Control acts as a free reverse check, downstream pressure enters port 2 unseating the O-ring and allowing air to pass through the hollow stem and out port 1 (figure B).

Performance Data

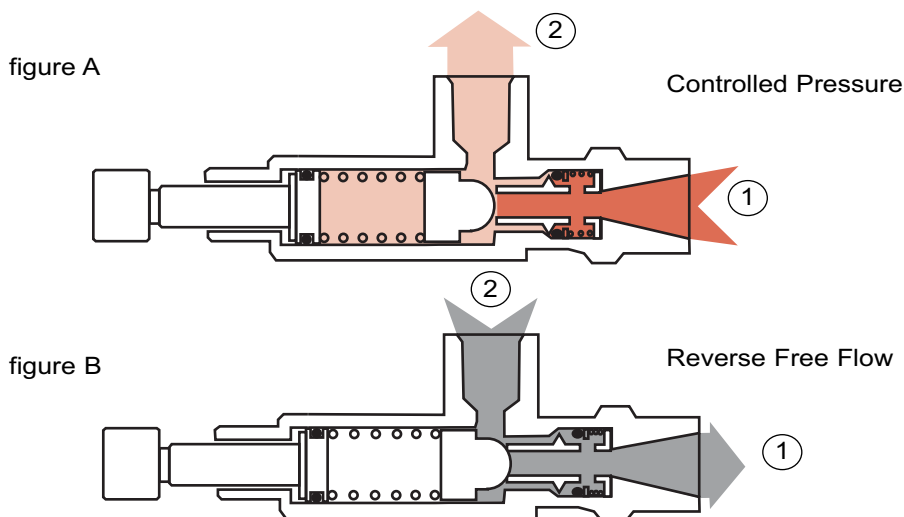
Temperature Range	Maximum Input Pressure		C _v		Fill Time 100 in ³ sec.
	Standard	150 psi	1-2	2-1	
-20°F to 160°F	Standard	150 psi	.15	.26	3.47
	Low	80 psi			

C_v per ANSI / (NFPA) T3.21.3

Materials

Aluminum/ Red Anodize and Black Anodize, Brass/ Electroless Nickel, Brass/ Black Dichromate, Stainless Steel, Buna-N, Acetal Copolymer

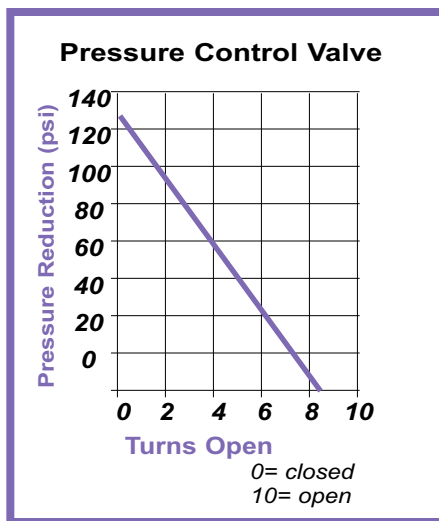
Pressure Control Cross Section



Product Information

Pressure Control Valve

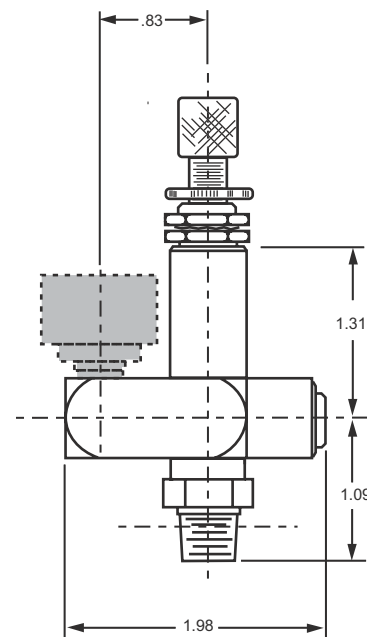
Part Number	Input	Output	Part Number	Input	Output
PPC11-11	1/8 NPT	1/8 NPT	PPC11-61	1/4 Push-in	1/8 NPT
PPC11-14	1/8 NPT	1/8 NPT (F)	PPC11-64	1/4 Push-in	1/8 NPT (F)
PPC11-16	1/8 NPT	1/4 Push-in	PPC11-66	1/4 Push-in	1/4 Push-in
PPC11-17	1/8 NPT	5/32 Push-in	PPC11-67	1/4 Push-in	5/32 Push-in
PPC11-18	1/8 NPT	1/4 NPT	PPC11-68	1/4 Push-in	1/4 NPT
PPC11-41	1/8 NPT (F)	1/8 NPT	PPC11-71	5/32 Push-in	1/8 NPT
PPC11-44	1/8 NPT (F)	1/8 NPT (F)	PPC11-74	5/32 Push-in	1/8 NPT (F)
PPC11-46	1/8 NPT (F)	1/4 Push-in	PPC11-76	5/32 Push-in	1/4 Push-in
PPC11-47	1/8 NPT (F)	5/32 Push-in	PPC11-77	5/32 Push-in	5/32 Push-in
PPC11-48	1/8 NPT (F)	1/4 NPT	PPC11-78	5/32 Push-in	1/4 NPT



Pressure Control Valve with a maximum pressure reduction of 80 psi available add a “-80” suffix to standard part number.

Locking nut, mounting nuts and lockwasher provided

Pressure Control



Warnings

- **NOT to be used as a Pressure Regulator**
- **For use with AIR ONLY**
- **Does NOT have a downstream vent**

Ordering Information

- To order Pressure Control Valves use the Product Information listing to select part number (factory assembled).
- To order Pressure Control Valve with a maximum pressure reduction of 80 psi add a “-80” suffix to the standard part number. (Standard 125 psi)
- To order gauge port option add a “-G” suffix to the part number.

