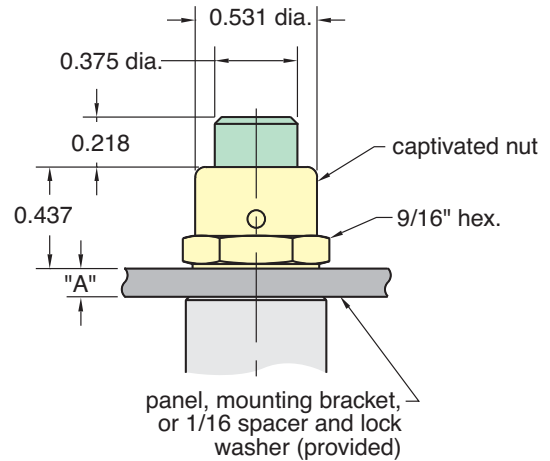
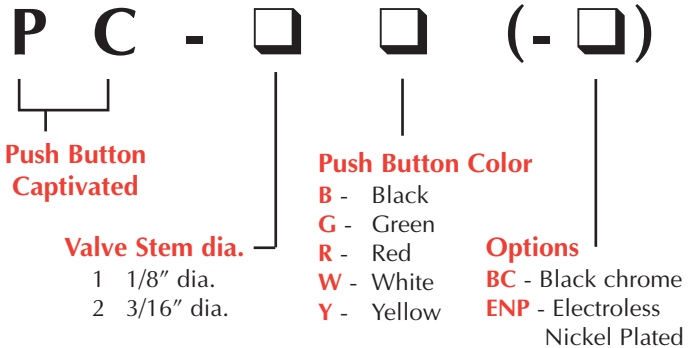
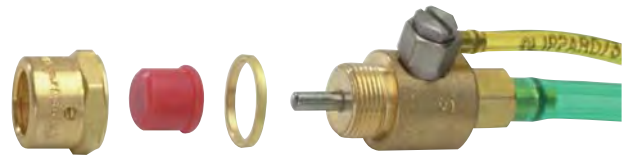


## Captivated Push Buttons

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 -ENP 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 over-travel 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.



### 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"

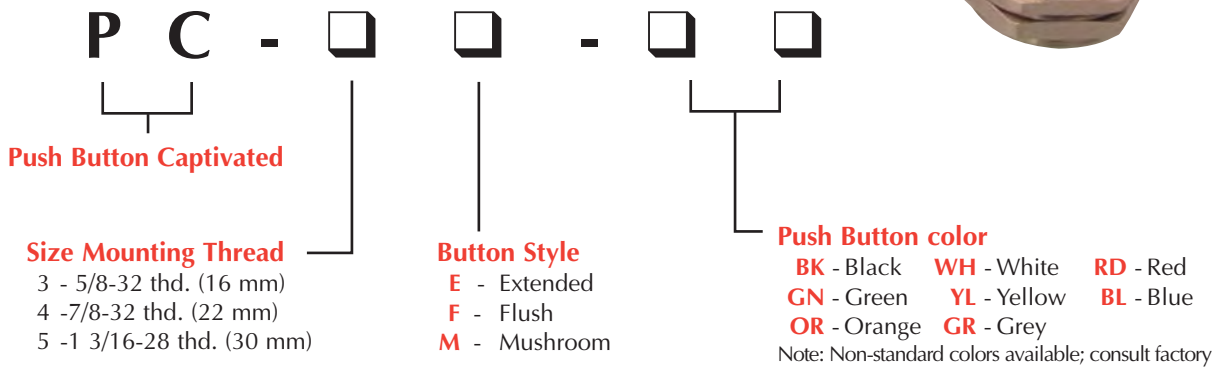


# PUSH BUTTON ACTUATORS

## 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 over-travel or side load to the valve assuring superior performance and long life.



