



2-Way Valves

	Order No.	Style	Flow (@ 100 psig/7 bar)	Ports			Normally-Open	Normally-Closed	Momentary/Detented	Brass Toggle	Plastic Toggle	Page No.
				Inlet	Outlet	Exhaust						
Toggle Valves	MTV-2	Poppet	7.3 scfm	#10-32	#10-32	-	▲	D	▲		114	
	MTV-2-M5	Poppet	175 l/min	M5	M5	-	▲	D	▲		114	
	MTV-2P	Poppet	7.3 scfm	1/8" NPT	#10-32	-	▲	D	▲		114	
	TV-2S	Spool	8 scfm	#10-32	#10-32	-	▲	D	▲		114	
	TV-2S-M5	Spool	190 l/min	M5	M5	-	▲	D	▲		114	
	TV-2SF	Spool	8 scfm	#10-32	#10-32	-	▲	D		▲	114	
	TV-2SF-M5	Spool	190 l/min	M5	M5	-	▲	D		▲	114	
	TV-2SP	Spool	8 scfm	1/8" NPT	#10-32	-	▲	D	▲		114	
	TV-2SFP	Spool	8 scfm	1/8" NPT	#10-32	-	▲	D		▲	114	
	TV-2M	Poppet	8 scfm	#10-32	#10-32	-	▲	M	▲		114	
	TV-2M-M5	Poppet	190 l/min	M5	M5	-	▲	M	▲		114	
	TV-2MF	Poppet	8 scfm	#10-32	#10-32	-	▲	M		▲	114	
	TV-2MF-M5	Poppet	190 l/min	M5	M5	-	▲	M		▲	114	
	TV-2MP	Poppet	6.8 scfm	1/8" NPT	#10-32	-	▲	M	▲		115	
	TV-2MFP	Poppet	6.8 scfm	1/8" NPT	#10-32	-	▲	M		▲	115	
	TVO-2M	Poppet	8 scfm	#10-32	#10-32	-	▲		M	▲	115	
	TVO-2M-M5	Poppet	190 l/min	M5	M5	-	▲		M	▲	115	
	TVO-2MF	Poppet	8 scfm	#10-32	#10-32	-	▲		M		▲	115
	TVO-2MF-M5	Poppet	190 l/min	M5	M5	-	▲		M		▲	115
TVO-2MP	Poppet	6.8 scfm	1/8" NPT	#10-32	-	▲		M	▲	115		
TVO-2MFP	Poppet	6.8 scfm	1/8" NPT	#10-32	-	▲		M		▲	115	
Stem Valves	MAV-2	Poppet	6.8 scfm	#10-32	#10-32	-		▲			116	
	MAV-2-M5	Poppet	170 l/min	M5	M5	-		▲			116	
	MAV-2P	Poppet	6.8 scfm	1/8" NPT	#10-32	-		▲			116	
	MAV-2C	Poppet	6 scfm	-	-	-		▲			116	
	MJV-2C	Poppet	22 scfm	-	-	-		▲			117	
	MAV-2R	Poppet	6.8 scfm	#10-32	#10-32	-		▲			116	
	MAV-2R-M5	Poppet	170 l/min	M5	M5	-		▲			116	
	MAVO-2	Spool	10 scfm	#10-32	#10-32	-	▲				116	
	MAVO-2-M5	Spool	245 l/min	M5	M5	-	▲				116	
	MAVO-2P	Spool	10 scfm	1/8" NPT	#10-32	-	▲				117	
	MAVO-2C	Spool	10 scfm	-	-	-	▲				116	
	MJV-2	Poppet	25 scfm	1/8" NPT	1/8" NPT	-		▲			117	
	MJV-2-MG	Poppet	600 l/min	G1/8	G1/8	-		▲			117	
	MJVO-2	Spool	12 scfm	1/8" NPT	1/8" NPT	-	▲				117	
	MJVO-2-MG	Spool	600 l/min	G1/8	G1/8	-	▲				117	
	MJVO-2C	Spool	15 scfm	-	-	-	▲				117	
Air-Piloted	PAV-2	Poppet	6.8 scfm	1/8" NPT	#10-32	-		▲			118	
	PAV-2P	Poppet	6.8 scfm	1/8" NPT	1/8" NPT	-		▲			118	
	PAVO-2	Poppet	11.6 scfm	#10-32	#10-32	-	▲				118	
	PAVO-2P	Poppet	11.6 scfm	#10-32	1/8" NPT	-	▲				118	



2-WAY TOGGLE VALVES



2-WAY TOGGLE VALVES

2-way valves are the simplest pneumatic component—their function is

merely to turn an air supply on and off. They may best be compared to a water faucet; in the “on” position water

flows from inlet to outlet, and in the “off” position the water flow is stopped. 2-way toggle valves may have a poppet or spool, and may be either a 2 position or have a momentary actuation.

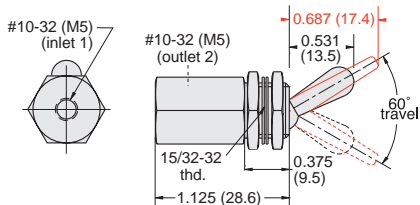
Medium: Air, Water or Oil

Materials: Brass body, Buna-N seals, stainless steel stem and spring

Force For Full Stem Travel: 12 oz. nominal

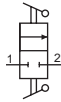
Mounting: 15/32-32 thread. Nuts and lockwashers furnished.

2 Position Spool Valves



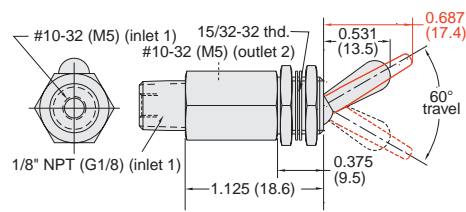
Input Pressure: 150 psig/10 bar max.

Air Flow: 4.5 SCFM @ 50 psig; 8.0 SCFM @ 100 psig; 190 l/min @ 6 bar



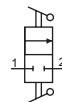
Part No.	Description
TV-2S	. . . . .2 Position Spool Valve, NP Brass Toggle, #10-32
TV-2S-M5	. . . . .2 Position Spool Valve, NP Brass Toggle, M5
TV-2SF	. . . . .2 Position Spool Valve, Plastic Toggle, #10-32
TV-2SF-M5	. . . . .2 Position Spool Valve, Plastic Toggle, M5

2 Position Spool Valves with 1/8" NPT Inlet



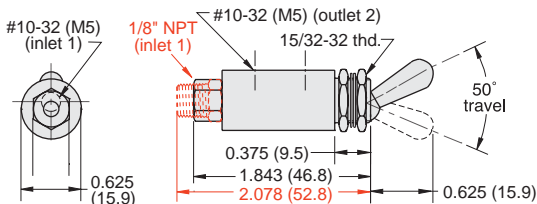
Input Pressure: 150 psig max.

Air Flow: 4.5 SCFM @ 50 psig; 8.0 SCFM @ 100 psig;



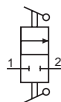
Part No.	Description
TV-2SP	. . . . .2 Position Spool Valve, NP Brass Toggle, 1/8" NPT
TV-2SFP	. . . . .2 Position Spool Valve, Plastic Toggle, 1/8" NPT

2 Position Poppet Valves



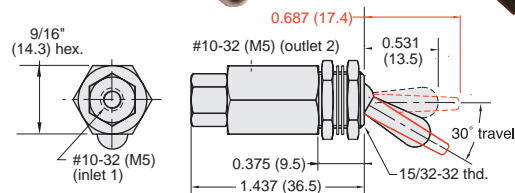
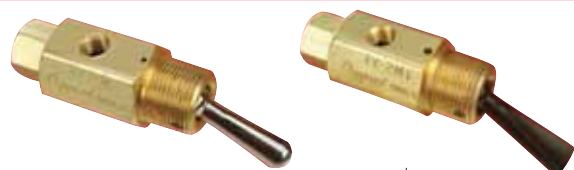
Input Pressure: 150 psig/10 bar max.

