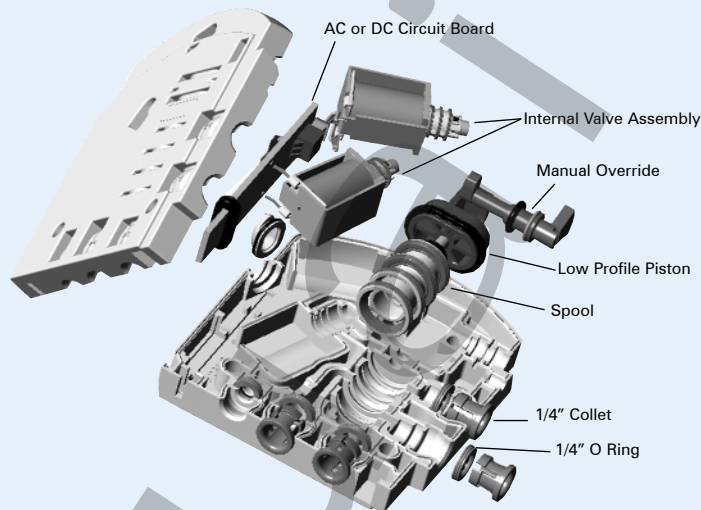


With an innovative concept and a pioneering approach to valve design, Mead's new technology has directly challenged the conventions of traditional valve manufacturers. In doing so, Mead has overcome many of the restrictions and limitations of conventional valve manufacturing, resulting in a unique design that minimizes valve size, reduces air turbulence and lowers valve costs.

## Features & Benefits

- Fast Response
- Simultaneous Electrical / Pneumatic Connection to Manifold
- Thermoplastic - Non Metallic
- Compact & Lightweight
- Low Power Consumption
- High Resistance to Chemicals
- Aerodynamic Flow Passages
- Quick-Change Valve System
- 1/4" or 6mm Integral Push-In Fittings
- Pre-Wired Serial (15 or 25 Pin) Manifold Socket
- No Tools or Lubrication Needed
- Optional Separate Main & Air Pilot Air Feed
- Mount Free Standing, DIN Rail or Panel
- Field Bus Controllable

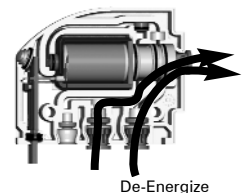


### "Half Shell" Design

The heart of the *Isonic*® concept is its patented "Half Shell", design. Composed of two mirror image halves, *Isonic*® allows its flow channels and internal component compartments to be designed directly into these molded body sections. Assembly is achieved by simply inserting the various valve elements into their corresponding "half-shell" pockets. Internal components are easily positioned to make optimal use of space. The valve is completed by ultrasonically welding the two valve segments, creating a strong bond and hermetic seal. This design totally eliminates the need for fasteners, adhesives, gaskets and inserts.

### Maximum Air Flow

Instead of the angular passages of most conventional valves, *Isonic*® internal channels are aerodynamically shaped for maximum air flow and minimal internal friction. Eliminating sharp corners and abrupt changes in direction reduces air turbulence and energy loss. Normally round air passages are replaced by thin, deep, tape-like channels that conserve space and optimize air flow.



De-Energize

### Resistant to Harsh Conditions

Molded from a high performance thermoplastic, *Isonic*® achieves superior heat, impact and chemical resistance. It is listed with both UL and CSA, making this system suitable for many environments.

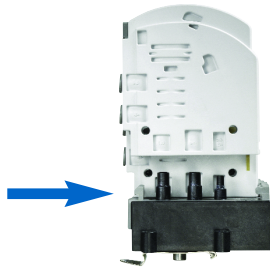


## The 2 Second Push-On Manifold and Valve System

The *Isonic*® MOD 3 manifold system has been designed to virtually eliminate downtime, eliminating all end plates, screws, o-rings and gaskets customarily found in manifold systems. With this “plug-in” design, replacing an individual valve can be accomplished in seconds - simultaneously making an electrical and pneumatic connection, without the aid of any tools!

The *Isonic*® valve series can naturally be implemented as either part of a manifold system or stand alone and have option of either internal or external pilot pressure.

**To Remove Valve Press  
Manifold Release**



**To Install simply Push Valve onto Manifold**

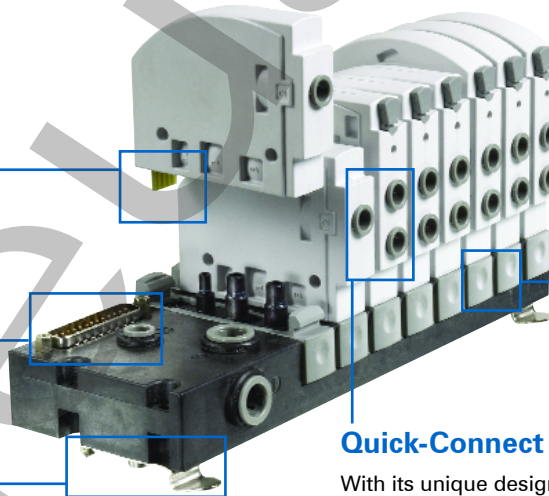
Edge connector requires no wiring and the Valve Ports need no fittings, the MOD 3 modular system is engineered to Push-On, saving time and money on traditional installation.

### Versatile

Available in four or eight station segments, the *Isonic*® MOD 3 manifold's unique modular design creates a versatile, expandable control base. The *Isonic*® MOD 3 manifold will accept any combination of different function valves. For larger manifolds, two or more segments can be easily combined to fulfill any needs. The manifold has separate mains and pilot air feed and also allows easy isolation of segments for applications with differential pressures.

### Edge Connector

The Slot-In electrical Edge Connector reduces the time and expense needed for wiring and connectors.



**Manifold Release**

Press to Release valve from manifold.

**Quick-Connect Collets - No Fittings Needed**

With its unique design *Isonic*® MOD 3 eliminates the need for tube fittings. Built-in, push-to-connect collets allow for fast and easy tube and manifold connections.

**Panel or DIN Rail Mounting**

Panel Mounted with front or rear screws and can also be DIN rail mounted with clips.

### Simplify Wiring Tasks With Field Bus System

To further reduce set-up time and installation costs, the *Isonic*® MOD 3 manifold is prewired to accept a single connection. An integrated PC.B. connects each of the manifold's valve stations. Simply plug in a standard cable to the Sub D connector for quick, clean wiring. A single connector can supply wiring for up to 8 (single or double pilot) valves. The manifold can then be controlled by a standard Field Bus System eg. *DeviceNet*, *ProfiBus*, *Interbus*. A second cable connector is necessary for manifolds of more than 8 valves.

*DeviceNet*

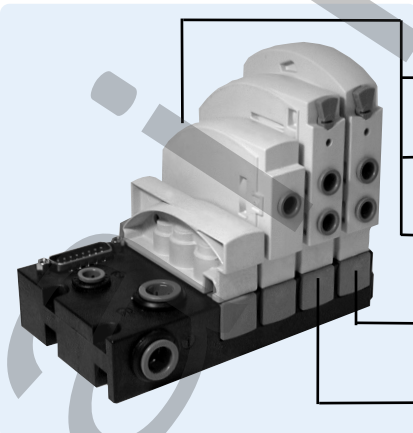


Valve Data

Product / Function	Flow (C <sub>v</sub> )	Pressure Range	Vacuum	Orifice Size	Tubing
2/2 Direct Acting or 3/2 Direct Acting	A: 0.03	0-120 PSI (0-8.3 Bar)	Full	A: 0.04 (1.0 mm)	ALL MODELS 1/4" (6mm) O.D. Ports 1, 2, 3, 4 5/32" (4mm) Port 14 Optional
	B: 0.06	0-100 PSI (0-6.9 Bar)	Full	B: 0.06 (1.5 mm)	
	C: 0.11	0-90 PSI (0-6.2 Bar)	Full	C: 0.08 (2.0 mm)	
4/2 Single Solenoid Pilot Operated	0.80	30-120 PSI (2.0-8.3 Bar)	Full with External Pilot	0.21" (5.3 mm)	
4/2 Double Solenoid Pilot Operated	0.80	15-120 PSI (1.0-8.3 Bar)	Full with External Pilot	0.21" (5.3 mm)	

General

<b>Temperature Range :</b> 0°- 120° F (-18° C to + 50° C)
<b>Media:</b> Air or Inert Gas
<b>Lubrication:</b> Not Recommended
<b>Filtration:</b> 3 micron
<b>Duty:</b> 100%
<b>Manual Override:</b> Standard (Pilot Models)
<b>Collets:</b> 1/4" (6 mm) and 5/32" (4mm)
<b>Voltages:</b> DC: 12 V and 24 V AC: 24 V, 110 V @ 50 / 60 Hz
<b>Seals:</b> Viton® and Nitrile
<b>Body:</b> GE Thermoplastic
<b>Response Time:</b> 10 ms On; 35 ms Off



Valve Symbols

	2/2 NC
	3/2 NC
	3/2 NO
	4/2 Double Solenoid
	4/2 Single Solenoid

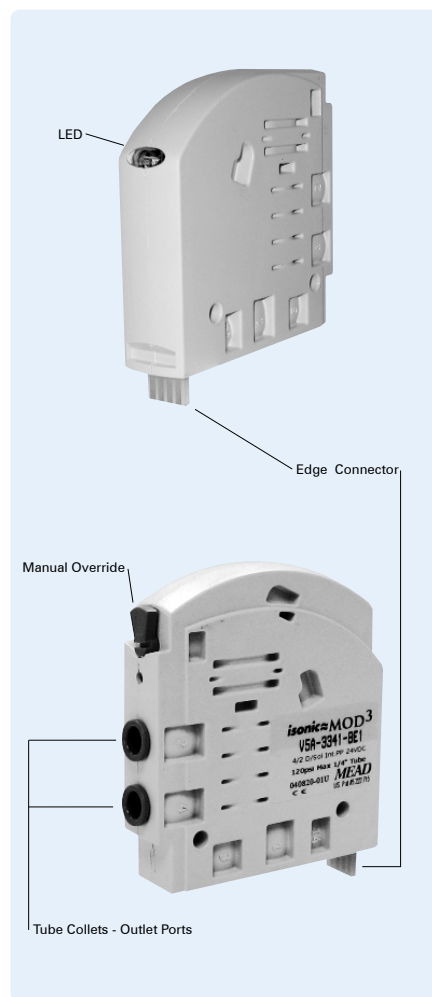
Solenoid Data

Direct Acting

Voltage	Amps	Resistance	Initial Power	100% Duty
12DC	0.169	71 Ω	2.00 W	1.50 W
24DC	0.071	305 Ω	1.70 W	1.28 W
24AC	0.071	305 Ω	1.70 W	1.28 W
110AC	0.016	7143 Ω	1.75 W	1.31 W

Pilot Operated

Amps	Resistance	Initial Power	100% Duty
0.133	92 Ω	1.60 W	1.30 W
0.058	406 Ω	1.60 W	1.20 W
0.058	406 Ω	1.40 W	1.20 W
0.001	8350 Ω	1.70 W	1.50 W



Track Side View Valve P. C. B. Edge Connector

Pin (View from track side)	Single and Direct Acting Solenoid	Double Solenoid	Signal LED Color
Right	Not Used	+VE Signal Port 1 > 2	Green
Left	+VE Signal	+VE Signal Port 1 > 4	Yellow
Center Right	Ground (0V)	Ground (0V)	-
Center Left	Ground (0V)	Ground (0V)	-

DIN Connector - IP 65

Pin No.	Single and Direct Acting Solenoid	Double Solenoid
1	Ground (0V)	+VE Signal Port 1 > 2
2	+ VE Signal	+VE Signal Port 1 > 4
3	Not Used	Ground (0V)
Earth	Not Used	Not Used

NOTE (DIN Style): Connector P5D1 is shown with valve above. The connector is not included with valve.

Valve Mini-Quick Connector

Pin (View connector side)	Single and Direct Acting Solenoid	Double Solenoid	Wire Color
Right	Ground (0V)	+VE Signal Port 1 > 2	Black
Left	+VE Signal	+VE Signal Port 1 > 4	Red
Center	Ground (0V)	Ground (0V)	White

NOTE (All): Consult Mead for reversed polarity models.

Reference

Control Valves

Cylinders

Specialty Valves

Production Devices

Accessories

Index

**2/2 & 3/2 Valves**

**Product Category**

V = Valve

**Family**

3 = Isonic Mod 3 3000 (2-way; 3-way)

**Tube Size**

A = 1/4" O.D. Tube Collet  
B = 6mm O.D. Tube Collet

**Orifice Size**

A = 0.040" (1.0mm) Vacuum to 120 PSI (8.3 bar)  
B = 0.060" (1.5mm) Vacuum to 100 PSI (6.9 bar)  
C = 0.080" (2.0mm) Vacuum to 90 PSI (6.2 bar)

**Actuation Type**

1 = Normally Closed  
2 = Normally Open

V 3 A - B 1 3 1 - B E 1

LED (Standard)

**Connector**

E = Edge Connector (Manifold)  
W = Mini Quick Connect  
X = 8mm micro DIN Connector (type C)

**Solenoid Voltage**

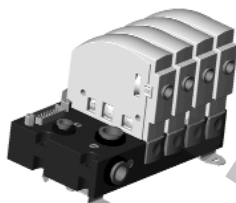
A = 12 DC  
B = 24 DC  
D = 24 50/60 Hz AC  
F = 110 50/60 Hz AC

**Supply Connections**

1 = Main Supply (Port 1)  
2 = Alternate Supply (Port 14)

**Flow Pattern**

2 = 2-Way  
3 = 3-Way  
V = Vacuum



**4/2 Valves**

**Product Category**

V = Valve

**Family**

5 = Isonic Mod 3 5000 (4 way)

**Tube Size**

A = 1/4" O.D. Tube Collet  
B = 6mm O.D. Tube Collet

**Actuation Type**

37 = Solenoid spring  
33 = Double solenoid

V 5 A - 37 4 1 - B E 1

LED (Standard)

**Connector**

E = Edge Connector (Manifold)  
W = Mini Quick Connect  
X = 8mm micro DIN Connector (Type C)

**Solenoid Voltage**

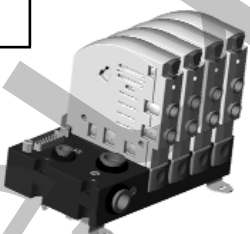
A = 12 DC  
B = 24 DC  
D = 24 50/60 Hz AC  
F = 110 50/60 Hz AC

**Pilot Connections**

1 = Internal Pilot Feed (Port 1)  
2 = External Pilot Feed (Port 14)

**Flow Pattern**

4 = 4/2  
V = Vacuum



**Manifolds**

**Product Category**

M = Manifold

**Family**

5 = Isonic Mod 3 3000/5000

**Tube Size**

A = 3/8" O.D. Tube Collets (Common Air Inlet / Exhaust)  
1/4" O.D. Tube Collets (Common Air Pilot Feed)  
B = 10 mm O.D. Tube Collets (Common Air Inlet / Exhaust)  
6 mm O.D. Tube Collets (Common Air Pilot Feed)

**Number of Stations**

04 = 4 Stations  
08 = 8 Stations  
(modular segments are combined for manifolds over 8 stations)

M 5 A - 08 0 8 - 1 1

**Accessories**

0 = None  
1 = 3/8" Exhaust Muffler  
2 = 10mm Exhaust Muffler

**Connector Cable**

0 = No cable & Connector  
1 = With 1.0m cable Connector  
3 = With 3.0m cable & Connector  
5 = With 5.0m cable & Connector

**Connector**

4 = 4 station / 15 pin (Sub D)  
8 = 8 station / 25 pin (Sub D)  
0 = Grommet (Mini Quick and DIN)

**Manifold Accessories**

0 = Manifold only  
1 = DIN rail clips mounted on manifold  
2 = Manifold mounted on DIN rail



4 Station Isonic® MOD 3 Valve Manifold



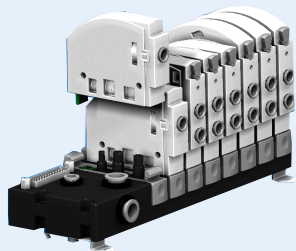
8 Station Isonic® MOD 3 Valve Manifold

Note: Valves will be pre-assembled on the manifold. Contact Mead with specific locations of mixed valve manifolds. An additional charge above the cost of the valves, manifolds and accessories may apply.



