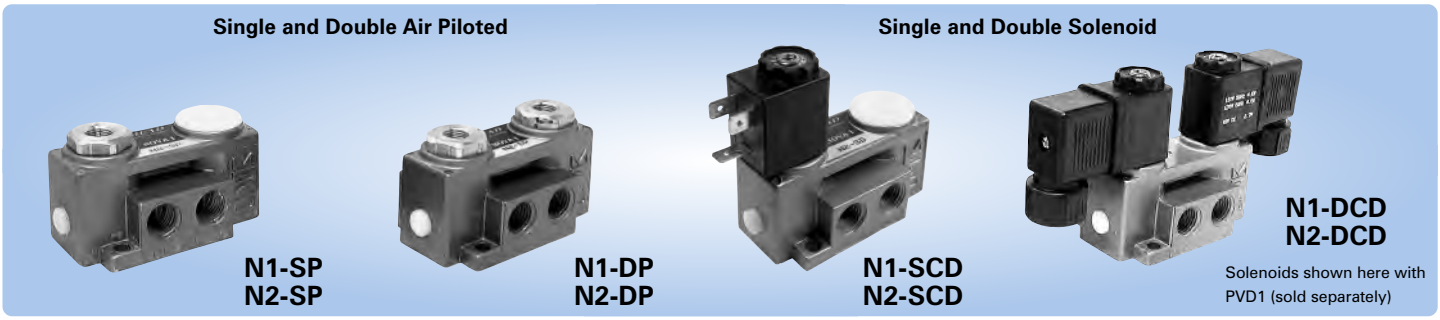
Nova



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 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

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.

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.

Operating Parameters N1	
Media:	Air or Inert Gas
Pressure:	Vacuum to 120 PSI
Port Size:	1/8" NPTF
Pilot Ports:	1/8" NPSF
Flow:	C_v = 0.7 (single valves)
	C_v = 0.9 (stacked valves)
Temperature:	0°F to 120°F
Lubrication:	Petroleum Base Oil
Filtration:	40 Micron Minimum
Sol Response:	30-40 ms
Seals:	Buna

Operating Parameters N2	
Media:	Air or Inert Gas
Pressure:	Vacuum to 120 PSI
Port Size:	1/4" NPTF
Pilot Ports:	1/8" NPSF
Flow:	C_v = 1.0 (single valves)
	C_v = 1.2 (stacked valves)
Temperature:	0°F to 120°F
Lubrication:	Petroleum Base Oil
Filtration:	40 Micron Minimum
Sol Response:	30-40 ms
Seals:	Buna

Ordering Example:

NEW!

N1 = 1/8" ports

N1-SCD - M - 24VAC

Base Model
Stacking Option
Voltage

N2 = 1/4" ports

N2-SCD - M - 24VAC

Base Model
Stacking Option
Voltage

Nova Specifications

N1 Model	N2 Model	Actuator	Return	Description	Min. Pilot Pressure	Available Voltages DC	Available Voltages AC	Wiring Type
N1-DP	N2-DP	Air Pilot	Air Pilot	Double Pressure Piloted	10PSI	-	-	-
N1-SP	N2-SP	Air Pilot	Spring	Single Pressure Piloted	40PSI	-	-	-
N1-DB	N2-DB	Bleed Pilot	Bleed Pilot	Double Bleed Piloted	40PSI	-	-	-
N1-HL	N2-HL	Hand Lever	Spring	Light 3lb. Touch	-	-	-	-
N1-PB	N2-PB	Push Button	Push Button	Detent	40PSI	-	-	-
N1-F4	N2-F4	Foot Pedal	Spring	Foot Valve w/Cover	-	-	-	-
N1-SCD*	N2-SCD*	Solenoid	Spring	DIN Connector Solenoid	40PSI	12-24	24-120-220-240	DIN*
N1-SX*	N2-SX	Solenoid	Spring	Explosion Proof	40PSI	-	120	Conduit
N1-DCD*	N2-DCD*	Solenoid	Solenoid	DIN Connector Solenoids	10PSI	12-24	24-120-220-240	DIN*
N1-DX	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.

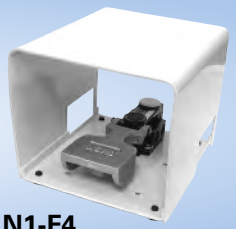
Double Push Button

N1-PB
N2-PB

Hand Lever

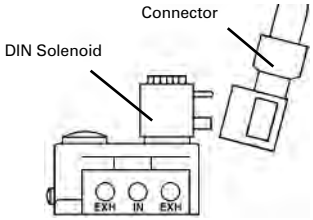
N1-HL
N2-HL

Foot Pedal



N1-F4
N2-F4

DIN Solenoid Connectors



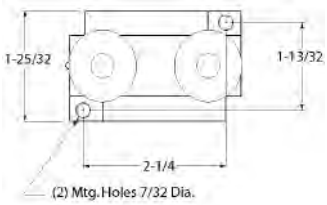
A DIN connector (ordered separately) quickly attaches to the solenoid's prongs and is secured by a single screw.

Model PVD1

Mead offers 3 types of 12mm industrial B-type 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 68.