**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

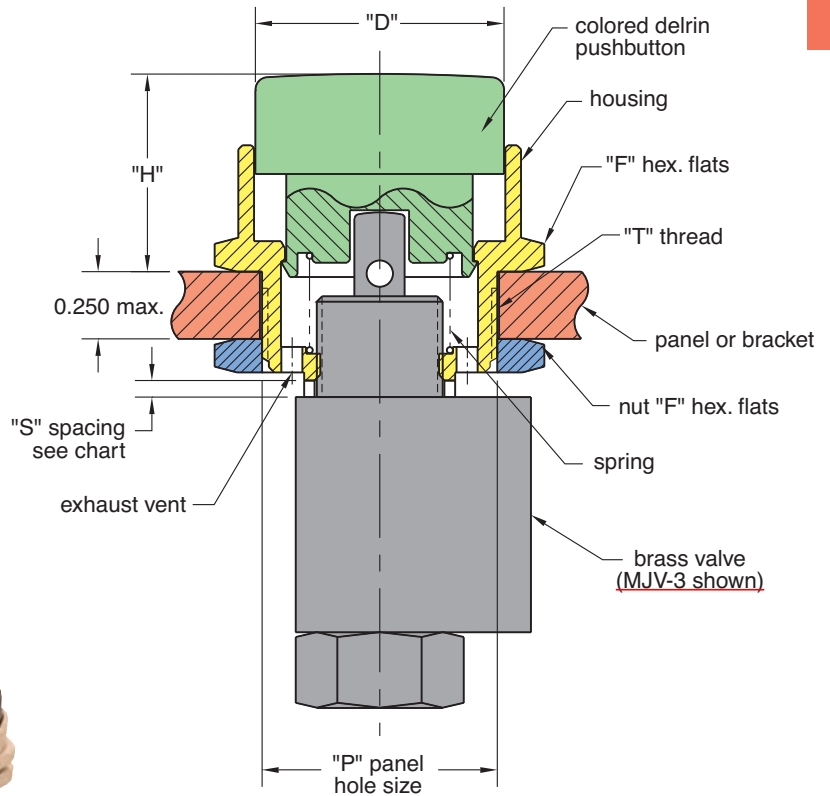
- Assembles directly to the valve; no adapters required
- Ideal for mounting on panels or brackets, up to 1/4" thick panel
- Self-contained assembly; no loose parts
- Stainless steel spring returns button to extended position with no added load to the valve stem
- Three sizes: 16 mm (5/8" dia.), 22 mm (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
- Electroless nickel plated brass housing and nut, molded Delrin® button and stainless steel spring for long life and corrosion resistance
- Protects the valve from over-travel 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 <sup>+1/32</sup> / <sub>0</sub>	"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"



# CONTROL VALVE & ACTUATOR ASSEMBLIES

## Minimatic® Actuators

Clippard's line of 22 mm and 30 mm actuators may be coupled with a variety of Clippard control valves with a simple adapter system providing a single assembly of a panel-mounted actuator and air valve.

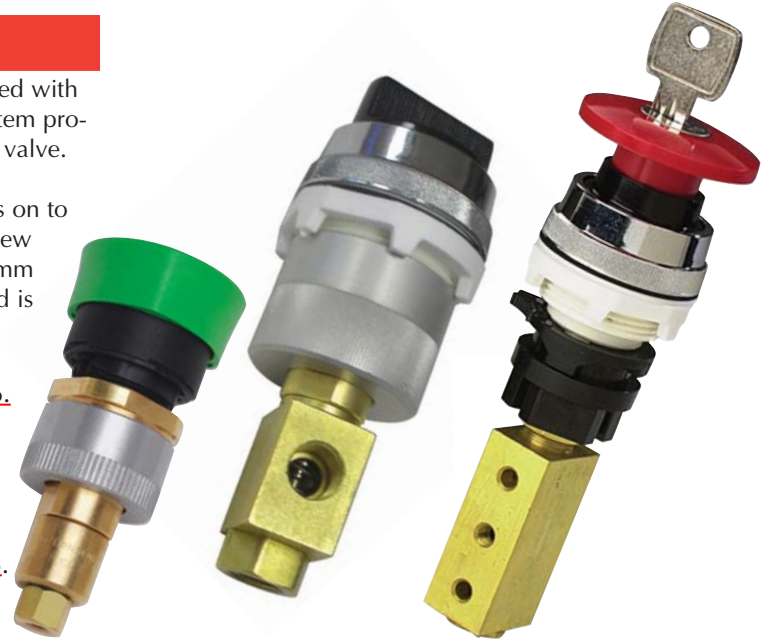
The PB-22 and PB-30 have an aluminum housing that threads on to the actuator, and integral brass sleeve. The PB-22-X fits the new 22 mm series actuators (P22-XXX), and the PB-30 fits the 30 mm series of actuators (PL-XXX). The PB-85 is made of plastic, and is compatible with 30 mm actuators only.

