

### Features

- Full Port Lead Free Brass Diverter Valve
- Spring return or double acting actuators
- Ball Valve direct mounted to actuator with ISO5211 standard
- Ball and stem 316 stainless steel
- Actuators designed for minimum 1 million cycles
- Quarter turn rack and pinion design
- Highly visible valve position indicator
- Actuator factory lubricated for normal lifetime
- Energized PTFE ball seats for lower torque and longer life
- Triple PTFE/FKM stem seal packing design
- Valve Certified NSF372 & NSF61 for potable/drinking water

### Applications

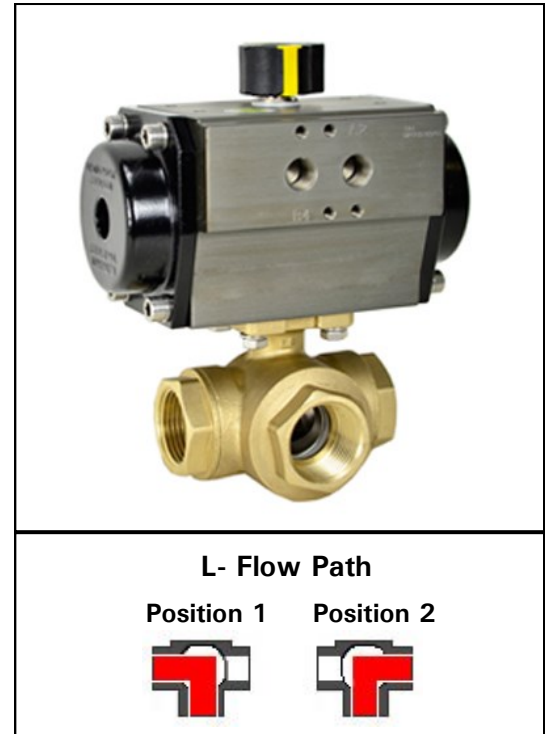
Air actuated brass 3-way diverter or selector ball valves are typically used to control the flow of water, air, oil, vacuum and other media compatible with the materials of construction. Ideal where lead free and NSF approved construction are required for potable drinking water as well as general industrial applications. Unique four ball seat design allows for full pressure at any port. Cycle times approximately 1 to 1.5 seconds per 90° rotation. Valve can be mounted in any orientation. Suitable for steam service up to 50 PSI with optional high temperature mounting kit and vacuum service to 29"Hg.

### Operation

Double acting actuators use pilot air pressure to open (position 2) and air pressure to close (position 1) the ball valve (4-way pilot required). Spring return actuators use air pressure to open and springs to close the ball valve—failsafe design (3-way pilot required). Position 1 is the standard or normal position. Actuator will work with filtered dry or lubricated compressed air. Air supply pilot pressure should be between 80 and 120 PSI. Easy to read visual valve position indicator.

### Construction

<b>Valve Body</b>	Lead Free Brass C69300
<b>Ball/Stem</b>	316 stainless steel
<b>Ball Seats</b>	(4) PTFE (Teflon) energized with FKM (Viton)
<b>Stem Seals</b>	PTFE (Teflon) with dual FKM (Viton) seals
<b>Actuator Seals</b>	NBR (Buna-N)
<b>Actuator Body</b>	Anodized aluminium, polyester powder coated end covers
<b>Position Indicator</b>	Glass filled Polyamide
<b>Fasteners</b>	Stainless Steel



### Description

Heavy duty quarter turn air actuators designed for a minimum 1 million operations. Three port valve available in spring return or double acting. Full port lead free brass ball valve direct mounts to the actuator. Unique 316 stainless steel ball and stem rather than your typical plated brass. Ball seats are energized PTFE for low torque and extended life. Leak free triple stem seal design. Standard Namur/ISO mounting pads for easy mounting of optional solenoid valve or limit switches.

