



PTP Series

PVC 3-way Ball Valve



The Assured Automation PTP Series 3-Way Ball Valves can be used for flow diverting, mixing, or on/off isolation. They will replace a Tee + 2 valve linkage assembly while reducing cost and space requirements. Installation and maintenance time is also reduced. The patented seat stop carrier allows for in-line microadjustment of the ball seating, and features o-ring cushioning to minimize wear and prevent seizing. The PTP also includes a patented DUAL BLOCK® locking union nut system, which ensures the nuts are held in position even under severe service conditions such as high vibration or thermal expansion. Integral mounting flange and bracketing allows for direct actuation and simple support, while a locking handle can prevent improper positioning. PTP Series 3-Way Ball Valves are part of our complete range of valves and flow meters, engineered and manufactured to strict quality, performance, and dimensional standards.

END CONNECTIONS

NPT Threaded: 1/2" to 2"

Glue Socket: 1/2" to 2"

MAXIMUM PRESSURE

232 PSIG (at 73°F)

[see Pressure/Temperature Curve](#)

TEMPERATURE RANGE

32°F to 140°F

[see Pressure/Temperature Curve](#)

MATERIALS

Body: PVC

Ball: PVC

Stem: PVC

Seats: PTFE

Stem Seals: EPDM or Viton®

FEATURES

- True union at all three ports
 - Positive shutoff of any of the three ports
 - T-port or L-port configuration
 - Blocking seat supports at all three ports
 - Smooth machined ball to minimize wear on valve seats
 - O-ring backing cushions to compensate for wear and prevent seizure of the ball
 - Shear point above the o-ring to maintain system integrity in the unlikely event of a stem breakage
 - Optional feature to allow the valve position to be secured with a padlock
 - Handle incorporates removable tool for adjustment of the threaded carrier
 - Stem indication of port location and ball position
 - Integrally molded mounting flanges for support and actuation
 - NSF / ANSI 61 Certified for potable water
- [see page 2 for feature details](#)

TYPICAL APPLICATIONS

- Seawater
- Corrosive Liquids
- Pollution Control Equipment
- Process Control Applications
- Laundry Equipment
- Textile Dyeing & Drying
- Bottle Dispensing
- Irrigation systems
- Ink & Paint Dispensing
- Chemical Process Equipment

ACTUATORS

Pneumatic

- Spring Return
- Double Acting

Electric

Manual (Handle Lever)

- Handle Lever

[see page 5 for actuator details](#)