Air Flow: 4.0 SCFM @ 50 psig; 7.3 SCFM @ 100 psig; 175 l/min @ 6 bar



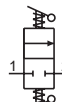
Part No.	Description
MTV-2	. . . . .2 Position Poppet Valve, #10-32
MTV-2-M5	. . . . .2 Position Poppet Valve, M5
MTV-2P	. . . . .2 Position Poppet Valve, 1/8" NPT

2 Position N.C. Poppet with Momentary Actuation



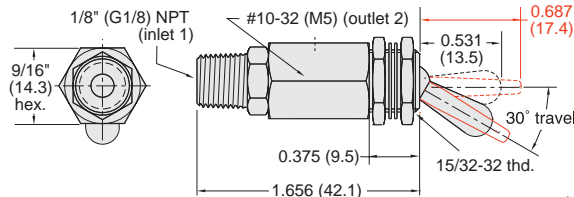
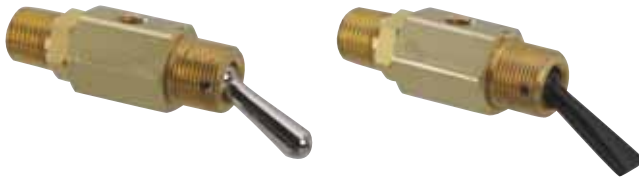
Input Pressure: 150 psig/10 bar max.

Air Flow: 4.5 SCFM @ 50 psig; 8.0 SCFM @ 100 psig; 175 l/min @ 6 bar



Part No.	Description
TV-2M	. . . . .2 Position N.C. Poppet Valve, NP Brass Toggle, #10-32
TV-2M-M5	. . . . .2 Position N.C. Poppet Valve, NP Brass Toggle, M5
TV-2MF	. . . . .2 Position N.C. Poppet Valve, Plastic Toggle, #10-32
TV-2MF-M5	. . . . .2 Position N.C. Poppet Valve, Plastic Toggle, M5

2 Position N.C. Spool w/Momentary Actuation



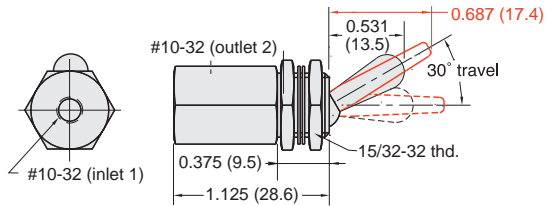
Input Pressure: 150 psig max.

Air Flow: 4.0 SCFM @ 50 psig; 6.8 SCFM @ 100 psig



Part No.	Description
TV-2MP	. . . .2 Position Spool Valve, NP Brass Toggle, 1/8" NPT
TV-2MFP	. . . .2 Position Spool Valve, Plastic Toggle, 1/8" NPT

2 Position N.O. Poppet w/Momentary Actuation



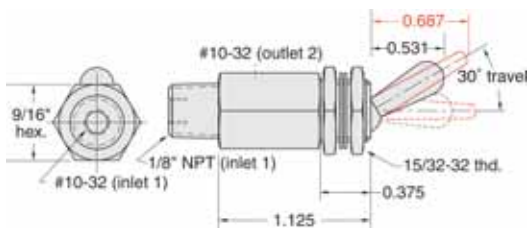
Input Pressure: 150 psig/10 bar max

Air Flow: 4.5 SCFM @ 50 psig; 8.0 SCFM @ 100 psig;
190 l/min @ 6 bar



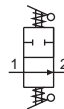
Part No.	Description
TVO-2M	. . . .2 Position N.O. Poppet Valve, NP Brass Toggle, #10-32
TVO-2M-M5	.2 Position N.O. Poppet Valve, NP Brass Toggle, M5
TVO-2MF	. . . .2 Position N.O. Poppet Valve, Plastic Toggle, #10-32
TVO-2MF-M5	.2 Position N.O. Poppet Valve, Plastic Toggle, M5

2 Position N.O. Poppet with Momentary Actuation



Input Pressure: 150 psig max.

Air Flow: 4.0 SCFM @ 50 psig; 6.8 SCFM @ 100 psig



Part No.	Description
TVO-2MP	. . . .2 Position Toggle Poppet Valve, NP Brass Toggle
TVO-2MFP	. . . .2 Position Toggle Poppet Valve, Plastic Toggle

Did you know...



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



2-WAY STEM VALVES



2-WAY STEM VALVES

2-way valves are the simplest pneumatic component – their function is merely to turn an air supply on or off. They may be compared to a light switch; in the “ON” position electricity flows from supply to the

light, and in the “off” position the electrical current flow is stopped. 2-way stem valves may have a poppet or spool, and, by depressing the stem, a normally closed (NC) valve is opened and a normally open (NO) valve is closed. A variety of actuators may be attached to the valve such as roller cam followers, manual push buttons or pilot actuators; see the Valve Actuators section of this catalog.

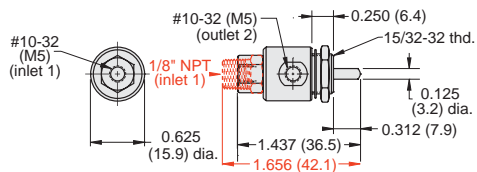
Medium: Air, Water or Oil

Materials: Brass body, Buna-N seals, stainless steel stem and spring

Stem Travel: 1/8" (3.2)

supply on or off. They may be compared to a light switch; in the “ON” position electricity flows from supply to the

Normally-Closed Poppet 2-Way Valves



Input Pressure: 300 psig/21 bar max.

Air Flow: 4.0 SCFM @ 50 psig; 6.8 SCFM @ 100 psig; 170 l/min @ 6 bar

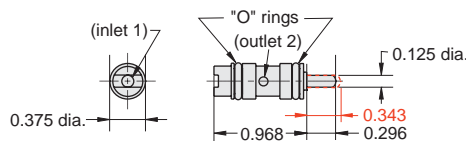
Force For Full Stem Travel: 24 oz. nominal

Mounting: 15/32-32 thread. Nut and lockwasher furnished.



Part No.	Description
MAV-2	. . . . .2-Way Normally-Closed Valve, #10-32
MAV-2-M5	. . . . .2-Way Normally-Closed Valve, M5
MAV-2P	. . . . .2-Way Normally-Closed Valve, 1/8" NPT

Miniature Poppet Cartridge Valves



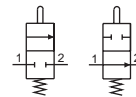
Input Pressure: 300 psig

Air Flow: 3.0 SCFM @ 50 psig; 6.0 SCFM @ 100 psig

Force For Full Stem Travel: 24 oz. nominal

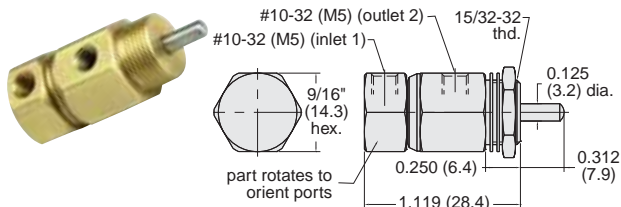
Mounting: Inserts into a 3/8" bore (0.375" ±0.001")

Note: See page 113 for retaining details



Part No.	Description
MAV-2C	. . . . .2-Way Normally-Closed Poppet Cartridge Valve
MAVO-2C	. . . . .2-Way Normally-Open Poppet Cartridge Valve

N.C. Poppet Valves with Rotatable Inlet



Input Pressure: 300 psig/21 bar max.

Air Flow: 4.0 SCFM @ 50 psig; 6.8 SCFM @ 100 psig; 170 l/min @ 6 bar

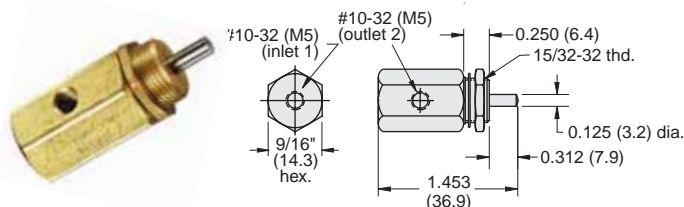
Force For Full Stem Travel: 24 oz. nominal

Mounting: 15/32-32 thread. Nut and lockwasher furnished.



Part No.	Description
MAV-2R	. . . . .2-Way Poppet Valve with Rotatable Inlet, #10-32
MAV-2R-M5	. . . . .2-Way Poppet Valve with Rotatable Inlet, M5

Normally-Open Spool Valves



Input Pressure: 150 psig/10 bar max.