General Information

Flow Connections 120 PSI (8.3 Bar)			Electrical Connections	Mounting Options
Supply (Port 1)	Exhaust (Port 3)	Pilot (Port 14)	Sub-D Type	Panel Foot Mounting
A=3/8"	A=3/8"	A=1/4"	15 Pin =	Panel Rear Mounting
B=	B=	B=	25 Pin =	35mm DIN Rail w/ Optional Kit
10mm	10mm	6mm	4 Valve Station	
			8 Valve Station	

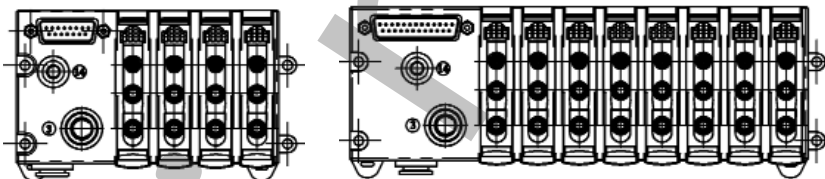


Manifold Sub-D Connections

15 Pin +VE Signal					25 Pin +VE Signal								
Valve Station No.	1	2	3	4	Valve Station No.	1	2	3	4	5	6	7	8
Valve Type	Pin Connection No.				Valve Type	Pin Connection No.							
Direct Acting Sol.	15	13	11	9	Direct Acting Sol.	11	13	24	22	20	18	16	14
Single and Double Sol. Pilot 1 > 4	15	13	11	9	Single and Double Sol. Pilot 1 > 4	11	13	24	22	20	18	16	14
Double Sol. Pilot Port 1 > 2	8	14	12	10	Double Sol. Pilot Port 1 > 2	10	12	25	23	21	19	17	15

Valve Station No.	All	Valve Station No.	All
Common	1, 2, 3, 4	Common	1, 2, 3, 4, 5, 6, 7, 8

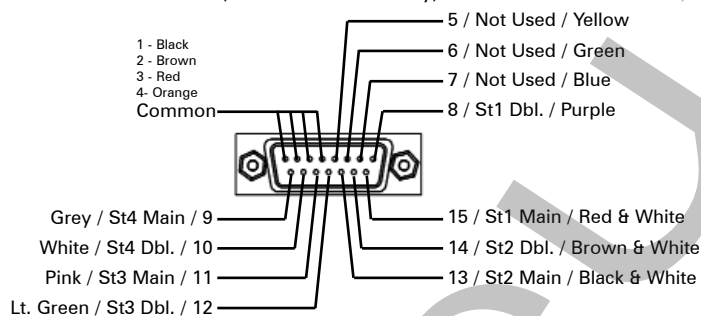


NOTE: Valve 1 is located nearest to Serial Connector, Common Pins are connected internally.

Wiring / 15 & 25 PIN Detail - Cable End (Colors Indicated apply to Mead accessories P(\*)-15SDC and P(\*)-25SDC)

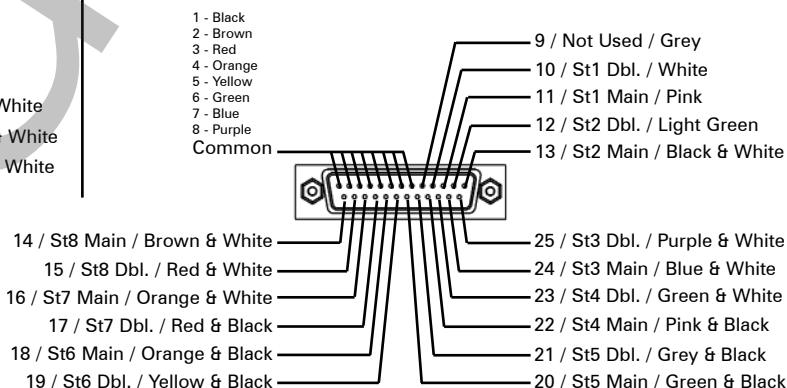
Numbers near pin lines are the pin numbers. Center information refers to usage (see detailed explanation). Colors indicated on the outside are the wire color of the Mead accessories.

15 Pin Sub-D Connector (4 Station Manifold Only)



Detailed Explanation: St1 Main = Station 1, Main connection (Used for all valves installed here). St1 Dbl. = Station 1, Double Solenoid Connection (The second connection for a double solenoid type valve - This is only used for the double solenoid type. Remember double solenoids have two connections.)

25 Pin Sub-D Connector (8 Station Manifold Only)



NOTE: All Commons are connected internally on both the 4 and 8 Station Manifolds.

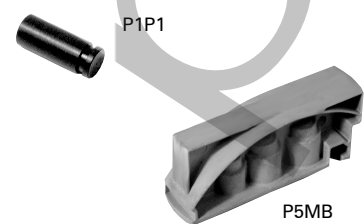
Accessories

Electrical Connectors	Model No.
8 mm DIN Connector	P5D1
8 mm DIN w/ 39" Leads	P5D2
Quick-Connect Leads	P5Q1
Sub-D Connector 15 Pin	P5-15SD
Sub-D Connector 25 Pin	P5-25SD

Blocking Plugs	Model No.
Manifold Blocking Plug	P5MB
1/4" Port Plug	P1P1
6 mm Port Plug	P1P2

Sub-D Connector & Cable (for M4 Manifolds)	Model No.
1.0M (15 pin Sub D Connector Included)	P1-15SDC
3.0M (15 pin Sub D Connector Included)	P3-15SDC
5.0M (15 pin Sub D Connector Included)	P5-15SDC
1.0M (25 pin Sub D Connector Included)	P1-25SDC
3.0M (25 pin Sub D Connector Included)	P3-25SDC
5.0M (25 pin Sub D Connector Included)	P5-25SDC



Manifold Accessories	Model No.
DIN Rail Mounting Clip Kit	P5MC
35 mm DIN Rail	P4M1-x*
35 mm DIN Rail End Stop	P4S1

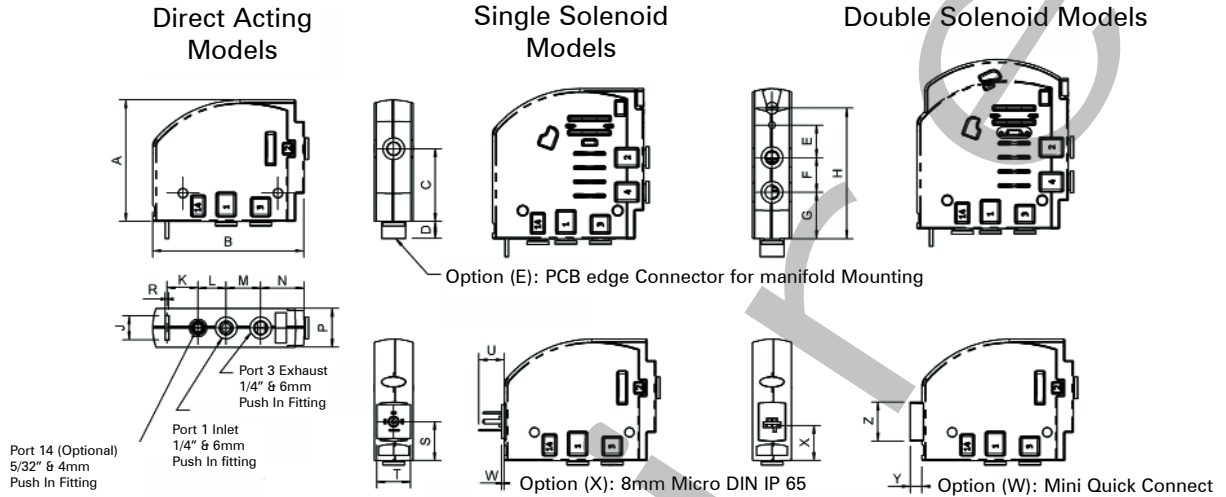
\* x = # of feet required



Exhaust Muffler	Model No.
1/4" Port (Push-In)	MMP-250
6 mm Port (Push-In)	MMP-006
3/8" Port (Push-In)	MMP-375
10 mm Port (Push-In)	MMP-010

Replacement Collets	Model No.
1/4" Tube Collet	P4C1
6 mm Tube Collet	P4C2
5/32" (4 mm) Tube Collet	P1C1
3/8" Tube Collet	P4CA
10 mm Tube Collet	P4CB

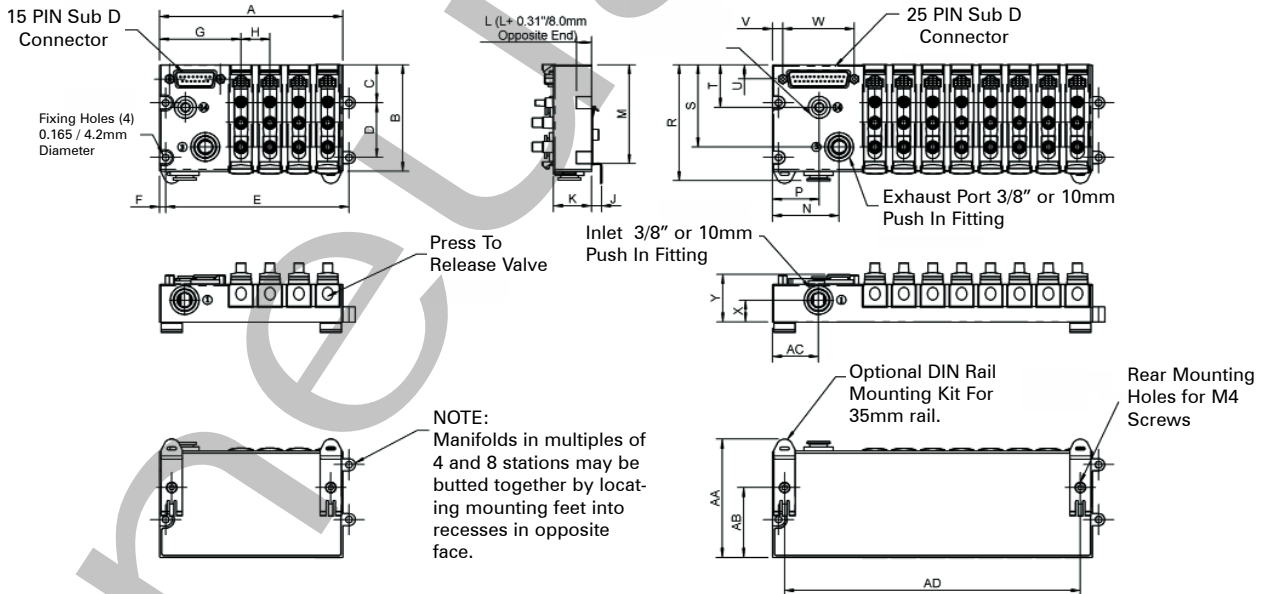
Valve Dimensions



Valve	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	W	X	Y	Z
2/2 & 3/2	2.20	2.76	1.32	0.43	-	-	-	-	0.43	0.57	0.51	0.63	0.79	0.71	0.06	0.71	0.60	0.65	0.05	0.46	0.22	0.71
	<i>56.0</i>	<i>70.0</i>	<i>33.5</i>	<i>10.8</i>	-	-	-	-	<i>11.0</i>	<i>14.4</i>	<i>13.0</i>	<i>16.0</i>	<i>20.0</i>	<i>18.0</i>	<i>1.60</i>	<i>18.0</i>	<i>15.3</i>	<i>16.6</i>	<i>1.30</i>	<i>11.8</i>	<i>5.50</i>	<i>18.0</i>
4/2 Single Solenoid	2.72	2.76	-	0.43	0.59	0.63	0.85	2.37	0.43	0.57	0.51	0.63	0.79	0.71	0.06	0.71	0.60	0.65	0.05	0.46	0.22	0.71
	<i>69.0</i>	<i>70.0</i>	-	<i>10.8</i>	<i>15.0</i>	<i>16.0</i>	<i>21.5</i>	<i>60.3</i>	<i>11.0</i>	<i>14.4</i>	<i>13.0</i>	<i>16.0</i>	<i>20.0</i>	<i>18.0</i>	<i>1.60</i>	<i>18.0</i>	<i>15.3</i>	<i>16.6</i>	<i>1.30</i>	<i>11.8</i>	<i>5.50</i>	<i>18.0</i>
4/2 Double Solenoid	3.07	2.76	-	0.43	0.59	0.63	0.85	2.37	0.43	0.57	0.51	0.63	0.79	0.71	0.06	0.71	0.60	0.65	0.05	0.46	0.22	0.71
	<i>78.0</i>	<i>70.0</i>	-	<i>10.8</i>	<i>15.0</i>	<i>16.0</i>	<i>21.5</i>	<i>60.3</i>	<i>11.0</i>	<i>14.4</i>	<i>13.0</i>	<i>16.0</i>	<i>20.0</i>	<i>18.0</i>	<i>1.60</i>	<i>18.0</i>	<i>15.3</i>	<i>16.6</i>	<i>1.30</i>	<i>11.8</i>	<i>5.50</i>	<i>18.0</i>

Note: Sizes are in inches first, millimeters second (italicized).

Manifold Dimensions

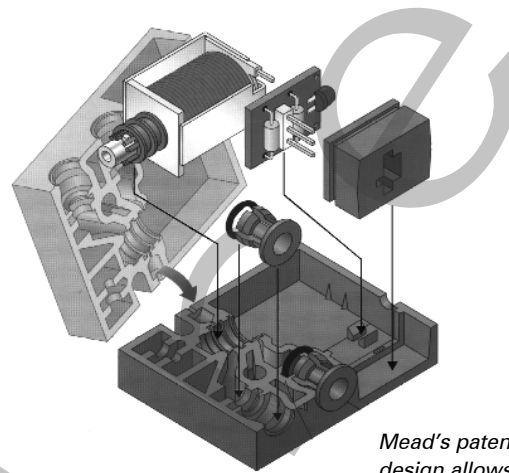
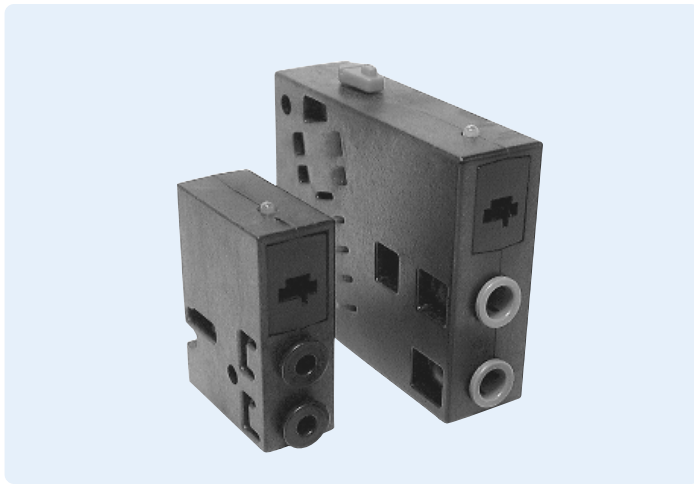


Manifold	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	AA	AB	AC	AD
4 Station	4.74	2.76	0.35	1.42	4.74	0.16	2.10	0.75	0.26	0.98	0.39	2.56	1.18	0.67	2.87	2.13	1.10	0.37	0.26	1.32	0.57	1.21	3.07	1.81	0.67	4.11
	<i>120.5</i>	<i>70.0</i>	<i>9.00</i>	<i>36.0</i>	<i>120.5</i>	<i>4.00</i>	<i>53.5</i>	<i>19.0</i>	<i>6.60</i>	<i>25.0</i>	<i>10.0</i>	<i>65.0</i>	<i>30.0</i>	<i>17.0</i>	<i>72.8</i>	<i>54.0</i>	<i>28.0</i>	<i>9.40</i>	<i>6.70</i>	<i>33.4</i>	<i>14.5</i>	<i>30.8</i>	<i>78.0</i>	<i>46.0</i>	<i>31.5</i>	<i>104.5</i>
8 Station	8.28	2.76	0.35	1.42	8.28	0.16	2.65	0.75	0.26	0.98	0.39	2.56	1.72	1.24	2.87	2.13	1.10	0.37	0.26	1.86	1.57	1.21	3.07	1.81	1.25	7.65
	<i>210.3</i>	<i>70.0</i>	<i>9.00</i>	<i>36.0</i>	<i>210.3</i>	<i>4.00</i>	<i>67.3</i>	<i>19.0</i>	<i>19.0</i>	<i>25.0</i>	<i>10.0</i>	<i>65.0</i>	<i>43.8</i>	<i>31.5</i>	<i>72.8</i>	<i>54.0</i>	<i>28.0</i>	<i>9.40</i>	<i>6.70</i>	<i>42.1</i>	<i>14.5</i>	<i>30.8</i>	<i>78.0</i>	<i>46.0</i>	<i>31.5</i>	<i>194.3</i>

Note: Sizes are in inches first, millimeters second (italicized).

