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:

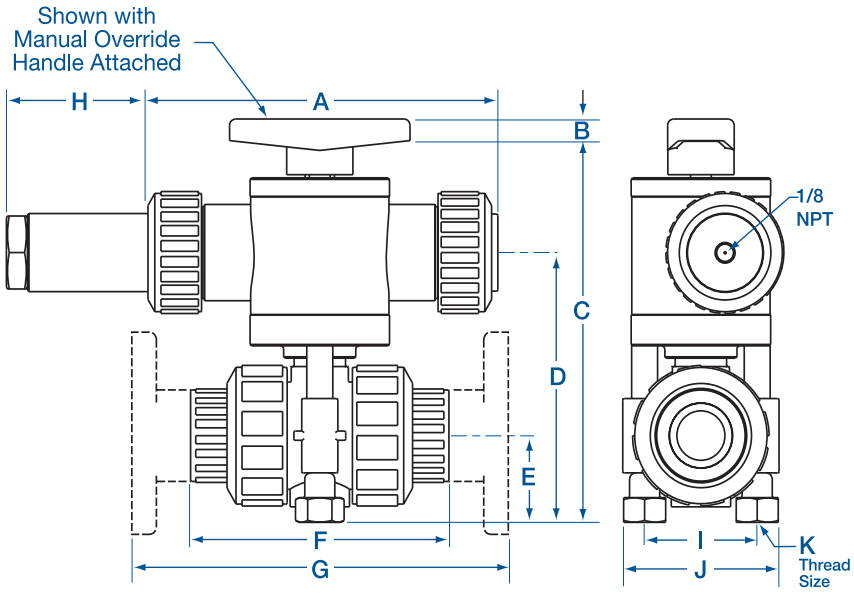
Series ABVA and ABVS have direct override to the ball valve shaft. Series ABVS requires simple loosening of the spring prior to manual override.

Materials of Construction:

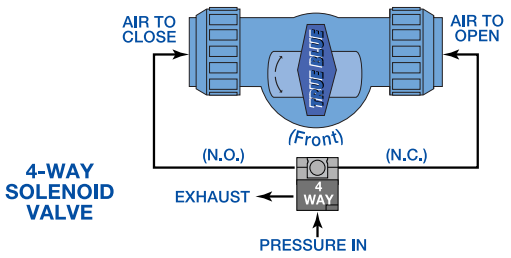
Actuator is constructed of corrosion resistant thermoplastics. Seals are Buna-N. For optional materials, please consult factory.

ACTUATOR ONLY – PART NUMBERS, WEIGHTS AND AIR PRESSURE REQUIREMENTS

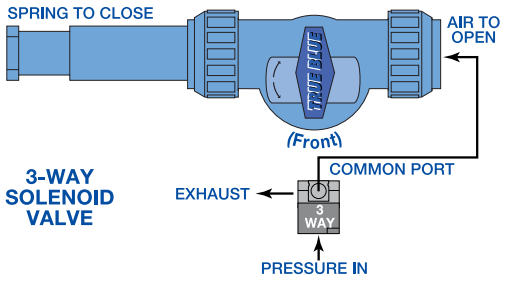
Valve Size NPT or BSP	Air x Air Part Number	Weight Lbs.	Weight Kg	Air x Air Air Pressure Required		Spring Kit Part Number	Weight Lbs.	Weight Kg	Air Pressure Required	
1/2	ABVA 1.2	0.9	.41	20 - 50 PSI	1,4 - 3,5 Bars	ABVS 1.2	.3	.14	50 - 80 PSI	3,4 - 5,5 Bars
3/4	ABVA 1.6	1.8	.82	20 - 50 PSI	1,4 - 3,5 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 IN.	A MM	B IN.	B MM	C IN.	C MM	D IN.	D MM	E IN.	E MM	F IN.	F MM	G IN.	G MM	H IN.	H MM	I IN.	I MM	J IN.	J 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 – 1¼", 1½", & 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:

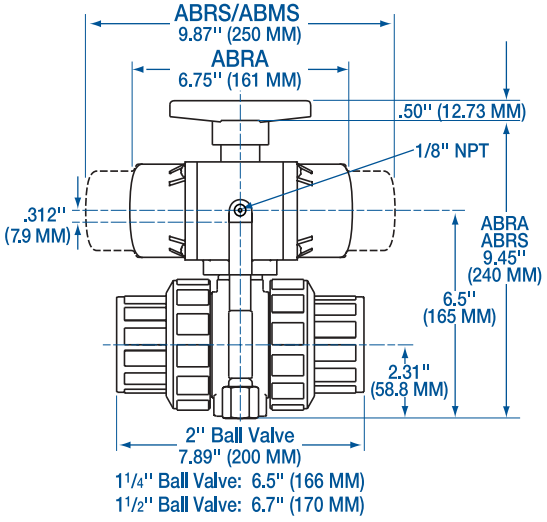
Actuator is constructed of corrosion resistant thermoplastics. Seals are Buna-N. For optional materials, please consult factory.

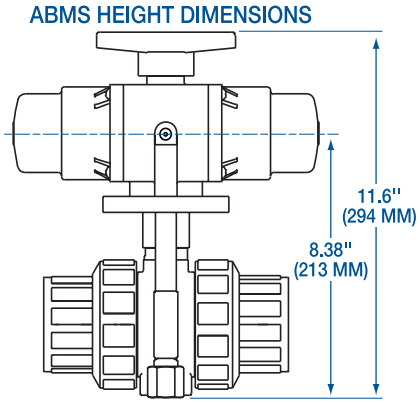
ACTUATOR ONLY – PART NUMBERS, WEIGHTS AND AIR PRESSURE REQUIREMENTS

Valve Size NPT or BSP	Actuator Type	Part Number	Weight Lbs.	Weight kg	Pressure Requirement		Maximum Pressure @ 75°F	
ALL 1¼", 1½" & 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".						

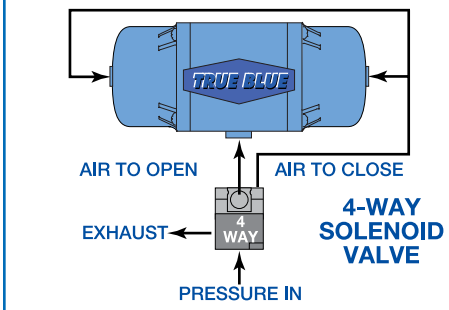
Part Numbers to order Air x Air Actuator with Valve:

For 1¼" pipe size the part # is ABRA125...; 1½" 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.

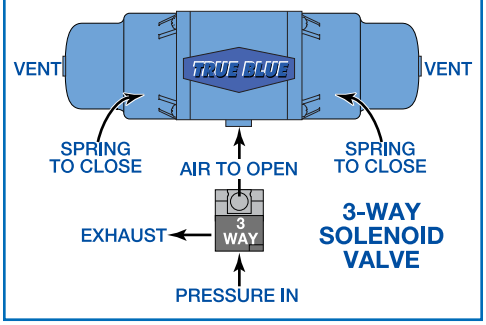




TYPICAL AIR CONNECTIONS ABRA



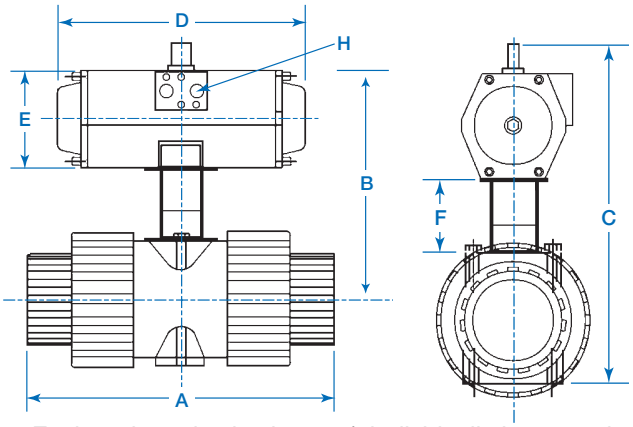
TYPICAL AIR CONNECTIONS ABRS/ABMS



SERIES ABR • Air Actuated Ball Valves 3" & 4"

Rack & Pinion Pneumatic Actuator engineered for corrosion resistance Double-Acting or Spring Return

The ABR rack and pinion pneumatic actuator produces linear torque output in a compact design utilizing the same body and end caps for double-acting and spring return units.