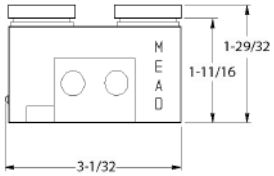
Dimensions

Basic Top View

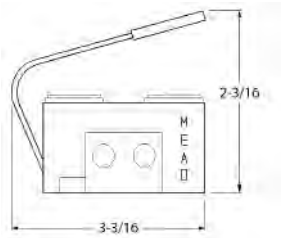


N1-HL & N2-HL

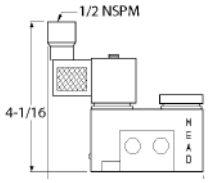
Models N1 & N2
SCD, DP, SP, DB, and PB



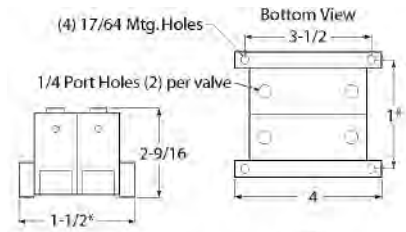
N1-SCD & N2-SCD (with connector)

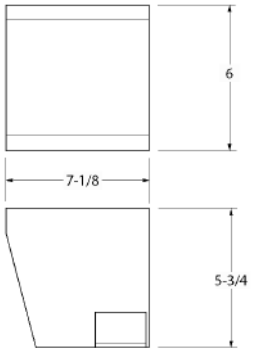


Stacks



N2-F4



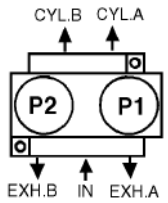


Stacking Options

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



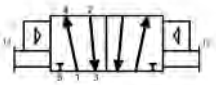
Single-actuated spring return models, including hand lever and foot pedal, have the inlet and Cyl. B ports connected when unactuated. On all double-actuated models, except (N1 or N2)-PB and (N1 or N2)-DB, signals at P1 cause output at Cyl. A and signals at P2 cause output at Cyl. B. On (N1 or N2)-PB and (N1 or N2)-DB models, the reverse occurs.

Easy To Repair

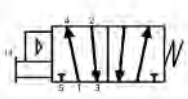
Nova valves are designed to permit complete replacement of all wearing parts in seconds without touching the piping or electrical wiring. All you need are a pair of snap ring pliers and a replacement spool.

Valve Symbols

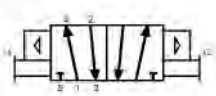
N1-DP & N2-DP



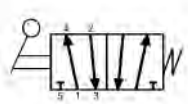
N1-SP & N2-SP



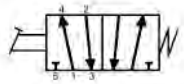
N1-DB & N2-DB



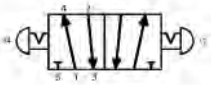
N1-HL & N2-HL



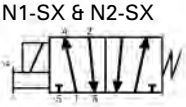
N2-F4



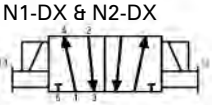
N1-PB & N2-PB



N1-SCD & N2-SCD
N1-SX & N2-SX

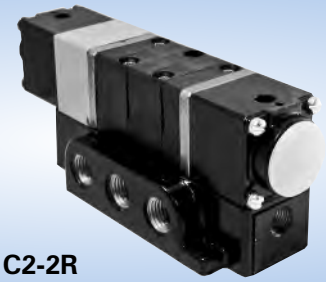


N1-DCD & N2-DCD
N1-DX & N2-DX

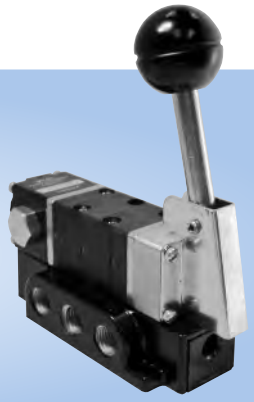


Capsula

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, 4-way, 5 port. Any valve module may be separated from its base in seconds without disturbing the piping.

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

Ordering Instructions - State model number and voltage.

C2-4DCD - 120AC

Base Model

Voltage

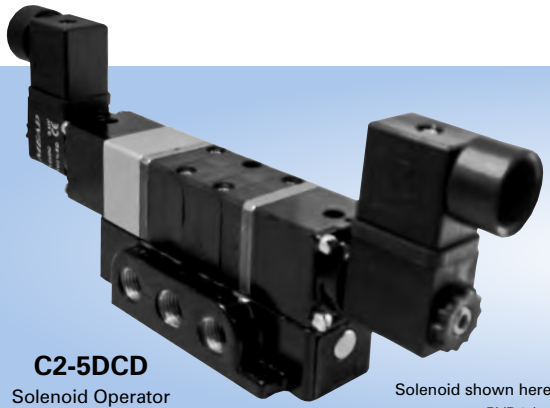
Model Number	Port Size	Actuator	Return	Description	Min. Pilot Press. (PSI)	Available Voltages DC	AC
C2-1	1/4	Air Pilot	Air Pilot	2-Position, Double Pressure Piloted	20	-	-
C5-1	1/2	Air Pilot	Air Pilot	2-Position, Double Pressure Piloted	20	-	-
C2-2H	1/4	Air Pilot	Spr. Center	3-Position, Double Pressure, 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	24-120-220-240
C5-4DCD	1/2	Solenoid	Spring	2-Position, Single DIN Solenoid	35	12-24	24-120-220-240
C2-5DCD	1/4	Solenoid	Solenoid	2-Position, Double DIN Solenoid	20	12-24	24-120-220-240
C5-5DCD	1/2	Solenoid	Solenoid	2-Position, Double DIN Solenoid	20	12-24	24-120-220-240
C2-6HDCD	1/4	Solenoid	Spr. Center	3-Position, Double DIN Solenoid, Pressure Held In Center	45	12-24	24-120-220-240
C2-6RDCD	1/4	Solenoid	Spr. Center	3-Position, Double DIN Solenoid, Pressure Released	45	12-24	24-120-220-240
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	-	-	-

* Explosion proof models available.
* Connector not included on solenoid models; see below.

DIN Solenoid Connectors

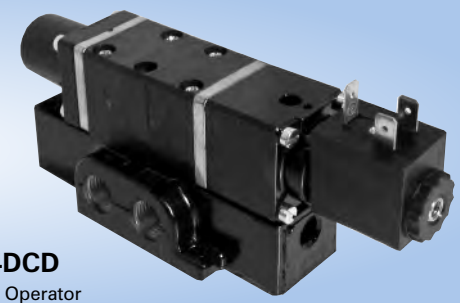
Model PVD1

Electrically actuated Capsula valves utilize a 12mm industrial B-type DIN type solenoid. 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 68.