### Approvals

#### Actuators

- CE mark
- ISO5211/ DIN3337 valve mounting
- Namur VDI/VDE 3845 accessory mounting

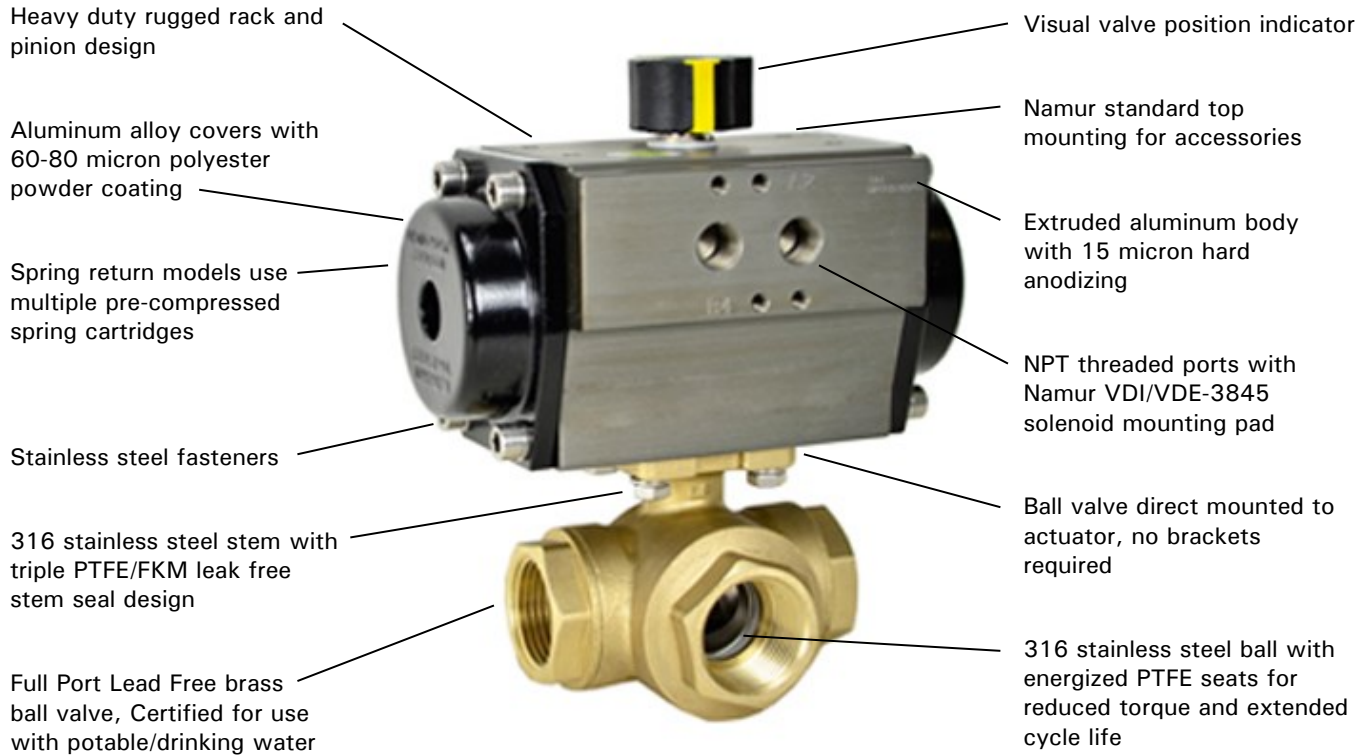


#### Valves

- IAPMO RT certified to:
  - NSF/ANSI 372 - 2011 Drinking Water
  - NSF/ANSI 61 - 2015
  - Weighted average lead content <= 0.25%
- Meets design MSS-SP-110



### Construction Features



### Pressure-Temperature

Valve Pressure Rating: 400 PSI (27 Bar)\* non-shock, 1-4" to 2" NPT sizes  
29" Hg vacuum, 50 PSI steam with high temp. kit

Air Pilot Pressure Range: 80-120 PSI (5.5-8.3 Bar)

Media Working Temperature: 0 to 180° F (-18 to 82° C)  
Media temperatures up to 300° F (149° C)  
with optional high temp. mounting kit

Ball Valve Temperature Rating: 0 to 344° F (-18 to 173° C)

Actuator Temperature Rating: 0 to 180° F (-18 to 82° C)

\*See P/T chart

### Optional Accessories

- Direct Mount Solenoid Valves - pilot valve for electrically operating the ball valve
- Valve Monitor/Limit Switches - limit switches used to confirm valve position
- High Temperature Mounting Kit - increases allowable media temperature

