

PVC Body

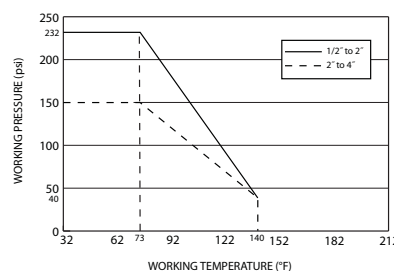


CPVC Body



\*Please see website for dimensional drawings

PRESSURE - TEMPERATURE RATINGS  
SERIES PBV



**The Series PBV** is ideal for services in industrial, chemical, turf and irrigation, and pool and spa applications, as well as for use with potable water. The valve features a shear-proof stem designed to prevent leakage in the event of damage, reinforced TFE seats and EPDM seals for longer life, and an all-plastic construction (PVC or CPVC) for heavyweight durability at a lightweight cost. Valves also come standard with selectable NPT or socket process connections.

The PBV is an economical automated valve package with either an electric or pneumatic actuator. Electrically actuated models are weatherproof, NEMA 4, powered by standard 115 VAC supply, and are available in either two-position or proportional control. Two-position actuators use the 115 VAC input to drive each of the valve ports open or closed, while the modulating actuator accepts a 4 to 20 mA input for infinite valve positioning. Actuator features include thermal overload protection to withstand stall conditions, visual position indication and a permanently lubricated gear train.

The pneumatic double acting actuator uses an air supply to drive each of the actuator ports. Spring return pneumatic actuators use the air supply to drive the valve stem one direction, and internally loaded springs return the valve to its original position. Also available is the SV3 solenoid valve to electrically switch the supply pressure between the air supply ports. Actuators are constructed of anodized aluminum and are epoxy coated for years of corrosion free service.

#### Options:

##### Explosion-proof Electric Actuator

-Add suffix "EX" to the model number

##### Optional Electric Actuator Supply Voltages

-Contact factory for model number change

24VAC

220VAC, 24VDC, or 12VDC

Solenoid Valve - See Model SV3.

#### SPECIFICATIONS

**Service:** Compatible liquids or gases.

**Body:** 2-way.

**Line Size:** 1/2" to 4".

**End Connections:** Female NPT or socket (field selectable).

**Pressure Limit:** 1/2" to 2": 232 psi (16.0 bar) @ 73°F (23°C); 2-1/2" to 4": 150 psi (10.3 bar) @ 73°F (23°C) WOG. Vacuum: 29" Hg.

#### Wetted Materials:

Body, End Connectors: PVC or CPVC.

Ball, Stem: PVC or CPVC.

Seat: TFE.

Stem Seal: EPDM.

**Temperature Limit:** 32 to 140°F (0 to 60°C).

**Other Materials:** Stem Bearing:

Polypropylene (1-1/4" and up).

#### ACTUATORS

##### Electric

**Power Requirements:** 120 VAC, 50/60 Hz, single phase. Optional 220 VAC, 24 VAC, 12 VDC, and 24 VDC.

**Power Consumption:** (Locked Rotor Current): Two Position: 1/2" to 1-1/2": .55A, 2" to 4": 0.75A. Modulating: 1/2" to 2": 0.75A, 2-1/2": 1.1A, 3" and 4": 0.75A.

**Cycle Time:** (per 90°): Two Position: 1/2" to 1-1/2": 2.5 sec., 2" and 2-1/2": 5 sec., 3" and 4": 15 sec. Modulating: 1/2" to 2-1/2": 5 sec., 3" and 4": 15 sec.

**Duty Cycle:** Two Position: 1/2" to 1-1/2": 75%, 2" to 4": 25%. Modulating: 75%.

**Enclosure Rating:** NEMA 4. Optional NEMA 7 (Class 1, Div. II groups A, B, C, D).

**Housing Material:** Aluminum with thermal bonding polyester powder finish.

**Temperature Limit:** 0 to 150°F (-18 to 65°C).

**Conduit Connection:** 1/2" female NPT.

**Modulating Input:** 4 to 20 mA.

**Standard Features:** Manual override and visual position indicator except modulating units.

#### Pneumatic "DA" and "SR" Series

**Type:** DA series is double acting and SR series is spring return (rack and pinion).

**Normal Supply Pressure:** 80 psi (5.5 bar).

**Maximum Supply Pressure:** 120 psig (8 bar).

**Air Connections:** 1/4" female NPT.

**Air Consumption:** (per stroke) DA1: 2.32 cu. in.; DA2: 9.34 cu. in.; DA3: 17.21 cu. in.; DA4: 20.5 cu. in.; SR2: 9.34 cu. in.; SR3: 17.21 cu. in.; SR6: 54.34 cu. in.; SR7: 85.43 cu. in.

