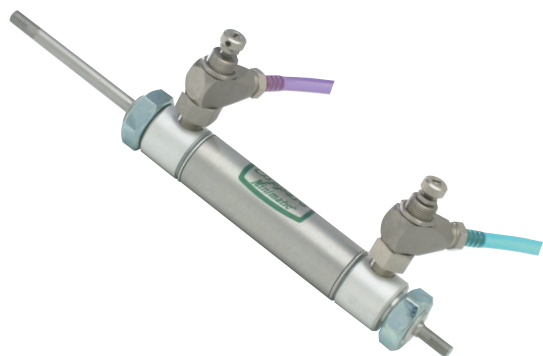




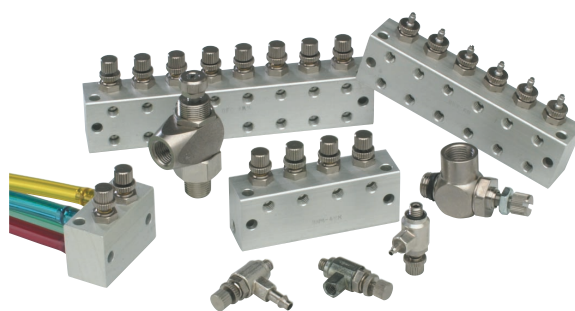
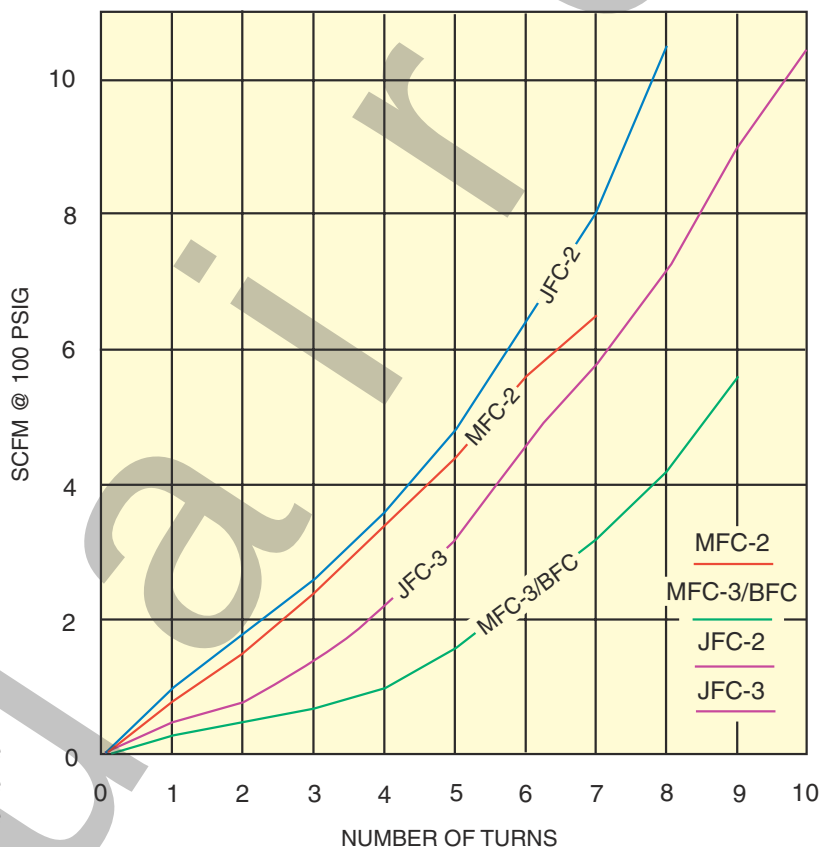
FLOW CONTROL VALVES

Flow Controls Flow vs. Needle Turns



Clippard offers (5) models of adjustable flow controls with 10-32 through 1/8 NPT ports. They feature a combination needle and check valve which controls flow in one direction and allows free flow in the opposite direction.