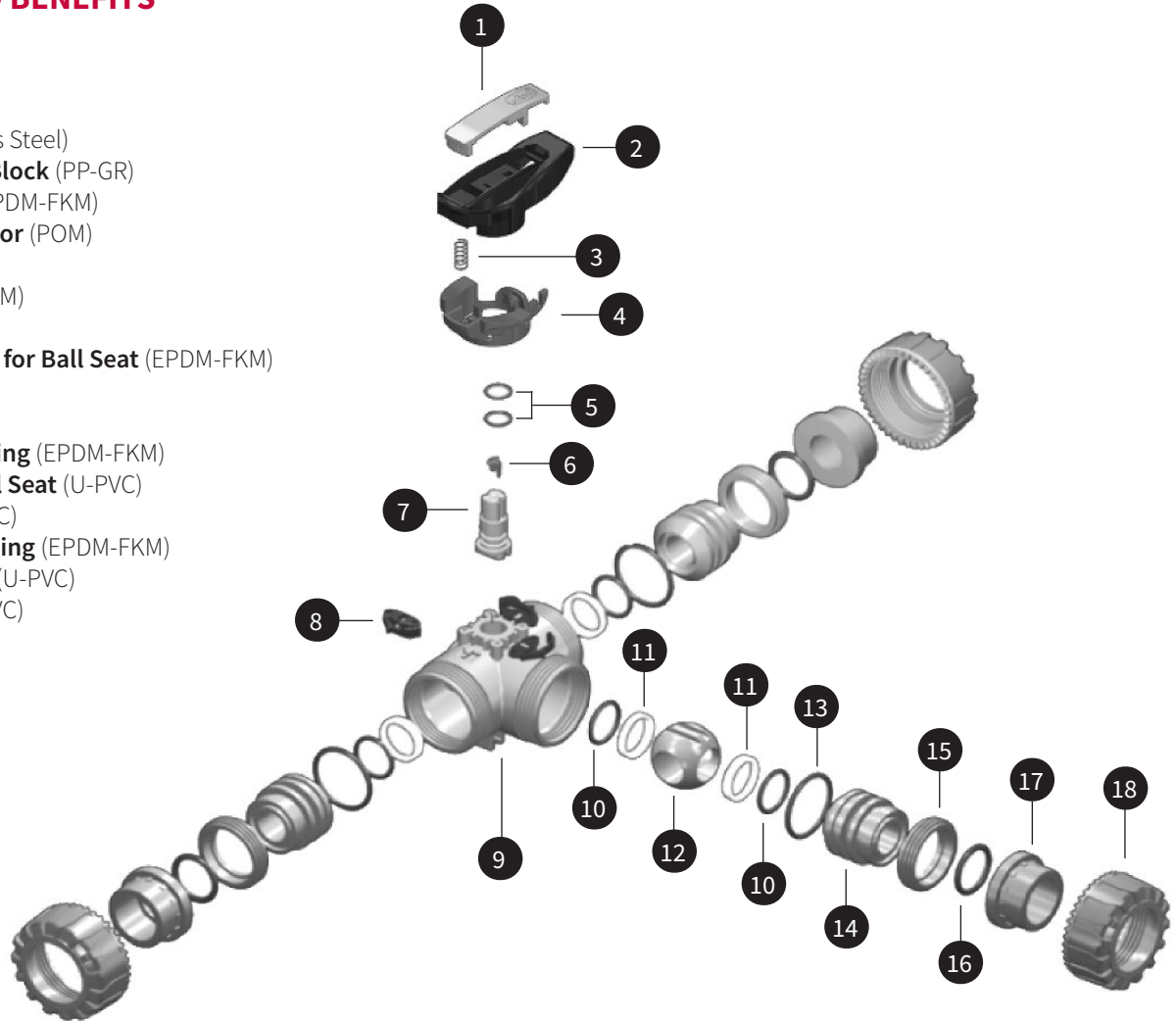
PTP Series



PVC 3-way Ball Valve

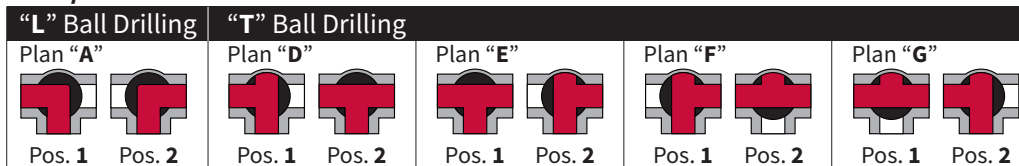
FEATURES AND BENEFITS

1. **Insert** (U-PVC)
2. **Handle** (U-PVC)
3. **Spring** (Stainless Steel)
4. **Safety Handle Block** (PP-GR)
5. **Stem O-Ring** (EPDM-FKM)
6. **Position Indicator** (POM)
7. **Stem** (U-PVC)
8. **Dual Block®** (POM)
9. **Body** (U-PVC)
10. **Support O-Ring for Ball Seat** (EPDM-FKM)
11. **Ball Seat** (PTFE)
12. **Ball** (U-PVC)
13. **Radial Seal O-Ring** (EPDM-FKM)
14. **Support for Ball Seat** (U-PVC)
15. **Stop Ring** (U-PVC)
16. **Socket Seal O-Ring** (EPDM-FKM)
17. **End Connector** (U-PVC)
18. **Union Nut** (U-PVC)