The Pressure Control Valve with extended gauge port housing and micro gauge installed (to prevent damage the gauge is packaged and sold separately). [Gauge data](#)

Catalog drawing represents the maximum overall measurement(s); for specific porting configuration drawings- contact factory.

Features

- Compact size
- Low hysteresis
- Precision control
- .16% Repeatability
- Stud mount, 10-32 UNF
- Compatible with Nitrogen and Helium
- Self relieving



Miniature Precision Regulator

Pneumadyne's new Miniature Precision Regulator offers highly accurate air pressure control in a compact package; ideal for limited space applications.

This precision machined, high quality regulator features an output pressure range up to 100 psi and high flow rate of 4.5 scfm. With a maximum supply pressure of 250 psi, our Precision Regulator is extremely dependable and repeatedly returns to the set pressure when turned off and on. Exceptionally tight design tolerances effectively minimize vibration allowing the regulator to remain stable under changing operating conditions.

Highly accurate air pressure control in a compact package

Performance Data

Temperature Range	Operating Pressure	Maximum Supply Pressure	Media
-40° to + 248°F	0 to 100 psi	250 psi	Clean, Dry Air

Output Pressure Range	Flow Rate		Repeatability	Set-ability	Air Consumption
	50 psi	100 psi			
0 to 100 psi	2.5 scfm	4.5 scfm	0.16 %	.15 psi	1.0 scfh max

Materials

Body: Electroless Nickel Plated Aluminum
 Stem: Stainless Steel
 Seals: Buna-N
 Spring: Stainless Steel
 Piston: Carbon-Graphite
 Sleeve: Pyrex® Glass

Mounting Method

Stud Mount: 10-32 UNF (footprint provided)
 Panel Mount: Nominal mounting hole dimension 31/64"

Miniature Precision Regulator Cross Section

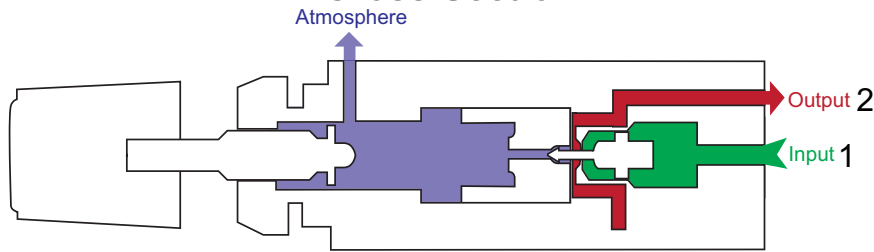


figure A

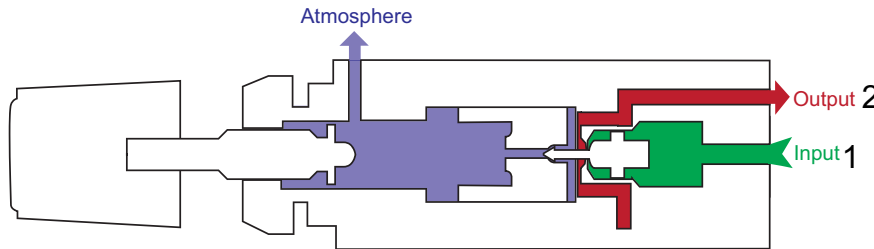
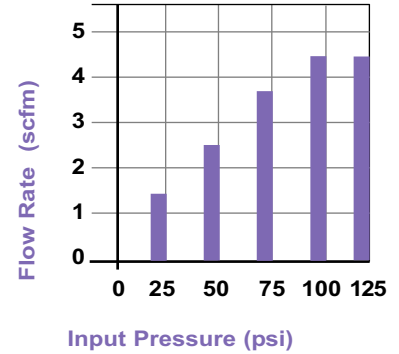
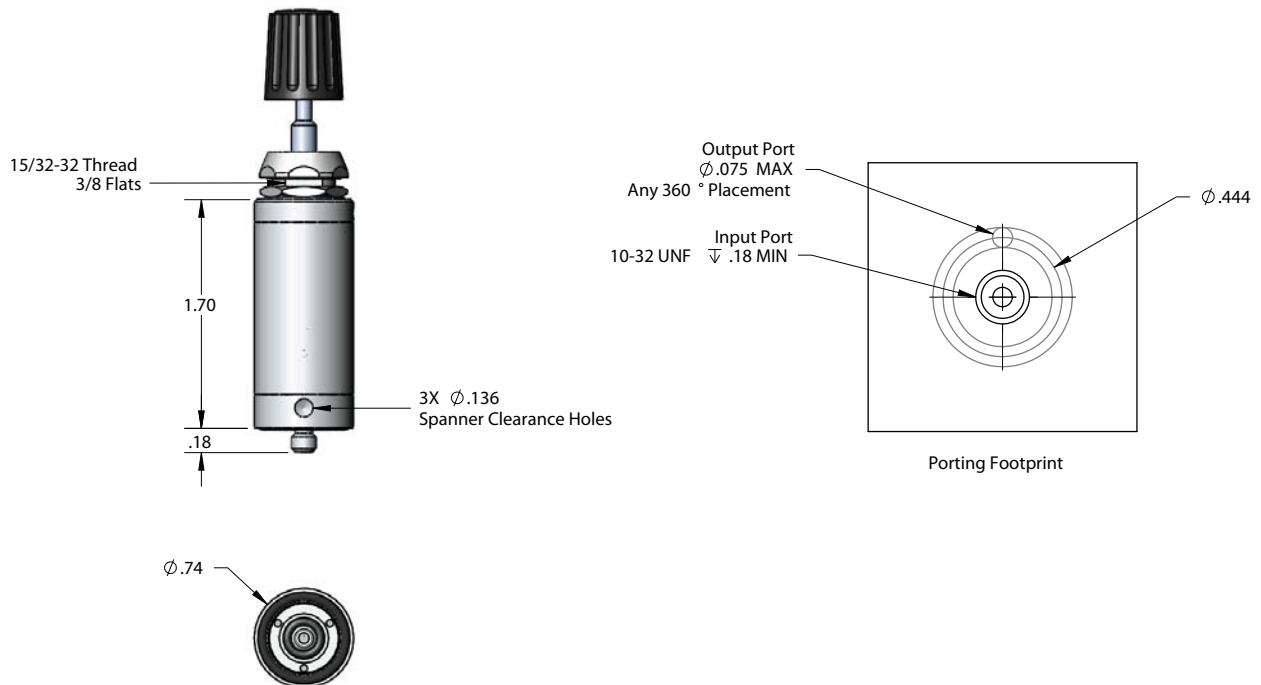