### Pressure/Temperature Chart (PSI/°F)

P/T Chart						
PSI	400	400	400	400	375	275
°F	0	50	100	176	200	266

### Pressure/Temperature Chart (Bar/°C)

P/T Chart						
Bar	27	27	27	27	26	19
°C	-18	10	38	80	93	130

## Specifications (English units)

Stock Number	Pipe Size (NPT)	Orifice Size (inch)	Cv Flow Factor	Pressure Max.(PSI)*	Cycle Time /90° (seconds)	Pilot Air Port (NPT)
<b>3-WAY L-PORT LEAD FREE BRASS BALL VALVE: SPRING RETURN ACTUATOR</b>						
521620	1/4	0.39	3.2	400	1	1/8
521621	3/8	0.39	3.5	400	1	1/8
521622	1/2	0.59	4.5	400	1	1/8
521623	3/4	0.75	10	400	1	1/4
521624	1	1.00	16	400	1	1/4
521625	1-1/4	1.22	31	400	1	1/4
521626	1-1/2	1.50	49	400	1	1/4
521627	2	2.00	82	400	1.5	1/4
<b>3-WAY L-PORT LEAD FREE BRASS BALL VALVE: DOUBLE ACTING ACTUATOR</b>						
521602	1/4	0.39	3.2	400	1	1/8
521603	3/8	0.39	3.5	400	1	1/8
521604	1/2	0.59	4.5	400	1	1/8
521606	3/4	0.75	10	400	1	1/4
521608	1	1.00	16	400	1	1/4
521610	1-1/4	1.22	31	400	1	1/4
521612	1-1/2	1.50	49	400	1	1/4
521616	2	2.00	82	400	1.5	1/4

Cv is the GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

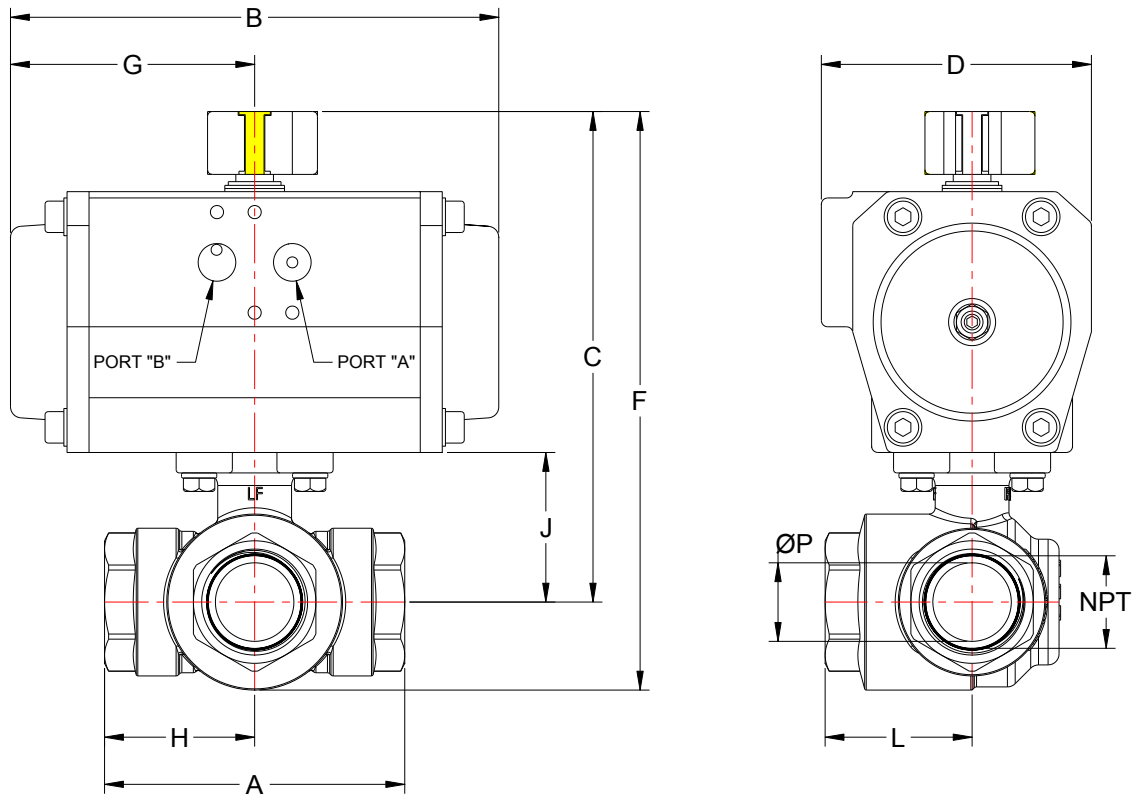
\* Pressure at 176° F (reduced pressure for higher temperatures—see P/T chart)

