

Features

- Functions as a diverter or selector valve
- 1000 PSI working pressure at 72°F (22°C)
- All materials comply with FDA, USDA, and 3-A requirements
- TFM-1600 ball seats with virgin PTFE cavity fillers
- Highly polished internals and end caps with 8-12 Ra finish
- Tri-Clamp ends for hygienic connections
- Visual valve position indicator
- Rugged aluminum Type 4X weatherproof enclosure
- Heavy duty motors with overload protection
- Thermostatically controlled anti-condensation heater
- Manual override with end of travel mechanical stops
- Two auxiliary position confirmation limit switches
- Actuators CSA Listed per UL429 and CSA C22.2

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 70% 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 rugged all metal gear drive 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. Power connections are via included cable connector or optional 1/2" NPT conduit adapters. Manual override is available for setup and power failure situation.

*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	ASTM 316 stainless steel
Ball/Stem/ End Caps	ASTM 316 stainless steel
Ball Seats/ Cavity Filler	TFM-1600/ Virgin PTFE
Stem Seals	PTFE / Viton®
Gear Drive	Heavy duty steel and aluminium bronze, self locking
Actuator Enclosure	Aluminium, polyester powder painted, Type 4X, IP67
Visual Valve Position Indicator	Clear polycarbonate cover, red/yellow open-closed
Fasteners	ASTM 304 Stainless Steel
Auxiliary Limit Switches	2 x SPDT 3A@125/250VAC, 30VDC resistive load



L-port Diverter Valve
Flow Pattern
Position 1 Position 2



Description

Electrically operated sanitary 3-way L-type flow pattern ball valve has four PTFE ball seats, allowing for full pressure at any port. Adjustable live loaded stem seal packing helps compensate for wear, pressure and temperature fluctuations, extending the cycle life of the valve. Rugged corrosion resistant electric actuator includes a manual override, position confirm switches (on-off units), thermostatically controlled anti-condensation heater, and over-torque protection.

Approvals– Actuators

- CSA Listed:
 - UL429 and CSA C22.2 No. 139
 - Type 4X, IP67 weatherproof enclosure

