

Features

- All materials comply with FDA, USDA, and 3-A requirements
- Virgin PTFE ball seats and cavity fillers
- Highly polished internals and end caps with 8-12 Ra finish
- Tri-Clamp ends for hygienic connections
- Full port 316 SS diverter valve
- 1000 PSI WOG at 72 °F
- Polyamide IP67 weatherproof enclosure with UV protection
- Multi-voltage capable with auto-voltage sensing
- Long life brushless motor
- Electronic over torque protection
- Anti-condensation heater
- Manual override
- DIN plug style electrical connections
- Highly visual dome style valve position indicator
- Auxiliary limit switches to confirm valve position
- BSR Battery Backup/Failsafe option

Applications

Sanitary 3-way ball valves are typically used for food, beverage, pharmaceutical, personal care, and pet care applications where 3-A sanitary construction is required, as well as for utility, process, and corrosive environment applications where quick clamp connections are beneficial. Often used as a diverter, selector or mixing valve with a variety of flow path options through the valve. Actuator designed for 75% duty cycle.

Operation

Electric actuated valve uses power-to-open (Pos. 2) and power-to-close (Pos.1), stays in the last known position with power failure. On receipt of a continuous voltage signal, the motor runs and via a flat gear drive system rotates the ball 90°. The motor is automatically stopped by internal cams striking limit switches. On receipt of a reversing continuous signal, the motor turns in the opposite direction reversing the valve position. DIN style plugs are provided for electrical connections. Standard manual override can be used for setup and power failure situations.

*Note: 3A standard 68-00 requires a minimum 1" clearance between valve and actuator. Valworx High Temp kits can be used to satisfy this requirement.

Construction

Valve Body	316 stainless steel
Ball/Stem	316 stainless steel
Ball Seats/ Cavity Filler	Virgin PTFE
Stem Seals	PTFE/ Viton®
Actuator Enclosure	Anti-corrosive Polyamide, IP67 weatherproof
Position Indicator/Manual Override	Dome style indicator/manual polyamide knob
Fasteners	ASTM 304 Stainless Steel
Auxiliary Limit Switches	2 x SPST 3A@125/250VAC, 30VDC resistive load



**L-port Diverter Valve
Flow Pattern**



Description

Electrically operated sanitary 3-way L-type ball valve has four PTFE ball seats, allowing for full pressure at any port. Adjustable live loaded triple stem seal design helps compensate for wear, pressure or temperature fluctuations. Corrosion resistant actuator includes a manual override, position confirm limit switches, thermostatically controlled anti-condensation heater, and over-torque protection. External LED diagnostic light.

