

MANUAL & ACTUATED TRUE UNION BALL VALVES

Engineered thermoplastic ball valves with trunnion design
in PVC, CPVC, PVDF and Natural Polypropylene



A COMPLETE LINE:

- Lateral Reducing Ball Valve
- Manual Ball Valves
- Three-Way Ball Valves
- Air x Air Actuators
- Air x Spring (Fail Safe) Actuators
- Electric Actuators
- Limit Stops
- Limit Switches

THE ONLY THERMOPLASTIC BALL VALVE WITH ALL THESE SAFETY FEATURES:

- True union ends
- Trunnion design
- Heavy-duty, large diameter shaft
- PTFE bearing on shaft
- Dual stem O-rings
- Self-compensating PTFE seats backed with O-rings
- Mounting lugs on body
- 100% individual testing

ELECTRIC & PNEUMATIC ACTUATOR FEATURES:

- Install easily to True Blue Ball Valves... no modifications or special adapters required
- Water and dust-tight designs
- Rugged thermoplastics resist corrosion
- Manual override standard on all popular actuators; available as an option on all others
- Long cycle life – extensively tested and proven
- Compact designs – very small footprint
- Lightweight assemblies reduce piping stress and save shipping cost



PLAST-O-MATIC VALVES, INC.

1384 Pompton Avenue, Cedar Grove, New Jersey 07009

(973) 256-3000 • Fax (973) 256-4745 • www.plastomatic.com

SAMPLE SPECIFICATIONS

Series MBV

Thermoplastic (Geon PVC, Corzan CPVC, Kynar PVDF, Natural Polypropylene) ball valves (size) are to have trunnion design, spherically machined ball, PTFE thrust bearing on actuating shaft, mounting lugs on outer body, PTFE seats pre-loaded with O-rings, and (FKM or EPDM) seals. Fittings shall be true-union type (threaded, socket, metric, etc.). All valves are to be 100% individually tested prior to shipment. As manufactured by Plast-O-Matic Valves, Inc.

Series EBV with Ball Valve

All thermoplastic (valve material) ball valves (size) are to be supplied with electrically powered actuators. Actuator housing shall be of thermoplastic design, NEMA 4 type to eliminate atmospheric corrosion. It shall include pre-powered limit switch, position indicator and motor running lights, manual override, and thermal overload protection. Valves are to have trunnion design, spherically machined ball, PTFE thrust bearing on actuating shaft, mounting lugs on outer body, PTFE seats pre-loaded with O-rings, and (FKM or EPDM) seals. Fittings shall be true-union type (threaded, socket, metric, etc.). All actuated valves are to be 100% individually tested prior to shipment. As manufactured by Plast-O-Matic Valves, Inc.

Series ABVA or ABRA with Ball Valve

All thermoplastic (valve material) ball valves (size) are to be supplied with pneumatically (or hydraulically) powered double-acting actuators. Actuator housing shall be of thermoplastic design, water and dust-tight to eliminate atmospheric corrosion. It shall include manual override and position indicator. Valves are to have trunnion design, spherically machined ball, PTFE thrust bearing on actuating shaft, mounting lugs on outer body, PTFE seats pre-loaded with O-rings, and (FKM or EPDM) seals. Fittings shall be true-union type (threaded, socket, metric, etc.). All actuated valves are to be 100% individually tested prior to shipment. As manufactured by Plast-O-Matic Valves, Inc.

Series ABVS or ABMS with Ball Valve

All thermoplastic (valve material) ball valves (size) are to be supplied with pneumatically (or hydraulically) powered fail-safe spring return actuators, pre-set for normally closed (or specify normally open) operation. Actuator housing shall be of thermoplastic design, water and dust-tight to eliminate atmospheric corrosion. It shall include manual override and position indicator. Valves are to have trunnion design, spherically machined ball, PTFE thrust bearing on actuating shaft, mounting lugs on outer body, PTFE seats pre-loaded with O-rings, and (FKM or EPDM) seals. Fittings shall be true-union type (threaded, socket, metric, etc.). All actuated valves are to be 100% individually tested prior to shipment. As manufactured by Plast-O-Matic Valves, Inc.

Series ABRS with Ball Valve

All thermoplastic (valve material) ball valves (size) are to be supplied with pneumatically (or hydraulically) powered fail-safe spring return actuators, pre-set for normally closed (or specify normally open) operation. Actuator housing shall be of thermoplastic design, water and dust-tight to eliminate atmospheric corrosion. It shall include position indicator. Valves are to have trunnion design, spherically machined ball, PTFE thrust bearing on actuating shaft, mounting lugs on outer body, PTFE seats pre-loaded with O-rings, and (FKM or EPDM) seals. Fittings shall be true-union type (threaded, socket, metric, etc.). All actuated valves are to be 100% individually tested prior to shipment. As manufactured by Plast-O-Matic Valves, Inc.

Series TMBV

Thermoplastic (Geon PVC or Corzan CPVC) 3-way ball valves (size) are to have trunnion design, spherically machined ball, PTFE thrust bearing on actuating shaft, mounting lugs on outer body, PTFE seats pre-loaded with O-rings, and (FKM or EPDM) seals. Fittings shall be true-union type (threaded, socket, metric, etc.). All valves are to be 100% individually tested prior to shipment. As manufactured by Plast-O-Matic Valves, Inc.

Series LMBV

Thermoplastic (Geon PVC, Corzan CPVC, Kynar PVDF, Natural Polypropylene) ball valves (size) are to have trunnion design, spherically machined ball, PTFE thrust bearing on actuating shaft, mounting lugs on outer body, PTFE seats pre-loaded with O-rings, and (FKM or EPDM) seals. One fitting shall be true-union type (threaded, socket, metric, etc.) and the other fitting shall be an adapter that threads directly to the ball valve and is (cemented, fused, butt-fused) directly to (size) piping component (tee, cross tee, etc.) so that ball valve is an intrinsic part of piping component. All valves are to be 100% individually tested prior to shipment, as manufactured by Plast-O-Matic Valves, Inc.

3-Way Actuated Valves

Use appropriate actuator listed above, and change first sentence to read: "All thermoplastic (Geon PVC or Corzan CPVC) 3-way ball valves (size) are to be supplied with..."

Hydraulically Actuated Valves

Use appropriate pneumatic actuator above, and change all "pneumatic" references to "hydraulic."

Limit Stop

Use appropriate pneumatic actuator above, and add "with pre-installed limit stop" to first sentence.

Limit Switch

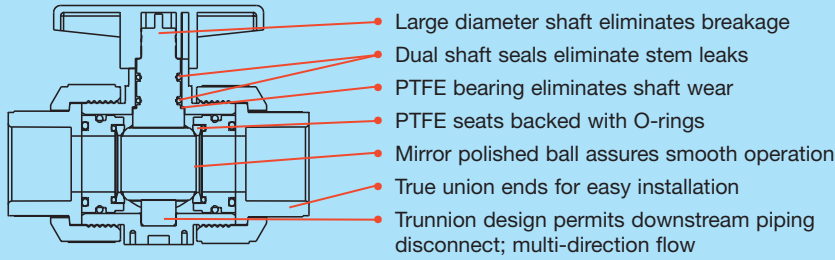
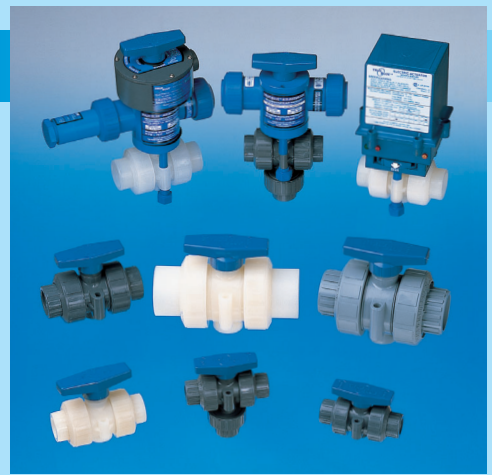
Use appropriate pneumatic actuator above, and add the following: "Actuated valve includes a pre-wired Limit Switch with a thermoplastic NEMA 4X type housing, adjustable to any open position."

