

Ball Valves

Pressures to 21,000 psi

MAXIMATOR ball valves provide superior quality and performance with a variety of valve styles and process connections. All medium and high pressure connections are supplied with glands and collars.

Ball Valves feature:

- ▶ One-piece, trunnion mounted style stem design eliminates shear failure found in two-piece stem designs.
- ▶ Choice of 3/16", 1/4", 3/8" and 1/2" ball orifices provides minimal pressure drops.
- ▶ Re-torqueable seat glands for longer seat life and dependability.
- ▶ Torlon Ball Seat material offers excellent sealing capabilities.
- ▶ 316 cold worked stainless steel body, and 17-4 PH stem offers excellent corrosion resistance.
- ▶ Ball valves are available in 90° and 180° open to close with a positive stop.
- ▶ Available with Pneumatic or Electric actuators.
- ▶ Available in medium, high and FNPT pressure connections.
- ▶ Full materials traceability.
- ▶ Safety weep holes for all pressure connections and packing area.

MAXPRO offers a complete line of high pressure components to compliment the 2-way and 3-way Ball Valve line.

Note: When selecting multiple items, the pressure rating would be that of the lowest rated component.

Caution: Ball valves are not recommended for small molecular gases (hydrogen, helium).

Maxpro Technologies, Inc.
 7728 Klier Drive South · Fairview Pennsylvania 16415
 Phone: 814-474-9191 · Fax: 814-474-9391
 website: www.maxprotech.com

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MAXIMATOR® US
 MAXPRO Technologies

Printed in the USA

2-Way Ball Valves – ¼" Orifice

Pressures to 21,000 psi

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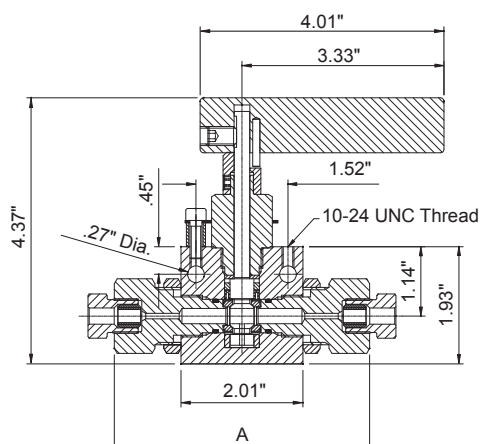
MAXIMATOR 2-Way Ball Valves have ¼" orifices and are capable of safe handling of liquids and gases up to 21,000 psi pressure. Their 90° handle rotation allows for full flow capabilities with minimal pressure drop. Robust one-piece trunnion style stem design eliminates shear failure that is found in a two-piece stem design. Ball seats are made of Torlon material providing excellent sealing capabilities with low handle operating torque. Re-torqueable seat glands provide longer valve life and dependability. Standard valves are supplied with Viton O-Rings rated to 300° F.

Ordering Information

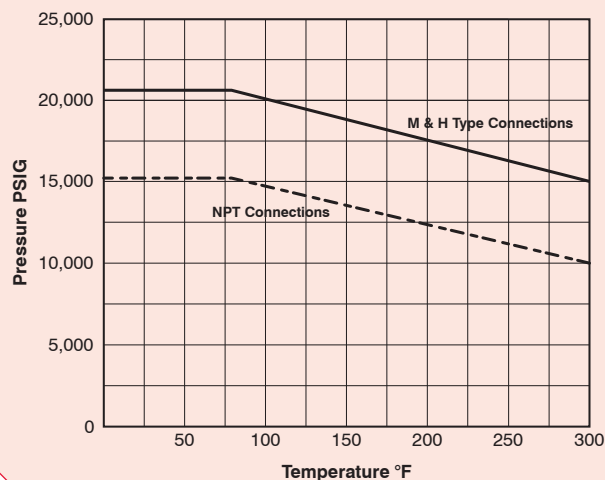
Typical catalog number: **21B244M**

21	B2	4	4M	-
Pressure (x 1000 psi)	Valve Series	Orifice Diameter	Connection Type	Options
15 = 15,200 psi 21 = 21,000 psi	B2 = Ball Valve 2-way	4 = ¼"	See chart below	See Ball Valve Actuators