Approvals– Actuators

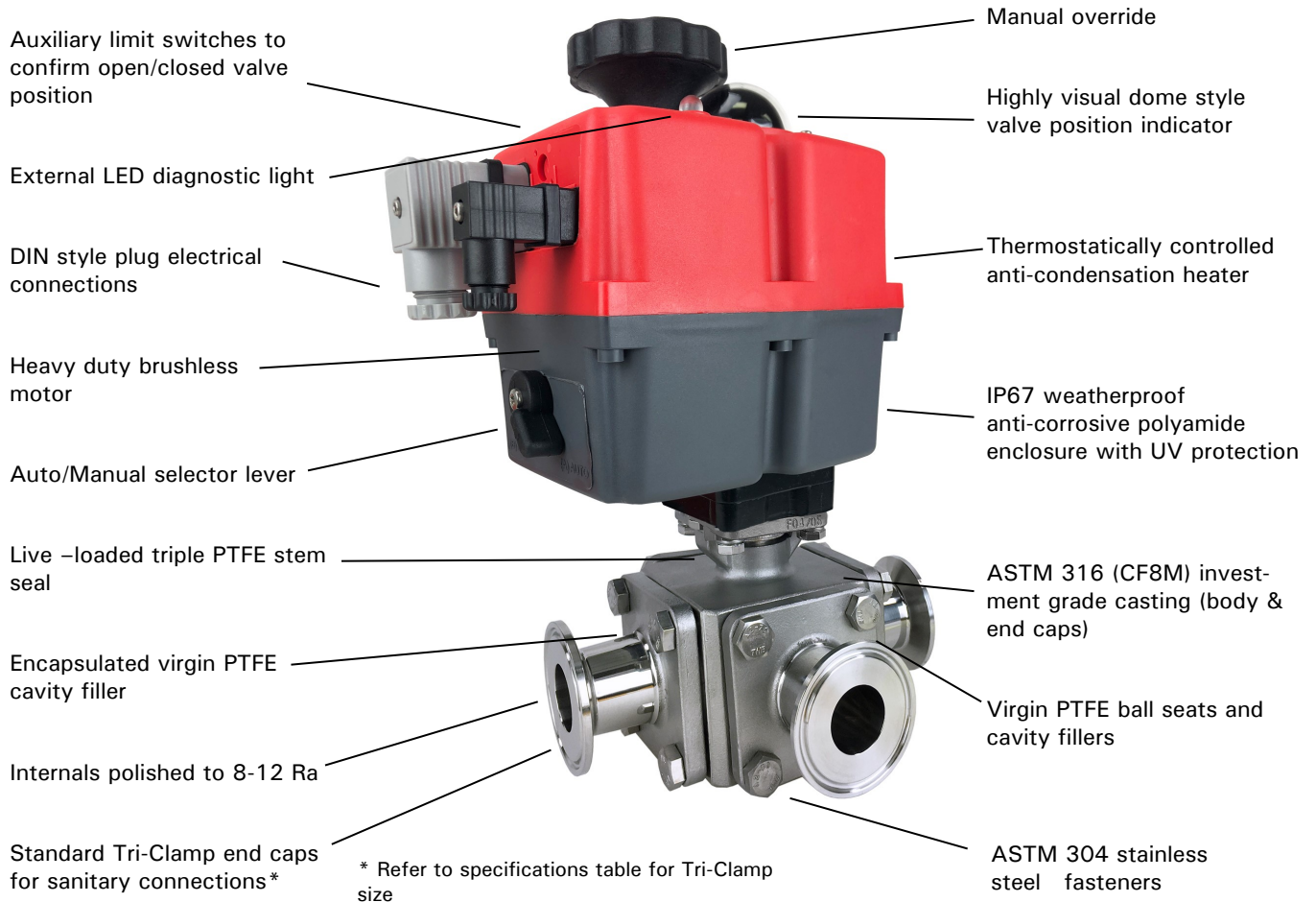
- CE mark conforming to:
 - Machinery directive
 - Low voltage directive
 - EMC Compatibility directive
- ISO5211 valve mounting



Standards- Valves

- Construction:
 - 3A 68-00
 - ANSI B16/B2/B18
 - NSF 61
 - FDA 21 CFR 177.1550
- Pressure Testing:
 - MSS-SP82

Construction Features



* Refer to specifications table for Tri-Clamp size
* Note: Tri-Clamp size is **NOT** determined by the OD of the end cap

Pressure-Temperature

Pressure Rating*: 1000 PSI @ 120°F

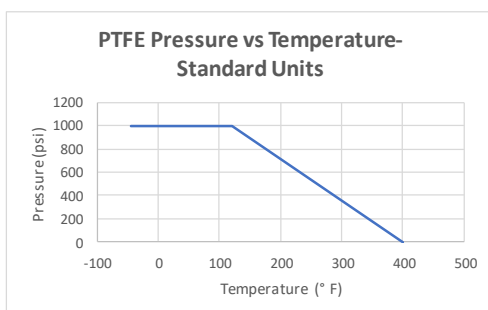
Max Pressure Room Temp- 1000 PSI (72°F desired room temp)

Temperature Rating: -50° to 400° F (-45 to 200°C)

*See P/T Chart

Actuator Temperature Rating: -4 to +158° F (-20 to 70° C)

Pressure/Temperature Chart (PSI/°F)



Standard Units

Temp °F	-45	120	400
Pressure	1000	1000	0

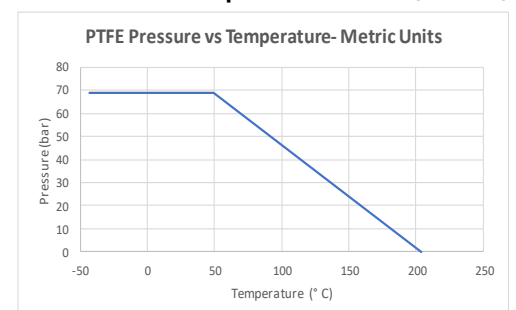
Metric Units

Temp °C	-43	49	204
Pressure	69	69	0

Optional Functions

- **BSR**: Battery Spring Return - actuator fails to a safe position with loss of external power