**Step #1.** Select **Actuator** on [pages 135 through 136](#).

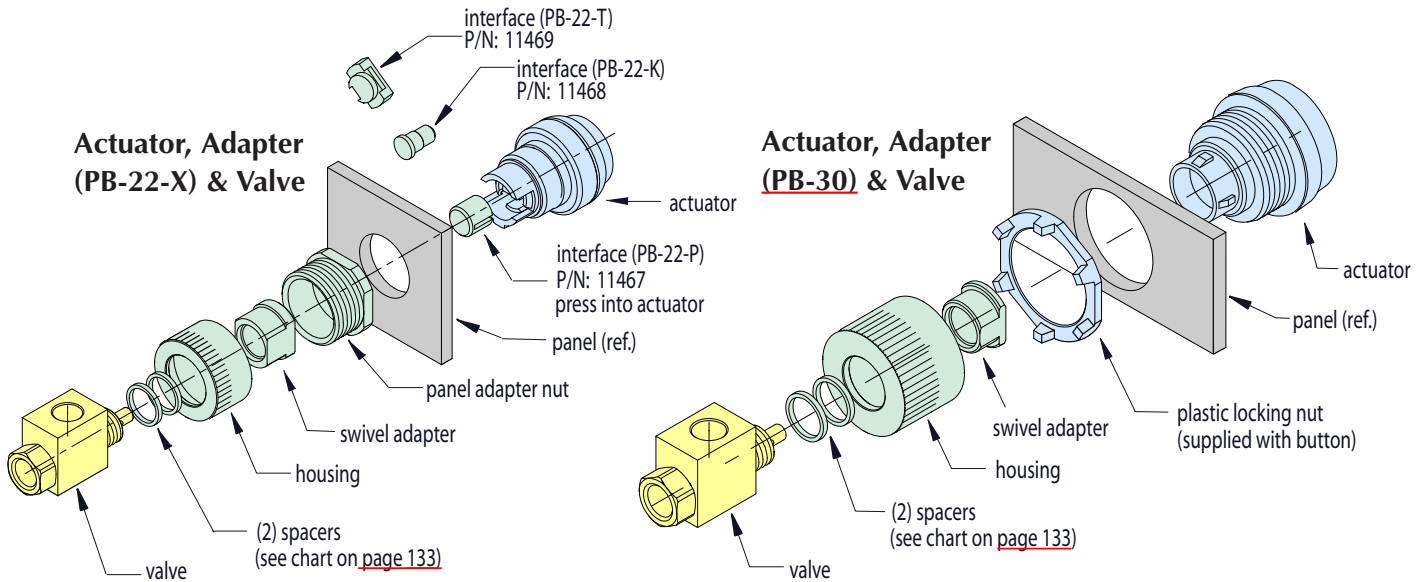
**Step #2.** Determine spacing requirements using the chart on [page 135](#).