Manually Operated 2-Way Ball Valve



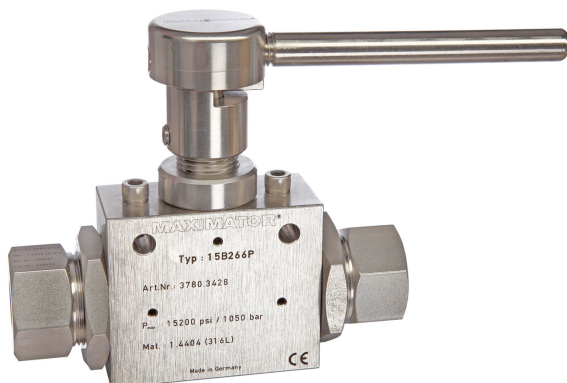
Pressure Temperature Ratings



Catalog Number	Pressure Rating @ RT (psi.)	O.D Tubing Size (in.)	Connection Type	Orifice Size (in.)	Cv	Dimension A (in.)	Valve Panel Hole (in.)	Block Thickness (in.)
21B244M	21,000	¼	4MF	0.109	0.25	4.21	1.03	1.00
21B246M	21,000	⅜	6MF	0.203	0.91	4.21	1.03	1.00
21B249M	21,000	⅝	9MF	0.250	1.51	4.21	1.03	1.00
21B244H	21,000	¼	4HF	0.094	0.2	4.21	1.03	1.00
21B246H	21,000	⅜	6HF	0.125	0.3	4.21	1.03	1.00
21B249H	21,000	⅝	9HF	0.188	0.68	4.84	1.03	1.38
15B242P	15,200	⅜	FNPT	0.250	1.51	4.21	1.03	1.00
15B244P	15,200	¼	FNPT	0.250	1.51	4.21	1.03	1.00
15B246P	15,200	⅜	FNPT	0.250	1.51	4.21	1.03	1.00
15B248P	15,200	½	FNPT	0.250	1.51	4.84	1.03	1.38

Caution: Ball valves are not recommended for small molecular gases (Hydrogen, Helium).
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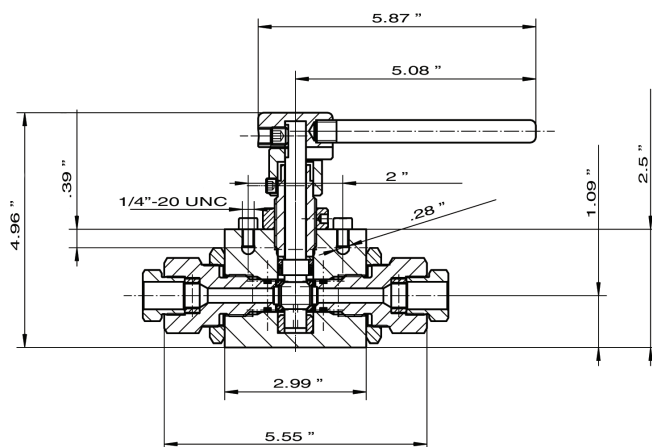
MAXIMATOR 2-Way Ball Valves have 3/8" orifices and are capable of safe handling of liquids and gases up to 21,000 psi pressure. Their 90° handle rotation allows for full flow capabilities with minimal pressure drop. Robust one-piece trunnion style stem design eliminates shear failure that is found in a two-piece stem design. Ball seats are made of Torlon material providing excellent sealing capabilities with low handle operating torque. Re-torqueable seat glands provide longer valve life and dependability. Standard valves are supplied with Viton O-Rings rated to 300° F.