Pressure/Temperature Chart (Bar/°C)



Specifications (English units)

Stock Number	Pipe Size (inch)	Tri-Clamp Size (inch)	Cv Flow Factor	Pressure Max. (PSI)*	Cycle Time /90° (seconds) +/- 10%	Enclosure Rating	Max. Current Draw (Amps)			
							110VAC	240VAC	24VAC	24VDC
24-240V AC or 24-135V DC ELECTRIC ACTUATED 3-WAY SANITARY STAINLESS BALL VALVE: L-PORT TRI-CLAMP										
573400	1/2	3/4	8	1000	9	IP67	0.3	0.2	1.3	1.0
573401	3/4	3/4	29	1000	9	IP67	0.3	0.2	1.3	1.0
573402	1	1-1/2	66	1000	13	IP67	0.4	0.2	2.0	1.6
573403	1-1/2	1-1/2	192	1000	29	IP67	0.3	0.2	1.5	1.2
573404	2	2	434	1000	29	IP67	0.3	0.2	1.5	1.2
573405	2-1/2	2-1/2	723	1000	58	IP67	0.8	0.5	3.3	2.7
573406	3	3	1124	1000	58	IP67	0.8	0.5	3.3	2.7

Cv= The GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

* Pressure @ -50° to 400° F (reduced pressure at higher temperatures—see P/T chart)

• Torque at 1000 PSI and 72°F

Specifications (Metric units)

Stock Number	Pipe Size (mm)	Tri-Clamp Size (inch)	Kv Flow Factor	Pressure Max. (Bar)*	Cycle Time /90° (seconds) +/- 10%	Enclosure Rating	Max. Current Draw (Amps)			
							110VAC	240VAC	24VAC	24VDC
24-240V AC or 24-135V DC ELECTRIC ACTUATED 3-WAY SANITARY STAINLESS BALL VALVE: L-PORT TRI-CLAMP										
573400	12.7	3/4	7	69	9	IP67	0.3	0.2	1.3	1.0
573401	19.1	3/4	25	69	9	IP67	0.3	0.2	1.3	1.0
573402	25.4	1-1/2	57	69	13	IP67	0.4	0.2	2.0	1.6
573403	38.1	1-1/2	107	69	29	IP67	0.3	0.2	1.5	1.2
573404	50.8	2	165	69	29	IP67	0.3	0.2	1.5	1.2
573405	63.5	2-1/2	374	69	58	IP67	0.8	0.5	3.3	2.7
573406	76.2	3	623	69	58	IP67	0.8	0.5	3.3	2.7

* Pressure range @ -45° to 200° C (reduced pressure for higher temperatures—see P/T chart)

Optional BSR - Battery Spring Return

The BSR– Battery Spring Return kit is available as a factory installed option for Valworx 5734 series electric actuated valves. The BSR kit will work with both on-off models and actuators with DPS positioners. The battery failsafe system provides an alternative source of power to drive the actuator to a preset failsafe position in the event of an external power failure. The industrial quality battery is constantly trickle charged during normal operation to assure maximum charge when required. The battery kit is installed under the actuator cover. No separate modules or boxes are required.

In many applications, the BSR battery spring return function tends to be a very economical option when compared to the alternate true mechanical spring return actuator. Valworx actuators with the BSR option are much smaller, lighter and less expensive.



The installed BSR kit will provide enough power to move the actuator/valve to a failsafe position with loss of external power. The kit can be ordered as fail closed or fail open as required.

The actuator operates in the normal power open and power close mode while external power is available. Internal circuitry monitors the incoming main power and automatically switches within a few seconds to the battery backup with loss of external power. The battery will then provide enough power to move the actuator to a failsafe position. Under normal operation the external control power will trickle charge the battery and maintain a full charge.

In the normal mode of operation, an LED status light located on top of the actuator cover will be continuously lit. With a loss of power, the LED status light will blink slowly. On resumption of external power, conditional that the actuator control signal remained unchanged, the actuator will reset to the position it saw at the time of the main power failure.