Corzan® is a trademark of Noveon. Geon® is a trademark of Geon. Kynar® is a trademark of Atofina.

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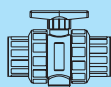
Engineering Excellence...



Built Into Every Ball Valve

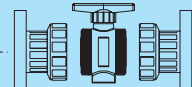
SERIES MBV

Geon® PVC
Corzan® CPVC
Kynar® PVDF
Natural Polypropylene
FKM or EPDM Seals



Standard Connections:

- Threaded - NPT or BSP
- Socket - Schedule 80 or Metric



Custom Connections:

- Spigot • SAE
- Flanges • Sanitary • JIS

(Consult Factory)

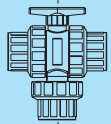


Vented Ball Option:
For Sodium Hypochlorite

All 2-Way and 3-Way Manual Ball Valves accept identical actuation packages... with no need for bulky adapter kits or replacement parts

SERIES TMBV

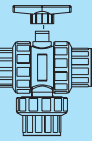
Geon® PVC,
Corzan® CPVC,
FKM or
EPDM Seals



Three Hole Ball:
Prevents dead heading and water hammer in 3-Way valves
(Design required with air actuators)



Two Hole Ball:
Prevents unwanted mixing in 3-Way valves
(Manual & Electric Only)



Tee or Other Piping Component :
(supplied by Distributor)

SERIES LMBV

Geon® PVC
Corzan® CPVC
Kynar® PVDF
Natural Polypropylene
FKM or EPDM Seals



Adapter:

- Simplifies lateral connections
- Replaces zero dead-leg valves

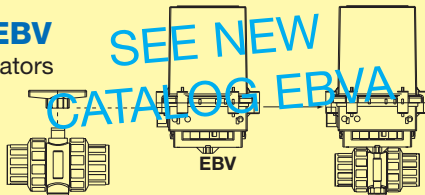


MANUAL

ACTUATED

SERIES EBV

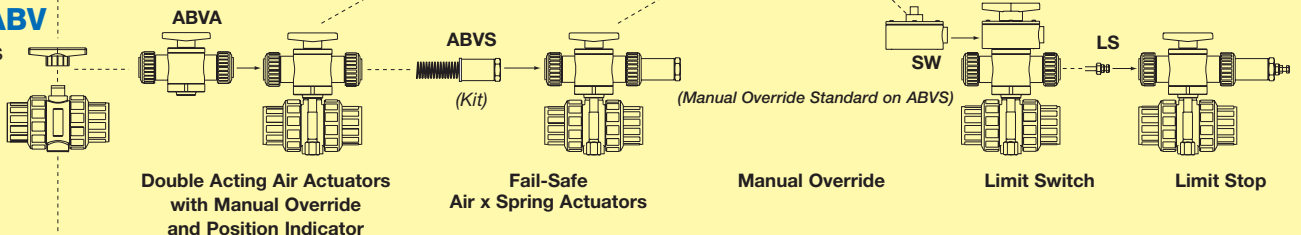
Electric Actuators for 1/2" - 2" Valves



Electric Actuator with Manual Override, Running Lights, Position Indicator, and Pre-powered Limit Switch

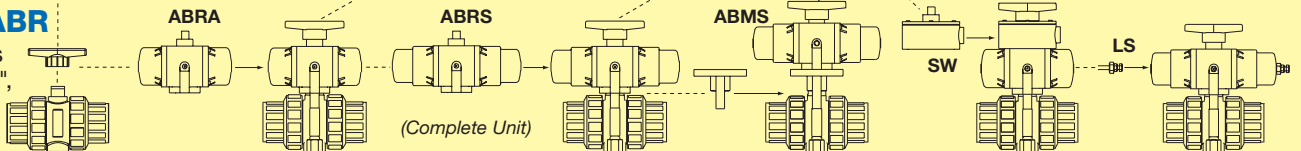
SERIES ABV

Air Actuators for 1/2", 3/4", 1" Valves



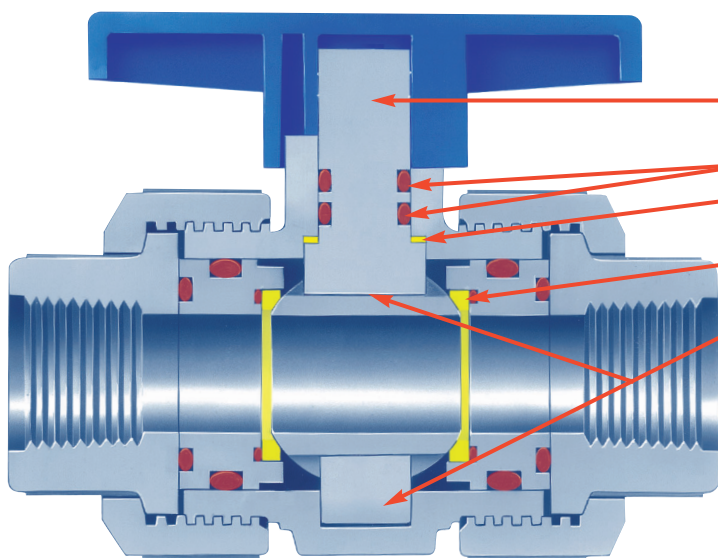
SERIES ABR

Air Actuators for 1 1/4", 1 1/2", 2" Valves



SERIES MBV • 2-Way Manual Ball Valves

An engineered true union ball valve for manual and actuated valve applications



Features:

- Heavy-duty, large diameter shaft to eliminate flexing and breakage.
- Dual shaft seals eliminate leakage.
- PTFE bearing on shaft eliminates friction and wear; stem design is "blow-out" proof.
- PTFE seats energized with O-rings eliminate wear and improve cycle life.
- Trunnion design eliminates lateral ball stress and allows downstream piping to be disconnected under full line pressure.
- Fully concentric and mirror polished ball assures smooth, leakproof operation.
- Multi-direction flow means valve cannot be piped in backwards.
- Smooth flow path eliminates pressure loss.
- True-union ends for ease of piping installation and removal.
- Mounting lugs on body for piping support or easy attachment of True Blue Actuators.

Each valve is 100% individually inspected and tested prior to shipment.

Design:

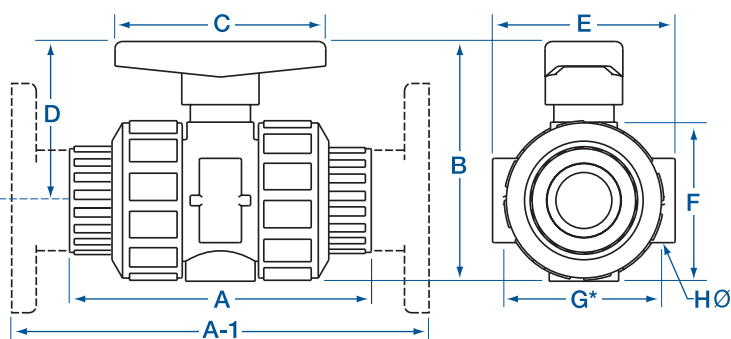
Known as "The Engineered Ball Valve", Series MBV provides more safety and design features than any other thermoplastic ball valve. With its mirror-polished ball, perfectly machined sealing surfaces, Trunnion centering design, PTFE thrust bearing and O-ring loaded floating PTFE seats, the True Blue manual ball valve offers smooth turning even in difficult applications. The floating seats automatically compensate for seat wear, and after long-term cycling, the carriers can easily be returned to their original position simply by tightening the union nuts.