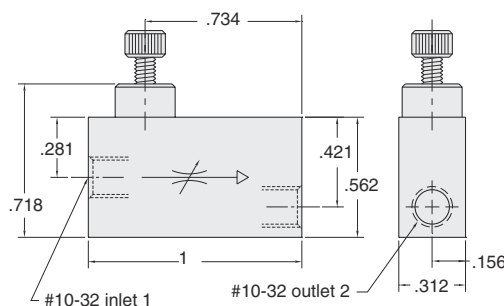
They are an ideal valve for use with a cylinder, providing a slow extend stroke while allowing a fast retract stroke. The chart on this page illustrates the flow versus the number of needle adjustments turns for the MFC-2, MFC-3, BFC-3, JFC-2, and JFC-3.



MFC-2



Adjustable flow control valve; brass body and stainless steel needle; Buna-N seals



Medium: air, water, or oil

Input Pressure: 300 psig max.

Air Flow: @50 psig - 4 SCFM max.
@100 psig - 7 SCFM max.

Pressure To Open: Cracks at approx. 2 psig

Mounting: direct or inline

Ports: Inlet - 10-32, Outlet - 10-32

Temperature Range: 32° to 230° F

Flow Direction: Arrow in valve body shows direction of controlled flow

Adjustment: knurled knob on needle shaft

10-32 FLOW CONTROL VALVES



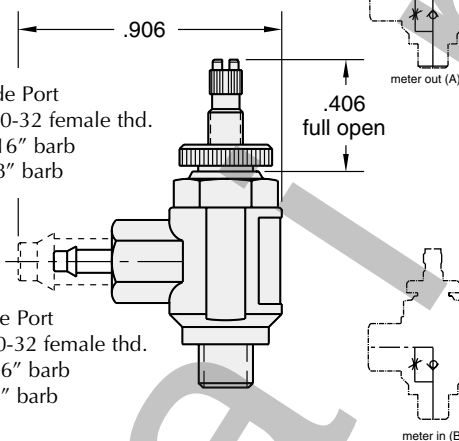
MFC-3A

Meter Out

**Meter out adjustable flow control valve.**Electroless Nickel plate brass body;
stainless steel needle; Buna-N seals.

Part #
MFC-3A
MFC-3A1
MFC-3A2

Side Port
#10-32 female thd.
1/16" barb
1/8" barb

**Medium:** air, water, or oil**Input Pressure:** 150 psig max.**Air Flow:** @100 psig - 5 SCFM adjustable**Mounting:** Directly into 10-32 port**Ports:** Rotating input port allows 360° positioning 10-32 NPT**Temperature Range:** 32° to 230° F**Flow Direction:** Arrow on valve body shows direction of controlled flow**Adjustment:** Screwdriver Slot

MFC-3B

Meter In



Part #
MFC-3B
MFC-3B1
MFC-3B2

Side Port
#10-32 female thd.
1/16" barb
1/8" barb

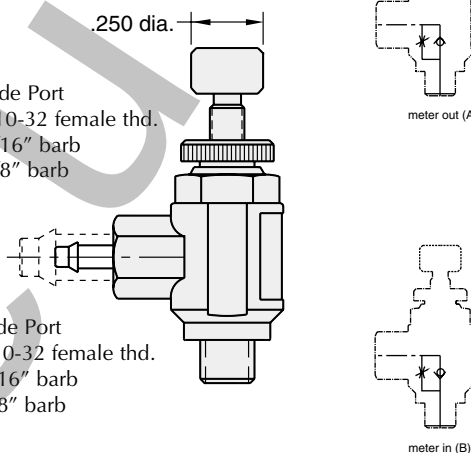
MFC-3AK

Meter Out

**Meter out adjustable flow control valve.**Electroless Nickel plate brass body;
stainless steel needle; Buna-N seals.

Part #
MFC-3AK
MFC-3AK1
MFC-3AK2

Side Port
#10-32 female thd.
1/16" barb
1/8" barb

**Medium:** air, water, or oil**Input Pressure:** 150 psig max.**Air Flow:** @100 psig - 5 SCFM adjustable**Mounting:** Directly into 10-32 port**Ports:** Rotating input port allows 360° positioning 10-32 NPT port**Temperature Range:** 32° to 230° F**Flow Direction:** Arrow on valve body shows direction of controlled flow**Adjustment:** Slotted knurled knob with lock nut on #10-80 threaded needle shaft for fine adjustment