Connector Dimensions





Mead's patented "half-shell" design allows flow channels and component compartments to be designed directly into the body.

### Design Optimizes Valve Performance...

Isonic® 2, 3 and 4-way valves feature a unique, multi-patented design that significantly shrinks valve size while boosting flow capacity. With its design and a state-of-the-art manufacturing process, Isonic® breaks through the restriction and limitations of conventional valve manufacturing.

### ...And Cuts Costs!

Isonic® technology eliminates all machining operations associated with valve manufacturing. Requiring only simple assembly, Isonic® can be produced quickly and easily with significant cost reduction.

### The Award-Winning "Half-Shell" Design

The heart of the Isonic® concept is its patented "half-shell" design. Composed of two mirror-image halves, Isonic® allows its flow channels and internal component compartments to be designed directly into these molded body sections. Valve bodies are molded of high-strength, glass-impregnated Ultem thermoplastic.

Assembly is achieved by simply inserting the various valve elements into their corresponding "half-shell" pockets. Internal components are easily positioned to make optimal use of space.

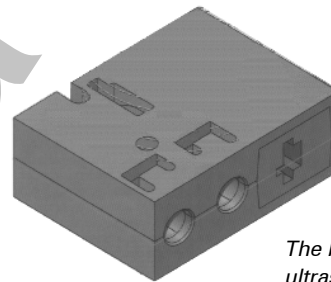
The valve is completed by ultrasonically welding the two valve segments, creating a strong bond and hermetic seal. This design totally eliminates the need for fasteners, adhesives, gaskets and inserts.

### New Patents

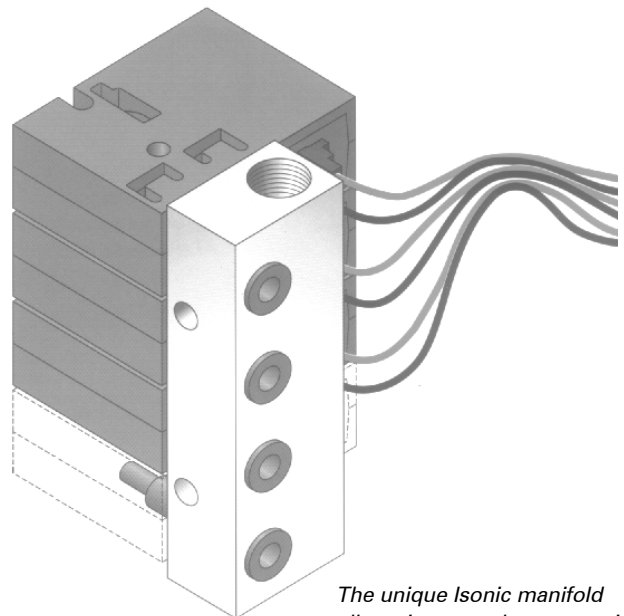
Patent #	Patented Property
5,222,715	"Half-Shell" Valve Construction
5,341,846	Plug-In Valve Stack Assembly
Additional Patents Pending	



Isonic® has earned UL recognition, is tested to the standards of CSA and conforms to the applicable directives of the European Union.



The body halves are joined by ultrasonic welding, creating a strong bond and hermetic seal.

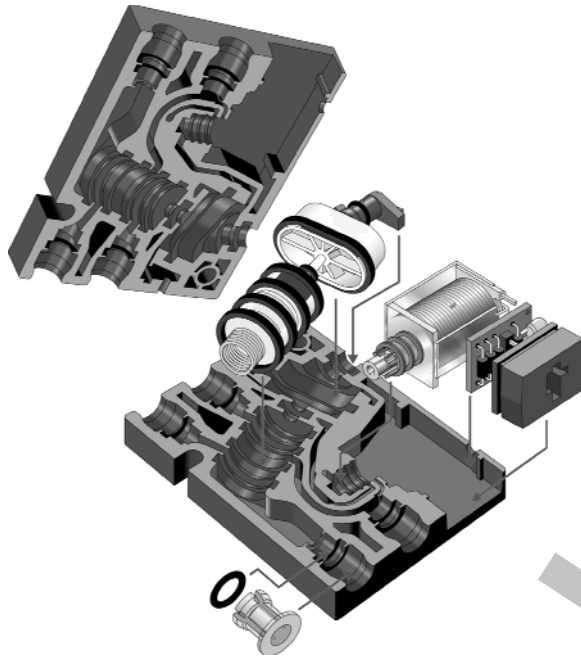


The unique Isonic manifold allows instant valve connection and removal, without the aid of a tool.

Isonic® is a registered trademark of Mead Fluid Dynamics, Inc.

## Loaded with Standard Features

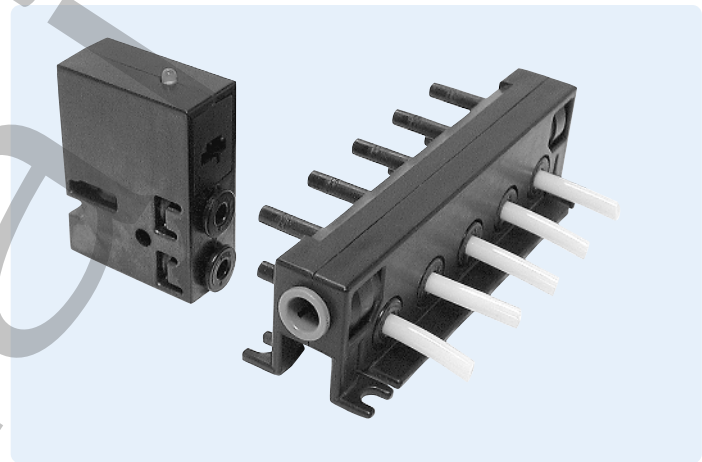
Along with its size and price advantages, Isonic® offers numerous user features, many of them standard. Most models feature an integral electronic board with surge suppression and LED. A variety of voltages and wiring options are available. This combination of price and versatility make Isonic® the perfect control choice for pneumatic systems.



## Faster Manifold Connections

The Isonic® manifold system has been designed to virtually eliminate downtime, eliminating all end plates, screws, o-rings and gaskets customarily found in manifold systems. Connecting any valve to the manifold base is as easy as plugging in an electrical cord. With this patented "plug-in" design, replacing an individual valve can be accomplished in seconds, without the aid of any tools!

Available in two, three, four or five station segments, the Isonic® manifold's unique modular design creates a versatile, expandable control base. For larger manifolds, two or more segments can be easily combined to fulfill any needs. Further, manifold segments are easily isolated for applications with differential pressures.



## Quick-Connect Collets - No Fittings Needed

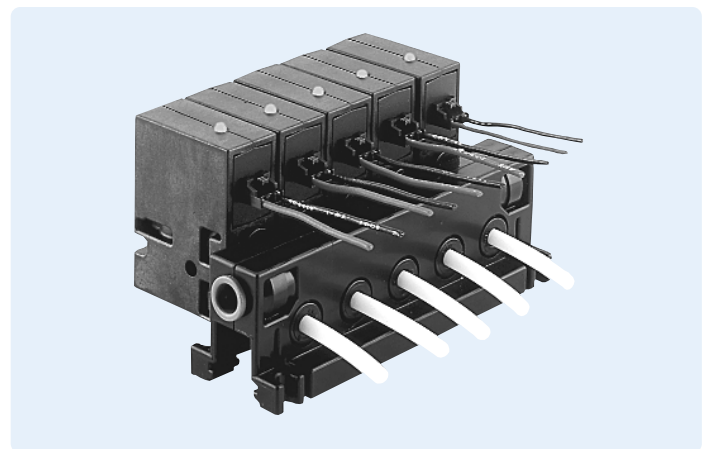
With its unique design Isonic® eliminates the need for tube fittings. Built-in, push-to-connect collets allow for fast and easy tube and manifold connections.

## Resistant To Harsh Conditions

Molded from a high performance thermoplastic, Isonic® achieves superior heat, impact and chemical resistance. It is listed with both UL and CSA.

## Maximum Air Flow

Instead of the angular passages of most conventional valves, Isonic's internal channels are aerodynamically shaped for maximum air flow and minimal internal friction. Eliminating sharp corners and abrupt changes in direction reduces air turbulence and energy loss. Normally round air passages are replaced by thin, deep, tape-like channels that conserve space and optimize air flow.



The Isonic® manifold can be either foot mounted or DIN rail mounted.



# Isonic® (2 and 3-Way)

## Specifications

<b>Design :</b>	Poppet
<b>Media:</b>	Air or Inert Gas
<b>Lubrication:</b>	None Required
<b>Filtration:</b>	40 micron
<b>Cycle Life:</b>	50,000,000 cycles
<b>Orifice Size:</b>	A: 0.025" / 0.65mm B: 0.035" / 0.90mm C: 0.055" / 1.4mm
<b>Flow:</b>	A: 0.01 C <sub>v</sub> B: 0.02 C <sub>v</sub> C: 0.05 C <sub>v</sub>
<b>Maximum Pressure:</b>	A: 120 PSI / 8.3 Bar B: 120 PSI / 8.3 Bar C: 30 PSI / 2.1 Bar
<b>Vacuum:</b>	to 28 in .Hg
<b>Temperature Range:</b>	0° - 120°F / 49°C
<b>Tubing:</b>	5/32" or 4mm
<b>Mounting Holes:</b>	0.156 diameter (1 hole, 1 slot)
<b>Seals:</b>	Viton® and Nitrile
<b>Weight:</b>	1.5 oz. (per valve)

## Solenoid Data

Voltage	12DC	24DC	24AC	120 AC
<b>Amps</b>	0.133	0.058	0.058	0.014
<b>Resistance</b>	92Ω	406Ω	406Ω	8350Ω
<b>Initial Power</b>	1.6	1.4	1.4	1.7
<b>Continuous On</b>	1.3	1.2	1.2	1.5

**Response Time:** 10 milliseconds

**Molex Connector:** UL and CSA Listed

**Din Connector:** Protection Class- IP 65 according to DIN 40 050  
Insulation Class- Group C according to VDE 0110  
Conform to DIN 43650 Form C Specifications

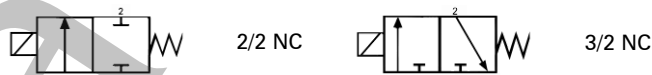
## Manifold

**Common Air Inlet:** Built-in, push-in fittings for 1/4" OD or 6mm tubing both ends

**Foot Mounting:** 4 slots, 11/64" diameter

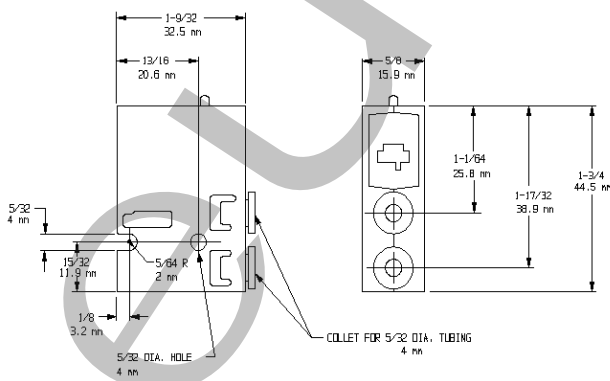
**DIN Rail Mounting:** Attaches to 15mm DIN rail

## Valve Symbols:

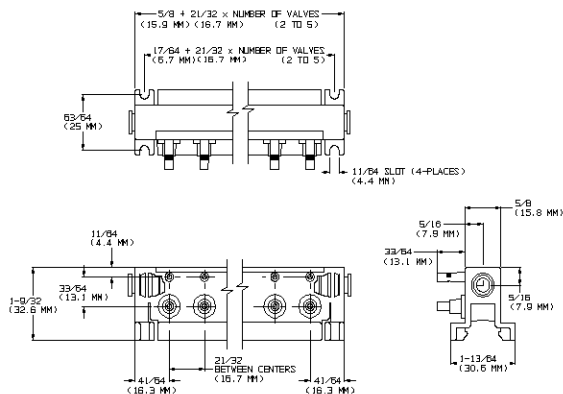


## Dimensions

### Valves:



### Manifolds



## Accessories



P1SA1

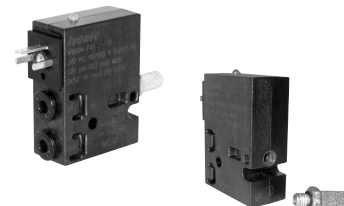


P1SA2



P1Q1

NOTE: (1) pc. is included with each "W" type valve.



MM-019

Muffer shown here on V1 Valve with T1 option



**How To Order**

**V 1 B 04 - A W 1 - (\*\*)**

**Product Category**

V = Valve

**Family**

1 = Isonic® 1000 (2-Way; 3-way)

**Orifice Size**

A = 0.025" (0.6mm)  
B = 0.035" (0.9mm)  
C = 0.055" (1.2mm)

**Flow Pattern**

02 = 2-Way Normally Closed  
04 = 3-Way Normally Closed  
05 = Vacuum (3-Way) Normally Closed  
06 = Vacuum (2-Way) Normally Closed

**Options**

T1 = Tapped Exhaust (10-32)  
T2 = Tapped Exhaust (M5x0.80)

**LED**

0 = None  
1 = LED (not available with connector Z)

**Connector**

W = Mini Quick Connect\*  
(with electronic board)  
X = 8mm micro DIN (with board)  
connector not included  
Y = Flying Lead (with board)  
Z = Flying Lead  
(no board - DC only)

**Solenoid Voltage**

A = 12 DC  
B = 24 DC  
D = 24 50/60 Hz AC  
F = 120 50/60 Hz AC\*  
\* 120 Volt model is not available with  
mini quick-connect (option W)

**Manifolds:**

**M 1 04 - J 0**

**Product Category**

M = Manifold

**Family**

1 = Isonic® 1000 (2-Way; 3-Way)

**Number of Stations**

02 = 2 Stations  
03 = 3 Stations  
04 = 4 Stations  
05 = 5 Stations  
N = N Stations (modular segments are combined for manifolds over 5 stations)

**Manifold Assembly**

0 = Manifold Only  
1 = Valves Assembled on Manifold\*  
2 = Assembled Manifold on DIN rail  
3 = Manifold w/valves on DIN rail\*  
\* Valves must be ordered on separate line

**Common Air Inlet (Both Ends)**

J = Push in fitting for 1/4" O.D. tubing  
K = Push in fitting for 6mm tubing

**Accessories:**

**Electrical Connectors**

8mm Micro DIN Connector . . . . . P1D1  
8mm Micro DIN Connector (molded, pre-wired). P1D2 (Includes 39"/ 1m leads)  
Mini Quick-Connect . . . . . P1Q1 (includes 18"/ 45cm leads; contact factory for longer lengths)

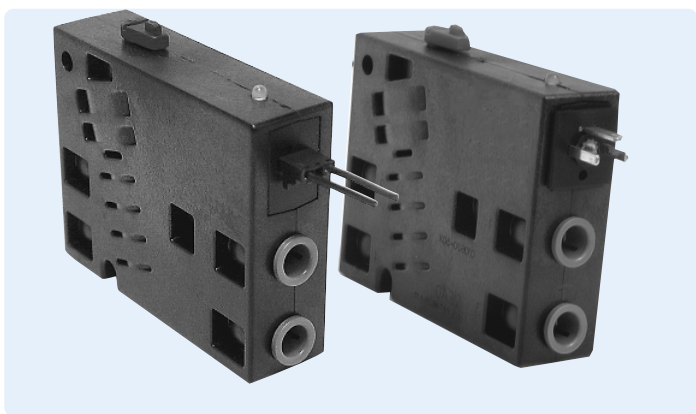
**Manifold Accessories**

15mm DIN Mounting Rail . . . . . P1M1-x (where x = desired number of feet of DIN rail)  
15mm DIN Rail End Stops . . . . . P1S1 (note: two required per manifold)  
4mm (5/32) Manifold Blocking Plug . . . . . P1B1 (for blocking empty manifold stations)  
1/4" Manifold Inlet Port Plug . . . . . P1P1 (one included with each manifold)  
6mm Manifold Inlet Port Plug . . . . . P1P2 (one included with each manifold)

**Miscellaneous**

10-32 Muffler . . . . . MM-019 (to silence exhaust in 10-32 exhaust port)  
Port Adapter . . . . . P1SA1 (converts 5/32" port to 1/4" barb OD tube)  
Port Adapter . . . . . P1SA2 (converts 5/32" port to 1/4" push-to-connect OD tube)

See additional accessories on page 17



**Isonic® Control Valves**

While only 20 mm in width, these 2 position spool valves provide a surprisingly high flow ( $C_v=0.8$ ). With its thin, aerodynamic flow passages, Isonic® maintains a higher flow in a smaller area. The pilot piston features an innovative oval design to further facilitate a compact, low-profile power valve.