- CE conformance

- ISO5211 mounting



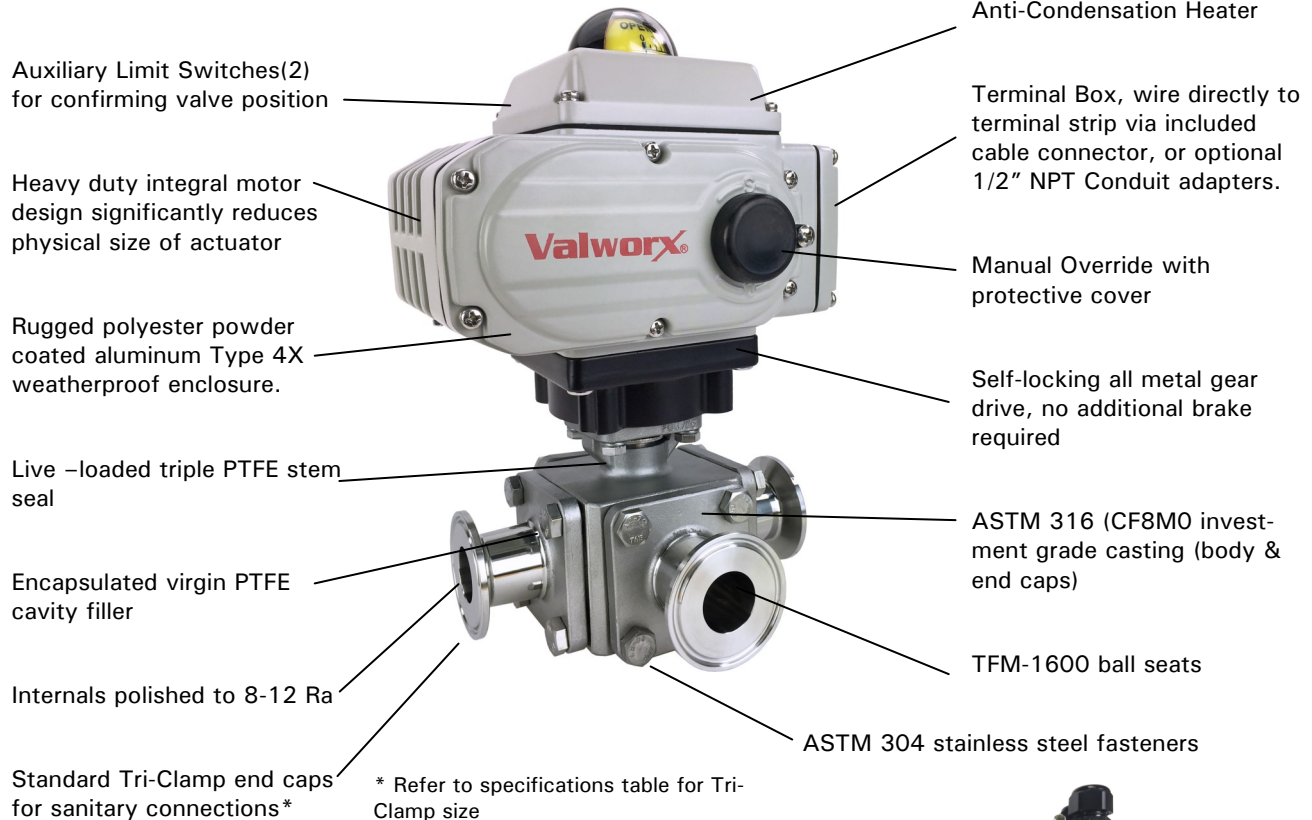
Standards- Valves

- Construction:

- 3A 68-00
- ANSI B16/B2/B18
- NSF 61
- FDA 21 CFR 177.1550

- Pressure Testing:
 - MSS-SP82

Construction Features



Standard Tri-Clamp end caps for sanitary connections*

* 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

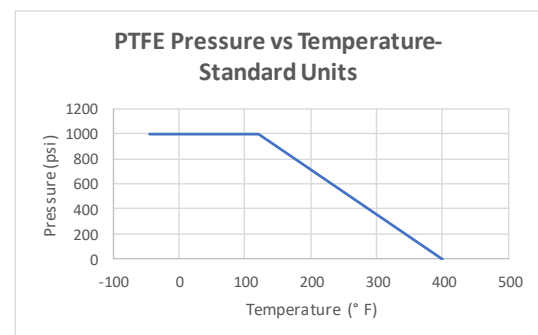
Max Pressure Room Temp– 1000 PSI (72°F desired room temp)

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

*See P/T Chart

Actuator Temperature Rating: -22 to +140° F (-30 to 60° C)

Pressure/Temperature Chart (PSI/°F)



Standard Units

Temp °F	-45	120	400
Pressure	1000	1000	0

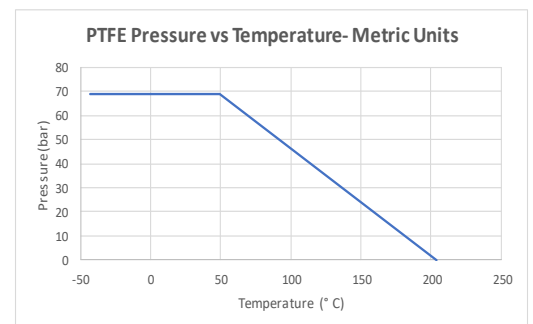
Metric Units

Temp °C	-43	49	204
Pressure	69	69	0



Visual Valve Position Indicator

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)	Voltage	Current (amps)	Duty Cycle	Electrical Dwg.
120 VAC ELECTRIC ACTUATED 3-WAY L-PORT SANITARY STAINLESS BALL VALVE									
573500	1/2	3/4	8	1000	10/8	110 VAC, 50/60Hz	0.3	70%	B
573501	3/4	3/4	29	1000	10/8	110 VAC, 50/60Hz	0.3	70%	B
573502	1	1-1/2	66	1000	20/17	110 VAC, 50/60Hz	0.3	70%	B
573503	1-1/2	1-1/2	192	1000	30/25	110 VAC, 50/60Hz	0.6	70%	B
573504	2	2	434	1000	30/25	110 VAC, 50/60Hz	0.6	70%	B
573505	2-1/2	2-1/2	723	1000	30/25	110 VAC, 50/60Hz	0.7	70%	B
573506	3	3	1124	1000	45/37	110 VAC, 50/60Hz	1.3	70%	B
24 VDC ELECTRIC ACTUATED 3-WAY L-PORT SANITARY STAINLESS BALL VALVE									
573700	1/2	3/4	8	1000	20	DC24	1.3	70%	G
573701	3/4	3/4	29	1000	20	DC24	1.3	70%	G
573702	1	1-1/2	66	1000	20	DC24	1.3	70%	G
573703	1-1/2	1-1/2	192	1000	30	DC24	2.0	70%	G
573704	2	2	434	1000	30	DC24	2.0	70%	G
573705	2-1/2	2-1/2	723	1000	30	DC24	2.0	70%	G