MFC-3BK

Meter In



Part #
MFC-3BK
MFC-3BK1
MFC-3BK2

Side Port
#10-32 female thd.
1/16" barb
1/8" barb

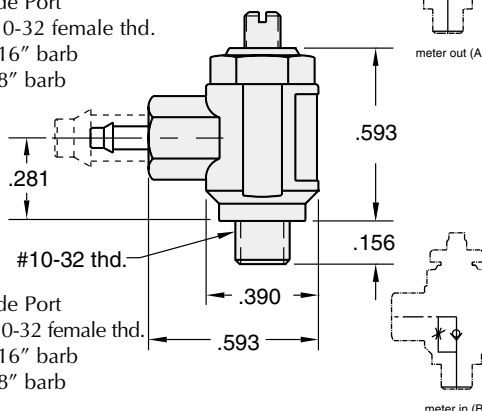
MFC-3AR

Meter Out

**Meter out adjustable flow control valve.**Electroless Nickel plate brass body;
stainless steel needle; Buna-N seals.

Part #
MFC-3AR
MFC-3AR1
MFC-3AR2

Side Port
#10-32 female thd.
1/16" barb
1/8" barb

**Medium:** air, water, or oil**Input Pressure:** 150 psig max.**Air Flow:** @100 psig - 5 SCFM adjustable**Mounting:** Directly into 10-32 NPT port**Ports:** Rotating input port allows 360° positioning 10-32 NPT port**Temperature Range:** 32° to 230° F**Flow Direction:** Arrow on valve body shows direction of controlled flow**Adjustment:** Recessed slotted needle

MFC-3BR

Meter In



Part #
MFC-3BR
MFC-3BR1
MFC-3BR2

Side Port
#10-32 female thd.
1/16" barb
1/8" barb



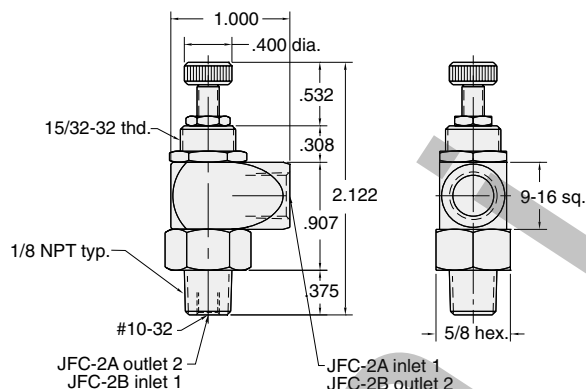
1/8 NPT FLOW CONTROL VALVES

JFC-2A



Meter out adjustable flow control valve.

Electroless Nickel plate brass body;
stainless steel needle; Buna-N seals.



Medium: air, water, or oil

Input Pressure: 150 psig max.

Air Flow: @100 psig - 10.5 SCFM adjustable

Mounting: Directly into cylinder.
Panel or inline

Ports: Rotating input port allows 360°
positioning 1/8 NPT

Temperature Range: 32° to 230° F

Flow Direction: Arrow on valve body
shows direction of controlled flow

Adjustment: Knurled knob with lock nut
on needle shaft

JFC-2B

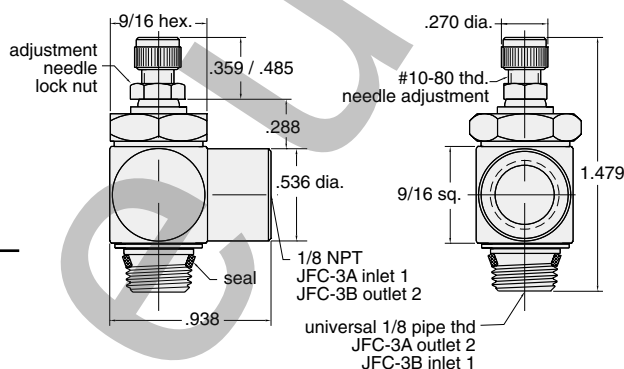


JFC-3A



Meter out adjustable flow control valve.