figure B

Miniature Precision Regulator Flow Chart



Miniature Precision Regulator



Ordering Information

- To order standard product use Part Number **PPR-S-100**.
- Optional seals available- contact factory.

Features

- Mounting versatility
- Knurled knob or Instrument quality knob
- Push-to-connect fittings available
- "O" Series input port rotates 360°
- "11" Series output port rotates 360°
- Direct gauge mount to output (11 Series)



Pressure Regulators

Pneumadyne's "0" & "11" Series Pressure Regulators are used to maintain a preset downstream pressure. Relieving and non-relieving styles are available to accommodate application requirements.

To ease regulator installation, porting options include 10-32 UNF, 1/8 NPT, barbs and push-in connections. For alignment purposes, the "0" Series features a swivel input and the "11" Series features a swivel output port.

The "11" Series can be mounted on a manifold allowing the consolidation of components with varying output pressures on a common pressure source (see figure C - System 11). Pneumadyne's micro gauge can be mounted on the "11" Series regulator with an extended gauge port providing an on-site pressure indicator.

Choose from a knurled knob or an Acetal panel knob for precision adjustment. Regulator components are anodized or Electroless nickel plated for corrosion and wear resistance.

Performance Data

Temperature Range	Operating Pressure	Max. Input Pressure	C _v Full Open	Flow Rate (scfm)	
				50 psi	125 psi
-20°F to 160°F	30 psi to 125 psi	125 psi	.27	9.8	22

C_v per ANSI / (NFPA) T3.21.3

Materials

Aluminum/ Black Anodize, Brass and Steel/ Electroless Nickel, Brass/ Black Dichromate, Buna-N, Stainless Steel, Acetal

Function

Relieving Regulator

Figure A - Adjustment of the control knob to a pre-determined level shifts the piston, unseating the Buna-N poppet and allowing air to flow through port 1 to port 2. When the set pressure is reached, the pressure under the piston and the force exerted by the spring are balanced producing a regulated output at port 2. A minimum of 30 psi input is required to maintain regulation.

Figure B - When downstream pressure exceeds the set level the poppet is seated -blocking input flow 1. The back pressure flows *in* output 2 lifting the Buna-N cup seal and piston allowing air to pass through the hollow stem and out the exhaust port 3.

Non-relieving Regulator

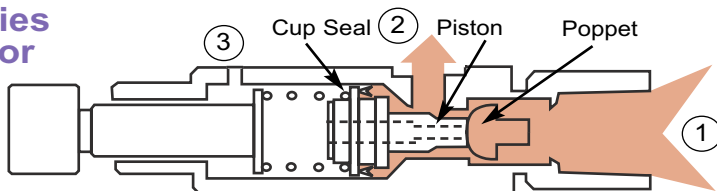
The non-relieving regulator flow path- input 1 to output 2- is the same as the relieving regulator, however the non-relieving regulator contains a solid piston that does not permit backflow at output port 2 to be exhausted.

Warning: for safety reasons only non-relieving regulators are recommended for use with liquids and with adequate means of downstream relief.

Regulator Cross Section

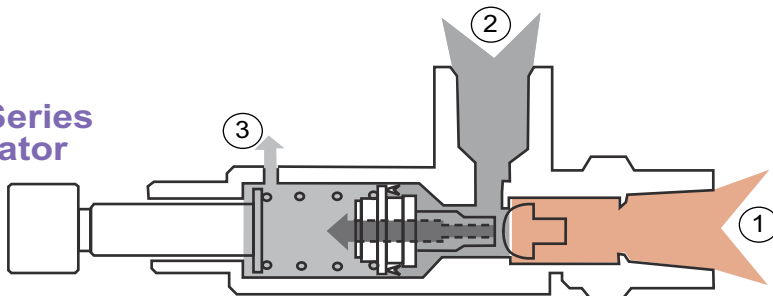
“O” Series Regulator

figure A

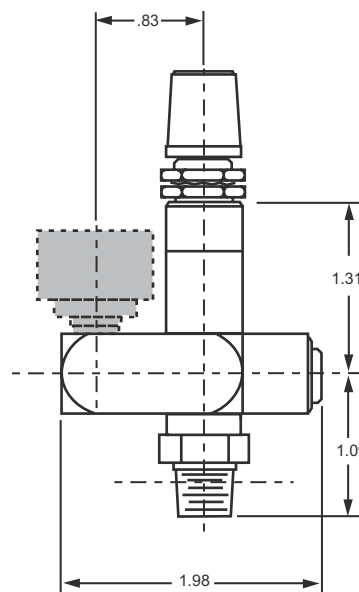


“11” Series Regulator

figure B *Relieving Mode*



Extended Port



The “11” Series Regulator with extended gauge port housing and micro gauge installed (to prevent damage the gauge is packaged and sold separately). [Gauge data](#)

Control Knob- select the knurled knob manufactured from steel or the panel knob molded from durable acetal -both are standard actuators.