BSR Kit Ordering

Kit Stock	Description
561104E	5610 BSR Battery Spring Return Kit, Fail Closed (pos 1)
561105E	5610 BSR Battery Spring Return Kit, Fail Open (pos 2)

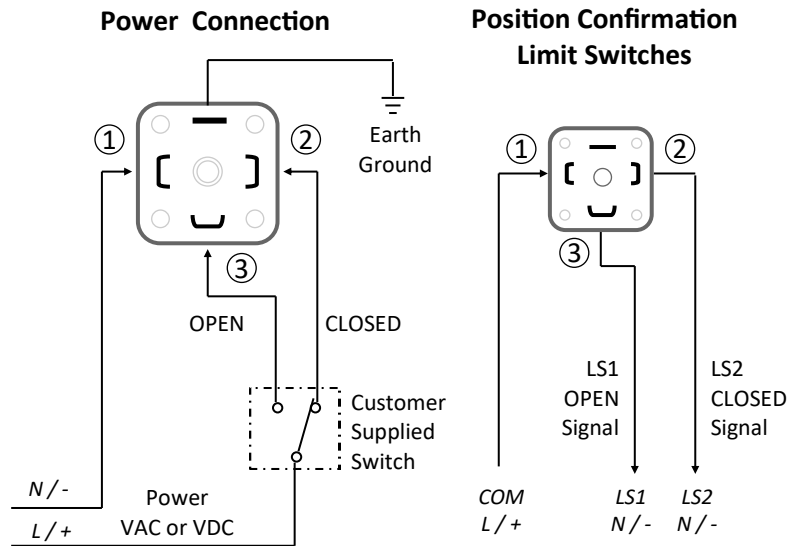
• BSR kits are a factory installed option

Valworx Actuator with BSR Option	1/2 to 3/4" Tri-Clamp	1" Tri-Clamp	1-1/2 to 2" Tri-Clamp	2-1/2 to 3" Tri-Clamp
Working operations without recharge, with 100% initial battery charge	10	10	10	4
Recharge time per working operation	15 min	48 min	58 min	50 min
Full Charge Time 100%	28 h	28 h	28 h	54 h

Electrical Wiring: On/Off and BSR Battery Spring Return Versions

Voltage: 24-240 Volts AC or 24-135 Volts DC, 1ph, -0/+ 5%

Auto-voltage sensing



Function: ON-OFF version

Power Connections

Power to PIN 1 and 2
- actuator CLOSED

Power to PIN 1 and 3
- actuator OPEN

Stays in last known position
with loss of power.

Function: ON-OFF version with BSR option

Wiring is the same as standard ON-OFF version.

Power to open, power to close - maintain power to trickle
charge the battery system in either open or closed position.

Actuator sent by battery power to failsafe position with power
failure.

Actuator returns to pre-failure position on power resumption.