**Cycle Time:** (per 90°) DA1: .03 sec.; DA2: .04 sec.; DA3: .08 sec.; DA4: .12 sec.; SR2: .09 sec.; SR3: .14 sec.; SR6: .46 sec.; SR7: .83 sec.

**Housing Material:** Anodized aluminum body and epoxy coated aluminum end caps.

**Temperature Limit:** -4 to 180°F (-20 to 82°C).

**Accessory Mounting:** NAMUR standard.

**Standard Features:** Visual position indicator.

#### SERIES PBV AUTOMATED 2-WAY PLASTIC BALL VALVES - PVC MODELS

Size	CV	Double Acting Pneumatic Model	Spring Return Pneumatic Model	Two Position Electric Model	Modulating Electric Model
1/2"	25	PBVPDA102	PBVPSR202	PBVPU1102	PBVPV1202
3/4"	51	PBVPDA103	PBVPSR203	PBVPU1103	PBVPV1203
1"	97	PBVPDA104	PBVPSR204	PBVPU1104	PBVPV1204
1-1/4"	204	PBVPDA105	PBVPSR205	PBVPU1105	PBVPV1205
1-1/2"	285	PBVPDA206	PBVPSR306	PBVPU1106	PBVPV1206
2"	540	PBVPDA207	PBVPSR307	PBVPU1207	PBVPV1207
2-1/2"	712	PBVPDA308	PBVPSR608	PBVPU1308	PBVPV1308
3"	1294	PBVPDA309	PBVPSR609	PBVPU1509	PBVPV1509
4"	2629	PBVPDA410	PBVPSR710	PBVPU1510	PBVPV1510

#### SERIES PBV AUTOMATED 2-WAY PLASTIC BALL VALVES - CPVC MODELS

Size	CV	Double Acting Pneumatic Model	Spring Return Pneumatic Model	Two Position Electric Model	Modulating Electric Model
1/2"	25	PBVCD102	PBVCSR202	PBVPU1102	PBVCV1202
3/4"	51	PBVCD103	PBVCSR203	PBVPU1103	PBVCV1203
1"	97	PBVCD104	PBVCSR204	PBVPU1104	PBVCV1204
1-1/4"	204	PBVCD105	PBVCSR205	PBVPU1105	PBVCV1205
1-1/2"	285	PBVCD206	PBVCSR306	PBVPU1106	PBVCV1206
2"	540	PBVCD207	PBVCSR307	PBVPU1207	PBVCV1207
2-1/2"	712	PBVCD308	PBVCSR608	PBVPU1308	PBVCV1308
3"	1294	PBVCD309	PBVCSR609	PBVPU1509	PBVCV1509
4"	2629	PBVCD410	PBVCSR710	PBVPU1510	PBVCV1510



3PBV

# Automated Ball Valve - Three-Way Plastic

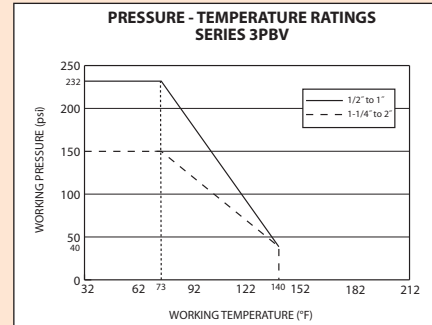
Electric and Pneumatic Actuators



Cv Values

\*Please see website for dimensional drawings and Cv positions

Size	Position				
	A	B	C	D	E
1/2"	3.85	2.45	4.55	13.7	5.11
3/4"	9.50	6.65	10.2	26.6	10.5
1"	14.4	9.80	17.2	53.2	18.6
1-1/4"	27.3	18.9	32.2	73.5	33.3
1-1/2"	33.3	23.1	42.0	119	43.4
2"	63.0	43.4	84.0	224	85.4



The Series 3PBV is ideal for mixing or diverting services in industrial, chemical, turf and irrigation, and pool and spa applications, as well as for use with potable water. The valve features a 3-seat design for efficient automation, reinforced TFE seats and EPDM seals for longer life, and an all PVC construction for heavyweight durability at a lightweight cost. Valves also come standard with field selectable NPT or socket process connections.

The 3PBV is an economical automated valve package with either an electric or pneumatic actuator. Electrically actuated models are weatherproof, NEMA 4, powered by standard 115 VAC supply, and are available in either two-position or proportional control. Two-position actuators use the 115 VAC input to drive each of the valve ports open or closed, while the modulating actuator accepts a 4 to 20 mA input for infinite valve positioning. Actuator features include thermal overload protection to withstand stall conditions, visual position indication and a permanently lubricated gear train.