Air Flow: 6.0 SCFM @ 50 psig; 10 SCFM @ 100 psig; 245 l/min @ 6 bar

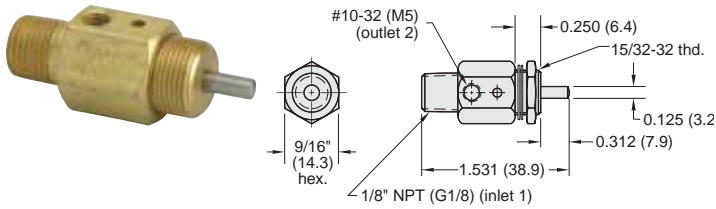
Force For Full Stem Travel: 32 oz. nominal

Mounting: 15/32-32 thread. Nut and lockwasher furnished.



Part No.	Description
MAVO-2	. . . . .2-Way Normally-Open Stem Valve, #10-32
MAVO-2-M5	. . . . .2-Way Normally-Open Stem Valve, M5

Normally-Open Spool Valve



Input Pressure: 150 psig max.

Air Flow: 6 SCFM @ 50 psig; 100 SCFM @ 100 psig

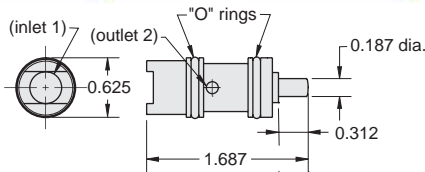
Force For Full Stem Travel: 32 oz. nominal

Mounting: 15/32-32 thread. Nut and lockwasher furnished.



Part No.	Description
MAVO-2P . . .	Normally-Open Spool Valve

J-Series Cartridge Valves



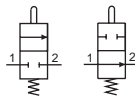
Input Pressure: 300 psig

Air Flow: 11 SCFM @ 50 psig; 22 SCFM @ 100 psig

Force For Full Stem Travel: 24 oz. nominal

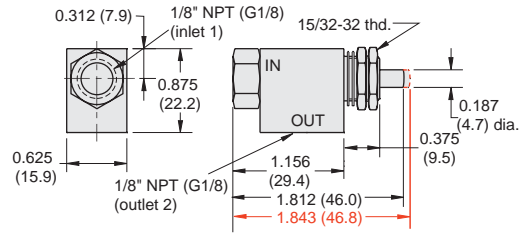
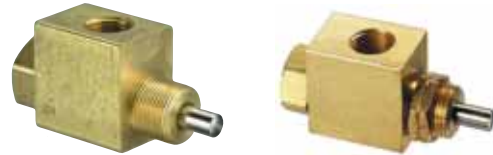
Mounting: Inserts into a 5/8" bore (0.625" ±0.001)

Note: See page 118 for mounting details



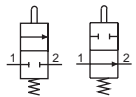
Part No.	Description
MJV-2C	Normally-Closed Poppet Cartridge Valve
MJVO-2C	Normally-Open Poppet Cartridge Valve

J-Series Miniature Poppet Valves



Input Pressure: MJV-2/MJV-2-MG - 300 psig/21 bar max.
MJVO-2/MJVO-2-MG - 150 psig/10 bar max.

Air Flow: MJV-2/MJV-2-MG - 14.0 SCFM @ 50 psig;
25 SCFM @ 100 psig; 600 l/min @ 6 bar
MJVO-2/MJVO-2-MG - 7 SCFM @ 50 psig;
12 SCFM @ 100 psig; 600 l/min @ 6 bar



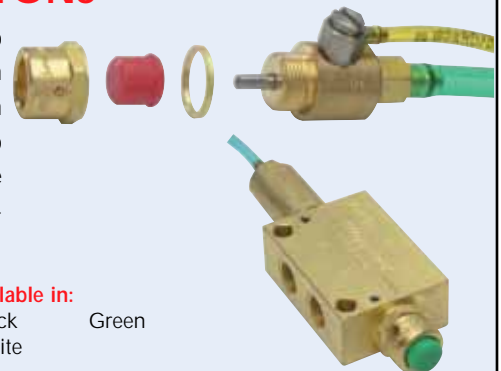
Force For Full Stem Travel: MJV-2/MJV-2-MG - 38 oz. nominal
MJVO-2/MJVO-2-MG - 36 oz. nominal

Mounting: 15/32-32 thread. Nuts and lockwashers furnished.

Part No.	Description
MJV-2	Normally-Closed Poppet Valve, 1/8" NPT
MJV-2-MG	Normally-Closed Poppet Valve, G1/8
MJVO-2	Normally-Open Spool Valve, 1/8" NPT
MJVO-2-MG	Normally-Open Spool Valve, G1/8

CAPTIVATED PUSH BUTTONS

The small compact size make the push buttons adaptable to panel mounting. Unlike set screw retained buttons, the screw-on design will not allow the button to fall off. Designed to work with Clippard MAV, MJV, and FV series valves, these buttons also help protect the valve by preventing over-traveling of the stem and the potential for side-load on the valve. See page 141 for more information.



Button Housing Available in: Black Chrome, Nickel Plated, Brass
Button Colors Available in: Yellow, Black, Green, Red, White



2-WAY AIR-PILOTED VALVES

2-WAY AIR-PILOTED VALVES

2-way valves are the simplest pneumatic component – their function is merely to turn an air supply on or off. They may be compared to a beer tap, in the “on” position beer flows from the keg to the mug and in the “off” position the beer flow is stopped. 2-way air piloted valves may have a poppet or spool and when an air signal is applied to the pilot, a normally closed (NC) valve is opened and a normally open (NO) valve is closed. When the pilot signal is removed, the valve reverts back to its original position.

Medium: Air, Water or Oil

Materials: Brass body, Buna-N seals, stainless steel stem and spring

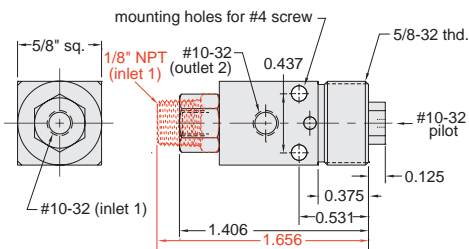
Stem Travel: 1/8”

Mounting: 5/8-32 thread or #4 screw. Nut and lockwasher may be ordered separately. Part Number: PAV-MH

Air Pilot Pressure: 15 psig min.

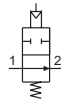
Foot Bracket: FB-1791

Air-Piloted Normally-Closed Poppet Valves

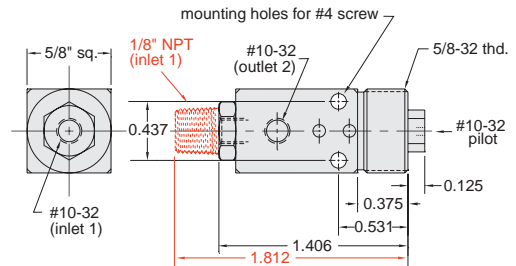


Input Pressure: 300 psig max.

Air Flow: 4.0 SCFM @ 50 psig; 6.8 SCFM @ 100 psig

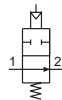


Air-Piloted Normally-Open Poppet Valves



Input Pressure: 150 psig max.