**Step #3.** Determine **Adapter** on [pages 135 and 136](#).

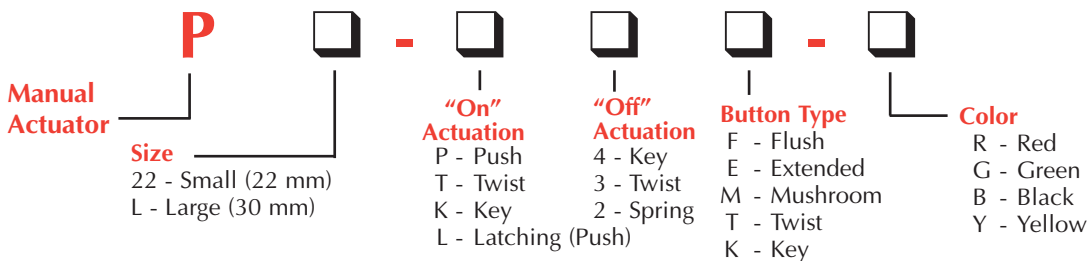
**Step #4.** Add **Accessories** on [page 137](#).



PB-22-X Adapter (22 mm) PB-30 Adapter (30 mm) PB-85 Adapter (30 mm)

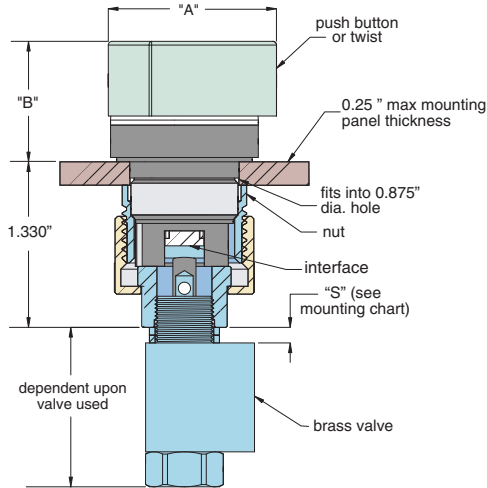


## Actuator Ordering Guide





## Size 22 mm Actuators



PB-22-X Adapter			
Actuator	Adapter	"A"	"B"
P22-P2F-	PB-22-P	1.200"	0.450"
P22-P2E-	PB-22-P	1.200"	0.650"
P22-P2M-	PB-22-P	1.600"	0.850"
P22-L3M-	PB-22-K	1.450"	1.000"
P22-L4M-	PB-22-K	1.450"	1.200"
P22-T2T-	PB-22-T	1.200"	0.925"
P22-T3T-	PB-22-T	1.200"	0.925"
P22-T3K-	PB-22-T	1.200"	1.000"
P22-K3K-	PB-22-T	1.200"	1.000"

### Mounting Chart for Clippard Valves

The following chart gives the necessary spacing required between the shoulder of the valve and the base of the adapter. Two 1/16" spacers are furnished with each adapter.

#### Spacer Requirements

Valves	"S"
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"



**Flush Push Button.** Manual Push "In". Spring Return.

Part No.	Description
<a href="#">P22-P2F-R</a>	Red
<a href="#">P22-P2F-G</a>	Green
<a href="#">P22-P2F-B</a>	Black
<a href="#">P22-P2F-Y</a>	Yellow



**Extended Push Button.** Manual Push "In". Spring Return.

Part No.	Description
<a href="#">P22-P2E-R</a>	Red
<a href="#">P22-P2E-G</a>	Green
<a href="#">P22-P2E-B</a>	Black
<a href="#">P22-P2E-Y</a>	Yellow



**Automatic Push/Turn Mushroom.** Manual push "In". Latches "In". Turn clockwise to unlatch. Spring return.

Part No.	Description
<a href="#">P22-L3M-R</a>	Red
<a href="#">P22-L3M-G</a>	Green
<a href="#">P22-L3M-B</a>	Black



**Maintained Twist 90°.** Turn clockwise to latch "In". Turn counterclockwise to release. Black only.

Part No.	Description
<a href="#">P22-T3T-B</a>	Black



**Spring Return Twist 45°.** Turn clockwise and hold for "In". Release for spring return. Black only.

Part No.	Description
<a href="#">P22-T2T-B</a>	Black



**Manual Push Mushroom.** Manual Push "In". Spring Return.

Part No.	Description
<a href="#">P22-P2M-R</a>	Red
<a href="#">P22-P2M-G</a>	Green
<a href="#">P22-P2M-B</a>	Black



**Key Twist 90° Maintained.**

(P22-T3K-B) Turn key clockwise to latch "In". Turn key counterclockwise to release. Key with-drawable in both positions. Black only.