Electroless Nickel plate brass body;
stainless steel needle; Buna-N seals.



Medium: air, water, or oil

Input Pressure: 150 psig max.

Air Flow: @100 psig - 10.5 SCFM adjustable

Mounting: Directly into cylinder.
Panel or inline

Ports: Rotating input port allows 360°
positioning 1/8 NPT

Temperature Range: 32° to 230° F

Flow Direction: Arrow on valve body
shows direction of controlled flow

Adjustment: Slotted knurled knob with
lock nut on #10-80 threaded needle
shaft for fine adjustment

JFC-3B

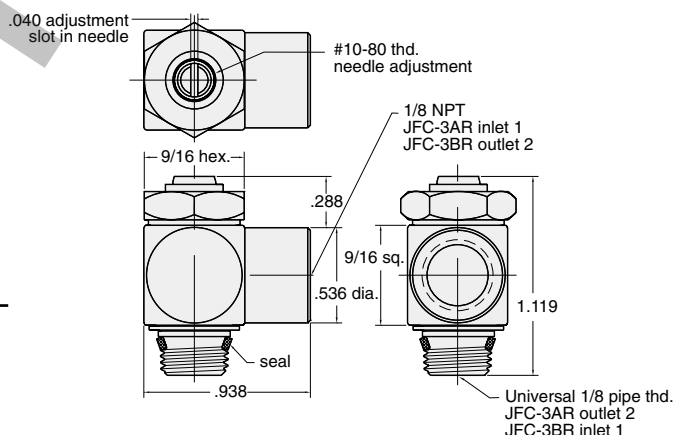


JFC-3AR



Meter out adjustable flow control valve.

Electroless Nickel plate brass body;
stainless steel needle; Buna-N seals.



Medium: air, water, or oil

Input Pressure: 150 psig max.

Air Flow: @100 psig - 10.5 SCFM adjustable

Mounting: Directly into cylinder.
Panel or inline

Ports: Rotating input port allows 360°
positioning 1/8 NPT

Temperature Range: 32° to 230° F

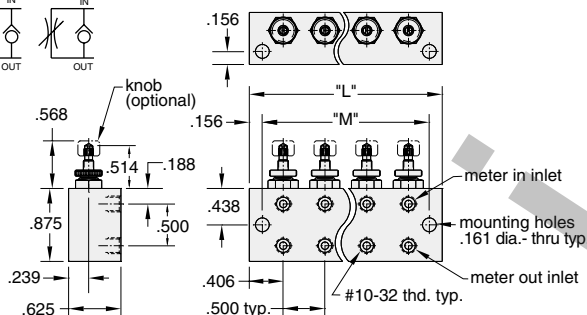
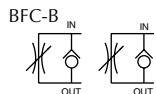
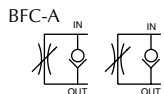
Flow Direction: Arrow on valve body
shows direction of controlled flow

Adjustment: Recessed slotted needle

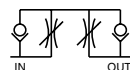
JFC-3BR



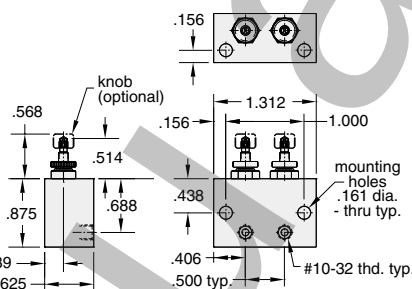
BFC-□□(□)



BFC-2C(□)

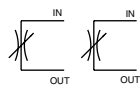


BFC-2C BFC-2CK
(2) Valves common meter in and meter out.