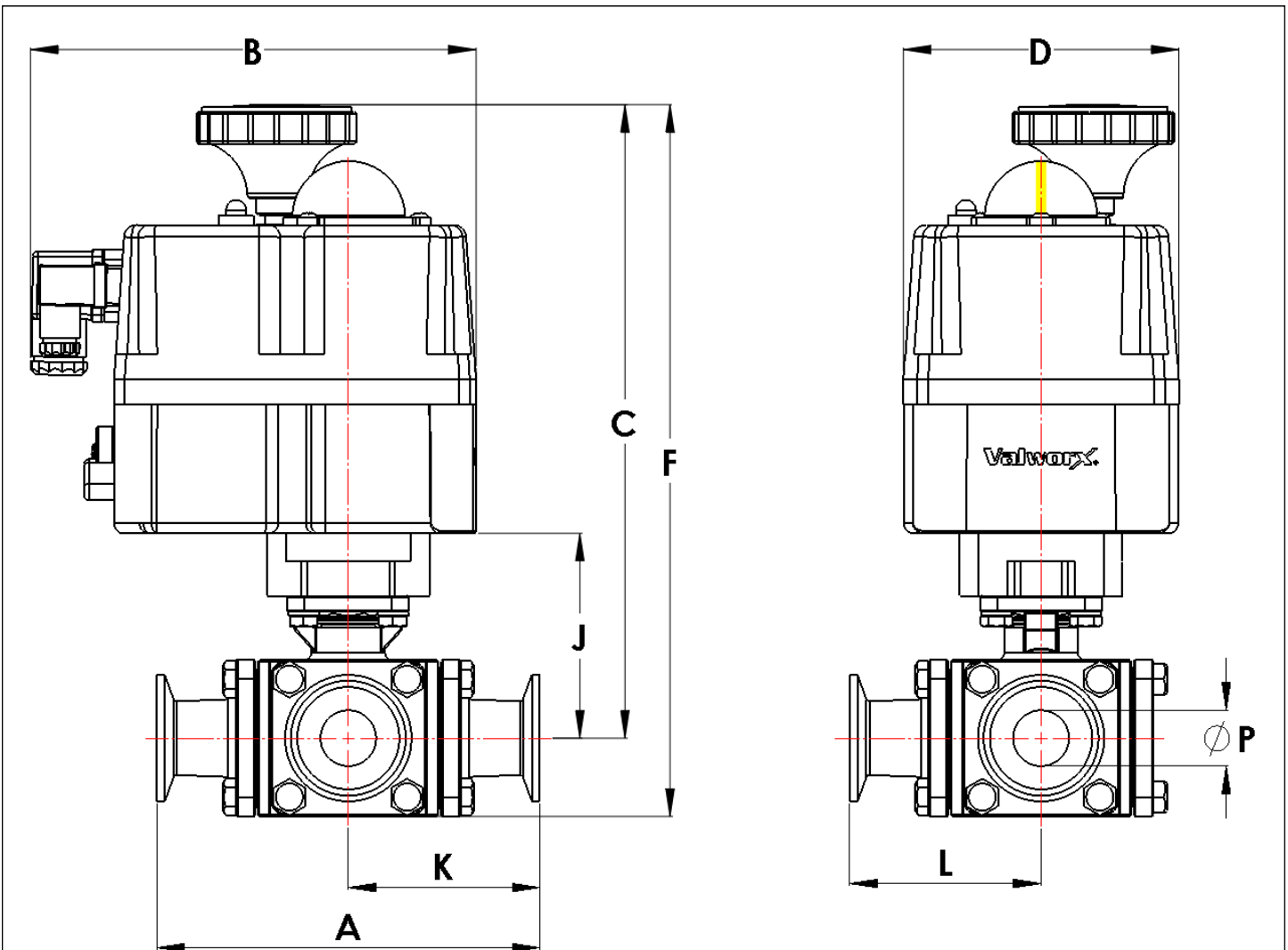
Function: Position confirmation limit switches

