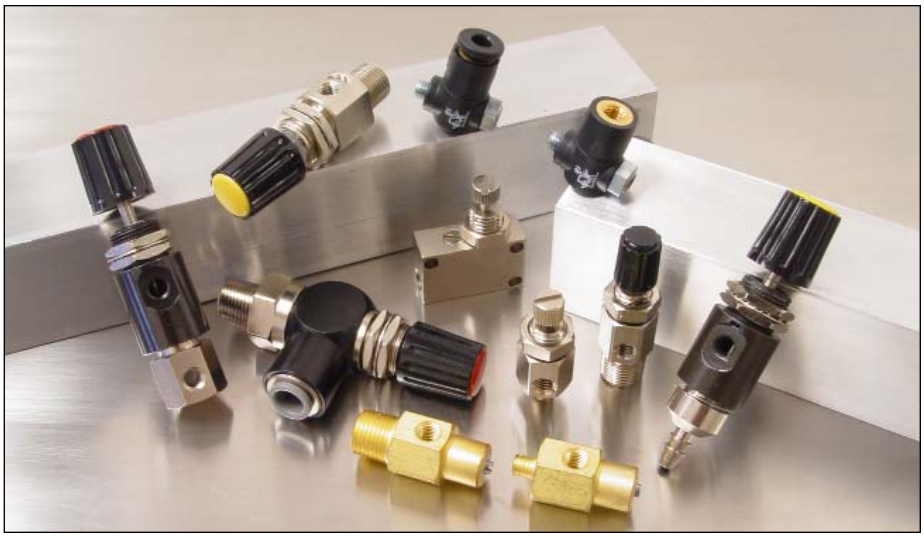
Features

- 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** controls 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 "11" Series	*Flow Control:* Red Cap	*Needle Valve:* 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) 50 psi	125 psi	C_V	Cracking Pressure (FC Only)	Function Code
"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) 50 psi	125 psi	C_V	Cracking Pressure	Function Code
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

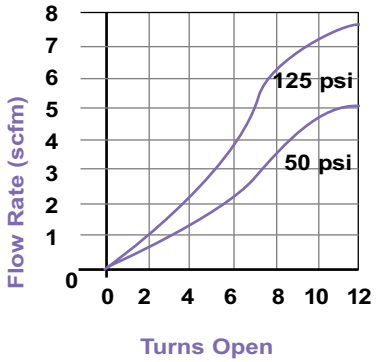
Port Options

	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) *Additional options available- contact factory*
"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

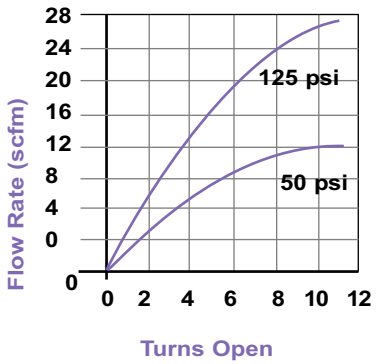
*170 Barb recommended for use with .170 ID PUR or .170 ID PE

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

"700" Series Flow Control
Turns to Open (gen. flow)