The pneumatic double acting actuator uses an air supply to drive each of the actuator ports. Spring return pneumatic actuators use the air supply to drive the valve stem one direction, and internally loaded springs return the valve to its original position. Also available is the SV3 solenoid valve to electrically switch the supply pressure between the air supply ports. Actuators are constructed of anodized aluminum and are epoxy coated for years of corrosion free service.

Port Configuration	Flow Path		
	Act. Open	Act. Closed	
"T" Port	-T1 All Open	A-B	
	-T2 A-B	A-C	
	-T3 A-C	B-C	
	-T4 B-C	All Open	
"L" Port	-L1 B-C	A-B	
	-L2 A-B	All Closed	
	-L3 All Closed	B-C	

## OPTIONS

Explosion Proof Electric Actuators  
-add "-EX" to model number

Optional Electric Actuator  
Supply Voltages

-Contact factory for model number change

Solenoid Valve - See Model SV3.

## SPECIFICATIONS

**Service:** Compatible liquids or gases.

**Body:** 3-way.

**Line Size:** 1/2" to 2".

**End Connections:** Female NPT or socket (field selectable).

**Pressure Limit:** 1/2" to 1": 232 psi (16.0 bar) @ 73°F (23°C); 1-1/4" to 2": 150 psi (10.3 bar) @ 73°F (23°C) WOG;

**Wetted Materials:** Body, end connectors: PVC; Ball, stem: PVC;

Seat: TFE; Stem seal: EPDM.

**Temperature Limit:** 32 to 140°F (0 to 60°C).

## ACTUATORS

### Electric

**Power Requirements:** 120 VAC, 50/60 Hz, single phase. Optional 220 VAC, 24 VAC, 12 VDC, and 24 VDC.

**Power Consumption (Locked Rotor Current):** Two position: 1/2" to 1-1/2": .55A, 2": 0.75A; Modulating: 0.75A.

**Cycle Time:** (per 90°): Two position: 1/2" to 1-1/2": 2.5 sec., 2": 5 sec.; Modulating: 5 sec.

**Duty Cycle:** Two position: 1/2" to 1-1/2": 75%, 2": 25%; Modulating: 75%.

**Enclosure Rating:** NEMA 4. Optional NEMA 7 (Class 1, Div. II groups A, B, C, D).

**Housing Material:** Aluminum with thermal bonding polyester powder finish.

## How To Order:

1. Select **Model No.** to specify pipe size and actuator.
2. Choose a **Port Configuration** to determine valve flow path.

**Example:** 3PBVPSR204-L3

**Temperature Limit:** 0 to 150°F

(-18 to 65°C).

**Conduit Connection:** 1/2" female NPT.

**Modulating Input:** 4 to 20 mA.

**Standard Features:** Manual override and visual position indicator except modulating units.

## Pneumatic "DA" and "SR" Series

**Type:** DA series is double acting and SR series is spring return (rack and pinion).

**Normal Supply Pressure:** 80 psi (5.5 bar).

**Maximum Supply Pressure:** 120 psig (8 bar).

**Air Connections:** DA/SR1 to 5: 1/8" female NPT, all other sizes: 1/4" female NPT.

**Air Consumption (per stroke):** DA1: 2.32 cu. in.; DA2, SR2: 9.34 cu. in.; SR3: 17.21 cu. in.

**Cycle Time (per 90°):** DA1: .03 sec.; DA2: .04 sec.; SR2: .09 sec.; SR3: .14 sec.

**Housing Material:** Anodized aluminum body and epoxy coated aluminum end caps.

**Temperature Limit:** -4 to 180°F (-20 to 82°C).

**Accessory Mounting:** NAMUR standard.

**Standard Features:** Visual position indicator.

## Series 3PBV Automated Ball Valves - 3-Way Plastic

Size	CV	Double Acting Pneumatic	Spring Return Pneumatic	Two Position Electric	Modulating Electric
		Model*	Model*	Model*	Model*
1/2"	See Chart Above	3PBVPDA102	3PBVPSR202	3PBVPU1102	3PBVPV1202
3/4"		3PBVPDA103	3PBVPSR203	3PBVPU1103	3PBVPV1203
1"		3PBVPDA104	3PBVPSR204	3PBVPU1104	3PBVPV1204
1-1/4"		3PBVPDA105	3PBVPSR205	3PBVPU1105	3PBVPV1205
1-1/2"		3PBVPDA206	3PBVPSR306	3PBVPU1106	3PBVPV1206
2"		3PBVPDA207	3PBVPSR307	3PBVPU1207	3PBVPV1207

\* Complete model includes **Port Configuration** - see "How to Order" above.