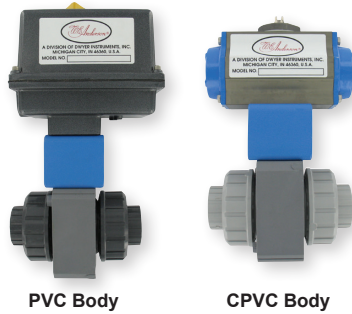




SERIES PBV | W.E. ANDERSON™ BY DWYER

# PLASTIC AUTOMATED BALL VALVE

Electric and Pneumatic Actuators



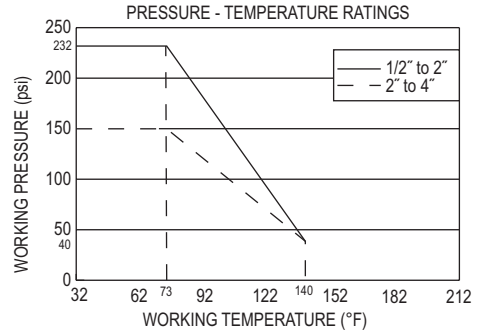
PVC Body

CPVC Body

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 (IP56), 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.



## 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).

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

**Air Consumption:** (per stroke) DA1: 2.32 in3; DA2: 9.34 in3; DA3: 17.21 in3; DA4: 20.5 in3; SR2: 9.34 in3; SR3: 17.21 in3; SR6: 54.34 in3; SR7: 85.43 in3.

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

**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.

## 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": .55 A, 2" to 4": 0.75 A. Modulating: 1/2" to 2": 0.75 A, 2-1/2": 1.1 A, 3" and 4": 0.75 A.

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

**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).

## OPTIONS

To order add suffix:	Description	Actuator Size*	Price
-EX	Explosion proof electric actuators	XX1-XX6	+\$265.00 <sup>(B)</sup>

\*Example: Third digit in U12 or V12 is the size

Note: For optional electric actuator supply voltages, contact factory for model number change and +\$76.50<sup>(B)</sup>

<sup>(B)</sup> Items are subject to Schedule B discounts.

## MODEL CHART - PVC

Size	Cv	Double Acting Pneumatic		Spring Return Pneumatic		Two Position Electric		Modulating Electric	
		Model	Price	Model	Price	Model	Price	Model	Price
1/2"	25	PBVPDA102	\$341.00 <sup>(B)</sup>	PBVPSR202	\$395.00 <sup>(B)</sup>	PBVPU1102	\$577.00 <sup>(B)</sup>	PBVPV1202	\$1958.00 <sup>(B)</sup>
3/4"	51	PBVPDA103	363.00 <sup>(B)</sup>	PBVPSR203	416.00 <sup>(B)</sup>	PBVPU1103	602.00 <sup>(B)</sup>	PBVPV1203	2003.00 <sup>(B)</sup>
1"	97	PBVPDA104	390.00 <sup>(B)</sup>	PBVPSR204	445.00 <sup>(B)</sup>	PBVPU1104	629.00 <sup>(B)</sup>	PBVPV1204	2067.00 <sup>(B)</sup>
1-1/4"	204	PBVPDA105	436.00 <sup>(B)</sup>	PBVPSR205	493.00 <sup>(B)</sup>	PBVPU1105	675.00 <sup>(B)</sup>	PBVPV1205	2102.00 <sup>(B)</sup>
1-1/2"	285	PBVPDA206	530.00 <sup>(B)</sup>	PBVPSR306	550.00 <sup>(B)</sup>	PBVPU1106	727.00 <sup>(B)</sup>	PBVPV1206	2157.00 <sup>(B)</sup>
2"	540	PBVPDA207	596.00 <sup>(B)</sup>	PBVPSR307	632.00 <sup>(B)</sup>	PBVPU1207	882.00 <sup>(B)</sup>	PBVPV1207	2196.00 <sup>(B)</sup>
2-1/2"	712	PBVPDA308	1061.00 <sup>(B)</sup>	PBVPSR608	1247.00 <sup>(B)</sup>	PBVPU1308	1439.00 <sup>(B)</sup>	PBVPV1308	2951.00 <sup>(B)</sup>
3"	1294	PBVPDA309	1318.00 <sup>(B)</sup>	PBVPSR609	1520.00 <sup>(B)</sup>	PBVPU1509	2148.00 <sup>(B)</sup>	PBVPV1509	3288.00 <sup>(B)</sup>
4"	2629	PBVPDA410	1811.00 <sup>(B)</sup>	PBVPSR710	2056.00 <sup>(B)</sup>	PBVPU1510	2831.00 <sup>(B)</sup>	PBVPV1510	4002.00 <sup>(B)</sup>