Slotted adjustment screw- also available- *contact factory.*

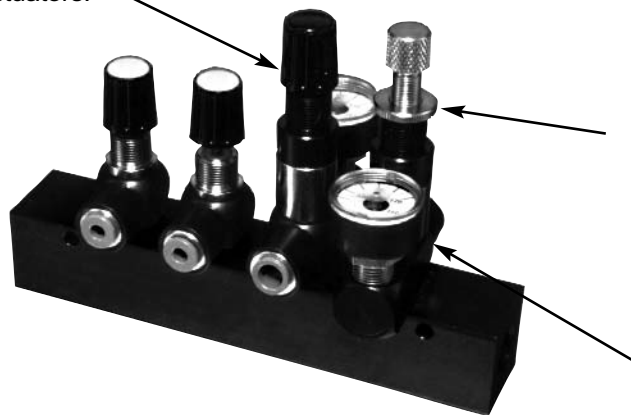


figure C

Locking Nut- RLN-40 (*sold separately*)- available to lock adjustment and eliminate possible setting variance, ideal for locations requiring infrequent adjustment.

System 11- a method of consolidating 2 to 10 components with a common pressure source. Component selection includes button style valves, regulators, and needle valves. *Each System 11 is designed per order- contact factory. See [System 11 Information](#).*

Micro Gauge- PMG-60, PMG-160 (*sold separately*)- can be mounted on the “11” Series regulator with an extended gauge port providing an on-site pressure indicator. To order a gauge ready regulator add a “-G” suffix to the part number.

Product Information

**“O” Series Regulators
Relieving**

Part Number	Input x Output	
Knurled Knob	RO-RK-1	1/8 NPT 10-32 (F)
	RO-RK-2	10-32 (F) Elbow 10-32 (F)
	RO-RK-3	10-32 (F) Tee 10-32 (F)
	RO-RK-4	1/8 NPT (F) 10-32 (F)
	RO-RK-5	170 Barb 10-32 (F)
	RO-RK-6	1/4 Push-in 10-32 (F)
	RO-RK-7	5/32 Push-in 10-32 (F)
Panel Knob	RO-RP-1	1/8 NPT 10-32 (F)
	RO-RP-2	10-32 (F) Elbow 10-32 (F)
	RO-RP-3	10-32 (F) Tee 10-32 (F)
	RO-RP-4	1/8 NPT (F) 10-32 (F)
	RO-RP-5	170 Barb 10-32 (F)
	RO-RP-6	1/4 Push-in 10-32 (F)
	RO-RP-7	5/32 Push-in 10-32 (F)

Non-Relieving

Knurled Knob	RO-NK-1	1/8 NPT 10-32 (F)
	RO-NK-2	10-32 (F) Elbow 10-32 (F)
	RO-NK-3	10-32 (F) Tee 10-32 (F)
	RO-NK-4	1/8 NPT (F) 10-32 (F)
	RO-NK-5	170 Barb 10-32 (F)
	RO-NK-6	1/4 Push-in 10-32 (F)
	RO-NK-7	5/32 Push-in 10-32 (F)
Panel Knob	RO-NP-1	1/8 NPT 10-32 (F)
	RO-NP-2	10-32 (F) Elbow 10-32 (F)
	RO-NP-3	10-32 (F) Tee 10-32 (F)
	RO-NP-4	1/8 NPT (F) 10-32 (F)
	RO-NP-5	170 Barb 10-32 (F)
	RO-NP-6	1/4 Push-in 10-32 (F)
	RO-NP-7	5/32 Push-in 10-32 (F)

Accessories

RLN-40	Locking Nut
PMG-100	Micro Gauge 0-100 psi
PMG-160	Micro Gauge 0-160 psi
PMG-60	Micro Gauge 0-60 psi

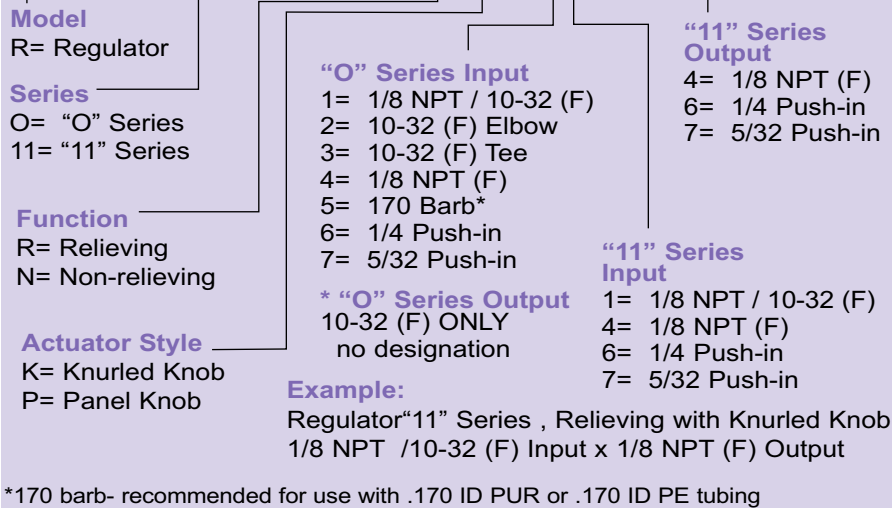
Ordering Information

- To order Pressure Regulators use the Product Information listing to select part number.
- To order a gauge ready regulator, add a -G suffix to the part number.