**Versatile Mounting**

With a hole and a slot molded into its body, Isonic® valves may be mounted flush to any flat surface. Mounting brackets are also available for individual surface or DIN rail mounting.

**Solenoid Data**

Voltage	Amps	Resistance	Initial Power	Continuous On
12DC	0.133	92	1.6	1.3
24DC	0.058	406	1.4	1.2
24AC	0.058	406	1.4	1.2
120AC	0.014	8350	1.7	1.5

Specifications	
<b>Design:</b>	Spool (2-Position)
<b>Ports :</b>	1/4" OD tube collet or 6mm OD tube collet
<b>Pilot Ports :</b>	3/32" (4mm) OD tube collet
<b>Media:</b>	Air or Inert Gas
<b>Lubrication:</b>	None Required
<b>Filtration:</b>	40 micron
<b>Cycle Life:</b>	20,000,000 (minimum)
<b>Orifice Size:</b>	0.2" (5.0mm)
<b>Flow:</b>	0.8 $C_v$
<b>Vacuum:</b>	Air pilot models can be used in vacuum applications with external air signal to pilot ports
<b>Minimum Pressure:</b>	30 PSI (2 Bar)
<b>Maximum Pressure:</b>	120 PSI (8.3 Bar)
<b>Temperature Range:</b>	0° - 120°F (-18°C - 49°C)
<b>Mounting Holes:</b>	0.177" (4.5mm) diameter (1 hole, 1 slot)
<b>Weight:</b>	Solenoid models 3.1 oz each Air Pilot models 2.1 oz each

**Materials**

Body..... GE thermoplastic  
Seals ..... Fluorocarbon and Nitrile

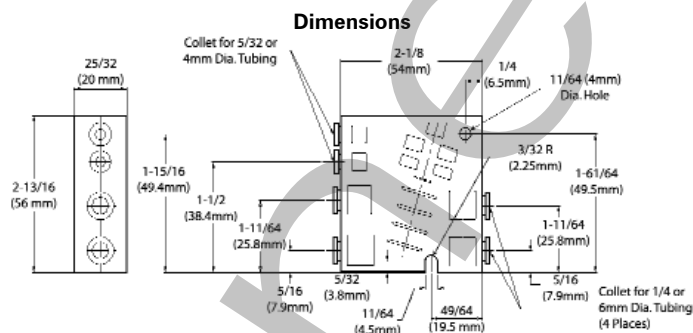
**Electrical**

Voltages..... DC: 12, 24  
..... AC: 24, 110/120  
Leads ..... 18" standard  
Duty Cycle..... Continuous duty  
Response Time ..... 16 milliseconds @ 100 PSI  
Serial Interface ..... 10-pin flat cable connector  
Manual Override ..... Standard (solenoid models)

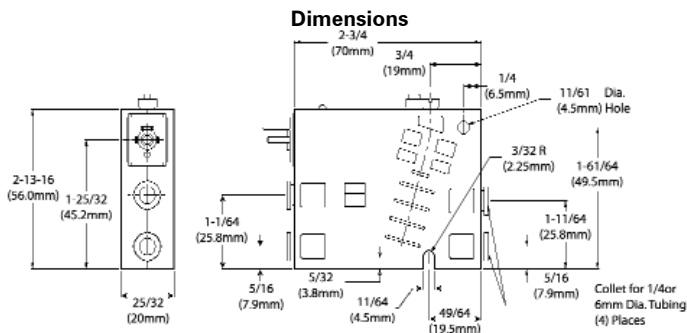


**Din Connector:** Protection Class- IP 65 according to DIN 40 050  
Insulation Class- Group C according to VDE 0110  
Conform to DIN 43650 Form C Specifications

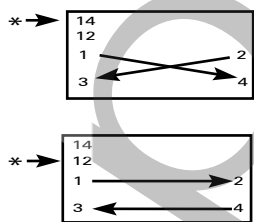
**Pressure Piloted Models**



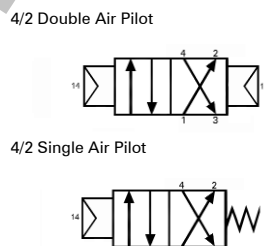
**Solenoid Models**



**Function**



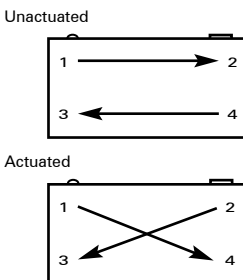
**Symbol**



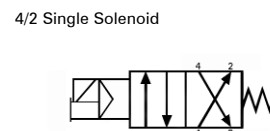
\* Arrow Indicates Pressure applied to Pilot Port

- 1.....Air Supply
- 2.....Cylinder
- 3.....Common Exhaust
- 4.....Cylinder

**Function**



**Symbol**



- 1.....Air Supply
- 2.....Cylinder
- 3.....Common Exhaust
- 4.....Cylinder

## The Quick-Change Manifold

The Isonic® manifold system has been designed to virtually eliminate downtime. Connecting any valve to the manifold base is as easy as plugging in an electrical cord. With this patented “plug-in” design, replacing an individual valve on the manifold can be accomplished in a matter of seconds!

## Isonic® Manifold Expands With Your Needs

Available in two, three or four station segments, the manifold’s unique modular design creates a versatile, expandable control base. For manifolds larger than four stations, two or more segments can be easily combined to create any size manifold (multiple segments are assembled on DIN rail and secured with end stops). Manifold segments are easily isolated for applications with differential pressures.

## Isolate Individual Valves On Manifold

Individual valve isolation allows you to control each valve’s inlet air separately, if desired. This would allow you to remove and add valves without having to cut air to the manifold, virtually eliminating downtime. See “How to Order” for details on the “S” option.

## Mounting Options

The Isonic® manifold can be either foot mounted or DIN rail mounted. 35mm DIN rail can be ordered from Mead.

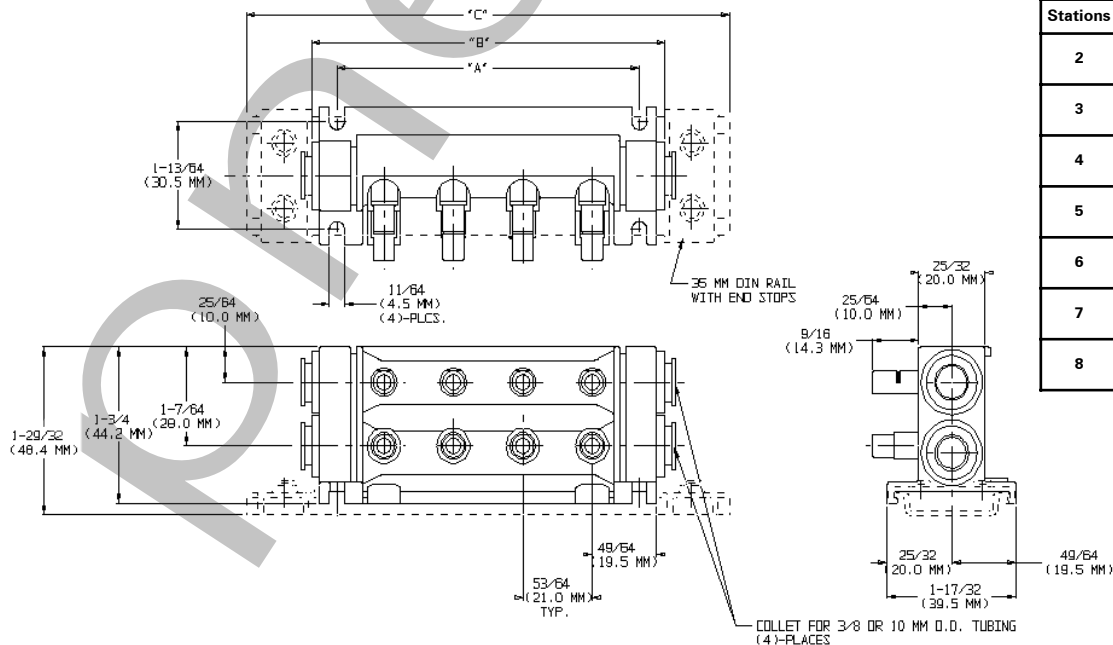
## Manifold Specifications

- Common Air Inlet . . . . Both ends: built in collets for  $\frac{3}{8}$ " OD (or 10mm) tubing
- Foot Mounting . . . . . 0.177 (4.5 mm) diameter
- DIN Rail Mounting . . . . Attaches to 35 mm DIN rail

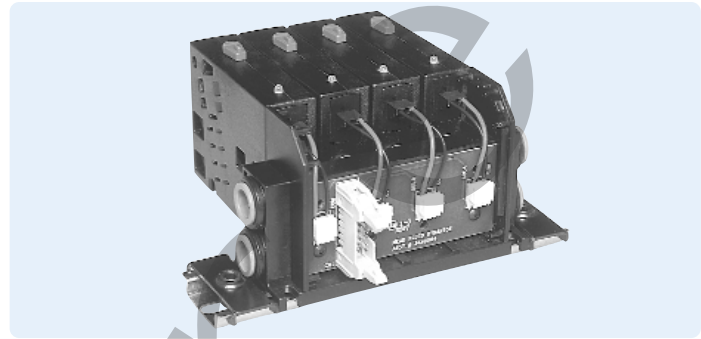
## DeviceNet®

Head end and slave units for DeviceNet® interface are available for use with Isonic® valve manifolds. Please consult factory.

## V4 Manifold Dimensions

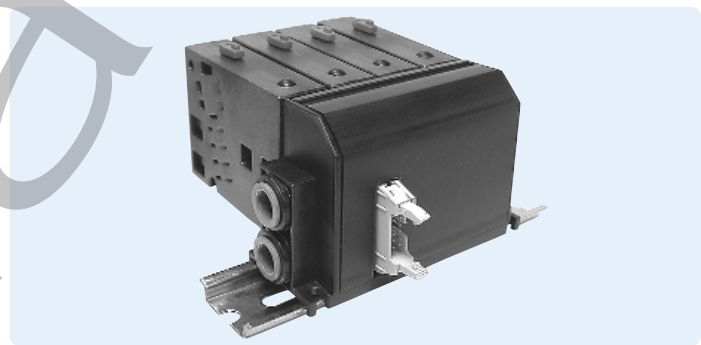


Stations	"A"	"B"	"C"
2	1-61/64 (49.5 mm)	2-35/64 (64.7 mm)	4-9/64 (105 mm)
3	2-25/32 (70.5 mm)	3-3/8 (85.6 mm)	4-15/16 (125 mm)
4	3-39/64 (91.5 mm)	4-13/64 (106.7 mm)	5-49/64 (146 mm)
5	5-9/64 (130.5 mm)	5-57/64 (145.6 mm)	7-19/64 (185 mm)
6	5-31/32 (151.5 mm)	6-9/16 (166.7 mm)	8-1/8 (206 mm)
7	6-51/64 (172.5 mm)	7-25/64 (187.7 mm)	8-61/64 (227 mm)
8	7-5/8 (193.5 mm)	8-7/32 (208.7mm)	9-25/32 (248 mm)



## Simplify Wiring Tasks With Cable Connector

To further reduce set-up time and installation costs, the Isonic® manifold can be prewired to accept a single connection. With this option, a printed circuit board connects each of the manifold’s valve stations. Simply plug in a standard flat-cable ribbon to the 10-pin connector for quick, clean wiring. A single connector can supply wiring for up to 8 valves. A second cable connector is necessary for manifolds of more than 8 valves.



Pre-wired manifolds are supplied with a protective cover. The cover snaps easily into place to protect the wiring and circuit board. It is easily removed for servicing or replacing a valve.

Reference

Control Valves

Cylinders

Specialty Valves

Production Devices

Accessories

Index

Isonic® (4-Way)

How To Order

Valves:

**V 4 A 0307 - A W 1 - (\*\*)**

Product Category

V = Valve

Family

4 = Isonic 4000 (4-way)

Collet Size

A = 1/4" O.D. Tube Collet

B = 6mm O.D. Tube Collet

Actuator Type

0507 = Single Air Pilot, Spring Return

0505 = Double Air Pilot

0307 = Single Solenoid, Spring Return

Options

V = Pilot Breather Vent Filter

LED

0 = None

1 = LED(not available with connector Z)

Connector

0 = None (pressure models)

W = Mini Quick Connect\* (w/board)

X = 8mm micro DIN Connector (w/board)

Y = Flying Lead (with board)

Z = Flying Lead (no board - DC only)

Solenoid Voltage

0 = None (pressure models)

R = 5 DC

A = 12 DC

B = 24 DC

D = 24 50/60 Hz AC

F = 110 / 120 50/60 Hz AC\*

H = 230 50/60 Hz AC\*

\* 120 & 230 volt models not available with mini quick-connect (option W)

Manifold:

**M 4 A 03 - 2 Y - (\*\*)**

Product Category

M = Manifold

Family

4 = ISONIC 4000 (4-way)

Collet Size

A = 3/8" O.D Tube Collets (Common Air Inlet)

B = 10mm O.D. Tube Collets (Common Air Inlet)

Number of Stations

02 = 2 Stations

03 = 3 Stations

04 = 4 Stations

N = N Stations

(modular segments are combined for manifolds over 4 stations)

Options

S = Isolation to each valve\*

Wiring Options

N = None

Y = Pre-wired 10-pin ribbon connector\* (wiring cover included)

C = Manifold with wiring cover

\* Pre-wired manifolds not available with isolation options nor with valves with DIN connector.