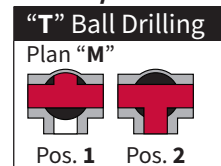


FLOW PLANS

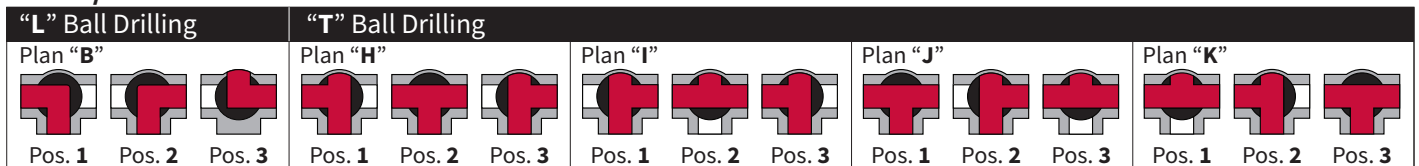
90° / 2-Position



180° / 2-Position



180° / 3-Position



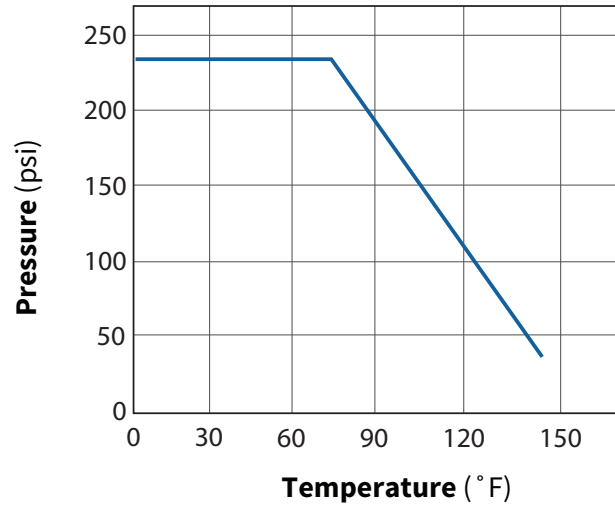


PTP Series



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PRESSURE/TEMPERATURE CURVE



C_V FACTORS

Size	C _V (per flow plan)								
	A	D		E		F		G	
	Pos. 1 or 2	Pos. 1	Pos. 2	Pos. 1	Pos. 2	Pos. 1	Pos. 2	Pos. 1	Pos. 2
1/2"	5.11	3.85	2.45	2.45	3.85	4.55	13.7	13.7	4.55
3/4"	10.5	9.5	6.65	6.65	9.5	10.2	26.6	26.6	10.2
1"	18.6	14.4	9.8	14.4	14.4	17.2	53.2	53.2	17.2
1 1/4"	33.3	27.3	18.9	27.3	27.3	32.2	73.5	73.5	32.2
1 1/2"	43.3	33.3	23.1	33.3	33.3	42	119	119	42
2"	85.4	63	43.4	43.4	63	84	224	224	84

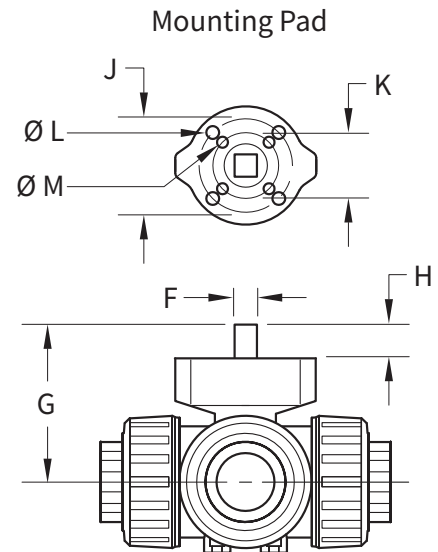
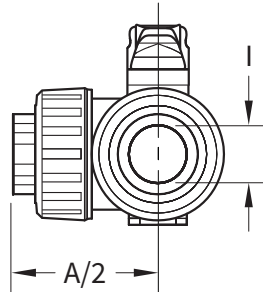
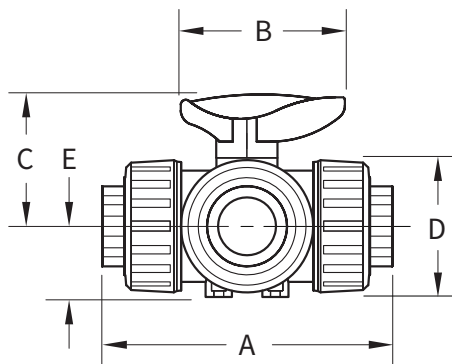


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DIMENSIONS



Valve Bodies with Manual Handle

Size	A	B	C	D	E	I	Wt. (lbs.)
1/2"	5.20	2.64	2.13	2.13	1.14	0.84	0.68
3/4"	6.27	3.35	2.56	2.56	1.36	1.05	1.21
1"	6.85	3.35	2.74	2.74	1.54	1.32	1.74
1 1/4"	8.07	4.25	3.25	3.25	1.81	1.66	2.81
1 1/2"	8.96	4.25	3.50	3.50	2.05	1.90	3.66
2"	10.51	5.28	4.25	4.25	2.44	2.38	6.17

Mounting Pad

Size	G	H	F	J	K	L	M
1/2"	2.28	0.47	0.43	F04	F03	0.22	0.22
3/4"	2.89	0.47	0.43	F05/F04	F03	0.26 / 0.22	0.22
1"	2.91	0.47	0.43	F05/F04	F03	0.26 / 0.22	0.22
1 1/4"	3.82	0.63	0.43 / 0.55	F05	F05	0.26	0.26
1 1/2"	4.09	0.63	0.43 / 0.55	F05	F05	0.26	0.26
2"	4.49	0.63	0.43 / 0.55	F07	F05	0.33	0.26



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ACTUATORS AVAILABLE

A full range of actuators are available to choose from. All sizing is done by Assured Automation to make selecting your assembly easy. Any accessories ordered with the actuator will be installed and tested by our ISO certified facility.