Product Number Diagram:

“O” & “11” Series Regulators

R 1 1 - R K - 1 4



**“11” Series Regulators
Relieving**

Part Number	Input x Output	
Knurled Knob	R11-RK-14	1/8 1/8 NPT (F)
	R11-RK-16	NPT 1/4 Push-in
	R11-RK-17	5/32 Push-in
	R11-RK-44	1/8 1/8 NPT (F)
	R11-RK-46	NPT 1/4 Push-in
	R11-RK-47	(F) 5/32 Push-in
	R11-RK-64	1/8 NPT (F)
Panel Knob	R11-RK-66	1/4 Push-in 1/4 Push-in
	R11-RK-67	5/32 Push-in
	R11-RK-74	5/32 1/8 NPT (F)
	R11-RK-76	Push-in 1/4 Push-in
	R11-RK-77	5/32 Push-in
	R11-RP-14	1/8 1/8 NPT (F)
	R11-RP-16	NPT 1/4 Push-in
Panel Knob	R11-RP-17	5/32 Push-in
	R11-RP-44	1/8 1/8 NPT (F)
	R11-RP-46	NPT 1/4 Push-in
	R11-RP-47	(F) 5/32 Push-in
	R11-RP-64	1/8 NPT (F)
	R11-RP-66	1/4 Push-in 1/4 Push-in
	R11-RP-67	5/32 Push-in
Panel Knob	R11-RP-74	1/8 NPT (F)
	R11-RP-76	5/32 Push-in 1/4 Push-in
	R11-RP-77	5/32 Push-in

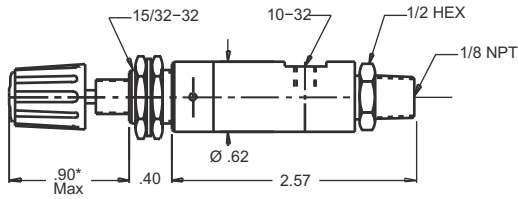
**“11” Series Regulators
Non-Relieving**

Part Number	Input x Output	
Knurled Knob	R11-NK-14	1/8 1/8 NPT (F)
	R11-NK-16	NPT 1/4 Push-in
	R11-NK-17	5/32 Push-in
	R11-NK-44	1/8 1/8 NPT (F)
	R11-NK-46	NPT 1/4 Push-in
	R11-NK-47	(F) 5/32 Push-in
	R11-NK-64	1/8 NPT (F)
Panel Knob	R11-NK-66	1/4 Push-in 1/4 Push-in
	R11-NK-67	5/32 Push-in
	R11-NK-74	5/32 1/8 NPT (F)
	R11-NK-76	Push-in 1/4 Push-in
	R11-NK-77	5/32 Push-in
	R11-NP-14	1/8 1/8 NPT (F)
	R11-NP-16	NPT 1/4 Push-in
Panel Knob	R11-NP-17	5/32 Push-in
	R11-NP-44	1/8 1/8 NPT (F)
	R11-NP-46	NPT 1/4 Push-in
	R11-NP-47	(F) 5/32 Push-in
	R11-NP-64	1/8 NPT (F)
	R11-NP-66	1/4 Push-in 1/4 Push-in
	R11-NP-67	5/32 Push-in
Panel Knob	R11-NP-74	1/8 NPT (F)
	R11-NP-76	5/32 Push-in 1/4 Push-in
	R11-NP-77	5/32 Push-in

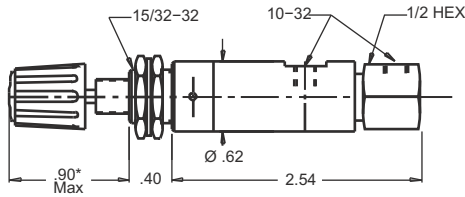
Custom Products: Contact factory for applications requiring 1/8 NPT male or 1/4 NPT male output port

“O” Series

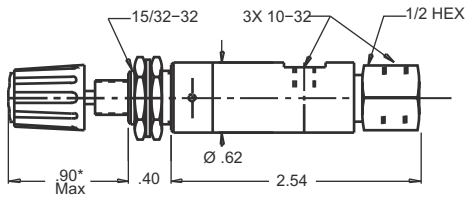
Shown with Panel Knob



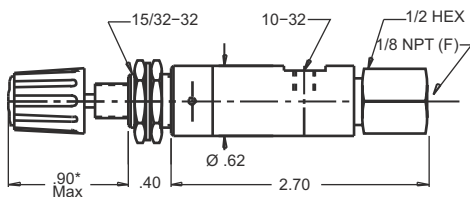
“-1” Input



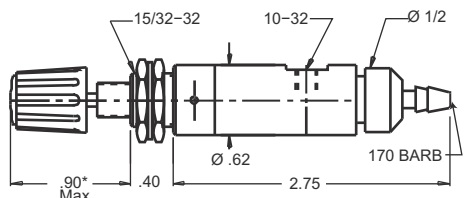
“-2” Input



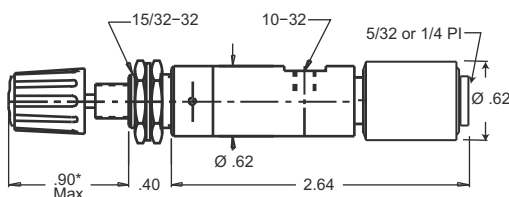
“-3” Input



“-4” Input



“-5” Input

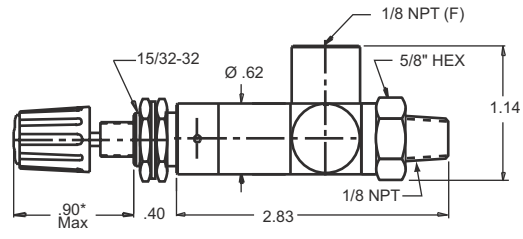


“-6” Input
“-7” Input

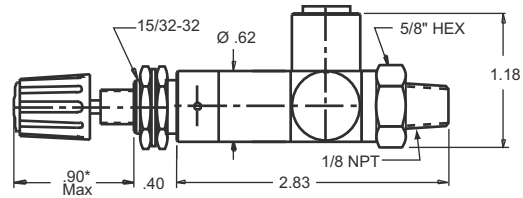
*.74 Max for knurled knob- all regulators

