

PNEUMATIC COMPONENTS AND SYSTEMS

*Air
Logic*



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MODULAR Precision Regulators and Manifold Systems

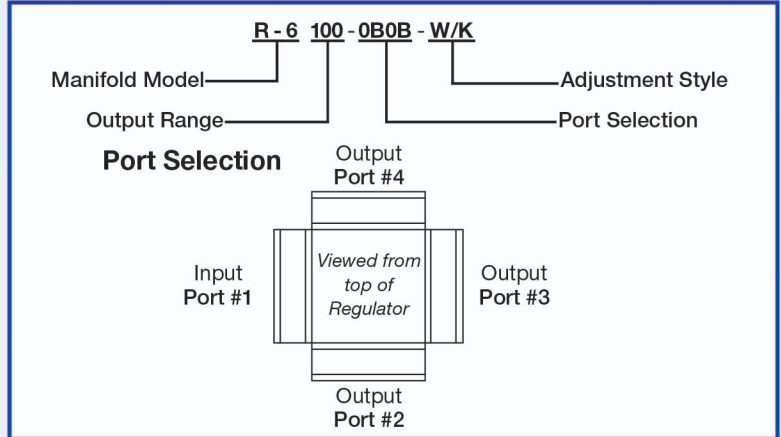




Regulator Selection Guide

Please Order by model number for output range or specify the preset output range 0.5 to 40 PSI using 100 PSI supply. Specify accessory letters or numbers for the dovetail ports and adjustment style. The regulator is supplied with an INPUT PORT, an OUTPUT PORT, and two BLANK PORTS as standard. Two accessory ports may be ordered. When choosing the port selection the input port is the starting point. The remaining ports are then selected counterclockwise.

MODEL NUMBER SELECTION



Introduction to Air Logic

The Air Logic Division of Knapp Manufacturing, Inc. designs and manufactures a comprehensive line of pneumatic and vacuum control equipment—sensing and input elements, control elements, output interfacing devices and complete air supply systems. The control elements include both fluidic and moving diaphragm control components. Air Logic has a strong reputation for immediate service, quality, and dependability. For special applications and requirements call Air Logic.

Regulators

Air Logic is a manufacturer of Modular Subminiature Precision Pressure Regulators and Modular Manifold Systems, ideal for instrumentation, medical and industrial applications.

The modular equipment includes

- Subminiature Precision Pressure Regulators
- Factory Preset Precision Pressure Regulators
- Manifold Mounted Precision Pressure Regulators
- Modular Manifold System

The Precision Pressure Regulators provide the ultimate in regulation of pressure.

The Modular Manifold System allows various combinations of pneumatic accessories to be assembled together.

The unique modular dovetail design allows the regulator or the manifold to be used individually or assembled into a modular combination of pneumatic components.

ADJUSTMENT RANGE			INDEX
Model Number	Adjustment Range	Description	Page Number
M-5000	N/A	Modular Manifold	10-11
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PR-7000	Specify Preset Output	Preset Precision Pressure Regulator	6-7
Modular Dovetail Accessories	N/A	For Pressure Regulator and Manifold System	12-13

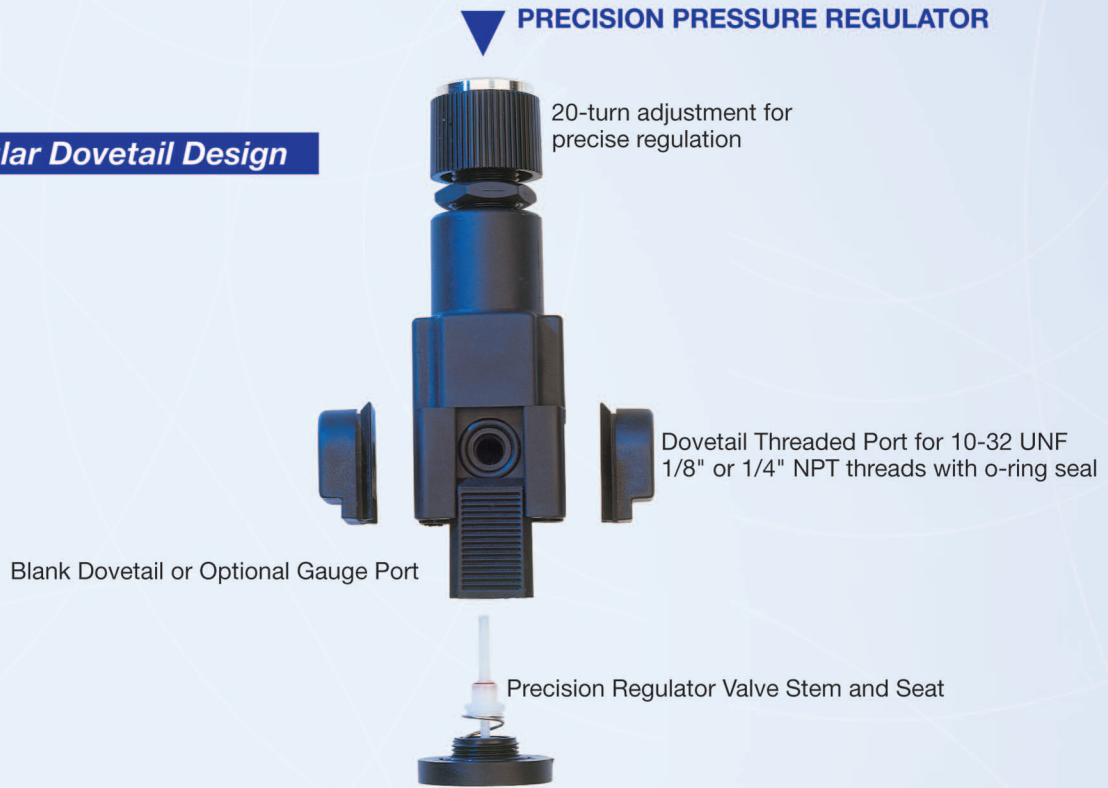
PORT CONNECTION		
Selection	Accessory Number	Description
Side Ports	0	10-32 UNF Threads
	1	1/8-27 NPT Threads
	2	1/4-18 NPT Threads
	B	Blank Dovetail
	U	Union Dovetail
	C	Connecting Dovetail
	G	1/8-27 NPT Dovetail Gauge Port
	H	1/4-18 NPT Dovetail Gauge Port
	D	0-30 PSI Gauge with Gauge Port
	I	0-60 PSI Gauge with Gauge Port
	J	0-100 PSI Gauge with Gauge Port
	K	0-160 PSI Gauge with Gauge Port
	W	Wall Mounting Dovetail Bracket
Manifold Top Cover	0	10-32 UNF Threads
	1	1/8-27 NPT Threads
	2	1/4-18 NPT Threads
	B	Blank Cover

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Patent numbers 5,217,260 & 5,261,447

Modular Precision Regulator and Manifold Systems

Unique Modular Dovetail Design



Unique Modular Manifold Design



R-7000 Series Precision Pressure Regulator



FEATURES

- Modular Dovetail Design
- Excellent Repeatability
- Miniature Size
- Non-Rising Stem
- Automatic Relief
- Low Cost

The **Modular Subminiature Precision Pressure Regulator** is designed for precise regulation of pressure. It is ideal for instrumentation and industrial applications. The pressure regulator has a 20 turn adjustment range from 0.5 to 100 PSI. Maximum supply is 150 PSI. Four adjustment ranges are available: 10 PSI, 30 PSI, 60 PSI and 100 PSI. The standard device is furnished with an adjustment knob and is also available with an extended 1/4" shaft to accept an adjustment knob or furnished with an exposed screwdriver adjustment by which the pressure range can be adjusted.

The **Unique Modular Dovetail** design allows the regulator to be used individually or assembled into a modular combination of pneumatic components.

Port Connections Available

- Threaded Port
- Connector
- Union
- Gauge Port
- Blank Slides
- Push-in Fitting

Patent numbers 5,217,260 & 5,261,447



Unique Modular Dovetail Design SPECIFICATIONS

Adjustment Range: 0.5 to 100 PSI

Maximum Supply: 150 PSI

Operating Temperature: 40° to 150° F (4° to 66°C)

Recommended Filtration: 5 Micron

Effect of Supply Variation: Within .1 PSI output change with 10 PSI supply change

Flow Regulator: Maximum flow 5 SCFM with 100 PSI supply

Repeatability: Within .1 PSI when the supply pressure is turned off and on

Drift: At 75°F. 0.1 PSI total drift

Supply Consumption: Within 400 cc/m at 100 PSI supply, with a deadend output

MATERIALS

Housing: Glass filled Celcon

Adjustment Screw: Carbon Filled Nylon

Retaining Ring: Carbon Spring Steel

Stem Assembly: Celcon

Diaphragm: Buna N, Polyurethane

Diaphragm Assembly: Celcon

Springs: Stainless Steel

O-Rings: Buna N, Silicone Nitrile

Valve Seat: PVC

Filter: Stainless Steel 304, Micron size 380

Manifold Mount Screws: Zinc

PORT CONNECTIONS

Threaded Dovetail: A Modular Dovetail Slide with 10-32 UNF, 1/8-27 NPT, 1/4-18 NPT thread sizes. The 1/8" and 1/4" NPT contain a brass hoop ring insert. The 1/8" and 1/4" gauge port is available. During assembly fittings should be finger tight plus one turn.

Union Dovetail: A Modular Dovetail Slide with a thru hole joining two units together with a common air supply.

Connecting Dovetail: A Modular Connecting Dovetail Slide with no hole joining two units together with no common air supply.

Gauge Dovetail: A Modular Dovetail Slide with 1/8-27 NPT or 1/4-18 NPT thread sizes. The Dovetail Slide has the word "gauge" molded into the slide.

Blank Dovetail: 2 Blank Dovetail Slides are supplied as standard.

Push-in Fitting Dovetail: Available for 5/32", 3/16", 1/4", 5/16", 4mm and 6mm O.D. Tubing.

MOUNTING

Panel Mount: 9/16" hole for panel mounting, mounting nut furnished. Panel mounting nut should be finger tight plus 1/4 turn.

Base mounting: .115 diameter mounting holes, use 4-40 mounting screws.

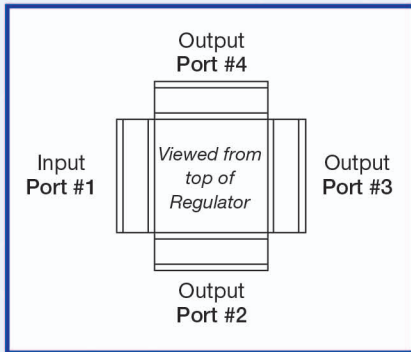
Wall Mount: Modular Dovetail wall mount.

Regulator Selection Guide

ORDERING INFORMATION Order by model number for output range. Specify accessory letters or numbers for the dovetail ports and adjustment style. The regulator is supplied with an INPUT PORT, an OUTPUT PORT, and two BLANK PORTS as standard. Two accessory ports may be ordered. When choosing the port selection the input port is the starting point. The remaining ports are then selected counterclockwise.

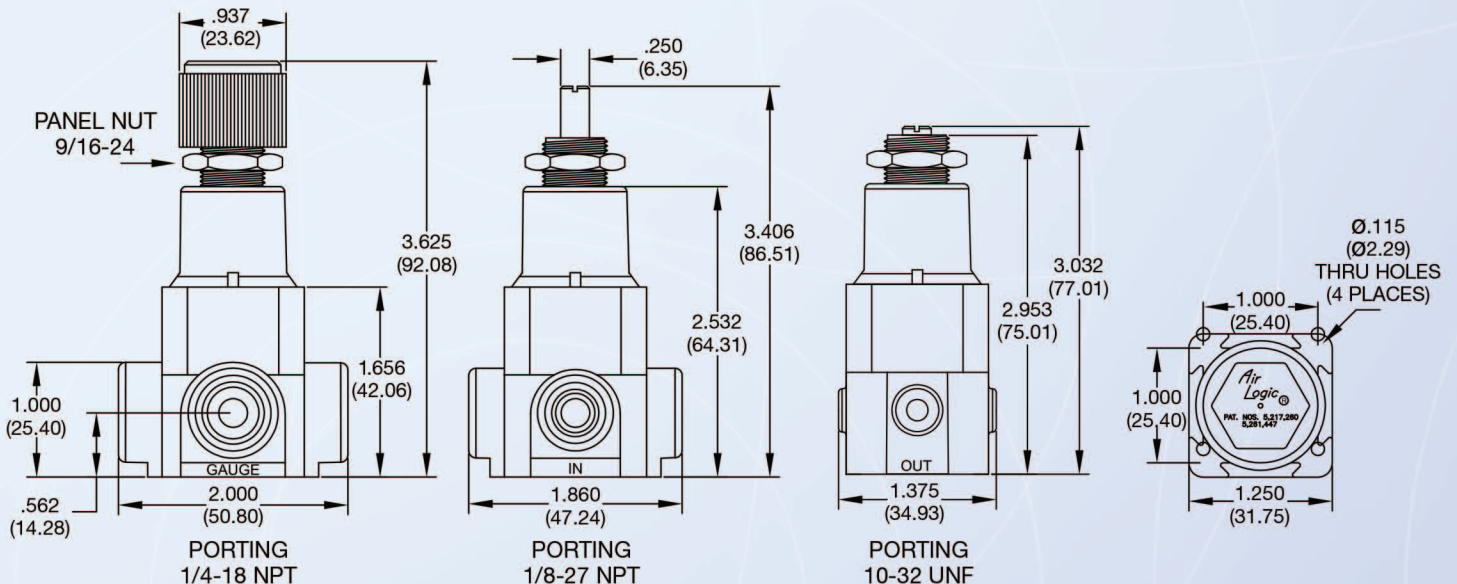
Part Number Guide

Port Location Diagram



	<u>R7030</u>	<u>7</u>	<u>S</u>	<u>8</u>	<u>S</u>	<u>WO/S</u>
Model Number	Input Port 1	Port 2	Port 3	Port 4	Adjustment Style	
R7010 0.5 - 10 PSI	<ul style="list-style-type: none"> 0 – 10-32 UNF Threads 1 – 1/8-27 NPT Threads 2 – 1/4-18 NPT Threads 3 – Push-in Fitting for 5/32" O.D. tube 4 – Push-in Fitting for 3/16" O.D. tube 5 – Push-in Fitting for 1/4" O.D. tube 6 – Push-in Fitting for 5/16" O.D. tube 7 – Push-in Fitting for 4mm O.D. tube 8 – Push-in Fitting for 6mm O.D. tube B – Blank Dovetail C – Connecting Dovetail D – 0-30 PSI Gauge with Gauge Port G – 1/8-27 NPT Dovetail Gauge Port H – 1/4-18 NPT Dovetail Gauge Port I – 0-60 PSI Gauge with Gauge Port J – 0-100 PSI Gauge with Gauge Port K – 0-160 PSI Gauge with Gauge Port L – 0-15 PSI Gauge with Gauge Port S – M5 Threads W – Wall Mounting Dovetail Bracket 					W/K - with adjustment knob
R7030 0.5 - 30 PSI						WO/S - with screw-driver slot adjustment
R7060 0.5 - 60 PSI						W/S - with 1/4" shaft adjustment
R7100 0.5 - 100 PSI						W/S - with 1/4" shaft adjustment

DIMENSIONS () = Metric Dimensions



PR-7000 Series Preset Precision Pressure Regulator



FEATURES

- **Modular Dovetail Design**
- **Excellent Repeatability**
- **Miniature Size**
- **Automatic Relief**
- **Low Cost**

The Modular Precision Preset Regulator is designed to produce a precise output pressure that is preset. The regulator is ideal for instrumentation and industrial applications.

The standard preset model is factory preset to the desired output pressure, 0.5-40 PSI using 100 PSI supply. Specify the supply pressure if the supply is different than 100 PSI.

The Preset Regulator is available with a recessed allen wrench adjustment or a removable adjustment knob.

The **Unique Modular Dovetail** design allows the regulator to be used individually or assembled into a modular combination of pneumatic components.

Port Connections Available

- **Threaded Port**
- **Connector**
- **Union**
- **Gauge Port**
- **Blank Slides**
- **Push-in Fitting**

Patent numbers 5,217,260 & 5,261,447



Unique Modular Dovetail Design

SPECIFICATIONS

Adjustment Range: 0.5 to 40 PSI

Maximum Supply: 150 PSI

Operating Temperature: 40° to 150° F (4° to 66°C)

Recommended Filtration: 5 Micron

Effect of Supply Variation: Within .1 PSI output change with 10 PSI supply change

Flow Regulator: Maximum flow 5 SCFM with 100 PSI supply

Repeatability: Within .1 PSI when the supply pressure is turned off and on

Drift: At 75°F. 0.1 PSI total drift

Supply Consumption: Within 400 cc/m at 100 PSI supply, with a deadend output

MATERIALS

Housing: Glass filled Celcon

Adjustment Screw: Carbon Filled Nylon

Retaining Ring: Carbon Spring Steel

Stem Assembly: Celcon

Diaphragm: Buna N, Polyurethane

Diaphragm Assembly: Celcon

Springs: Stainless Steel

O-Rings: Buna N, Silicone Nitrile

Valve Seat: PVC

Filter: Stainless Steel 304, Micron size 380

Manifold Mount Screws: Zinc

PORT CONNECTIONS

Threaded Dovetail: A Modular Dovetail Slide with 10-32 UNF, 1/8-27 NPT, 1/4-18 NPT thread sizes. The 1/8" and 1/4" NPT contain a brass hoop ring insert. The 1/8" and 1/4" gauge port is available. During assembly fittings should be finger tight plus one turn.

Union Dovetail: A Modular Dovetail Slide with a thru hole joining two units together with a common air supply.

Connecting Dovetail: A Modular Connecting Dovetail Slide with no hole joining two units together with no common air supply.

Gauge Dovetail: A Modular Dovetail Slide with 1/8-27 NPT or 1/4-18 NPT thread sizes. The Dovetail Slide has the word "gauge" molded into the slide.

Blank Dovetail: 2 Blank Dovetail Slides are supplied as standard.

Push-in Fitting Dovetail: Available for 5/32", 3/16", 1/4", 5/16", 4mm and 6mm O.D. Tubing.

MOUNTING

Base Mounting: .115 diameter mounting holes – use 4-40 mounting screws.

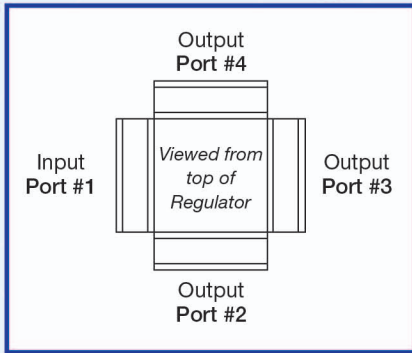
Wall Mount: Modular Dovetail wall mount.

Regulator Selection Guide

ORDERING INFORMATION Order by model number and specify the preset output range 0.5 to 40 PSI using 100 PSI supply. Specify accessory letters or numbers for the dovetail ports and adjustment style. The regulator is supplied with an *INPUT PORT*, an *OUTPUT PORT*, and two *BLANK PORTS* as standard. Two accessory ports may be ordered. When choosing the port selection, the *INPUT PORT* is the starting point. The remaining ports are then selected counterclockwise.

Part Number Guide

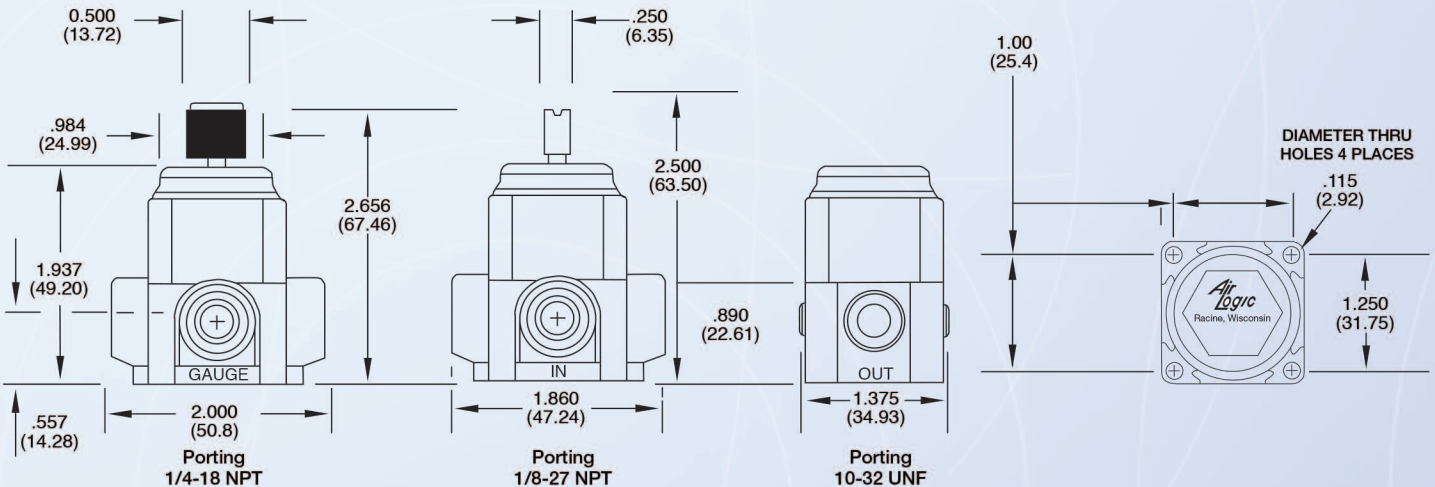
Port Location Diagram



Model Number	Input Port 1	Port 2	Port 3	Port 4	Adjustment Style
<div style="display: flex; justify-content: space-around; font-weight: bold; font-size: 1.2em;"> PR7018 7 D S B W/S </div>					
<p>PR7 ____</p> <p>Specify Output 0.5 - 40 PSI</p>	<p>0 – 10-32 UNF Threads</p> <p>1 – 1/8-27 NPT Threads</p> <p>2 – 1/4-18 NPT Threads</p> <p>3 – Push-in Fitting for 5/32" O.D. tube</p> <p>4 – Push-in Fitting for 3/16" O.D. tube</p> <p>5 – Push-in Fitting for 1/4" O.D. tube</p> <p>6 – Push-in Fitting for 5/16" O.D. tube</p> <p>7 – Push-in Fitting for 4mm O.D. tube</p> <p>8 – Push-in Fitting for 6mm O.D. tube</p> <p>B – Blank Dovetail</p> <p>D – 0-30 PSI Gauge with Gauge Port</p> <p>G – 1/8-27 NPT Dovetail Gauge Port</p> <p>H – 1/4-18 NPT Dovetail Gauge Port</p> <p>I – 0-60 PSI Gauge with Gauge Port</p> <p>L – 0-15 PSI Gauge with Gauge Port</p> <p>S – M5 Threads</p> <p>W – Wall Mounting Dovetail Bracket</p>	<p>W/K - with adjustment knob</p> <p>W/S - with adjustment shaft</p> <p>Allen Wrench Adjustment does not require specification</p>			

DIMENSIONS () = Metric Dimensions

Removable Adjusting Stem
with or without knob



R-6000, PR-6000 Series Manifold Mounted Pressure Regulator



FEATURES

- Manifold Mount
- Modular Dovetail Design
- Excellent Repeatability
- Automatic Relief
- Low Cost

The Manifold Mounted Precision Pressure Regulators are designed to mount directly on pneumatic circuit boards or manifold subplates. The port connections for the supply and output are located on the base of the manifold mounted series regulator. Two recessed Buna-N o-rings are supplied for sealing the regulator to the manifold.

The Manifold Mounted Regulators are available in two models: **The Adjustable Precision Regulator** has a 20-turn adjustment range from .5 to 100 PSI. Maximum supply is 150 PSI. Four adjustment ranges are available: 10 PSI, 30 PSI, 60 PSI, and 100 PSI.

The Adjustable Regulator is furnished with an adjustment knob and is also available with an extended 1/4" shaft to accept an adjusting knob or furnished with an exposed screwdriver adjustment by which the pressure range can be adjusted.

The Preset Precision Regulator is designed to produce a precise output pressure that is preset at the factory, 0.5 to 40 PSI using a 100 PSI supply.

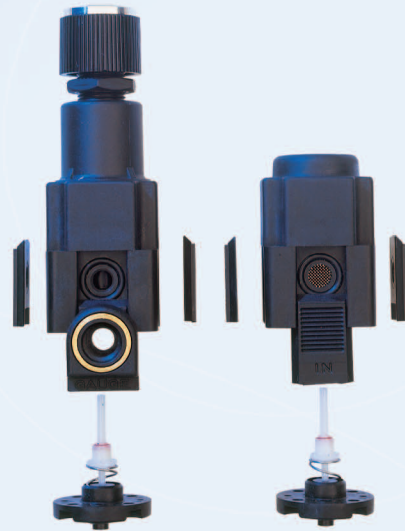
The preset regulator is available with a recessed allen wrench adjustment or a removable adjustment knob.

The **Unique Modular Dovetail** design allows the regulator to be used individually or assembled into a modular combination of pneumatic components.

Port Connections Available

- Threaded Port
- Connector
- Union
- Gauge Port
- Blank Slides
- Push-in Fitting

Patent numbers 5,217,260 & 5,261,447



Unique Modular Dovetail Design

SPECIFICATIONS

Adjustment Range: Adjustment Model, 0.5 to 100 PSI
Preset Model, 0.5 to 40 PSI

Maximum Supply: 150 PSI

Operating Temperature: 40° to 150° F (4° to 66°C)

Recommended Filtration: 5 Micron

Effect of Supply Variation: Within .1 PSI output change with 10 PSI supply change

Flow Regulator: Maximum flow 5 SCFM with 100 PSI supply

Repeatability: Within .1 PSI when the supply pressure is turned off and on

Drift: At 75°F. 0.1 PSI total drift

Supply Consumption: Within 400 cc/m at 100 PSI supply, with a deadend output

MATERIALS

Housing: Glass filled Celcon

Adjustment Screw: Carbon filled Nylon

Retaining Ring: Carbon Spring Steel

Stem Assembly: Celcon

Diaphragm: Buna N, Polyurethane

Diaphragm Assembly: Celcon

Springs: Stainless Steel

O-Rings: Buna N, Silicone Nitrile

Valve Seat: PVC

Filter: Stainless Steel 304, Micron size 380

Manifold Mount Screws: Zinc

PORT CONNECTIONS

Threaded Dovetail: A Modular Dovetail Slide with 10-32 UNF, 1/8-27 NPT, 1/4-18 NPT thread sizes. The 1/8" and 1/4" NPT contain a brass hooping insert. The 1/8" and 1/4" gauge port is available. During assembly, fittings should be finger tight plus one turn.

Union Dovetail: A Modular Dovetail Slide with a thru hole joining two units together with a common air supply.

Connecting Dovetail: A Modular Connecting Dovetail Slide with no hole joining two units together with no common air supply.

Gauge Dovetail: A Modular Dovetail Slide with 1/8-27 NPT or 1/4-18 NPT thread sizes. The Dovetail Slide has the word "gauge" molded into the slide. 2 Blank Dovetail Slides are supplied as standard.

Blank Dovetail: Available for 5/32", 3/16", 1/4", 5/16", 4mm and 6mm O.D. Tubing.

MOUNTING

Manifold Mounting: .115 diameter mounting holes - use 4-40 mounting screws

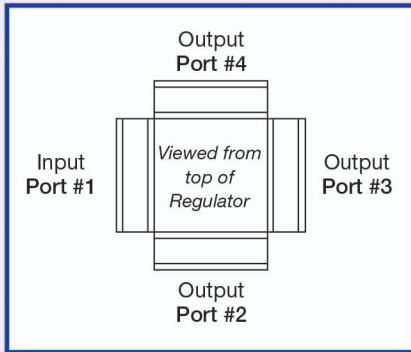
Mounting Base: An Air Logic manifold mounting base is available. 10-32 UNF threaded input and output ports.

Regulator Selection Guide

ORDERING INFORMATION Order by model number for output range or specify the preset output range 0.5 to 40 PSI using 100 PSI supply. Specify accessory letters or numbers for the dovetail ports and adjustment style. The regulator is supplied with an *INPUT PORT*, an *OUTPUT PORT*, and two *BLANK PORTS* as standard. Two accessory ports may be ordered. When choosing the port selection the input port is the starting point. The remaining ports are then selected counterclockwise.

Part Number Guide

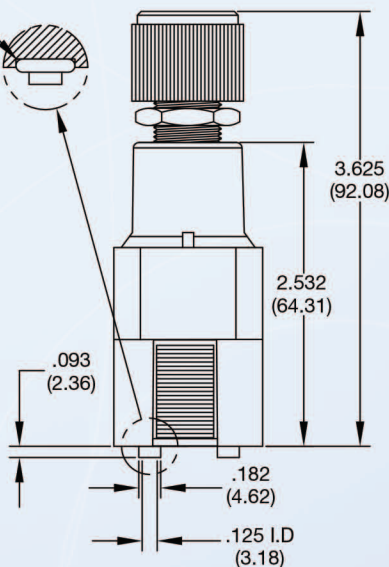
Port Location Diagram



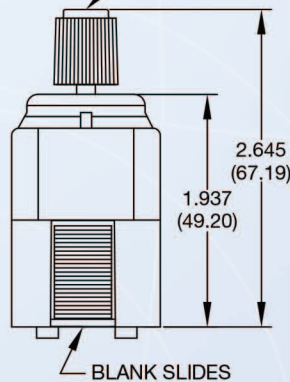
Model Number	Input Port 1	Port 2	Port 3	Port 4	Adjustment Style
R6010 0.5 - 10 PSI	0 – 10-32 UNF Threads	1 – 1/8-27 NPT Threads	2 – 1/4-18 NPT Threads		W/K - with adjustment knob
R6030 0.5 - 30 PSI	3 – Push-in Fitting for 5/32" O.D. tube	4 – Push-in Fitting for 3/16" O.D. tube	5 – Push-in Fitting for 1/4" O.D. tube		WO/S - with screw-driver slot adjustment
R6060 0.5 - 60 PSI	6 – Push-in Fitting for 5/16" O.D. tube	7 – Push-in Fitting for 4mm O.D. tube	8 – Push-in Fitting for 6mm O.D. tube		W/S - with 1/4" Shaft adjustment
R6100 0.5 - 100 PSI	B – Blank Dovetail	D – 0-30 PSI Gauge with Gauge Port	G – 1/8-27 NPT Dovetail Gauge Port	H – 1/4-18 NPT Dovetail Gauge Port	Preset Regulator
PR6 _ _ _	I – 0-60 PSI Gauge with Gauge Port	J – 0-100 PSI Gauge with Gauge Port	K – 0-160 PSI Gauge with Gauge Port	L – 0-15 PSI Gauge with Gauge Port	Allen Wrench Adjustment does not require specification
Specify Output 0.5 - 40 PSI	S – M5 Threads	W – Wall Mounting Dovetail Bracket			W/K or W/S must be specified

DIMENSIONS () = Metric Dimensions

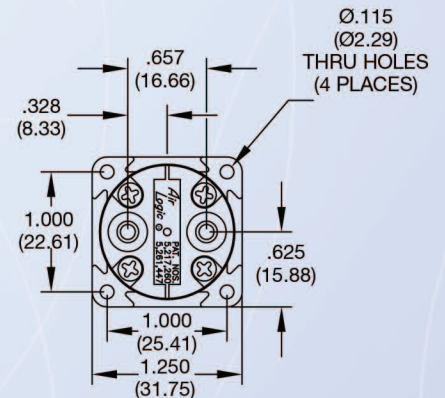
BUNA N-008
O-RINGS
(2 SUPPLIED)



REMOVABLE ADJUSTING STEM
WITH OR WITHOUT KNOB



MANIFOLD MOUNT



M-5000 Series Modular Manifold



FEATURES

- **Modular Dovetail Design**
- **Miniature Size**
- **Low Cost**

The **Modular Manifold** is designed for instrumentation and industrial applications.