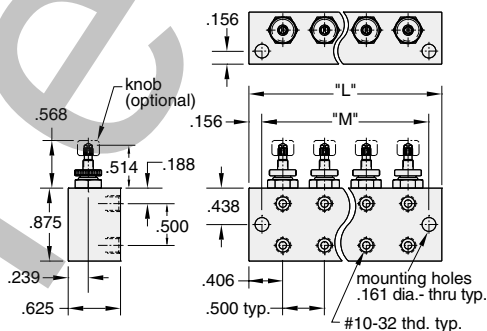


Either port may be used as inlet.

BNV-□N(□)

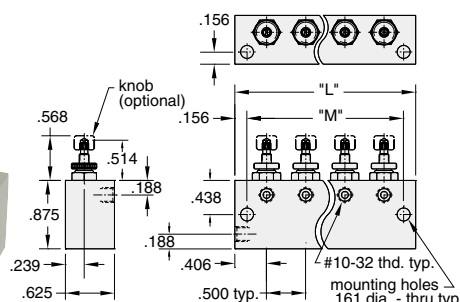
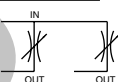


BNV-2N	BNV-4N	BNV-6N	BNV-8N
BNV-2NK	BNV-4NK	BNV-6NK	BNV-8NK



Either port may be used as inlet.

BNM-□N(□)



Either port may be used as inlet.

***Precision flow controls
and needle valves available
in blocks for rigid mounting.***

Specification same as MFC-3

Clippard's block flow control and needle valves have a variety of features that offer extra versatility for unique applications. These precision made valves offer high performance, low cost, reliability and ease of installation. Each valve is independent of the other (except the BFC-2C), sharing only a common body. This allows separate pressures and/or gases to be used while simplifying mounting. Each needle adjustment is smooth, exact, and includes a locking ring to prevent tampering. The valve body is machined and anodized aluminum; the compound angle needle stems are machined from 303 stainless steel; the valve sleeve is electroless nickel plated brass; and the seals are Buna-N rubber. Block flow controls and needle valves are ideal for controlling double acting cylinders.

FC - Flow Control

NV - Needle Valve

NM - Needle Manifold

B ☐ - ☐ ☐ ☐

Block

Number of stations

2 - (2) stations

4 - (4) stations

6 - (6) stations

8 - (8) stations

A - meter out flow

B - meter in flow

C - (2) valves common
meter in and meter out

N - needle valve

Adjustment type

Blank - screwdriver slot

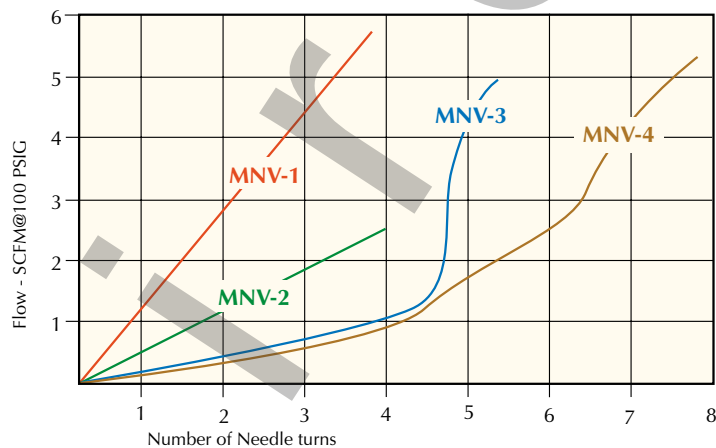
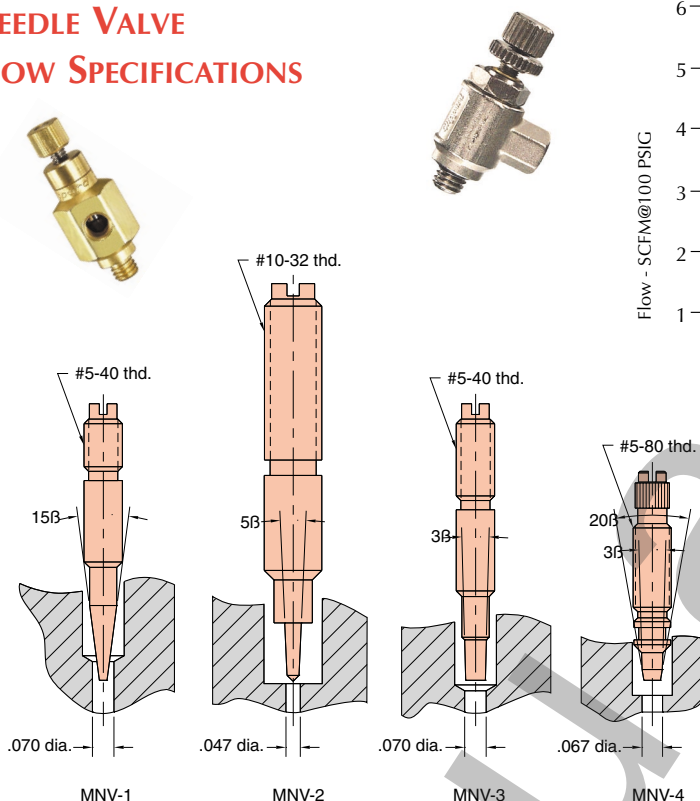
K - adjustment knob