Ordering Information

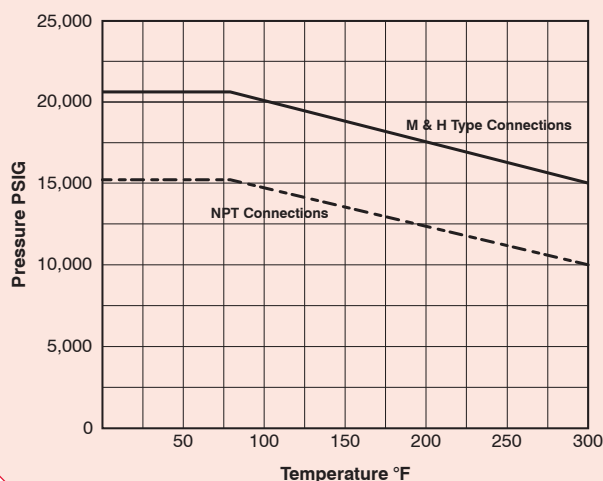
Typical catalog number: **21B269M**

21	B2	6	9M	-
Pressure (x 1000 psi)	Valve Series	Orifice Diameter	Connection Type	Options
15 = 15,200 psi 21 = 21,000 psi	B2 = Ball Valve 2-way	6 = 3/8"	See chart below	See Ball Valve Actuators

Manually Operated 2-Way Ball Valve



Pressure Temperature Ratings



Catalog Number	Pressure Rating @ RT (psi.)	O.D Tubing Size (in.)	Connection Type	Orifice Size (in.)	Cv	Valve Panel Hole (in.)	Block Thickness (in.)
21B269M	21,000	1/16	9M	0.307	1.91	1.38	1.38
21B2612M	21,000	3/4	12M	0.374	3.51	1.38	1.38
15B264P	15,200	1/4	NPT	0.201	3.51	1.38	1.38
15B266P	15,200	3/8	NPT	0.307	3.51	1.38	1.38
15B268P	15,200	1/2	NPT	0.375	3.51	1.38	1.38

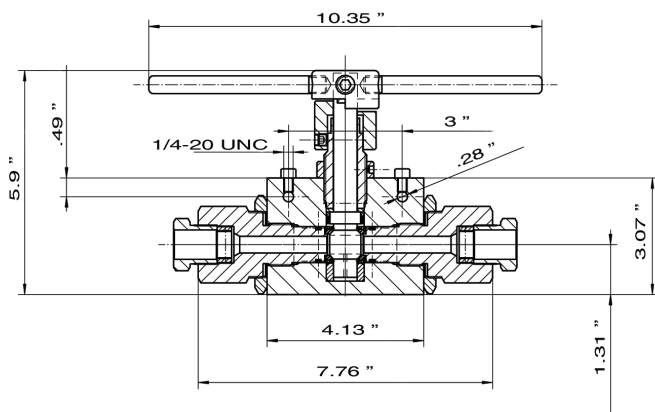
Caution: Ball valves are not recommended for small molecular gases (Hydrogen, Helium).

All dimensions are for reference only and subject to change.

2-Way Ball Valves – ½" Orifice

Pressures to 10,000 psi

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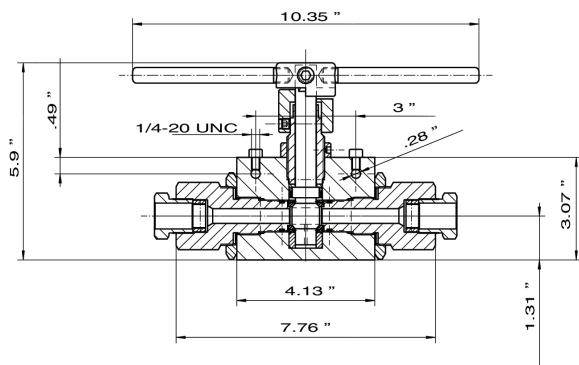
MAXIMATOR 2-Way Ball Valves have ½" orifices and are capable of safe handling of liquids and gases up to 10,000 psi pressure. Their 90° handle rotation allows for full flow capabilities with minimal pressure drop. Robust one-piece trunnion style stem design eliminates shear failure that is found in a two-piece stem design. Ball seats are made of Torlon material providing excellent sealing capabilities with low handle operating torque. Re-torqueable seat glands provide longer valve life and dependability. Standard valves are supplied with Viton O-Rings rated to 300° F.