## Specifications (Metric units)

Stock Number	Pipe Size (NPT)	Orifice Size (mm)	Kv Flow Factor	Pressure Max.(Bar)*	Cycle Time /90° (seconds)	Pilot Air Port (NPT)
<b>3-WAY L-PORT LEAD FREE BRASS BALL VALVE: SPRING RETURN ACTUATOR</b>						
521620	1/4	10	2.8	27	1	1/8
521621	3/8	10	3.0	27	1	1/8
521622	1/2	15	3.9	27	1	1/8
521623	3/4	19	8.6	27	1	1/4
521624	1	25	14	27	1	1/4
521625	1-1/4	31	27	27	1	1/4
521626	1-1/2	38	42	27	1	1/4
521627	2	50	70	27	1.5	1/4
<b>3-WAY L-PORT LEAD FREE BRASS BALL VALVE: DOUBLE ACTING ACTUATOR</b>						
521602	1/4	10	2.8	27	1	1/8
521603	3/8	10	3.0	27	1	1/8
521604	1/2	15	3.9	27	1	1/8
521606	3/4	19	8.6	27	1	1/4
521608	1	25	14	27	1	1/4
521610	1-1/4	31	27	27	1	1/4
521612	1-1/2	38	42	27	1	1/4
521616	2	50	70	27	1.5	1/4

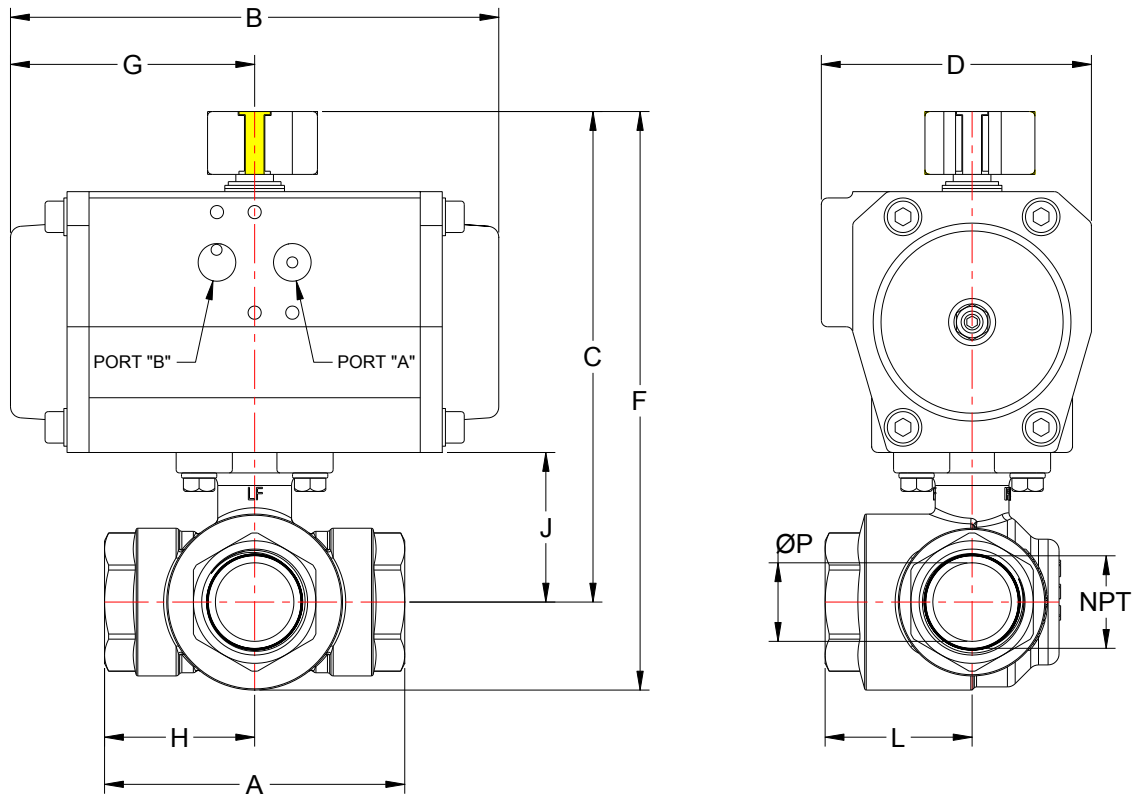
\* Pressure at 80° C (reduced pressure for higher temperatures—see P/T chart)