Air Flow: 6.8 SCFM @ 50 psig; 11.6 SCFM @ 100 psig

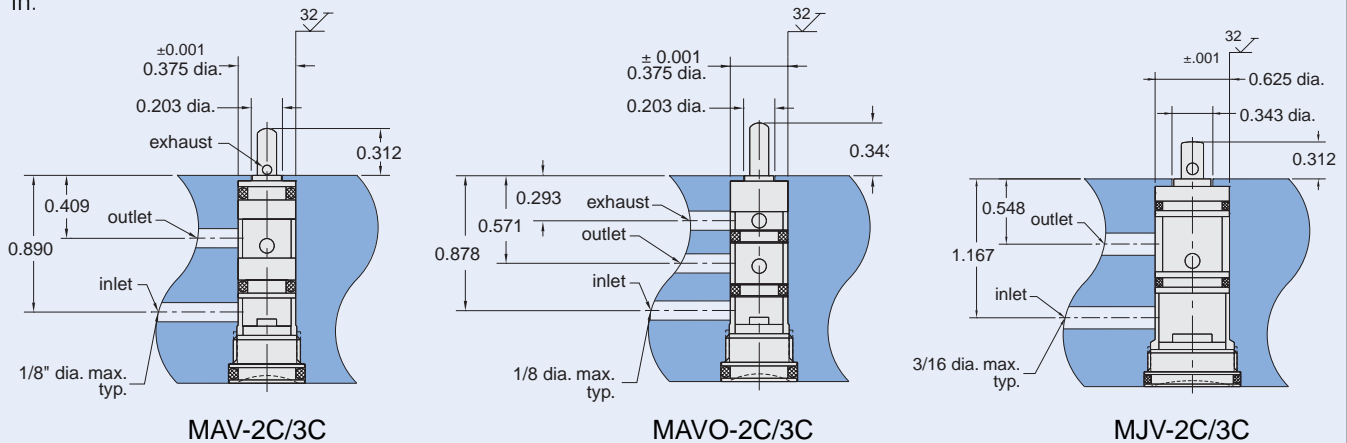


Part No.	Description
PAV-2	Normally-Closed Poppet Valve, #10-32
PAV-2P	Normally-Closed Poppet Valve, 1/8" NPT

Part No.	Description
PAVO-2	Normally-Open Poppet Valve, #10-32
PAVO-2P	Normally-Open Poppet Valve, 1/8" NPT

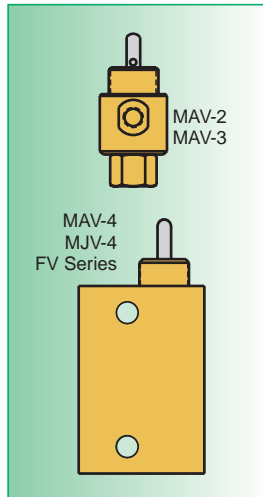
CARTRIDGE VALVE MOUNTING

Clippard miniature cartridge valves offer the user flexibility in the application of 2-way and 3-way normally open or normally closed valves. Two sizes are provided: to fit either a 0.375" diameter bore or 0.625" diameter bore. They are used in Clippard heavy duty limit switches and are suitable for pneumatic tools and manifolds or for any use where a valve needs to be built in.



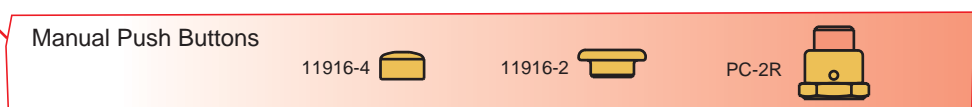
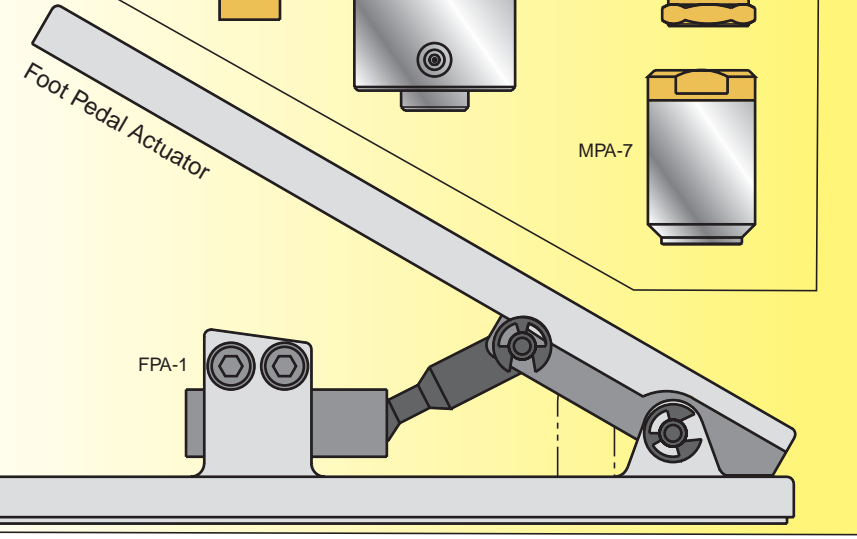
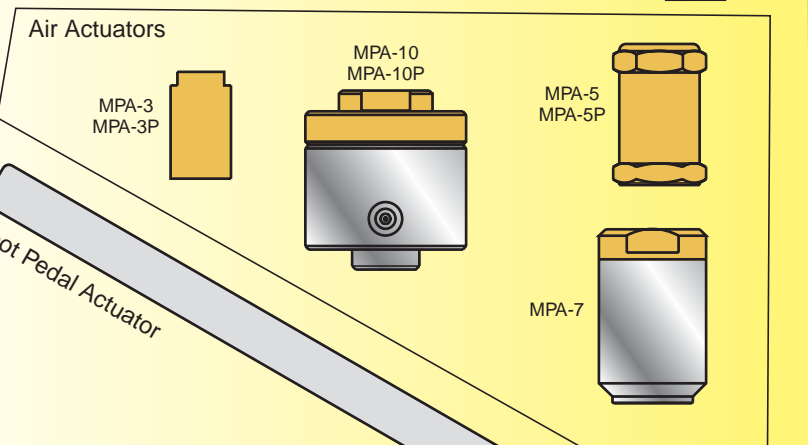
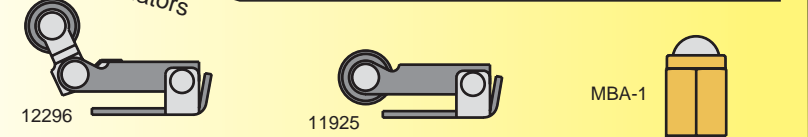
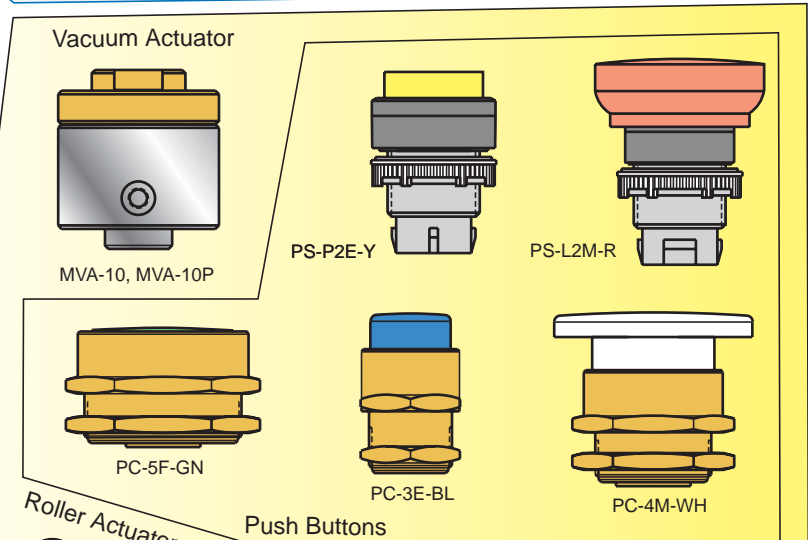
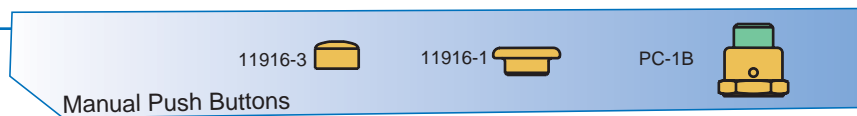
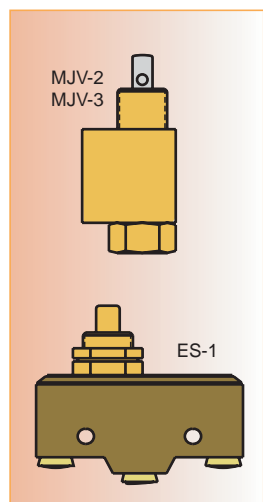
The following valve actuators are compatible with all Clippard MAV, MAVO, MJV, MJVO, ES-1, & FV series valves.

One of the most versatile items in the Clippard line. Permits wide circuit flexibility and allows many control functions to be accomplished pneumatically with less cost, hazards and complexity. Threads onto the tops of our Miniature 2-way, 3-way, and 4-way valves and ES-1 electric switch to provide fast pilot actuation from a pneumatic signal.