P22-K3K-B same as P22-T3K-B except key is withdrawable in "Out" position only.

Part No.	Description
<a href="#">P22-T3K-B</a>	Black
<a href="#">P22-K3K-B</a>	Black



**Push Key Mushroom.** Manual push "In".

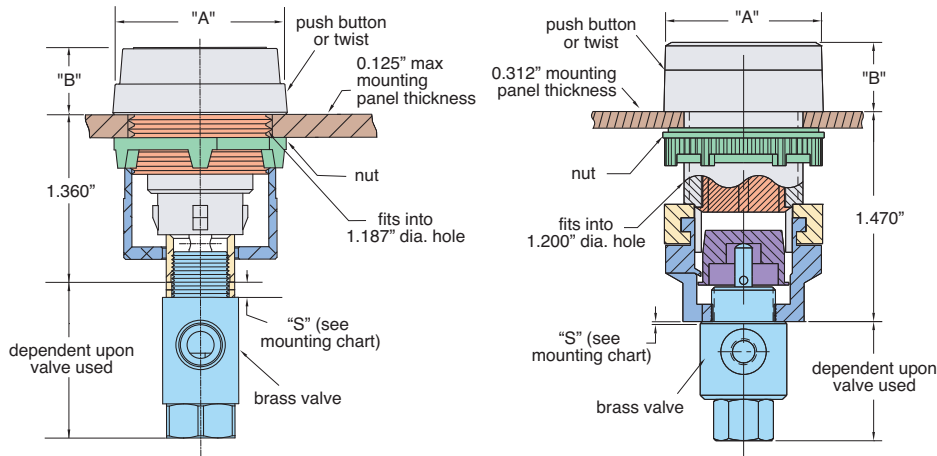
Automatic latches "In". Turn key clockwise to release. Spring return. Key withdrawable "Out" position only. Red only.

Part No.	Description
<a href="#">P22-L4M-R</a>	Red



# CONTROL VALVE & ACTUATOR ASSEMBLIES

## Size 30 mm Actuators



PB-30 Aluminum Adapter		
Actuator	"A"	"B"
PL-P2F-	1.440"	0.580"
PL-P2E-	1.440"	0.880"
PL-P2M-	1.560"	1.050"
PL-L3M-	1.560"	1.050"
PL-P4K-	1.440"	1.400"
PL-L4M-	1.580"	1.300"
PL-T2T-	1.440"	1.070"
PL-T3T-	1.440"	1.070"
PL-T3K-	1.440"	1.200"
PL-K3K-	1.440"	1.200"

PB-85 Plastic Adapter		
Actuator	"A"	"B"
PL-P2F-	1.440"	0.550"
PL-P2E-	1.440"	0.960"
PL-P2M-	1.575"	1.043"
PL-L3M-	1.575"	1.043"
PL-P4K-	1.440"	2.280"
PL-L4M-	1.575"	2.280"
PL-T2T-	1.440"	1.403"
PL-T3T-	1.440"	1.043"
PL-T3K-	1.440"	2.280"
PL-K3K-	1.440"	2.280"

Part No.	Description
PB-30	Aluminum Adapter
PB-85	Plastic Adapter



**Flush Push Button.** Manual push "In". Spring return.

Part No.	Description
PL-P2F-R	Red
PL-P2F-G	Green
PL-P2F-B	Black
PL-P2F-Y	Yellow



**Maintained Twist 90°.** Turn clockwise to latch "In". Turn counterclockwise to release. Black only.

Part No.	Description
PL-T3T-B	Black



**Extended Push Button.** Manual push "In". Spring return.

Part No.	Description
PL-P2E-R	Red
PL-P2E-G	Green
PL-P2E-B	Black
PL-P2E-Y	Yellow



**Push Key Mushroom.** Manual push "In". Automatic latches "In". Turn key clockwise to release. Spring return. Key withdrawable "Out" position only.