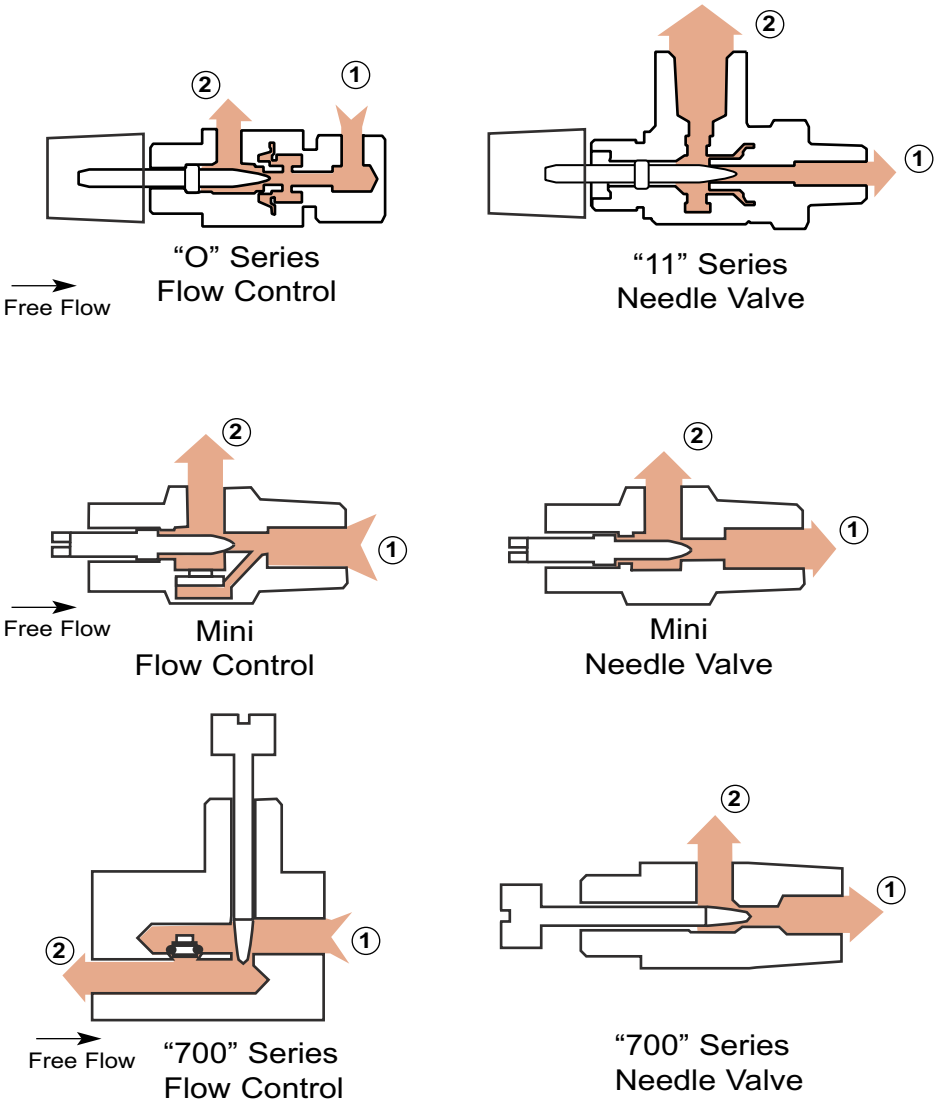


"11" Series Flow Control
Turns to Open



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

Flow Control / Needle Valve Cross Section



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

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

Note: Needle Valves control flow in both directions.

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 / 10-32 (F)	1/8 NPT (F)
PFC11-16		1/4 Push-in
PFC11-17		5/32 Push-in
PFC11-44	1/8 NPT (F)	1/8 NPT (F)
PFC11-46		1/4 Push-in
PFC11-47		5/32 Push-in
PFC11-64	1/4 Push-in	1/8 NPT (F)
PFC11-66		1/4 Push-in
PFC11-67		5/32 Push-in
PFC11-74	5/32 Push-in	1/8 NPT (F)
PFC11-76		1/4 Push-in
PFC11-77		5/32 Push-in
Reverse Flow		
PFC11R-14	1/8 NPT / 10-32 (F)	1/8 NPT (F)
PFC11R-16		1/4 Push-in
PFC11R-17		5/32 Push-in
PFC11R-44	1/8 NPT (F)	1/8 NPT (F)
PFC11R-46		1/4 Push-in
PFC11R-47		5/32 Push-in
PFC11R-64	1/4 Push-in	1/8 NPT (F)
PFC11R-66		1/4 Push-in
PFC11R-67		5/32 Push-in
PFC11R-74	5/32 Push-in	1/8 NPT (F)
PFC11R-76		1/4 Push-in
PFC11R-77		5/32 Push-in
"700" Series - panel knob available		
C070501 *low*	10-32 (F)	10-32 (F)
C070503 *gen.*	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 / 10-32 (F)	1/8 NPT (F)
PNV11-16		1/4 Push-in
PNV11-17		5/32 Push-in
PNV11-44	1/8 NPT (F)	1/8 NPT (F)
PNV11-46		1/4 Push-in
PNV11-47		5/32 Push-in
PNV11-64	1/4 Push-in	1/8 NPT (F)
PNV11-66		1/4 Push-in
PNV11-67		5/32 Push-in
PNV11-74	5/32 Push-in	1/8 NPT (F)
PNV11-76		1/4 Push-in
PNV11-77		5/32 Push-in
"700" Series - panel knob available		
C070301 *low*	10-32 (M)	10-32 (F)
C070303 *gen.*	10-32 (M)	10-32 (F)
C070601 *low*	1/8 NPT	10-32 (F)
C070603 *gen.*	1/8 NPT	10-32 (F)
Mini		
NV-32	10-32 (M)	10-32 (F)
NV-52	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.