The **Unique Modular Dovetail** design allows the manifold block to be used as an individual unit or assembled into a modular combination of pneumatic components.

The **Modular Manifold** is available in two models. The standard model and the filtered model.

The standard model is unfiltered.

The filtered model contains four stainless steel filters in the side ports. Micron size is 380. The top cover is unfiltered.

The **Manifold Block** contains four individual dovetail slides and one top cover that will accept a various assortment of threaded ports or blanks.

Port Connections Available

- **Threaded Port and Top Cover**
- **Blank Slide and Blank Top Cover**
- **Connector**
- **Union**
- **Gauge Port**
- **Push-in Fitting**

The **Modular Dovetail Wall Mount Bracket** is available for wall or cabinet mounting.

The **Pneumatic Accessories** include the modular manifold block, the modular precision pressure and preset regulators, pressure or vacuum switches, and pressure or vacuum gauges.

By combining the pneumatic accessories together pneumatic circuits and systems can be assembled into one Modular Manifold System.

Patent Number 5,217,260



Unique Modular Dovetail Design SPECIFICATIONS

Maximum Supply: 150 PSI

Operating Temperature: 40° to 150° F (4° to 66°C)

Recommended Filtration: 5 Micron

Capacity: 1 Cubic Inch

MATERIALS

Housing: Glass filled Celcon

O-Rings: Buna N, Silicone Nitrile

Filter: Stainless Steel 304, Micron size 380

PORT CONNECTIONS

Threaded Dovetail: A Modular Dovetail Slide with 10-32 UNF, 1/8-27 NPT, 1/4-18 NPT thread sizes. The 1/8" and 1/4" gauge port is available.

Union Dovetail: A Modular Dovetail Slide with a thru hole joining two units together with a common air supply.

Connecting Dovetail: A Modular Connecting Dovetail Slide with no hole joining two units together with no common air supply.

Blank Dovetail: A Blank Dovetail Slide is supplied when the port is not in use.

Gauge Dovetail: A Modular Dovetail Slide with 1/8-27 NPT or 1/4-18 NPT thread sizes. The Dovetail Slide has the word "gauge" molded into the slide.

Top Cover: The top cover is available in various combinations, 10-32 UNF, 1/8-27 NPT or 1/4-18 NPT thread sizes. The 1/4" and 1/8" contain a brass hoop insert. During assembly, fittings should be finger tight plus one turn. A Blank Top Cover is available when porting is not desired.

Push-in Fitting Dovetail : Available for 5/32", 3/16", 1/4", 5/16", 4mm and 6mm O.D. Tubing.

MOUNTING

Base mounting: .115 diameter mounting holes - use 4-40 mounting screws

Wall Mount: Modular Dovetail wall mount

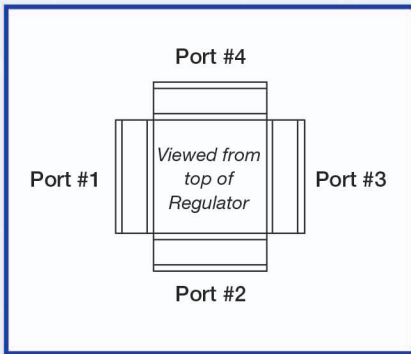
Manifold Selection Guide

ORDERING INFORMATION Order by model number. Specify accessory letters or numbers for the dovetail ports and top cover port. When choosing the port selection Port #1 is the starting point. The remaining ports are then selected counterclockwise.

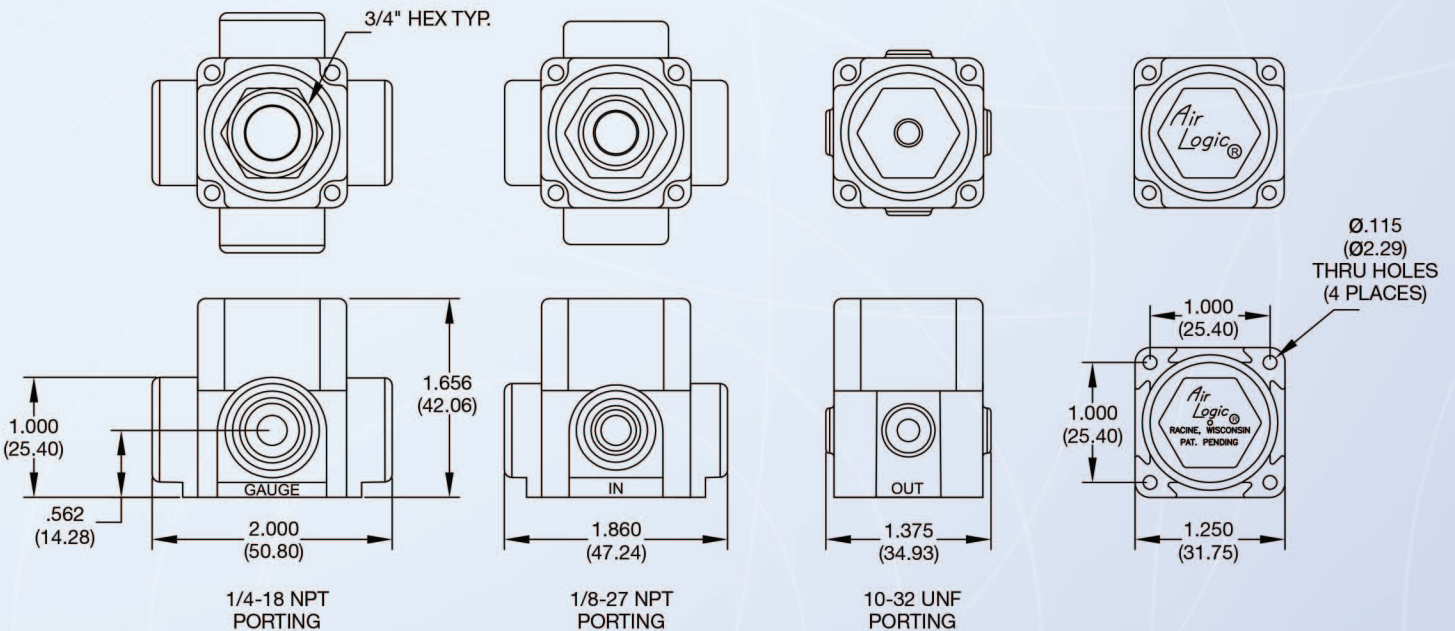
Part Number Guide

Model Number	Input Port 1	Port 2	Port 3	Port 4	Top Cover Style
M5000 Standard Model	0 – 10-32 UNF Threads 1 – 1/8-27 NPT Threads 2 – 1/4-18 NPT Threads 3 – Push-in Fitting for 5/32" O.D. tube 4 – Push-in Fitting for 3/16" O.D. tube 5 – Push-in Fitting for 1/4" O.D. tube 6 – Push-in Fitting for 5/16" O.D. tube 7 – Push-in Fitting for 4mm O.D. tube 8 – Push-in Fitting for 6mm O.D. tube				0 – 10-32 UNF Threads 1 – 1/8-27 NPT Threads 2 – 1/4-18 NPT Threads
M5001 Filtered Model	B – Blank Dovetail D – 0-30 PSI Gauge with Gauge Port G – 1/8-27 NPT Dovetail Gauge Port H – 1/4-18 NPT Dovetail Gauge Port I – 0-60 PSI Gauge with Gauge Port J – 0-100 PSI Gauge with Gauge Port K – 0-160 PSI Gauge with Gauge Port L – 0-15 PSI Gauge with Gauge Port S – M5 Threads W – Wall Mounting Dovetail Bracket				B – Blank Cover

Port Location Diagram



DIMENSIONS () = Metric Dimensions



Modular Dovetail Accessories

The **Modular Dovetail Accessories** are designed for the Adjustable Pressure Regulator, the Preset Pressure Regulator, the Manifold Mounted Pressure Regulator, and the Modular Manifold System.

The **Unique Modular Dovetail** design allows the regulator or the manifold to be used individually or assembled into a modular combination of Pneumatic Components.

The **Modular Dovetail Slides** are sealed with a Buna N o-ring to prevent leaking. The dovetail slides are locked in place by the bottom hex cover.

The **Blank Dovetail Slides** are used when porting is not desired. Four blank dovetail slides are standard on the manifold regulator. The supply side is marked "IN" and the output side is marked "OUT."



The **Dovetail Union and Connector** allow various combinations of regulators and manifold blocks to be assembled together.

The **Union Dovetail** contains a thru hole joining two units together with a common air supply.

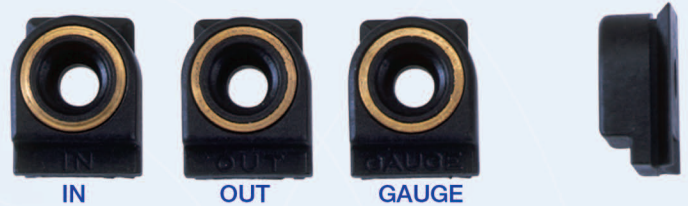
The **Connecting Dovetail** contains no thru hole, but joins two units together with no common air supply.



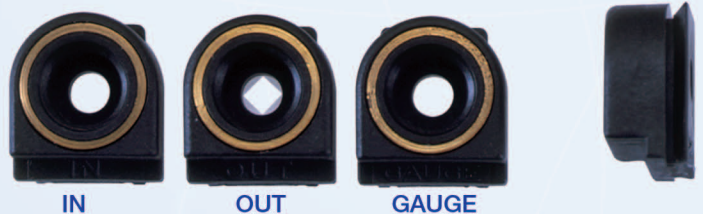
The **10-32 UNF Threaded Dovetail Slides** have an IN and an OUT.



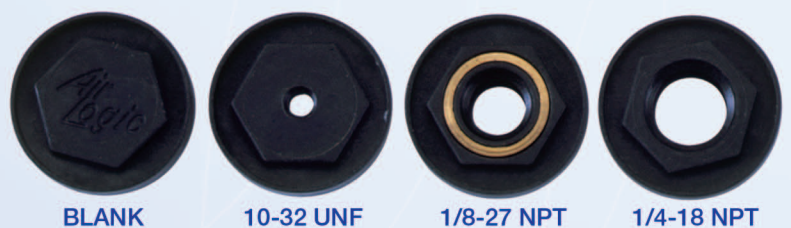
The **1/8-27 NPT Threaded Dovetail Slides** have an IN, OUT, and a GAUGE Port. The 1/8" NPT port contains a brass hoop ring insert designed for added strength.



The **1/4-18 NPT Threaded Dovetail Slides** have an IN, OUT, and Gauge Port. The 1/4" NPT ports contain a brass hoop ring insert designed for added strength.



The **Manifold Top Cover** is available with blank port, 10-32 UNF, 1/8-27 NPT and 1/4-18 NPT.



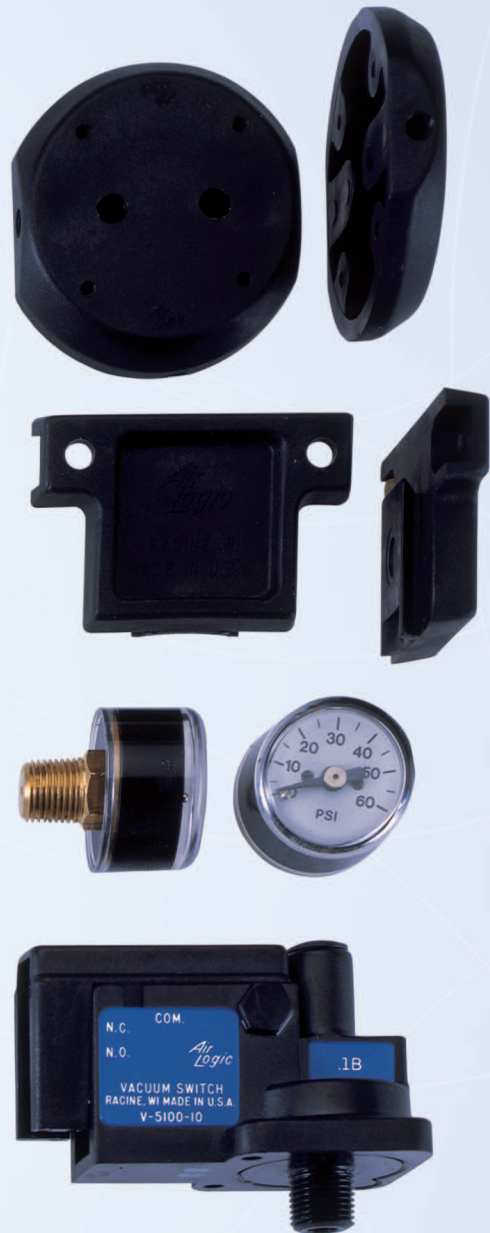
The **Manifold Mounting Base Plate** is designed for testing and evaluating the manifold mounted precision regulator. The mounting base has 10-32 UNF threaded input and output ports. Part Number 7-MMB

The **Modular Dovetail Wall Mount Bracket** is available for wall or cabinet mounting.

The **Subminiature Pressure or Vacuum Gauges** are available with a miniature 7/8" dial and 1/8" NPT back mount.

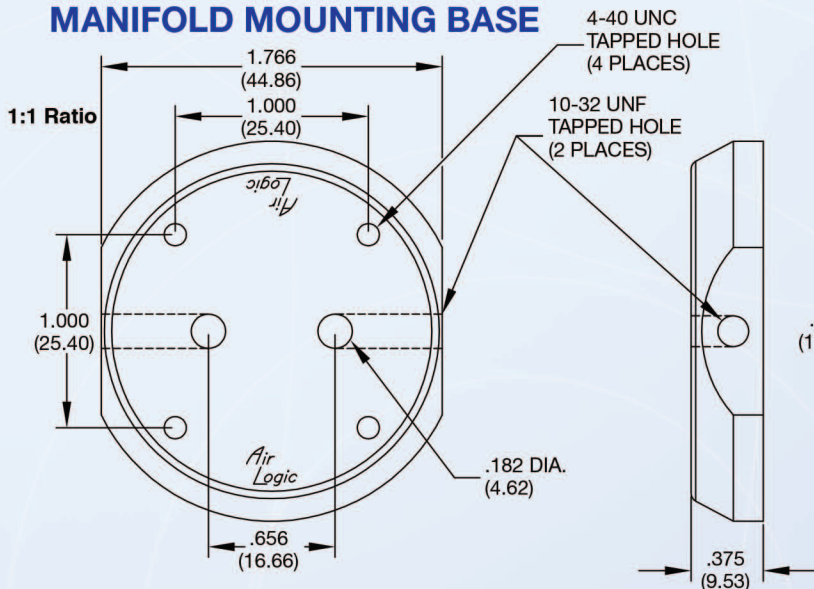
Model Number	Range
G-015	0-15 PSI
G-030	0-30 PSI
G-060	0-60 PSI
G-100	0-100 PSI
G-160	0-160 PSI
Vacuum Gauge	
V-030	0-30" Hg

The **Subminiature Pressure Switches** and Vacuum Switches are available with a 1/8" NPT pipe thread mount. The accessories are designed for the 1/8" NPT Threaded Dovetail Slide.

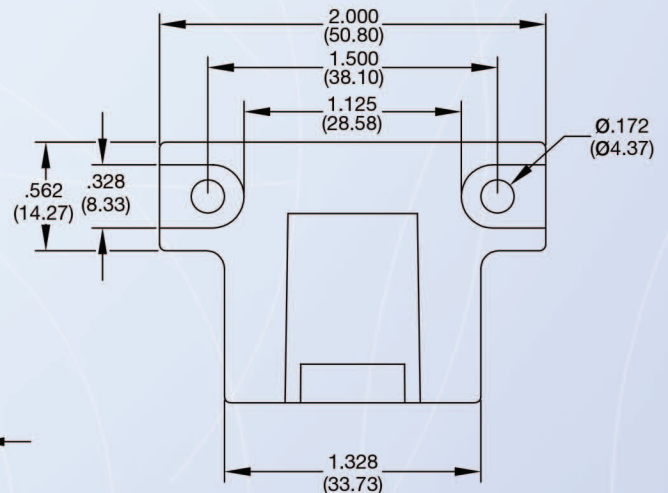


DIMENSIONS () = Metric Dimensions

MANIFOLD MOUNTING BASE



WALL MOUNT BRACKET



*Air
Logic* Pneumatic Components and Systems



**Pressure Switches
Vacuum Switches**



Introduction to Air Logic

The Air Logic Division of Fred Knapp Engraving Company designs and manufactures a comprehensive line of pneumatic and vacuum control equipment.

Air Logic is a manufacturer of miniature precision snap-acting switches that interface from pressure signals to electrical control circuits and from vacuum signals to electrical systems. The snap-action electrical switch provides a positive and reliable response. The switch operation is based on the actuation of a precision snap-acting switch acting against a diaphragm. The extremely short stroke and small volume permit fast response. Ideal for precise pressure and vacuum sensing.

The switches are single pole, double throw for normally open, normally closed and common terminals which are available from 0.1 to 25 AMP, 15 AMP standard. For low current applications, gold contact and solid state switches are available.

Maximum pressure 100 PSI or maximum vacuum 29.9" Hg. Adjustment ranges 0.5 to 100 PSI or 1 to 28" Hg. Special actuating and releasing pressure are available on request.

The switches include Miniature Switches, Subminiature Switches, Low Differential Switches, Solid State Switches and Pilot Operated Valves.

The Miniature Switch is designed for low pressure or low level vacuum applications.

The Subminiature Switch is designed for high pressure or high level vacuum applications.

The Low Differential Switch is designed for a low difference between the "ON" and "OFF" actuating and releasing set points.

The Solid State Switch is a direct interface with solid state electrical circuits.

The Pilot Operated Valves are designed to be normally open or closed. The Pressure Pilot Valve has an adjustable pressure pilot setpoint with a pressure output.

The Vacuum Pilot Valve has an adjustable vacuum pilot setpoint with a pressure output.

Air Logic has a strong reputation for immediate service, quality and dependability. For special applications and requirements, call Air Logic.

Air Logic and *A* are trademarks of Air Logic registered in the United States Patent and Trademark Office.

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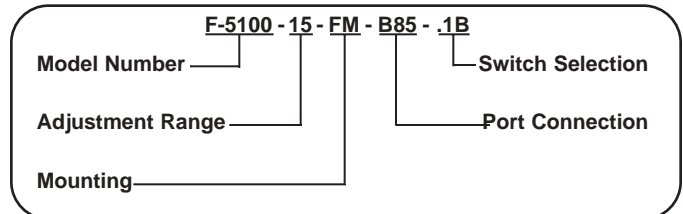
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Switch Selection Guide

Please order by Model Number. After the Model Number has been selected determine the Adjustment Range, Mounting Style, Port Connection and Switch Selection.

The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing. The B80 accessory number does not have to be specified when ordering the switch. An example of the switch selection is show below.

Model Number Selection



Mounting Style

Selection	Accessory Letter	Description
Flush Mount	FM	2 mounting holes for base mounting
Panel Mount	PM	1/8-27 NPT to 1/8-27 NPS
Manifold Mount	MM	2 mounting holes for manifold board supplied with Buna N o-ring
1/8 NPT	PT	1/8-27 male tapered pipe threads with 10-32 female internal threads

Port Connection

Selection	Accessory Letter	Description
10-32 Female Threads	B80	Barb for 1/16" I.D. tubing
	B85	Barb for 1/8" I.D. tubing

Switch Selection

Standard Switches	5A	5 AMP - 125, 250, 277 VAC 1/10 HP, 250 VAC
	15A	15.1 AMP - 1/3 HP, 125 or 250 VAC 1/2 AMP, 125 VDC 1/4 AMP, 250 VDC 5 AMP, 125 VAC "L"
Gold Crosspoint	.1B	0.1 AMP - 125 VAC
Special Switches Available	3A	3 AMP - 125, 250, 277 VAC 1/10 HP, 250 VAC
	10A	10 AMP - 1/4 HP, 125 or 250 VAC 1/2 AMP, 125 VDC 1/4 AMP, 250 VDC 3 AMP, 125 VAC "L"
	25A	25 AMP - 277 VAC 1 HP, 125 VAC 2 HP, 250 VAC
Low Differential Switches	4A	4 AMP - 250 VAC 1/10 HP, 125 VAC 30 VAC
	.1B	01. AMP - 250 VAC
Solid State Switches		Supply Voltage 4.5 - 24 VDC Supply Current 5 m A Output Current 10 m A Sinking
Pressure Piloted 3-Way Valve	N.O.	Normally Open-Senses Pressure/ Turns Output OFF
	N.C.	Normally Closed-Senses Pressure/ Turns Output ON
Vacuum Piloted 3-Way Valve	N.O.	Normally Open-Senses Vacuum/ Turns Output OFF
	N.C.	Normally Closed-Senses Vacuum/ Turns Output ON

F-4100 Series Miniature Pressure Switch



The F-4100 Series Miniature Pressure Switches interface from pressure to electrical control circuits. Ideal for general sensing applications. The switches are available with preset and adjustable pressure settings. The F-4100-50 is preset at 5" H₂O and the F-4100-90 is preset at 15" H₂O. The F-4100-85W is adjustable 8 to 85" H₂O. The F-4100-100 and the F-4100-200 are adjustable 0.5-15 PSI. The switches have three electrical terminals: Normally Open, Normally Closed and Common. 0.1, 5 and 15 AMP switches are available. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

FEATURES

- Snap-Action Switch
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Single pole, double throw
 Electrical Rating: 0.1, 5 or 15 AMP, 125 or 250 Volt AC
 Electrical Switch: UL Approved
 Electrical Connections: .187" quick-connect terminal

MECHANICAL

Operating Speed: 25 milliseconds
 Signal Pressure: See chart below.
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

Flush Mount: mounting hole .149" diameter, use No. 6-32 screw

PORT CONNECTIONS

10-32 female threads. Furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

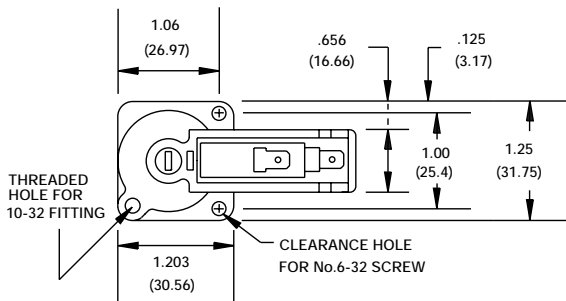
ORDERING INFORMATION (Order by model number, adjustment range and port connection as shown below.)

F-4100 — 200 — B85

Model Number	Adjustment Range	Switch Selection	Pressure Rating	Port Connection	Mounting Style
F-4100	50 -Preset 5.0 ± 1" H ₂ O	5 AMP	10 PSI	B80-Barb for 1/16" I.D. Tubing	FM-Flush Mount Only
	85W -Adjustable 8 to 85" H ₂ O	5 AMP			
	90 -Preset 15.0 ± 1.5" H ₂ O	15 AMP	B85-Barb for 1/8" I.D. Tubing		
	100 -Adjustable 0.5 to 15 PSI	5 AMP	30 PSI	No Accessory number is required for a B-80 Barb	
	200 -Adjustable 0.5 to 15 PSI	15 AMP			
100.1B -Adjustable 0.5 to 15 PSI	0.1 AMP				

DIMENSIONS

() = Metric Dimensions



V-4100 Series Miniature Vacuum Switch



The V-4100 Series Vacuum Switches interface from vacuum to electrical control circuits. Ideal for low level vacuum applications. The switches are available with preset and adjustable vacuum settings. The V-4100-0.7 is preset at .7" Hg or 10" H₂O. The V-4100-1 is preset at 1" Hg, and the V-4100-4 is adjustable from 1.5 to 4" Hg. Maximum 29.9" Hg. The switches have three electrical terminals: Normally Open, Normally Closed and Common. 0.1, and 10 AMP switches are available. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

FEATURES

- Snap-Action Switch
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Single pole, double throw
 Electrical Rating: 0.1, or 10 AMP, 125 or 250 Volt AC
 Electrical Switch: UL Approved
 Electrical Connections: .187" quick-connect terminal

MECHANICAL

Operating Speed: 25 milliseconds
 Signal Pressure: 29.9" Hg maximum
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

Flush Mount: mounting hole .149" diameter, use No. 6-32 screw

PORT CONNECTIONS

10-32 female threads. Furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

ORDERING INFORMATION (Order by model number, adjustment range and port connection as shown below.)

V-4100 — 4 — B85 — .1B

Model Number	Adjustment Range	Mounting Style	Vacuum Rating	Port Connection	Switch Selection
V-4100	0.7 - Preset 0.7" Hg.	FM-Flush Mount Only	29.9" Hg.	B80-Barb for 1/16" I.D. Tubing	.1B 10A
	1 - Preset 1" Hg.			B85-Barb for 1/8" I.D. Tubing	.1B 10A
	4 - Adjustable 1.5 - 4" Hg.			No Accessory number is required for a B-80 Barb	10A

F-5100 Series Subminiature Pressure Switch



The F-5100 Series Subminiature Pressure Switches interface from pressure to electrical control circuits. Ideal for high pressure and low differential applications. The switch is adjustable 0.5 - 100 PSI with a maximum of 100 PSI supply. The switches have three electrical terminals: Normally Open, Normally Closed and Common. 15 AMP switches are standard. 0.1 to 25 AMP switches are available.

Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 10-32 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates - a Buna N o-ring is supplied; and 1/8 NPT mount which has 1/8-27 tapered pipe threads. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

ORDERING INFORMATION (Order by model number, adjustment range, mounting style, port connection and switch selection as shown below.)

F-5100 — 15 — PM — B85 — .1B

Model Number	Adjustment Range	Mounting Style	Port Connection	Switch Selection
F-5100	15-0.5 to 15 PSI	FM-Flush Mount	B80-Barb for 1/16" I.D. Tubing	.1B-0.1 AMP 3A-3 AMP 5A-5 AMP
	30-0.5 to 30 PSI	PM-Panel Mount 1/8-27 NPS	B85-Barb for 1/8" I.D. Tubing	10A-10 AMP
		MM-Manifold Mount		15A-15 AMP
	60-0.5 to 60 PSI	PT-Pipe Thread Mount 1/8-27 NPT	No Accessory Number required for a B-80 Barb	25A - 25 AMP
100-0.5 to 100 PSI			No Accessory Number required for a 15 AMP	

FEATURES

- Low Cost
- Subminiature Size
- High Pressure Adjustment
- Low Differential
- Snap-Action Switch
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Single pole, double throw
 Electrical Rating: 15 AMP is standard; no accessory number required
 0.1 to 25 AMP switches are available
 Electrical Switch: UL Approved
 Electrical Connections: .187" quick-connect terminal

MECHANICAL

Operating Speed: Activate or release in 25 milliseconds
 Signal Pressure: 100 PSI maximum
 Adjustment Range: 0.5 to 100 PSI, ± 0.5 tolerance on the initial starting pressure
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

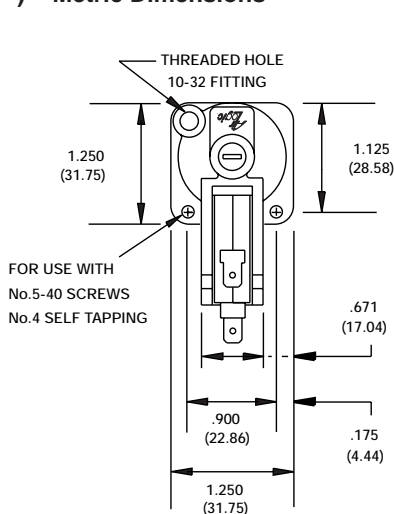
Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
 Panel Mount: 1/8-27 NPT to 10-32 female internal threads
 Mounting hole size 7/16" diameter. Supplied with mounting nut
 Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
 1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female internal threads

PORT CONNECTIONS

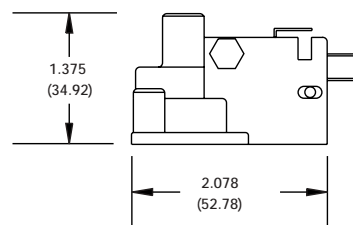
10-32 female threads.
 1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

DIMENSIONS

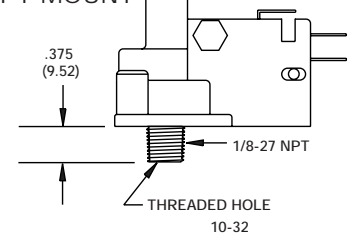
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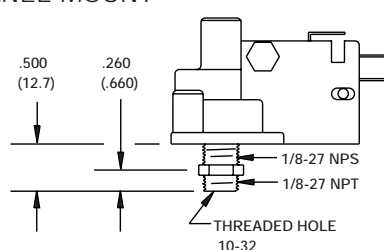
FLUSH MOUNT



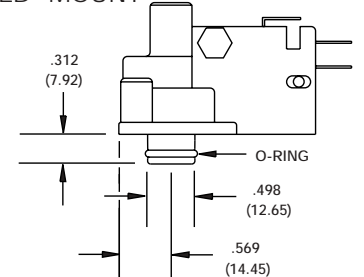
1/8 NPT MOUNT



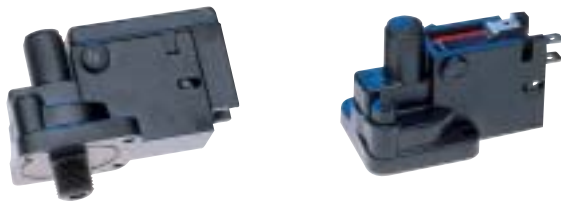
PANEL MOUNT



MANIFOLD MOUNT



V-5100 Series Subminiature Vacuum Switch



The V-5100 Series Vacuum Switches interface from vacuum to electrical control circuits. Ideal for low differential vacuum applications. The switch is adjustable from 1 to 28" Hg with 29.9" Hg maximum.

The switches have three electrical terminals: Normally Open, Normally Closed and Common. 15 AMP switches are standard. 0.1 to 25 AMP switches are available.

Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 1/8-27 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates - a Buna N o-ring is supplied; and 1/8 NPT mount which has 1/8-27 tapered pipe threads. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

ORDERING INFORMATION (Order by model number, adjustment range, mounting style, port connection and switch selection as shown below.)