Manifold Assembly

0 = Manifold Only

1 = Valves Assembled on Manifold\*

2 = Manifold Mounted on DIN rail (required for 5 or more stations)

3 = Valves Assembled on Manifold, mounted on DIN rail\*

\* Valves must be ordered on separate line

**Accessories**

**Electrical Connectors**

- 8mm Micro DIN Connector . . . . . P1D1
- 8mm Pre-wired DIN Connector (includes 39" leads) . . P1D2
- Mini Quick-Connect (includes 18" leads) . . . . . P1Q1

**Mounting Brackets (For 4-Way Valves Only)**

- Single Valve Mounting Bracket . . . . . P4SM
- Single Valve DIN Rail Mount . . . . . P4DM

**Port Adapter (For 5/32" Ports)**

- Converts Port to Barb for 1/4" OD Tube . . . . . P1SA1
- Converts Port to Push-in Fitting (1/4" OD Tube) . . . . . P1SA2

**DIN Rail & Manifold End Stops**

- 15mm DIN Rail (x = # of feet required) . . . . . P1M1-x
- 35mm DIN Rail (x = # of feet required) . . . . . P4M1-x
- 15mm Rail End Stop . . . . . P1S1
- 35mm Rail End Stop . . . . . P4S1

**10-Pin Connector & Ribbon Cable (For Pre-Wired Manifolds)**

- Connector w/ 1.0 meter leads . . . . . P4RC10
- Connector w/ 1.5 meter leads . . . . . P4RC15
- Connector w/ 3.0 meter leads . . . . . P4RC30

**Manifold Station Blocking Plugs & Port Plugs**

- 5/32" (4mm) Station Plug (for empty manifold stations) . P1B1
- 1/4" Station Plug (for empty manifold stations) . . . . . P4B1
- 6mm Station Plug (for empty manifold stations) . . . . . P4B2
- 1/4" Port Plug . . . . . P1P1
- 6mm Port Plug . . . . . P1P2
- 3/8" Port Plug . . . . . P4P1
- 10mm Port Plug . . . . . P4P2

**Miscellaneous Accessories**

- Valve Locking Clip (locks 2 valves in place) . . . . . P4LC-2
- (locks 3 valves in place) . . . . . P4LC-3
- (locks 4 valves in place) . . . . . P4LC-4
- Manifold Valve ID Strip (50 #s per strip) . . . . . P4ID

**Tube Collets (For Replacement Only)**

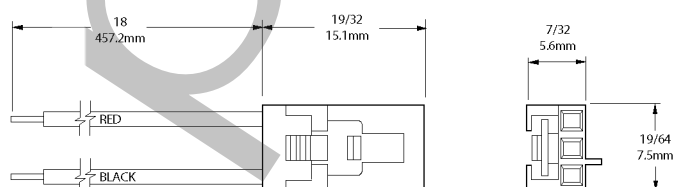
- For 1/4" Port . . . . . P4C1
- For 6mm Port . . . . . P4C2
- For 3/8" Port . . . . . P4CA
- For 10mm Port . . . . . P4CB

**Push-In Exhaust Mufflers**

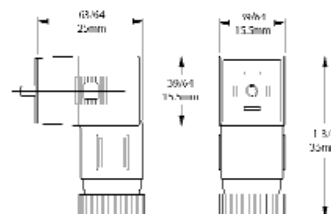
- For 1/4" Port . . . . . MMP-250
- For 6mm Port . . . . . MMP-006
- For 3/8" Port . . . . . MMP-375
- For 10mm Port . . . . . MMP-010

**Wiring Connector Dimensions**

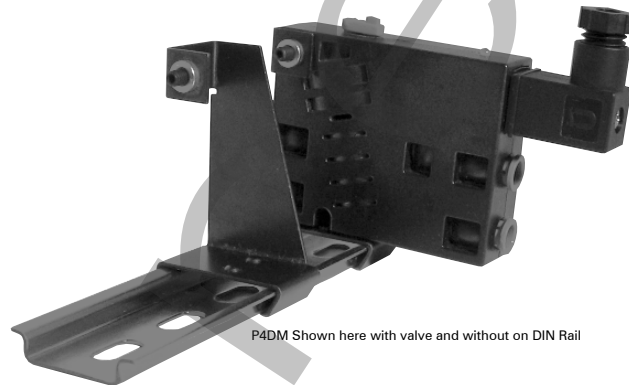
**Mini Quick-Connect**



**8mm DIN Connector**

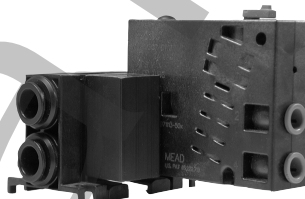


**Mounting Bracket (P4DM)**



P4DM Shown here with valve and without on DIN Rail

**Manifold Accessories**



P4B1

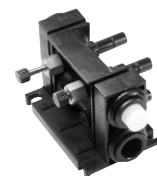


P4LC-4

**Collets**

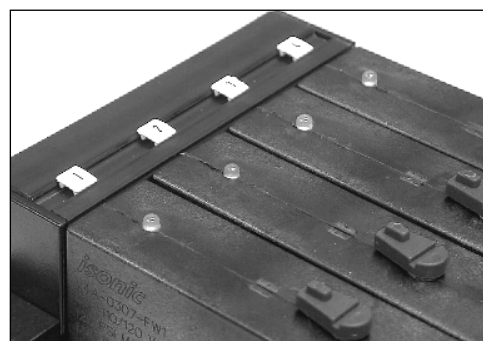


P4C1 & P4CA



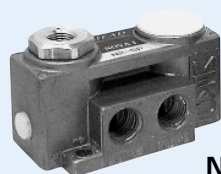
Manifold Option "S" Valve Isolation

**Valve Identifiers (P4ID)**





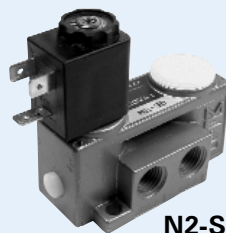
## Single and Double Air Piloted



N2-SP

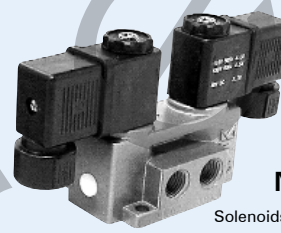


N2-DP



N2-SCD

## Single and Double Solenoid



N2-DCD

Solenoids shown here with PVD1 (sold separately)

## Designed For Long Life

Nova 4-way directional control valves offer state-of-the-art air valve design at a remarkably low price. Nova utilizes a single bonded rubber spool with finely ground sealing lands that travel only .047" ...less than  $\frac{1}{16}$  th of an inch! This economy of movement assures long valve life yet generates enough flow to power a 4" bore cylinder.

## Large Air Flow With Dual Exhausts

$\frac{1}{4}$ " NPTF ported Nova valves produce a large output flow of 57 cubic feet per minute at 100 PSI inlet pressure ( $C_v=1.0$ ). Each output port has its own exhaust port so that individual exhaust control is possible.

## Manual Override as Standard

All Nova valves are supplied with manual overrides so that valve actuation may be triggered without electricity or air to the pilots.

## Operating Parameters

Media: Air or Inert Gas

Pressure: Vacuum to 120 PSI

Port Size:  $\frac{1}{4}$ " NPTFPilot Ports:  $\frac{1}{8}$ " NPSFFlow:  $C_v = 1.0$  (single valves)  
 $C_v = 1.2$  (stacked valves)

Temperature: 0°F to 120°F

Lube: Petroleum Base Oil

Filtration: 40 Micron Minimum

Solenoid Response: 30-40 ms

Seals: Buna

## Nova Specifications

Model	Actuator	Return	Description	Min. Pilot Pressure	Available Voltages		Wiring Type
					DC	AC	
N2-DP	Air Pilot	Air Pilot	Double Pressure Piloted	10PSI	-	-	-
N2-SP	Air Pilot	Spring	Single Pressure Piloted	40PSI	-	-	-
N2-DB	Bleed Pilot	Bleed Pilot	Double Bleed Piloted	40PSI	-	-	-
N2-HL	Hand Lever	Spring	Light 3lb. Touch	-	-	-	-
N2-PB	Push Button	Push Button	Holds in Two Positions	40PSI	-	-	-
N2-F4	Foot Pedal	Spring	Foot Valve w/Cover	-	-	-	-
N2-SCD*	Solenoid	Spring	DIN Connector Solenoid	40PSI	12-24	24-120-220	DIN*
N2-SX	Solenoid	Spring	Explosion Proof	40PSI	-	120	Conduit
N2-DCD*	Solenoid	Solenoid	DIN Connector Solenoids	10PSI	12-24	24-120-220	DIN*
N2-DX	Solenoid	Solenoid	Explosion Proof	10PSI	-	120	Conduit

\* Connector not included on N2-SCD and N2-DCD. See "DIN Solenoid Connectors" on following page.

## External Air Supply to Solenoid (E)

For solenoid actuation below the stated minimum pilot pressure or for vacuum applications, a 10-32 tapped external air supply allows the solenoid to be operated at different pressures than the power section.

## Ordering Instructions

**Single Valves:** State model number and voltage, if applicable.

**Stacked Valves:** Add an "M" to the single valve model number and state voltage if applicable - specify number and type of valves in each stack. **Note:** Explosion proof coils may not be stacked next to each other because of their greater size.

**External Pilot Supply:** Add an "E" to the model number.

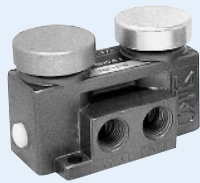
**Isolator Discs:** Specify isolator discs only if you will need to isolate valves within a stack.

## Ordering Example:

**N2-SCD - M - 24VAC - 5**

Base Model \_\_\_\_\_  
Stacking Option \_\_\_\_\_  
Voltage \_\_\_\_\_  
Number In Stack \_\_\_\_\_

Double Push Button



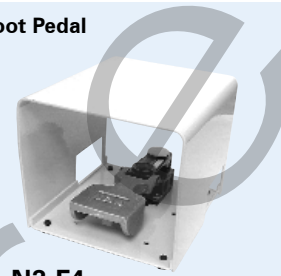
N2-PB

Hand Lever



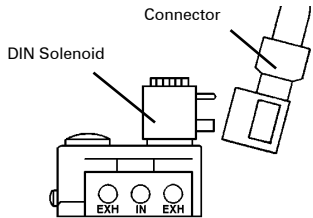
N2-HL

Foot Pedal



N2-F4

DIN Solenoid Connectors



A DIN connector (ordered separately) quickly attaches to the solenoid's prongs and is secured by a single screw.

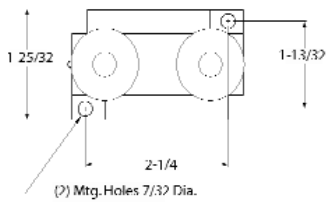
Model PVD1



Mead offers 3 types of DIN connectors to facilitate connections to the solenoid. Model PVD1 is a connector with a 1/2" conduit entry and no lead wires. Model PVD2 also has a 1/2" conduit entry but includes 20" of cabled lead wire. Model PVD3 is a strain relief connector that includes 72" of cabled wire. See page 66.

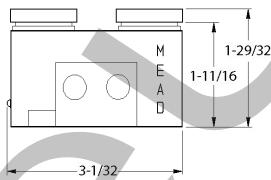
Dimensions

Basic Top View

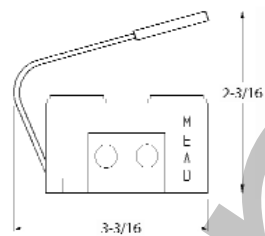


N2-HL

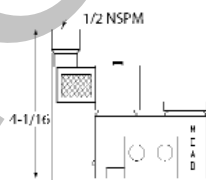
N2-DP, SP, DB, and PB



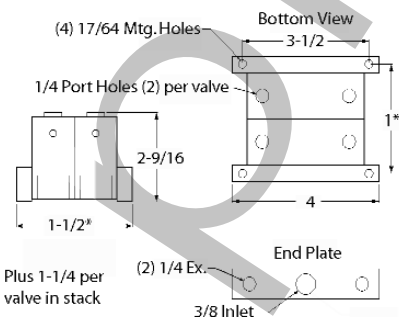
N2-SCD (with connector)



Stacks



N2-F4

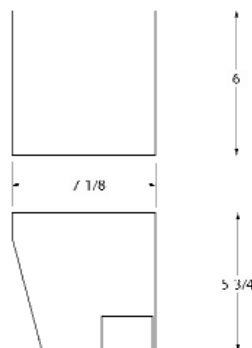


Bottom View

Plus 1-1/4 per valve in stack

(2) 1/4 Ex. 3/8 Inlet

End Plate

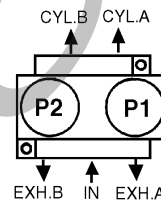


Stacking Options

If your application calls for the use of several valves, it is often advantageous to stack them. Because all valves within a stack are supplied air from a common source and are vented through common exhaust ports, plumbing time and fitting costs are greatly reduced.

Stacking also assures that your control valves are located centrally for more convenient trouble shooting and maintenance. Each stack valve body is attached only to its immediate neighbors so that valve additions, replacements, or deletions are easily achieved.

Flow Patterns



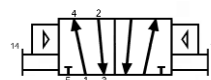
Single-actuated spring return models, including hand lever and foot pedal, have the inlet and Cyl. B ports connected when unactuated. On all double-actuated models, except N2-PB and N2-DB, signals at P1 cause output at Cyl. A and signals at P2 cause output at Cyl. B. On N2-PB and N2-DB models, the reverse occurs.

Easy To Repair

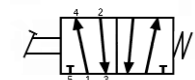
Nova valves are designed to permit complete replacement of all wearing parts in seconds without touching the piping or electrical wiring. All you need are a pair of snap ring pliers and a replacement spool.

Valve Symbols

N2-DP



N2-F4



N2-SP



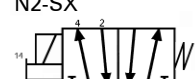
N2-PB



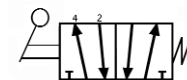
N2-DB



N2-SCD



N2-HL



N2-DCD

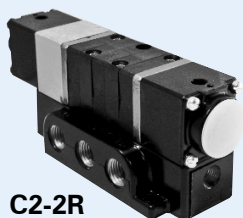


N2-DX

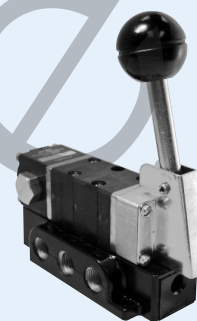
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**C2-3**  
Single Air Piloted



**C2-2R**  
3 Position, Double Air Piloted



**C2-10H**  
Hand Valve

**Sub-Base Mounted**

Mead's Capsula valves work long and hard even when subjected to dirty air. Their unique patented bi-lobed seals are wear compensating, self cleaning, and are completely retained to prevent extrusion.

All models are mounted on a side ported sub-base. Any valve module may be separated from its base in seconds without disturbing the piping.

**Ordering Instructions** - State model number and voltage.

**C2-4DCD - 120AC**

Base Model \_\_\_\_\_

Voltage \_\_\_\_\_

General Specifications	
<b>Flow:</b>	1/4" Models - C <sub>v</sub> = 0.75 (45 SCFM at 100 PSI) 1/2" Models - C <sub>v</sub> = 3.17 (190 SCFM at 100 PSI)
<b>Max. Air Pressure:</b>	120 PSI
<b>Pilot Ports:</b>	1/8" NPT
<b>Filtration:</b>	40 micron (extends valve life)
<b>Lubrication:</b>	Required for 1/2" and all 3-position models
<b>Response:</b>	30-40 ms
<b>Temperature:</b>	-20°F to +212°F
<b>1/4" Materials:</b>	Module (Valox) - Spool (Delrin AF®) Base (Die cast Aluminum) ®Dupont Company
<b>1/2" Materials:</b>	Module (Phenolic) - Spool (Aluminum) Base (Rolled Aluminum)

Model Number	Port Size	Actuator	Return	Description	Min. Pilot Press. (PSI)	Available Voltages DC	AC
C2-1	1/4	Air Pilot	Air Pilot	2-Position, Double Pressure Piloted	20	-	-
C5-1	1/2	Air Pilot	Air Pilot	2-Position, Double Pressure Piloted	20	-	-
C2-2H	1/4	Air Pilot	Spr. Center	3-Position, Double Pressure, Pressure Held In Center	45	-	-
C2-2R	1/4	Air Pilot	Spr. Center	3-Position, Double Pressure, Pressure Released	45	-	-
C2-3	1/4	Air Pilot	Spring	2-Position, Single Pressure Piloted	35	-	-
C5-3	1/2	Air Pilot	Spring	2-Position, Single Pressure Piloted	35	-	-
C2-4DCD	1/4	Solenoid	Spring	2-Position, Single DIN Solenoid	35	12-24	24-120-240
C5-4DCD	1/2	Solenoid	Spring	2-Position, Single DIN Solenoid	35	12-24	24-120-240
C2-5DCD	1/4	Solenoid	Solenoid	2-Position, Double DIN Solenoid	20	12-24	24-120-240
C5-5DCD	1/2	Solenoid	Solenoid	2-Position, Double DIN Solenoid	20	12-24	24-120-240
C2-6HDCD	1/4	Solenoid	Spr. Center	3-Position, Double DIN Solenoid, Pressure Held In Center	45	12-24	24-120-240
C2-6RDCD	1/4	Solenoid	Spr. Center	3-Position, Double DIN Solenoid, Pressure Released	45	12-24	24-120-240
C2-7	1/4	Hand Lever	Spring	2-Position Lever, Spring Return	-	-	-
C5-7	1/2	Hand Lever	Spring	2-Position Lever, Spring Return	-	-	-
C2-8	1/4	Hand Lever	Hand Lever	2-Position Lever, Friction Held	-	-	-
C5-8	1/2	Hand Lever	Hand Lever	2-Position Lever, Friction Held	-	-	-
C2-9H	1/4	Hand Lever	Spr. Center	3-Position Lever, Pressure Held In Center	-	-	-
C2-9R	1/4	Hand Lever	Spr. Center	3-Position Lever, Pressure Released in Center	-	-	-
C2-10H	1/4	Hand Lever	Detented	3-Position Lever, Pressure Held In Center	-	-	-
C2-10R	1/4	Hand Lever	Detented	3-Position Lever, Pressure Released In Center	-	-	-

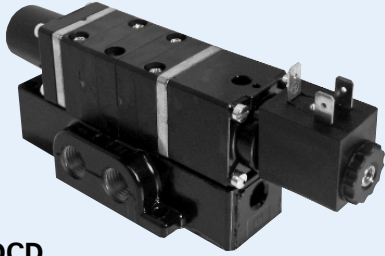
\* Connector not included on solenoid models; see below.