“11” Series

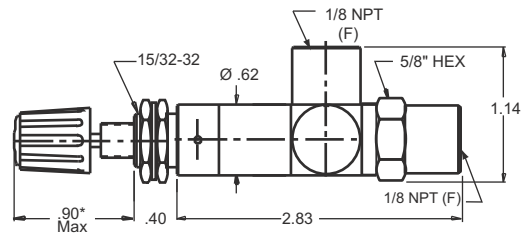
Shown with Panel Knob



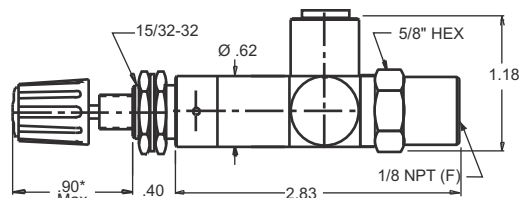
“-14” Porting



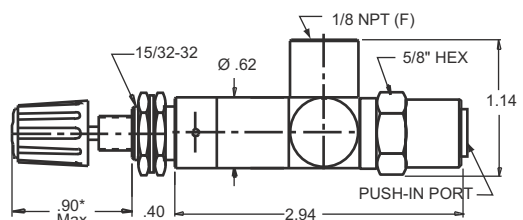
“-16” Porting
“-17” Porting



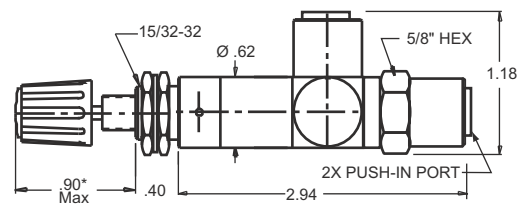
“-44” Porting



“-46” Porting
“-47” Porting



“-64” Porting
“-74” Porting



“-66” Porting
“-67” Porting
“-76” Porting
“-77” Porting

Features

- **In-line** or **Right Angle**
- Allows rapid cylinder return
- Multiple porting options
- Relieve 100 in³ in 2 seconds
- Male pipe thread for direct cylinder mount
- Threaded or controllable exhaust port
- Swivel cylinder port



Quick Exhaust Valves

In-line

The 570 In-line Quick Exhaust offers the convenience of in-line plumbing with a 1/8 NPT output and 1/8 NPT(F) input. Six exhaust holes located on either side relieve large amounts of flow in a minimal amount of time. It is ideal for allowing rapid cylinder return without air traveling back through the system.

Function

As pressure is applied through input port 1 (figure A) the poppet and seal shift forward blocking the exhaust port and allowing flow through output port 2.

When pressure is removed from input port 1 (figure B) back flow at port 2 unseats the poppet and allows flow through exhaust port 3.

Performance Data

Part Number	Temperature Range	Operating Pressure	C _v	Flow Rate (scfm)		Fill Time sec/ in ³ 0-90 psi	Exhaust Time sec/ in ³ 100-10 psi
				50 psi	125 psi		
C570501	-20°F to 160°F	0-125 psi	.20	7.3	14.7	.02	.01
QE11-*.**			.20	8.2	20.2	.02	.02
*QE10-FMF			.15	5.0	10.8	.03	.06

*Not recommended for use with cylinders larger than 1" diameter; stroke up to 12".

- Flow information supplied for flow path 1-2.

C_v per ANSI / (NFPA) T3.21.3

"11" Series- Right Angle

Pneumadyne's "11" Series Quick Exhaust Valve allows rapid cylinder return without permitting air to travel back through the system. There are sixty possible porting configurations incorporating the standard Pneumadyne "11" Series design with the addition of the 1/4 NPT male and 1/8 NPT male **output** ports. The **exhaust port** options include the 1/8 NPT female for use with a sintered bronze or industrial muffler, the 1/4-28 UNF female for use with a speed control needle ([see chart](#)), and the 1/4" push-to-connect fitting that is specially designed with a captive collet that is retained even when tubing is disconnected (recommended for use with 1/4 OD Polyurethane (95A) tubing).

Function

As pressure is applied through input port 1 (figure C) the poppet shifts forward blocking the exhaust port and allowing flow through output port 2.

When pressure is removed from input port 1 (figure D) back flow at port 2 unseats the poppet and allows flow through exhaust port 3.

Quick Exhaust Cross Section

figure A
Fill

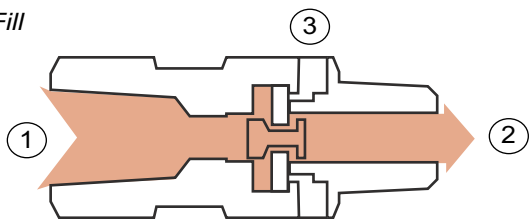


figure B
Exhaust

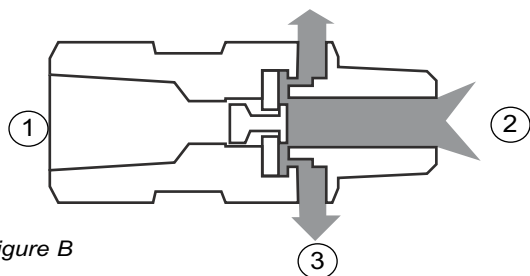


figure C
Fill

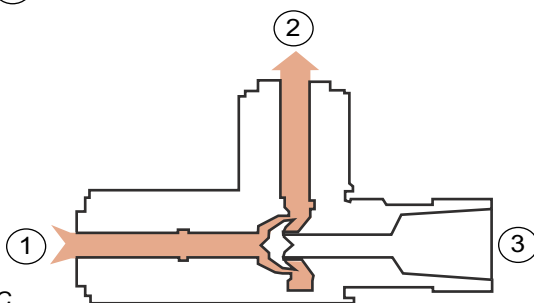
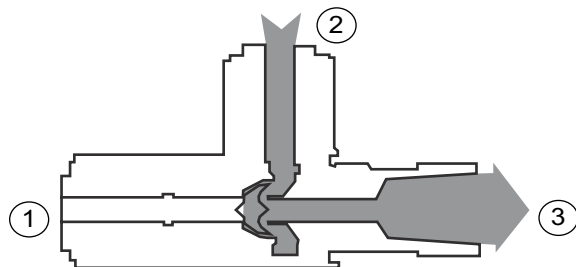
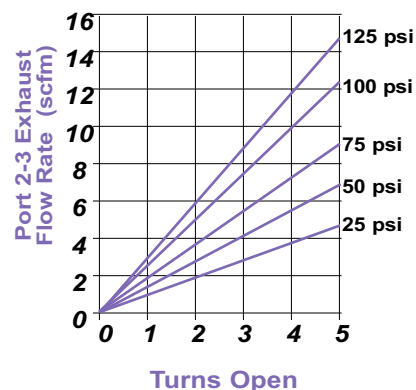