V-5100 — 10 — PM — B85 — .1B

Model Number	Adjustment Range	Mounting Style	Port Connection	Switch Selection
V-5100	5-1 to 5" Hg	FM-Flush Mount	B80-Barb for 1/16" I.D. Tubing	.1B -0.1 AMP
		PM-Panel Mount 1/8-27 NPS		3A -3 AMP
	10-2 to 10" Hg	MM-Manifold Mount	B85-Barb for 1/8" I.D. Tubing	5A -5 AMP
		PT-Pipe Thread Mount 1/8-27 NPT		10A -10 AMP
28-3 to 28" Hg	PT-Pipe Thread Mount 1/8-27 NPT	No Accessory Number required for a B-80 Barb	15A -15 AMP	
			25A -25 AMP	
			No Accessory Number required for a 15 AMP	

FEATURES

- Low Cost
- Subminiature Size
- Low Differential
- Snap-Action Switch
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Single pole, double throw
 Electrical Rating: 15 AMP is standard; no accessory number required
 0.1 to 25 AMP switches are available
 Electrical Switch: UL Approved
 Electrical Connections: .187" quick-connect terminal

MECHANICAL

Operating Speed: Activate or release in 25 milliseconds
 Signal Pressure: 29.9" Hg maximum
 Adjustment Range: 1 to 28" Hg
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

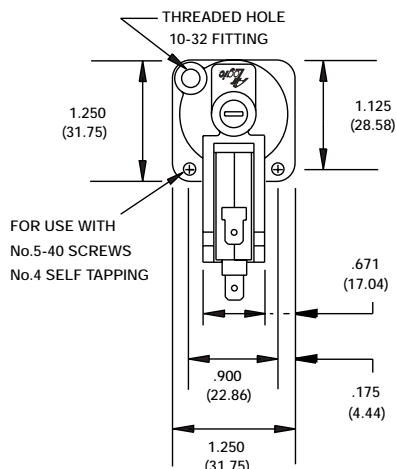
Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
 Panel Mount: 1/8-27 NPT to 1/8-27 NPS, 10-32 female internal threads
 Mounting hole size 7/16" diameter. Supplied with mounting nut
 Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
 1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female internal threads

PORT CONNECTIONS

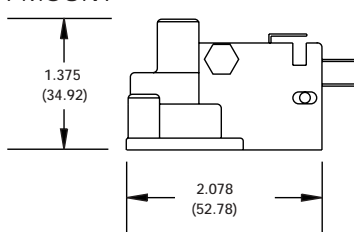
10-32 female threads.
 1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

DIMENSIONS

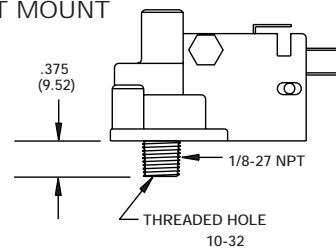
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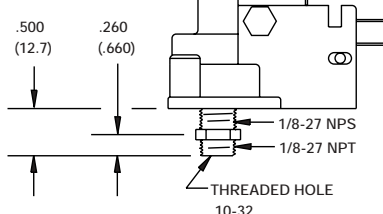
FLUSH MOUNT



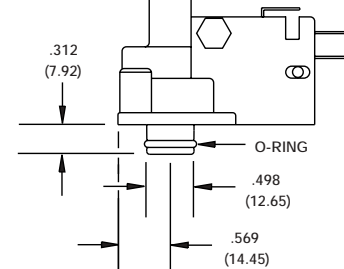
1/8 NPT MOUNT



PANEL MOUNT



MANIFOLD MOUNT



F-5300 Series Low Differential Pressure Switch



The F-5300 Series Low Differential Pressure Switches interface from pressure to electric control circuits. Designed for a low difference between "ON" and "OFF" pressure.

The switch is adjustable 0.5 to 100 PSI with 100 PSI maximum supply pressure.

The Switches have three electrical terminals: Normally Open, Normally Closed and Common. 0.1 and 4 AMP switches are available, 4 AMP switch is standard.

Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 1/8-27 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates - a Buna N o-ring is supplied; and 1/8 NPT mount which has a 1/8-27 tapered pipe threads. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

ORDERING INFORMATION (Order by model number, adjustment range, mounting style, port connection and switch selection as shown below.)

F-5300 — 15 — PM — B85 — .1B

Model Number	Adjustment Range	Mounting Style	Port Connection	Switch Selection
F-5300	15-0.5 to 15 PSI	FM-Flush Mount	B80-Barb for 1/16" I.D. Tubing	.1B-0.1 AMP
	30-0.5 to 30 PSI	PM-Panel Mount 1/8-27 NPS	B85-Barb for 1/8" I.D. Tubing	4A-4 AMP
	60-0.5 to 60 PSI	MM-Manifold Mount		No Accessory Number required for a 4 AMP
	100-0.5 to 100 PSI	PT-Pipe Thread Mount 1/8-27 NPT	No Accessory Number required for a B-80 Barb	

FEATURES

- Low Cost
- Subminiature Size
- High-Pressure Adjustment
- Low Differential
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Single pole, double throw
 Electrical Rating: 4 AMP is standard, no accessory number required
 Electrical Switch: UL Approved
 Electrical Connections: .110" quick-connect terminal

MECHANICAL

Operating Speed: Activate or release in 25 milliseconds
 Signal Pressure: 100 PSI maximum
 Adjustment Range: 0.5 to 100 PSI, ± 0.5 tolerance on the initial starting pressure
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

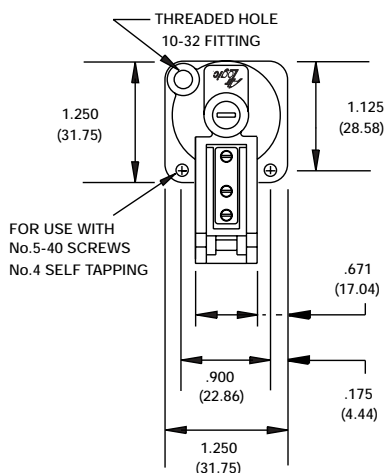
Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
 Panel Mount: 1/8-27 NPT to 1/8-27 NPS, 10-32 female internal threads
 Mounting hole size 7/16" diameter. Supplied with mounting nut
 Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
 1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female female internal threads

PORT CONNECTIONS

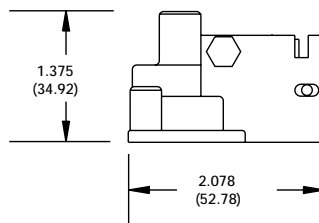
10-32 female threads.
 1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

DIMENSIONS

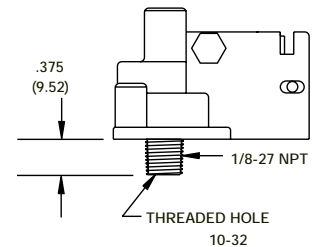
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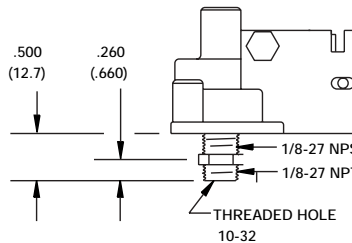
FLUSH MOUNT



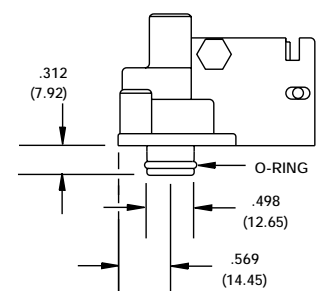
1/8 NPT MOUNT



PANEL MOUNT



MANIFOLD MOUNT



V-5300 Series Low Differential Vacuum Switch



The V-5300 Series Vacuum Switches interface from vacuum to electrical control circuits. Designed for a low difference between "ON" and "OFF" vacuum signal.

The switch is adjustable from 1 to 28" Hg with a 29.9" Hg maximum. The switches have three electrical terminals: Normally Open, Normally Closed and Common. 0.1 and 4 AMP switches are available. 4 AMP switch is standard.

Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 10-32 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates – a Buna N o-ring is supplied; and 1/8 NPT mount which has 1/8-27 tapered pipe threads. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

ORDERING INFORMATION (Order by model number, adjustment range, mounting style, port connection and switch selection as shown below.)

V-5300 — 5 — PM — B85 — .1B

Model Number	Adjustment Range	Mounting Style	Port Connection	Switch Selection
V-5300	5-1 to 5" Hg	FM-Flush Mount	B80-Barb for 1/16" I.D. Tubing	.1B-0.1 AMP
	10-2 to 10" Hg	PM-Panel Mount 1/8-27 NPS	B85-Barb for 1/8" I.D. Tubing	4A-4 AMP
		MM-Manifold Mount		No Accessory Number required for a 4 AMP
28-3 to 28" Hg	PT-Pipe Thread Mount 1/8-27 NPT	No Accessory Number required for a B-80 Barb		

FEATURES

- Low Cost
- Subminiature Size
- Low Differential
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Single pole, double throw
 Electrical Rating: 4 AMP is standard, no accessory number required
 0.1 AMP is available
 Electrical Switch: UL Approved
 Electrical Connections: .110" quick-connect terminal

MECHANICAL

Operating Speed: Activate or release in 25 milliseconds
 Signal Pressure: 29.9" Hg maximum
 Adjustment Range: 1 to 28" Hg
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

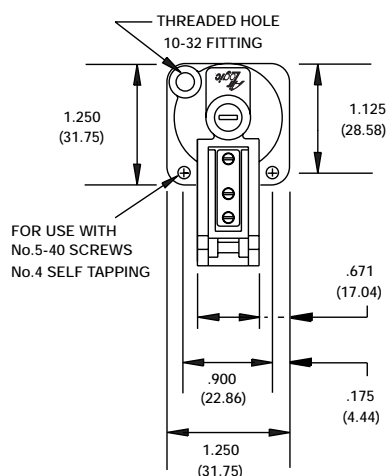
Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
 Panel Mount: 1/8-27 NPT to 1/8-27 NPS, 10-32 female internal threads
 Mounting hole size 7/16" diameter. Supplied with mounting nut
 Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
 1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female internal threads

PORT CONNECTIONS

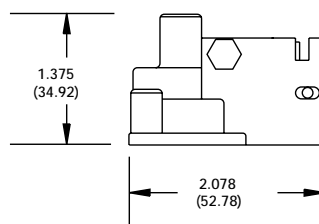
10-32 female threads.
 1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

DIMENSIONS

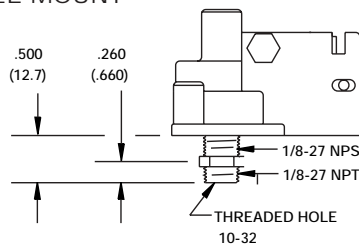
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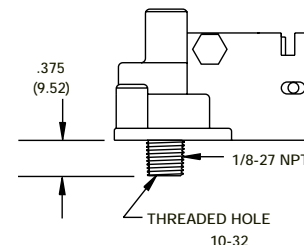
FLUSH MOUNT



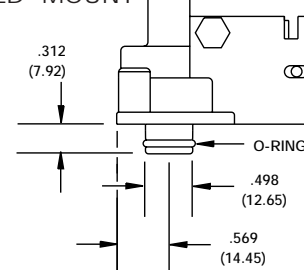
PANEL MOUNT



1/8 NPT MOUNT



MANIFOLD MOUNT



F-5500 Series Solid State Pressure Switch



The F-5500 Series Solid State Pressure Switches interface from pressure to electrical control circuits.

The switch is adjustable from 0.5 to 100 PSI with 100 PSI maximum supply. The Solid State Switch combines precision mechanical switch operating convenience with solid state reliability. It uses the Hall sensor. An integrated circuit, actuated by a magnet located in the operating plunger, produces a digital output. There are no contacts. Supply voltage is 4.5-24 VDC. The Solid State Switch is a direct interface with solid state circuits. The digital logic-level output eliminates the need for conditioning circuitry to obtain a square wave output. A terminal housing can be provided for use with AMP 102241-1.

Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 1/8-27 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates – a Buna N o-ring is supplied; and 1/8 NPT mount which has 1/8-27 tapered pipe threads. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

ORDERING INFORMATION (Order by model number, adjustment range, mounting style, and port connection as shown below.)

F-5500 — **15** — **PM** — **B85**

Model Number	Adjustment Range	Mounting Style	Port Connection	Switch
F-5500	15-0.5 to 15 PSI	FM-Flush Mount	B80-Barb for 1/16" I.D. Tubing	4.5 to 24 VDC
	30-0.5 to 30 PSI	PM-Panel Mount 1/8-27 NPS	B85-Barb for 1/8" I.D. Tubing	
	60-0.5 to 60 PSI	MM-Manifold Mount	No Accessory Number required for a B-80 Barb	
	100-0.5 to 100 PSI	PT-Pipe Thread Mount 1/8-27 NPT		

FEATURES

- Low Cost
- Subminiature Size
- High-pressure Adjustment
- Low Differential
- Solid State Switch
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Solid State Hall Sensor
 Electrical Rating: 4.5-24 VDC
 Electrical Switch: UL Approved
 Electrical Connections: AMP 102241-1 terminal

MECHANICAL

Operating Speed: Activate or release in 25 milliseconds
 Signal Pressure: 100 PSI maximum
 Adjustment Range: 0.5 to 100 PSI, ± 0.5 tolerance on the initial starting pressure
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

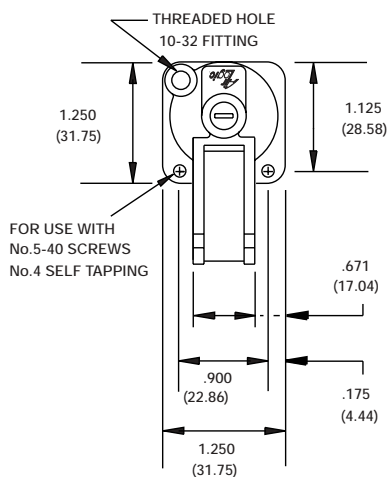
Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
 Panel Mount: 1/8-27 NPT to 1/8-27 NPS, 10-32 female internal threads
 Mounting hole size 7/16" diameter. Supplied with mounting nut
 Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
 1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female internal threads

PORT CONNECTIONS

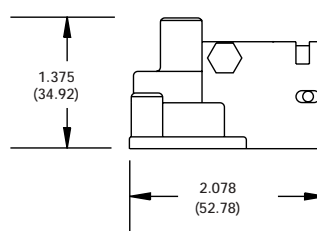
10-32 female threads.
 1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

DIMENSIONS

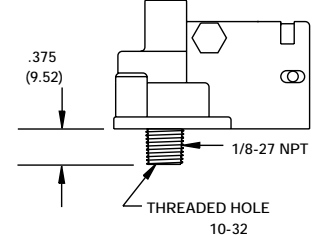
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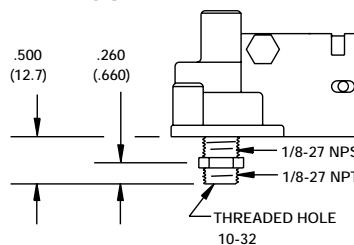
FLUSH MOUNT



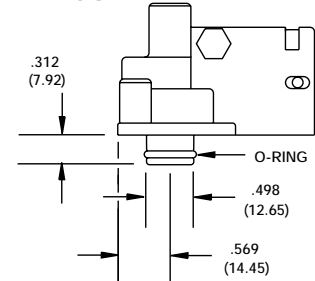
1/8 NPT MOUNT



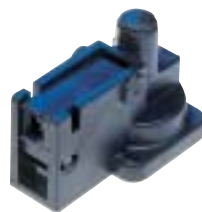
PANEL MOUNT



MANIFOLD MOUNT



V-5500 Series Solid State Vacuum Switch



The V-5500 Series Solid State Vacuum Switches interface from vacuum to electrical control circuits.

The switch is adjustable from 1 to 28" Hg with a maximum 29.9" Hg vacuum supply. The Solid State Switch combines precision mechanical switch operating convenience with solid state reliability. It uses the Hall sensor. An integrated circuit, activated by a magnet located in the operating plunger, produces a digital output. There are no contacts. Supply voltage is 4.5-24 VDC. The Solid State Switch is a direct interface with solid state circuits. The digital logic-level output eliminates the need for conditioning circuitry to obtain a square wave output. A terminal housing can be provided for use with AMP 102241-1 terminals.

Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 1/8-27 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates – a Buna N o-ring is supplied; and 1/8 NPT mount which has 1/8-27 tapered pipe threads. The switches are furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

ORDERING INFORMATION (Order by model number, adjustment range, mounting style, and port connection as shown below.)

V-5500 — 10 — PM — B85

Model Number	Adjustment Range	Mounting Style	Port Connection	Switch Selection
V-5500	5-1 to 5" Hg	FM-Flush Mount	B80-Barb for 1/16" I.D. Tubing	4.5-24 VDC
	10-2 to 10" Hg	PM-Panel Mount 1/8-27 NPS	B85-Barb for 1/8" I.D. Tubing	
	28-3 to 28" Hg	MM-Manifold Mount	No Accessory Number required for a B-80 Barb	

FEATURES

- Low Cost
- Subminiature Size
- Low Differential
- Solid State Switch
- Fast Response

SPECIFICATIONS

ELECTRICAL

Switch Action: Solid State Hall Sensor
 Electrical Rating: 4.5-24 VDC
 Electrical Switch: UL Approved
 Electrical Connections: AMP 110224-1 terminal

MECHANICAL

Operating Speed: Activate or release in 25 milliseconds
 Signal Pressure: 29.9" Hg maximum
 Adjustment Range: 1 to 28" Hg
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

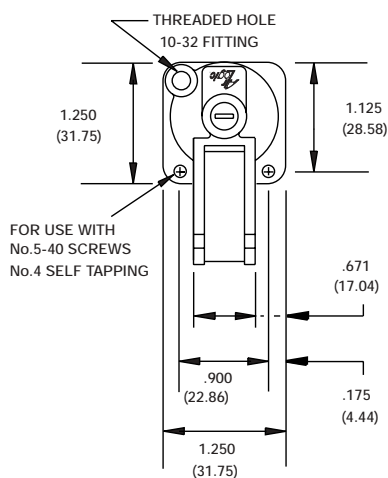
Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
 Panel Mount: 1/8-27 NPT to 1/8-27 NPS, 10-32 female internal threads
 Mounting hole size 7/16" diameter. Supplied with mounting nut
 Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
 1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female internal threads

PORT CONNECTIONS

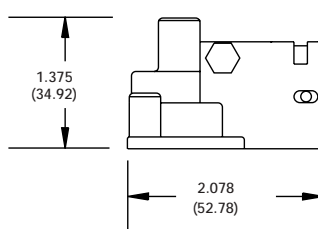
10-32 female threads.
 1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing.

DIMENSIONS

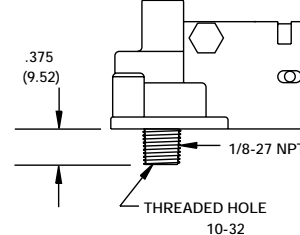
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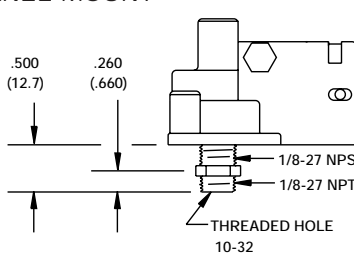
FLUSH MOUNT



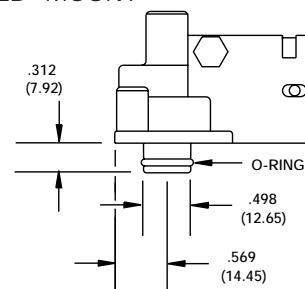
1/8 NPT MOUNT



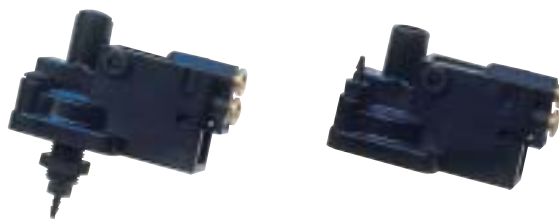
PANEL MOUNT



MANIFOLD MOUNT



F-5700, F-5800 Series Pressure Piloted 3-Way Valve



The F-5700, F-5800 Series Pressure Piloted 3-Way Valve has an adjustable pressure pilot setpoint. The adjustable pressure pilot can be set to sense pressure between .5 to 100 PSI. Maximum supply of 100 PSI. The 3-Way Valve is Normally Open or Normally Closed. The Normally Open valve senses the adjusted pressure setpoint and turns the output off. The Normally Closed valve senses the adjusted pressure setpoint and turns the output on.

Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 1/8-27 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates - a Buna N o-ring is supplied; and 1/8 NPT mount which has 1/8-27 tapered pipe threads. The pilot input is furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing. The output has instant push in fittings for 5/32 O.D. tubing.

ORDERING INFORMATION (Order by model number for Normally Open or Closed, Sensing Range, Mounting Style and Pilot Port Connection).

Model Number	Valve Operation	Sensing Range	Mounting Style	Port Connection
F-5700	Normally Open - Senses Pressure/ Turns Output OFF	15 - 0.5 to 15 PSI	FM-Flush Mount	B80-Barb for 1/16" I.D. Tubing
		30 - 0.5 to 30 PSI	PM-Panel Mount 1/8-27 NPS	
		60 - 0.5 to 60 PSI	MM-Manifold Mount	B85-Barb for 1/8" I.D. Tubing
F-5800	Normally Closed Senses Pressure/ Turns Output ON	100 - 0.5 to 100 PSI	PT-Pipe Thread Mount 1/8-27 NPT	No Accessory Number required for a B-80 Barb

FEATURES

- Subminiature Size
- Low Differential
- Fast Response

SPECIFICATIONS

Mechanical

Operating Speed: Activate or release in 65 milliseconds
 Signal Pressure: 100 PSI maximum
 Pilot Adjustment: 0.5 to 100 PSI, ± 0.5 tolerance on the initial starting pressure
 Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
 Diaphragm: Polyurethane
 Spring: Stainless Steel or Music Wire

MOUNTING

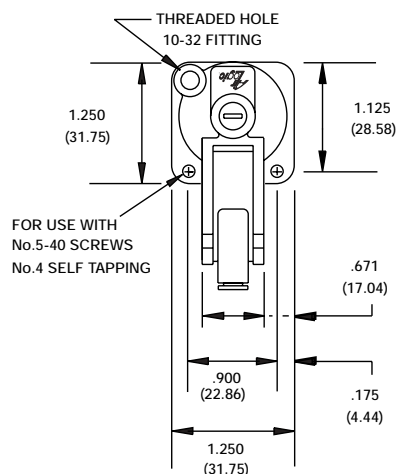
Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
 Panel Mount: 1/8-27 NPT to 1/8-27 NPS, 10-32 female internal threads
 Mounting hole size 7/16" diameter. Supplied with mounting nut
 Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
 1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female internal threads

PORT CONNECTIONS

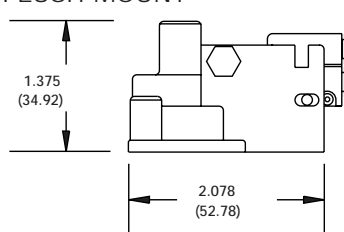
Pilot Input: 10-32 female threads
 1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with 10-32 Barbed Fitting for 1/16" I.D. tubing
 Output: Instant push in fitting for 3/32" I.D. x 5/32" O.D. tubing

DIMENSIONS

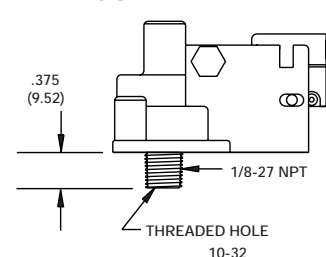
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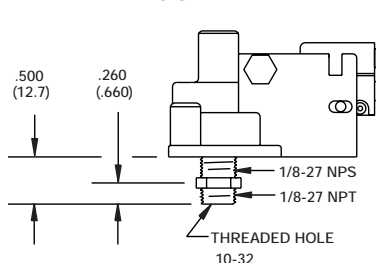
FLUSH MOUNT



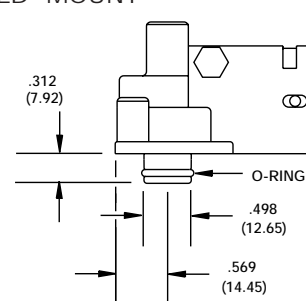
1/8 NPT MOUNT



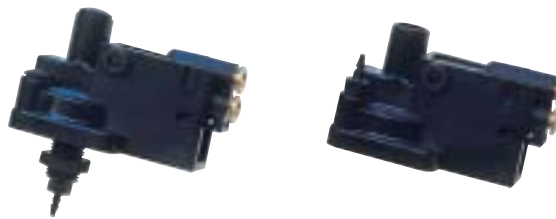
PANEL MOUNT



MANIFOLD MOUNT



V-5700, V-5800 Series Vacuum Piloted 3-Way Valve



The V-5700, V-5800 Series Vacuum Piloted 3-Way Valve has an adjustable vacuum pilot setpoint. The adjustable vacuum pilot can be set to sense vacuum between 1 to 28" Hg. Maximum vacuum of 29.9" Hg. The 3-Way Valve is Normally Open or Normally Closed. The Normally Open valve senses the adjusted vacuum setpoint and turns the output off. The Normally Closed valve senses the adjusted vacuum setpoint and turns the output on.

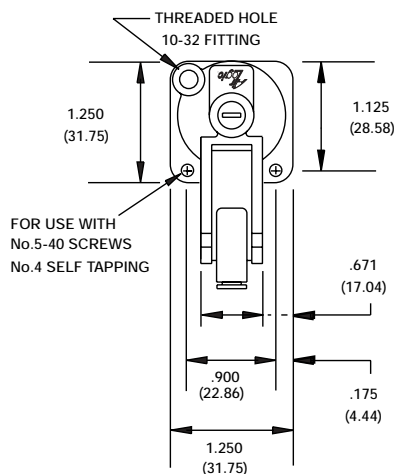
Four mounting styles are available: The standard flush mount; the panel mount has a unique thread that goes from 1/8-27 tapered pipe thread to 1/8-27 straight pipe thread for mounting; the manifold mount is designed to mount directly on pneumatic circuit boards or manifold subplates - a Buna N o-ring is supplied; and 1/8 NPT mount which has 1/8-27 tapered pipe threads. The pilot input is furnished with a B80 Barb, 10-32 Barbed Fitting for 1/16" I.D. tubing. The output has instant push in fittings for 5/32 O.D. tubing.

ORDERING INFORMATION (Order by model number for Normally Open or Closed, Sensing Range, Mounting Style and Pilot Port Connection).

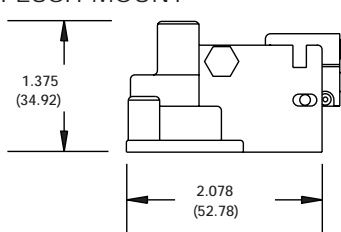
Model Number	Valve Operation	Sensing Range	Mounting Style	Port Connection
V-5700	Normally Open - Senses vacuum/ Turns Output OFF	5-1.0 to 5" Hg 10-2.5 to 10" Hg 28-3.5 to 28" Hg	FM-Flush Mount PM-Panel Mount 1/8-27 NPS MM-Manifold Mount	B80-Barb for 1/16" I.D. Tubing B85-Barb for 1/8" I.D. Tubing
V-5800	Normally Closed Senses vacuum/ Turns Output ON		PT-Pipe Thread Mount 1/8-27 NPT	No Accessory Number required for a B-80 Barb

DIMENSIONS

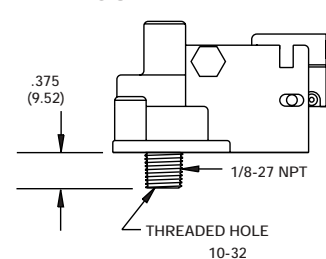
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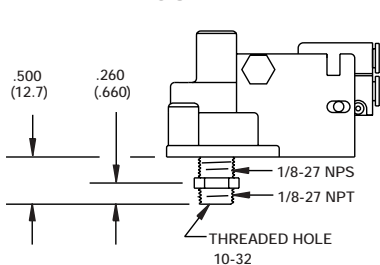
FLUSH MOUNT



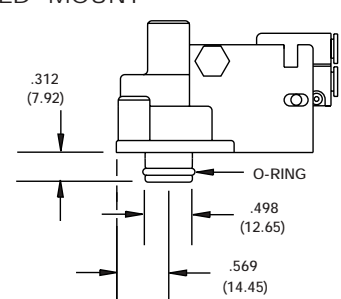
1/8 NPT MOUNT



PANEL MOUNT



MANIFOLD MOUNT



FEATURES

- Subminiature Size
- Low Differential
- Fast Response

SPECIFICATIONS

Mechanical

Operating Speed: Activate or release in 65 milliseconds
Signal Pressure: 100 PSI maximum
Pilot Adjustment: 1 to 28" Hg
Temperature Limits: 40° to 120°F. (4° to 49°C.)

MATERIALS

Housing: Polysulfone
Diaphragm: Polyurethane
Spring: Stainless Steel or Music Wire

MOUNTING

Flush Mount: mounting hole .125" diameter, use No. 4 self-tapping or 5-40 screw
Panel Mount: 1/8-27 NPT to 1/8-27 NPS, 10-32 female internal threads
Mounting hole size 7/16" diameter. Supplied with mounting nut
Manifold Mount: Two mounting holes .125" diameter, use No. 4 self-tapping or 5-40 screw, supplied with Buna N o-ring
1/8 NPT Mount: 1/8-27 male tapered pipe threads with 10-32 female internal threads

PORT CONNECTIONS

Pilot Input: 10-32 female threads
1/8-27 male tapered pipe threads with 10-32 female internal threads furnished with 10-32 Barbed Fitting for 1/16" I.D. tubing.
Output: Instant push in fitting for 3/32" I.D. x 5/32" O.D. tubing

*Air
Logic*®

Pneumatic Components and Systems



Accessories



Introduction to Air Logic

The Air Logic Division of Fred Knapp Engraving Company designs and manufactures a comprehensive line of pneumatic and vacuum control equipment – sensing and input elements, control elements, output interface devices and complete air supply systems. The control elements include both fluidic and moving diaphragm control components, each to be used where its own advantages are needed.

Air Logic is a manufacturer of various pneumatic accessories, ideal for instrumentation, medical and industrial applications.

The pneumatic accessories include Check Valves, Orifice Restrictors, Filtered Orifice Restrictors, Needle Valves, miniature Inline Filters and Preset Flow Controls.

The Check Valves feature miniature size, low cracking pressure and excellent repeatability.

The Orifice Restrictors are precision molded of polysulfone and are available in three models: 1) For inline installation, 2) Available with barbs for 1/16" or 1/8" I.D. flexible tubing or 3) Encased in a 10-32 barbed fitting.

The Filtered Orifice Restrictor contains an orifice restrictor and a stainless filter which are encased in the same housing. The filter is designed to remove most contaminate particles and protects the orifice restrictor.

The fine threads of the Needle Valve permit excellent adjustment for precise control of flow. Miniature size, sensitive adjustment and excellent repeatability are the features of Orifice Restrictors and Needle Valves.

The miniature Inline Filters are designed for a low pressure drop through the filter.

The Preset Flow Control maintains a constant flow in one direction and full flow in the opposite direction.

Air Logic manufactures a comprehensive and sophisticated line of pneumatic and vacuum components, with a strong reputation for immediate service, quality and dependability. For special applications and requirements, call Air Logic.

Air Logic and *A* are trademarks of Air Logic registered in the United States Patent and Trademark Office.

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Accessories	Page
Preset Flow Controls	1
Filters	2
Filtered Orifice Restrictors	2
Orifice Restrictors	3
Needle Valves.....	4-5
Check Valves	6

F-2804 Series Preset Flow Control



The Preset Flow Control maintains a constant flow in one direction and full flow in the opposite direction. The operation of the Flow Control is based on the movement of a small disc. The disc shifts within the housing as the pressure differential changes from forward to reverse. An orifice restrictor is encased in the center of the disc. A flat surface on one side of the disc seals and permits flow through the orifice.

The amount of flow permitted in the reverse direction, which is the sealing side, is determined by the orifice size. The amount of flow permitted in the forward direction is full flow.