**DIN Solenoid Connectors**

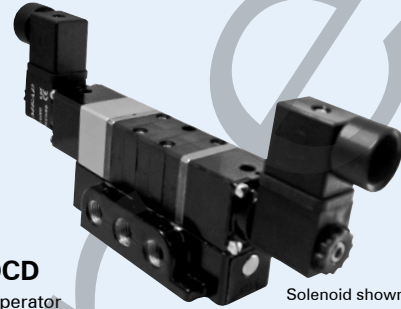
Electrically actuated Capsula valves utilize DIN type solenoids. DIN solenoids feature a totally encapsulated coil with 3 prongs, allowing fast and easy connections. DIN connectors are ordered separately. Mead offers 3 types of DIN connectors to facilitate connections to the solenoid. A full description of these connectors can be found on page 66.



Model PVD1



**C2-4DCD**  
Solenoid Operator

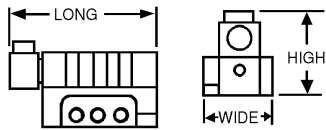


**C2-5DCD**  
Solenoid Operator  
Solenoid shown here with (2) connectors, PVD1 (sold separately)

**Dimensions**

2 mounting holes per valve:

1/4" valves - 7/32" diameter  
1/2" valves - 9/32" diameter

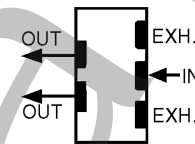


Model	Long	Wide	High
C2-1	4 7/32	2	2 1/4
C5-1	7 7/16	3	3 1/4
C2-2H	7 1/32	2	2 1/4
C2-2R	7 1/32	2	2 1/4
C2-3	4 21/32	2	2 1/4
C5-3	7 31/32	3	3 1/4
C2-4DCD	6 1/2	2	2 1/4
C5-4DCD	10 9/32	3	3 1/8
C2-5DCD	7 3/4	2	3 9/16
C5-5DCD	10 13/16	3	3 1/8
C2-6HDCD	10 25/32	2	3 9/16
C2-6RDCD	10 25/32	2	3 9/16
C2-7	5 3/8	2	5 5/8
C5-7	9 3/16	3	8 7/8
C2-8	5 7/8	2	5 5/8
C5-8	6 1/4	3	8 7/8
C2-9H	6 1/4	2	5 5/8
C2-9R	6 1/4	2	8 7/8
C2-10H	6 1/4	2	5 5/8
C2-10R	6 1/4	2	8 7/8

**Actuators**

The Capsula line offers a wide variety of actuator styles including single & double air piloting, hand lever operators, and single & double solenoid piloting.

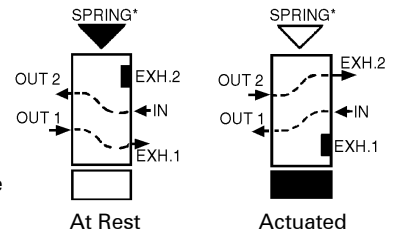
**Flow Patterns**



Capsula valves are 4-way, 5 ported directional control valves. This means that they have one inlet, 2 pressure outputs, and 2 exhaust ports. Dual exhausts facilitate individual flow control of each output port and allow dual pressure and diverter hooksup.

**Two Position Models**

Whenever the inlet is charged, flow will occur at one output port or the other.

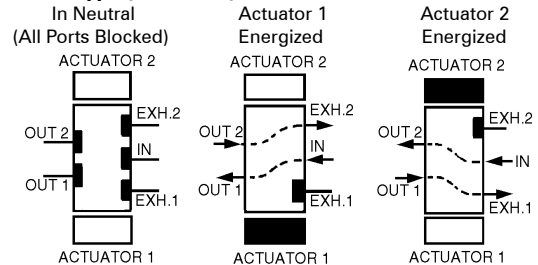


\*On double solenoid or double air piloted models, the second actuator replaces the spring.

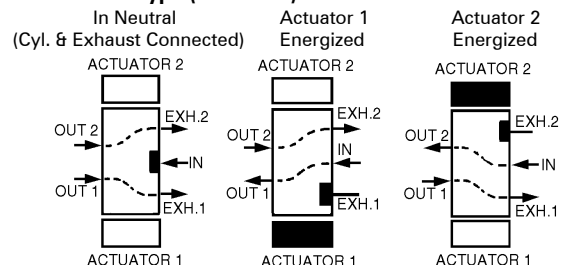
**Three Position Models**

Whenever the inlet is charged and neither actuator is signalled, both output ports will either be blocked (pressure held) or exhausted (pressure released). Pressure held models allow a cyl. to be "inched" along. Pressure released models allow the cylinder piston to float in neutral.

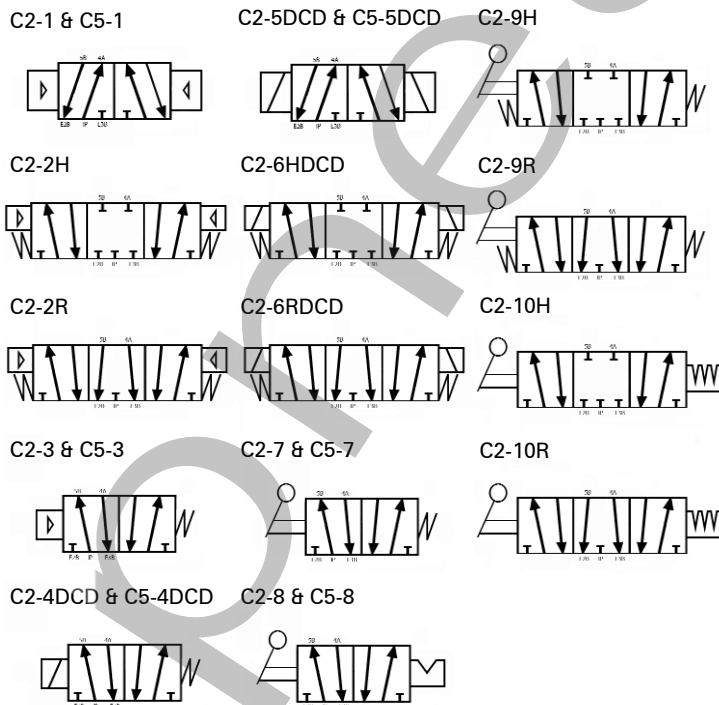
**Pressure Held Type (H Models)**



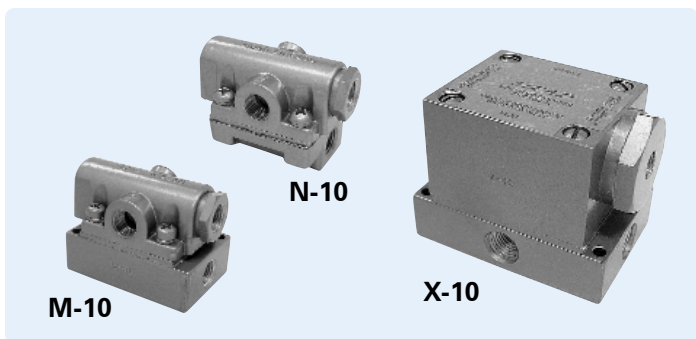
**Pressure Release Type (R Models)**



**Valve Symbols**



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**Built-In Speed Controls**

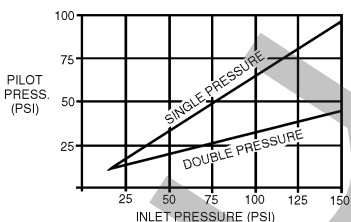
Dura-matic 4-way valves not only control cylinder direction but also control cylinder rod speed. Most models include easy-to-use built-in flow controls that permit the user to establish cylinder speeds right at the directional valve.

**Remote Air Piloting**

Air piloting is a simple and economical way to operate cylinders or other air driven devices; it eliminates the need for electric wiring or solenoids. Dura-matic models are available as either pressure or bleed remote piloting depending upon the model selected. Single piloted models require one remote pilot valve and double piloted models require two.

**Pressure Piloted Valves:**

These valves shift when pressurized air travels from a remote pilot valve to the pilot port of the Dura-matic valve. The table shows the minimum allowable pilot pressures.



**Bleed Piloted Valves:**

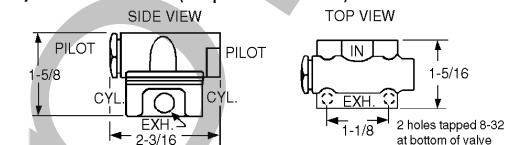
Bleed piloted models output air from the pilot port(s). When the remote pilot valve is actuated the air is exhausted, causing the valve to shift. In contrast to pressure piloting, bleed pilot valves do not need separate air supplies. However, they do continue to bleed air as long as they are actuated. Below are two remote bleed pilot valves:

Model	Description	Length	Width
404A	Bleed Limit Valve; 1/8" NPT Fitting	2 1/4"	1/2" Hex
405A	Bleed Limit Valve; 1/4" OD Tubing	2 1/4"	1/2" Hex

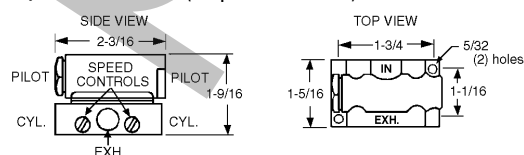
A wide variety of pilot operators are provided in the Micro-Line valves section (pages 26-27). This line of valves can be used to remotely pilot either the pressure or the bleed type.

**Dimensions**

**L-10, N-10, T-10 and V-10 (all ports 1/8" NPT)**



**K-10, M-10, O-10 and U-10 (all ports 1/8" NPT)**



Size (-)	Model	Function	Flow*	C <sub>v</sub>
1/8	K-10	Single Pressure	13.6	.24
1/8	M-10	Double Pressure	13.6	.24
1/8	O-10	Single Bleed	13.6	.24
1/8	U-10	Double Bleed	13.6	.24
1/4	W-10	Single Pressure	48.5	.63
1/4	X-10	Double Pressure	48.5	.63
1/4	Y-10	Single Bleed	48.5	.63
1/4	Z-10	Double Bleed	48.5	.63
1/8	L-10‡	Single Pressure	10.1	.11
1/8	N-10‡	Double Pressure	10.1	.11
1/8	T-10‡	Single Bleed	10.1	.11
1/8	V-10‡	Double Bleed	10.1	.11

\* Flow at 100 PSI Inlet pressure (in SCFM)

‡ These models do not have built-in flow controls

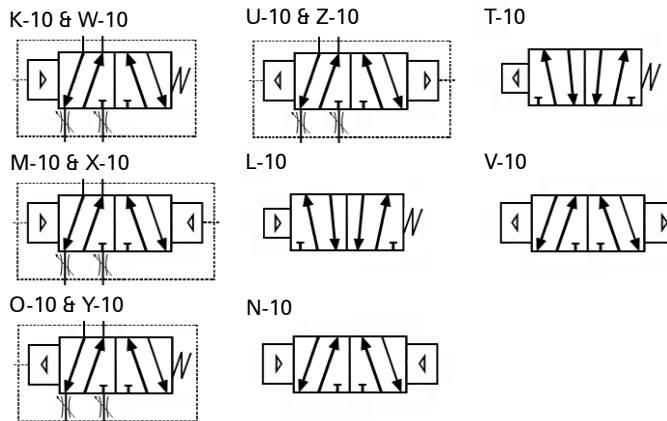
**Technical Specifications**

<b>Pressure :</b>	20 to 150 PSI (min. 30 PSI on W-10)
<b>Temperature :</b>	-40°F to +150°F
<b>Lubrication:</b>	Petroleum base oil
<b>Filtration:</b>	40 micron

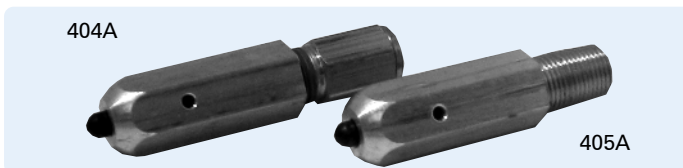
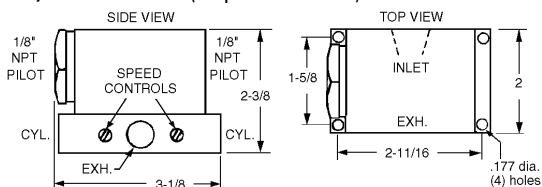
**Construction**

<b>Type :</b>	Slide (wear compensating nylon)
<b>Dynamic Seals :</b>	Buna N Block Vs
<b>Plate:</b>	Hardened and lapped aircraft quality steel
<b>Exhaust Ports:</b>	Common to both cylinder ports
<b>Speed Controls:</b>	Needle type with check valve to allow free out flow and controlled exhaust flow

**Valve Symbols**



**W-10, X-10, Y-10 and Z-10 (all ports 1/4" NPT)**







### Reduce The Effects Of Repetitive Motion

Many machine operators are required to operate air powered equipment hundreds or thousands of times per day. These types of routines can result in repetitive motion disorders such as Carpal Tunnel Syndrome. The debilitating effects usually result in increasing worker compensation claims and declining employee productivity.

Ergonomically designed to respond to extremely low actuation forces, Mead's Low Stress actuators require as little as 6 ounces of force to initiate a signal. This valve will dramatically reduce the demands on your workers' hands, wrists and arms.

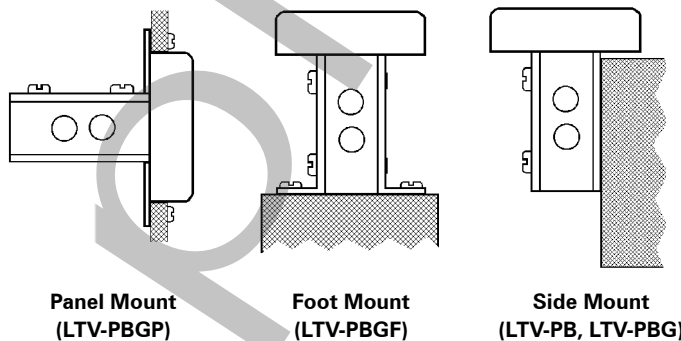
### How To Order

Three actuator stickers (red, green & black) are included with each valve. All models may be configured 3-way normally open, 3-way normally closed or 4-way.

Model #	Description
LTV-PB	Basic Valve (Unguarded); For Side Mounting
LTV-PBG	Valve with Button Guard; For Side Mounting
LTV-PBGF	Valve with Button Guard; For Foot Mounting
LTV-PBGP	Valve with Button Guard; For Panel Mounting

### Mounting Options

The Low Stress Series allows you to choose between three distinct mounting options. Mounting holes are located in the valve body for standards side mounting. For foot bracket or panel mounting, be sure to specify the proper model number, listed below.