Note: All spring return actuators are factory standard as spring (fail) close. For spring (fail) open valves, add suffix "-FO" to the model number.

<sup>(B)</sup> Items are subject to Schedule B discounts.

## MODEL CHART - CPVC

Size	Cv	Double Acting Pneumatic		Spring Return Pneumatic		Two Position Electric		Modulating Electric	
		Model	Price	Model	Price	Model	Price	Model	Price
1/2"	25	PBVCDA102	\$370.00 <sup>(B)</sup>	PBVCSR202	\$446.00 <sup>(B)</sup>	PBVUCU1102	\$604.00 <sup>(B)</sup>	PBVCV1202	\$1949.00 <sup>(B)</sup>
3/4"	51	PBVCDA103	402.00 <sup>(B)</sup>	PBVCSR203	481.00 <sup>(B)</sup>	PBVUCU1103	635.00 <sup>(B)</sup>	PBVCV1203	1977.00 <sup>(B)</sup>
1"	97	PBVCDA104	441.00 <sup>(B)</sup>	PBVCSR204	517.00 <sup>(B)</sup>	PBVUCU1104	666.00 <sup>(B)</sup>	PBVCV1204	2015.00 <sup>(B)</sup>
1-1/4"	204	PBVCDA105	598.00 <sup>(B)</sup>	PBVCSR205	686.00 <sup>(B)</sup>	PBVUCU1105	826.00 <sup>(B)</sup>	PBVCV1205	2167.00 <sup>(B)</sup>
1-1/2"	285	PBVCDA206	668.00 <sup>(B)</sup>	PBVCSR306	732.00 <sup>(B)</sup>	PBVUCU1106	843.00 <sup>(B)</sup>	PBVCV1206	2192.00 <sup>(B)</sup>
2"	540	PBVCDA207	767.00 <sup>(B)</sup>	PBVCSR307	813.00 <sup>(B)</sup>	PBVUCU1207	1045.00 <sup>(B)</sup>	PBVCV1207	2287.00 <sup>(B)</sup>
2-1/2"	712	PBVCDA308	1456.00 <sup>(B)</sup>	PBVCSR608	1617.00 <sup>(B)</sup>	PBVUCU1308	1800.00 <sup>(B)</sup>	PBVCV1308	3192.00 <sup>(B)</sup>
3"	1294	PBVCDA309	1620.00 <sup>(B)</sup>	PBVCSR609	1789.00 <sup>(B)</sup>	PBVUCU1509	2098.00 <sup>(B)</sup>	PBVCV1509	3336.00 <sup>(B)</sup>
4"	2629	PBVCDA410	2565.00 <sup>(B)</sup>	PBVCSR710	2773.00 <sup>(B)</sup>	PBVUCU1510	3604.00 <sup>(B)</sup>	PBVCV1510	4678.00 <sup>(B)</sup>

Note: All spring return actuators are factory standard as spring (fail) close. For spring (fail) open valves, add suffix "-FO" to the model number.

<sup>(B)</sup> Items are subject to Schedule B discounts.