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) 50 psi	Flow Rate (scfm) 125 psi	Cracking Pressure	Fill sec/ in^3 0-90 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

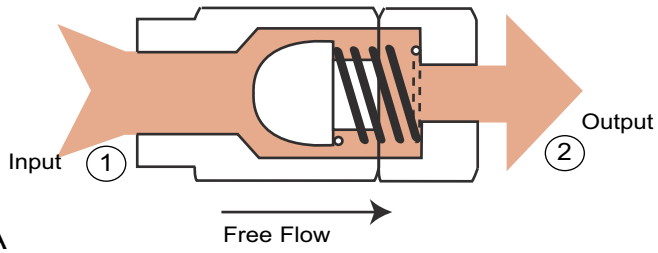


figure A

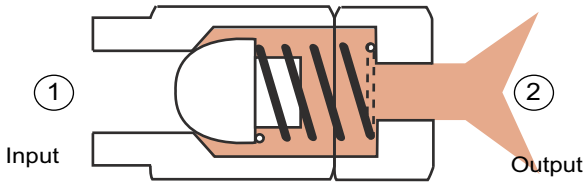


figure B

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.

Ordering Information

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

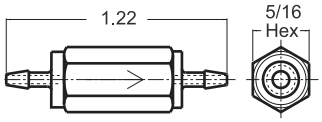
Product Information

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

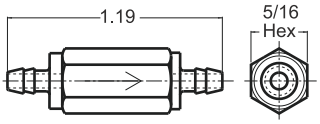
*-SS used to indicate stainless steel

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

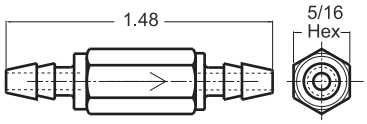
Check Valves



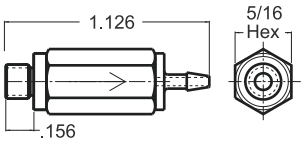
C050101



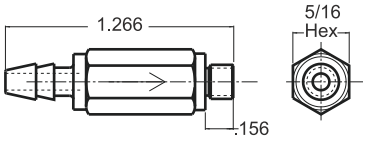
C050102



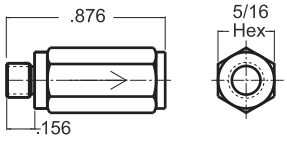
C050104



C050201

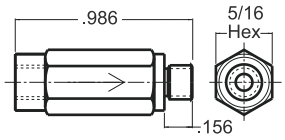


C050210

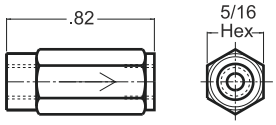


C050301

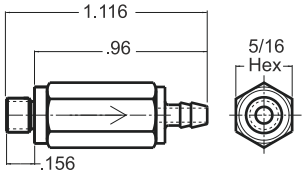
Check Valves



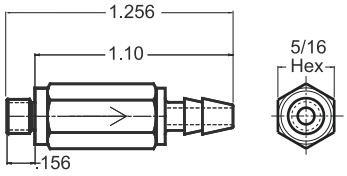
C050302



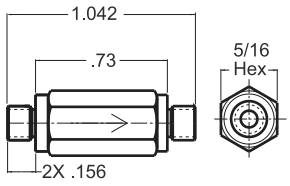