The top and bottom "Trunnion" design permits flow and pressure in either direction, and eliminates the stresses inherent to a ball secured only at the top. Sizes 1/2" through 1 1/2" have a full port; size 2" has a tapered port; the ultra smooth flow path virtually eliminates turbulence and pressure loss and permits flow rates that far exceed pipe manufacturers specifications.

Mounting lugs are integrally molded on the sides of each valve. These provide convenient piping support, and allow you to add an actuator in the field with no bulky adapter kits or change-overs. Even after many years, a True Blue Actuator can be added without removing the valve from the piping system.

Materials of Construction:

Series MBV is molded of Type 1 Grade 1 Geon® PVC, Corzan® CPVC, Natural Polypropylene, and Kynar® PVDF. Standard O-ring seals are FKM or EPDM. Seats and shaft bearings are PTFE. Standard connections are threaded (NPT or BSP) or socket (Schedule 80 or Metric). For optional materials and connections, please consult factory.



DIMENSIONS

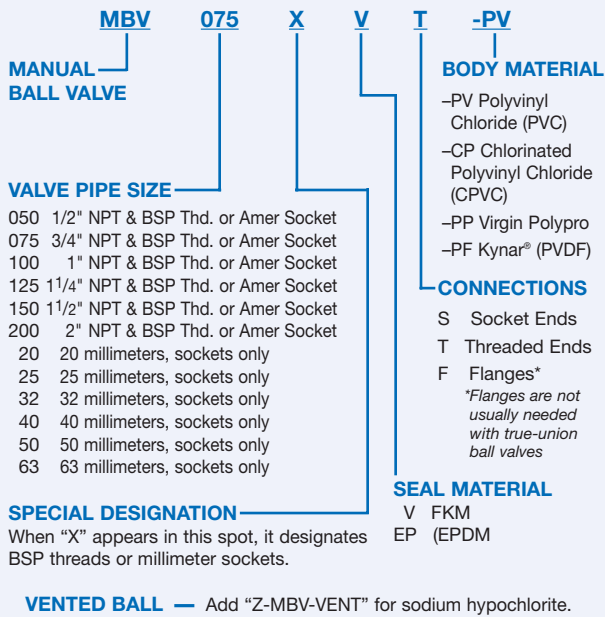
Pipe Sizes NPT BSP	MM	Weights**		A Thread & Socket		A-1 Flanged		B		C		D		E		F		G* Bolt Center		H (Dia.) Mounting Hole	
		Lbs	Kg	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1/2"	20	.5	.2	4.125	104.8	6.125	155.6	3.0	76.2	3.125	79.4	2.0	50.8	2.25	57.2	2.0	50.8	1.75	44.5	.27	6.9
3/4"	25	.8	.3	4.625	117.5	7.125	181.0	3.75	95.3	3.75	95.3	2.5	63.5	2.75	69.9	2.5	63.5	2.25	57.2	.28	7.1
1"	32	1.1	.5	5.5	139.7	8.0	203.2	4.312	111.1	3.75	95.3	3.0	76.2	3.25	82.6	3.312	73.0	2.5	63.5	.28	7.1
1 1/4"	40	2.3	1.1	6.5	165.1	9.25	235.0	6.125	155.6	4.5	114.3	4.0	101.6	4.125	104.8	4.25	108.0	3.312	84.1	.40	10.2
1 1/2"	50	2.5	1.1	6.75	171.5	9.75	247.7	6.125	155.6	4.5	114.3	4.0	101.6	4.125	104.8	4.25	108.0	3.312	84.1	.40	10.2
2"	63	2.7	1.2	8.0	203.2	11.375	288.9	6.125	155.6	4.5	114.3	4.0	101.6	4.125	104.8	4.25	108.0	3.312	84.1	.40	10.2

*Center line for bolt holes. **For weight of valve in CPVC multiply by 1.1, for Polypro multiply by .66, and for Kynar® (PVDF) multiply by 1.3.

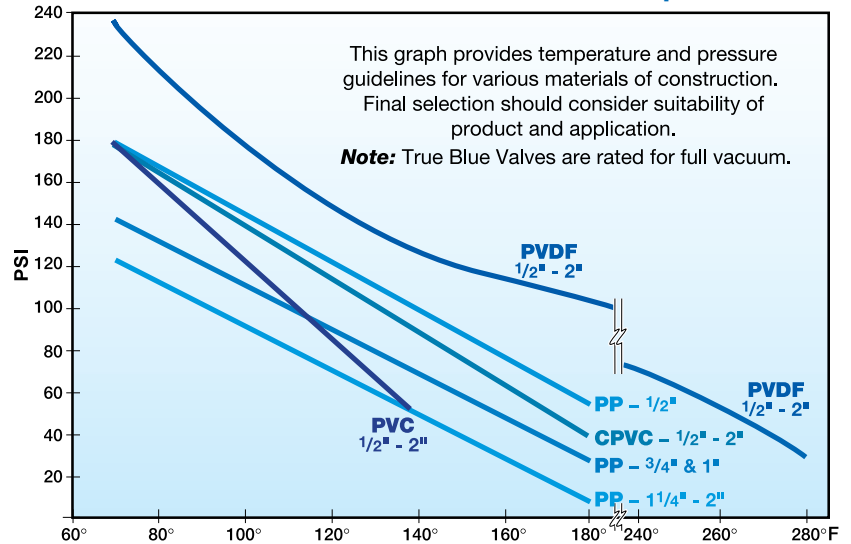
Ordering Information

Order by part number and specify exact chemicals, temperatures and pressures. To arrive at the proper part number, please consult diagram below.

The letters and numbers used in this part number are for example only!



Material Guideline For Pressure and Temperature



APPROXIMATE FLOW RATES at 1.0 PSI (0,07 Bar) Pressure Drop

Valve Sizes	1/2	3/4	1	1 1/4	1 1/2	2
C_v Factor	10	20	40	80	100	120
TORQUE SPECIFICATIONS						
Torque in-lbs.	25	35	45	70	70	70



Natural Polypro Ball Valves

Our Polypropylene True Blue Ball Valves provide a cost-effective option for ultra-pure water handling applications. They are manufactured from natural, unpigmented virgin polypropylene, containing no plasticizers or fillers. In addition, our valves are assembled dry, eliminating contamination via any lubricants. Following is additional information which may be found useful in your evaluation process.

Characteristics of Natural Polypropylene:

- Homopolymer resin.
- Compatible with all popular homopolymer and copolymer piping.
- Meets all requirements of the U.S. Food and Drug Administration as specified in the Code of Federal Regulations, Title 21, Section 177.1520, covering safe use of articles intended for food-contact use.
- Underwriters Laboratories yellow card index rating (in a minimum thickness of 0.120 in.) 115°C, UL94 Flammability Class 94HB in 0.58 inch thickness.
- NSF-listed for possible water uses, non-pressure applications. Also, NSF-listed for DWV pipe and fittings, continuous waste.
- CAS# 9003-07-0.

TYPICAL RESIN PROPERTIES

	(a)	(b)
Melt Flow Rate, dg/min	12	ASTM Method D 1238
Density, g/cm ³	0.903	D 792A-2
Notched Izod Compact Strength		
ft.-lbs/in. (J/m), at 73°F	0.7 (37.3)	
ft.-lbs/in. (J/m), at 0°F	0.3 (16)	
Tensile Strength at Yield PSI (MPa)	5,000 (34.5)	D 638
Elongation at Yield, %	11	D 638
Flexural Modulus, PSI (MPa)	240,000 (1,655)	D 790B
Rockwell Hardness, R Scale	100	D 785A
Deflection Temperature at 66°F (455kPa), °F (°C)	198° (92°)	D 648
Water Absorption after 24 Hrs., %	0.02	D 570
Environmental Stress-Cracking, hrs.	500, No Failure	D1693
Coefficient of Linear Thermal Expansion, cm/cm/°C:		
-30 - 0°C	6.4 x 10 ⁻⁵	
0 - 30°C	8.6 x 10 ⁻⁵	
30 - 60°C	9.4 x 10 ⁻⁵	

(a) Values shown are averages and are not to be considered specifications.