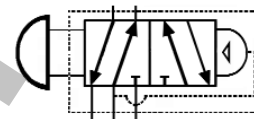


### Operating Specifications

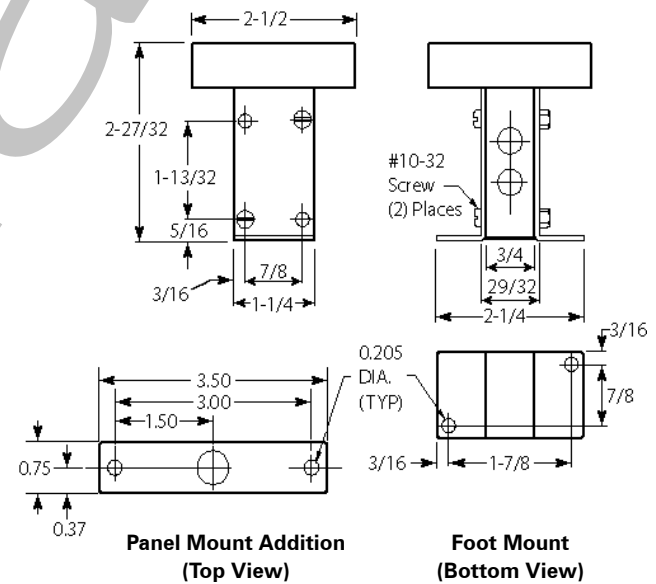
LTV Low Stress valves are ported 1/8" NPT. They are shipped with a 3-way normally closed flow pattern for pilot applications, but can be easily converted to 3-way normally open or 4-way flow by removing a port plug.

Technical Specifications	
Temperature :	0°F to 115°F
Pressure:	25 - 125 PSI air
Filtration:	Standard 40 micron. filter recommended to prolong seal life
Lubrication:	Required
Flow at 100 PSI:	14 SCFM
C <sub>v</sub> Factor:	0.24

### Valve Symbol - All Models

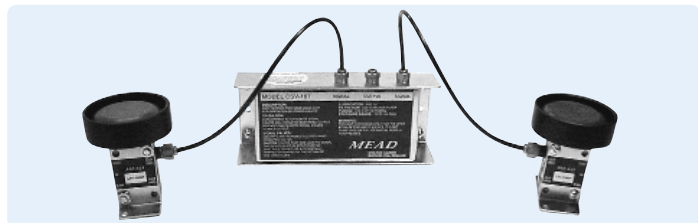


### Dimensions



### Low Stress Two-Hand Control

To provide safer operation of assembly equipment and other machinery use the LTV Low Stress valves with the CSV-107 two-hand control unit. When used as directed, this unit demands concurrent actuation from two remote inputs before a signal can be initiated. Further, the release of one or both inputs immediately stops the output signal. The unit cannot recycle until both valves are again simultaneously actuated. The CSV-107 requires no electrical connections. For more information regarding the CSV-107, please see page 60.



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**LTV-5**  
Pin Plunger



**LTV-10**  
Straight Leaf



**LTV-15**  
Roller Leaf



**LTV-20**  
One-Way Roller Leaf



**LTV-25\***  
Roller Plunger



**LTV-30\***  
Cross Plunger



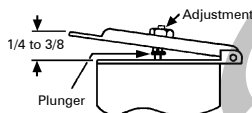
\* For 15/32" panel openings; 15/32-32 UNS

**Light-Touch, Snap-Acting Control Valves**

Mead's LTV valves are compact 1/8" ported 4-way valves that may be actuated by hand, remote air signal, electric signal or mechanically by a machine element. They are ideal for powering small or medium sized cylinders and for piloting larger valves. Some models require as little as 4 ounces of force and .010" of plunger travel to actuate. See the chart on the opposite page for individual valve specifications.

**Micrometer Trip Position Adjustment Available On LTV-10, LTV-15 and LTV 20**

An optional screw adjustment on the valve lever allows the user precision control of the valve actuator. Specify LTV-10A, LTV-15A, or LTV-20A.



**DIN Solenoid Connectors**

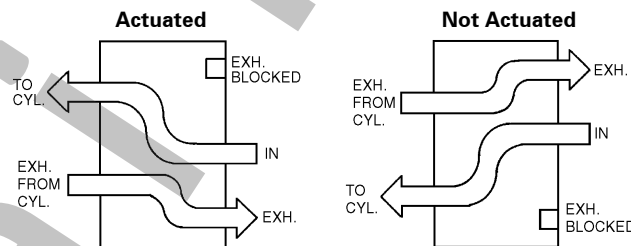
Electrically actuated LTV valves utilize DIN type solenoids. DIN solenoids feature a totally encapsulated coil with 3 prongs, allowing fast and easy connections. DIN connectors are ordered separately. Mead offers 3 types of DIN connectors to facilitate connections to the solenoid. A full description of these connectors can be found on page 66.



Solenoid shown with connector PVD1 (sold separately)

**LTV Flow Patterns**

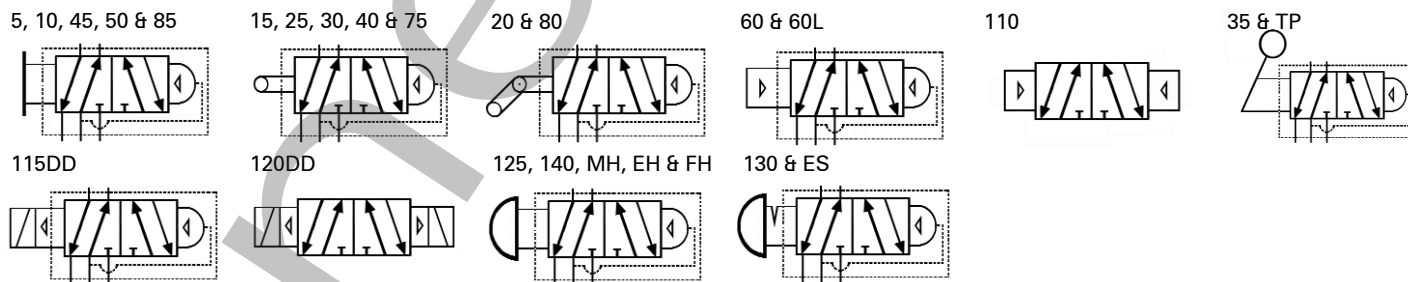
For all models, except LTV-60, which is opposite.



**General Specifications**

<b>Pressure Range:</b>	25 to 125 PSI (Solenoid models to 100 PSI)
<b>Temperature:</b>	0°F to 115°F
<b>Flow:</b>	0.24 C <sub>v</sub>
<b>Flow at 100 PSI:</b>	14 SCFM
<b>Ports:</b>	1/8" NPT Standard; LTV-60 and LTV-110 pilot ports are 10-32
<b>Lubrication:</b>	Required
<b>Filtration:</b>	40 micron
<b>Body:</b>	Cast Aluminum
<b>Seals:</b>	Buna N
<b>Spool:</b>	Aluminum
<b>Response:</b>	20-30 ms

**Valve Symbols** (Only Model Numbers are indicated.)



**LTV-75**  
Roller



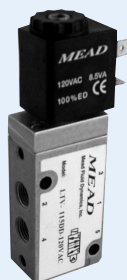
**LTV-80**  
One-Way Roller



**LTV-85**  
Extended Rod (6")



**LTV-115DD**  
Single Solenoid



**LTV-120DD**  
Double Solenoid



**LTV-125, LTV-130**  
Knob\* (LTV-125 has threaded stem)



\* For 15/32" panel openings; 15/32-32 UNS

**LTV-35\***  
Flip Toggle



**LTV-40\***  
Ball Roller



**LTV-45\***  
Straight Plunger



**LTV-50**  
Fingertip Lever



**LTV-60, Single Pressure**  
**LTV-110, Double Pressure**

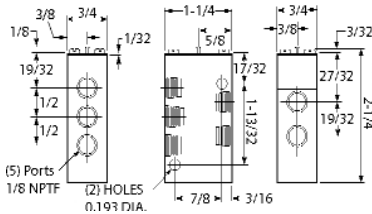


**LTV-60L**  
Low Pressure



\* For 15/32" panel openings;  
15/32-32 UNS

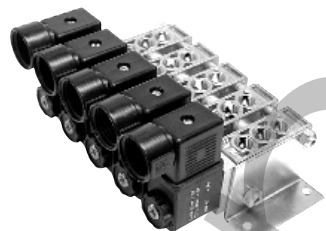
**Basic Dimensions**



Note: Envelope dimensions of valves with actuators are shown in the chart on the right.

**LTV Valve Stacks**

Stacked valves reduce piping requirements by eliminating the need for a separate air supply to each valve. All LTV valves are stackable except LTV-75, 80, 85, 140, MH, TP, EH, FH & ES. When LTV-50, LTV-115DD or LTV-120DD valves are stacked 1/4" spacers are added between valves. To order, add "M" to the model number, specify number, type and position of valves.



Solenoids shown here with connector PVD1 (sold separately)

Model	Actuator	Return	Act. Force @ 80 PSI	Act. Stroke Distance (")	Leng. (")	Width (")	Hgt. (")
LTV-5	Pin Plunger	Air Spring	13 oz.	.016 / .094	1 1/4	3/4	2 3/8
LTV-10	Straight Leaf	Air Spring	5.5 oz.	.016 / .156	2 3/32	3/4	2 1/2
LTV-10A	Adjustable Leaf	Air Spring	5.5 oz.	.016 / .156	2 3/32	3/4	2 5/8
LTV-15	Roller Leaf	Air Spring	5.5 oz.	.016 / .156	2 5/32	3/4	2 7/8
LTV-15A	Adjustable Roller Leaf	Air Spring	5.5 oz.	.016 / .156	2 5/32	3/4	3
LTV-20	1-Way Roller Leaf	Air Spring	5.5 oz.	.016 / .156	2 3/32	3/4	3 11/32
LTV-20A	Adjustable Roller Leaf	Air Spring	5.5 oz.	.016 / .156	2 3/32	3/4	3 15/32
LTV-25	Roller Plunger	Air Spring	13 oz.	.016 / .094	1 1/4	3/4	3 5/8
LTV-30	Cross Plunger	Air Spring	13 oz.	.016 / .094	1 1/4	3/4	3 5/8
LTV-35	Flip Toggle	Manual	9.25 oz.	30° / -	1 1/4	3/4	3 25/32
LTV-40	Ball Roller	Air Spring	13 oz.	.016 / .094	1 1/4	3/4	3 1/32
LTV-45	Straight Plunger	Air Spring	13 oz.	.016 / .094	1 1/4	3/4	3 11/32
LTV-50	Fingertip Lever	Air Spring	5.5 oz.	.016 / .156	2 17/32	3/4	2 11/16
LTV-60+	Single Pressure~	Air Spring	-	- / -	1 1/4	3/4	2 11/32
LTV-60L*	Low Pressure	Air Spring	-	- / -	1 1/4	3/4	3 3/32
LTV-75	Heavy-Duty Roller	Air Spring	14 oz.	.031 / .313	2 7/32	3/4	4 5/32
LTV-80	Heavy-Duty 1-Way Roller	Air Spring	14 oz.	.031 / .313	2 13/32	3/4	4 15/32
LTV-85	Heavy-Duty Extended Rod	Air Spring	4 oz.	.125 / .500	6 1/4	3/4	3 17/32
LTV-110	Double Pressure~	Ext. Air Pilot	-	- / -	1 1/4	3/4	2 11/32
LTV-115DD**	Solenoid (DIN)	Air Spring	-	- / -	1 5/8	7/8	3 9/32
LTV-120DD**	Solenoid (DIN)	Solenoid	-	- / -	1 5/8	7/8	4 19/32
LTV-125	Knob	Air Spring	13 oz.	.016 / -	1 1/4	5/8	3 19/32
LTV-130	Knob	Manual	2 lbs.	.094 / .125	1 1/4	5/8	3 9/32
LTV-140	Palm	Air Spring	13 oz.	.016 / .094	1 3/8	1 3/8	3 25/32
LTV-MH ^	Mushroom Head	Air Spring	1 lb.	.218 / .047	1 5/8	1 5/8	4 3/16
LTV-TP ^	Two Position	Manual	-	- / -	1 5/8	1 5/8	4 5/16
LTV-EH ^	Extended Head	Air Spring	-	.218 / .049	1 5/8	1 5/8	3 13/16
LTV-FH ^	Flush Head	Air Spring	-	.218 / .049	1 5/8	1 5/8	3 3/4
LTV-ES	Emergency Stop (Red)	Manual	2 lbs.	.218 / .125	2 1/2	2 1/2	4 9/32

\* Minimum pilot pressure of 25 PSI required.

\*\* Specify voltage: 12DC, 24DC, 24AC or 120AC

^ Specify actuator color: red, green or black

+ Pilot pressure must equal at least 60% of inlet pressure.

~ 10-32 pilot port

**LTV-140\***  
Palm



**LTV-MH\*\***  
Mushroom Head



**LTV-TP\*\***  
Two Position



**LTV-EH\*\***, Extended Head  
**LTV-FH\*\***, Flush Head



**LTV-ES**, Emergency Stop



\* For 15/32" panel openings;  
15/32-32 UNS \*\* For 1 3/16" panel openings

MV 3-Way Switches

Reference

Control Valves

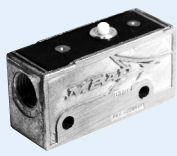
Cylinders

Specialty Valves

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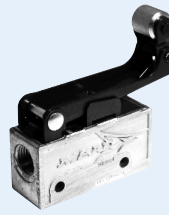
MV-5



MV-10



MV-15



MV-20



MV-25\*

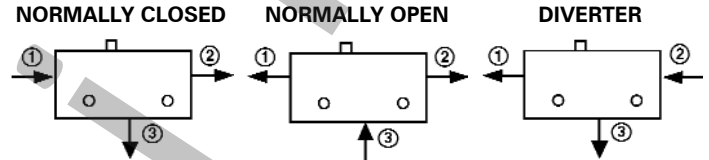


MV-30\*

\* For 15/32" panel openings; 15/32-32 UNS

Mead's MV air switches are 3-way 1/8" ported air pilot valves that are identical in size, actuating style, and mounting characteristics to most industrial type electric limit switches. Use them in place of electric limits to save on hookup cost and eliminate spark hazard. MV valves simplify circuits by eliminating the need for wire shielding, transformers, and solenoids.

The MV air switch may be piped normally closed, normally open, or as a diverter. These alternatives are described in detail below.

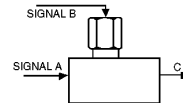


Pressurized air flows from 1 to 2 when button is pushed.  
Exhaust air flows from 2 to 3 when button is released.

Pressurized air flows from 3 to 2 when button is not pushed.  
Exhaust air flows from 2 to 1 when button is pressed.

Pressurized air flows from 2 to 1 when button is pushed. This hookup does not provide for exhaust.

Perform "AND" Logic Function With MV-60



This hookup provides that flow will occur at C only when air signals are received at A and B. The MV-60 is a 3-way air piloted valve.

Add Push to Connect 1/4" Fittings



MV-45-C4

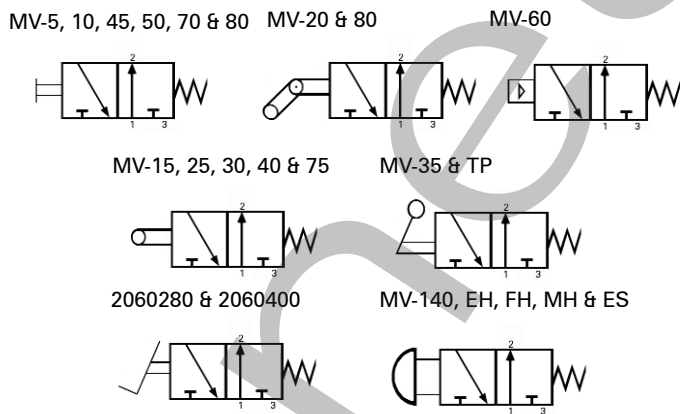


MV-25-C5

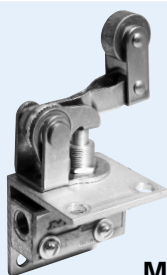
MV valves are available with brass push to connect fittings. For normally closed applications, specify "C4". The valve will be provided with a fitting for the inlet and outlet; the valve exhausts to atmosphere. For Normally Closed or Diverter applications, specify "C5" (all ports will have push to connect fittings). Any MV valve may utilize this option. The valve's body height increases by 5/16" and the mounting holes are 0.532" apart.