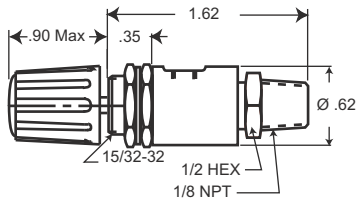
Full open, both valves offer the same flow rate.

Ordering Information

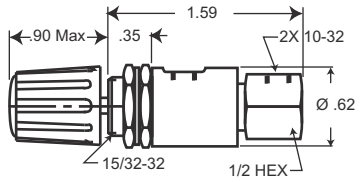
- To order standard product refer to Product Information listing.
- To order "700" Series valves with instrument quality panel knob- add a -PK suffix to the part number.
- Optional seals available- contact factory.
- Contact factory for reverse flow applications.

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

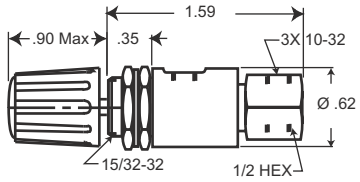
"O" Series



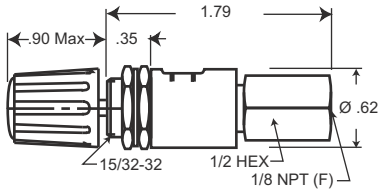
"-1" Input



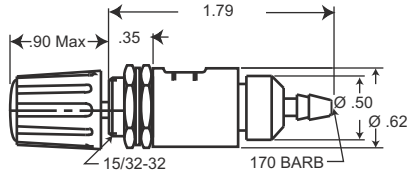
"-2" Input



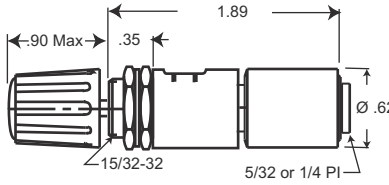
"-3" Input



"-4" Input

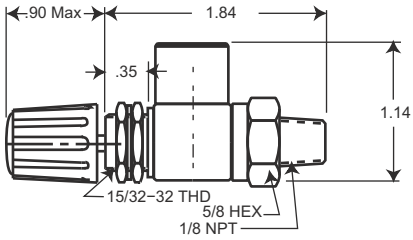


"-5" Input

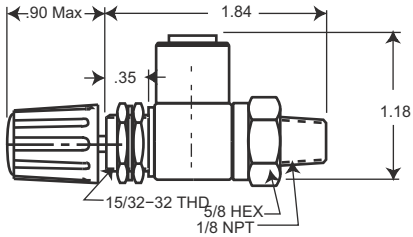


"-6" Input
"-7" Input

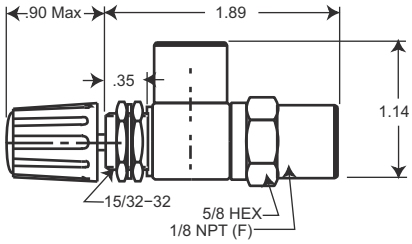
"11" Series



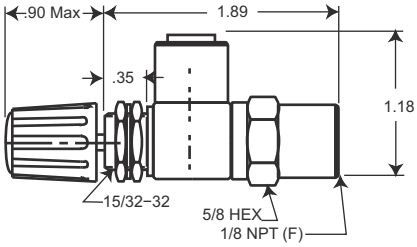
"-14" Porting



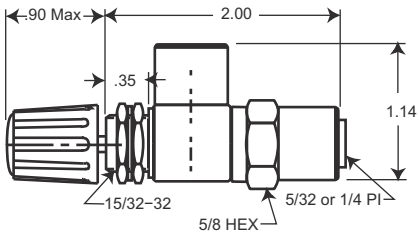
"-16" Porting
"-17" Porting



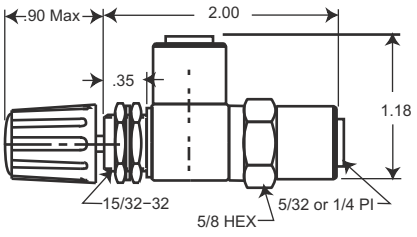
"-44" Porting



"-46" Porting
"-47" Porting



"-64" Porting
"-74" Porting



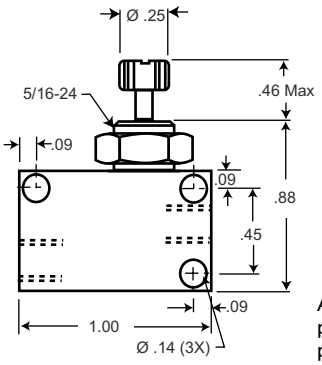
"-66" Porting
"-67" Porting
"-76" Porting
"-77" Porting

- When design makes a dimension critical- contact factory for confirmation.