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

Electric Actuated 3-Way L-port Valves

Valworx electric actuated 3-way L-Port valves use power-to-open (pos.2) and power-to-close (pos.1), stays in the last known position with loss of power. The actuator will rotate the output drive 90° to change the position of the ball valve. Limit switches automatically stop the motor/gear drive in either position 1 or position 2 as required.

Two auxiliary limit switches are provided as standard to confirm valve position.

Rugged primary gear drive system is made of heat treated alloy steel for high strength, excellent wear resistance and high torque. Final stage aluminium bronze worm gear drive is self-locking, no motor brake required.

A manual override is provided for use in setup or power failure situations. The override is operated with a standard hex wrench (included).

The standard 4 watt thermostatically controlled anti-condensation heater will help prevent failures due to condensation buildup inside the actuator.

Robust aluminium alloy housing is corrosion-resistant, polyester powder coated, and weatherproof. The housing is rated Type 4X (IP67) and certified by CSA. Heavy duty motors are integral to the actuator housing. The actuator has the smallest physical size to power ratio of most actuators on the market.

Electrical wiring is directly to a terminal strip via cable connectors (included) or optional 1/2" NPT conduit adapters.

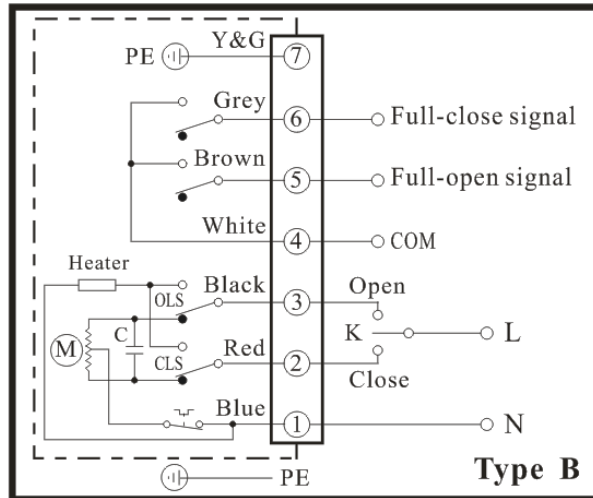
Specifications (Metric units)

Stock Number	Pipe Size (mm)	Tri-Clamp Size (inch)	Kv Flow Factor	Pressure Max.(Bar)*	Cycle Time/90° (seconds)	Voltage	Current (amps)	Duty Cycle	Electrical Dwg.
120 VAC ELECTRIC ACTUATED 3-WAY L-PORT SANITARY STAINLESS BALL VALVE									
573500	12.7	3/4	7	69	10/8	110 VAC, 50/60Hz	0.3	70%	B
573501	19.1	3/4	25	69	10/8	110 VAC, 50/60Hz	0.3	70%	B
573502	25.4	1-1/2	57	69	20/17	110 VAC, 50/60Hz	0.3	70%	B
573503	38.1	1-1/2	107	69	30/25	110 VAC, 50/60Hz	0.6	70%	B
573504	50.8	2	165	69	30/25	110 VAC, 50/60Hz	0.6	70%	B
573505	63.5	2-1/2	374	69	30/25	110 VAC, 50/60Hz	0.7	70%	B
573506	76.2	3	623	69	45/37	110 VAC, 50/60Hz	1.3	70%	B
24 VDC ELECTRIC ACTUATED 3-WAY L-PORT SANITARY STAINLESS BALL VALVE									
573700	12.7	3/4	7	69	20	DC24	1.3	70%	G
573701	19.1	3/4	25	69	20	DC24	1.3	70%	G
573702	25.4	1-1/2	57	69	20	DC24	1.3	70%	G
573703	38.1	1-1/2	107	69	30	DC24	2.0	70%	G
573704	50.8	2	165	69	30	DC24	2.0	70%	G
573705	63.5	2-1/2	374	69	30	DC24	2.0	70%	G