Number of Stations "X"	"L"	"M"
2	1.312	1.000
4	2.312	2.000
6	3.312	3.000
8	4.312	4.000



NEEDLE VALVES

NEEDLE VALVE FLOW SPECIFICATIONS



Adjustable control needle valves restrict flow in both directions. There are (4) four models offered by Clippard, all with 10-32 ports, but with various needle configurations to provide coarse or fine flow adjustment. The diagram of needle shapes and the chart on this page show the difference between these models.

MNV-1



Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

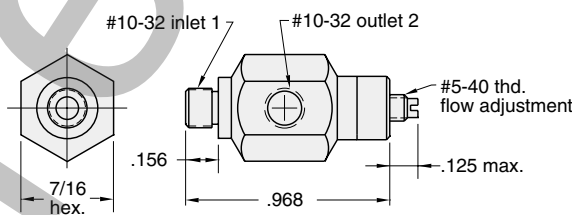
Air Flow: @50 psig - 3 SCFM
@100 psig - 6 SCFM

Mounting: Direct or inline

Ports: Inlet - 10-32, Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Screwdriver slot;
clockwise adjustment provides
less flow



MNV-1K



Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

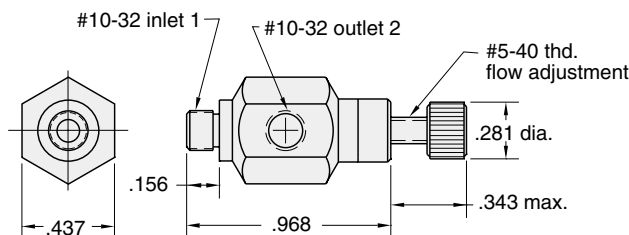
Air Flow: @50 psig - 3 SCFM
@100 psig - 6 SCFM

Mounting: Direct or inline

Ports: Inlet - 10-32, Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Knurled knob;
clockwise adjustment provides
less flow



NEEDLE VALVES

**MNV-1P**

Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

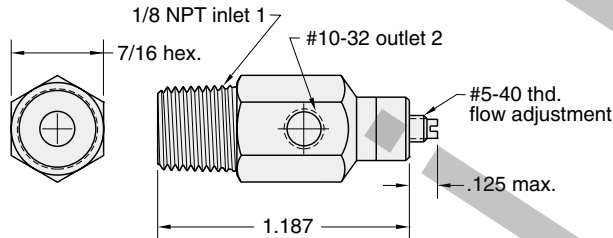
Air Flow: @50 psig - 3 SCFM
@100 psig - 6 SCFM

Mounting: Direct or inline

Ports: Inlet - 1/8 NPT, Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Screwdriver slot; clockwise
adjustment provides less flow

**MNV-1KP**

Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

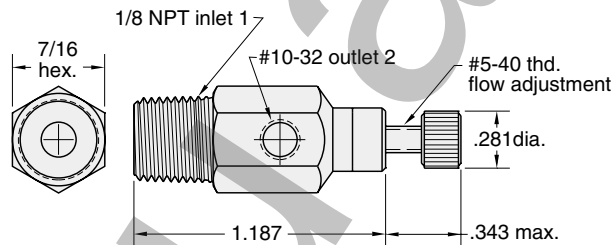
Air Flow: @50 psig - 3 SCFM
@100 psig - 6 SCFM

Mounting: Direct or inline

Ports: Inlet - 1/8 NPT, Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Knurled knob; clockwise
adjustment provides less flow

**MNV-2**

Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 300 psig max.