(b) ASTM test methods are latest under Society's current procedures. All molded specimens prepared by injection (ASTMD 2146).

SERIES ABV • Air Actuated Ball Valves – 1/2", 3/4", & 1"



Series ABVA – Air pressure to open and air pressure to close

Series ABVS – Spring kit easily converts ABVA to “Fail-Safe” operation

Features:

- All plastic construction ideal for corrosive atmosphere.
- Direct manual override standard on ABVA & ABVS.
- Easy field attachment to ball valve.
- Long cycle life – extensively tested & proven.
- ABVS converts easily between normally-open and normally-closed operation.
- Lightweight assembly – less piping stress and lower shipping weight.
- Can be hydraulically actuated.

Each valve and actuator is 100% individually inspected and tested prior to shipment.

Installation:

The ABVA requires a 4-way air solenoid valve (Part # 8345G1), and ABVS requires a 3-way air solenoid valve (Part # 8320G13) to control actuation. Compressed air should be filtered and lubricated. The hex nuts used to mount the actuator are tapped to facilitate piping support.

Manual Override:

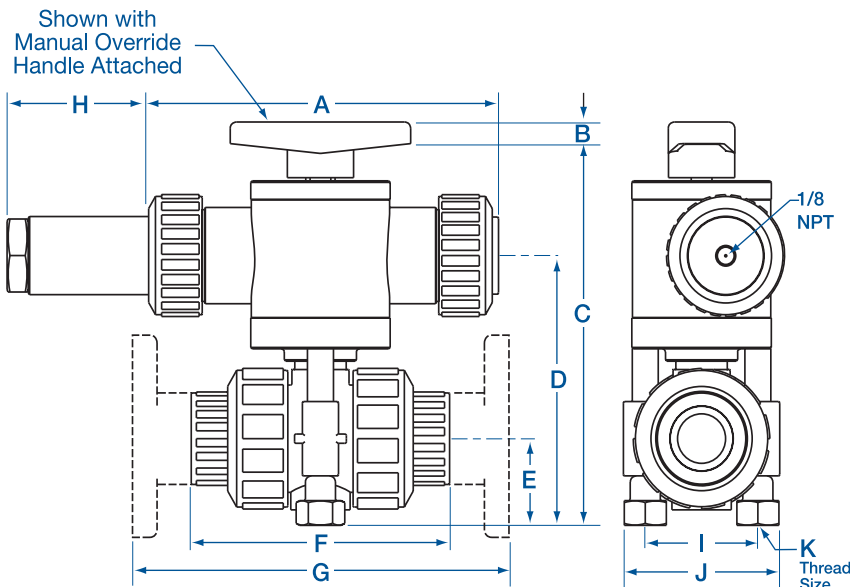
Series ABVA and ABVS have direct override to the ball valve shaft. Series ABVS requires simple loosening of the spring prior to manual override.

Materials of Construction:

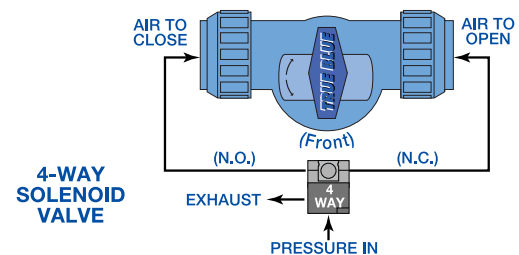
Actuator is constructed of corrosion resistant thermoplastics. Seals are Buna-N. For optional materials, please consult factory.

ACTUATOR ONLY – PART NUMBERS, WEIGHTS AND AIR PRESSURE REQUIREMENTS

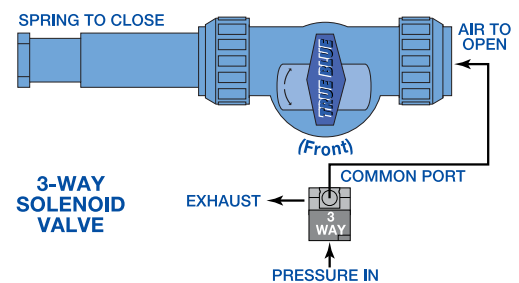
Valve Size NPT or BSP	Air x Air Part Number	Weight		Air x Air Air Pressure Required		Spring Kit Part Number	Weight		Air Pressure Required	
		Lbs.	Kg	PSI	Bars		Lbs.	Kg	PSI	Bars
1/2	ABVA 1.2	0.9	.41	20 - 50 PSI	1,4 - 3,5 Bars	ABVS 1.2	.3	.14	50 - 80 PSI	3,4 - 5,5 Bars
3/4	ABVA 1.6	1.8	.82	20 - 50 PSI	1,4 - 3,5 Bars	ABVS 1.6	.6	.27	50 - 80 PSI	3,4 - 5,5 Bars
1	ABVA 1.6	1.8	.82	20 - 50 PSI	1,4 - 3,5 Bars	ABVS 1.6	.6	.27	50 - 80 PSI	3,4 - 5,5 Bars



TYPICAL AIR CONNECTIONS, ABVA



TYPICAL AIR CONNECTIONS, ABVS



VALVE & ACTUATOR ASSEMBLY – PART NUMBERS & DIMENSIONS

Pipe Size	Air x Air ** Actuator w/Valve Part Number	A		B		C		D		E		F		G		H		I		J	
		IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
1/2	ABVA 050 –	5.75	146	0.6	15	5.6	142	3.90	99	1.25	32	4.25	108	6.5	165	2.8	71	1.75	44.4	2.60	66
3/4	ABVA 075 –	7.30	185	0.6	15	7.1	180	5.00	127	1.50	38	4.60	117	7.1	180	2.8	71	2.25	57.0	3.25	83
1	ABVA 100 –	7.30	185	0.6	15	7.8	198	5.55	144	1.90	48	5.60	142	8.0	203	2.8	71	2.50	64.0	3.30	84

* For spring return simply change ABVA to ABVS and refer to Dimension H.

** To complete part numbers refer to the Order Information section on page 5, the Manual Ball Valve. The letters MBV are simply replaced by ABVA or ABVS as indicated in the above chart.

	K Thread Size	K Thread Depth
ABVA 1.2	1/4 - 20	.44 in. 11.2 mm
ABVA 1.6	1/4 - 20	.44 in. 11.2 mm

SERIES ABR • Air Actuated Ball Valves – 1 1/4", 1 1/2", & 2"



Series ABRA – Air pressure to open and air pressure to close

Series ABRS – Spring return model for normally-closed or normally-open operation

Series ABMS – Spring return model with manual override

Features:

- All plastic construction ideal for corrosive atmosphere.
- Manual override standard on ABRA & ABMS.
- Easy field attachment to ball valve.
- Long cycle life – extensively tested & proven.
- ABRS and ABMS can be converted between normally-closed and normally-open.
- Lightweight assembly – less piping stress and lower shipping weight.
- Can be hydraulically actuated.

Each valve and actuator is 100% individually inspected and tested prior to shipment.

Installation:

The ABRA requires a 4-way air solenoid valve (Part # 8345G1); and ABRS and ABMS require a 3-way air solenoid valve (Part # 8320G13) to control actuation. Compressed air should be filtered and lubricated. The hex nuts used to mount the actuator are tapped to facilitate piping support.

Manual Override:

Series ABRA has direct override to the ball valve shaft. Series ABRS has no manual override. Series ABMS is a spring-return model with direct override to the ball valve shaft.

Materials of Construction:

Actuator is constructed of corrosion resistant thermoplastics. Seals are Buna-N. For optional materials, please consult factory.