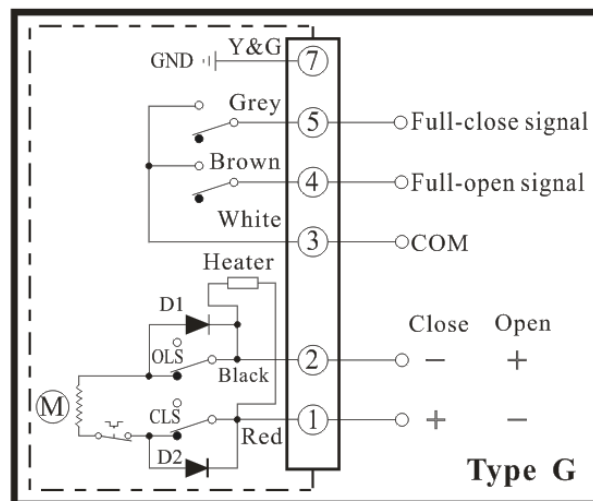
* Pressure range @ -45° to 200° C (reduced pressure for higher temperatures – see P/T chart)

Electrical Wiring

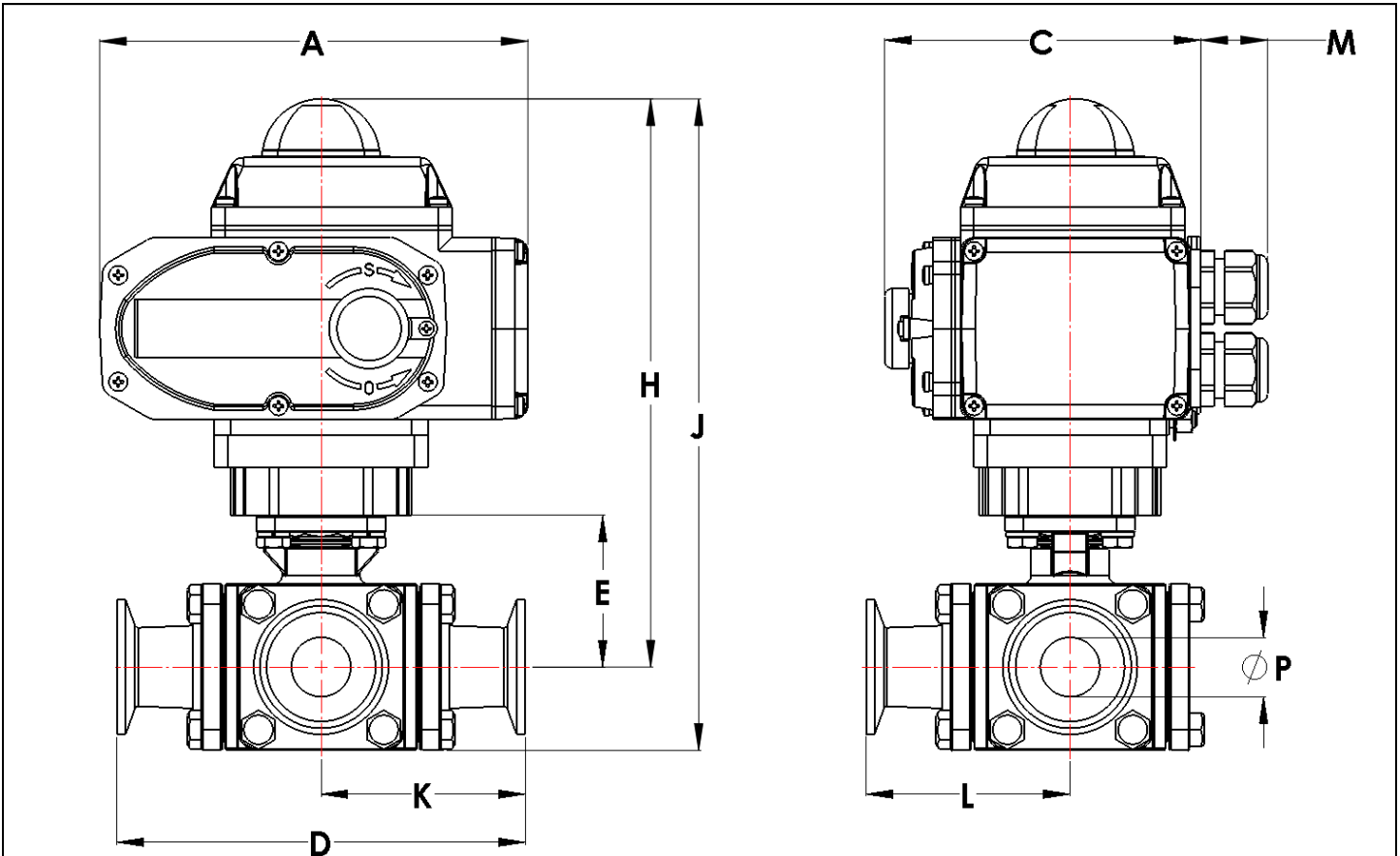
AC Voltages



DC Voltages

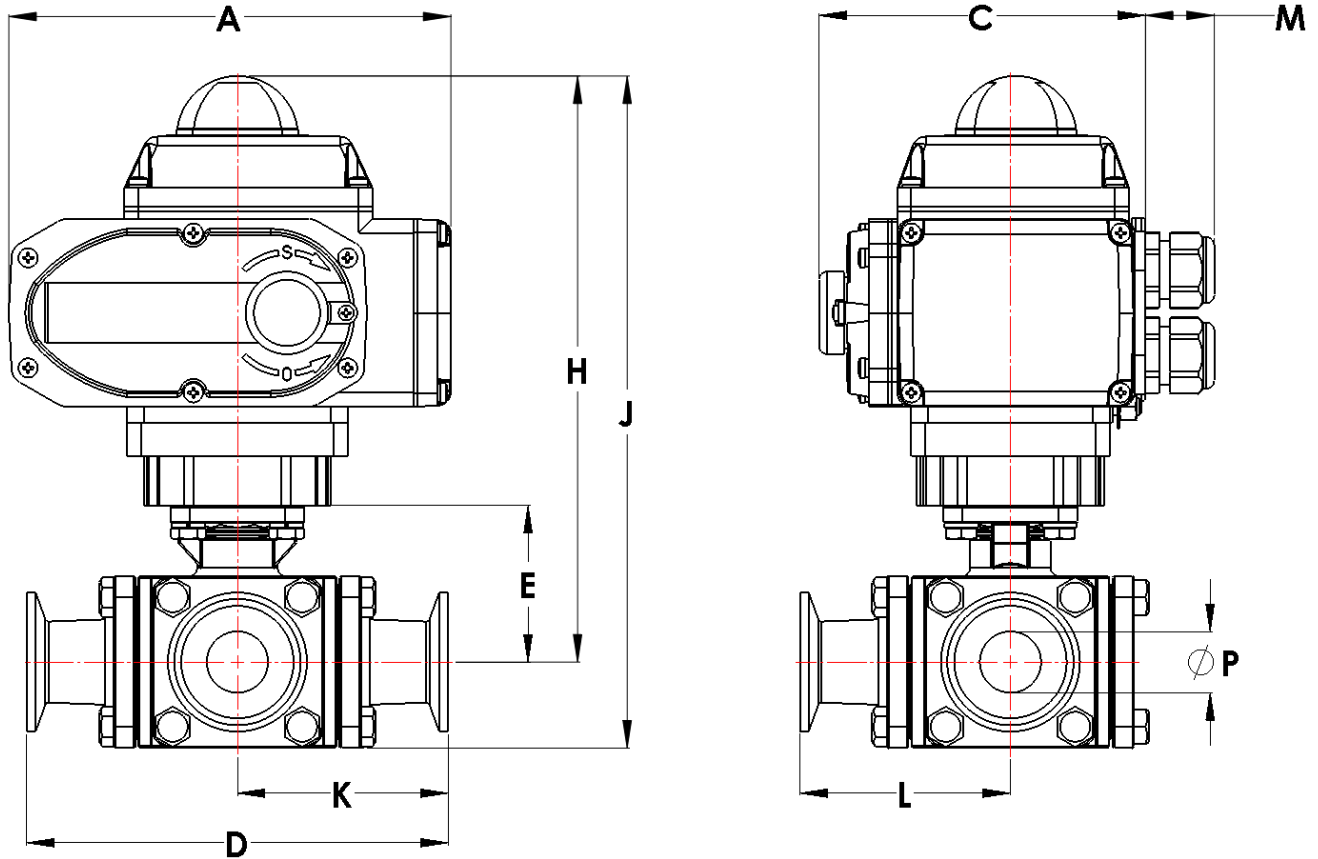


Dimensions: (110 VAC)