C050401



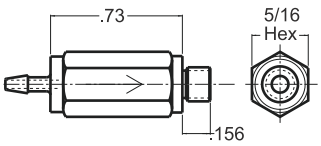
C050202



C050204

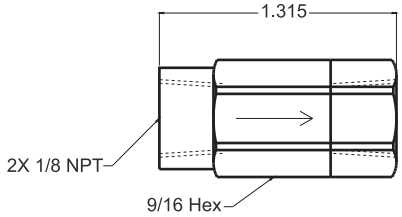


C050205

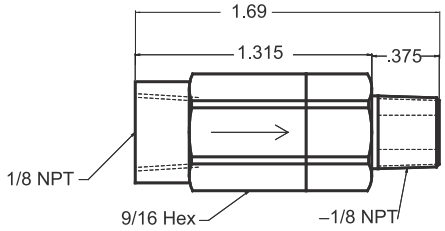


C050206

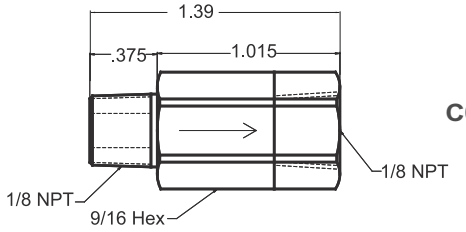
Check Valves



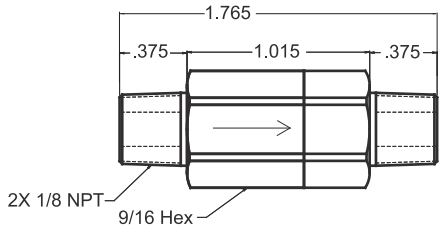
C050501



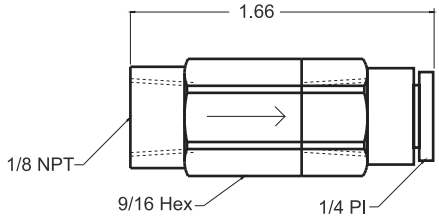
C050502



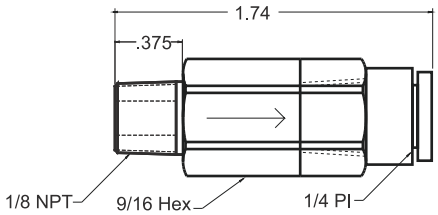
C050503



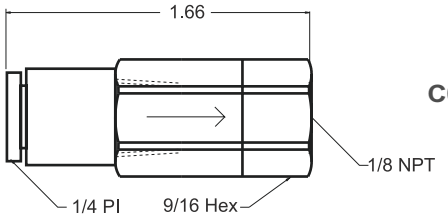
C050504



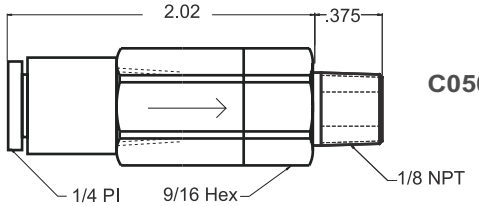
C050601



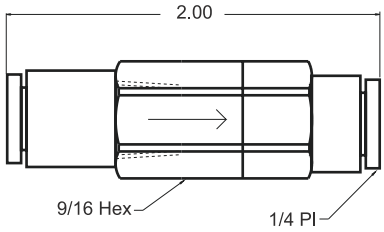
C050602



C050603



C050604



C050605

- 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)
POC-41-F POC-61-F	0° to 160°F	15 to 150	150	.23	10
POC-68-F POC-68-6	-40° to 240°F	0 to 150	150	.35	less than .1

	Flow Rate (scfm) *1-2*		Flow Rate (scfm) *2-1*	
	50 psi	100 psi	50 psi	100 psi
POC-41-F POC-61-F	2.8	5.2	3.1	5.7
POC-68-F POC-68-6	13	22	13	22

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

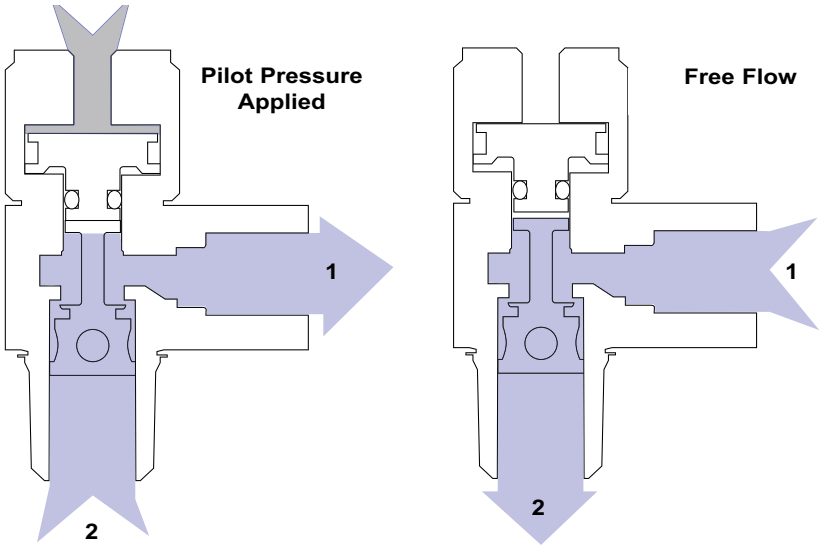
Materials

POC-41-F & POC-61-F
Body: Zinc Plated Brass & Anodized Aluminum
Internal Components: Brass, Stainless Steel & Polyamide
Seals: Buna-N
Spring: Stainless Steel