C2-5DCD
Solenoid Operator

Solenoid shown here with (2) connectors, PVD1 (sold separately)

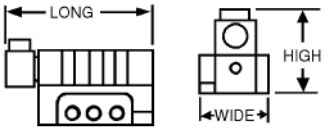


C2-4DCD
Solenoid Operator

Dimensions

2 mounting holes per valve:

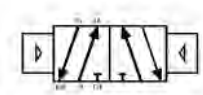
1/4" valves - 7/32" diameter
1/2" valves - 9/32" diameter



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

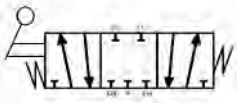
Valve Symbols

C2-1 & C5-1

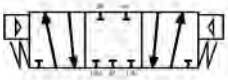


C2-5DCD & C5-5DCD

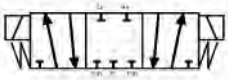
C2-9H



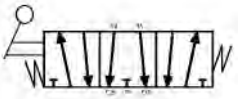
C2-2H



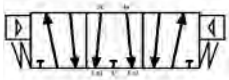
C2-6HDCD



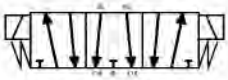
C2-9R



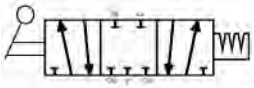
C2-2R



C2-6RDCD



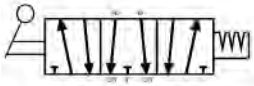
C2-10H



C2-3 & C5-3

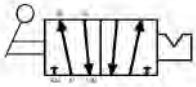
C2-7 & C5-7

C2-10R



C2-4DCD & C5-4DCD

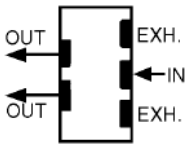
C2-8 & C5-8



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

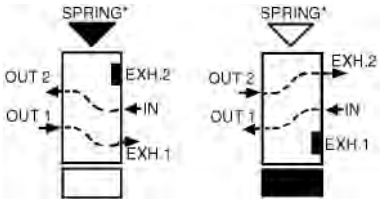


Capsula valves are 4-way, 5 ported directional control valves. This means that they have one inlet, 2 pressure outputs, and 2 exhaust ports. Dual exhausts facilitate individual flow control of each output port and allow dual pressure and diverter hookups.

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.



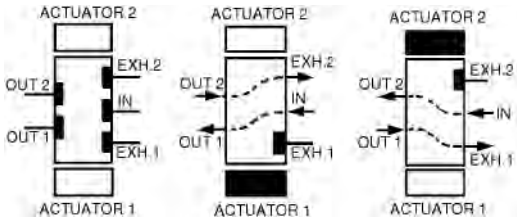
At Rest Actuated

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.

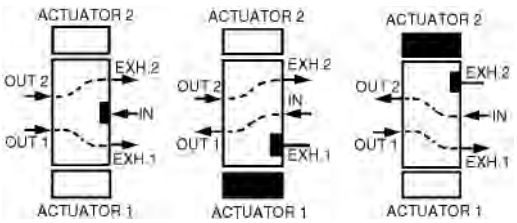
Pressure Held Type (H Models)

In Neutral (All Ports Blocked) | Actuator 1 Energized | Actuator 2 Energized

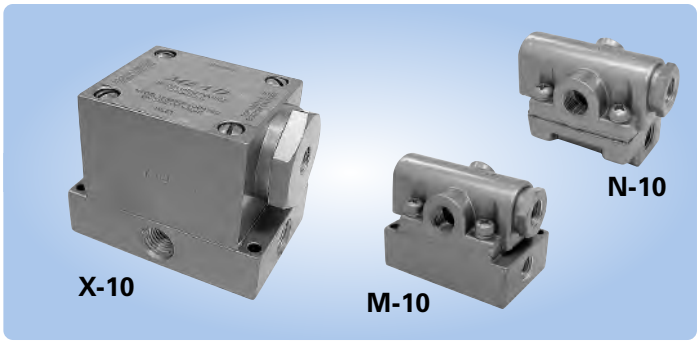


Pressure Release Type (R Models)

In Neutral (Cyl. & Exhaust Connected) | Actuator 1 Energized | Actuator 2 Energized



Dura-Matic 4-Way Valves



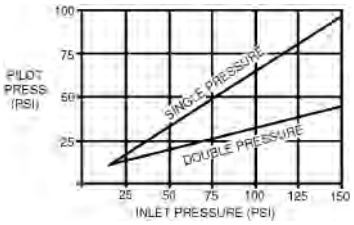
Built-In Speed Controls

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.



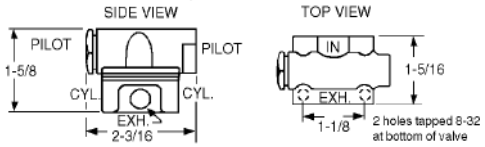
Bleed Piloted Valves:
Bleed piloted models output air from the pilot port(s). When the remote pilot valve is actuated the air is exhausted, causing the valve to shift. In contrast to pressure piloting, bleed pilot valves do not need separate air supplies. However, they do continue to bleed air as long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

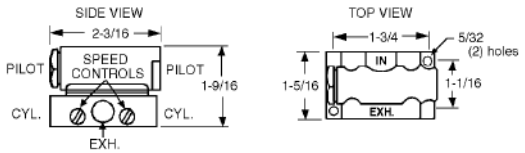
A wide variety of pilot operators are provided in the Micro-Line valves section (pages 26-27). This line of valves can be used to remotely pilot either the pressure or the bleed type.