figure D
Exhaust



Quick Exhaust "11" Series with Locking Speed Control Needle



Port Options

		Definition	Options
Inline	Port 1 Input		● 1/8 NPT (F)
	Port 2 Output		● 1/8 NPT
	Port 3 Exhaust		● Non-Threaded
Right Angle	Port 1 Input		● 10-32 (F) ● 1/8 NPT / 10-32 (F) ● 1/8 NPT (F) ● 1/4 Push-in ● 5/32 Push-in
	Port 2 Swivel Output		● 10-32 (M) ● 1/8 NPT ● 1/8 NPT (F) ● 1/4 Push-in ● 5/32 Push-in ● 1/4 NPT
	Port 3 Exhaust		● 10-32 (F) ● 1/8 NPT (F) ● 1/4-28 UNF ● 1/4 Push-in

Materials

In-line: Brass/ Electroless Nickel, Buna-N, PUR

Right Angle: Aluminum/ Black Anodize, Brass/ Black Dichromate, Buna-N, Acetal, Stainless Steel, Brass/ Electroless Nickel

Ordering Information

● To order “11” Series Quick Exhaust select product number from Product Information listing or use Product Number Diagram to develop required component configuration.

1. Replace the “*” in the **Product Information** listing with one of the exhaust port codes listed below:

- M- for 1/8 NPT (F)
- S- for 1/4-28 UNF (F)
- P- for 1/4 push-to-connect

2. Select from the **Additional Accessories (sold separately)**

- **QE-MS** Sintered Bronze Muffler 1/8 NPT for use with QE-M-xx.
- **QE-MI** Industrial Muffler 1/8 NPT for use with QE-M-xx.
- **QE-S** Speed Control Needle 1/4-28 UNF with locking nut- for use with QE-S-xx.
- Contact factory for custom porting configurations.

1/4” push-to-connect exhaust port is specially designed with a captive collet that is retained even when tubing is disconnected

Product Diagram Quick Exhaust Valves

QE 11 - S - 1 8

Series

QE11= Quick Exhaust
“11” Series-
Right angle
porting

Exhaust Port

M= 1/8 NPT (F)
P= 1/4 Push-in
S= 1/4-28 UNF (F)

Input Port

1= 1/8 NPT /
10-32 (F)
4= 1/8 NPT (F)
6= 1/4 Push-in
7= 5/32 Push-in

Output Port

1= 1/8 NPT
4= 1/8 NPT (F)
6= 1/4 Push-in
7= 5/32 Push-in
8= 1/4 NPT

Example:

Quick Exhaust, “11” Series, 1/4-28 UNF (F) thread for use with Speed Control Needle (sold separately), 1/8 NPT /10-32 (F) input, 1/4 NPT output.

QE 10 - F M F

Series

QE10= Quick Exhaust

Input Port

F= 10-32 (F)
5= M5
7= 5/32 Push-in

Output Port

M= 10-32
G= M5 Adj M
A= 10-32 Adj M

Exhaust Port

F= 10-32 (F)
5= M5

Product Information

In-line

Part Number	Input	Output
-------------	-------	--------

C570501 1/8 NPT (F) 1/8 NPT

Right Angle

Part Number	Input	Output
QE10-5G5	M5	M5 Adj. (M)
QE10-7MF	5/32 Push-in	10-32 (F)
QE10-FAF	10-32 (F)	10-32 Adj. (M)
QE10-FMF	10-32 (F)	10-32 (M)

"11" Series Right Angle

Part Number	Input	Output
QE11-*-11	1/8 NPT	1/8 NPT
QE11-*-14	1/8 NPT	1/8 NPT (F)
QE11-*-16	1/8 NPT	1/4 Push-in
QE11-*-17	1/8 NPT	5/32 Push-in
QE11-*-18	1/8 NPT	1/4 NPT
QE11-*-41	1/8 NPT (F)	1/8 NPT

"11" Series Right Angle (cont'd)

Part Number	Input	Output
QE11-*-44	1/8 NPT (F)	1/8 NPT (F)
QE11-*-46	1/8 NPT (F)	1/4 Push-in
QE11-*-47	1/8 NPT (F)	5/32 Push-in
QE11-*-48	1/8 NPT (F)	1/4 NPT
QE11-*-61	1/4 Push-in	1/8 NPT
QE11-*-64	1/4 Push-in	1/8 NPT (F)
QE11-*-66	1/4 Push-in	1/4 Push-in
QE11-*-67	1/4 Push-in	5/32 Push-in
QE11-*-68	1/4 Push-in	1/4 NPT
QE11-*-71	5/32 Push-in	1/8 NPT
QE11-*-74	5/32 Push-in	1/8 NPT (F)
QE11-*-76	5/32 Push-in	1/4 Push-in
QE11-*-77	5/32 Push-in	5/32 Push-in
QE11-*-78	5/32 Push-in	1/4 NPT



"11" Series Quick Exhaust shown with accessories

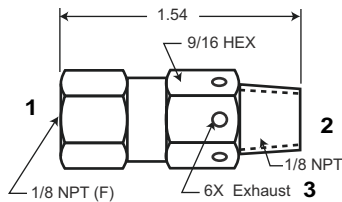
Additional Accessories

Part Number	Description
QE-MS	1/8 NPT Sintered Bronze Muffler
QE-MI	1/8 NPT Industrial Muffler
QE-S	1/4-28 UNF Speed Control Needle