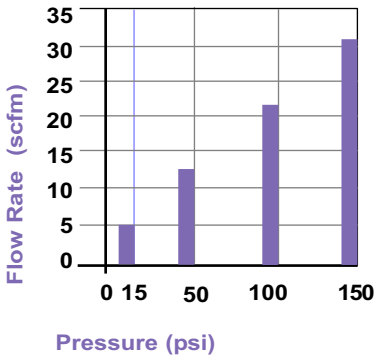
POC-68-F & POC-68-6
Body: Anodized Aluminum & Electroless Nickel Plated Brass
Stem: Brass
Seals: Buna-N
Spring: Stainless Steel

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

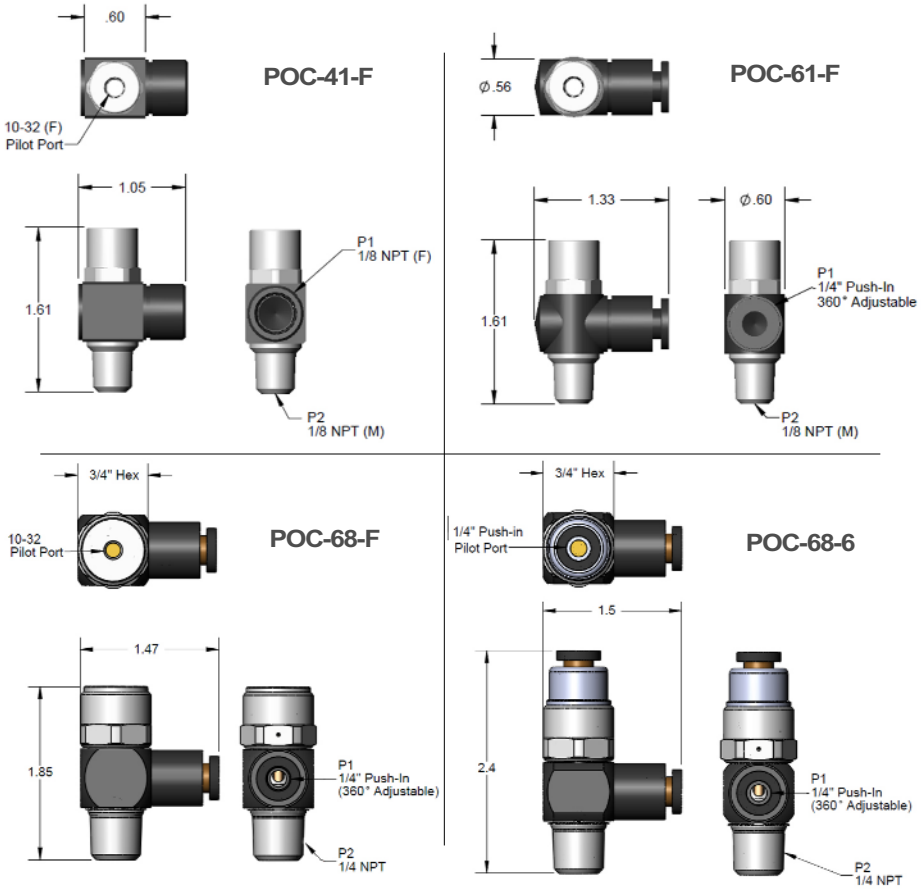
Pilot Operated Check Valves Cross Section



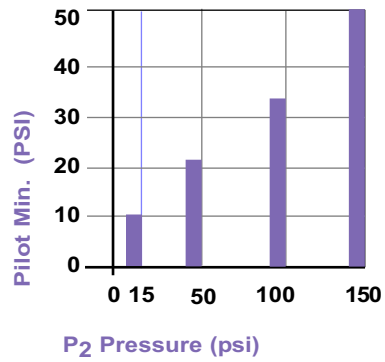
Pilot Operated Check Valves Flow Chart: POC-68-F



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.