**Dimensions: Spring Return (inches (mm))**



Pipe Size (NPT)		A	B	C	D	F	G	H	J	L	P	Ports (NPT)	Weight
1/4	inch	2.19	5.47	4.49	2.95	5.04	2.74	1.09	1.04	1.08	0.39	1/8	3.55 lb
	mm	55.6	139	114	75	128	69.5	27.8	26.5	27.5	10	—	1.61 kg
3/8	inch	2.19	5.47	4.49	2.95	5.04	2.74	1.09	1.04	1.08	0.39	1/8	3.50 lb
	mm	55.6	139	114	75	128	69.5	27.8	26.5	27.5	10	—	1.59 kg
1/2	inch	2.87	5.47	4.76	2.95	5.51	2.74	1.44	1.32	1.44	0.59	1/8	4.10 lb
	mm	73	139	121	75	140	69.5	36.5	33.5	36.5	15	—	1.86 kg
3/4	inch	3.27	6.12	5.75	3.39	6.65	3.06	1.63	1.69	1.63	0.75	1/4	6.50 lb
	mm	83	155.5	146	86	169	77.8	41.5	43	41.5	19	—	2.95 kg
1	inch	3.76	8.27	6.61	3.70	7.72	4.13	1.88	1.87	1.84	1.00	1/4	10.30 lb
	mm	95.6	210	168	94	196	105	47.8	47.6	46.8	25	—	4.67 kg
1-1/4	inch	4.21	9.06	7.28	4.09	8.58	4.53	2.11	2.17	2.01	1.22	1/4	14.20 lb
	mm	107	230	185	104	218	115	53.5	55	51	31	—	6.44 kg
1-1/2	inch	4.96	9.06	7.72	4.09	9.25	4.53	2.48	2.58	2.34	1.50	1/4	16.80 lb
	mm	126	230	196	104	235	115	63	65.5	60	38	—	7.62 kg
2	inch	5.87	11.02	8.74	4.72	10.67	5.51	2.93	3.03	2.72	2.00	1/4	24.70 lb
	mm	149	280	222	120	271	140	74.5	77	69	50	—	11.20 kg

**Dimensions: Double Acting (inches (mm))**



Pipe Size (NPT)		A	B	C	D	F	G	H	J	L	P	Ports (NPT)	Weight
1/4	inch	2.19	5.47	4.49	2.95	5.04	2.74	1.09	1.04	1.08	0.39	1/8	3.25 lb
	mm	55.6	139	114	75	128	69.5	27.8	26.5	27.5	10	—	1.47 kg
3/8	inch	2.19	5.47	4.49	2.95	5.04	2.74	1.09	1.04	1.08	0.39	1/8	3.20 lb
	mm	55.6	139	114	75	128	69.5	27.8	26.5	27.5	10	—	1.45 kg
1/2	inch	2.87	5.47	4.76	2.95	5.51	2.74	1.44	1.32	1.44	0.59	1/8	3.80 lb
	mm	73	139	121	75	140	69.5	36.5	33.5	36.5	15	—	1.72 kg
3/4	inch	3.27	6.12	5.75	3.39	6.65	3.06	1.63	1.69	1.63	0.75	1/4	5.90 lb
	mm	83	155.5	146	86	169	77.8	41.5	43	41.5	19	—	2.68 kg
1	inch	3.76	6.12	5.94	3.39	7.05	3.06	1.88	1.87	1.84	1.00	1/4	6.60 lb
	mm	95.6	155.5	151	86	179	77.8	47.8	47.6	46.8	25	—	2.99 kg
1-1/4	inch	4.21	8.27	6.89	3.70	8.19	4.13	2.11	2.17	2.01	1.22	1/4	10.20 lb
	mm	107	210	175	94	208	105	53.5	55	51	31	—	4.63 kg
1-1/2	inch	4.96	8.27	7.32	3.70	8.86	4.13	2.48	2.58	2.34	1.50	1/4	12.80 lb
	mm	126	210	186	94	225	105	63	65.5	60	38	—	5.81 kg
2	inch	5.87	9.06	8.15	4.09	10.08	4.53	2.93	3.03	2.72	2.00	1/4	19.30 lb
	mm	149	230	207	104	256	115	74.5	77	69	50	—	8.75 kg