- FEATURES**
- Precision Molded Orifice
 - Miniature Size
 - Minimum Cracking Pressure
 - Low Cost

SPECIFICATIONS

Maximum Supply: 75 PSI
 Operating Temperature: 40° to 120°F. (5° to 48°C.)
 Recommended Filtration: 5 micron
 Cracking Pressure: Less than 10" H₂O

MATERIALS

Orifice: Polysulfone
 Housing: Gray Polysulfone
 Disc: Silicone

MOUNTING

Inline

PORT CONNECTIONS

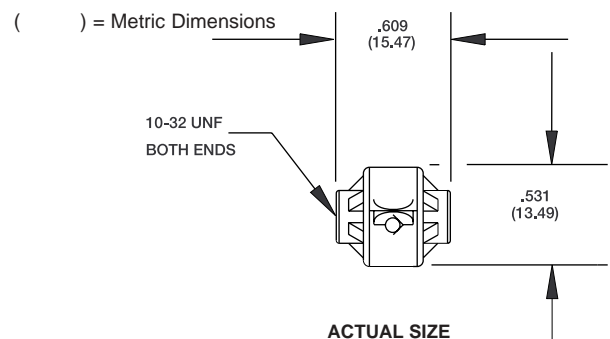
10-32 Threads, 10-32 Nipple is Supplied

ORDERING INFORMATION (Order by model number, specify orifice diameter and accessory letters required.)

F-2804-404 — **050** — **B85**

Model Number	Orifice Diameter	Port Connections
F-2804-404	041-0.004"	B80 - Barbs for 1/16" I.D. tubing B85 - Barbs for 1/8" I.D. tubing No accessory numbers required for 10-32 nipple
F-2804-404	050-0.005"	
F-2804-404	051-0.006"	
F-2804-404	071-0.007"	
F-2804-404	101-0.010"	
F-2804-404	121-0.012"	
F-2804-404	161-0.016"	
F-2804-404	201-0.020"	
F-2804-404	251-0.025"	
F-2804-404	301-0.030"	
F-2804-404	401-0.040"	

DIMENSIONS



F-950, F-960, F-970 Series Filters



The Air Logic Filters are designed for compressed air systems to remove most contaminate particles.

Three models are available: 1) The F-950 Series is an inline filter with barbs for 1/16" or 1/8" I.D. tubing, 2) The F-960 Series filter is encased in a male 10-32 UNF threaded housing with barbs for 1/16" or 1/8" I.D. tubing, 3) The F-970 Series Filter is encased in a female 10-32 UNF threaded housing.

The filters are precision molded of polysulfone material. The Dutch weave wire screen is constructed of stainless steel. The Dutch weave is resistant to high pressure. The filters are available in 5, 25, 43 and 73 microns. Maximum supply is 125 PSI. The inline filter is disposable.

- FEATURES**
- Low Cost
 - Disposable
 - Small Size
 - Low Pressure Drop

SPECIFICATIONS
 Maximum Supply: 125 PSI
 Operating Temperature: 40° to 120°F. (5° to 48°C.)

MATERIALS
 Housing: Blue Polysulfone
 Filter Media: 316 stainless steel filter screen

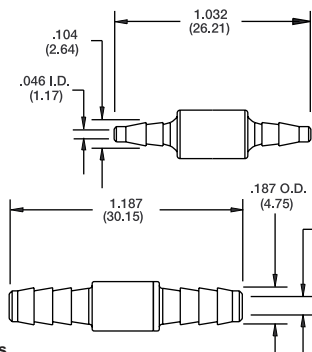
MOUNTING
 Inline installation, 10-32 UNF male threads, or 10-32 UNF female threads

PORT CONNECTIONS
 Barbs for 1/16" or 1/8" I.D. flexible tubing
ORDERING INFORMATION (Order by model number, specify micron size, and port connection.)

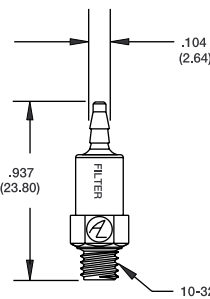
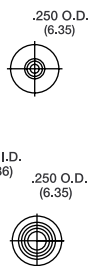
Model Number	Mounting	Filter Size	Port Connection
F-950	Inline	5 - 5 micron 325 x 2300 mesh	B80 - Barbs for 1/16" I.D. tubing
F-960	Male 10-32 UNF	25 - 25 micron 200 x 600 mesh 43 - 43 micron 325 x 325 mesh	B85 - Barbs for 1/8" I.D. tubing
F-970	Female 10-32 UNF	73 - 73 micron 200 x 200 mesh	No accessory numbers required for 10-32 threads

DIMENSIONS

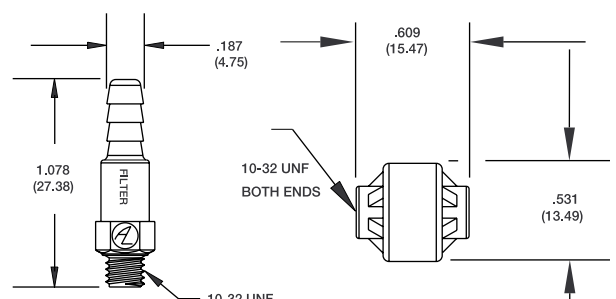
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F-950 Series

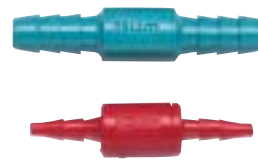


F-960 Series



F-970 Series

F-950 Series Filtered Orifice Restrictors



The Filtered Orifice Restrictors are designed for use in pneumatic control circuits. The orifice restrictor and a stainless steel filter are encased in a molded housing with barbs for 1/16" or 1/8" I.D. flexible tubing.

The Dutch weave wire screen is constructed of stainless steel. The filter is available in 5, 43 and 73 microns. The orifices are precision molded of polysulfone and are held to flow tolerances of ± 4%.

Available in ten color coded sizes .004" to .030" diameter. Maximum supply is 100 PSI. The Filtered Orifice Restrictors are disposable and designed for inline installation.

- FEATURES**
- Precision Molded
 - Miniature size
 - Low Pressure Drop

SPECIFICATIONS
 Orifice Diameter: .004" to .030"
 Maximum Supply: 100 PSI
 Operating Temperatures: 40° to 120°F. (5° to 48°C.)

MATERIALS
 Housing: Polysulfone
 Filter Media: 316 stainless steel filter screen

PORT CONNECTIONS
 Barbs for 1/16" or 1/8" I.D. flexible tubing

ORDERING INFORMATION (Order by model number, specify filter size, orifice diameter and accessory numbers for port connections.)

Model Number	Filter Size	Orifice Diameter	Color Code	Port Connection
F-950	5 - 5 micron 325 x 2300 mesh	.041-0.004"	Purple	B80 - Barbs for 1/16" I.D. tubing B85 - Barbs for 1/8" I.D. tubing
		.050-0.005"	Lime Green	
		.051-0.006"	Red	
	43 - 43 micron 325 x 325 mesh	.071-0.007"	Aqua Green	
		.101-0.010"	Yellow	
		.121-0.012"	Black	
		.161-0.016"	Gray	
	73 - 73 micron 200 x 200 mesh	.201-0.020"	Blue	
		.251-0.025"	Brown	
		.301-0.030"	Beige	

F-950 - 5 - 050 - B80

F-2815, F-3120 Series Orifice Restrictors



The Air Logic Orifice Restrictors are designed for use in pneumatic control circuits. Available in eleven color coded sizes.

The Orifices are precision molded of polysulfone and are held to flow tolerances of $\pm 4\%$.

The Orifice Restrictors are available in three models: 1) For inline installation, 2) Available with barbs for 1/16" or 1/8" I.D. flexible tubing, or 3) Encased in a 10-32 barbed fitting.

The F-2815 Series Orifice Restrictors are for inline installation with straight ports for 1/16" I.D. flexible tubing. The orifice restrictors are available with barbs for 1/16" or 1/8" I.D. flexible tubing.

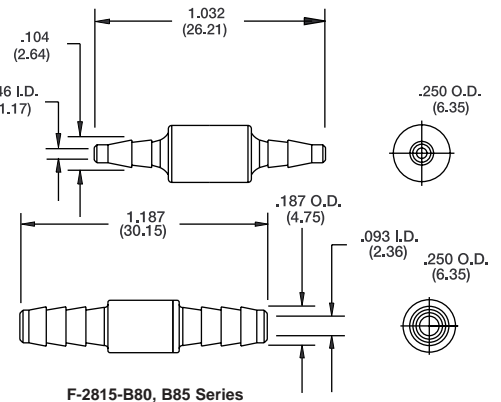
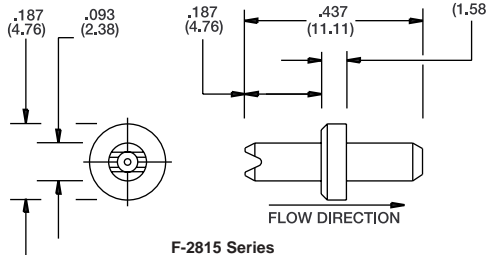
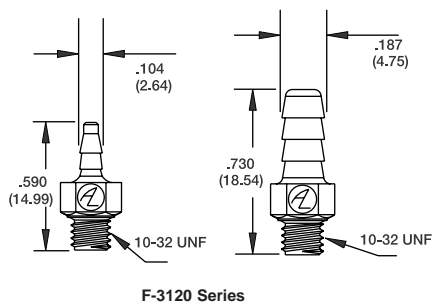
The F-3120 Series Orifice Restrictors are encased in a molded polysulfone barbed fitting. The barbed fitting has 10-32 UNF male threads and is available with barbs for 1/16" or 1/8" I.D. flexible tubing.

ORDERING INFORMATION (Order by model number, orifice diameter and specify accessory numbers for port connections.)

Model Number		Orifice Diameter	Color Code	Port Connection
10-32 Threads	Inline			
F-3120	F-2815	041-0.004"	Purple	B80 - Barbs for 1/16" I.D. tubing B85 - Barbs for 1/8" I.D. tubing No accessory numbers required for straight ports.
F-3120	F-2815	050-0.005"	Lime Green	
F-3120	F-2815	051-0.006"	Red	
F-3120	F-2815	071-0.007"	Aqua Green	
F-3120	F-2815	101-0.010"	Yellow	
F-3120	F-2815	121-0.012"	Black	
F-3120	F-2815	161-0.016"	Gray	
F-3120	F-2815	201-0.020"	Blue	
F-3120	F-2815	251-0.025"	Brown	
F-3120	F-2815	301-0.030"	Beige	
F-3120	F-2815	401-0.040"	Rust	

DIMENSIONS

() = Metric Dimensions



- ### FEATURES
- Precision Molded
 - Miniature size
 - Low Cost

SPECIFICATIONS

Orifice Diameter: .004" to .040"
 Maximum Supply: 100 PSI
 Operating Temperatures: 40° to 120°F. (5° to 48°C.)
 Recommended Filtration: 5 micron
 Flow Tolerances: $\pm 4\%$

MATERIALS

Housing: Polysulfone

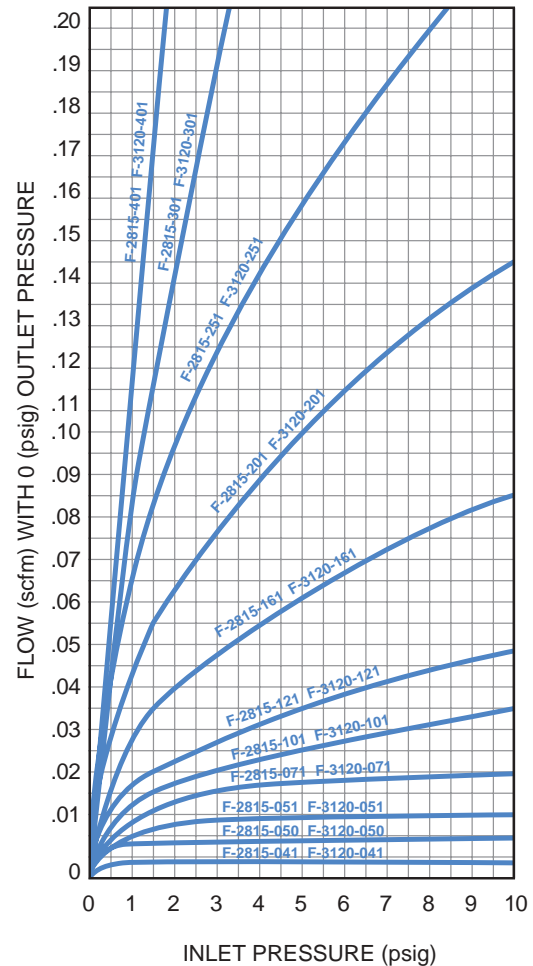
MOUNTING

Inline installation or 10-32 UNF male threads

PORT CONNECTIONS

Straight ports for 1/16" I.D. flexible tubing
 Barbs for 1/16" or 1/8" I.D. flexible tubing

Typical Flow Characteristics for Normal Flow Direction



F-2822 Series Needle Valves



The F-2822 Series Needle Valves are ideal for instrumentation and industrial applications. The fine angle of the needle allows for the precise control of flow.

The Needle Valves are adjustable from 0 to the equivalent flow of a 0.025" diameter orifice. The flow is restricted in both directions. The Needle Valve is designed for inline installation or can be panel mounted. The standard device is furnished with a screwdriver slot adjustment or knurled knob.

The Needle Valves are available in two materials: Glass filled nylon or glass filled polypropylene. The o-rings are available in Buna-N, Viton or Ethylene Propylene.

ORDERING INFORMATION (Order by model number, mounting number, specify port connections and accessory letters.)

Type	Model Number	Mounting	Port Connections	Accessories
Nylon	F-2822	40-Inline	B80-Barbs for 1/16" I.D. Tubing B85-Barbs for 1/8" I.D. Tubing	K-Nickel plated brass adjustment knob SS-Stainless steel needle KSS-Stainless steel knob V-Viton o-ring E-Ethylene Propylene o-ring
		41-Panel Mounted	No accessory numbers required for straight ports	
Polypropylene	F-2822	50-Inline	Only available in straight ports	No accessory letters required for screwdriver slot adjustment or Buna-N o-ring
		51-Panel Mounted		

FEATURES

- Fine Adjustment
- Miniature Size
- Plastic Housing

SPECIFICATIONS

Turns: 7 turns
 Flow: Equivalent to 0.025" diameter orifice
 Adjustment Screw: Screwdriver slot or knurled knob
 Operating Temperature: 40° to 120°F. (5° to 48°C.)
 Recommended Filtration: 5 micron

MOUNTING

Inline installation or panel mounted. Furnished with two self tapping screws.

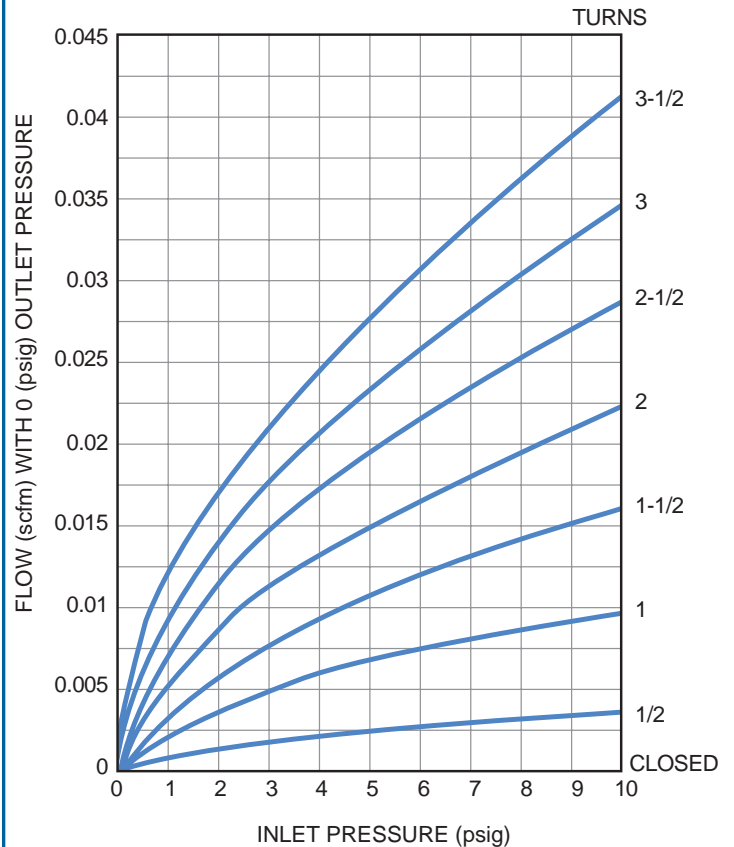
PORT CONNECTIONS

Straight ports for 1/16" I.D. flexible tubing
 Barbs for 1/16" or 1/8" I.D. flexible tubing

MATERIALS

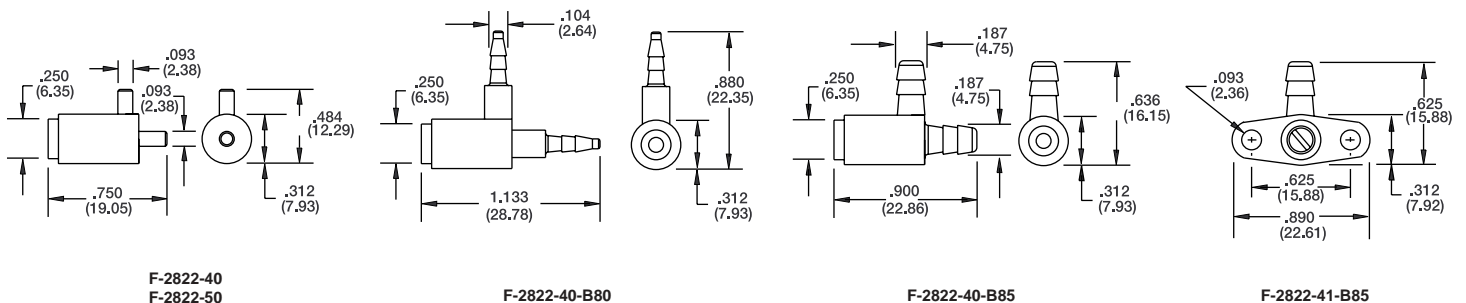
O-ring: Buna-N, Viton, Ethylene Propylene (EPDM)
 Vibration Insert: None
 Body: F-2822-40 40% Glass Filled Nylon
 F-2822-41 40% Glass Filled Nylon
 F-2822-50 20% Glass Filled Polypropylene
 F-2822-51 20% Glass Filled Polypropylene
 Pin: Nickel Plated Brass or 303 Stainless Steel
 Pin Thread Size: 10-64
 Pin Angle: 6°

Typical Characteristics



DIMENSIONS

() = Metric Dimensions



F-2822 Series Needle Valves



The F-2822 Series Needle Valves are ideal for instrumentation and industrial applications. The fine angle of the needle allows for the precise control of flow.

The Needle Valves are adjustable from 0 to the equivalent flow of a 0.025" diameter orifice. The flow is restricted in both directions. Two models are available from the standard units F-2822-20, 21 to the fine adjustment units F-2822-30, 31.

The Needle Valve is designed for inline installation or can be panel mounted. The standard device is furnished with a screwdriver slot adjustment.

ORDERING INFORMATION (Order by model number and specify accessory letters required.)

F-2822 — 20 — B80

Type	Model Number	Mounting	Port Connections
Standard Model	F-2822-20	Inline	B80 - Barbs for 1/16" I.D. tubing B85 - Barbs for 1/8" I.D. tubing
	F-2822-21	Panel Mounted	
Fine Adjustment Model	F-2822-30	Inline	No accessory numbers required for straight ports
	F-2822-31	Panel Mounted	

MATERIALS

	F-2822-20 F-2822-21	F-2822-30 F-2822-31
O-ring	Buna N	Buna N
Vibration Insert	Nylon	Polyethylene
Body	Phosphor Bronze	Phosphor Bronze
Pin	Beryllium Copper	Beryllium Copper
Pin Thread Size	10-64	10-80
Pin Angle	6°	4°

FEATURES

- Fine Adjustment
- Miniature Size
- Temperature Stable
- Minimum Drift

SPECIFICATIONS

Turns: 7 turns
 Flow: Equivalent to 0.025" diameter orifice
 Adjustment Screw: Screwdriver slot
 Operating Temperature: 40° to 120°F. (5° to 48°C.)
 Recommended Filtration: 5 micron
 Maximum Pressure: 100 PSI

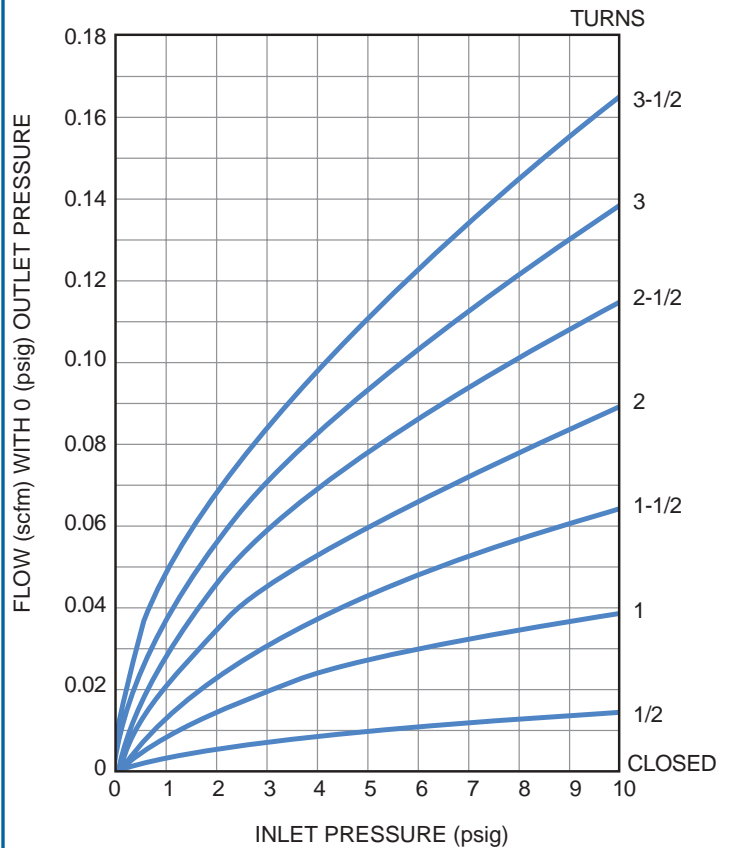
MOUNTING

Inline installation or panel mounted. Furnished with two self tapping screws.

PORT CONNECTIONS

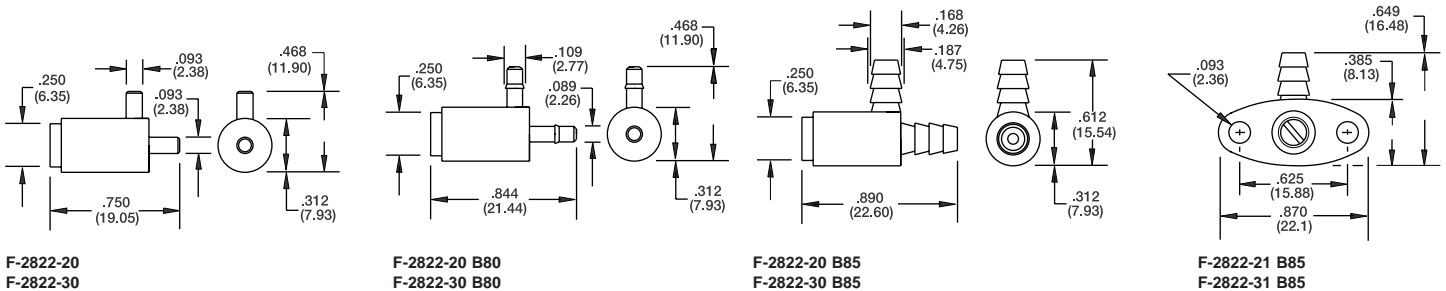
Straight ports for 1/16" I.D. flexible tubing
 Barbs for 1/16" or 1/8" I.D. flexible tubing

Typical Characteristics



DIMENSIONS

() = Metric Dimensions



F-2804 Series Check Valves



The F-2804 Series Check Valves permit flow in one direction only. The operation of the check valve is based on the movement of a small disc. The disc shifts within the housing as the pressure differential changes from forward to reverse. A flat surface on one side of the disc seals off flow, while the other side allows flow to pass.

Five models are available: The Polypropylene Unit, F-2804-400, the Standard Units, F-2804-401, 402, and 403 and the High Flow Unit, F-2804-404.

The advantages of the check valve design are low "cracking pressure" and a minimum differential for forward flow, less than 0.005 PSI in the Standard Units. Secondly, there is no residual pressure difference across the check valve once flow has ceased. Flow in the forward direction is relatively unrestricted, approximately equivalent to the restriction of a 0.040 inch orifice in the Standard Units. The amount of flow permitted in the reverse direction, which is the sealing side, and the forward direction, which is full flow, is shown in the graphs below right.

ORDERING INFORMATION (Order by model number and specify accessory letters required.)

F-2804 - 404 - B85

Model Number	Color Code	Port Connection
F-2804-400	Red Symbol	Only available with 1/16" straight ports
F-2804-401	Orange Symbol	B80 - Barbs for 1/16" I.D. tubing B85 - Barbs for 1/8" I.D. tubing
F-2804-402	Green Symbol	
F-2804-403	Blue Symbol	No accessory numbers required for straight ports.
F-2804-404	Black Housing	B80 - Barbs for 1/16" I.D. tubing B85 - Barbs for 1/8" I.D. tubing No accessory numbers required for 10-32 threads.

FEATURES

- Minimum Cracking Pressure
- Miniature size
- Low Cost

SPECIFICATIONS

Maximum Supply: F-2804-400 • 10 PSI
F-2804-401 • 10 PSI
F-2804-402 • 10 PSI
F-2804-403 • 10 PSI
F-2804-404 • 75 PSI

Operating Temperature: 40° to 120°F. (5° to 48°C.)

Recommended Filtration: 5 micron

Cracking Pressure: F-2804-400 • Less than .8" H₂O
F-2804-401 • Less than .8" H₂O
F-2804-402 • Less than .8" H₂O
F-2804-403 • Less than .8" H₂O
F-2804-404 • Less than 10" H₂O

MATERIALS

	Housing	Disc
F-2804-400	• Polypropylene	• Silicone
F-2804-401	• Polysulfone	• Celcon
F-2804-402	• Polysulfone	• Celcon
F-2804-403	• Polysulfone	• Silicone
F-2804-404	• Polysulfone	• Silicone

MOUNTING

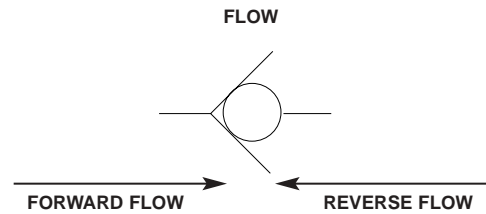
Inline

PORT CONNECTIONS

Straight ports for 1/16" I.D. flexible tubing

Barbs for 1/16" or 1/8" I.D. flexible tubing

The F-2804-404 has 10-32 threads

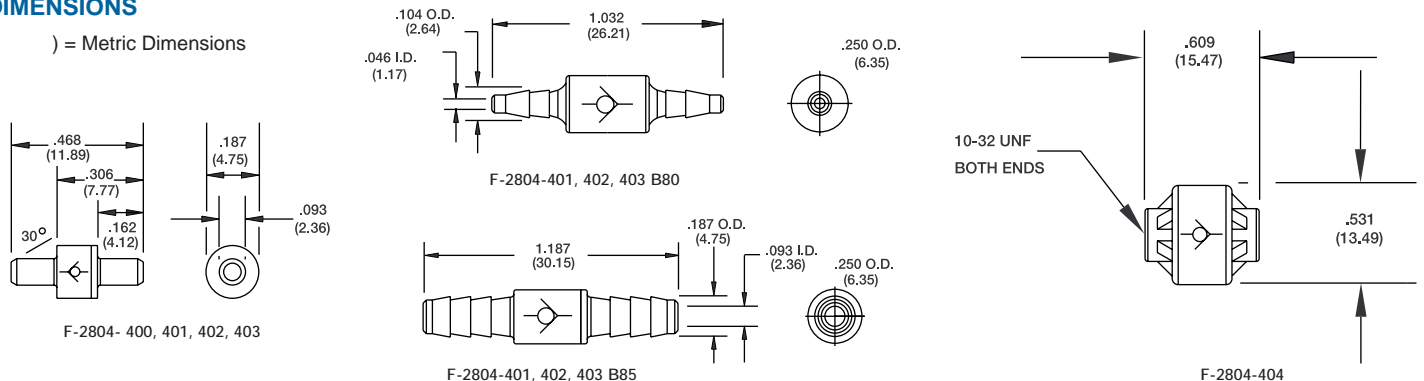


TYPICAL FLOW CHARACTERISTICS

Model Number	Reverse Flow @ 1 PSI Differential	Forward Flow @ 1 PSI Differential
F-2804-400	Less than 0.20 SCIM	0.12 SCFM 1 PSI Supply
F-2804-401	Less than 2.98 SCIM	
F-2804-402	Less than 1.00 SCIM	
F-2804-403	Less than 0.20 SCIM	2.0 SCFM 75 PSI Supply
F-2804-404	Less than 0.06 SCIM	

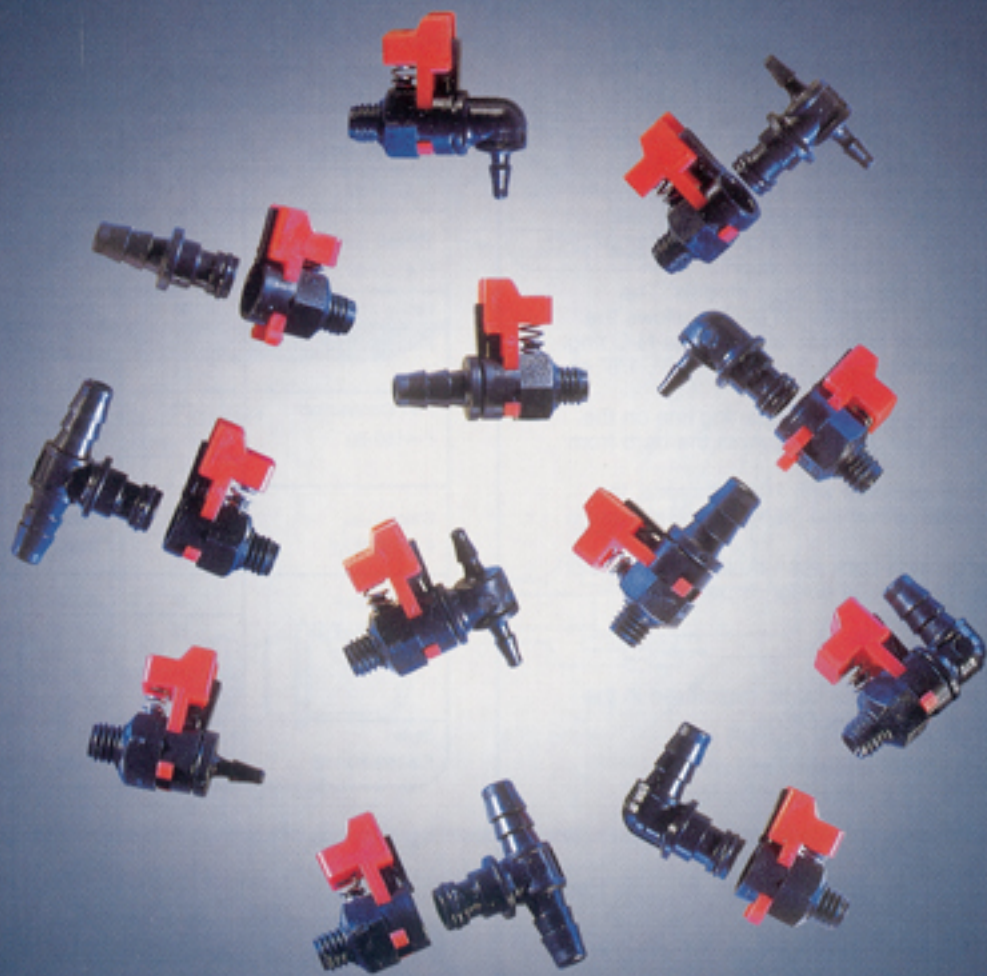
DIMENSIONS

() = Metric Dimensions



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Pneumatic Components and Systems

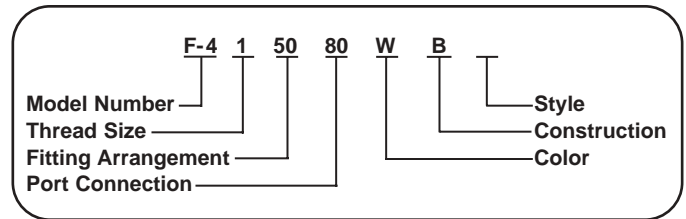


Miniature Quick Disconnects



Quick Disconnect Selection Guide

Please order by Model Number. After the Model Number has been selected, determine the Thread Size, Fitting Arrangement, Port Connection, Color, Style, and Construction. Black is the standard color, no accessory is required.