Dimensions

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



K-10, M-10, 0-10 and U-10 (all ports 1/8" NPT)



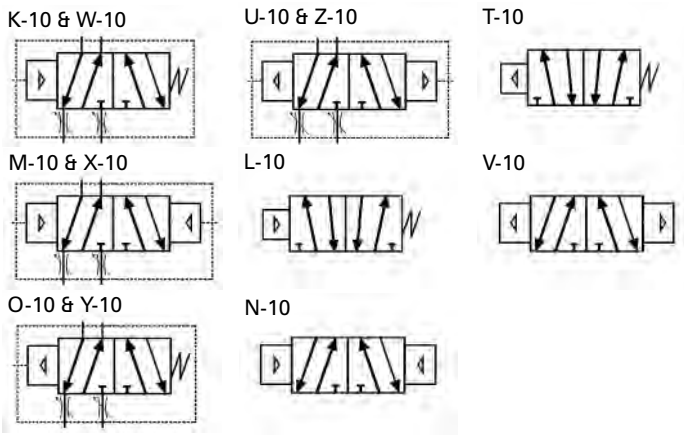
Size(")	Model	Function	Flow*	C_v
1/8	K-10	Single Pressure	13.6	.24
1/8	M-10	Double Pressure	13.6	.24
1/8	O-10	Single Bleed	13.6	.24
1/8	U-10	Double Bleed	13.6	.24
1/4	W-10	Single Pressure	48.5	.63
1/4	X-10	Double Pressure	48.5	.63
1/4	Y-10	Single Bleed	48.5	.63
1/4	Z-10	Double Bleed	48.5	.63
1/8	L-10‡	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

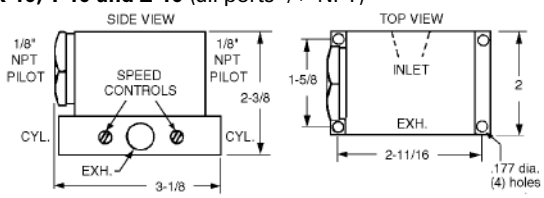
Technical Specifications	
Pressure :	20 to 150 PSI (min. 30 PSI on W-10)
Temperature :	-40°F to +150°F
Lubrication:	Petroleum base oil
Filtration:	40 micron

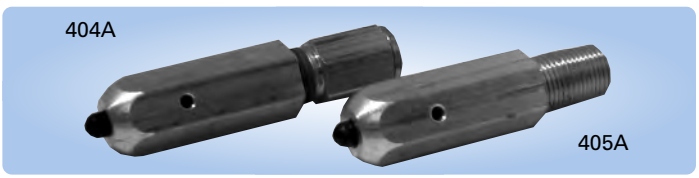
Construction	
Type :	Slide (wear compensating nylon)
Dynamic Seals :	Buna N Block Vs
Plate:	Hardened and lapped aircraft quality steel
Exhaust Ports:	Common to both cylinder ports
Speed Controls:	Needle type with check valve to allow free out flow and controlled exhaust flow

Valve Symbols

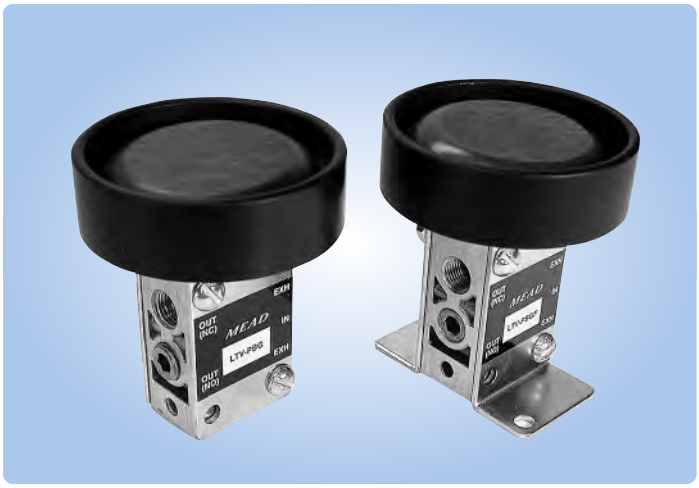


W-10, X-10, Y-10 and Z-10 (all ports 1/4" NPT)





Ergonomic Low Stress Air Valve



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.

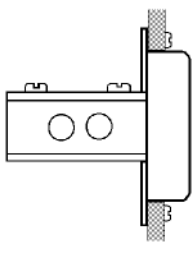
How To Order

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.

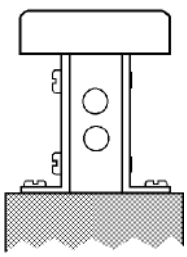
Model #	Description
LTV-PB	Basic Valve (Unguarded); For Side Mounting
LTV-PBG	Valve with Button Guard; For Side Mounting
LTV-PBGF	Valve with Button Guard; For Foot Mounting
LTV-PBGP	Valve with Button Guard; For Panel Mounting

Mounting Options

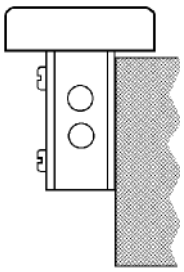
The Low Stress Series allows you to choose between three distinct mounting options. Mounting holes are located in the valve body for standard side mounting. For foot bracket or panel mounting, be sure to specify the proper model number, listed below.