Part No.	Description
PL-L4M-R	Red



**Automatic Push/Turn Mushroom.** Manual push "In". Latches "In". Turn clockwise to unlatch. Spring return.

Part No.	Description
PL-L3M-R	Red
PL-L3M-G	Green
PL-L3M-B	Black



**Manual Push Mushroom.** Manual push "In". Spring return.

Part No.	Description
PL-P2M-R	Red
PL-P2M-G	Green
PL-P2M-B	Black



**Spring Return Twist 45°.** Turn clockwise and hold for "In". Release for spring return. Black only.

Part No.	Description
PL-T2T-B	Black



**Push Key Push Button.** Manual push "In". Spring return. Turn key counterclockwise to lock "Out"; clockwise to unlock. Key withdrawable locked or unlocked. Black only.

Part No.	Description
PL-P4K-B	Black



**Key Twist 90° Maintained.** (PL-T3K-B) Turn key clockwise to latch "In". Turn key counterclockwise to release. Key withdrawable in both positions. Black only.

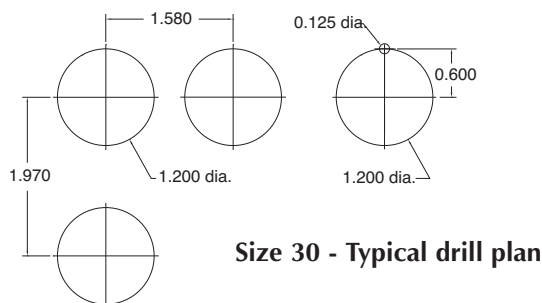
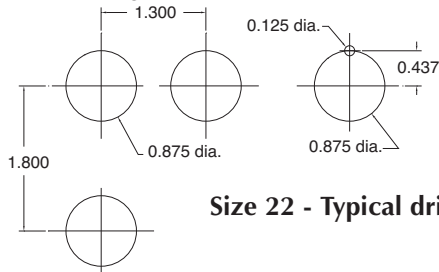
Part No.	Description
PL-K3K-B	same as PL-T3K-B except key is withdrawable in "Out" position only.
PL-T3K-B	Black
PL-K3K-B	Black

## Legend Plates

Legend Text	22 Size Part #	30 Size Part #
Blank	P22-01	PL-01
Start	P22-02	PL-02
Stop (red)	P22-03	PL-03
Forward	P22-04	PL-04
Reverse	P22-05	PL-05
Fast	P22-06	PL-06
Slow	P22-07	PL-07
On	P22-08	PL-08
Off (red)	P22-09	PL-09
Reset	P22-10	PL-10
Raise	P22-11	PL-11
Lower	P22-12	PL-12
Emergency Stop (red)	P22-13	PL-13
Run / Jog	P22-31	PL-31
Auto / Hand	P22-32	PL-32
Forward / Reverse	P22-33	PL-33
Fast / Slow	P22-34	PL-34
Open / Close	P22-35	PL-35
Up / Down	P22-36	PL-36
Off / On	P22-37	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 30 mm size manual actuators.

Part No.	Description
<a href="#">PB-60</a>	Mounting Wrench



### Replacement Interface

Part No.	Description
<a href="#">11468</a>	PB-22-K Interface
<a href="#">11467</a>	PB-22-P Interface
<a href="#">11469</a>	PB-22-T Interface



### Replacement 30 mm Anti-Rotation Ring

Holds 30 mm adapter in one position. Included with all 30 mm twist manual actuators.

Part No.	Description
<a href="#">PL-50</a>	Anti-Rotation Ring, 30 mm



### 22 mm Anti-Rotation Feature