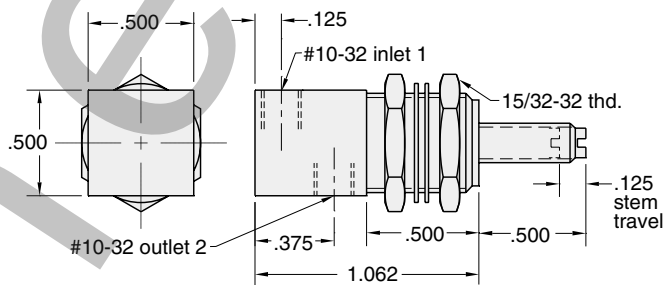
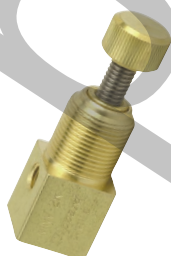
Air Flow: @50 psig - 1 SCFM
@100 psig - 2.5 SCFM

Mounting: 15/32-32 thread
Nut and lockwashers furnished

Ports: 10-32 female

Temperature Range: 32° to 230° F

Adjustment: Screwdriver slot; clockwise
adjustment provides less flow

**MNV-2K**

Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 300 psig max.

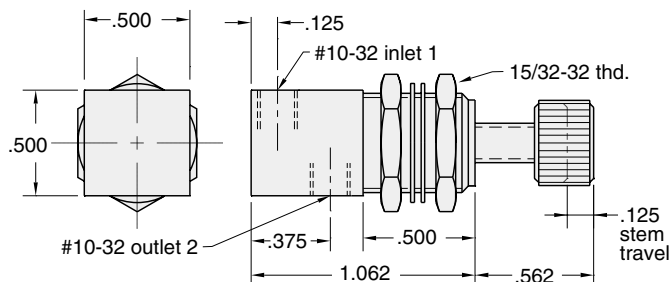
Air Flow: @50 psig - 1 SCFM
@100 psig - 2.5 SCFM

Mounting: 15/32-32 thread
Nut and lockwashers furnished

Ports: 10-32 female

Temperature Range: 32° to 230° F

Adjustment: Knurled knob; clockwise
adjustment provides less flow





NEEDLE VALVES

MNV-3



Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

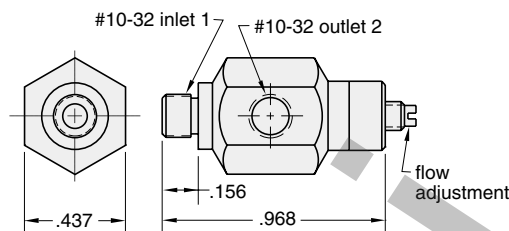
Air Flow: @50 psig - 2.5 SCFM
@100 psig - 5 SCFM

Mounting: Direct or inline

Ports: Inlet - 10-32, Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Screwdriver slot;
clockwise adjustment provides
less flow



MNV-3K



Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

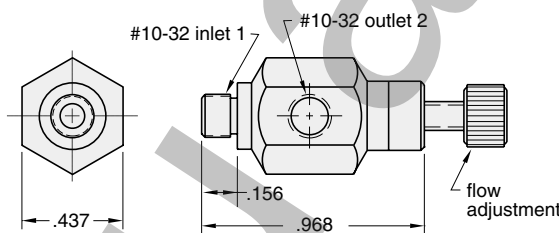
Air Flow: @50 psig - 2.5 SCFM
@100 psig - 5 SCFM