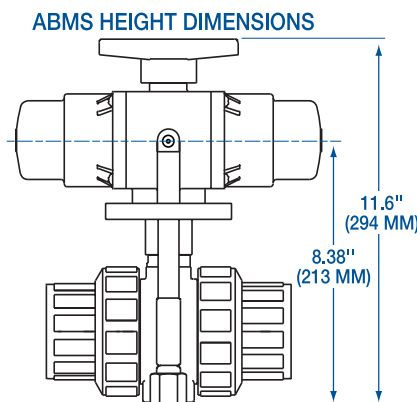
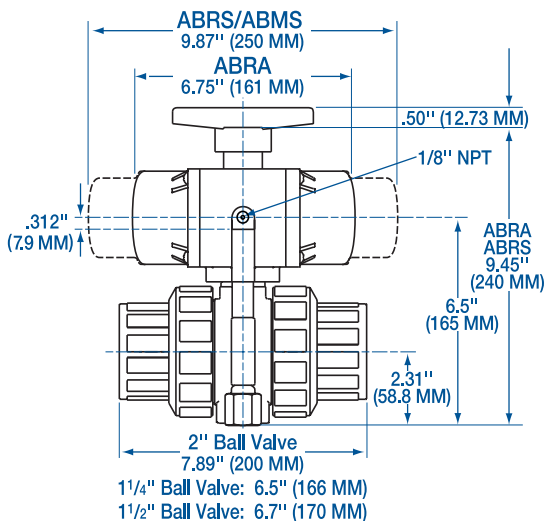
ACTUATOR ONLY – PART NUMBERS, WEIGHTS AND AIR PRESSURE REQUIREMENTS

Valve Size NPT or BSP	Actuator Type	Part Number	Weight		Pressure Requirement		Maximum Pressure @ 75°F	
			Lbs.	kg				
ALL 1 1/4", 1 1/2" & 2" BALL VALVES	Air x Air with Manual Override	ABRA	1.5	0.7	30 - 50 PSI	2,1 - 3,5 BAR	80 PSI	5,5 BAR
	Air x Spring without Manual Override	ABRS	2.5	1.1	60 - 80 PSI	4,1 - 5,5 BAR	80 PSI	5,5 BAR
	Air x Spring with Manual Override	ABMS	3.5	1.6	60 - 80 PSI	4,1 - 5,5 BAR	80 PSI	5,5 BAR

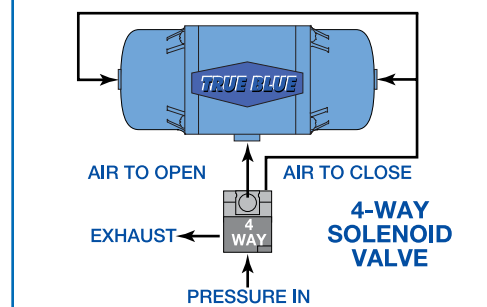
Maximum Ambient Temperature 120°F (49°C) ABRS/ABMS shipped "normally-closed". They can be ordered "normally-open".

Part Numbers to order Air x Air Actuator with Valve:

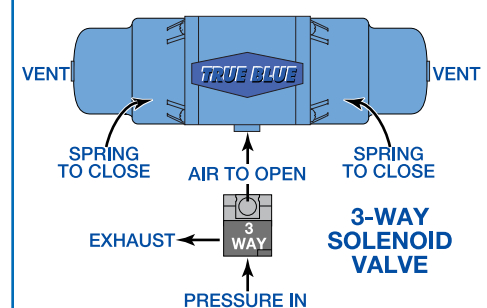
For 1 1/4" pipe size the part # is ABRA125...; 1 1/2" is ABRA150...; 2" is ABRA200...; to complete the part numbers refer to the "Order Information" section on page 5, Manual Ball Valves. The letters MBV are simply replaced by ABRA (Air x Air), ABRS (Air x Spring) or ABMS (Air x Spring with manual override) as indicated.



TYPICAL AIR CONNECTIONS ABRA

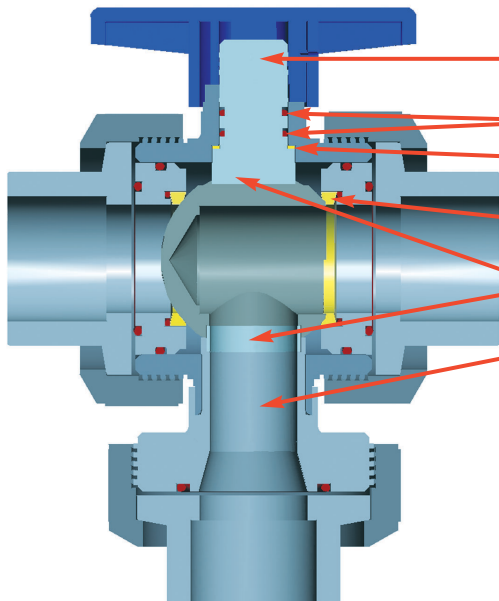


TYPICAL AIR CONNECTIONS ABRS/ABMS



SERIES TMBV • 3-Way Manual Ball Valves

An engineered multiple union ball valve for applications requiring two inlets, two outlets, sampling or diverting



Features:

- Heavy-duty, large diameter shaft to eliminate flexing and breakage.
- Dual shaft seals eliminate leakage.
- PTFE bearing on shaft eliminates friction and wear; stem design is “blow-out” proof.
- PTFE seats energized with O-rings eliminate wear and improve cycle life.
- Trunnion design eliminates lateral ball stress and allows downstream piping to be disconnected under full line pressure.
- Smooth flow path minimizes pressure loss.
- Fully concentric and mirror polished ball assures smooth, leakproof operation.
- Three true-union ends for ease of piping installation and removal; helps lower costs and reduce footprint.
- Choice of 2-hole or 3-hole ball.

Each valve is 100% individually inspected and tested prior to shipment.

Design:

Known as “The Engineered Ball Valve”, Series TMBV provides more safety and design features than any other thermoplastic ball valve. With its mirror-polished ball, perfectly machined sealing surfaces, Trunnion centering design, PTFE thrust bearing and O-ring loaded floating PTFE seats, the True Blue three-way ball valve offers smooth turning even in difficult applications. The floating seats automatically compensate for seat wear, and after long-term cycling, the carriers can easily be returned to their original position simply by tightening the union nuts.

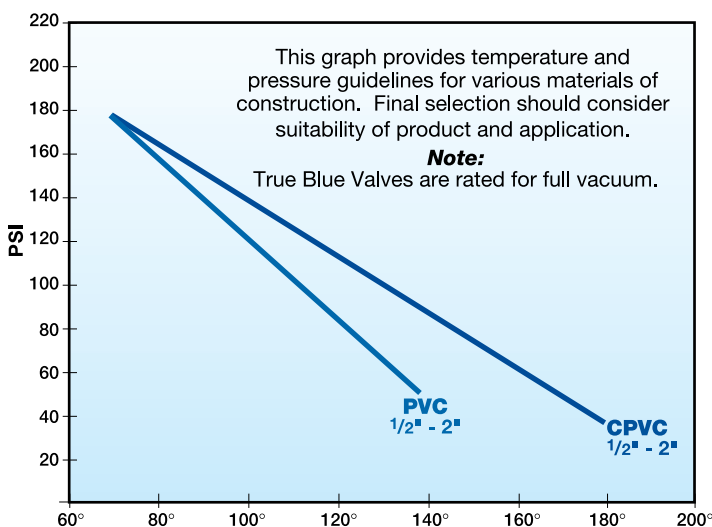
The 2-hole ball design is standard; it is ideal for applications where flow cannot be mixed. To prevent a momentary no-flow (“dead-head”) condition, an optional 3-hole ball is available. Please specify when ordering.

The top to bottom “Trunnion” design permits flow and pressure in either direction, and eliminates the stresses inherent to a ball secured only at the top. An ultra smooth flow path virtually eliminates turbulence and pressure loss and permits flow rates that far exceed pipe manufacturers specifications.