MPA Actuators Can:

- Remotely actuate any number of valves and switches simultaneously in different strategic locations from a single miniature 3-way valve
- Make an ES-1 into a pressure switch
- Act as an air relay, i.e., one pressure source to another.
- Operate the MAV-4D from a single impulse.
- Serve as a pressure interlock or safety device, i.e., turn off power when pressure fails, etc.
- Provide an electric take off from a pneumatic source to start and stop power, actuate electric counters, indicator lights on panel boards, etc.

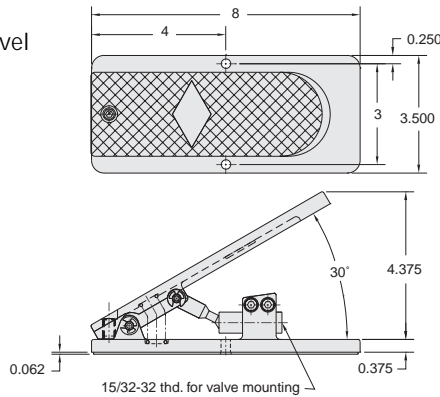




VALVE ACTUATORS

Foot Pedal

Adjustable travel foot pedal



Part No.	Description
FPA-1	Adjustable Travel Foot Pedal

Construction: Sturdy cast aluminum and black oxidized steel

Control Devices: May be fitted with any Clippard 2-, 3- or 4-way valve or MAR-1C pressure controller with a #15/32-32 mounting thread

Mounting: To floor or other structure with two 9/32" mounting holes stroke plunger adjustable to accommodate a variety of valves

"Hands-free" touch-of-toe operation of endless types of automated and semi-automated machinery and equipment, jigs and fixtures, is possible thru use of this sturdy treadle type foot pedal, combined with Clippard miniature valves, plunger type air pressure controls, and electrical switch.

A sliding link mechanism between treadle and mounting sleeve actuates the component, and a set screw at the back of pedal base adjusts treadle travel.

Pedal is spring loaded at approximately 1/2 lb. for return to "off" position.

Note for MBA-1, 11925 & 12296:

When mounting on a valve, a space should be provided between the body and the actuator according to the chart to the right:

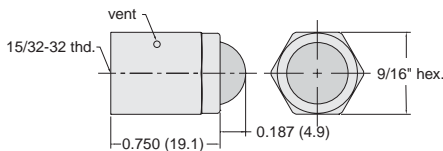
Valve mtg. thd.	MBA-1	11925	12296
0.250 thd length	0.125"	0.062"	0.062"
0.373 thd length	0.218"	0.188"	0.188"

A mounting nut (supplied with valve), mounting bracket or washers should be used to obtain the required spacing.

Ball Cam Actuator



Ball Cam Actuator permits the valves and electrical switch to be operated by mechanical movement depressing the ball from any direction



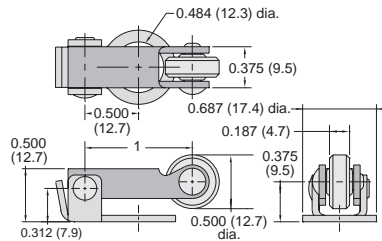
Construction: Body - brass
Ball - stainless steel retained in housing

Operation: Will actuate valve while depressed from any (360°) direction

Mounting: 15/32-32 female to mount to Clippard miniature valves and electric switch

Part No.	Description
MBA-1	Ball Cam Actuator

Roller Cam Actuator



Construction: Stainless steel with nylon roller

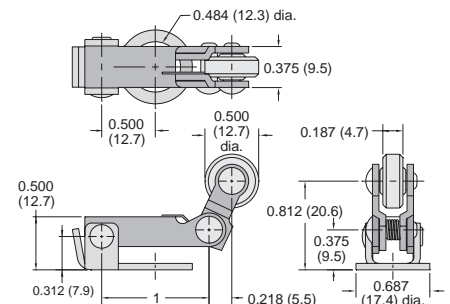
Temperature Range: 32° to 230° F

Mounting: 31/64" dia. mounting hole fits 15/32-32 threaded mounting section of valve bodies

Operation: Mounts to valve body, actuates valve when mechanically depressed; valve spring provides return

Part No.	Description
11925	Roller Cam Follower Actuator

Double-Pivoted Actuator



Construction: Stainless steel with nylon roller

Mounting: 31/64" dia. mounting hole fits 15/32-32 threaded mounting section of valve bodies

Operation: Mounts to valve body, actuates valve when depressed by activating cam or linear travel device in one direction only; no actuation on return travel

Part No.	Description
12296	Roller, Double-Pivoted One-Way Cam Follower Actuator

AIR PILOTED VALVE ACTUATORS



MINIMUM PRESSURE REQUIRED (psig)*													
Clippard Valve	Pressure (psig)					Vacuum (in Hg)	Clippard Valve	Pressure (psig)					Vacuum (in Hg)
	w/MPA3	w/MPA-5	w/MPA-7	w/MPA-10	w/MVA-10			w/MPA3	w/MPA-5	w/MPA-7	w/MPA-10	w/MVA-10	
ES-1 Switch	12	4	2	*	*		FV-3	41	15	7.5	4.0	8.2	
MAV-2 Valve	23	8	4	2.0	4.2		FV-3P	41	15	7.5	4.0	8.2	
MAV-3 Valve	23	8	4	2.0	4.2		FV-4	41	15	7.5	4.0	8.2	
MAV-4 Valve	36	11	5.5	3.5	7.2		FV-4P	41	15	7.5	4.0	8.2	
MJV-4 Valve	36	11	5.5	3.5	7.2		FV-5	41	15	7.5	4.0	8.2	
MAV-4D Valve	13	4	1.5	1.0	2.0		FV-5P	41	15	7.5	4.0	8.2	
MJV-4D Valve	13	4	1.5	1.0	2.0		FV-3D	14	5	2.5	1.5	3.2	
MJV-2 Valve	30	10	5	3.0	6.2		FV-3DP	14	5	2.5	1.5	3.2	
MJV-3 Valve	30	10	5	3.0	6.2		FV-4D	14	5	2.5	1.5	3.2	
MAVO-2 Valve	27	9	4.5	2.5	5.2		FV-4DP	14	5	2.5	1.5	3.2	
MAVO-3 Valve	27	9	4.5	2.5	5.2		FV-5D	14	5	2.5	1.5	3.2	
MJVO-2 Valve	30	10	5	3.0	6.2		FV-5DP	14	5	2.5	1.5	3.2	
MJVO-3 Valve	30	10	5	3.0	6.2								

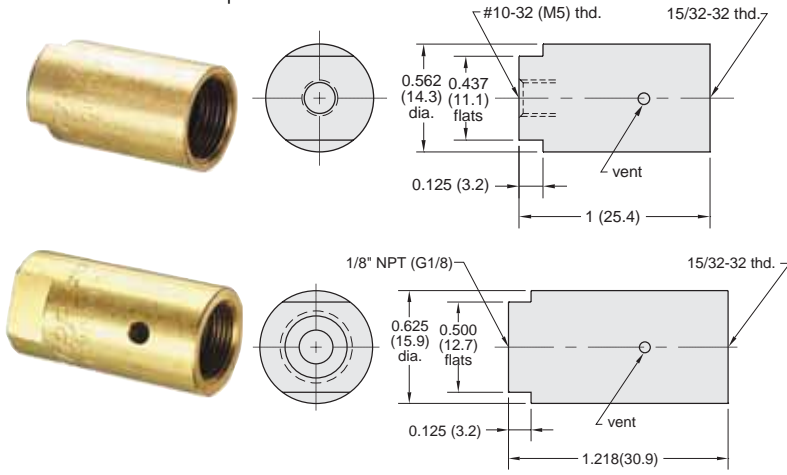
*with 100 psig to valve inlet

Single Acting Air Pilot Actuators

Input Pressure: 250 psig/17 bar max.