Mounting: Direct or inline

Ports: Inlet - 10-32 , Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Knurled knob;
clockwise adjustment provides
less flow



MNV-3P



Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

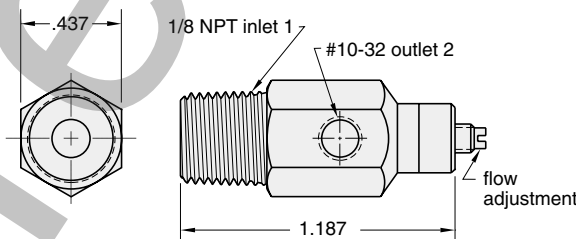
Air Flow: @50 psig - 2.5 SCFM
@100 psig - 5 SCFM

Mounting: Direct or inline

Ports: Inlet - 1/8 NPT, Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Screwdriver slot;
clockwise adjustment provides
less flow



MNV-3KP



Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 2000 psig max.

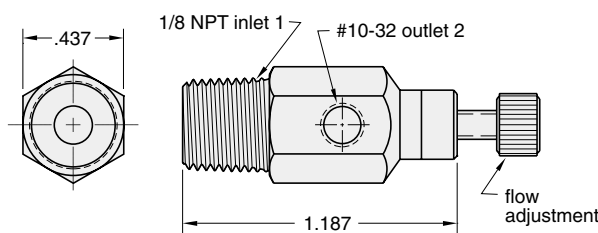
Air Flow: @50 psig - 2.5 SCFM
@100 psig - 5 SCFM

Mounting: Direct or inline

Ports: Inlet - 1/8 NPT, Outlet - 10-32

Temperature Range: 32° to 230° F

Adjustment: Knurled knob;
clockwise adjustment provides
less flow



NEEDLE VALVES



MNV-4

Adjustable control needle valve; brass body;
stainless steel needle; Buna-N seal



Medium: air, water, or oil

Input Pressure: 300 psig max.

Air Flow: @100 psig - 0 to 5 SCFM

Mounting: Direct or inline

Ports: Inlet - 10-32, Outlet - 10-32

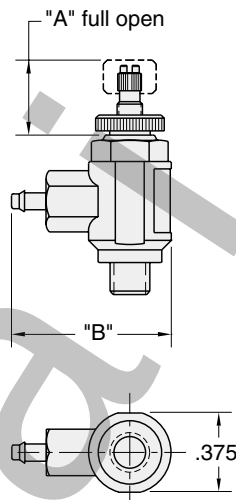
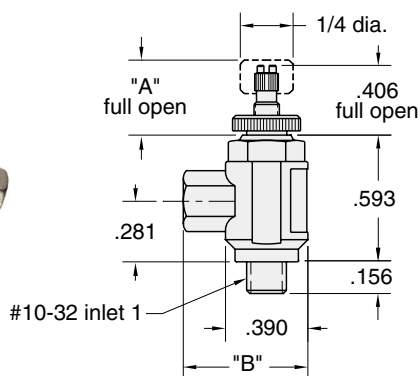
Temperature Range: 32° to 230° F

Adjustment: Knurled locking nut standard;
screwdriver slot; knurled locking nut
standard; clockwise adjustment of either
provides less flow

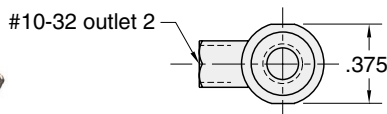
Part #	Female Part	"A"	"B"
MNV-4	10-32 thd.	.406	.593
MNV-41	1/16 barb	.406	.750
MNV-42	1/8 barb	.406	.906

Adjustment for MNV-4K: Knurled knob;
clockwise adjustment of either provides
less flow

Part #	Female Part	"A"	"B"
MNV-4K	10-32 thd.	.406	.593
MNV-4K1	1/16 barb	.406	.750
MNV-4K2	1/8 barb	.406	.906



MNV-4K



Did you know...

Clippard was the first to
use the 10-32 threaded
port for miniature
valves, cylinders, and
fittings which continues
to be the industry standard
today.



#10-32 outlet

#10-32 inlet