Manual Override:

Series TMBV is molded of Type 1 Grade 1 Geon® PVC and Corzan® CPVC. Standard O-ring seals are FKM or EPDM. Seats and shaft bearings are PTFE. Standard connections are threaded (NPT or BSP) or socket (Schedule 80 or Metric). For optional materials and connections, please consult factory.

Material Guideline For Pressure and Temperature



FLOW CHARACTERISTICS DURING CYCLING

BALL STYLE

2-HOLE STANDARD



During cycling, the standard 2-hole ball has a momentary dead-head when the ball outlet is between ports.

3-HOLE OPTION

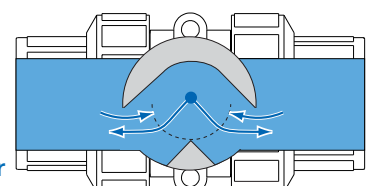
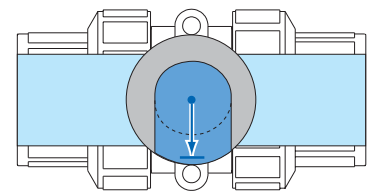


Add “-A” to Part Number

During cycling, the optional 3-hole ball has a momentary mixing of streams when the ball outlet is between ports. This option should be specified if a brief interruption of flow will be detrimental to your process.

TOP VIEW

Flow from bottom, center

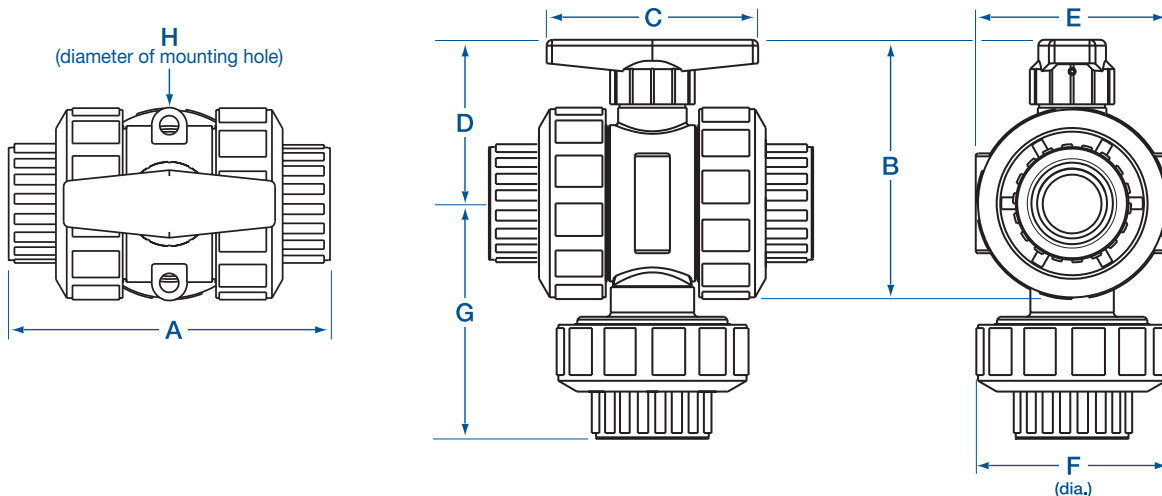




APPROXIMATE FLOW RATES at 1.0 PSI (0,07 Bar) Pressure Drop					
Valve Sizes	1/2	3/4	1	1 1/2	2
Cv Factor	4.0	8.0	13.0	38.0	39.0
TORQUE SPECIFICATIONS					
Torque, in-lbs.	25	35	45	70	70

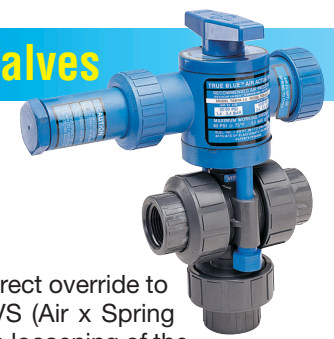
ORDERING INFORMATION							
Two Hole Design				Three Hole Design			
Sizes	Seal	PVC	CPVC (Corzan™)	Sizes	Seal	PVC	CPVC (Corzan™)
1/2"	EPDM FKM	TMBV050EPT-PV TMBV050VT-PV	TMBV050EPT-CP TMBV050VT-CP	1/2"	EPDM FKM	TMBV050EPT-PV-A TMBV050VT-PV-A	TMBV050EPT-CP-A TMBV050VT-CP-A
3/4"	EPDM FKM	TMBV075EPT-PV TMBV075VT-PV	TMBV075EPT-CP TMBV075VT-CP	3/4"	EPDM FKM	TMBV075EPT-PV-A TMBV075VT-PV-A	TMBV075EPT-CP-A TMBV075VT-CP-A
1"	EPDM FKM	TMBV100EPT-PV TMBV100VT-PV	TMBV100EPT-CP TMBV100VT-CP	1"	EPDM FKM	TMBV100EPT-PV-A TMBV100VT-PV-A	TMBV100EPT-CP-A TMBV100VT-CP-A
1 1/2"	EPDM FKM	TMBV150EPT-PV TMBV150VT-PV	TMBV150EPT-CP TMBV150VT-CP	1 1/2"	EPDM FKM	TMBV150EPT-PV-A TMBV150VT-PV-A	TMBV150EPT-CP-A TMBV150VT-CP-A
2"	EPDM FKM	TMBV200EPT-PV TMBV200VT-PV	TMBV200EPT-CP TMBV200VT-CP	2"	EPDM FKM	TMBV200EPT-PV-A TMBV200VT-PV-A	TMBV200EPT-CP-A TMBV200VT-CP-A

NOTE #1: A two (2) holed ball is standard with 180° uni-directional rotation. To prevent a momentary no-flow (dead-heading) condition during cycling, a three (3) holed ball is available. **NOTE #2:** End connections must be specified. **NOTE #3:** Model numbers listed are for “threaded” end connectors. For “socket” change the the “T” in the model number to “S”.



DIMENSIONS																
Valve Size	A		B		C		D		E		F Ø		G		H Ø	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1/2"	4.125	104.8	3.0	76.2	3.125	79.4	2.0	50.8	2.25	57.2	1.75	44.45	2.75	69.85	.27	6.9
3/4"	4.625	117.5	3.75	95.3	3.75	95.3	2.5	63.5	2.75	69.9	2.25	57.15	3.31	84.07	.28	7.1
1"	5.50	139.7	4.312	111.1	3.75	95.3	3.0	76.2	3.25	82.6	2.50	63.50	3.81	96.77	.28	7.1
1 1/2"	6.75	171.5	6.125	155.6	4.50	114.3	4.0	101.6	4.125	104.8	3.37	85.60	5.00	127.0	.40	10.2
2"	8.00	203.2	6.125	155.6	4.50	114.3	4.0	101.6	4.125	104.8	3.68	93.47	5.56	141.2	.40	10.2

SERIES TABV & TABR • 3-Way Air Actuated Ball Valves



Series TABVA & TABRA – Air x Air Actuation Series TABVS & TABRS – Air x Spring Fail-Safe Operation

Features:

- Rugged thermoplastic construction ideal for corrosive atmospheres.
- Long cycle life – extensively tested and proven.
- Lightweight assembly – less piping stress and lower shipping weight.
- Pre-assembled to 3-way ball valve; can also be added in the field
- Can be hydraulically actuated.
- Manual override standard on air x air models and TABVS.

Each valve and actuator is 100% individually inspected and tested prior to shipment.

Installation:

Air x Air models require a 4-way air solenoid valve (Part # 8345G1); Air x Spring models require a 3-way air solenoid valve (Part # 8320G13) to control actuation. Compressed air should be filtered and lubricated.