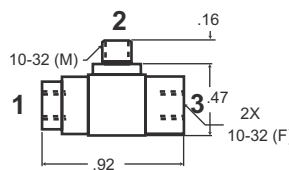
Quick Exhaust

Port Designation

C570501 In-line



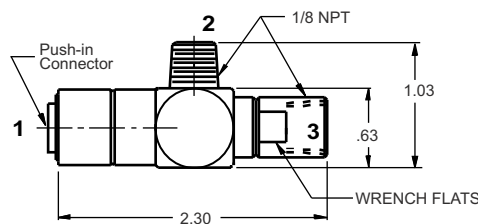
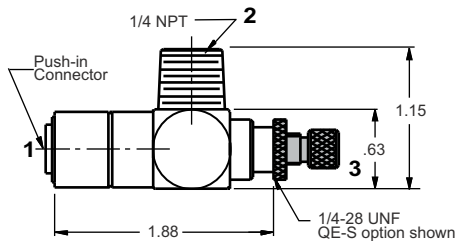
QE10-FMF Right Angle



1	Input
2	Cylinder Port
3	Exhaust

Typical drawings illustrate the overall package size of the Quick Exhaust "11" Series valve. There are **sixty** (60) possible configurations- contact factory for additional drawings.

Right Angle



● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

Features

- Release 100 in³ in 4 seconds
- Durable construction- available with standard pipe thread and 10-32 thread



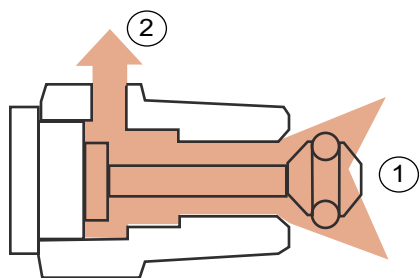
Bleed Valves

The Bleed Valve offers an easy solution for the release of excess pressure from a system. This compact and durable valve has been Pneumadyne tested to assure dependability and maximum flow.

Function

When the button is actuated the stem slides forward and air flow is vented through a non-threaded exhaust port located near the actuator. This valve makes it possible to release pressurized air at a rate of 100 in³ in 4 seconds.

Cross Section



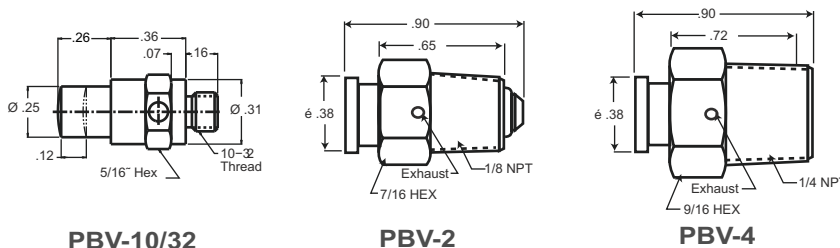
All dimensions and specifications are subject to change.

Performance Data

Temperature Range		Operating Pressure		
-20°F to 160°F		Range: 0-125 psi		
Part Number	Mount	Force to Actuate		Exhaust Time sec/ in ³ 100-10 psi
		50 psi	125 psi	
PBV-10/32	10-32 UNF (5/16" hex)	3 lbs	3 3/4lbs	.06
PBV-2	1/8 NPT (7/16" hex)	3 lbs	6 1/2 lbs	.04
PBV-4	1/4 NPT (9/16" hex)			

C_v per ANSI / (NFPA) T3.21.3

Bleed Valve



Ordering Information

- To order standard product refer to Performance Data listing (sold separately).

Materials

Brass/ Electroless Nickel, Buna-N, Stainless Steel



Features

- UL approved switch
- Interface between a pneumatic system and electrical controls
- 18 gauge copper wire
- Mounting versatility
- Can be used with DC current

Performance Data

Part Number	Temperature Range	Function	* Minimum Actuation (psi)	Maximum Actuation (psi)
C520101	-20°F to 160°F	Contacts Open (not passing)	40 psi	100 psi
C520102		Contacts Closed (passing)		

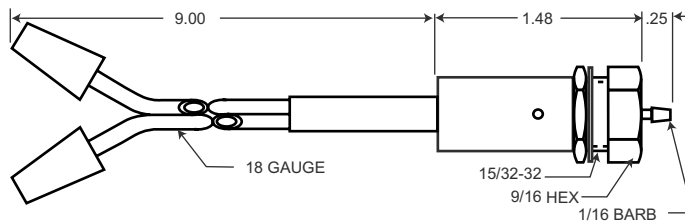
* Other pressure ranges available- contact factory

C_v per ANSI / (NFPA) T3.21.3

The Air-Operated Electric Switch

Pneumadyne's UL approved Air Operated Electric Switch is an excellent way to provide an interface between your pneumatic system and electrical controls. The primary function is to convert an air pressure signal to an electrical signal. This product can be panel mounted (31/64" nominal hole) or surface mounted using the MB-1 or MB-1F mounting bracket.

Air Operated Electric Switch



Ordering Information

- To order standard product refer to Performance Data listing (sold separately).
- (1) nut and (1) lockwasher provided.
- 062 barb recommended for use with 1/16 ID PUR.
- Optional barbs available- contact factory.

All dimensions and specifications are subject to change without notice.

Switch Life Expectancy

	115 vac Resistive
5 amp	6 thousand cycles
1 amp	1 million cycles
	220 vac Resistive
2-1/2 amp	6 thousand cycles
1/2 amp	1 million cycles

Data provided by switch manufacturer

Materials

Acetal, Brass/ Electroless Nickel, Buna-N, Stainless Steel, 18 gauge copper wire, Steel