Introduction to Air Logic

The Air Logic Division of Fred Knapp Engraving Company designs and manufactures a comprehensive line of pneumatic and vacuum control equipment.

Air Logic is a manufacturer of miniature plastic Quick Disconnects. The patented design of the Quick Disconnect allows an easy and reliable connection. The unique Latch-Lock push-button provides a quick connection. For easy operation depress the Latch-Lock push-button for barb removal; re-insert to lock the barb into position. The audible click of the Latch-Lock push-button ensures a reliable connection.

The Quick Disconnect is available in three models: The Straight, the Elbow, or the Tee. The unique design allows the fitting to swivel 360°. The fitting is sealed with a Buna-N-O'ring. The Quick Disconnect is available with Barbs for 1/16", 1/8" or .170" I.D. tubing.

The barb fitting does not have a molded parting line on the first barb. The precision molded design prevents the barb from leaking.

The Quick Disconnect is available with 10-32 threads, the unique design of the threads allows the fitting to seal without a gasket.

The housing, barb, and Latch-Lock push-button are precision molded of Celcon Acetal. The unique design is patented. Patent #5,695,223.

Air Logic and *AL* are trademarks of Air Logic registered in the United States Patent and Trademark Office.

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.170" Quick Disconnect	5

Model Number Selection by Position		
Number Position	Accessory Number	Description
F-4150-80	F-4	Quick Disconnect Family
Thread Size F-4150-80	1	10-32 UNF Threads
Fitting Arrangement F-4150-80	50	Straight
	54	Elbow
	55	Tee
Port Connection F-4150-80	80	Barb for 1/16" I.D. Tubing
	85	Barb for 1/8" I.D. Tubing
	86	Barb for .170" I.D. Tubing
Color F-4150-80W	W	White Black - Standard Color
Construction F-4150-80-WB	B	Barb Only
	H	Housing Only
	No Accessory Number is required	Complete Assembly Barb and Housing
Style F-4150-80-WB_	No Accessory Number is required	Straight Through Flow

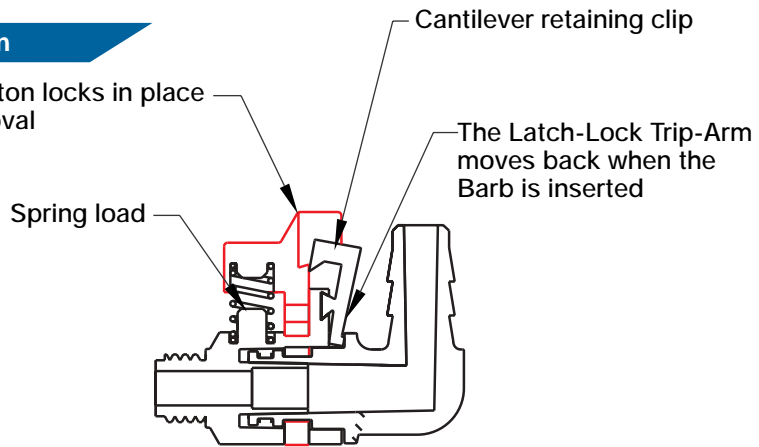
Model Number	Description	Barb Connection
F-4150-80	10-32 UNF x 1/16" Barb	Straight
F-4150-85	10-32 UNF x 1/8" Barb	
F-4150-86	10-32 UNF x .170" Barb	
F-4154-80	10-32 UNF x 1/16" Barb	Elbow
F-4154-85	10-32 UNF x 1/8" Barb	
F-4154-86	10-32 UNF x .170" Barb	
F-4155-80	10-32 UNF x 1/16" Barb	Tee
F-4155-85	10-32 UNF x 1/8" Barb	
F-4155-86	10-32 UNF x .170" Barb	



Miniature Quick Disconnects

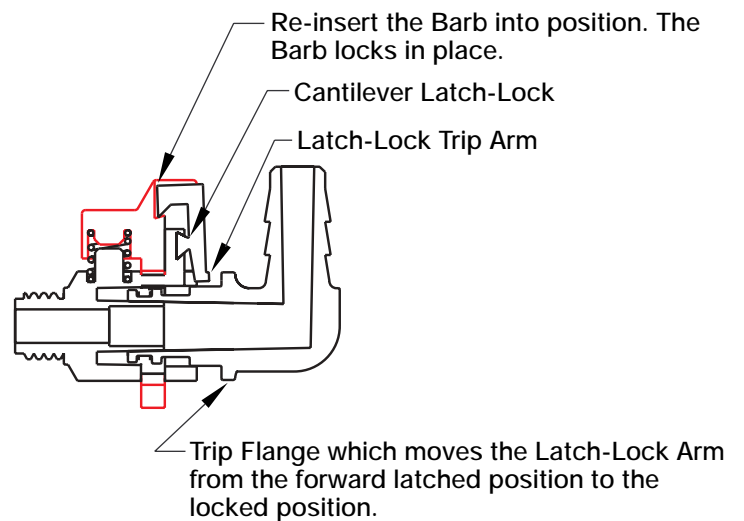
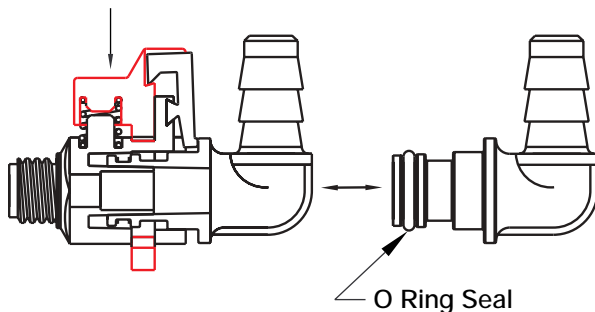
Unique Latch-Lock Push-Button

The push-button locks in place for Barb removal



Quick Disconnect Operation

Depress the Latch-Lock push-button for Barb Removal. The Barb is free to move in or out.



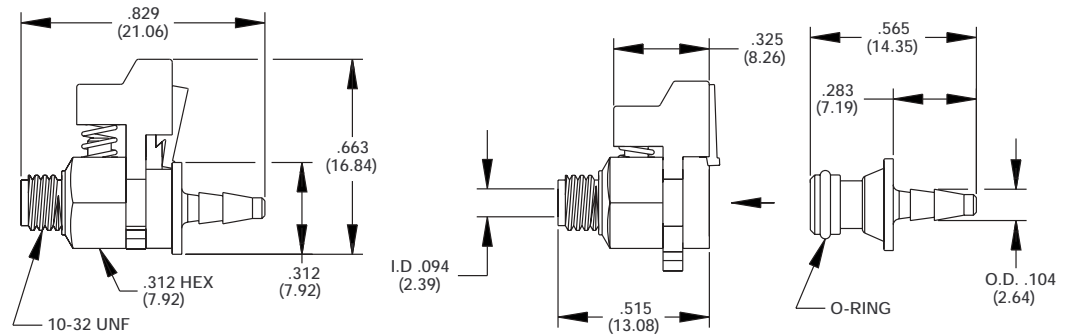
Ordering Information (Order by model number. Specify accessory letters or numbers for Thread Size, Fitting Arrangement, Port Connection, Color, Style, and Construction.)

Model Number	Thread Size	Barb Connection	Barb Size	Color	Construction	Style
F-4	1 -10-32 UNF	50 -Straight 54 -Elbow 55 -Tee	80 -1/16" 85 - 1/8" 86 - .170"	W-White	B -Barb Only H -Housing Only No Accessory number is required for complete assembly	No Accessory number is required for Straight Through Design

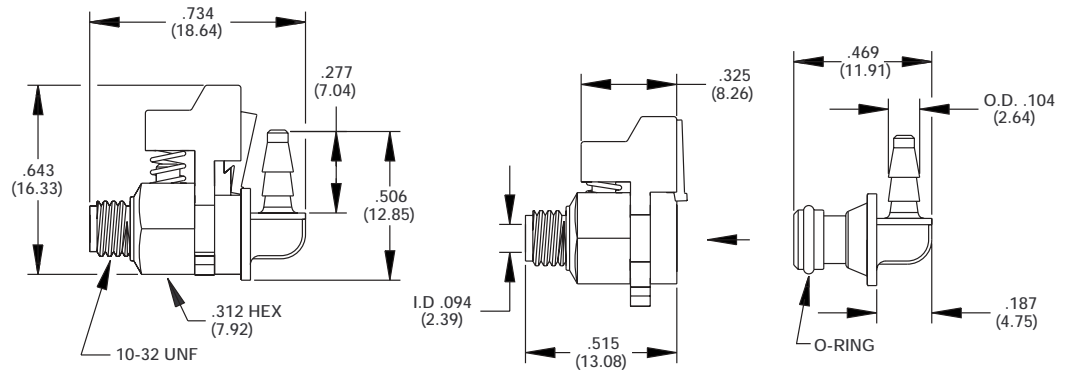
The Quick Disconnect Fitting is available in 3 models: The Straight, Elbow or Tee. The Fitting has 10-32 UNF Threads and a Barb for 1/16" I.D. Tubing.

- **Materials:** HOUSING-Celcon, **SPRING**-Stainless Steel, **O'RING**-Buna-N
- **Operating Temperature:** 40° to 120° F (5° to 48°C)
- **Maximum Supply:** 125 PSI. • **Color:** Black or White • **Patent #5,695,223.**

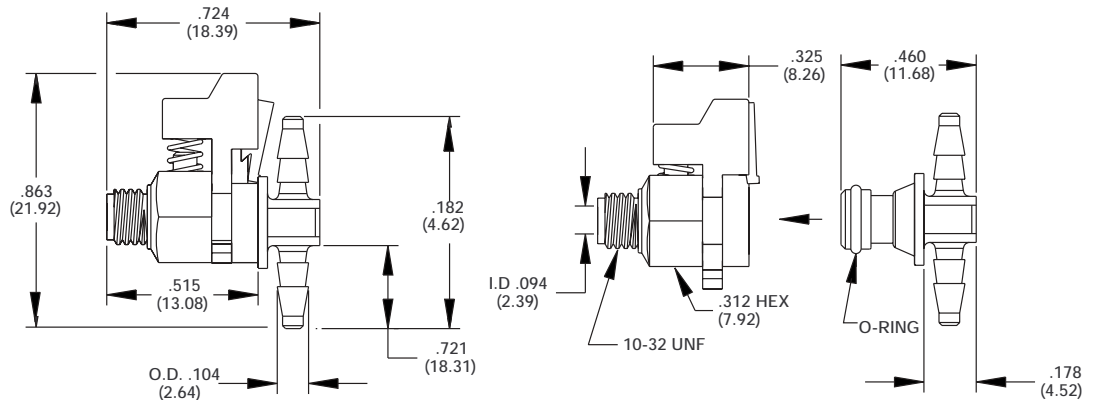
F-4150-80 Straight Quick Disconnect



F-4154-80 Elbow Quick Disconnect



F-4155-80 Tee Quick Disconnect



Quick Disconnect

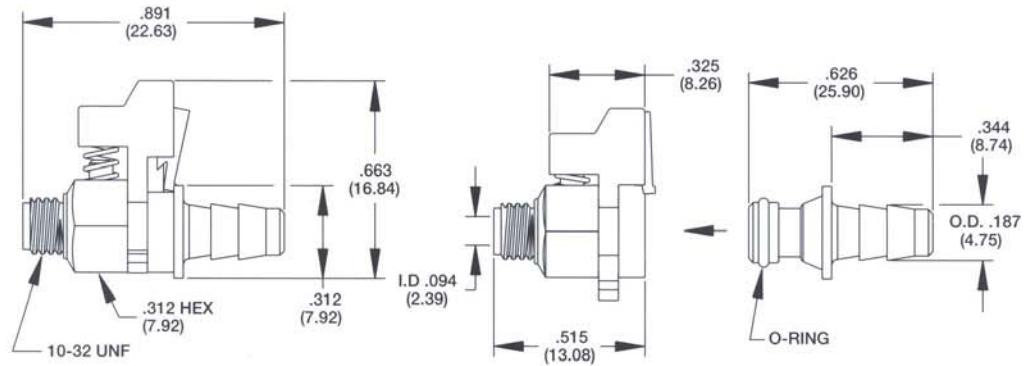
1/8" I.D. Barb

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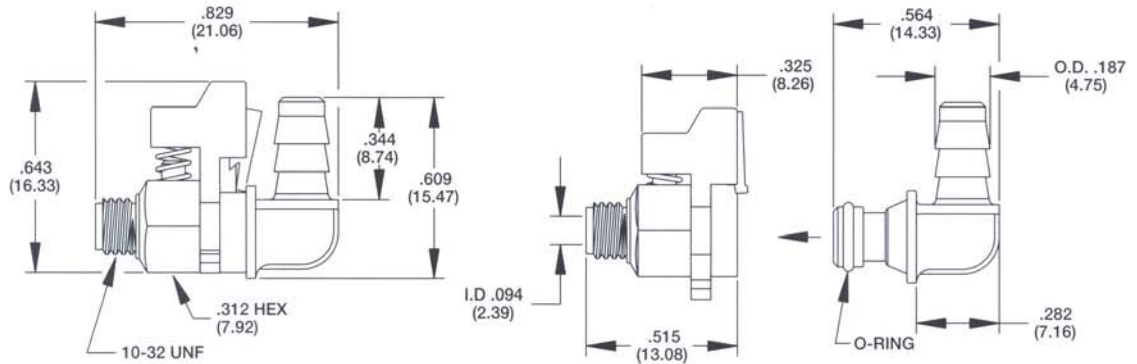
The Quick Disconnect Fitting is available in 3 models: The Straight, Elbow or Tee. The Fitting has 10-32 UNF Threads and a Barb for 1/8" I.D. Tubing.

- Materials: HOUSING-Celcon, SPRING-Stainless Steel, O'RING-Buna-N • Operating Temperature: 40° to 120° F (5° to 48°C)
- Maximum Supply: 125 PSI • Color: Black or White • Patent #5,695,223.

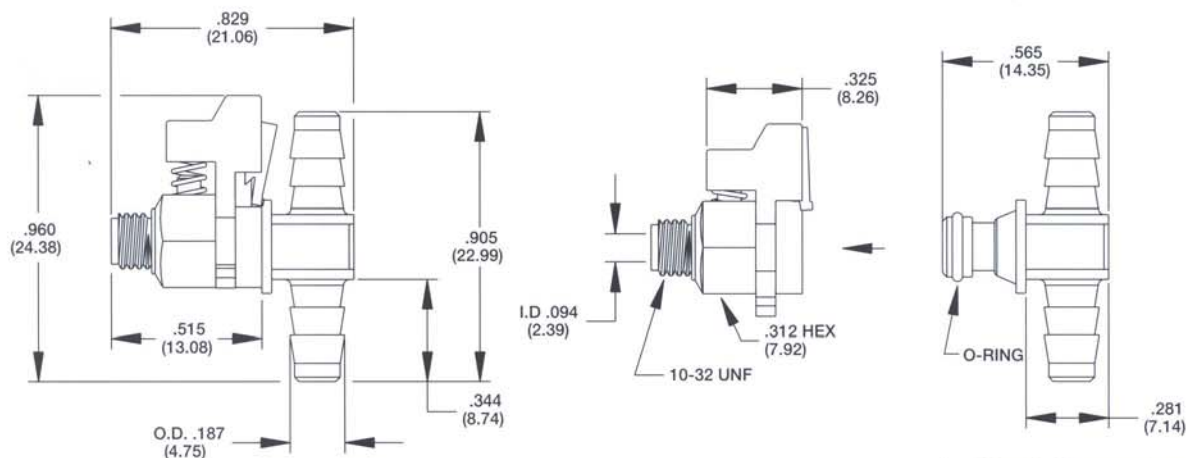
F-4150-85 Straight Quick Disconnect



F-4154-85 Elbow Quick Disconnect



F-4155-85 Tee Quick Disconnect



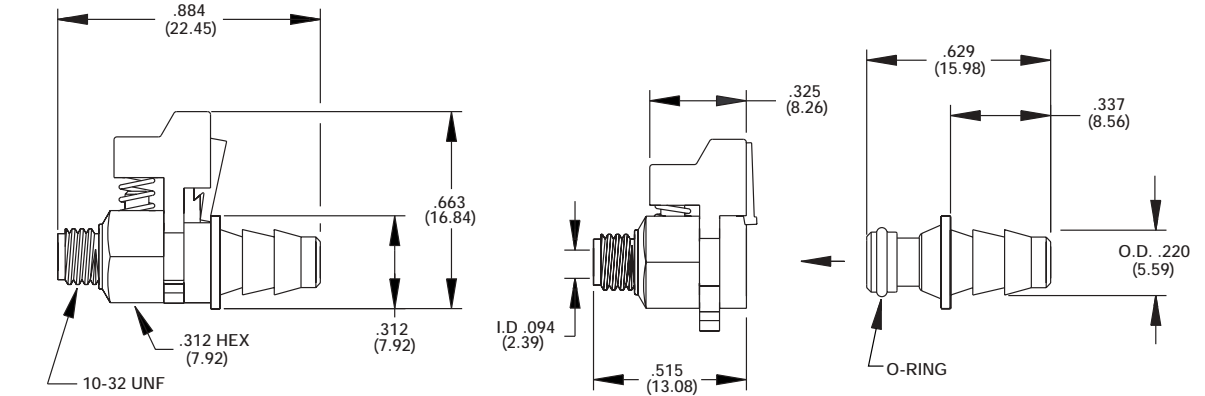
Patent #5,695,223

() = Metric Dimensions

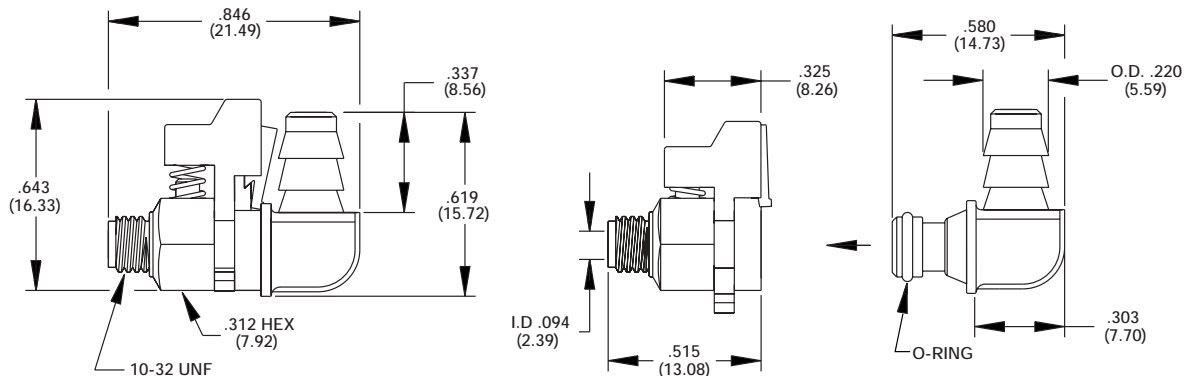
The Quick Disconnect Fitting is available in 3 models: The Straight, Elbow or Tee. The Fitting has 10-32 UNF Threads and a Barb for .170" I.D. Tubing.

- **Materials:** HOUSING-Celcon, **SPRING**-Stainless Steel, **O’RING**-Buna-N
- **Operating Temperature:** 40° to 120° F (5° to 48°C)
- **Maximum Supply:** 125 PSI. • **Color:** Black or White • **Patent #5,695,223.**

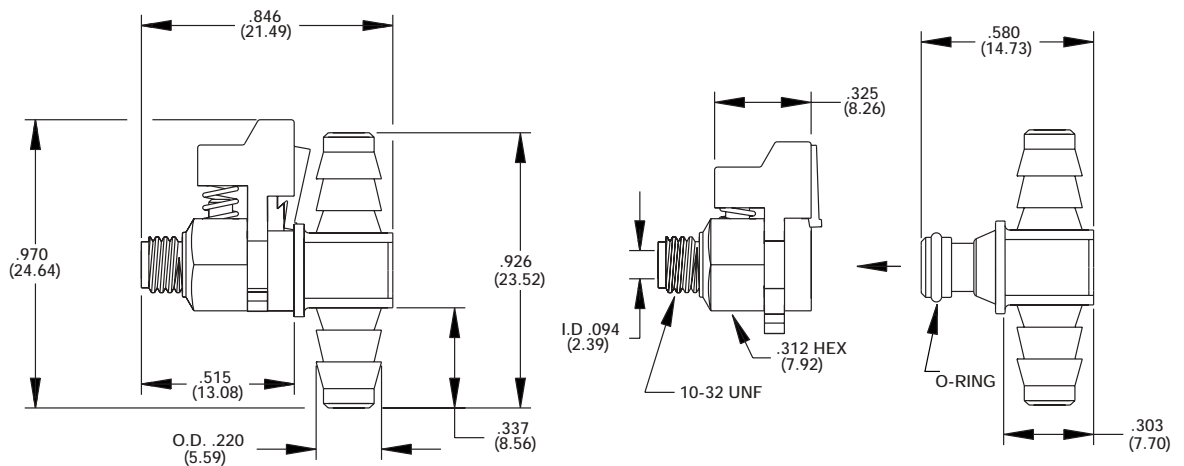
F-4150-86 Straight Quick Disconnect



F-4154-86 Elbow Quick Disconnect



F-4155-86 Tee Quick Disconnect



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Pneumatic Components and Systems



Plastic Fittings



Introduction to Air Logic

Air Logic is a manufacturer of various pneumatic accessories, ideal for instrumentation, medical and industrial applications.

The Plastic Fittings include Bulkhead Connectors, Miniature Unions, Reducing Connectors, Barbed Fittings, Tees, Elbows, Crosses, 10-32 Plugs and Nipples, Straight Swivels, Swivel Elbows and Tees (Patent #4,946,204).

The Multiple Bulkhead Connectors are precision molded of polysulfone and are available in two models, the 10-tube and 32-tube connector. The 10-tube connector seals with a press fit and can be panel mounted. The 32-tube connector is joined together by two hex head screws and is panel mounted.

The Standard Bulkhead Connectors are precision molded of nylon or polypropylene. They are available in two models, the Reducing or Straight Bulkhead Connector. The connectors join 1/16", 1/8" or .170 I.D. tubing and are panel mounted.

The Unions are precision molded of polysulfone or polypropylene, which join 1/16" I.D. or 1/8" I.D. flexible tubing.

The Reducing Connectors are precision molded of polysulfone; they join 1/16" I.D. to 1/8" or 1/16" I.D. to .170 I.D. flexible tubing.

The Swivel Fittings (Patent #4,946,204) are available in three models, the Straight Swivel, the Swivel Elbow and the Swivel Tee. The swivels are available with barbs for 1/16", 3/32", or 1/8" I.D. flexible tubing. The swivels are available with 10-32 UNF threads, 1/8-27 NPT or 1/4-18 NPT. The unique design (Patent #4, 946,204) allows the fitting to swivel 360°. The snap type fitting is sealed with a Buna-N o-ring. The Swivel fittings are precision molded of nylon.

The Multiple Barbed Fittings are precision molded of nylon or polypropylene.

The celcon Plastic Tee joins 1/16" I.D. flexible tubing together.

The 10-32 Plug and Nipple are precision molded of nylon or polypropylene.

The 10-32 Barbed Fittings are available with barbs for 1/16" I.D., 1/8" I.D. or .170 I.D. flexible tubing.

The unique design of the barbed fitting allows the 10-32 threads to seal without a gasket. The barbed fitting does not have a molded parting line on the first barb. This prevents the fitting from leaking. Air Logic fittings feature miniature size, low cost and precision molding.

Air Logic and *A* are trademarks of Air Logic registered in the United States Patent and Trademark Office.

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Swivel Fittings	
10-32 Swivel Elbows and Tees	6
1/8-27 Swivel Elbows and Tees	7
1/4-18 Swivel Elbows and Tees	8
Swivel Fittings	
10-32 Straight Swivels	9
1/8-27 Straight Swivels	9
1/4-18 Straight Swivels	10

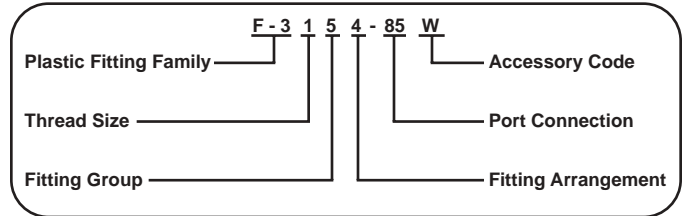
Fitting Selection Guide

Please order by Model Number. The numbers in the various positions determine Thread Size, Fitting Group, Port Connection and Fitting Arrangement, Color and Material.

Nylon Material: Black is the standard color for all nylon fittings. White, Blue and Red nylon are available in the Plug, Nipple and Barb Fittings. The Union, Elbow, Tee and Cross are available in White, or Black Nylon.

Polypropylene Material: gray is the standard color for all polypropylene fittings. An example of the fitting selection is shown below:

Model Number Selection

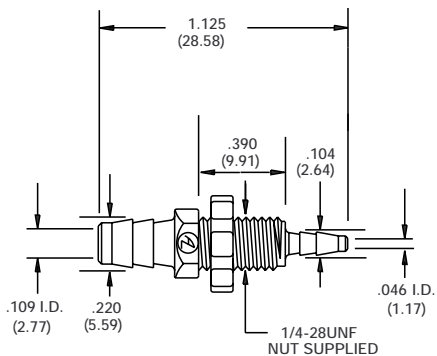


Model Number Selection by Position

Number Position	Accessory Number	Description
F-3154-85	F-3	Plastic Fitting Family
Thread Size F-3154-85	1	10-32 UNF Threads
	2	1/8-27 NPT Threads
	3	1/4-18 NPT Threads
Fitting Group F-3154-85	03	Multiple Bulkhead Connector
	00	Straight Bulkhead Connector
	20	Union, Reducers, Barb Fitting
	40	Barbed Unions, Elbows, Tees, & Crosses
	45	Straight Tee
	50	Straight Swivel
	54	Swivel Elbow
	55	Swivel Tee
Fitting Arrangement F-3154-85	4	Elbow
	5	Tee
	6	Cross
Port Connections F-3154-85	20	Plug
	25	Nipple
	41	Union - Straight Ports for 1/16" I.D. Tubing
	42	Union - Barbed Ports for 1/16" I.D. Tubing
	43	Union - Barbed Ports for 1/8" I.D. Tubing
	65	Tee - Straight Ports for 1/16" I.D. Tubing
	68	Reducer for .170 to 1/16" I.D. Tubing
	70	Reducer for 1/8" to 1/16" I.D. Tubing
	71	Reducer for .170 to 1/8" I.D. Tubing
	80	Barb for 1/16" I.D. Tubing
83	Barb for 3/32" I.D. Tubing	
85	Barb for 1/8" I.D. Tubing	
86	Barb for .170 I.D. Tubing	
Accessory Code F-3120-20-PP	W	White
	B	Blue
	R	Red
		Black - Standard Color
	PP	Polypropylene

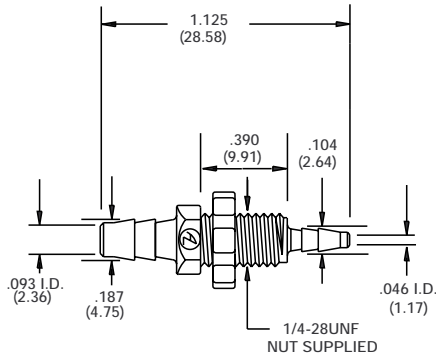
Standard Bulkhead Connectors

F-3100-68 Reducing Bulkhead Connector



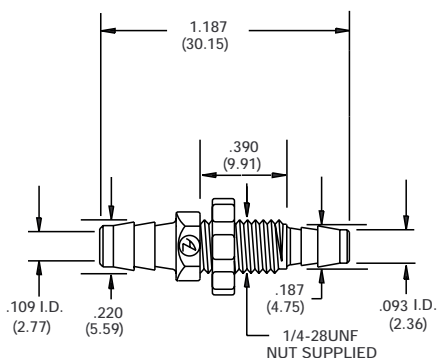
Barbed ports for .170 I.D. to 1/16" I.D. flexible tubing.
External 1/4-28 UNF threads for panel mounting.
Material: Nylon - Black or White
Polypropylene - Gray

F-3100-70 Reducing Bulkhead Connector



Barbed ports for 1/8" I.D. to 1/16" I.D. flexible tubing.
External 1/4-28 UNF threads for panel mounting.
Material: Nylon - Black or White
Polypropylene - Gray

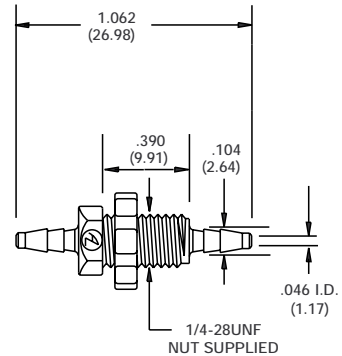
F-3100-71 Reducing Bulkhead Connector



Barbed ports for .170 I.D. to 1/8" I.D. flexible tubing.
External 1/4-28 UNF threads for panel mounting.
Material: Nylon - Black or White
Polypropylene - Gray

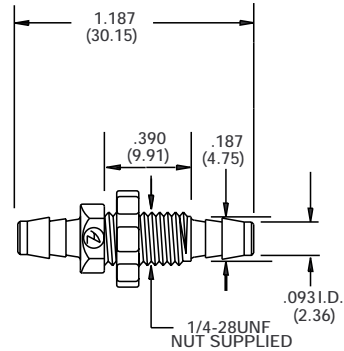
() = Metric Dimensions

F-3100-80 Straight Bulkhead Connector



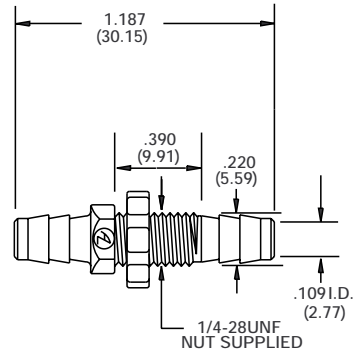
Barbed ports for 1/16" I.D. flexible tubing.
External 1/4-28 UNF threads for panel mounting.
Material: Nylon - Black or White
Polypropylene - Gray

F-3100-85 Straight Bulkhead Connector



Barbed ports for 1/8" I.D. flexible tubing.
External 1/4-28 UNF threads for panel mounting.
Material: Nylon - Black or White
Polypropylene - Gray

F-3100-86 Straight Bulkhead Connector



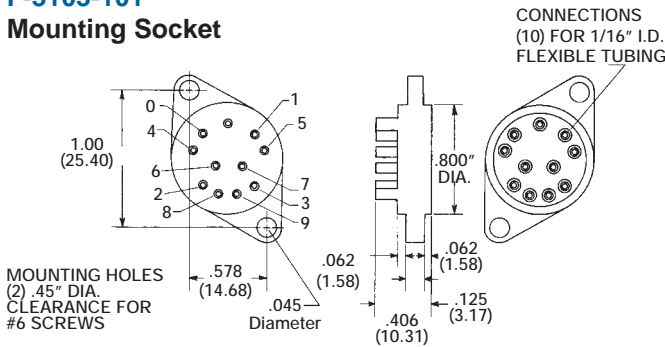
Barbed ports for .170 I.D. flexible tubing.
External 1/4-28 UNF threads for panel mounting.
Material: Nylon - Black or White
Polypropylene - Gray

() = Metric Dimensions

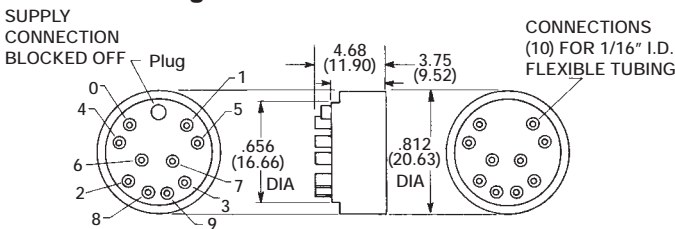
Standard Bulkhead Connectors

F-3103-Series 10 Tube Connector

F-3103-101 Mounting Socket



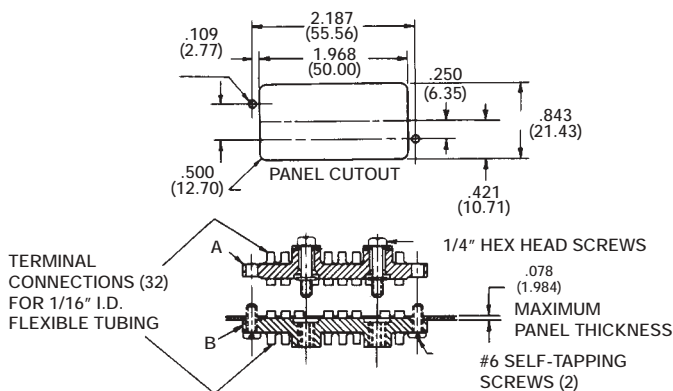
F-3103-102 Connector Plug



The F-3103-101 Mounting Socket and F-3103-102 Connector Plug form a ten tube connector when used together. The Mounting Socket may be panel or bulkhead mounted. Order each separately by model number.