Construction: Body - brass; Springs - stainless steel; Seals - Buna N rubber; Piston - Delrin®

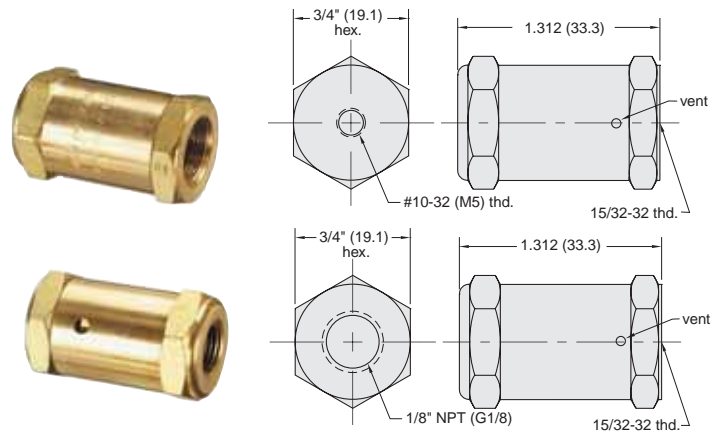
Mounting: 15/32-32 female thread to mount to Clippard miniature valves and components



Bore Size: 0.375 (9.5)

Force Factor: 0.1

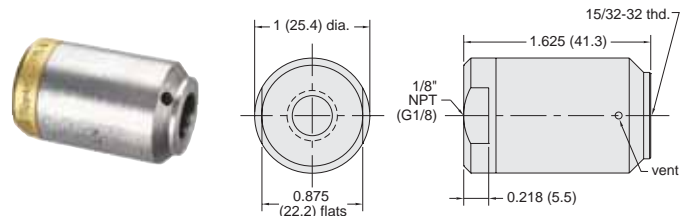
Part No.	Description
MPA-3	Single Acting, Spring Return Actuator, #10-32
MPA-3-M5	Single Acting, Spring Return Actuator, M5
MPA-3P	Single Acting, Spring Return Actuator, 1/8" NPT
MPA-3-MG	Single Acting, Spring Return Actuator, G1/8



Bore Size: 0.625 (15.9)

Force Factor: 0.3

Part No.	Description
MPA-5	Single Acting, Spring Return Actuator, #10-32
MPA-5-M5	Single Acting, Spring Return Actuator, M5 Metric
MPA-5P	Single Acting, Spring Return Actuator, 1/8" NPT
MPA-5-MG	Single Acting, Spring Return Actuator, G1/8



Bore Size: 0.825" (21.0) dia.

Force Factor: 0.6

Part No.	Description
MPA-7	Single Acting, Spring Return Actuator, 1/8" NPT
MPA-7-MG	Single Acting, Spring Return Actuator, G1/8

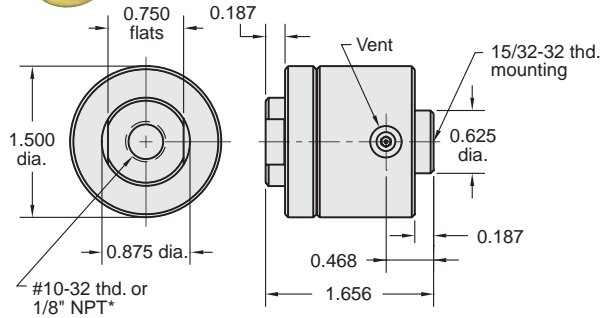


VALVE ACTUATORS

Pilot Actuators



Single Acting Spring Return Pilot Actuator



Bore Size: 1.250" dia.

Input Pressure: 150 psig max.

Mounting: 15/32-32 female thread to mount to Clippard Minimatic® valves and components; no spacers or washers are required when assembled to any Clippard valve; may be used with 15018-2 mounting bracket

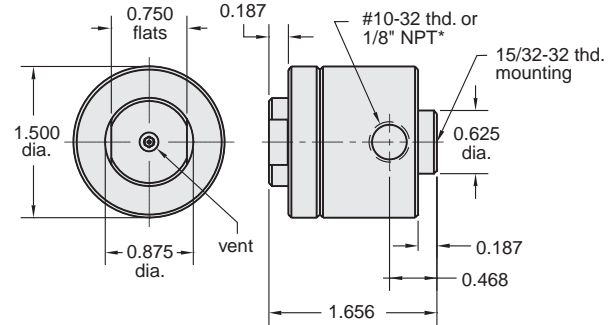
Force Factor: 1.2

Part No.	Description
MPA-10	Single Acting, Spring Return Actuator, #10-32
MPA-10P	Single Acting, Spring Return Actuator, 1/8" NPT

Vacuum Actuators



Single Acting Spring Return Vacuum Actuator



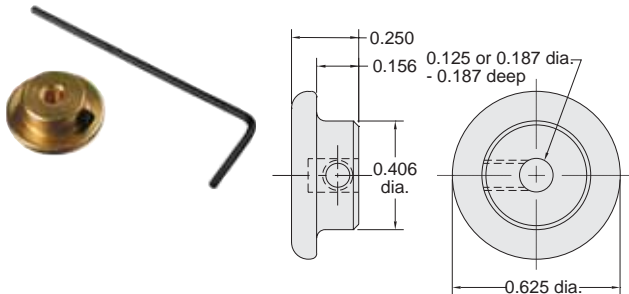
Input Pressure: 30 in. Hg vacuum

Mounting: 15/32-32 female thread to mount to Clippard Minimatic® valves and components; no spacers or washers are required when assembled to any Clippard valve; may be used with 15018-2 mounting bracket

Part No.	Description
MVA-10	Single Acting, Spring Vacuum Actuator, #10-32
MVA-10P	Single Acting, Spring Vacuum Actuator, 1/8" NPT

Push Button Actuators, 5/8"

Round Solid Brass 5/8" dia. Push Button



Use: Mounts directly on valve stem for manual operation of valve; prevents overtravel of valve stem by providing a positive stop

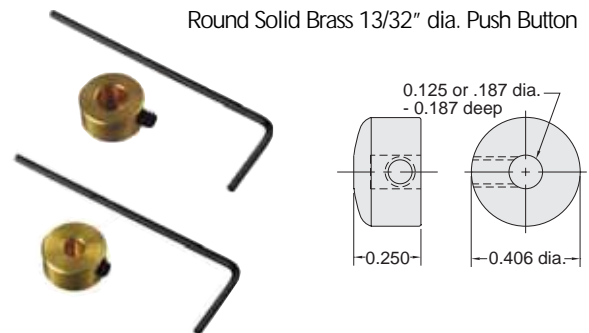
Mounting: 1/8" or 3/16" dia. mounting hole fits valve stems; locks in place by set screw (Allen wrench furnished)

Note: Individually packaged or bulk quantities available

Part No.	Description
11916-1	.5/8" Brass Push Button, 1/8" Stem
11916-2	.5/8" Brass Push Button, 3/16" Stem

Push Button Actuators, 13/32"

Round Solid Brass 13/32" dia. Push Button



Use: Mounts directly on valve stem for manual operation of valve; small size permits attachment to valve before valve is mounted through 15/32" dia. hole; prevents overtravel of valve stem by providing a positive stop

Mounting: 1/8" or 3/16" dia. mounting hole fits valve stems; locks in place by set screw (Allen wrench furnished)

Note: Individually packaged or bulk quantities available

Part No.	Description
11916-3	.13/32" Brass Push Button, 1/8" Stem
11916-4	.13/32" Brass Push Button, 3/16" Stem

Captivated Push Buttons



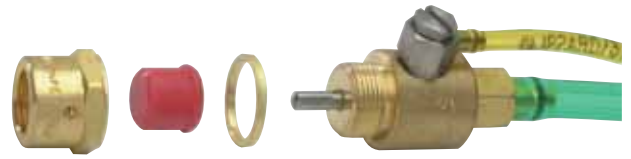
Clippard also offers the captivated push button for use with a large variety of stem operated valves. Captivated push buttons are sold as kits, adaptable to either 1/8" diameter stems or 3/16" diameter stems. Each kit includes a colored acetyl push button, brass housing nut, 1/16" brass spacer, and lock washer for assembly.

The standard furnished mounting nut has a bright chromate finish. Black chrome or nickel-plated finishes are also available by adding the suffix -BC or -NP to the part number.

