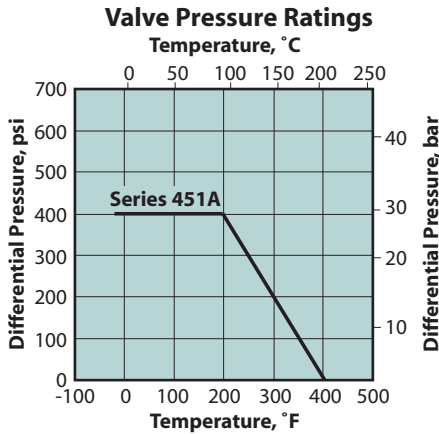
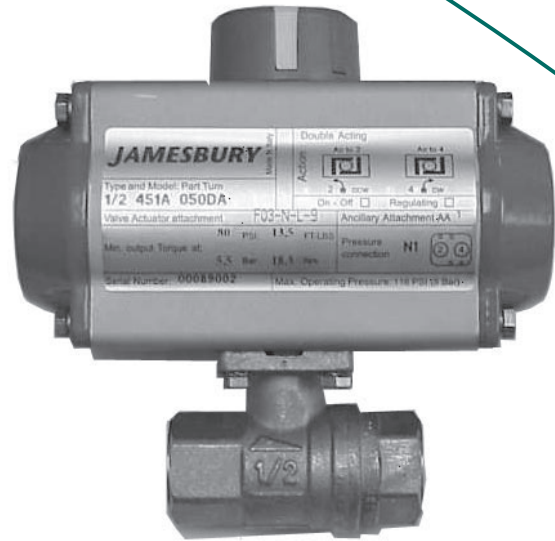


VALUE-LINE® SERIES 451A AUTOMATED BRASS BALL VALVES

JAMESBURY® Series 451A ball valves are general-purpose full-port valves. The valves feature tight shut-off and are for use in hot and cold water, compressed air, and natural and bottled gas.

Series 451A are automated valves mounted with JAMESBURY VALV-POWR® VPVL pneumatic actuators. Supply air mounting surfaces are NAMUR for ease of connection. The actuator is rated for 60 psi (4.1 bar) up to 116 psi (8.0 bar) and operating temperatures range from -4°F to 175°F (-20°C to 79.4°C). The valves are rated to 400 psi CWP (27.6 bar). Not for steam applications.



The actuator used in these assemblies is the JAMESBURY VALV-POWR, VPVL compact piston design. VPVL double-opposed piston actuators combine the benefits of high cycle life, a rugged construction, and an extremely compact and symmetrical design.

- Valves and actuators are designed to operate as a unit with the highest degree of compatibility.
- Valves and actuators are supplied completely assembled and set for operation from the full open to the full closed position.
- Standard operation for spring-return actuators is to cycle the valve to the closed position upon loss of air or electricity to the solenoid valve.

- Solenoid valve and accessory attachments comply with NAMUR VDI/VDE 3845.
- The VPVL actuator has a hard-anodized body, polyester-coated end caps, and epoxy-coated springs along with internal and external stainless steel fasteners to provide corrosion resistance in a variety of difficult applications and environments.

Bill of Materials and Parts List 1/2" – 2" (DN 15 – 50)	
Part Name	Materials
Body	Forged Brass†
Ball	Chrome-Plated Brass
Seats	Graphite-Filled PTFE w/Viton O-ring
Stem O-ring	Viton
Stem	316 Stainless Steel
Washer	Carbon-Filled PTFE
Stem Thrust Washer	Carbon-Filled PTFE
Actuator	Aluminum Body and End Caps

† Attention: The state of California has determined lead and lead compounds are known to cause cancer, birth defects and reproductive harm. The state of California prohibits the use of brass valves for drinking water service.

DIMENSIONS

Double-Acting Dimensions - inches														
Valve / Actuator	A	B	C	D	E	F	G	H	J	K	L	M*	P	Wgt. lb
1/2" 451A050DA	5.53	2.77	2.32	1.22	1.34	1.20	2.60	2.77	2.32	1.14	1.36	4	0.59	2.78
3/4" 451A050DA	5.53	2.77	2.32	1.52	1.72	1.46	2.93	2.77	2.32	1.14	1.36	4	0.79	3.12
1" 451A050DA	5.53	2.77	2.32	1.67	2.07	1.79	3.56	2.77	2.32	1.14	1.36	4	0.98	3.92
1-1/4" 451A100DA	6.24	3.12	2.83	2.19	2.55	2.05	4.09	3.27	2.83	1.42	1.67	8	1.26	8.26
1-1/2" 451A100DA	6.24	3.12	2.83	2.44	3.13	2.32	4.61	3.27	2.83	1.42	1.67	8	1.6	7.58
2" 451A200DA	6.29	4.14	3.33	2.72	3.78	2.66	5.31	3.72	3.33	1.67	2.01	8	1.97	12.92