Material: Polysulfone.

F-3103-320 32 Tube Connector



The Connector joins up to 32 tubes of 1/16" I.D. tubing. The connector is joined together by two hex head screws and can be panel mounted.

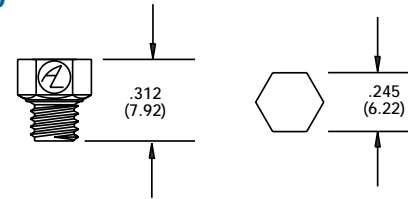
Material: Polysulfone.

() = Metric Dimensions

Please Read Warranty on Page 11

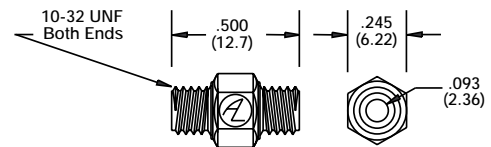
Plastic Fittings

F-3120-20 Plug



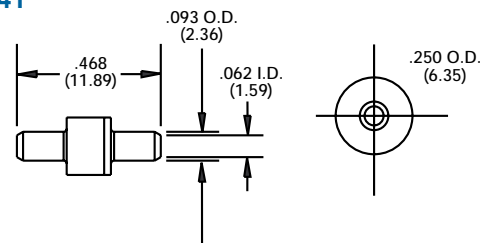
10-32 UNF hex head plug
Material: Nylon - Black, Red, White or Blue
Polypropylene - Gray

F-3120-25 Nipple



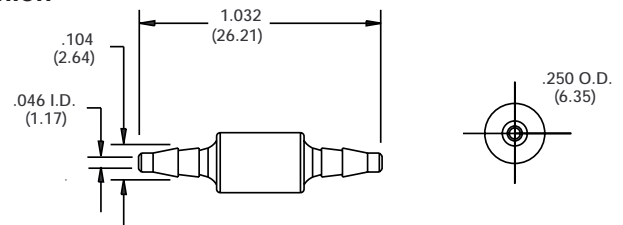
10-32 UNF hex head plug
Material: Nylon - Black, Red, White or Blue
Polypropylene - Gray

F-3120-41 Union



Straight ports for 1/16" I.D. flexible tubing.
Material: Polysulfone

F-3120-42 Union



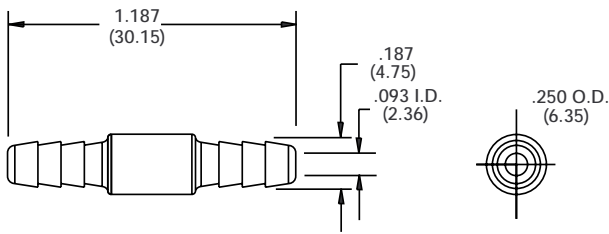
Barbed ports for 1/16" I.D. flexible tubing.
Material: Polysulfone

() = Metric Dimensions

Check Chemical Comptability of Polysulfone.

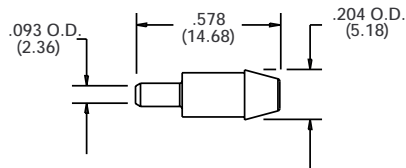
Plastic Fittings

F-3120-43 Union



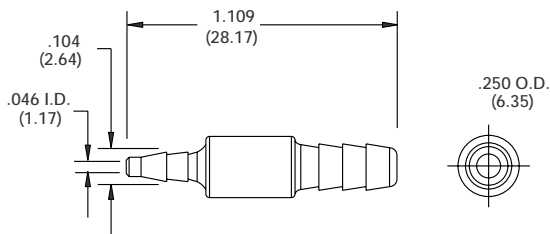
Barbed ports for $\frac{1}{16}$ " I.D. flexible tubing.
Material: Polysulfone.

F-3120-68 Barbed Reducer



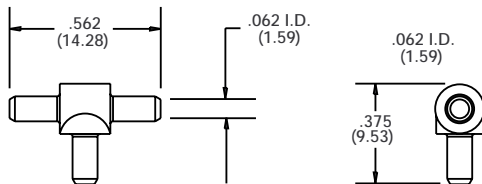
A straight port for $\frac{1}{16}$ " I.D. flexible tubing at one end
and a barbed connection for $\frac{1}{8}$ " or .170 I.D. flexible
tubing at the other end.
Material: Polysulfone.

F-3120-70 Barbed Reducer



Barbed ports for $\frac{1}{16}$ " I.D. x $\frac{1}{8}$ " I.D. flexible tubing.
Material: Polysulfone.

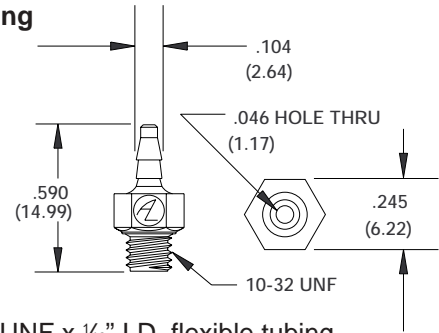
F-3145-65 Tee



Straight ports for $\frac{1}{16}$ " I.D. flexible tubing.
Material: Celcon

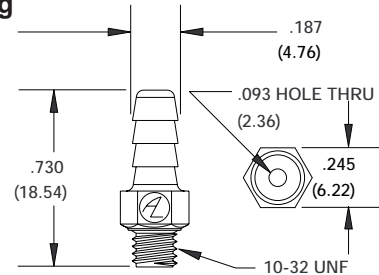
() = Metric Dimensions

F-3120-80 Barbed Fitting



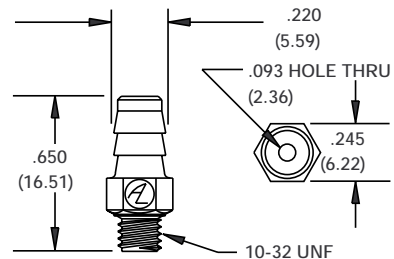
For 10-32 UNF x $\frac{1}{16}$ " I.D. flexible tubing
Material: Nylon - Black, Red, White or Blue
Polypropylene - Gray

F-3120-85 Barbed Fitting



For 10-32 UNF x $\frac{1}{8}$ " I.D. flexible tubing
Material: Nylon - Black, Red, White or Blue
Polypropylene - Gray

F-3120-86 Barbed Fitting

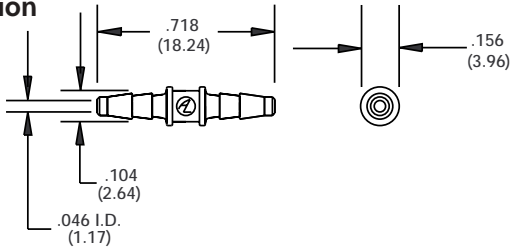


For 10-32 UNF x .170 I.D. flexible tubing
Material: Nylon - Black, Red, White or Blue
Polypropylene - Gray

() = Metric Dimensions

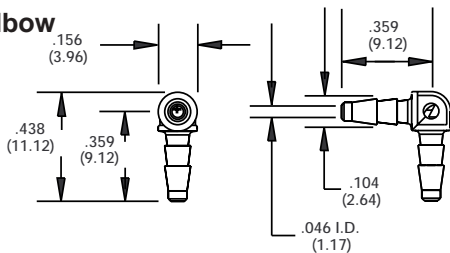
Plastic Fittings

F-3140-80 Barbed Union



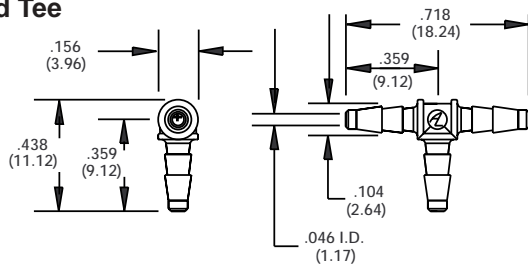
Barbed ports for 1/16" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

F-3144-80 Barbed Elbow



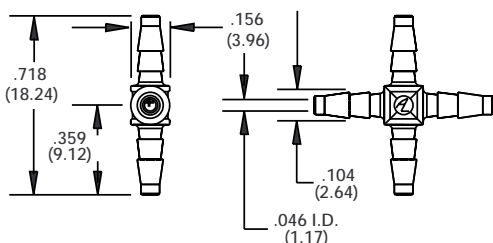
Barbed ports for 1/16" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

F-3145-80 Barbed Tee



Barbed ports for 1/16" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

F-3146-80 Barbed Cross

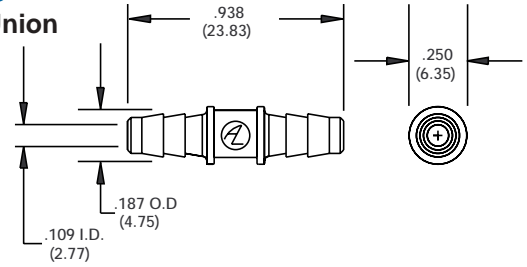


Barbed ports for 1/16" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

() = Metric Dimensions

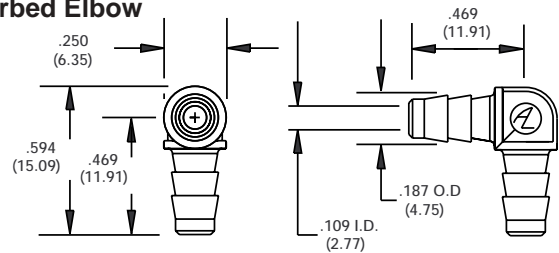
Please Read Warranty on Page 11

F-3140-85 Barbed Union



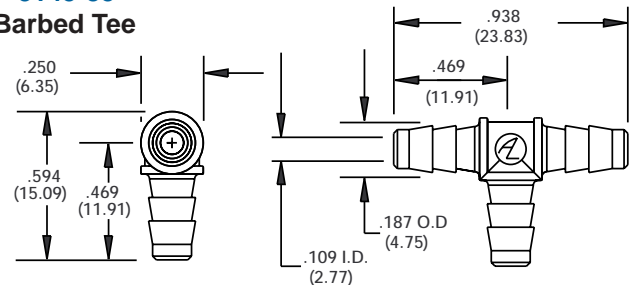
Barbed ports for 1/8" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

F-3144-85 Barbed Elbow



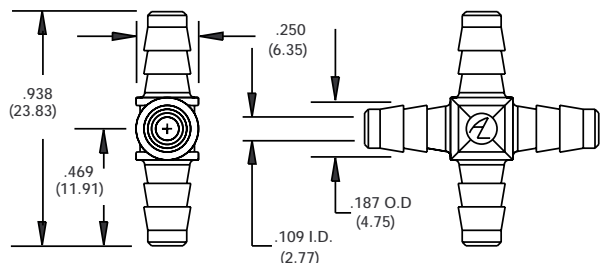
Barbed ports for 1/8" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

F-3145-85 Barbed Tee



Barbed ports for 1/8" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

F-3146-85 Barbed Cross



Barbed ports for 1/8" I.D. flexible tubing.
Material: Nylon - Black or White
Polypropylene - Gray

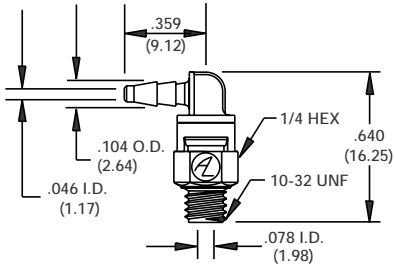
() = Metric Dimensions

Check Chemical Comptability of Polysulfone.

Swivel Elbow & Tee Fittings

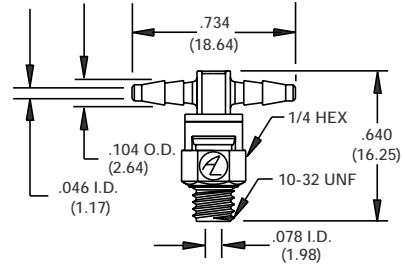
Patent #4,946,204

F-3154-80
Swivel Elbow



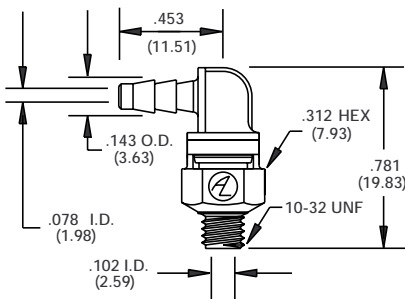
For 10-32 UNF x 1/16" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3155-80
Swivel Tee



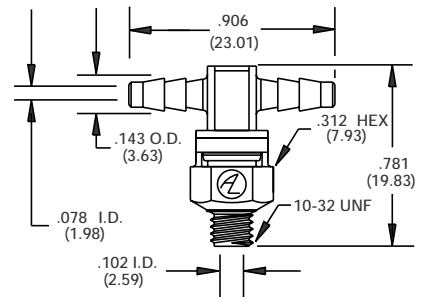
For 10-32 UNF x 1/16" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3154-83
Swivel Elbow



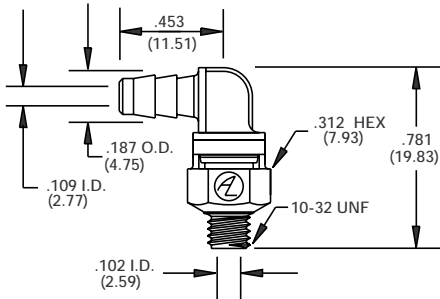
For 10-32 UNF x 3/32" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3155-83
Swivel Tee



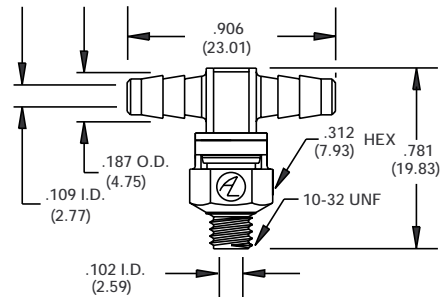
For 10-32 UNF x 3/32" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3154-85
Swivel Elbow



For 10-32 UNF x 1/8" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3155-85
Swivel Tee



For 10-32 UNF x 1/8" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

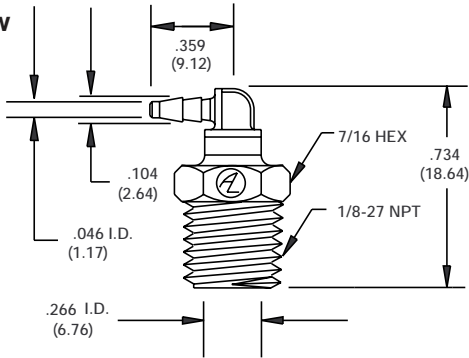
() = Metric Dimensions

() = Metric Dimensions

Swivel Elbow & Tee Fittings

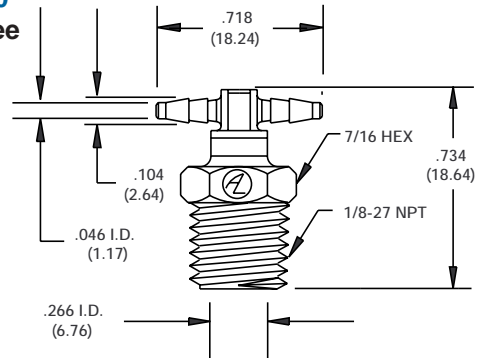
Patent #4,946,204

F-3254-80
Swivel Elbow



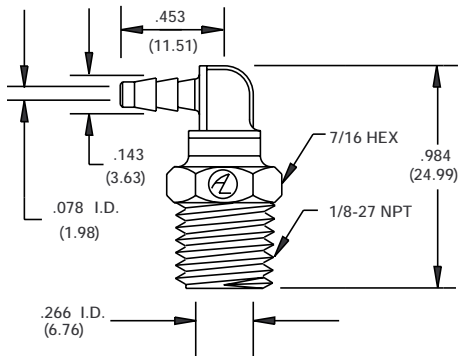
For 1/8-27 NPT x 1/16" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3255-80
Swivel Tee



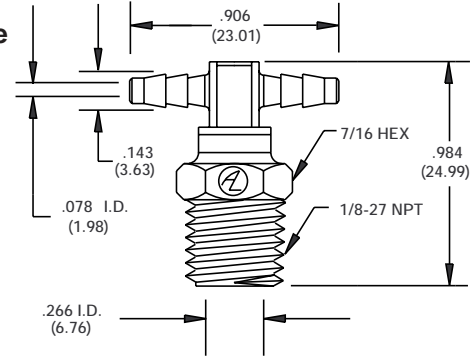
For 1/8-27 NPT x 1/16" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3254-83
Swivel Elbow



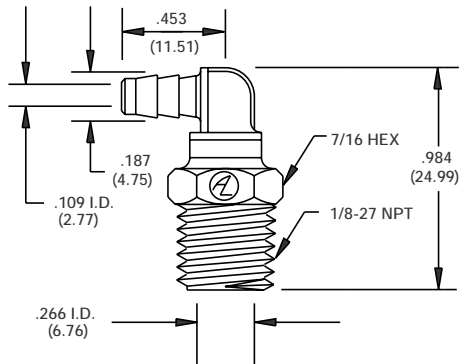
For 1/8-27 NPT x 3/32" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3255-83
Swivel Tee



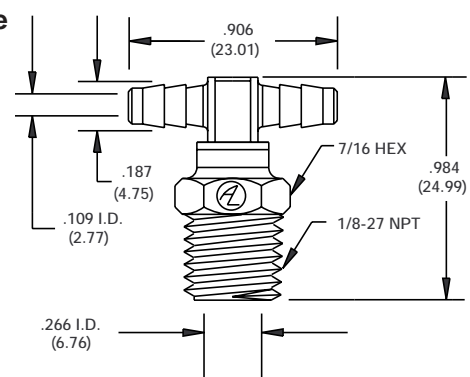
For 1/8-27 NPT x 3/32" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3254-85
Swivel Elbow



For 1/8-27 NPT x 1/8" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3255-85
Swivel Tee



For 1/8-27 NPT x 1/8" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

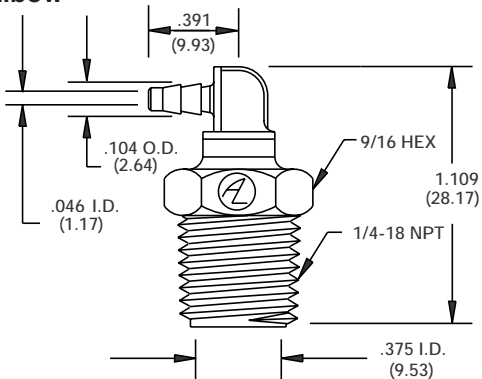
() = Metric Dimensions

() = Metric Dimensions

Swivel Elbow & Tee Fittings

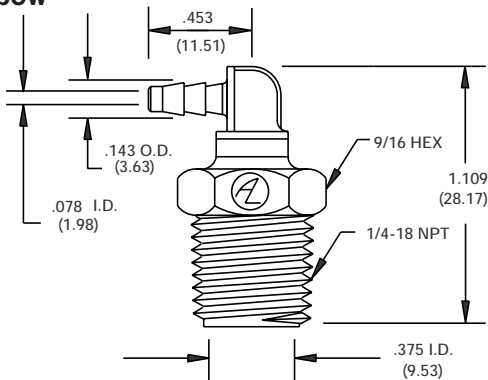
Patent #4,946,204

F-3354-80
Swivel Elbow



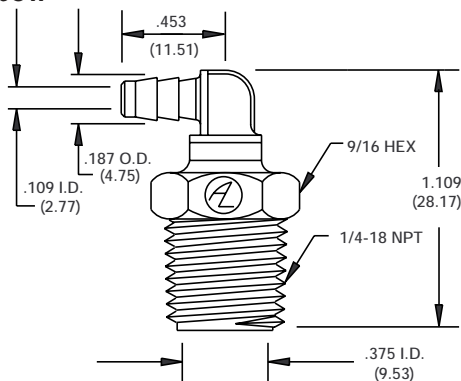
For 1/4-18 NPT x 1/16" I.D. flexible tubing. Swivels 360°. Buna-N o-ring seal. Material: Nylon.

F-3354-83
Swivel Elbow



For 1/4-18 NPT x 3/32" I.D. flexible tubing. Swivels 360°. Buna-N o-ring seal. Material: Nylon.

F-3354-85
Swivel Elbow

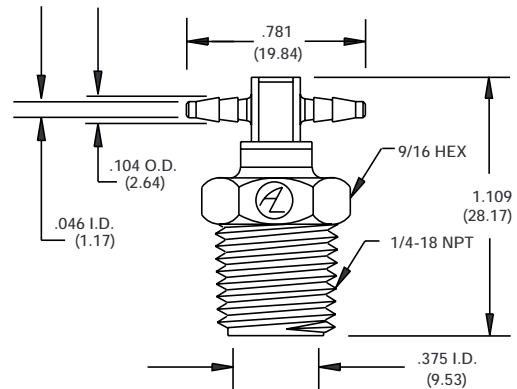


For 1/4-18 NPT x 1/8" I.D. flexible tubing. Swivels 360°. Buna-N o-ring seal. Material: Nylon.

() = Metric Dimensions

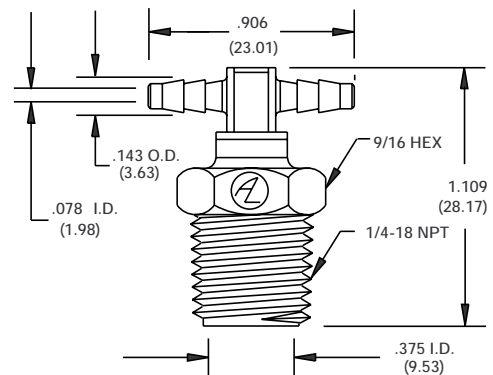
Please Read Warranty on Page 11

F-3355-80
Swivel Tee



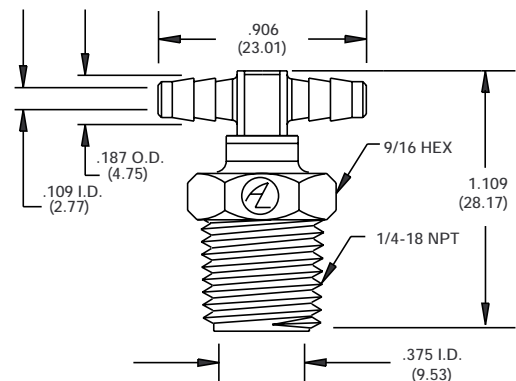
For 1/4-18 NPT x 1/16" I.D. flexible tubing. Swivels 360°. Buna-N o-ring seal. Material: Nylon.

F-3355-83
Swivel Tee



For 1/4-18 NPT x 3/32" I.D. flexible tubing. Swivels 360°. Buna-N o-ring seal. Material: Nylon.

F-3355-85
Swivel Tee



For 1/4-18 NPT x 1/8" I.D. flexible tubing. Swivels 360°. Buna-N o-ring seal. Material: Nylon.

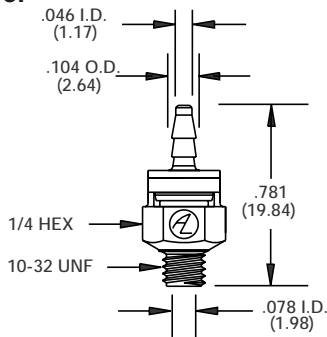
() = Metric Dimensions

Check Chemical Compatibility of Polysulfone.

Straight Swivel Fittings

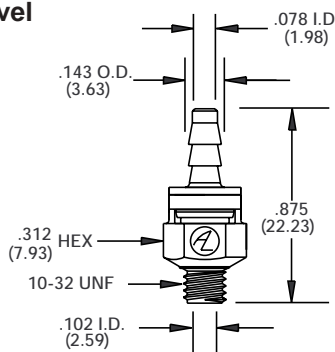
Patent #4,946,204

F-3150-80 Straight Swivel



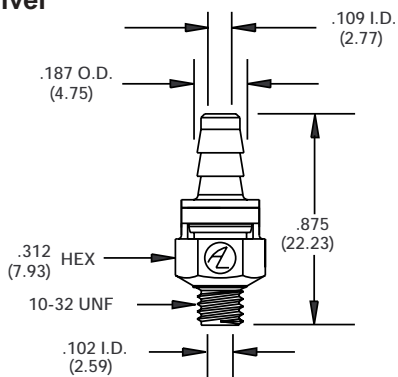
For 10-32 UNF x 1/16" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3150-83 Straight Swivel



For 10-32 UNF x 3/32" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

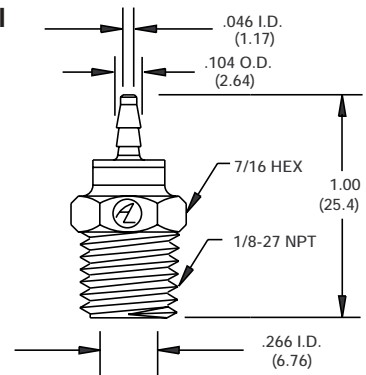
F-3150-85 Straight Swivel



For 10-32 UNF x 1/8" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

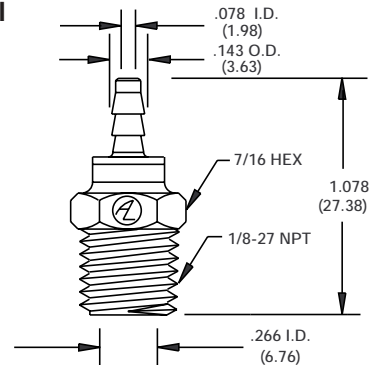
() = Metric Dimensions

F-3250-80 Straight Swivel



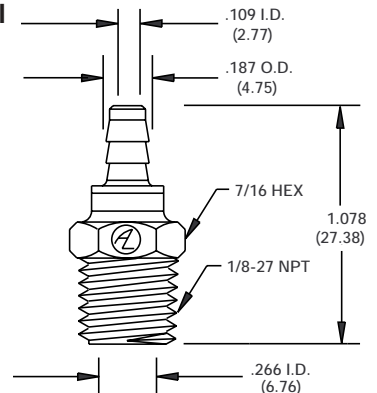
For 1/8-27 NPT x 1/16" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3250-83 Straight Swivel



For 1/8-27 NPT x 3/32" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3250-85 Straight Swivel



For 1/8-27 NPT x 1/8" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

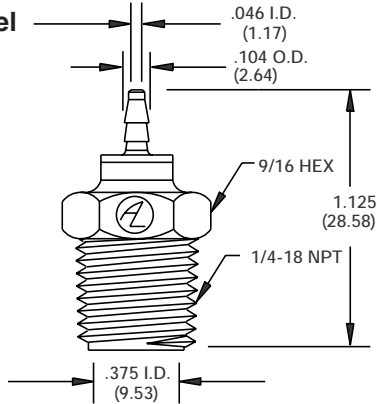
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Straight Swivel Fittings

Patent #4,946,204

F-3350-80

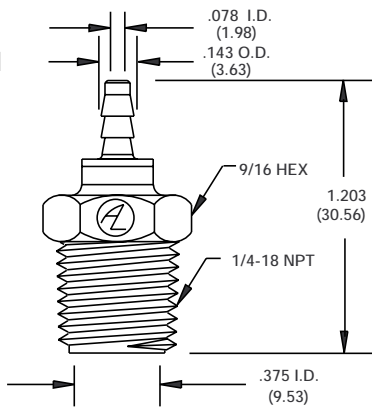
Straight Swivel



For 1/4-18 NPT x 1/16" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3350-83

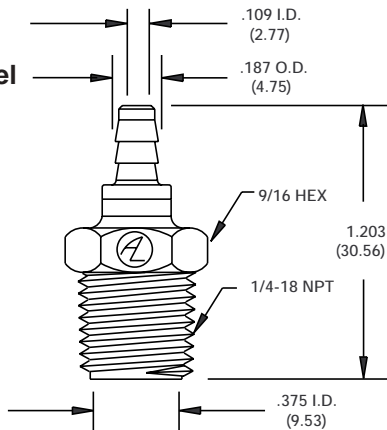
Straight Swivel



For 1/4-18 NPT x 3/32" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

F-3350-85

Straight Swivel



For 1/4-18 NPT x 1/8" I.D. flexible tubing. Swivels 360°.
Buna-N o-ring seal.
Material: Nylon.

() = Metric Dimensions

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Air Logic Pneumatic Components and Systems



Assortment Kits



Introduction to Air Logic

The Air Logic Division of Fred Knapp Engraving Company designs and manufactures a comprehensive line of Assortment Kits which include Inline Filters, Orifice Restrictors, Bulkhead Connectors and various Plastic Fittings.

The Filter Assortment Kits contain a selection of three models. The F-950 Series is an inline filter with barbs for 1/16" or 1/8" I.D. tubing. The F-960 Series filter is encased in a male 10-32 UNF threaded housing with barbs for 1/16" or 1/8" I.D. tubing. The F-970 Series Filter is encased in a female 10-32 UNF threaded housing. Available in 5, 25, 43, or 73 microns.

The Orifice Assortment Kits contain a selection of three models. The F-2815 Series for inline installation, the F-2815-B80, B85 Series with barbs for 1/16" or 1/8" I.D. flexible tubing and the F-3120 Series encased in a 10-32 UNF barbed fitting. The orifices are available in diameters from .004" to .040".