Manual Override:

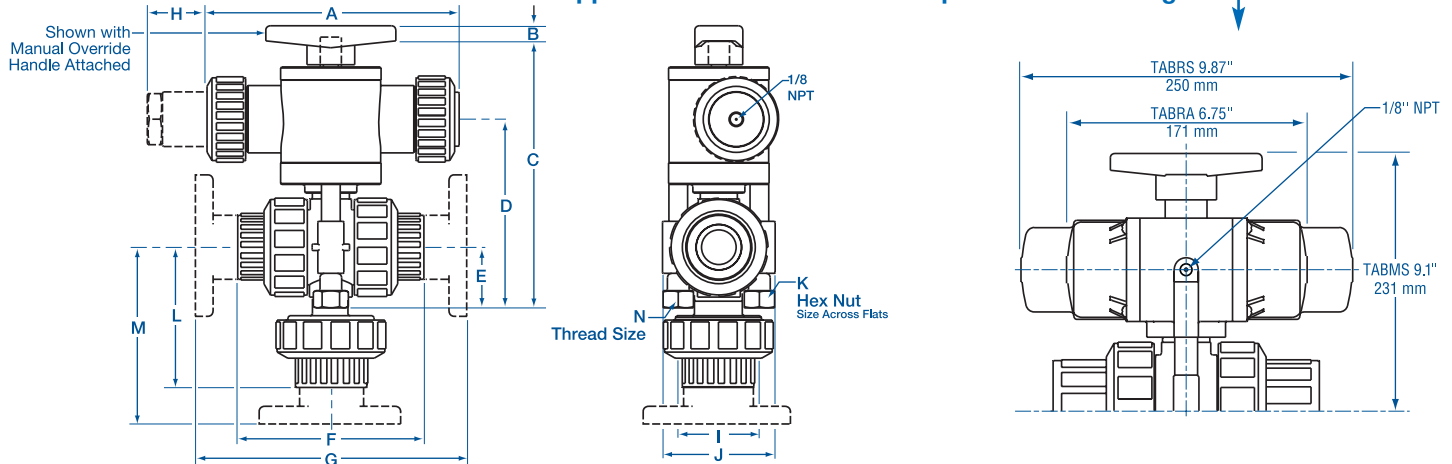
All 3-way Air x Air models have direct override to the ball valve shaft. Series TABVS (Air x Spring 1/2", 3/4", and 1") requires simple loosening of the spring prior to manual override. Series TABRS (Air x Spring 1 1/2" and 2") should be specified as TABMS if manual override is critical to the application.

Materials of Construction:

Ball valves are available in Geon PVC and Corzan CPVC, with PTFE seats. A 3-hole ball design is standard and prevents a momentary no-flow ("dead head") condition by briefly allowing flow from two ports. If liquids cannot be mixed, please consult factory for 3-way air actuated isolation valve. Seals are available in EPDM or FKM. For complete specifications on the 3-way ball element, please refer to Series TMBV.

Actuator is constructed of corrosion resistant thermoplastics. Seals are Buna-N. For optional materials, please consult factory.

Dimensional Table Below Applies To All TAB- Series Except As Shown At Right



DIMENSIONS

Pipe Size	Air x Air ** Actuator w/Valve Part Number	A IN.	B IN.	C IN.	D IN.	E IN.	F IN.	G IN.	H IN.	I IN.	J IN.	K Hex IN.	L IN.	M IN.	N IN.
1/2	TABVA 050 –	5.75	.6	5.6	3.9	1.5	4.13	6.5	2.8	1.75	2.6	5/8	2.75	3.75	1/4-20
3/4	TABVA 075 –	7.3	.6	7.1	5.0	1.5	4.63	7.1	2.8	2.25	3.25	7/8	3.12	4.24	1/4-20
1	TABVA 100 –	7.3	.6	7.8	5.55	1.9	5.60	8.0	2.8	2.5	3.3	7/8	3.87	5.12	1/4-20
1 1/2	TABRA 150 –	See Above	.6	9.5	6.5	2.5	6.80	9.9	See Above	3.37	4.2	1	5.00	6.50	3/8-16
2	TABRA 200 –	See Above	.6	9.5	6.5	2.5	8.00	11.2	See Above	3.37	4.2	1	5.56	7.18	3/8-16

** For spring return simply change TABVA to TABVS or TABRA to TABRS and refer to "H" dimension. Manual override is standard on all but TABRS. For optional manual override on 1 1/2" and 2" Air x Spring, change "R" to "M". **NOTES:** TO COMPLETE THE MODEL NUMBER: 1) Add "V" for FKM seal or "EP" for EPDM seals 2) Followed by "T" for NPT threads or "S" for Schedule 80 Socket. 3) Followed by "PV" for PVC or "CP" for CPVC ball valve material.

Specifications:

AIR x AIR			
Type	TABVA050	TABVA075/100	TABRA150/200
Ball Valve Size	1/2"	3/4" & 1"	1 1/2" & 2"
Air Pressure	20-50 PSI	20-50 PSI	30-50 PSI
Total Weight*	1 lb. 14 oz.	3 lbs. 12 oz.	5 lbs. 2 oz.

*Includes 3-Way PVC Ball Valve.

AIR x SPRING			
Type	TABVS050	TABVS075/100	TABRS150/200
Ball Valve Size	1/2"	3/4" & 1"	1 1/2" & 2"
Air Pressure	50-80 PSI	50-80 PSI	60-80 PSI
Total Weight*	2 lbs. 3 oz.	4 lbs. 6 oz.	6 lbs. 2 oz.

*Includes 3-Way PVC Ball Valve.

Cv FACTOR					
Size	1/2	3/4	1	1 1/2	2
Cv	4.0	8.0	13.0	38.0	39.0

SERIES SW • Limit Switches

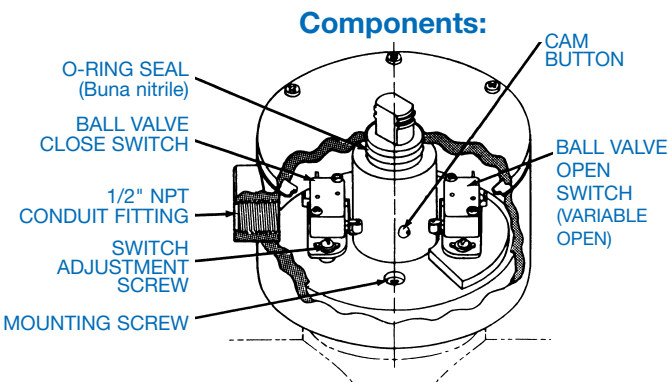
Features:

- NEMA 4 type housing.
- Plastic construction eliminates atmospheric corrosion.
- Adjustable to any limited open position.
- Manual override valve.

Series SW signals the open or closed valve position for computer verification or to actuate other equipment based on the valve position. Body material is PVC, seals are Buna-N, and the assembly fasteners are stainless steel. The lightweight housing is water and dust-tight with NEMA 4 type design.

The Limit Switch has a camshaft and two single-pole double throw switches. A signal line is wired "through" the switch to the equipment or computer being signaled. A 1/2" NPT conduit fitting seals the wiring connection. AC resistive load rating is 10 amps for each contact. DC loads are rated for 60W (5A at 12 VDC, 2.5A at 24 VDC).

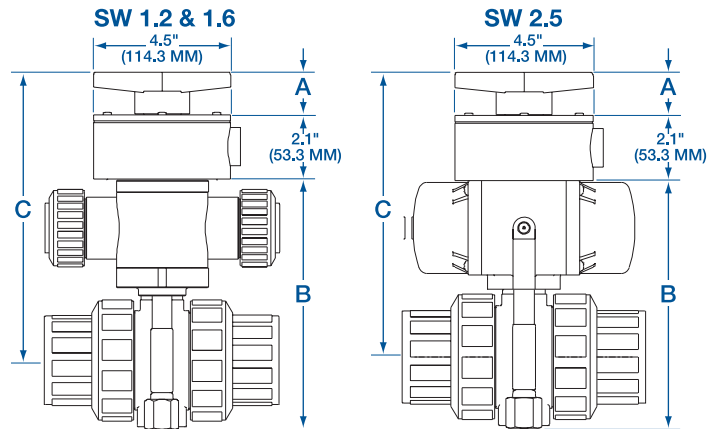
The switches make contact when the valve is either open or closed. The open position of the True Blue Ball Valve is adjustable for throttling by using the optional Series LS Limit Stop.