Panel Mount (LTV-PBGP)



Foot Mount (LTV-PBGF)



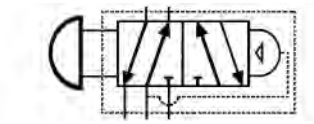
Side Mount (LTV-PB, LTV-PBG)

Operating Specifications

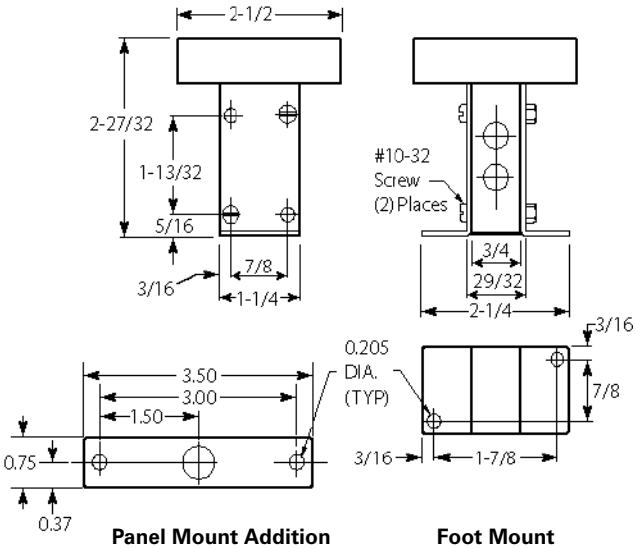
LTV Low Stress valves are ported 1/8" NPT. They are shipped with a 3-way normally closed flow pattern for pilot applications, but can be easily converted to 3-way normally open or 4-way flow by removing a port plug.

Technical Specifications	
Temperature :	0°F to 115°F
Pressure:	25 - 125 PSI air
Filtration:	Standard 40 micron. filter recommended to prolong seal life
Lubrication:	Petroleum based oil
Flow at 100 PSI:	14 SCFM
C_v Factor:	0.24

Valve Symbol - All Models



Dimensions



Panel Mount Addition (Top View)

Foot Mount (Bottom View)

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 63.

LTV

LTV-5 Pin Plunger

LTV-10 Straight Leaf

LTV-15 Roller Leaf
LTV-90 Nylon Roller

LTV-20 One-Way Roller Leaf

LTV-25* Roller Plunger

LTV-30* Cross Plunger

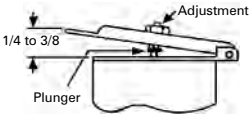
* For $^{15}/_{32}$" panel openings; $^{15}/_{32}$-32 UNS

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

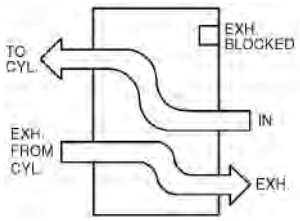
Electrically actuated LTV valves utilize DIN type solenoids. DIN solenoids feature a totally encapsulated coil with 3 prongs, allowing fast and easy connections. DIN connectors are ordered separately. Mead offers 3 types of DIN connectors to facilitate connections to the solenoid. A full description of these connectors can be found on page 68.

Solenoid shown with connector PVD1 (sold separately)

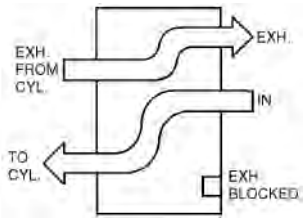
LTV Flow Patterns

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

Actuated



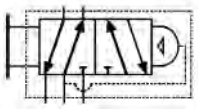
Not Actuated



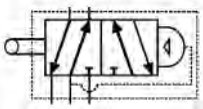
General Specifications	
Pressure Range:	25 to 125 PSI (Solenoid models to 100 PSI)
Temperature:	0°F to 115°F
Flow:	0.24 C_v
Flow at 100 PSI:	14 SCFM
Ports:	$^{1}/_{8}$" NPT Standard; LTV-60 and LTV-110 pilot ports are 10-32
Lubrication:	Petroleum Base Oil
Filtration:	40 Micron Minimum
Body:	Cast Aluminum
Seals:	Buna N
Spool:	Aluminum
Response:	20-30 ms

Valve Symbols (Only Model Numbers are indicated.)

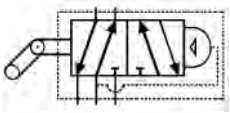
5, 10, 45, 50 & 85



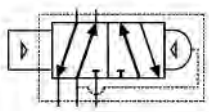
15, 25, 30, 40 & 75



20 & 80

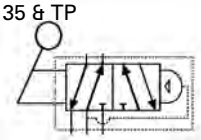


60 & 60L

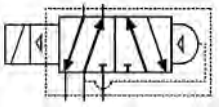


110

35 & TP



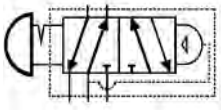
115DD



120DD

125, 140, MH, EH & FH

130 & ES



Solenoid Models:
24 VDC = 6.5 watts / .27 amp
120 VAC = 8.5 watts / .07 amps

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

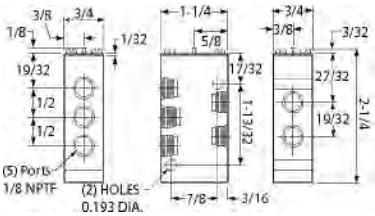
LTV-50 Fingertip Lever

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(") Full Open	Act. Stroke Distance(") Over Travel	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	Detent	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-90	Adjustable Roller Leaf	Air Spring	5.5 oz.	.016	.156	2 5/32	3/4	3
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	Detent	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	Detent	-	-	-	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)	Detent	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