The Bulkhead Connector Kits contain a selection of two models, the Reducing and Straight Bulkhead Connector. The Connectors join 1/16", 1/8" or .170 I.D. flexible tubing.

The Swivel Fitting Assortment Kits contain a selection of three models, 10-32 UNF threads, 1/8-27 NPT or 1/4-18 NPT. The straight Swivel, the Swivel Elbow and the Swivel Tee are available. The unique design (Patent #4,946,204) allows the fitting to swivel 360°.

The Plastic Fitting Assortment Kits contain a selection of miniature unions, reducing connectors, 10-32 UNF Barbed Fittings, Tees, Elbows, Crosses, 10-32 UNF Plugs, 10-32 UNF Nipples, Straight Swivels, Swivel Elbows and Tees. (Patent #4, 946,20)

Air Logic and *A* are trademarks of Air Logic registered in the United States Patent and Trademark Office.

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Assortment Kit Selection Guide

Please order your Kit selection by Model Number. Assortment Kits are available in three sizes: The Basic Kit, the Medium Kit-100, and the Master Kit-200. Barb size is designated with B80 for 1/16" or B85 for 1/8" I.D. Tubing.

Model Number Selection

F-3140-200	
Model Number	Accessory Number

Model Number Selection

Selection	Model Number	Description
Filters	F-950-100	1/16" and 1/8" I.D. Barbed Inline Filters
	F-960-100	Male 10-32 Barbed Filters
	F-970-100	Female 10-32 Filters
Orifice Restrictors	F-2815	Inline Orifice Restrictors
	F-2815-B80	1/16" I.D. Barbed Orifice Restrictors
	F-2815-B85	1/8" I.D. Barbed Orifice Restrictors
	F-2815-100	Assorted 1/16" and 1/8" I.D. Barbed Orifice Restrictors
	F-3120-B80	10-32 x 1/16" I.D. Barbed Orifice Restrictors
	F-3120-B85	10-32 x 1/8" I.D. Barbed Orifice Restrictors
	F-3120-100	Assorted 10-32 x 1/16" and 1/8" Barbed Orifice Restrictors
	F-2815-200	Assorted Inline Orifices, 1/16", 1/8", and 10-32 Barbed Orifices
Bulkhead Connector	F-3100	Assorted Reducing and Straight Bulkhead Connectors
Swivel Fittings	F-3150	Assorted 10-32 Straights, Elbows and Tees
	F-3250	Assorted 1/8"-27 NPT Straights, Elbows and Tees
	F-3350	Assorted 1/4" -18 NPT Straights, Elbows and Tees
Plastic Fittings	F-3140	Assorted 10-32 Plugs and Nipples, 1/16", 1/8" and .170" Barbed Fittings, Unions, Reducers and Tees
	F-3140-100	Assorted 10-32 Plugs and Nipples, 1/16", 1/8" and .170" Barbed Fittings, Unions, Elbows and Tees
	F-3120-200	Assorted 10-32 Plugs and Nipples, 1/16", 1/8" and .170" Barbed Fittings, Unions, Reducers, Elbows, Tees, Crosses, Bulkhead Connectors, Straight Swivels, Elbows and Tees

Filter Assortment Kits

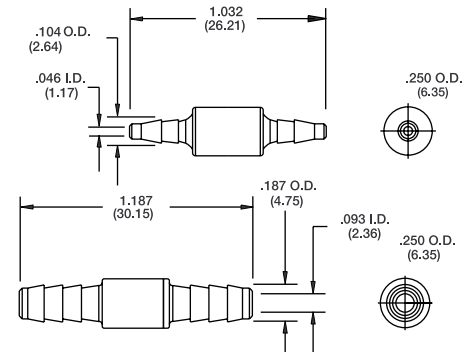


Air Logic offers a disposable filter which is available in 5, 25, 43, and 73 microns. The housing is precision molded of polysulfone material. The stainless steel mesh screen has a Dutch weave which is resistant to high pressure. Maximum supply pressure is 125 PSI. The filters are available for inline applications or with 10-32 UNF threads. There are 2 of each filter included in these kits.

F-950-100 Inline Filter Assortment Kit

The F-950-100 Inline Filter Assortment Kit offers 5, 25, 43 and 73 micron filter sizes. The filter is available with barbs for 1/16" and 1/8" I.D. flexible tubing. There are two of each filter included in this kit.

Model No.	Micron Size	Barb Size
F-950 -5-B80	.5 um	1/16"
F-950-25-B80	.25 um	1/16"
F-950-43-B80	.43 um	1/16"
F-950-73-B80	.73 um	1/16"
F-950- 5-B85	.5 um	1/8"
F-950-25-B85	.25 um	1/8"
F-950-43-B85	.43 um	1/8"
F-950-73-B85	.73 um	1/8"



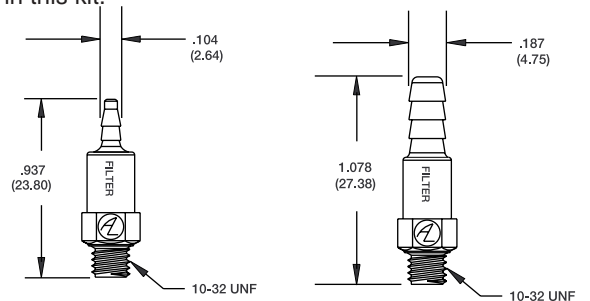
DIMENSIONS

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F-960-100 Threaded Filter Assortment Kit

The F-960-100 Inline Filter Assortment Kit offers 5, 25, 43 and 73 micron filter sizes. The filter is encased in a 10-32 UNF barbed fitting for 1/16" and 1/8" I.D. flexible tubing. There are two of each filter included in this kit.

Model No.	Micron Size	Barb Size
F-960- 5-B80	.5 um	1/16"
F-960-25-B80	.25 um	1/16"
F-960-43-B80	.43 um	1/16"
F-960-73-B80	.73 um	1/16"
F-960- 5-B85	.5 um	1/8"
F-960-25-B85	.25 um	1/8"
F-960-43-B85	.43 um	1/8"
F-960-73-B85	.73 um	1/8"



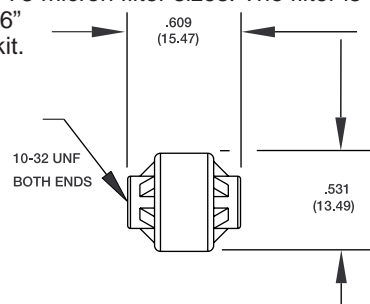
DIMENSIONS

() = Metric Dimensions

F-970-100 Female 10-32 Filter Assortment Kit

The F-970-100 female 10-32 Filter Assortment Kit offers 5, 25, 43 and 73 micron filter sizes. The filter is encased in a 10-32 UNF female filter housing. The 10-32 UNF barbed fittings are included for 1/16" and 1/8" I.D. flexible tubing. There are two of each filter included in this kit.

Model No.	Micron Size
F-970- 5	.5 um
F-970-25	.25 um
F-970-43	.43 um
F-970-73	.73 um



DIMENSIONS

() = Metric Dimensions



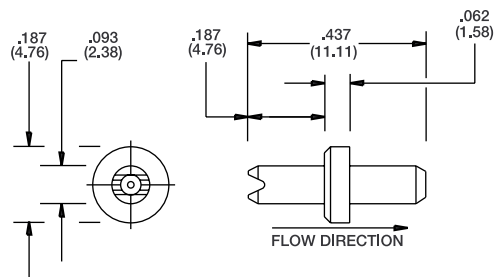
Orifice Assortment Kits

Air Logic offers Orifice Restrictors in eleven color coded sizes. The orifices are precision molded of polysulfone material and are held to flow tolerances of $\pm 4\%$. Inline orifice restrictors are available with barbs for 1/16" and 1/8" I.D. flexible tubing. The orifice restrictors are also available in 10-32 x 1/16" and 10-32 x 1/8" barbed fittings.

F-2815 Orifice Assortment Kit

The F-2815 Orifice Assortment Kit offers eleven color coded orifice sizes from .004" to .040" for use with 1/16" I.D. flexible tubing. There are five of each orifice included in this kit.

Model No.	Size	Color
F-2815-041	.004"	Purple
F-2815-050	.005"	Lime Green
F-2815-051	.006"	Red
F-2815-071	.007"	Aqua
F-2815-101	.010"	Yellow
F-2815-121	.012"	Black
F-2815-161	.016"	Gray
F-2815-201	.020"	Blue
F-2815-251	.025"	Brown
F-2815-301	.030"	Beige
F-2815-401	.040"	Rust



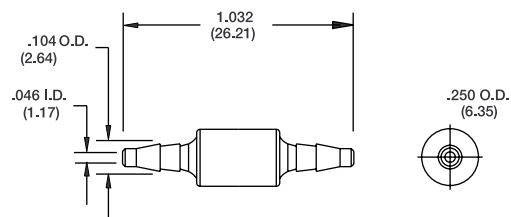
DIMENSIONS

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F-2815-B80 Orifice Assortment Kit

The F-2815-B80 Orifice Assortment Kit offers eleven color coded orifice sizes from .004" to .040" with barbs for 1/16" I.D. flexible tubing. There are two of each orifice included in this kit.

Model No.	Size	Color
F-2815-041-B80	.004"	Purple
F-2815-050-B80	.005"	Lime Green
F-2815-051-B80	.006"	Red
F-2815-071-B80	.007"	Aqua
F-2815-101-B80	.010"	Yellow
F-2815-121-B80	.012"	Black
F-2815-161-B80	.016"	Gray
F-2815-201-B80	.020"	Blue
F-2815-251-B80	.025"	Brown
F-2815-301-B80	.030"	Beige
F-2815-401-B80	.040"	Rust



DIMENSIONS

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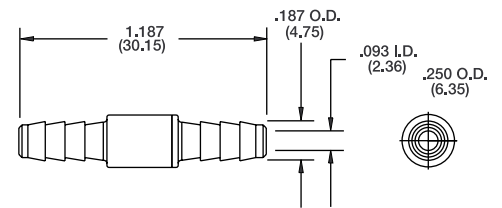
Orifice Assortment Kits



F-2815-B85 Orifice Assortment Kit

The F-2815-B85 Orifice Assortment Kit offers eleven color coded orifice sizes from .004" to .040" for use with 1/8" I.D. flexible tubing. There are two of each orifice included in this kit.

Model No.	Size	Color
F-2815-041-B85	.004"	Purple
F-2815-050-B85	.005"	Lime Green
F-2815-051-B85	.006"	Red
F-2815-071-B85	.007"	Aqua
F-2815-101-B85	.010"	Yellow
F-2815-121-B85	.012"	Black
F-2815-161-B85	.016"	Gray
F-2815-201-B85	.020"	Blue
F-2815-251-B85	.025"	Brown
F-2815-301-B85	.030"	Beige
F-2815-401-B85	.040"	Rust



DIMENSIONS

() = Metric Dimensions

F-2815-100 Orifice Assortment Kit

The F-2815-100 Orifice Assortment Kit offers eleven color coded orifice sizes from .004" to .040" with straight ports for 1/16" I.D. flexible tubing or with barbs for 1/16" and 1/8" I.D. flexible tubing. There are two of each orifice included in this kit.

Model No.	Model No.	Model No.	Size	Color
F-2815-041	F-2815-041-B80	F-2815-041-B85	.004"	Purple
F-2815-050	F-2815-050-B80	F-2815-050-B85	.005"	Lime Green
F-2815-051	F-2815-051-B80	F-2815-051-B85	.006"	Red
F-2815-071	F-2815-071-B80	F-2815-071-B85	.007"	Aqua
F-2815-101	F-2815-101-B80	F-2815-101-B85	.010"	Yellow
F-2815-121	F-2815-121-B80	F-2815-121-B85	.012"	Black
F-2815-161	F-2815-161-B80	F-2815-161-B85	.016"	Gray
F-2815-201	F-2815-201-B80	F-2815-201-B85	.020"	Blue
F-2815-251	F-2815-251-B80	F-2815-251-B85	.025"	Brown
F-2815-301	F-2815-301-B80	F-2815-301-B85	.030"	Beige
F-2815-401	F-2815-401-B80	F-2815-401-B85	.040"	Rust

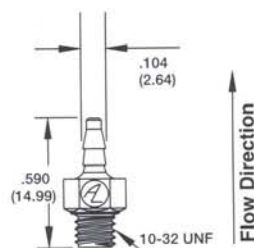
Orifice Assortment Kits



F-3120-B80 Orifice Assortment Kit

The F-3120-B80 Orifice Assortment Kit offers eleven color coded orifice sizes from .004" to .040" The orifices are inserted into a black 10-32 x 1/16" barbed fitting, which is molded of polysulfone material. There are two of each orifice included in this kit.

Model No.	Size
F-3120-041-B80.....	.004"
F-3120-050-B80.....	.005"
F-3120-051-B80.....	.006"
F-3120-071-B80.....	.007"
F-3120-101-B80.....	.010"
F-3120-121-B80.....	.012"
F-3120-161-B80.....	.016"
F-3120-201-B80.....	.020"
F-3120-251-B80.....	.025"
F-3120-301-B80.....	.030"
F-3120-401-B80.....	.040"



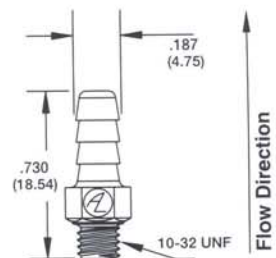
DIMENSIONS

() = Metric Dimensions

F-3120-B85 Orifice Assortment Kit

The F-3120-B85 Orifice Assortment Kit offers eleven color coded orifice sizes from .004" to .040" The orifices are inserted into a black 10-32 x 1/8" barbed fitting, which is molded of polysulfone material. There are two of each orifice included in this kit.

Model No.	Size
F-3120-041-B85.....	.004"
F-3120-050-B85.....	.005"
F-3120-051-B85.....	.006"
F-3120-071-B85.....	.007"
F-3120-101-B85.....	.010"
F-3120-121-B85.....	.012"
F-3120-161-B85.....	.016"
F-3120-201-B85.....	.020"
F-3120-251-B85.....	.025"
F-3120-301-B85.....	.030"
F-3120-401-B85.....	.040"



DIMENSIONS

() = Metric Dimensions

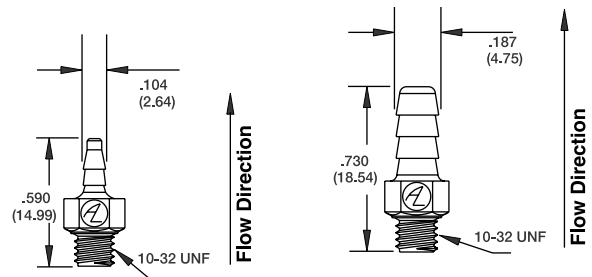
Orifice Assortment Kits



F-3120-100 Orifice Assortment Kit

The F-3120-100 Orifice Assortment Kit offers eleven color coded orifice sizes from .004" to .040". The orifice is inserted into a black 10-32 x 1/16" and a black 10-32 x 1/8" barbed fitting. There are two of each orifice included in this kit.

Model No.	Model No.	Size
F-3120-041-B80	F-3120-041-B85	.004"
F-3120-050-B80	F-3120-050-B85	.005"
F-3120-051-B80	F-3120-051-B85	.006"
F-3120-071-B80	F-3120-071-B85	.007"
F-3120-101-B80	F-3120-101-B85	.010"
F-3120-121-B80	F-3120-121-B85	.012"
F-3120-161-B80	F-3120-161-B85	.016"
F-3120-201-B80	F-3120-201-B85	.020"
F-3120-251-B80	F-3120-251-B85	.025"
F-3120-301-B80	F-3120-301-B85	.030"
F-3120-401-B80	F-3120-401-B85	.040"



DIMENSIONS

() = Metric Dimensions

F-2815-200 Orifice Assortment Kit

The F-2815-200 Orifice Assortment Kit offers eleven color-coded orifice sizes from .004" to .040" with straight ports for 1/16" I.D. flexible tubing and with barbs for 1/16" and 1/8" I.D. flexible tubing. The kit also includes 10-32 UNF barbed orifices; the orifice is inserted into a black 10-32 x 1/16" and a black 10-32 x 1/8" barbed fitting. There are two of each orifice included in this kit.

Model No.	Model No.	Model No.	Model No.	Model No.	Size
F-2815-041	F-2815-041-B80	F-2815-041-B85	F-3120-041-B80	F-3120-041-B85	.004"
F-2815-050	F-2815-050-B80	F-2815-050-B85	F-3120-050-B80	F-3120-050-B85	.005"
F-2815-051	F-2815-051-B80	F-2815-051-B85	F-3120-051-B80	F-3120-051-B85	.006"
F-2815-071	F-2815-071-B80	F-2815-071-B85	F-3120-071-B80	F-3120-071-B85	.007"
F-2815-101	F-2815-101-B80	F-2815-101-B85	F-3120-101-B80	F-3120-101-B85	.010"
F-2815-121	F-2815-121-B80	F-2815-121-B85	F-3120-121-B80	F-3120-121-B85	.012"
F-2815-161	F-2815-161-B80	F-2815-161-B85	F-3120-161-B80	F-3120-161-B85	.016"
F-2815-201	F-2815-201-B80	F-2815-201-B85	F-3120-201-B80	F-3120-201-B85	.020"
F-2815-251	F-2815-251-B80	F-2815-251-B85	F-3120-251-B80	F-3120-251-B85	.025"
F-2815-301	F-2815-301-B80	F-2815-301-B85	F-3120-301-B80	F-3120-301-B85	.030"
F-2815-401	F-2815-401-B80	F-2815-401-B85	F-3120-401-B80	F-3120-401-B85	.040"

Standard Bulkhead Connector Kit

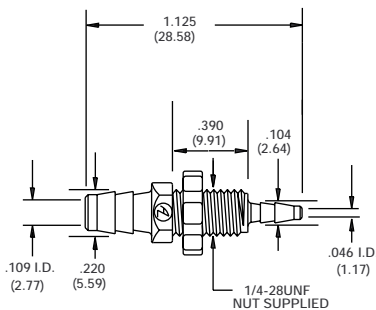


Air Logic offers two models of Standard Bulkhead Connectors, the reducing and the straight bulkhead connector. The connectors join 1/16", 1/8" or .170 I.D. flexible tubing. The bulkhead connectors are panel mounted by tightening a 1/4-28 UNF threaded nut onto the external threads of the bulkhead.

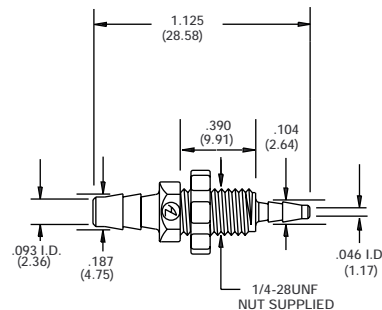
F-3100 Standard Bulkhead Connector Kit

The F-3100 Standard Bulkhead Assortment kit offer three sizes of reducing and straight bulkhead connectors. There are two of each connector included in this kit.

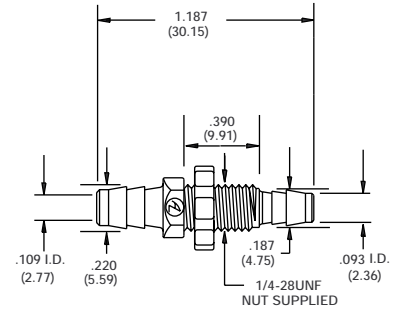
Part No.	Description
F-3100-68	Reducer for .170 to 1/16" I.D. Tubing
F-3100-70	Reducer for 1/8" to 1/16" I.D. Tubing
F-3100-71	Reducer for .170 to 1/8" I.D. Tubing
F-3100-80	Barb for 1/16" I.D. Tubing
F-3100-85	Barb for 1/8" I.D. Tubing
F-3100-86	Barb for .170 I.D. Tubing



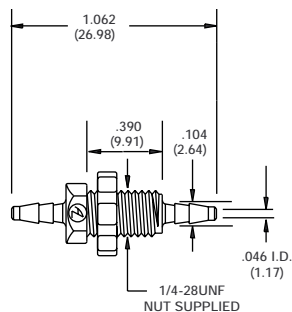
F-3100-68
Reducing Bulkhead Connector



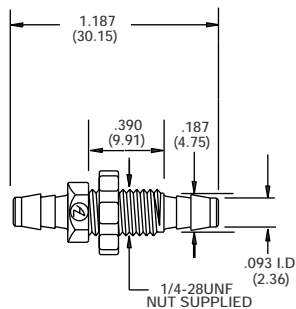
F-3100-70
Reducing Bulkhead Connector



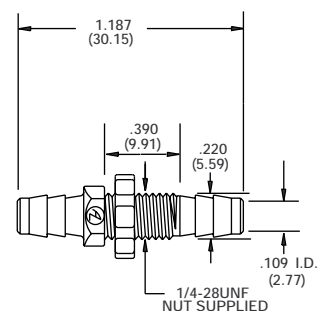
F-3100-71
Reducing Bulkhead Connector



F-3100-80
Straight Bulkhead Connector



F-3100-85
Straight Bulkhead Connector



F-3100-86
Straight Bulkhead Connector

Swivel Fitting Assortment Kits

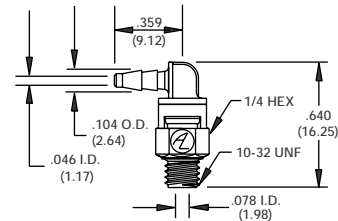


Air Logic offers three models of Swivel Fittings (Pat. #4,946,204), the straight swivel, the swivel elbow and the swivel tee. All models of swivels are available with barbs for 1/16", 3/32", and 1/8" I.D. flexible tubing. The swivels are offered with 10-32 UNF threads, 1/8-27 NPT and 1/4-18 NPT. The unique design of the fitting allows it to swivel 360°. The swivels are precision molded of nylon material and have a Buna-N o-ring for sealing purposes.

F-3150 Swivel Fitting Assortment Kit

The F-3150 Swivel Fitting Assortment Kit offers three models of swivel fittings with 10-32 UNF threads. The swivels have barbs for 1/16", 3/32", and 1/8" I.D. flexible tubing. There are two of each swivel fitting included in this kit.

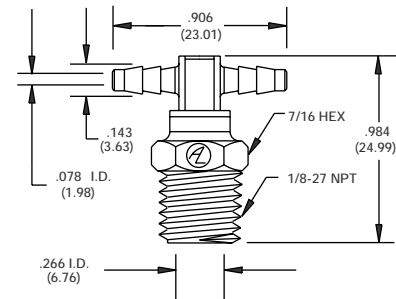
Model No.	Configuration	Barb
F-3150-80	Straight	1/16"
F-3150-83	Straight	3/32"
F-3150-85	Straight	1/8"
F-3154-80	Elbow	1/16"
F-3154-83	Elbow	3/32"
F-3154-85	Elbow	1/8"
F-3155-80	Tee	1/16"
F-3155-83	Tee	3/32"
F-3155-85	Tee	1/8"



F-3250 Swivel Fitting Assortment Kit

The F-3250 Swivel Fitting Assortment Kit offers three models of swivel fitting with 1/8-27 NPT threads. The swivels have barbs for 1/16", 3/32", and 1/8" I.D. flexible tubing. There are two of each swivel fittings included in this kit.

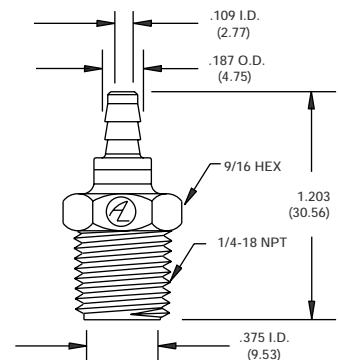
Model No.	Configuration	Barb
F-3250-80	Straight	1/16"
F-3250-83	Straight	3/32"
F-3250-85	Straight	1/8"
F-3254-80	Elbow	1/16"
F-3254-83	Elbow	3/32"
F-3254-85	Elbow	1/8"
F-3255-80	Tee	1/16"
F-3255-83	Tee	3/32"
F-3255-85	Tee	1/8"



F-3350 Swivel Fitting Assortment Kit

The F-3350 Swivel Fitting Assortment Kit offers three models of swivel fittings with 1/4-18 NPT threads. The swivels have barbs for 1/16", 3/32", and 1/8" I.D. flexible tubing. There are two of each swivel fittings included in this kit.

Model No.	Configuration	Barb
F-3350-80	Straight	1/16"
F-3350-83	Straight	3/32"
F-3350-85	Straight	1/8"
F-3354-80	Elbow	1/16"
F-3354-83	Elbow	3/32"
F-3354-85	Elbow	1/8"
F-3355-80	Tee	1/16"
F-3355-83	Tee	3/32"
F-3355-85	Tee	1/8"



Plastic Fitting Assortment Kit



Air Logic offers a complete line of Plastic Fittings which include bulkhead connectors, miniature unions, reducing connectors, 10-32 UNF barbed fittings, tees, elbows, crosses, 10-32 UNF plugs, 10-32 UNF nipples, straight swivels, swivel elbows, and swivel tees (Patent #4,946,204).

F-3140 Plastic Fitting Assortment Kit

The F-3140 Plastic Fitting Assortment Kit offers a variety of plastic fittings. There are 5 of each fitting included in this kit

Model No.	Description	Material
F-3120-20	10-32 UNF Hex Head Plug	Nylon
F-3120-25	10-32 UNF Nipple	Nylon
F-3120-41	1/16" Union	Polysulfone
F-3120-42	1/16" Barbed Union	Polysulfone
F-3120-43	1/8" Barbed Union	Polysulfone
F-3120-68	1/16" Straight x 1/8" Barbed Reducer	Polysulfone
F-3120-70	1/16" x 1/8" Barbed Reducer	Polysulfone
F-3145-65	1/16" Tee	Celcon
F-3120-80	10-32 x 1/16" Barbed Fitting	Nylon
F-3120-85	10-32 x 1/8" Barbed Fitting	Nylon
F-3120-86	10-32 x .170" Barbed Fitting	Nylon

F-3140-100 Plastic Fitting Assortment Kit

The F-3140-100 Plastic Fitting Assortment Kit offers a variety of plastic fittings. There are 2 of each fitting included in this kit

Model No.	Description	Material
F-3120-20	10-32 UNF Hex Head Plug	Nylon
F-3120-20-W	10-32 UNF Hex Head Plug (White)	Nylon
F-3120-20-R	10-32 UNF Hex Head Plug (Red)	Nylon
F-3120-20-B	10-32 UNF Hex Head Plug (Blue)	Nylon
F-3120-25	10-32 UNF Nipple	Nylon
F-3120-25-W	10-32 UNF Nipple (White)	Nylon
F-3120-25-R	10-32 UNF Nipple (Red)	Nylon
F-3120-25-B	10-32 UNF Nipple (Blue)	Nylon
F-3120-80	10-32 x 1/16" Barbed Fitting	Nylon
F-3120-80-W	10-32 x 1/16" Barbed Fitting (White)	Nylon
F-3120-80-R	10-32 x 1/16" Barbed Fitting (Red)	Nylon
F-3120-80-B	10-32 x 1/16" Barbed Fitting (Blue)	Nylon
F-3120-85	10-32 x 1/8" Barbed Fitting	Nylon
F-3120-85-W	10-32 x 1/8" Barbed Fitting (White)	Nylon
F-3120-85-R	10-32 x 1/8" Barbed Fitting (Red)	Nylon
F-3120-85-B	10-32 x 1/8" Barbed Fitting (Blue)	Nylon
F-3140-80	1/16" Barbed Union	Nylon
F-3140-80-W	1/16" Barbed Union (White)	Nylon
F-3140-85	1/8" Barbed Union	Nylon
F-3140-85-W	1/8" Barbed Union (White)	Nylon
F-3144-80	1/16" Barbed Elbow	Nylon
F-3144-80-W	1/16" Barbed Elbow (White)	Nylon
F-3144-85	1/8" Barbed Elbow	Nylon
F-3144-85-W	1/8" Barbed Elbow (White)	Nylon
F-3145-65	1/16" Tee	Celcon
F-3145-80	1/16" Barbed Tee	Nylon
F-3145-80-W	1/16" Barbed Tee (White)	Nylon
F-3145-85	1/8" Barbed Tee	Nylon
F-3145-85-W	1/8" Barbed Tee (White)	Nylon

Plastic Fitting Master Kit



The F-3140-200 Master Kit contains samples of the complete line of fittings. There are two of each of the following fittings in this kit.

F-3140-200 Plastic Fitting Assortment Kit

Model No.	Description	Material
F-3120-80	10-32 x 1/16" Barbed Fitting	Nylon
F-3120-80-W	10-32 x 1/16" Barbed Fitting (White)	Nylon
F-3120-80-R	10-32 x 1/16" Barbed Fitting (Red)	Nylon
F-3120-80-B	10-32 x 1/16" Barbed Fitting (Blue)	Nylon
F-3120-85	10-32 x 1/8" Barbed Fitting	Nylon
F-3120-85-W	10-32 x 1/8" Barbed Fitting (White)	Nylon
F-3120-85-R	10-32 x 1/8" Barbed Fitting (Red)	Nylon
F-3120-85-B	10-32 x 1/8" Barbed Fitting (Blue)	Nylon
F-3120-86	10-32 x .170" Barbed Fitting	Nylon
F-3120-86-W	10-32 x .170" Barbed Fitting (White)	Nylon
F-3120-86-R	10-32 x .170" Barbed Fitting (Red)	Nylon
F-3120-86-B	10-32 x .170" Barbed Fitting (Blue)	Nylon
F-3140-80	1/16" Barbed Union	Nylon
F-3140-80-W	1/16" Barbed Union (White)	Nylon
F-3140-85	1/8" Barbed Union	Nylon
F-3140-85-W	1/8" Barbed Union (White)	Nylon
F-3144-80	1/16" barbed Elbow	Nylon
F-3144-80-W	1/16" Barbed Elbow (White)	Nylon
F-3144-85	1/8" Barbed Elbow	Nylon
F-3144-85-W	1/8" Barbed Elbow (White)	Nylon
F-3145-80	1/16" Barbed Tee	Nylon
F-3145-80-W	1/16" Barbed Tee (White)	Nylon
F-3145-85	1/8" Barbed Tee	Nylon
F-3145-85-W	1/8" Barbed Tee (White)	Nylon
F-3146-80	1/16" Barbed Cross	Nylon
F-3146-80-W	1/16" Barbed Cross (White)	Nylon
F-3146-85	1/8" Barbed Cross	Nylon
F-3146-85-W	1/8" Barbed Cross (White)	Nylon
F-3154-80	10-32 x 1/16" Swivel Elbow	Nylon
F-3154-83	10-32 x 3/32" Swivel Elbow	Nylon
F-3154-85	10-32 x 1/8" Swivel Elbow	Nylon
F-3155-80	10-32 x 1/16" Swivel Tee	Nylon
F-3155-83	10-32 x 3/32" Swivel Tee	Nylon
F-3155-85	10-32 x 1/8" Swivel Tee	Nylon
F-3254-80	1/8"-27 NPT x 1/16" Swivel Elbow	Nylon
F-3254-83	1/8"-27 NPT x 3/32" Swivel Elbow	Nylon
F-3254-85	1/8"-27 NPT x 1/8" Swivel Elbow	Nylon
F-3255-80	1/8"-27 NPT x 1/16" Swivel Tee	Nylon
F-3255-83	1/8"-27 NPT x 3/32" Swivel Tee	Nylon
F-3255-85	1/8"-27 NPT x 1/8" Swivel Tee	Nylon

There is one of each of the following fittings in this sample kit.