All dimensions shown subject to change without notice.

"700" Series

Flow Control

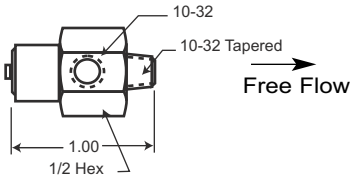


Product Number
C070501 *low*
C070503 *general*

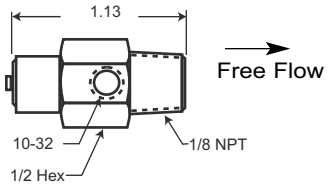
Available with instrument quality panel knob, add **-PK** suffix to the part number (not shown)

Mini

Flow Control



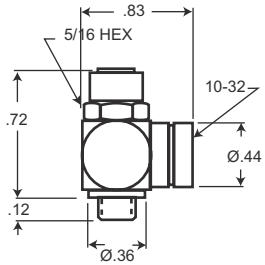
Product Number
FC-32



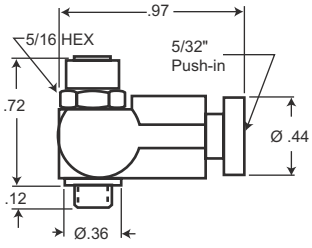
Product Number
FC-52

Banjo

Flow Control



Product Number
BFC-32
BFCR-32

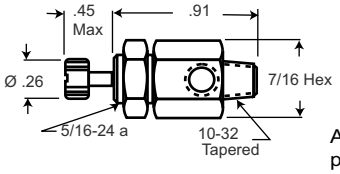


Product Number
BFC-32P
BFCR-32P

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

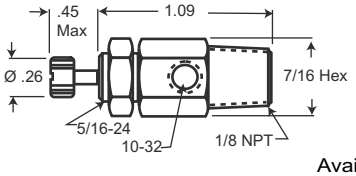
"700" Series

Needle Valves



Product Number
C070301 *low*
C070303 *general*

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

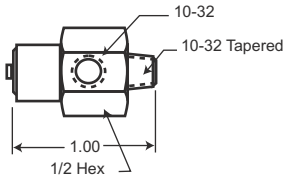


Product Number
C070601 *low*
C070603 *general*

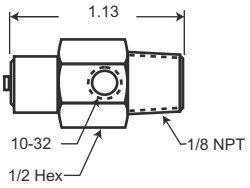
Available with instrument quality panel knob, add **-PK** suffix to the part number (not shown)

Mini

Needle Valves



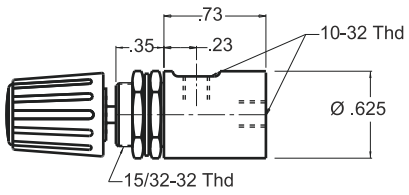
Product Number
NV-32



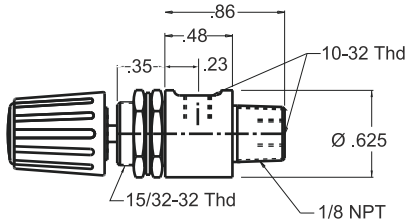
Product Number
NV-52

"O" Series

Needle Valves



Product Number
PNV0-0



Product Number
PNV0-1/8