Double-Acting Dimensions - mm														
Valve / Actuator	A	B	C	D	E	F	G	H	J	K	L	M*	P	Wgt. kg
DN 15 451A050DA	140	70	59	30	34	30	66	70	59	29	35	4	15	1.3
DN 20 451A050DA	140	70	59	37	44	37	74	70	59	29	35	4	20	1.4
DN 25 451A050DA	140	70	59	42	53	45	90	70	59	29	35	4	25	1.8
DN 32 451A100DA	159	79	72	56	65	52	104	83	72	36	42	8	30	3.8
DN 40 451A100DA	159	79	72	62	80	59	117	83	72	36	42	8	40	3.5
DN 50 451A200DA	159	105	85	69	96	68	135	83	85	42	51	8	50	5.9

Spring-Return Dimensions - inches														
Valve / Actuator	A	B	C	D	E	F	G	H	J	K	L	M*	P	Wgt. lb
1/2" 451A050SR	5.53	2.77	2.32	1.22	1.34	1.20	2.60	2.77	2.32	1.14	1.36	4	0.59	2.78
3/4" 451A050SR	5.53	2.77	2.32	1.52	1.72	1.46	2.93	2.77	2.32	1.14	1.36	4	0.79	3.32
1" 451A100SR	6.24	3.12	2.83	1.67	2.07	1.79	3.56	3.27	2.83	1.42	1.67	4	0.98	5.62
1-1/4" 451A200SR	8.29	4.14	3.33	2.19	2.55	2.05	4.09	3.72	3.33	1.67	2.01	8	1.26	9.96
1-1/2" 451A200SR	8.29	4.14	3.33	2.44	3.13	2.32	4.61	3.72	3.33	1.67	2.01	8	1.6	11.28
2" 451A250SR	9.74	4.87	3.84	2.72	3.78	2.66	5.31	4.19	3.84	1.95	2.26	8	1.97	16.72

Spring-Return Dimensions - mm														
Valve / Actuator	A	B	C	D	E	F	G	H	J	K	L	M*	P	Wgt. kg
DN 15 451A050SR	5.53	70	59	31	34	30	66	70	59	29	35	4	15	1.3
DN 20 451A050SR	5.53	70	59	39	44	37	74	70	59	29	35	4	20	1.5
DN 25 451A100SR	6.24	79	72	42	53	45	90	83	72	36	42	8	25	2.6
DN 32 451A200SR	8.29	105	85	56	65	53	28	94	85	42	51	8	30	4.5
DN 40 451A200SR	8.29	105	85	62	80	59	117	94	85	42	51	8	40	5.1
DN 50 451A250SR	9.74	124	98	69	96	68	135	106	98	49	57	8	50	7.6

* Quantity

Subject to change without prior notice.

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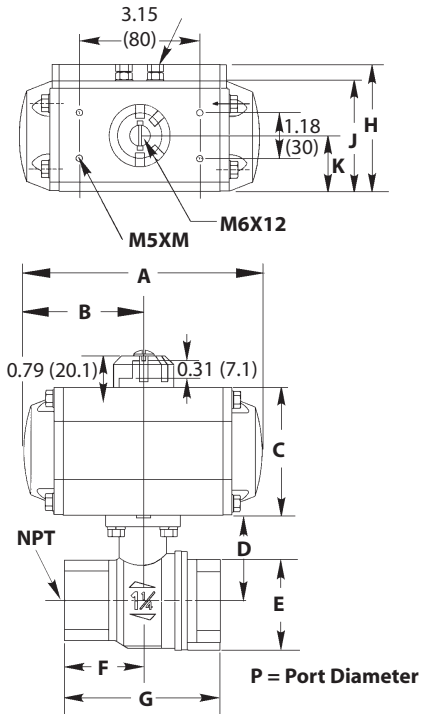
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www.metso.com/automation

Dimensions are inches (mm)

1/8 NPT NAMUR Mount Air Supply



HOW TO ORDER

Automated Valve Series

VPVL Actuator Model

Size	Double-Acting		Spring-Return	
1/2" (DN 15)	451A	050DA	451A	050SR
3/4" (DN 20)	451A	050DA	451A	050SR
1" (DN 25)	451A	050DA	451A	100SR
1-1/4" (DN 32)	451A	100DA	451A	200SR
1-1/2" (DN 40)	451A	100DA	451A	200SR
2" (DN 50)	451A	200DA	451A	250SR