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

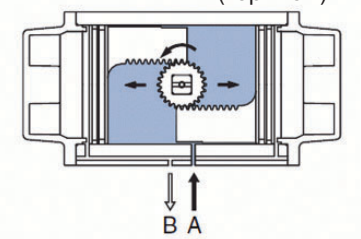
Features:

- Million cycle design
- Polished bore & low friction bearings
- Visual indication
- Blowout-proof shaft
- Meets ASTM B117-73 (500 hrs. salt spray)

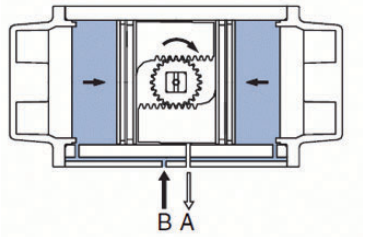
Actuator Materials of Construction

Actuator body is aluminum alloy (ASTM 6063T6 and ASTM B179) with additional components constructed of nickel plated steel, stainless steel, spring steel, high alloy spring steel, aluminum, nylon, nitril, nitrile, and acetal resin.

Air x Air (Top View)

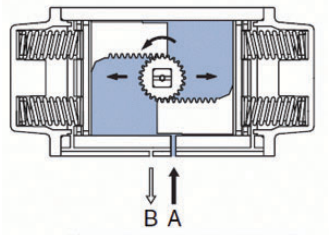


Air supplied to Port A forces pistons apart and toward end positions with exhaust air exiting at Port B. (A counter-clockwise rotation is obtained)

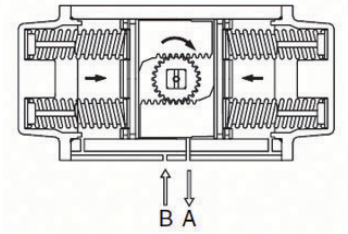


Air supplied to Port B forces pistons toward center with exhaust air exiting at Port A. (A clockwise rotation is obtained)

Air x Spring (Top View)



Air supplied to Port A forces pistons apart and toward end position, compressing springs. Exhaust air exits at Port B. (A counter-clockwise rotation is obtained)



Air or electric failure allows springs to force pistons toward center position with exhaust air exiting at Port A. (A clockwise rotation is obtained)

DIMENSIONS

Pipe Size	Activator with Valve Model No.	A		B		C		D		E		F		H
		IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	
3″	ABRA 300 –	10.6	270		CONSULT FACTORY			6.12	156	3.27	83		CONSULT FACTORY	1/4″ NPT
4″	ABRA 400–	12.76	324					6.12	156	3.27	83			1/4″ NPT

* To complete the Model Numbers refer to the ordering chart below.

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!

ABRA* — AIR ACTUATED BALL VALVE

300 — VALVE PIPE SIZE
- 300 3"
- 400 4"

V — SEAL MATERIAL
- V FKM
- EP EPDM

T — CONNECTIONS
- S Socket Ends
- T Threaded Ends
- F Flanges*

**Flanges are not usually needed with true-union ball valves.*

-PV — BODY MATERIAL
- –PV Polyvinyl Chloride (PVC)
- –CP Chlorinated Polyvinyl Chloride (CPVC)
- –PP Virgin Polypro
- –PF PVDF

VENTED BALL —
Add "Z-ABR-VENT" for sodium hypochlorite.

*For Air x Spring, change ABRA to ABRS.

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