Model No.	Description	Material
F-3100-68	.170" x 1/16" Bulkhead Connector	Nylon
F-3100-70	1/8" x 1/16" Bulkhead Connector	Nylon
F-3100-71	.170" x 1/8" Bulkhead Connector	Nylon
F-3100-80	1/16" x 1/16" Bulkhead Connector	Nylon
F-3100-85	1/8" x 1/8" Bulkhead Connector	Nylon
F-3100-86	.170" x .170" Bulkhead Connector	Nylon
F-3150-80	10-32 x 1/16" Straight Swivel	Nylon
F-3150-83	10-32 x 3/32" Straight Swivel	Nylon
F-3150-85	10-32 x 1/8" Straight Swivel	Nylon
F-3250-80	1/8"-27 NPT x 1/16" Straight Swivel	Nylon
F-3250-83	1/8"-27 NPT x 3/32" Straight Swivel	Nylon
F-3250-85	1/8"-27 NPT x 1/8" Straight Swivel	Nylon
F-3350-80	1/4"-18 NPT x 1/16" Straight Swivel	Nylon
F-3350-83	1/4"-18 NPT x 3/32" Straight Swivel	Nylon
F-3350-85	1/4"-18 NPT x 1/8" Straight Swivel	Nylon
F-3354-80	1/4"-18 NPT x 1/16" Swivel Elbow	Nylon
F-3354-83	1/4"-18 NPT x 3/32" Swivel Elbow	Nylon
F-3354-85	1/4"-18 NPT x 1/8" Swivel Elbow	Nylon
F-3355-80	1/4"-18 NPT x 1/16" Swivel Tee	Nylon
F-3355-83	1/4"-18 NPT x 3/32" Swivel Tee	Nylon
F-3355-85	1/4"-18 NPT x 1/8" Swivel Tee	Nylon

*Air
Logic*[®]

Pneumatic Components and Systems



Interface Devices

F-4419-120 Spring Sensor



The F-4419-120 Spring Sensor is a limit sensor designed for simple and reliable operation and easy mounting. Functioning like a whisker valve, it is composed of a nylon deflection rod and a tightly wound coil spring. When the nylon rod is deflected 6° or more, the coils of the spring separate and allow free air flow. In application, the deflection of the nylon rod should not be allowed to exceed 45°. Greater than 45° deflection of the rod may cause permanent damage to the coil spring. The air connection should be made with 1/16" I.D. tubing, and a dropping Restrictor or Sensor Venturi must be installed upstream of the Spring Sensor. The nylon rod may be trimmed as required. In the normal undeflected position, the sensor offers a high resistance to air flow. Thus, the Spring Sensor can be used for various functions such as sensing the end of a cylinder stroke or sensing the presence of a part or machine element.

FEATURES

- Reliable Operation
- Easy Mounting
- Fast Response

SPECIFICATIONS

Supply Pressure: 0 to 30 PSI
 Deflection Angle: 6° minimum and 45° maximum
 Deflection Force: Approximately 1 ounce at end of rod
 Minimum Undeflected Output Signal: 40% of supply pressure
 when using 0.010" diameter dropping restrictor
 Temperature Limits: 0° to 150°F. (-17° to 65°C.)

MATERIALS

Body: Brass
 Spring: Stainless Steel
 Rod: Nylon
 10-32 Fitting: Nylon

MOUNTING

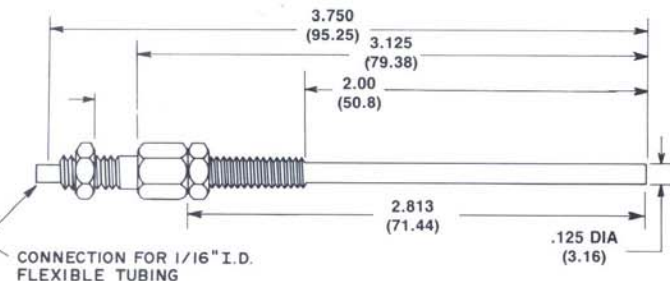
Panel Mount - 10-32 UNF hole

PORT CONNECTIONS

Straight ports for 1/16" I.D. flexible tubing

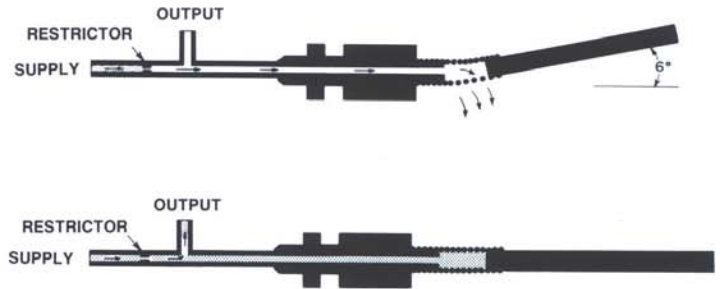
ORDERING INFORMATION

Model Number: F-4419-120

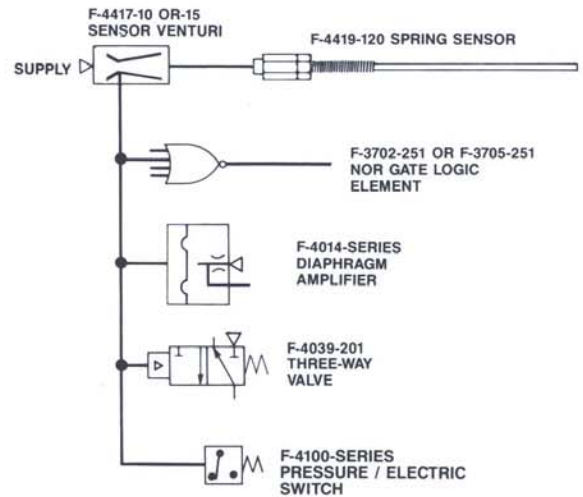


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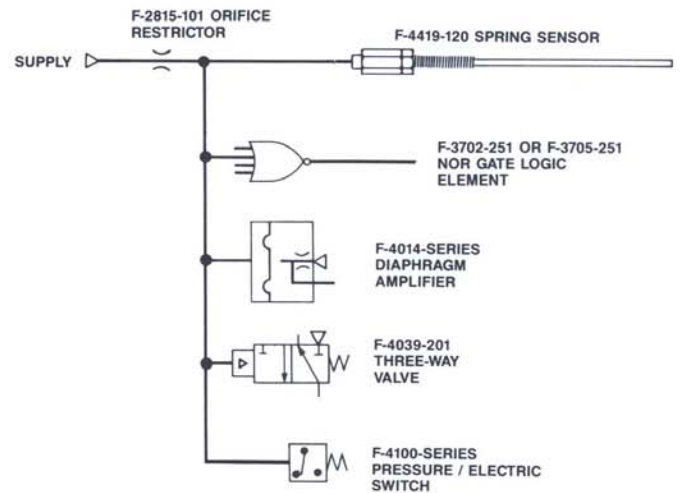
Please Read Warranty on Page 8.



F-4419-120 Spring Sensor Flow Patterns Deflected (Top) and Undeflected (Bottom)



Typical Application Using Sensor Venturi with F-4419-120 Spring Sensor



Typical F-4419-120 Application Using Upstream Orifice Restrictor

Check Chemical Compatibility of Polysulfone.

V-4417 Series Vacuum Generator



The V-4417 Series Vacuum Generator is designed to produce a low-flow vacuum using the venturi principle. The vacuum generator converts compressed air to a vacuum consuming 4.9 SCFH with a 13 PSI supply.

When air is allowed to flow through the generator, the high velocity of the air passing through the center port draws a vacuum through the side ports. Two red vinyl caps are provided to cap the unused output port.

FEATURES

- Miniature Size
- Low Cost

SPECIFICATIONS

Vacuum Range: 0" Hg to 15" Hg at 13 PSI supply
 Vacuum Flow: 1 SCFH
 Maximum Supply: 20 PSI
 Operating Temperature: 0° to 180°F. (-18° to 82°C.)
 Recommended Filtration: 5 Micron
 Air Consumption: 4.9 SCFH

MATERIALS

Housing: Polysulfone

MOUNTING

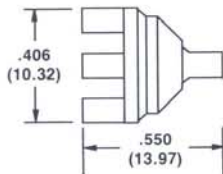
Inline

PORT CONNECTIONS

Straight ports for 1/16" I.D. flexible tubing

ORDERING INFORMATION

Model Number: V-4417-10
 Vacuum Range: 0-15" Hg



FLOW PATTERN

() = Metric Dimensions

Please Read Warranty on Page 8.

F-4417 Series Sensor Venturi



The F-4417 Series Sensor Venturis are fluidic devices that convert flow changes through bleed type fluidic sensors to fully on and fully off pressure signals. The F-4417-10 and -15 Sensor Venturis are single units designed for two different supply pressure ranges. The F-4417-40 Sensor Venturi is a conveniently mounted composite of four Sensor Venturis with a single supply connection that can be panel mounted. The output state of each venturi shows on black and white indicator.

The Sensor Venturi allows a high velocity of air to pass through the center port drawing a vacuum through the two side output ports producing a definite off signal. For entirely free flow, the output level will be a vacuum typically equal to 20% of the supply pressure. When sensor flow is obstructed completely, full supply pressure is diverted to the two side output ports. Two output ports are provided on each unit; cap the unused connection with a vinyl cap when required.

Sensor Venturi Flow Patterns



FEATURES

- Definite OFF signal
- No Moving Parts
- Small Size
- Low Cost

SPECIFICATIONS

Recommended Filtration: 5 Micron

MATERIALS

Body: Polysulfone
 Indicators: Celcon
 Spring: Stainless Steel

MOUNTING

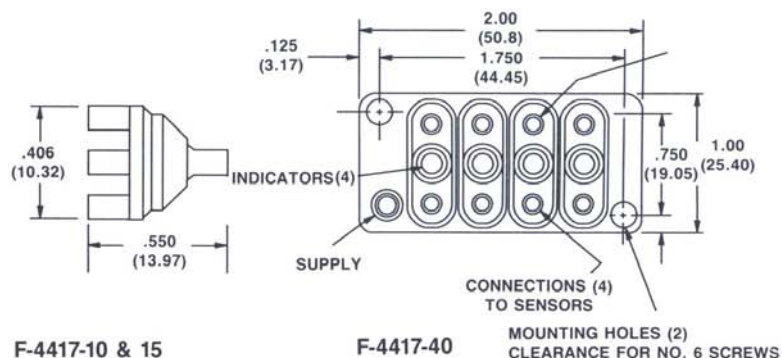
Inline or panel mounted

PORT CONNECTIONS

Straight ports for 1/16" I.D. flexible tubing

ORDERING INFORMATION (Order by model number.)

Model Number	F-4417-10	F-4417-15	F-4417-40
Supply Pressure	2 - 20 PSI	0 - 3 PSI	0.5 - 10 PSI
Supply Flow	Equivalent to 0.016" Dia. Orifice		Equivalent to 0.032" Dia. Orifice
Operating Temperature	0° to 180°F. (-18° to 82°C.)		40° to 120°F. (4.4° to 49°C.)



F-4417-10 & 15

F-4417-40

MOUNTING HOLES (2)
 CLEARANCE FOR NO. 6 SCREWS

Check Chemical Compatibility of Polysulfone.

Subminiature Pressure Gauges



The Subminiature Pressure Gauges are used for the measurement of pressure, 0-160 PSI. Four pressure ranges are available: 30 PSI, 60 PSI, 100 PSI and 160 PSI.

The inside case of the gauge is constructed of a polished brass. The one piece lens cover is molded out of polycarbonate. The gauge has a brass geared movement with a "C" shape copper-alloy bourdon tube. The center back connection is 1/8-27 NPT brass male threads. The accuracy of the gauge is 2% in the mid-third of the pressure range.

FEATURES

- Miniature Size
- 2% Accuracy
- Low Cost

SPECIFICATIONS

Pressure Ranges: 30 PSI, 60 PSI, 100 PSI, 160 PSI
 Maximum Supply: 50% over the pressure of the operating range
 Operating Temperature: 0 to 160°F. (-17.8° to 71°C.)
 Recommended Filtration: 5 micron
 Accuracy: 2% mid-third of scale

MATERIALS

Housing: Brass polished finished inside case
 Cover: One piece polycarbonate lens cover
 Back Connection: Brass
 Geared Movement: Brass
 Bourdon Tube: "C" shape copper-alloy

BACK CONNECTION

1/8-27 NPT center back, male threads

DIMENSIONS

7/8" dial diameter
 1" case diameter
 1 1/4" front to back depth

ORDERING INFORMATION (Order by model number.)

Model Number	Range	Dial Size	Port Connection
G-030	0-30 PSI	7/8" Dial Diameter	1/8-27 NPT Center Back
G-060	0-60 PSI		
G-100	0-100 PSI		
G-160	0-160 PSI		

Please Read Warranty on Page 8.

Pressure Gauges



The Air Logic Pressure Gauges are steel case gauges for measurement of pressure 0-100 PSI. Panel mount design, U-clamp center back connection.

ORDERING INFORMATION (Order by model number.)

Model Number	Range	Dial Size	Port Connection
G-242	0-30 PSI	1 1/2" Stem Mounted	1/8" NPT
G-240	0-15 PSI	2" PANEL MOUNTED	1/8" NPT
G-442	0-30 PSI		
G-444	0-60 PSI		
G-448	0-100 PSI		
G-040 (Double Scale)	0-85" w.g. 0-3 PSI	2 1/2" PANEL MOUNTED	1/4" NPT
G-141	0-5 PSI	2 1/2" PANEL MOUNTED	1/8" NPT
G-142	0-10 PSI		1/4" NPT
G-042	0-30 PSI		1/8" NPT

Vacuum Gauges



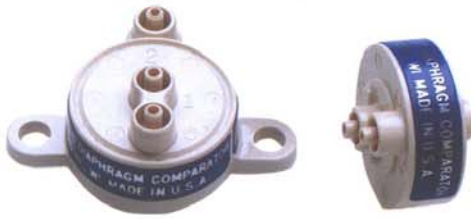
The V-300 Series Vacuum Gauges are steel case gauges for measurement of vacuum 0 to 30" of mercury. Constructed of phosphor bronze bourdon tube, with brass socket. 2% accuracy. Panel-mount design, U-clamp center back connection.

ORDERING INFORMATION (Order by model number.)

Model Number	Range	Dial Size	Port Connection
V-305	0-30" Hg	1 1/2"	1/8" NPT
V-310		2"	1/4" NPT
V-315		2"	1/8" NPT
V-320		2 1/2"	1/4" NPT

Check Chemical Compatibility of Polysulfone.

F-4103 Series Diaphragm Comparator



The F-4103-20 & 25 Diaphragm Comparator is a versatile control circuit component for both fluidic and pneumatic signal levels. It performs many functions including those of an analog pressure comparator, an analog pressure repeater and a digital signal isolator.

Referring to Fig. 1, port 1 is a center leakport with a 0.020 inch diameter. The two other ports provide a means of applying pressure to either side of a rubber diaphragm. Port 2, on the left side of the diaphragm, is a dead-ended input. Port 0 is an input for applying pressure to the right side of the diaphragm. The two most common F-4103-20 & 25 circuit configurations are the comparator and the repeater.

Comparator Function

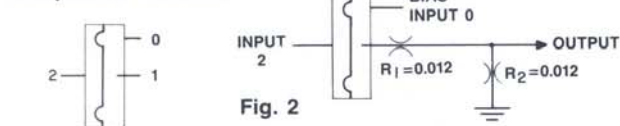


Fig. 1

Note: Bleed through R_2 required for dead ended output load.

Comparator Function

When connected as shown in Fig. 2, the F-4103-20 & 25 compares two analog pressure signals. In this configuration, the diaphragm shifts when the pressure on one side becomes greater than the pressure on the other. An output signal from port 1 indicates that input 0 is greater than input 2. No output indicates that input 2 is greater than input 0. The F-4103-20 in this configuration can be used to compare an analog signal to a reference pressure as required in a Schmitt Trigger circuit.

Repeater Function

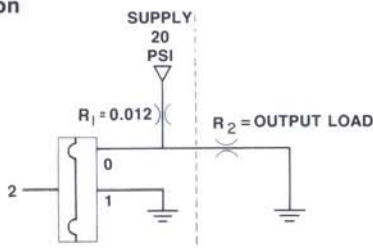


Fig. 3

Repeater Function

When connected as shown in Fig. 3, the F-4103-20 & 25 produces an output pressure which is equal to its input pressure. The pressure on the right side of the diaphragm is held equal to the pressure on the left side of the diaphragm over a wide range of output flow changes. The diaphragm isolates the input from the output so that flow changes on the output side have no effect on the input pressure. As the output flow decreases, the diaphragm shifts away from the center leakport and allows more air to bleed to atmosphere. As the output flow increases, the diaphragm moves toward the center leakport and allows less air to bleed to atmosphere. In this manner, the output pressure is held equal to the input over a wide range of output flow changes.

Applying the F-4103-20 & 25 in a repeater configuration prevents contamination from entering an analog or digital fluidic circuit.

Please Read Warranty on Page 8.

FEATURES

- Fast Response
- Snap-Action
- Miniature Size

SPECIFICATIONS

Operating Pressure: 0.5 to 25 PSI Maximum
Bleed Port: 0.020 Inch
Temperature Limits: 40° to 120°F. (4.4° to 49°C.)
Recommended Filtration: 5 Micron

MATERIALS

Housing: Polysulfone
Diaphragm: Silicone

MOUNTING

F-4103-20: Inline
F-4103-25: Panel Mounted

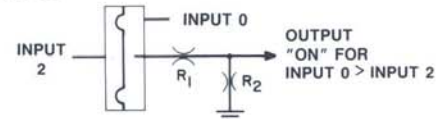
PORT CONNECTIONS

Straight ports for 1/16" I.D. flexible tubing

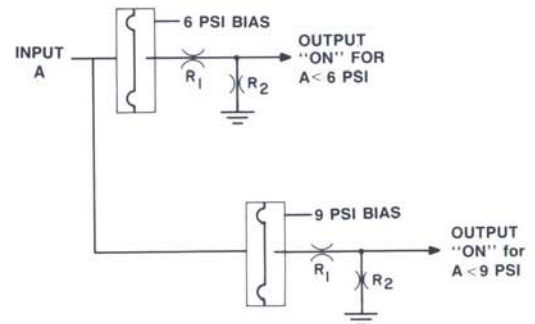
ORDERING INFORMATION (Order by model number.)

Model Numbers: F-4103-20 - Inline
F-4103-25 - Panel Mount

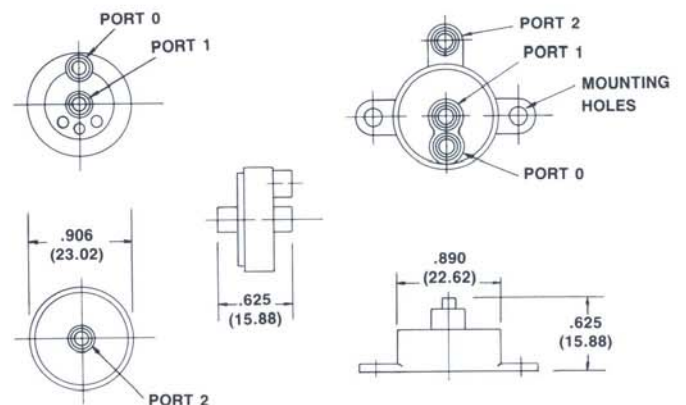
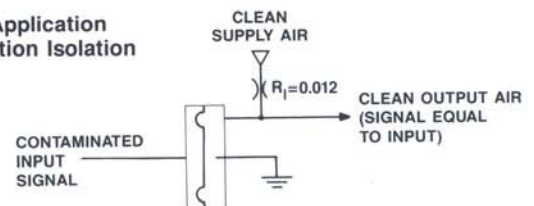
Comparator Application Comparing Two Variables



Comparator Application Comparing a Variable to Two Constants



Repeater Application Contamination Isolation



() = Metric Dimensions

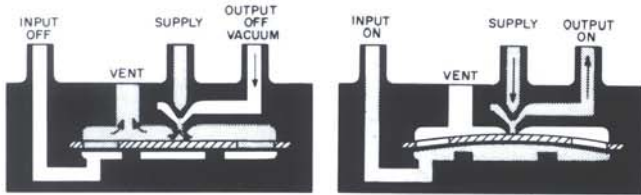
Check Chemical Compatibility of Polysulfone.

F-4014 Series Diaphragm Amplifier



The F-4014-Series Diaphragm Amplifiers are miniature interface devices which perform the same function as a piloted three-way valve, but at low outlet flow rates. Pneumatic signals of several inches water gauge applied to the input will control the output pressure up to 35 PSI in both digital and analog systems.

Diaphragm Amplifiers are very suitable for providing pneumatic signals to air-piloted valves and for powering small cylinders. They are also used at fluidic signal levels for providing isolation and in timing circuits.



Operation

Typical Operation of the Diaphragm Amplifier

With the input signal below the actuating level, a flat spring holds the pilot diaphragm away from the opening between the output chamber and the vented chamber. A jet of supply air passes through the output chamber into the vented chamber, drawing air with it from the output chamber and causing the output pressure to be slightly negative.

With the input signal above the actuating level, the diaphragm seals the opening between the output chamber and the vented chamber. The total supply flow passes to the output port. A dead-ended load will receive the full supply pressure level with no further supply air consumption.

Inserting a restrictor into the vent port shifts the turn-on pressure to a higher value and introduces hysteresis into the characteristic. It also causes the turn-on to be snap-acting. The vent port is sized to accommodate F-2815-Series Orifice Restrictors with a press fit.

Air Logic F-4014-Series Diaphragm Amplifiers are available in five models, with either 0.012" or 0.016" diameter supply orifice and with either 3" or 8" water gauge actuating pressure. The larger supply orifice consumes more flow in the unactuated state and delivers more flow in the actuated state. (See Typical Supply Characteristics.)

For the F-4014-163 and -168 units, output flow passes through an orifice of 0.016" diameter, and exhaust flow passes through the equivalent of a 0.020" diameter orifice. For the F-4014-123 and -128 units, output flow passes through a 0.012" orifice and exhaust flow passes through the equivalent of a 0.016" orifice. Maximum output flows are shown in the Typical Supply Characteristics.

Please Read Warranty on Page 8.

FEATURES

- Fast Response
- Snap-Action
- Miniature Size

SPECIFICATIONS

Supply Flow: SEE TYPICAL SUPPLY CHARACTERISTICS
 Maximum Input Pressure: 5 PSI
 Input Leakage @ 1 PSI: Less than 0.003 SCFM
 Temperature Limits: 40° to 120°F. (4° to 49°C.)
 Recommended Filtration: 10 Micron

MATERIALS

Body: Polysulfone
 Diaphragm: Polyurethane
 Spring: Beryllium Copper

MOUNTING

Panel Mount: Two No. 6 Screws

PORT CONNECTIONS

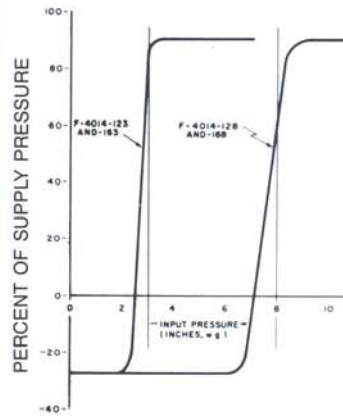
Straight port connections for 1/16" I.D. flexible tubing

ORDERING INFORMATION (Order by model number.)

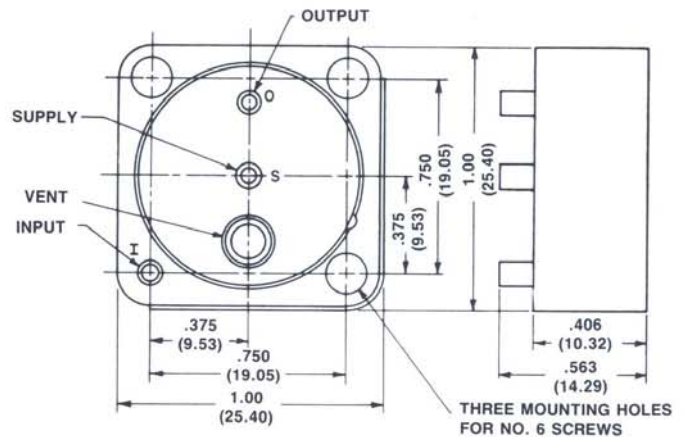
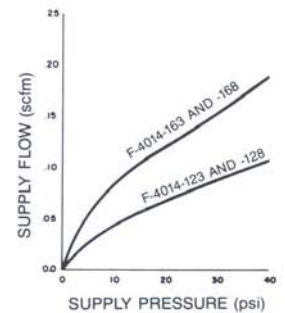
Model Number	Actuating Pressure*	Supply Orifice	Supply Pressure
F-4014-123	3" ± 2" H ₂ O	0.012"	0-35 PSI
F-4014-128	8" ± 3" H ₂ O		
F-4014-161	1" ± 1" H ₂ O	0.016"	0-25 PSI
F-4014-163	3" ± 2" H ₂ O		
F-4014-168	8" ± 3" H ₂ O		

*Input pressure for which the output pressure is one-half the supply pressure, i.e., mid span.

Input-Output Characteristics



Supply Characteristics



() = Metric Dimensions

Check Chemical Compatibility of Polysulfone.

F-2913-80 Test Point Indicator



Introduction to Air Logic

The Air Logic Division of Fred Knapp Engraving Company designs and manufactures a comprehensive line of pneumatic and vacuum control equipment - including Input Elements, Output Interface Devices and Sensing Elements. The various devices include both fluidic and moving diaphragm control components, each to be used where its own advantages are needed.

The Input and Output devices include Pressure and Vacuum Gauges, Test Point Indicators, Diaphragm Amplifiers and Diaphragm Comparators.

The Pressure and Vacuum Gauges are used for the measurement of pressure 0-160 PSI or vacuum 0-30" Hg. The Sub-miniature Pressure Gauges are available in four ranges: 30 PSI, 60 PSI, 100 PSI, and 160 PSI. The gauges feature a 7/8" dial and 2% accuracy.

The Standard Pressure Gauges are available in various ranges: 3 PSI, 5 PSI, 10 PSI, 15 PSI, 30 PSI, 60 PSI, and 100 PSI.

The Standard Vacuum Gauges are available in one range, 30"Hg.

The Test Point Indicator is a simple low pressure on-off indicator which actuates at 4" H₂O. The Diaphragm Amplifier provides the same function as a low pressure 3-way piloted valve. A low pressure pneumatic signal applied to the input controls the output up to 35 PSI. The Diaphragm Comparators are universal pneumatic components that enable you to compare, ramp, add or subtract pressure signals.

The Sensing Elements include Sensor Venturi and a Spring Sensor. The Sensor Venturi senses and converts a back pressure signal to a fully "on" or "off" pressure signal.

The Venturi can also be used as a Vacuum Generator. The Vacuum Generator produces a vacuum output of 15" mercury.

The Spring Sensor is a limit contact sensor that senses the presence of an object when contacted.

Air Logic manufactures a comprehensive and sophisticated line of pneumatic and vacuum components. Air Logic has a strong reputation for immediate service, quality and dependability. For special applications and requirements, call Air Logic.

Air Logic and *AL* are trademarks of Air Logic registered in the United States Patent and Trademark Office.

The Test Point Indicator is a small, simple on-off indicator. The Test Point Indicator has a spring loaded plunger which returns to normal regardless of the mounting position. Pressure as low as 4 inches water gauge will shift the plunger out. The Indicator may be permanently installed in fluidic systems for observing logic sequencing in routine operating.

FEATURES

- Miniature Size
- Minimum Sensing Pressure

SPECIFICATIONS

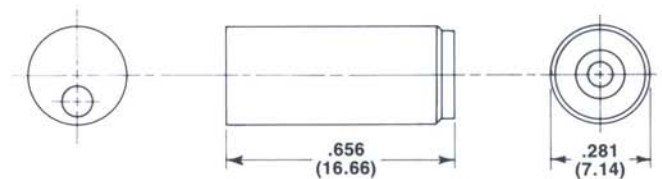
Actuating Pressure: 4" H₂O (0.14 PSI)
 Maximum Pressure: 3 PSI
 Leakage Flow: 0.006 SCFM Maximum @ 4"
 Speed of Response: 25 Hz
 Temperature Limits: 40° to 150°F. (4° to 65°C.)

MATERIALS

Housing: Polysulfone
 Plunger: Celcon
 Spring: Stainless Steel

ORDERING INFORMATION

Model Number: F-2913-80



() = Metric Dimensions

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PRODUCT WARRANTY

WARRANTY: All references hereunder to "products" includes all pneumatic and vacuum control equipment, systems and other items which are manufactured and/or distributed by Seller. Seller warrants products manufactured and/or distributed by it to be free from defects in materials and workmanship arising from normal usage of the products, provided such defects appear or are discovered within 1 year after the purchase date of the products and, provided further, that Buyer notifies Seller of such defects in writing within 30 days after the appearance or discovery thereof. All transportation charges incurred in connection with this warranty shall be borne by Buyer. If within such period, any such products shall be proven to Seller's satisfaction to be defective, such products shall be replaced or their price refunded, at Seller's option. Seller's obligations for non-performance, defective products, or any damage caused by its products or their use, and Buyer's exclusive remedy therefor, shall be limited to such replacement or refund and shall be conditioned upon Seller's receiving written notice, together with a demand for such replacement or refund, within the time period specified herein. This exclusive remedy shall not be deemed to have failed its essential purpose under any circumstances so long as Seller is willing and able to replace defective products or refund the purchase price within the time specified. **SELLER'S PRICES ARE BASED ON THIS POLICY LIMITING ITS LIABILITY. IF BUYER DESIRES FOR SELLER TO PROVIDE A WARRANTY GREATER THAN THAT WHICH IS STATED ABOVE, THEN SELLER WILL ADJUST UPWARDS THE PRICE FOR THE PRODUCTS DESCRIBED HEREIN OR ON THE FACE SIDE HEREOF TO REFLECT THE ADDITIONAL EXPENSE TO SELLER WHICH SUCH A WARRANTY OBLIGATION WOULD CAUSE.**

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No waiver, alteration or modification of the foregoing shall be valid, unless made in writing and signed by an executive officer of Seller. Seller reserves the right to alter product designs and materials, when conditions warrant, without notice.

WARNING: Do not use these products when pressures or temperatures can exceed their rated operating conditions. See the applicable product specifications.

When using products made from polysulfone, please check material compatibility. Certain chemicals or contaminants can attack polysulfone and cause the product to fail.

Seller's products are not sold for applications in any medical equipment intended for use as a component of any life support system unless a specified written agreement pertaining to such intended use is executed between Seller and Buyer. Such agreement will require the equipment manufacturer either to contract for additional reliability testing of Seller's products and/or a commitment to undertake such testing as a part of its manufacturing process. In addition, Buyer must agree to indemnify and hold harmless Seller from any claims arising out of the use of Seller's products in life support equipment.

DISTRIBUTOR:

The logo for Air Logic, featuring the word "Air" in a blue, italicized, sans-serif font above the word "Logic" in a larger, blue, italicized, sans-serif font. A registered trademark symbol (®) is located to the right of the word "Logic".

Div. of Fred Knapp Engraving Co., Inc.

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<http://www.air-logic.com> • e-mail: airlogic@air-logic.com

The logo for Air Logic is embossed on a curved, metallic blade. The blade is positioned diagonally across the top half of the image, with the tip pointing towards the upper right. The background is a deep blue with a pattern of overlapping, light-colored circles. The text "Air Logic" is written in a stylized, italicized font, with "Air" on the top line and "Logic" on the bottom line.

*Air
Logic.*

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