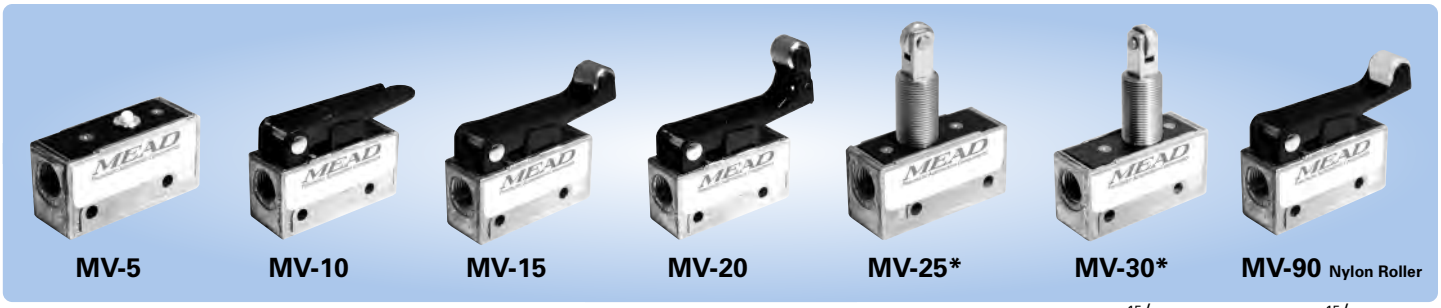
LTV-TP** Two Position Detent

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



MV-5 MV-10 MV-15 MV-20 MV-25* MV-30* MV-90 Nylon Roller

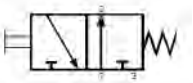
* For $^{15}/_{32}$" panel openings; $^{15}/_{32}$-32 UNS

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.

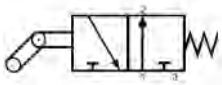
General Specifications	
Pressure Range:	Vacuum to 120 PSI
Media:	Air or Inert Gas
Flow:	0.11 C_v
Flow at 100 PSI:	6 SCFM
Ports:	$^{1}/_{8}$" NPT
Cycle Life:	7-10 million
Force to Actuate:	As Low as 6.4 Ounces
Max. Ambient Temp.:	115°F
Lubrication:	Not Required
Filtration:	40 Micron
Seals:	Viton
Spool: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

Valve Symbols

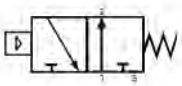
MV-5, 10, 45, 50, 70 & 80



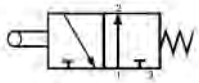
MV-20 & 80



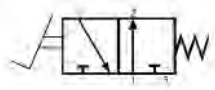
MV-60



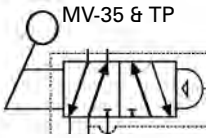
MV-15, 25, 30, 40 & 75



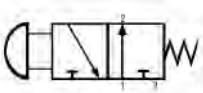
2060280 & 2060400



MV-35 & TP

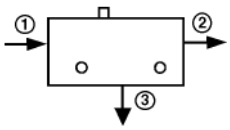


MV-140, EH, FH, MH & ES



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

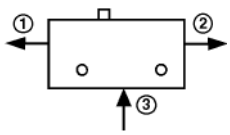
NORMALLY CLOSED



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

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

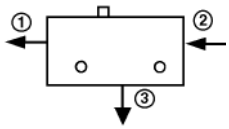
NORMALLY OPEN



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

Exhaust air flows from 2 to 1 when button is pressed.

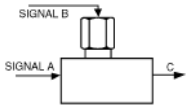
DIVERTER



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

Pressurized air flows from 2 to 3 when button is released. This hookup does not provide for exhaust.

Perform "AND" Logic Function With MV-60

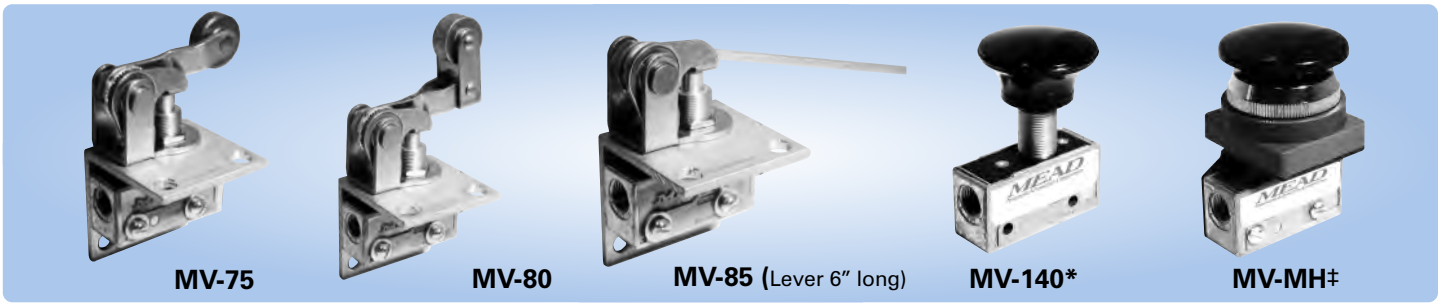


This hookup provides that flow will occur at C only when air signals are received at A and B. The MV-60 is a 3-way air piloted valve.

Add Push to Connect 1/4" Fittings

MV-45-C4

MV valves are available with 1/4" brass push to connect fittings. The valve will be provided with a fitting for the inlet, outlet and the exhausts ports. Any MV valve may utilize this option. The valve's body height increases by 5/16" and the mounting holes are 0.532" apart.



MV-75 MV-80 MV-85 (Lever 6" long) MV-140* MV-MH‡

* For $^{15}/_{32}$" panel openings; $^{15}/_{32}$-32 UNS

MV 3-Way Switches


MV-35*
Locks In Down Position


MV-40*


MV-45*

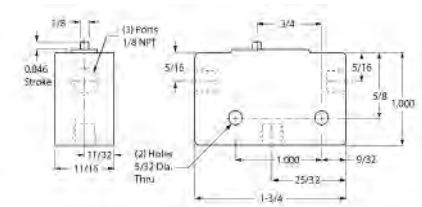

MV-50


MV-60
1/8" NPT Pilot Port


MV-70
Lever 4 1/4" long

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

Basic Valve Dimensions

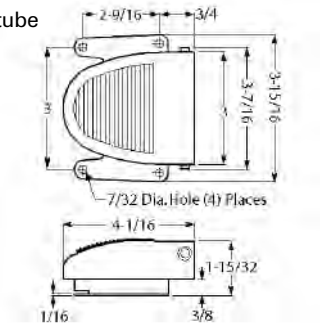


Envelope dimensions of valves are shown in the chart below.