Captivated push buttons can be used on individual stem operated valves or in panel mount application by omitting the 1/16" brass spacer. These push buttons are available in a variety of colors, allowing you to color code, or easily differentiate between valves when designing control systems. The design of these push buttons allows maximum actuation of the valve with no overtravel or side load to the valve stem.

This assures superior performance and long life.

Captivated push buttons are commonly used as limit valves in conjunction with pneumatic cylinders, slides, and any variety of mechanical actuators. The rugged design coupled with precise actuation of stem operated valves make it perfect for applications where repetitive cycling of the valve is necessary. Designed to work with Clippard MAV, MJV, and FV series, these push buttons integrate easily into Minimatic® systems, providing optimal quality and efficiency in Miniature pneumatic control.



P C - □ □ (- □)

Push Button Captivated

Valve Stem dia.

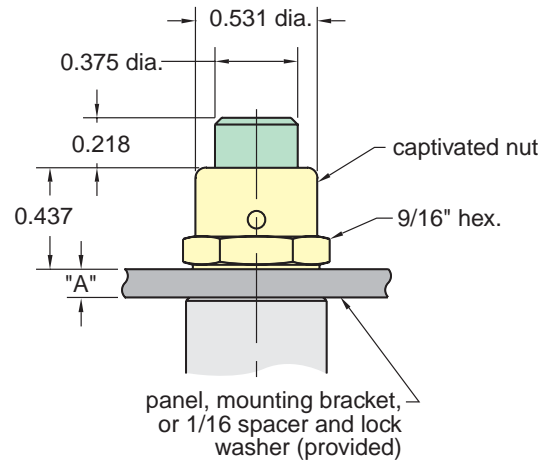
- 1 1/8" dia.
- 2 3/16" dia.

Push Button color

- B - Black
- G - Green
- R - Red
- W - White
- Y - Yellow

Options

- BC - Black chrome
- NP - Nickel plated



Spacing Required for Proper Actuation of Push Button

Valve	"A" Dim.
MAV-2, MAV-3 MAVO-2, MAVO-3	3/32"
MAV-4, MAV-4D MJV-4, MJV-4D	5/32"
MJV-2, MJV-3 MJVO-2, MJVO-3 FV-3, FV-4, FV-5	7/32"

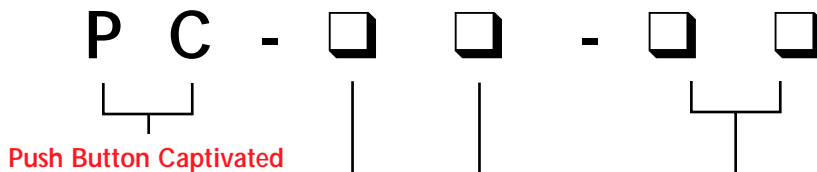


PUSH BUTTON ACTUATORS

Heavy-Duty Push Button Actuators

Heavy Duty Push Button Actuators can be used on individual stem operated valves or in panel mounting applications. These push buttons are available in a variety of colors, allowing you to color code, or easily differentiate between valves when designing control systems. They feature a built-in spring so the button always returns to the extended position when released with no additional load on the valve.

The design of these push buttons allows complete actuation of the valve with no overtravel or side load to the valve assuring superior performance and long life.



Size Mounting Thread
 3 - 5/8-32 thd. (16 mm)
 4 - 7/8-32 thd. (22 mm)
 5 - 1 3/16-28 thd. (30 mm)

Button Style
 E - Extended
 F - Flush
 M - Mushroom

Push Button color
 BK - Black WH - White RD - Red
 GN - Green YL - Yellow BL - Blue
 OR - Orange GR - Grey
 Note: Non-standard colors available; consult factory



Part No. Description
 PC-3E-(color) . . . 5/8-32 Thd., Extended
 (specify color)



Part No. Description
 PC-4E-(color) . . . 7/8-32 Thd., Extended
 (specify color)



Part No. Description
 PC-5E-(color) . . 1 3/16-28 Thd., Extended
 (specify color)



Part No. Description
 PC-3F-(color) . . . 5/8-32 Thd., Flush
 (specify color)



Part No. Description
 PC-4F-(color) . . . 7/8-32 Thd., Flush
 (specify color)



Part No. Description
 PC-5F-(color) . . 1 3/16-28 Thd., Flush
 (specify color)



Part No. Description
 PC-3M-(color) . . . 5/8-32 Thd., Mushroom
 (specify color)



Part No. Description
 PC-4M-(color) . . . 7/8-32 Thd., Mushroom
 (specify color)



Part No. Description
 PC-5M-(color) . . 1 3/16-28 Thd., Mushroom
 (specify color)

Features

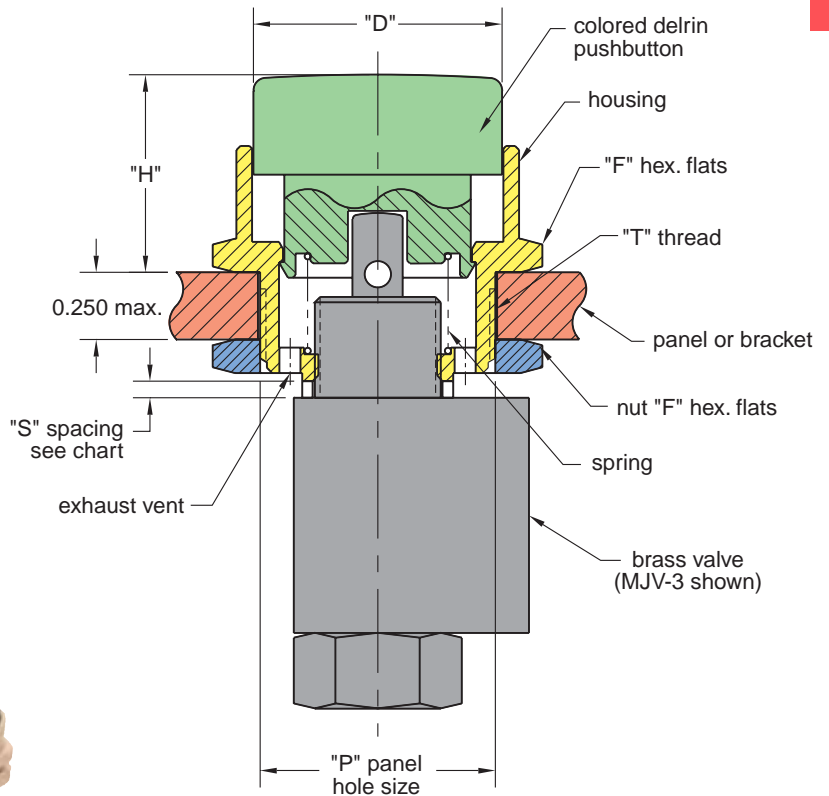
- Assembles directly to the valve; no adapters required
- Ideal for mounting on panels or brackets, up to 1/4" thick panel
- Self-contained assembly; no loose parts
- Stainless steel spring returns button to extended position with no added load to the valve stem
- Three sizes: 16 mm (5/8" dia.), 22 mm (7/8" dia.) and 30 mm (1-3/16" dia.)
- Flush, extended and mushroom style buttons
- Five bright colors for visibility and operator recognition. Other colors available upon request
- Nickel plated brass housing and nut, molded Delrin® button and stainless steel spring for long life and corrosion resistance
- Protects the valve from overtravel and side load

Different valve models vary in mounting thread length, stem extension and stroke. To accommodate these differences, the chart below lists the recommended spacing ("S") to insure complete valve actuation. Provided with each button is a 1/16" thick spacer ring that may be used in place of a panel or bracket to obtain proper spacing. The lockwasher provided may be used with no significant effect on spacing.