Pneumatic

C Series

Dual Rack and Pinion



Spring Return
fail to Open or Closed

Double Acting
fail in place

[\(see C series web page\)](#)

P Series

Dual Scotch Yoke



Spring Return
fail to Open or Closed

Double Acting
fail in place

[\(see P series web page\)](#)

F Series

Dual Rack and Pinion



Spring Return
fail to Open or Closed

Double Acting
fail in place

[\(see F series web page\)](#)

Accessories

- NAMUR direct mount solenoid valves
- Variety of limit switches
- Modulating positioners
- 1/4" NPT x 1/4" tube push fittings
- 1/4" NPT x 1/4" compression fittings
- SS and poly tubing

[see page 8 for accessory details](#)

Electric

Weatherproof

V4 Series



- 12 to 120 VAC/VDC**
- Manual override
 - Epoxy coated aluminum
 - Modulating or On/Off

[\(see V4 series web page\)](#)

R4 Series



- 12 to 120 VAC/VDC**
- Thermally protected motor
 - Declutchable manual override

[\(see R4 series web page\)](#)

S4 Series



- 24 to 240 VAC/DC**
- Auto-voltage sensing
 - Manual override
 - Modulating or On/Off
 - Battery "spring return" optional

[\(see S4 series web page\)](#)

Explosion Proof

B7 Series



- 24 VDC and 120 VAC**
- Rugged enclosure
 - Manual override
 - Large terminal strip

[\(see B7 series web page\)](#)

Manual

Manual Lever



Accessories

- Cryogenic stem extensions
- Chain wheels for geared handwheels
- Limit switches



PTP Series



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ORDERING INFORMATION

C **PTP** **E** **N** **A** **P8S1**

Size	Series	Seat and Seal Material	End Connection	Flow Plan	Actuator
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VALVE BODY

Size: _____

- C = 1/2" F = 1 1/4"
- D = 3/4" G = 1 1/2"
- E = 1" H = 2"

Seat and Seal: _____

- E = EPDM
- V = Viton®

End Connection: _____

- N = NPT Threaded
- S = Glue Socket

Flow Plan: _____

- A F
- D G
- E

ACTUATOR

Pneumatic Actuators

Series: _____

- C = C Series Dual Rack & Pinion
- F = F Series Dual Rack & Pinion
- P = P Series Dual Scotch Yoke

Supply Air Pressure: _____

- 6 = 60psi 8 = 80psi

Function: _____

- S = Spring return D = Double acting

Fail Safe Position: _____

- 1 = Fail to POSITION 1 2 = Fail to POSITION 2
- D = Fails to Last Position
- (omit) for direct acting

Electric Actuators

Series: _____

- V4 = Weatherproof S4 = Weatherproof B7 = Explosion Proof
- R4 = Weatherproof K4 = Weatherproof

Voltage: _____

- A = 120VAC B = 24VDC F = 12VDC

Manual Operators

Type: _____

- M = Basic Manual Handle

P	8	S	1
Series	Air psi	Function	Fail Position

V4	A
Series	Voltage

M
Type

Note: only one actuator may be chosen

Code continues to specify additional accessories and options



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ACCESSORIES

Solenoid Valves

NAMUR solenoid valves for direct mount to the actuator. Various coil and connector options are available including weatherproof, explosion proof, corded, NPT conduit, and cable gland.

3-way
for spring return models



3/4-way for
for double acting models



[Solenoid valve web page](#)

Limit Switches (valve position indicators)

Used to communicate the position of the valve to a PLC, HMI, or simple remote indicator lamp. Various switch technologies are available. All include a local visual indicator as well.

UA/UB Series

Solid state proximity switches; 1 for Open, 1 for Closed



YF Series

SPDT mechanical switches; 1 for Open, 1 for Closed



YE, YH, YO Series

SPDT mechanical switches; 1 for Open, 1 for Closed



Other limit switches are available [Limit switch web page](#)

Modulating Positioners

Add modulating control to either of our pneumatic actuator series. These positioners mount to the top of the actuator using the NAMUR standard mounting hole and stem pattern.

Pneumatic

0-15 psi control signal



Electro-pneumatic

4-20mA or 0-10VDC control signal



With feedback unit

4-20mA or 0-10VDC feedback signal



[Positioner web page](#)