Dry contact 3A @ 125/250
VAC, 30VDC resistive load

PIN 1 (COM) and 2 to confirm
actuator is closed

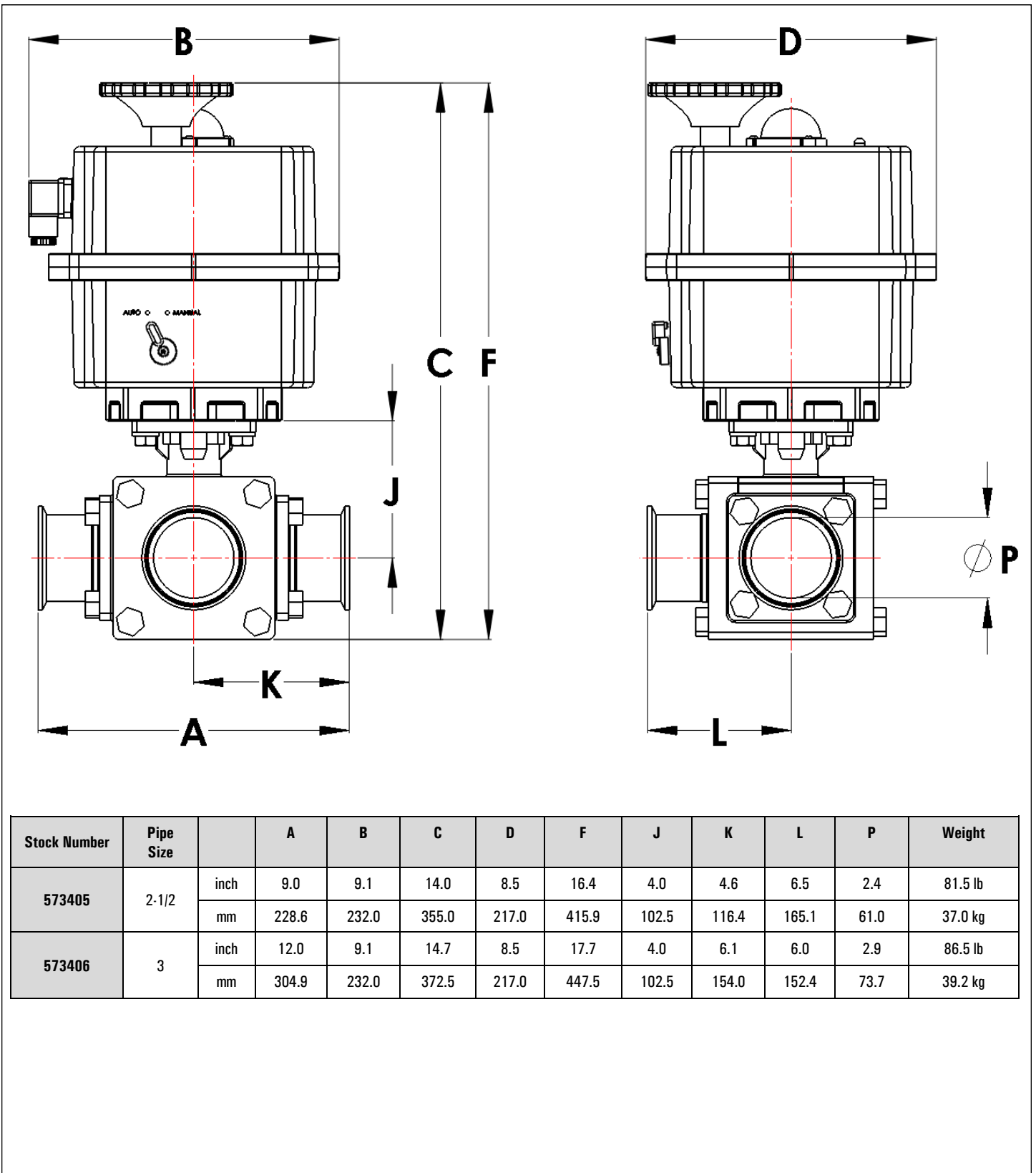
PIN 1 (COM) and 3 to confirm
actuator is open

Dimensions:



Stock Number	Pipe Size		A	B	C	D	F	J	K	L	P	Weight
573400	1/2	inch	4.3	7.1	8.5	4.3	9.4	1.8	2.3	2.2	0.4	8.0 lb
		mm	109.2	179.0	215.8	110.0	239.0	44.8	58.4	55.9	10.2	3.6 kg
573401	3/4	inch	5.0	7.1	8.6	4.3	9.7	1.9	2.5	2.3	0.6	9.0 lb
		mm	127.0	179.0	219.3	110.0	245.3	48.3	63.5	58.4	15.2	4.1 kg
573402	1	inch	6.0	7.0	10.0	4.3	11.2	3.2	3.0	3.0	0.9	12.3 lb
		mm	152.4	177.0	253.0	110.0	284.1	82.0	76.4	76.4	22.9	5.6 kg
573403	1-1/2	inch	7.5	7.0	10.7	4.3	12.4	3.0	3.7	3.8	1.4	23.2 lb
		mm	190.5	177.0	272.0	110.0	314.3	76.0	95.2	96.5	35.6	10.5 kg
573404	2	inch	8.5	7.0	11.1	4.3	13.1	3.0	4.3	4.3	1.9	33.2 lb
		mm	215.9	177.0	282.0	110.0	333.7	76.0	108.5	109.2	48.3	15.0 kg

Dimensions:



Stock Number	Pipe Size		A	B	C	D	F	J	K	L	P	Weight
573405	2-1/2	inch	9.0	9.1	14.0	8.5	16.4	4.0	4.6	6.5	2.4	81.5 lb
		mm	228.6	232.0	355.0	217.0	415.9	102.5	116.4	165.1	61.0	37.0 kg
573406	3	inch	12.0	9.1	14.7	8.5	17.7	4.0	6.1	6.0	2.9	86.5 lb
		mm	304.9	232.0	372.5	217.0	447.5	102.5	154.0	152.4	73.7	39.2 kg