Series SW Limit Switch is also adjustable to accommodate the throttle open position.

Mounting:

The limit switch is simply mounted to the actuator by two (2) screws. These screws are sealed inside the unit.

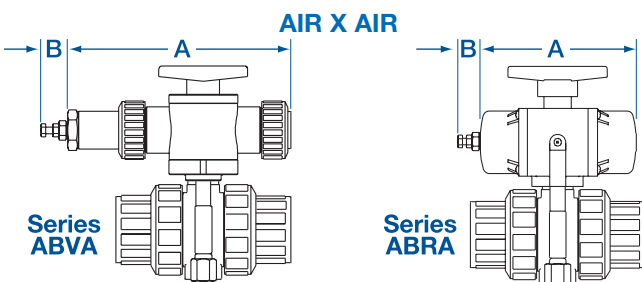


DIMENSIONS							
Accessory	Ball Valve Size	A		B		C	
		IN	MM	IN	MM	IN	MM
SW1.2	1/2	0.9	22.9	6.7	170.2	4.9	124.5
SW1.6	3/4	1.2	30.5	8.0	203.2	5.9	149.9
SW1.6	1	1.2	30.5	8.3	210.8	6.2	157.5
SW2.5	1 1/4, 1 1/2, & 2	1.4	35.6	8.0	203.2	9.3	236.2

SERIES LS • Limit Stops

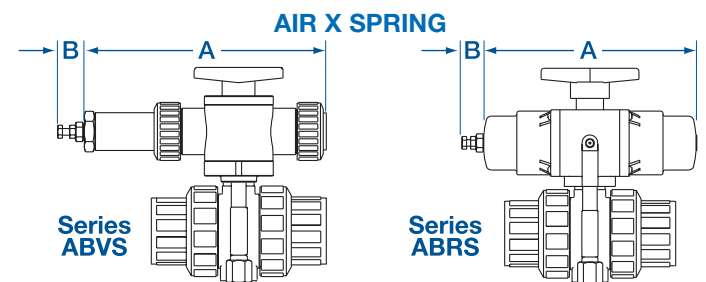
Limit Stops maintain desired flow capacity for air actuated ball valves.

A True-Blue air actuated ball valve with a limit stop can be set to maintain any desired flow from virtually closed, up to full capacity of the valve. Two (2) types are available, one for air x air actuators (ABVA & ABRA) and one for air x spring "fail-safe" actuators (ABVS & ABRs).



Accessory	Ball Valve Size	A		B (max.)	
		IN.	MM	IN.	MM
ALS-1.2	1/2"	6.55	166.4	1.70	17.8
ALS-1.6	3/4" & 1"	8.35	212.1	2.50	63.5
ABRA-2.5-LS*	1 1/4", 1 1/2" & 2"	6.75	171.0	2.00	50.8

*Limit Stop for ABR-2.5 must be ordered with Actuator.



Accessory	Ball Valve Size	A		B (max.)	
		IN.	MM	IN.	MM
SLS-1.2	1/2"	8.45	214.6	1.80	45.7
SLS-1.6	3/4" & 1"	10.25	260.4	2.25	57.2
ABRS-2.5-LS*	1 1/4", 1 1/2" & 2"	9.87	250.0	2.13	54.0

*Limit Stop for ABR-2.5 must be ordered with Actuator.

SERIES LMBV • Lateral Reducing Ball Valve

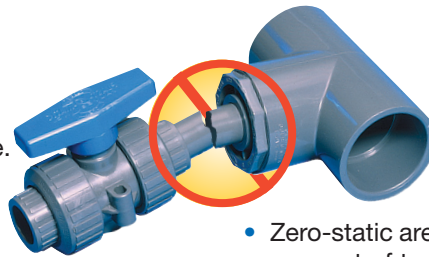


- Superior Lateral Connections
- Improves Piping Safety
- Replaces “Zero Dead-Leg” Valves

Plast-O-Matic Trunnion Ball Valves are available with an adapter for easy and compact connection to standard plumbing tees, resulting in substantially stronger and more compact valve connection to lateral piping. This design eliminates the need for a reducer, additional length of pipe, and one of the end connections on the ball valve.

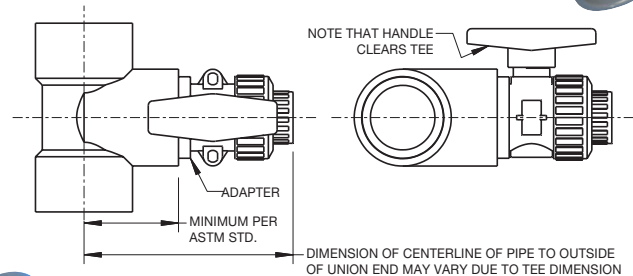
Advantages over traditional ball valve tee connections:

- Faster plumbing – reduces labor.
- The overall length is shorter; valve body is partly inside the plumbing tee.
- Design enables removal of valve access to internals.
- Resists piping stresses better than traditional “reducer” connections.
- Eliminates potential variations in pipefitting.
- Assembly is substantially stronger than pipe + reducer + fittings.



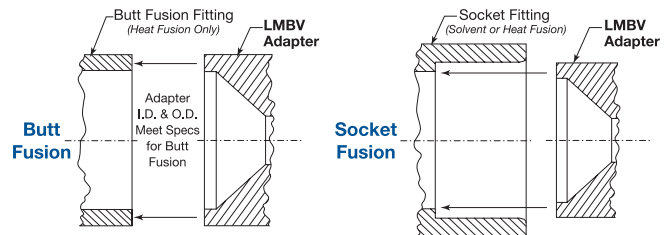
Use in place of zero dead-leg valves:

- Lower costs.
- Virgin, non-pigmented Kynar PVDF and Natural Polypro compatible with all butt fusion piping systems.
- Zero-static area is similar in size to diaphragm valve; uses same concept of turbulence /flushing action to prevent dead-leg.
- Valve is threaded into adapter – true union – easier maintenance, easier changes in piping system.



Each Adapter fits spigot and socket connectors

Note the two illustrations (at right). Each adapter meets O.D. specifications for socket connectors; the same adapter meets O.D. and I.D. specifications for butt fusion connectors. No need for different type connectors.



ORDERING INFORMATION

Order by part number and specify exact chemical, temperature and pressures. To arrive at the proper part number, please consult chart. (The letters and numbers used in this part number are for example only!)

LMBV		075	X	V	T	-PV	-	200		
Lateral Reducing Ball Valve		Valve Pipe Size		Seal Material	Connections	Body Material	Adapter Size			
050	1/2"	20	20 mm	V FKM	S Socket Ends	-PV PVC	050	1/2"	20	20 mm
075	3/4"	25	25 mm	EP EPDM	T Threaded Ends	-CP Corzan CPVC	075	3/4"	25	25 mm
100	1"	32	32 mm		F Flanges*	-PP Virgin Polypro	100	1"	32	32 mm
125	1 1/4"	40	40 mm		*Flanges are not usually needed with true-union ball valves.	-PF Kynar PVDF	125	1 1/4"	40	40 mm
150	1 1/2"	50	50 mm				150	1 1/2"	50	50 mm
200	2"	63	63 mm				200	2"	63	63 mm
							300	3"	90	90 mm

For actuation options, please consult factory.
Note: Standard unit includes ball valve, adapter and tee. Consult factory.



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