DIMENSIONS

SIZE	MODEL	"D" Dia.	"H" Hgt.	"T" Thd.	"P" Panel Hole	+1/32 -0 "F" Hex Flats
5/8-32 (16 mm) mtg. thd.	PC-3E-□□	0.625"	0.734"			
	PC-3F-□□	0.625"	0.500"	5/8-32	5/8" dia.	3/4"
	PC-3M-□□	1.165"	0.906"			
7/8-32 (22 mm) mtg. thd.	PC-4E-□□	0.925"	0.734"			
	PC-4F-□□	0.925"	0.500"	7/8-32	7/8" dia.	1-1/16"
	PC-4M-□□	1.500"	0.906"			
1 3/16-28 (30 mm) mtg. thd.	PC-5E-□□	1.165"	0.734"			
	PC-5F-□□	1.165"	0.500"	1 3/16-28	1-3/16" dia.	1-5/16"
	PC-5M-□□	1.500"	0.906"			



SPACING "S" REQUIRED FOR PROPER VALVE ACTUATION						
Valve series	MAV-2 MAV-3	MAVO-2 MAVO-3	MAV-4 MJV-4	MAV-4D MJV-4D	MJV-2,-3 MJVO-2,-3 FV-3, FV-4, FV-5	
• Mounting thd.	1/4"		1/4"		3/8"	
• Stem extension	5/16"		3/8"		5/16"	
• Valve stroke	1/8"		3/16"		1/8"	
"S" Minimum	none		none		1/16"	
Maximum	1/16"		1/16"		1/8"	



PUSH BUTTON ACTUATORS

Minimatic® Actuators

Easily actuated, clearly identifiable panel controls are the hallmark of a professional control system.

Whether the system is a single valve machine control . . . or an operating console for controlling complex pneumatic systems . . . you will find the actuator you require.

The line includes round push buttons, in flush, extended, and mushroom styles. Also included are key locking controls, and twist actuators. An electric switch is also available where a combination of electric and pneumatic switching is desired in a single panel.

As shown in the drawing, a PB-85 is required to connect a push button and a Clippard valve.

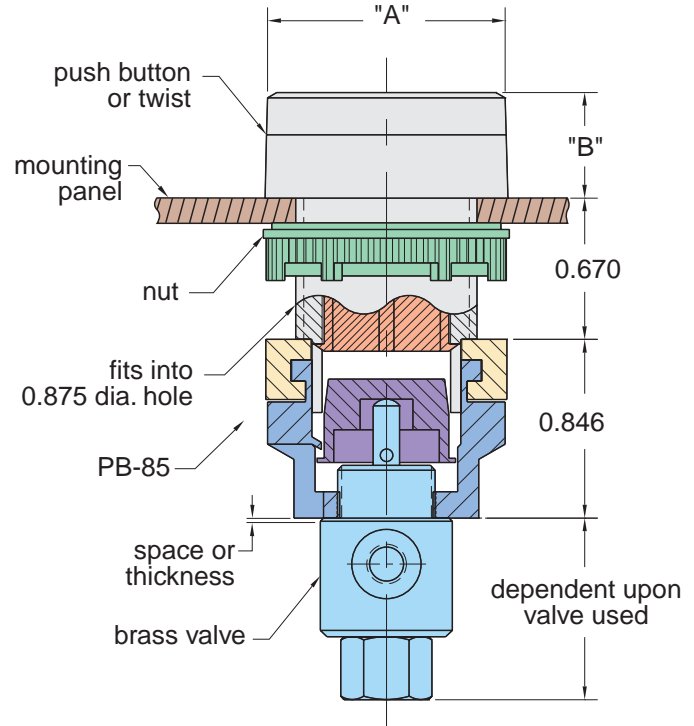
Dimensions

Size 22			Size 30		
Model	"A"	"B"	Model	"A"	"B"
PS-P2F	1.156"	0.492"	PL-P2F	1.440"	0.550"
PS-P2E	1.156"	0.736"	PL-P2E	1.440"	0.960"
PS-P2M	1.575"	0.965"	PL-P2M	1.575"	1.043"
PS-L3M	1.575"	0.965"	PL-L3M	1.575"	1.043"
PS-P4K	1.156"	2.320"	PL-P4K	1.440"	2.280"
PS-L4M	1.575"	2.320"	PL-L4M	1.575"	2.280"
PS-T2T	1.156"	1.043"	PL-T2T	1.440"	1.403"
PS-T3T	1.156"	1.043"	PL-T3T	1.440"	1.043"
PS-T3K	1.156"	2.320"	PL-T3K	1.440"	2.280"

Actuator Mounting Chart

The following chart gives the necessary spacing required between the shoulder of the valve and the base of the adapter.

Valves	PB-85
MAV-2, -2P, -2R, -3R, -3, -3P MAVO-2, -3	None
MJV-2, -3 MJVO-2, -3	1/8"
MAV-4, -4D MJV-4, -4D	None
ES-1	None
FV-3, -3P, -3D, -3DP FV-4, -4P, -4D, -4DP FV-5, -5P, -5D, -5DP	1/8"



Manual Actuator Features

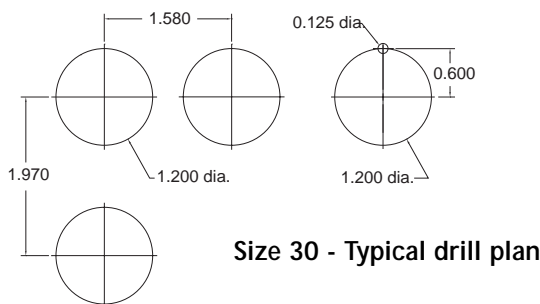
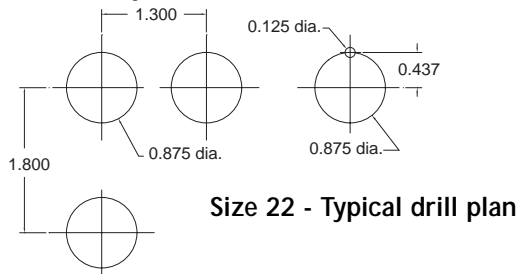
- Attractive and rugged: precision molded ABS plastic
- Two sizes: 30 mm (1 13/64" dia.) in 20 models
22 mm (7/8" dia.) in 20 models
- 4 bright colors for visibility and operator recognition
- Flush, extended, and mushroom styles
- Custom adapter mates manual actuator with 26 different Clippard 2-, 3-, and 4-way valves. Valve and adapter slide on and lock onto actuator in seconds. Easily removed.
- Special wrench fits both sizes, speeds assembly
- Actuators may be mounted or dismounted in panel independent of valve and adapter
- 19 legend plates available plus blank plates in each size
- Valve and adapter may be locked onto actuator in any of four positions to ease installation inside panel
- Anti-rotation rings available for secure mounting
- Key lockable push buttons for security and/or safety



Legend Text	22 Size Part #	33 Size Part #
Blank	PS-01	PL-01
Start	PS-02	PL-02
Stop (red)	PS-03	PL-03
Forward	PS-04	PL-04
Reverse	PS-05	PL-05
Fast	PS-06	PL-06
Slow	PS-07	PL-07
On	PS-08	PL-08
Off (red)	PS-09	PL-09
Reset	PS-10	PL-10
Raise	PS-11	PL-11
Lower	PS-12	PL-12
Emergency Stop (red)	PS-13	PL-13
Run / Jog	PS-31	PL-31
Auto / Hand	PS-32	PL-32
Forward / Reverse	PS-33	PL-33
Fast / Slow	PS-34	PL-34
Open / Close	PS-35	PL-35
Up / Down	PS-36	PL-36
Off / On	PS-37	PL-37

Mounting Clippard Manual Actuators

These drill plans are for units fitted with optional anti-rotation ring



Legend Plates

Plastic legend plate, two sizes, with a black field and white inscription (red as noted). Inscription plates are interchangeable in both sizes.



Accessories for Manual Actuators

Mounting Wrench

Fits both 22 Size and 30 Size manual actuators.

Part No.	Description
PB-60	Mounting Wrench



Valve Adapter

Adapts all manual actuators to any Clippard standard 2-, 3-, or 4-way brass valve. Made of ZYTEL® ST-901 Supertough Nylon.

Part No.	Description
PB-85	Valve Adapter



Square Bezel

Converts any 22 Size actuator to a square actuator.

Part No.	Description
PS-65	Square Bezel



Replacement Mounting Nut

Mounting nut that holds manual actuators to panel. Included with manual actuators. 22 Size only.

Part No.	Description
PS-55	Replacement Mounting Nut



Anti-Rotation Ring

Holds push button in one position. Included with all twist manual actuators.

Part No.	Description
PS-50	Anti-Rotation Ring, 22 mm
PL-50	Anti-Rotation Ring, 30 mm