Model	Actuator	Act. Force lbs. @ 100 PSI NC	Act. Force lbs. @ 100 PSI NO	Act. Stroke Distance To Crack Open	Act. Stroke Distance To Full Open	Act. Stroke Distance Over Travel	Envelope Dimensions Len.	Envelope Dimensions Wid.	Envelope Dimensions Hgt.
MV-5	Pin Plunger	2.5	3.3	.035	.046	.035	1 3/4	11/16	1
MV-10	Straight Leaf	1.2	1.5	.100	.137	.079	2 3/16	11/16	1 1/4
MV-15	Steel Roller	1.0	1.3	.100	.137	.079	2 3/16	11/16	1 5/8
MV-20	1-Way Roller Leaf	1.0	1.3	.100	.137	.079	2 3/16	11/16	2 1/16
MV-25	Roller Plunger	2.8	3.5	.035	.046	.155	1 3/4	11/16	2 3/16
MV-30	Cross Roller	2.8	3.5	.035	.046	.155	1 3/4	11/16	2 3/16
MV-35	Flip Toggle	1.5	2.3	35°	35°	35°	1 3/4	11/16	2 5/16
MV-40	Ball Roller	2.5	3.3	.035	.046	.035	1 3/4	11/16	1 19/32
MV-45	Straight Plunger	2.5	3.3	.035	.046	.155	1 3/4	11/16	1 29/32
MV-50	Fingertip Lever	1.0	1.3	.100	.137	.079	2 5/8	11/16	1 3/8
MV-60	Pressure Piloted	40*	40*	-	-	-	1 3/4	11/16	1 5/8
MV-70	Extended Leaf	0.7	1.0	.255	.315	.195	4 1/2	11/16	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	11/16	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
MV-EMS	Emergency Stop	-	-	-	-	-	1 3/4	1 5/8	3 1/4

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

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-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

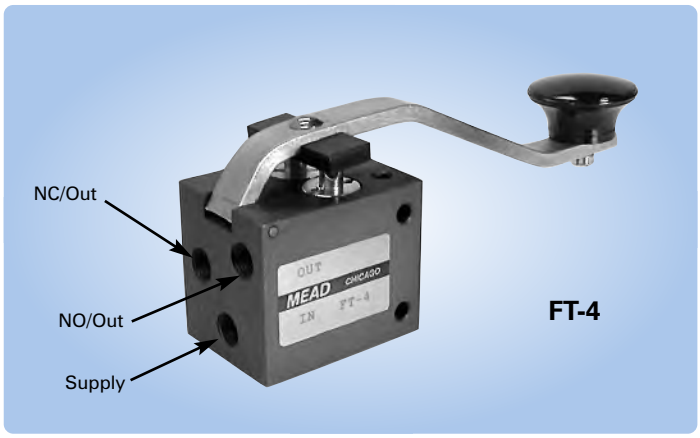

NEW!
MV-EMS
Red & Manual Only

‡ For 1 3/16" panel opening

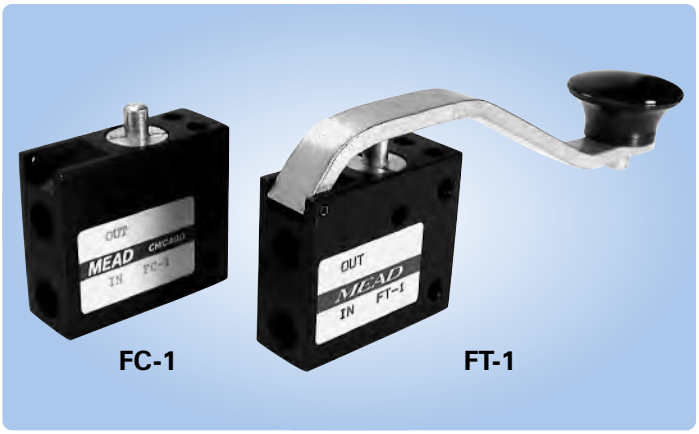
General Purpose Cam, Foot, Hand and Button Valves

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



FT-4



FC-1 FT-1

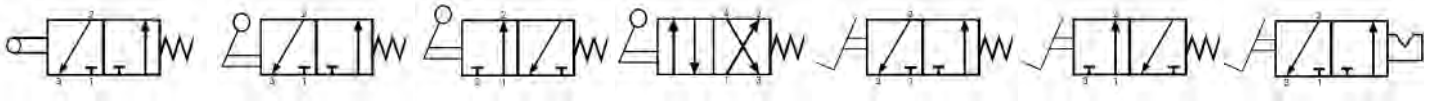
Poppet Spool Type

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.