General Specifications	
Pressure Range:	Vacuum to 120 PSI
Media:	Air or Inert Gas
Flow:	0.11 C <sub>v</sub>
Flow at 100 PSI:	6 SCFM
Ports:	1/8" NPT
Cycle Life:	7-10 million
Force to Actuate:	As Low as 6.4 Ounces
Max. Ambient Temp.:	115°F
Lubrication:	Not Required
Filtration:	40 Micron
Seals:	Viton
Spool:	Dupont Teflon®
Body:	Cast Zinc

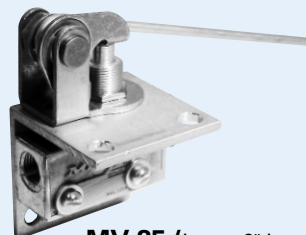
Valve Symbols



MV-75



MV-80



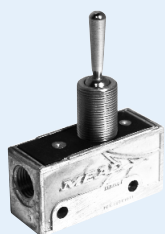
MV-85 (Lever 6" long)



MV-140\*

\* For 15/32" panel openings; 15/32-32 UNS





**MV-35\***

Locks In Down Position



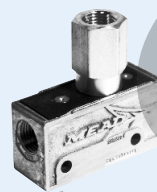
**MV-40\***



**MV-45\***



**MV-50**



**MV-60**

1/8" NPT Pilot Port

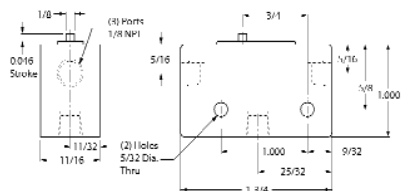


**MV-70**

Lever 4 1/4" long

\* For 1 5/32" panel openings; 1 5/32-32 UNS

**Basic Valve Dimensions**



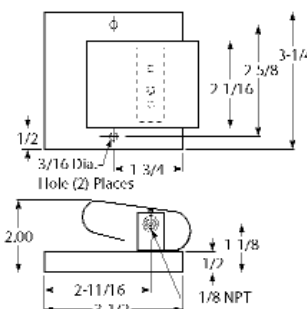
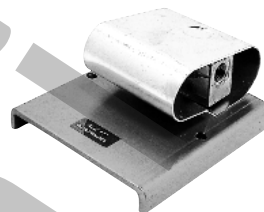
Envelope dimensions of valves are shown in the chart below.

Model	Actuator	Act. Force lbs. @ 100 PSI		Act. Stroke Distance			Envelope Dimensions		
		NC	NO	To Crack Open	To Full Open	To Over Travel	Len.	Wid.	Hgt.
MV-5	Pin Plunger	2.5	3.3	.035	.046	.035	1 3/4	1 1/16	1
MV-10	Straight Leaf	1.2	1.5	.100	.137	.079	2 3/16	1 1/16	1 1/4
MV-15	Steel Roller	1.0	1.3	.100	.137	.079	2 3/16	1 1/16	1 5/8
MV-20	1-Way Roller Leaf	1.0	1.3	.100	.137	.079	2 3/16	1 1/16	2 1/16
MV-25	Roller Plunger	2.8	3.5	.035	.046	.155	1 3/4	1 1/16	2 3/16
MV-30	Cross Roller	2.8	3.5	.035	.046	.155	1 3/4	1 1/16	2 3/16
MV-35	Flip Toggle	1.5	2.3	35°	35°	35°	1 3/4	1 1/16	2 5/16
MV-40	Ball Roller	2.5	3.3	.035	.046	.035	1 3/4	1 1/16	1 19/32
MV-45	Straight Plunger	2.5	3.3	.035	.046	.155	1 3/4	1 1/16	1 29/32
MV-50	Fingertip Lever	1.0	1.3	.100	.137	.079	2 5/8	1 1/16	1 3/8
MV-60	Pressure Piloted	40*	40*	-	-	-	1 3/4	1 1/16	1 5/8
MV-70	Extended Leaf	0.7	1.0	.255	.315	.195	4 1/2	1 1/16	1 9/16
MV-75	HD Roller Leaf	2.8	3.5	.093	.119	.129	2 1/4	1 3/4	3 7/16
MV-80	HD 1-Way Roller	2.8	3.5	.093	.119	.129	2 1/8	1 3/4	4 1/8
MV-85	HD Extended Rod	0.4	0.6	.637	.782	.330	6 1/4	1 3/4	3 1/8
MV-90	Nylon Roller	1.0	1.3	.100	.137	.079	2 3/16	1 1/16	1 5/8
MV-140	Palm Actuator	2.5	3.3	-	-	-	1 3/4	1 3/8	2 1/4
MV-MH	Mushroom Head	-	-	-	-	-	1 3/4	1 1/2	2 5/8
MV-TP	Two Position	-	-	-	-	-	1 3/4	1 1/2	3 1/32
MV-FH	Flush Head	-	-	-	-	-	1 3/4	1 1/2	2 7/32
MV-EH	Extended Head	-	-	-	-	-	1 3/4	1 1/2	2 13/32
MV-ES	Emergency Stop	-	-	-	-	-	2 1/2	2 1/2	2 7/8

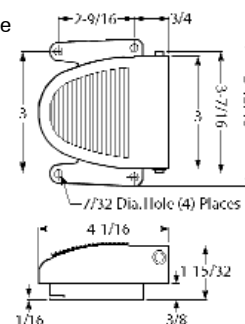
\* PSI; NO=Normally Open, NC= Normally Closed

**Foot Operated Models**

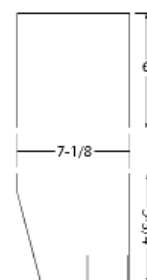
**Model #2060280**  
Model has two 1/8" NPT ports



**Model #2060400**  
Model has plug-in fittings for 1/4" OD tube



**Model #2060400G (Guarded)**



**NOTE:** 2060400 and 2060400G are provided with push to connect fittings as the C4 option (described on opposite page). For Normally Open applications or where all ports are needed, specify either 2060400-C5 or 2060400G-C5.



**MV-MH‡**



**MV-TP‡**



**MV-FH (Button Flush)‡**  
Specify Red, Green or Black



**MV-EH (Button 5/16" Up)‡**  
Specify Red, Green or Black



**MV-ES‡**  
Red & Spring Return Only

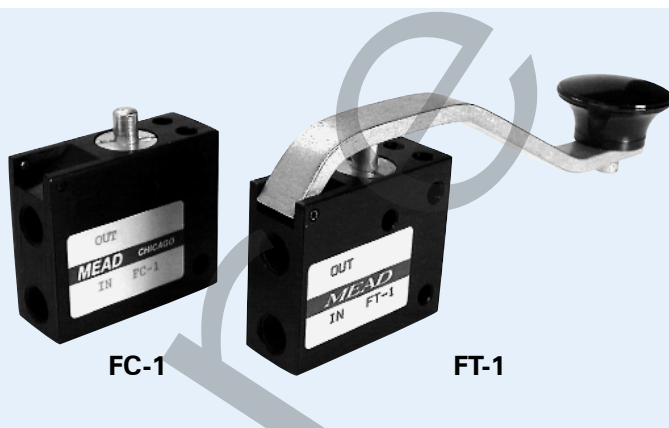
‡ For 1 3/16" panel opening



These compact air valves provide economical cam, fingertip, palm, hand, and foot actuation. 3-way models are ideal for actuating single-acting cylinders and 4-way directional valves. 4-way models are suitable for the control of double-acting cylinders. Three types of spool designs are available.

**General Specifications**

- Media:** Air to 150 PSI
- Temperature Range:** -40°F to +250°F
- Cam Buttons:** Hardened Steel
- Spring:** Stainless Steel
- Seals:** Buna
- Body:** Machined Aluminum
- Body (4B-1, 4W-1, 201 and 3C-1):** Die Cast Zinc



**Poppet Spool Type**

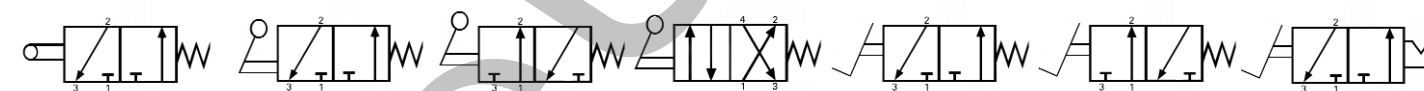
A high degree of reliability is achieved by these valves with the simple, yet efficient, poppet type design. A short operating stroke assures instantaneous response while minimizing operator fatigue.

Model Number	Actuator	Style	Port (NPT)	Flow (Cv)	Pre-Travel	Over Travel	Force Req. @ 100 PSI
FC-1	Cam Button	3-Way NC	1/8"	0.13	3/64"	None	17lbs.
FC-2A	Cam Button	3-Way NO	1/8"	0.32	1/8"	1/8"	11lbs.
FC-101	Cam Button	3-Way NC	3/8"	1.15	1/16"	None	30lbs.
FT-1	Fingertip Lever	3-Way NC	1/8"	0.13	1/4"	None	4lbs.
FT-2A	Fingertip Lever	3-Way NO	1/8"	0.32	7/8"	1/8"	2lbs.
FT-4	Fingertip Lever	4-Way	1/8"	0.16	7/8"	None	3lbs.
FT-101	Fingertip Lever	3-Way NC	3/8"	1.15	3/16"	None	8lbs.
201	Foot Treadle	3-Way	3/8"	1.15	5/8"	None	7 1/2 lbs.



**Valve Symbols**

FC-1, FC-2A & FC-101    FT-1 & FT-101    FC-2A    FT-4    201 (NC Setup)    201 (NO Setup)    201 (Detent Setup)



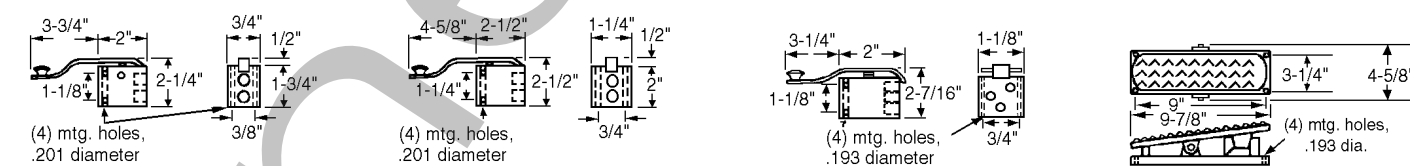
**Dimensions**

**Models FC-1, & FC-2A, FT-1, FT-2A**

**Models FC-101 & FT-101**

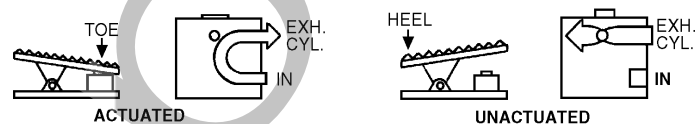
**Model FT-4**

**Model 201**



**Flow Patterns**

**Model 201**

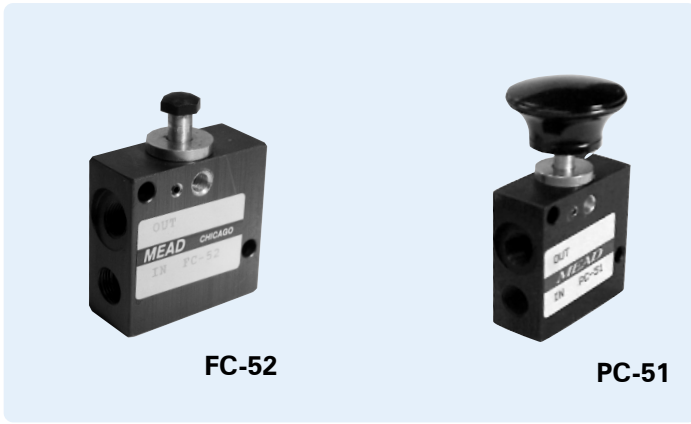


Model 201 may be adjusted in seconds during installation to be detented or spring return. The valve may be set up as either normally open or normally closed for spring return operation.



**201**

Reference  
Control Valves  
Cylinders  
Specialty Valves  
Production Devices  
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Index



FC-52

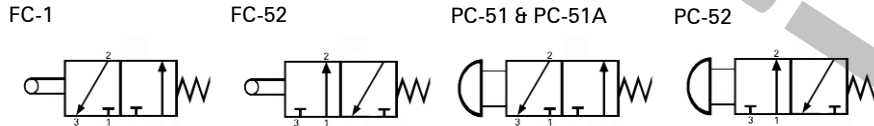
PC-51

Balanced Spool Type

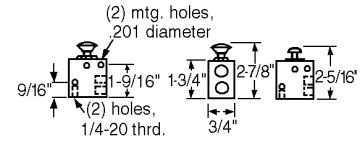
Actuating Force remains constant regardless of air pressure due to the balanced spool design. This series is particularly suited for use in situations where a high rate of flow is required through a 3-Way cam or palm button valve. Additionally the spool design eliminates the momentary loss of pressure due to valve shifting.

Model Number	Actuator	Style	Port (NPT)	Flow (Cv)	Pre-Travel	Over Travel	Force Req. @ 100 PSI
FC-51	Cam Button	3-Way NC	1/8"	0.81	1/8"	1/8"	7lbs.
FC-52	Cam Button	3-Way NO	1/8"	0.68	1/8"	1/8"	5lbs.
PC-51	Palm Button Spr. Ret.	3-Way NC	1/8"	0.81	1/8"	1/8"	7lbs.
PC-51A	Palm Button Detent	3-Way NC	1/8"	0.81	1/8"	1/8"	3lbs.
PC-52	Palm Button	3-Way NO	1/8"	0.68	1/8"	1/8"	5lbs.

Valve Symbols



Dimensions



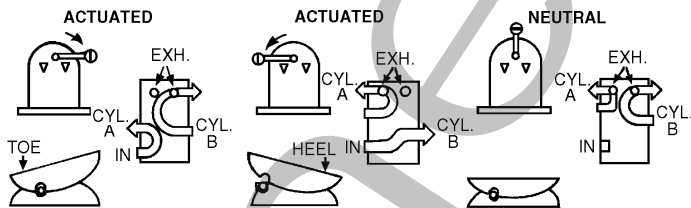
Spool Type - Rugged Conditions

Time-tested reliability is the trademark of these valves. Due to the unique design performance is not greatly affected by the use of unclean air and operation in chip and dirt-ridden environments.

Model Number	Actuator	Style	Port (NPT)	Flow (Cv)	Pre-Travel	Over Travel	Force Req. @ 100 PSI
3C-1	Cam Button	3-Way NC	1/4"	0.48	1/16"	None	9lbs.
4B-1	Hand	4-Way	1/4"	0.48	5/8"	None	5lbs.
4W-1	Foot Treadle	4-Way	1/4"	0.48	5/16"	None	18lbs.

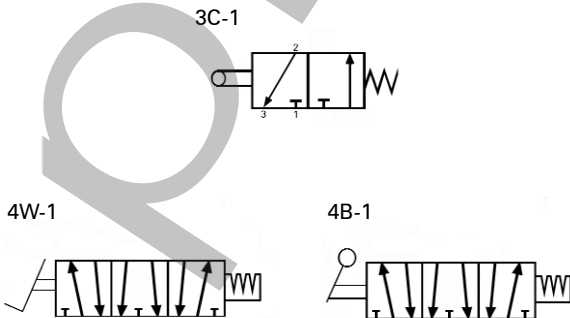
Flow Patterns

Models 4B-1 and 4W-1

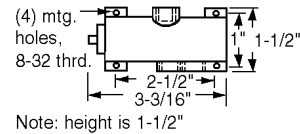


Note: In neutral, cylinder ports are dumped to atmosphere.

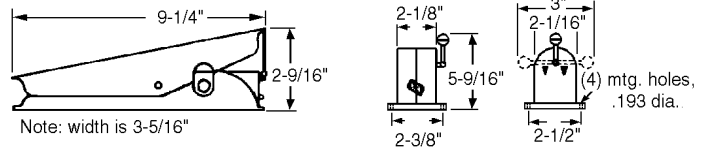
Valve Symbols



Dimensions



Note: height is 1-1/2"



Note: width is 3-5/16"