Stock Number	Pipe Size		A	C	D	E	H	J	K	L	M	P	Weight (AC)
573500	1/2	inch	6.3	4.7	4.3	1.8	7.9	8.8	2.3	2.2	1.0	0.4	10.0 lb
		mm	161.0	118.5	109.2	44.7	200.7	224.0	58.9	55.9	25.0	10.2	4.5 kg
573501	3/4	inch	6.3	4.7	5.0	1.8	9.1	8.0	2.5	2.3	1.0	0.6	11.0 lb
		mm	161.0	118.5	127.0	44.7	230.2	204.3	63.5	58.4	25.0	15.2	5.0 kg
573502	1	inch	6.3	4.7	6.0	2.2	8.4	9.6	3.0	3.0	1.0	0.9	13.0 lb
		mm	161.0	118.5	152.4	57.0	213.0	244.0	76.4	76.4	25.0	22.9	5.9 kg
573503	1-1/2	inch	7.7	5.0	7.5	3.0	6.6	11.7	3.7	3.8	1.0	1.4	26.0 lb
		mm	196.5	126.0	190.5	75.9	167.7	298.3	95.2	96.5	25.0	35.6	11.7 kg
573504	2	inch	7.7	5.0	8.5	3.0	10.5	12.5	4.3	4.3	1.0	1.9	36 lb
		mm	196.5	126.0	215.9	75.9	266.0	318.0	108.5	109.2	25.0	48.3	16.2 kg
573505	2-1/2	inch	10.1	6.4	9.0	4.0	12.5	14.9	4.6	6.5	1.0	2.4	90.0 lb
		mm	255.5	161.5	228.6	102.5	318.5	379.4	116.4	165.1	25.0	61.0	40.8 kg
573506	3	inch	10.1	6.4	12.0	4.7	13.2	16.2	6.1	6.0	1.0	2.9	97.0 lb
		mm	255.5	161.5	304.9	120.0	336.0	411.0	154.0	152.4	25.0	73.7	44.0 kg

Dimensions: (24 VDC)



Stock Number	Pipe Size		A	C	D	E	H	J	K	L	M	P	Weight (DC)
573700	1/2	inch	6.4	4.7	4.3	1.8	7.9	8.8	2.3	2.2	1.0	0.4	9.5 lb
		mm	161.0	118.5	109.2	44.7	200.7	224.0	58.9	55.9	25.0	10.2	4.3 kg
573701	3/4	inch	6.4	4.7	5.0	1.8	9.1	8.0	2.5	2.3	1.0	0.6	10.5 lb
		mm	161.0	118.5	127.0	44.7	230.2	204.3	63.5	58.4	25.0	15.2	4.8 kg
573702	1	inch	6.4	4.7	6.0	2.2	8.4	9.6	3.0	3.0	1.0	0.9	12.5 lb
		mm	161.0	118.5	152.4	57.0	213.0	244.0	76.4	76.4	25.0	22.9	5.7 kg
573703	1-1/2	inch	7.7	5.0	7.5	3.0	6.6	11.7	3.7	3.8	1.0	1.4	26.0 lb
		mm	196.5	126.0	190.5	75.9	167.7	298.3	95.2	96.5	25.0	35.6	11.4 kg
573704	2	inch	7.7	5.0	8.5	3.0	10.5	12.5	4.3	4.3	1.0	1.9	36.0 lb
		mm	196.5	126.0	215.9	75.9	266.0	318.0	108.5	109.2	25.0	48.3	16.2 kg
573705	2-1/2	inch	7.7	5.0	9.0	4.0	12.5	14.9	4.6	6.5	1.0	2.4	79.0 lb
		mm	196.5	126.0	228.6	102.5	318.5	379.4	116.4	165.1	25.0	61.0	35.8 kg