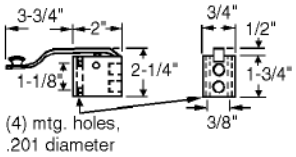
Valve Symbols

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

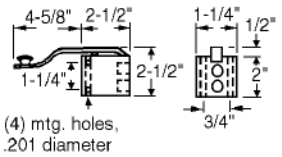


Dimensions

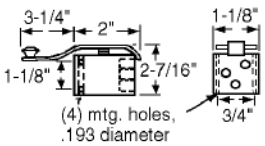
Models FC-1, & FC-2A,FT-1, FT-2A



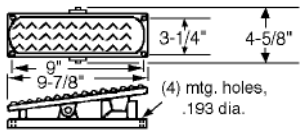
Models FC-101 & FT-101



Model FT-4

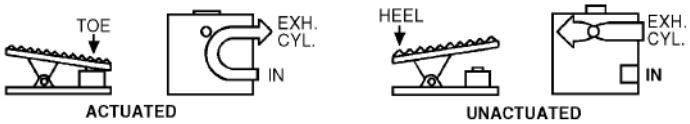


Model 201



Flow Patterns

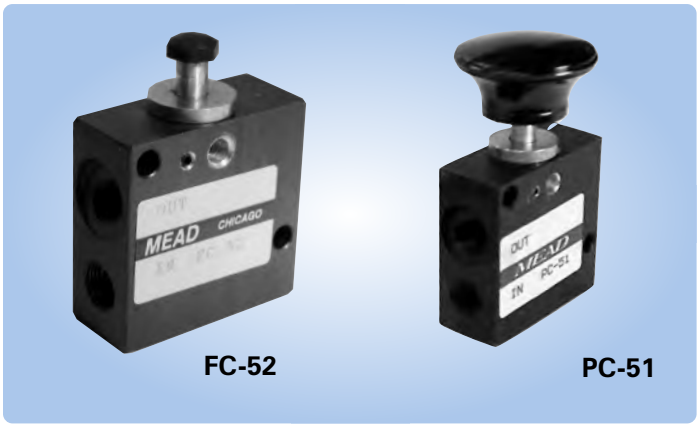
Model 201



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

General Purpose Cam, Foot, Hand and Button Valves



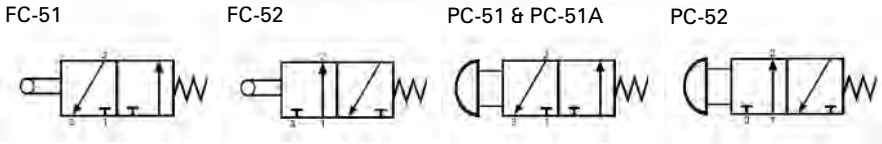
Balanced Spool Type

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.

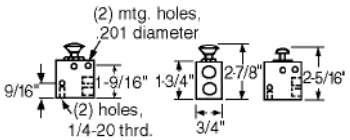
Model Number	Actuator	Style	Port (NPT)	Flow (Cv)	Pre-Travel	Over Travel	Force Req. @ 100 PSI
FC-51	Cam Button	3-Way NC	1/8"	0.81	1/8"	1/8"	7lbs.
FC-52	Cam Button	3-Way NO	1/8"	0.68	1/8"	1/8"	5lbs.
PC-51	Palm Button Spr. Ret.	3-Way NC	1/8"	0.81	1/8"	1/8"	7lbs.
PC-51A	Palm Button Detent	3-Way NC	1/8"	0.81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

Valve Symbols

FC-51 FC-52 PC-51 & PC-51A PC-52



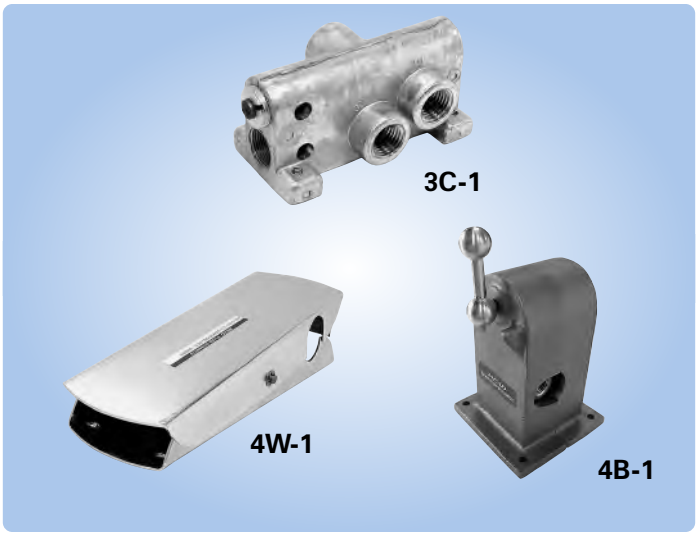
Dimensions



Spool Type - Rugged Conditions

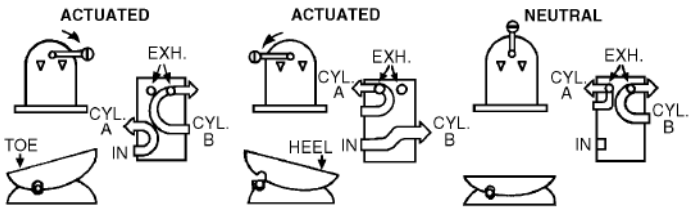
Time-tested reliability is the trademark of these valves. Due to the unique design, performance is not greatly affected by the use of unclean air and operation in chip and dirt-ridden environments.

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.



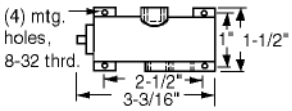
Flow Patterns

Models 4B-1 and 4W-1

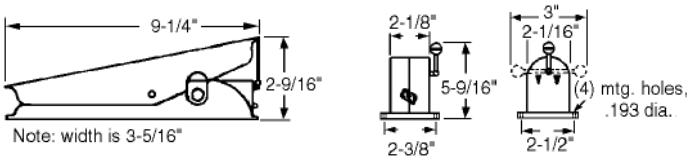


Note: In neutral, cylinder ports are dumped to atmosphere.

Dimensions

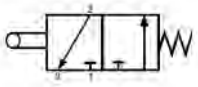


Note: height is 1-1/2"

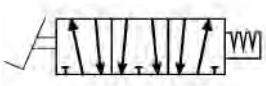


Valve Symbols

3C-1



4W-1



4B-1