Ordering Information

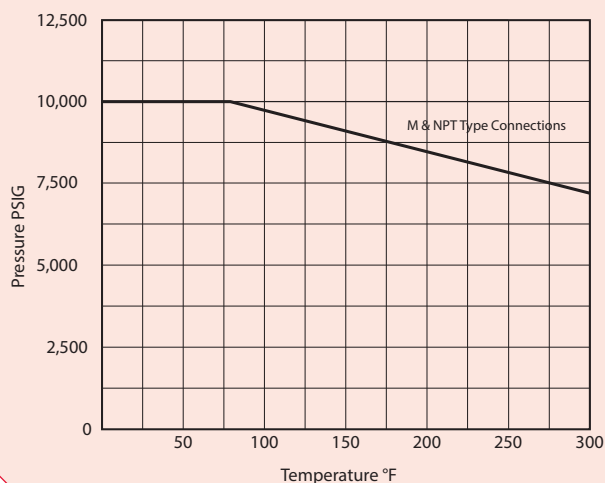
Typical catalog number: **10B2812M**

21	B2	8	12M	-
Pressure (x 1000 psi)	Valve Series	Orifice Diameter	Connection Type	Options
10 = 10,000 psi	B2 = Ball Valve 2-way	8 = ½"	See chart below	See Ball Valve Actuators

Manually Operated 2-Way Ball Valve



Pressure Temperature Ratings



Catalog Number	Pressure Rating @ RT (psi.)	O.D Tubing Size (in.)	Connection Type	Orifice Size (in.)	Cv	Valve Panel Hole (in.)	Block Thickness (in.)
10B2812M	10,000	3/4	12M	0.374	4.4	1.5	1.772
10B2816M	10,000	1	16M	0.500	7.6	1.5	1.772
10B2812P	10,000	3/4	NPT	0.500	7.6	1.5	1.772
10B2816P	10,000	1	NPT	0.500	7.6	1.5	1.772

Caution: Ball valves are not recommended for small molecular gases (Hydrogen, Helium).
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MAXIMATOR 3-Way Ball Valves have 3/16" orifices and are capable of safe handling of liquids and gases up to 21,000 psi pressure. Robust one-piece trunnion style stem design eliminates shear failure that is found in a two-piece stem design. There are two styles in the 3-way design:

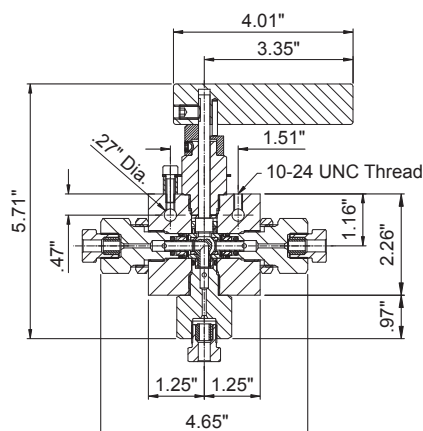
- The 180° rotating Switching Ball Valve is designed to have fluid enter in through the bottom connection and can be switched to either side connection. Also, the valve can be closed in the center "Off" position.
- The 90° rotating Diverting Ball Valve is designed to have fluid enter in through the bottom connection and can be diverted to either side connection. There is no center off position in the diverting design.

Ordering Information

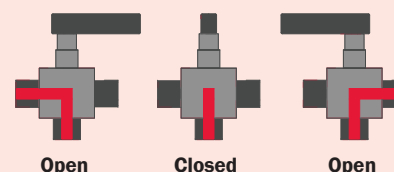
Typical catalog number: **21B3S34M**

21	B3S	3	4M	-
Pressure (x 1000 psi)	Valve Series	Orifice Diameter	Connection Type	Options
15 = 15,200 psi 21 = 21,000 psi	B3S = 180° Switching B3D = 90° Diverting	3 = 3/16"	See chart below	See Ball Valve Actuators

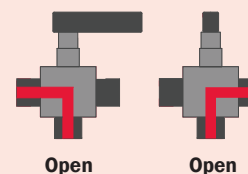
Manual 3-Way Ball Valve



3-Way, 180° Switching Style



3-Way, 90° Diverting Style



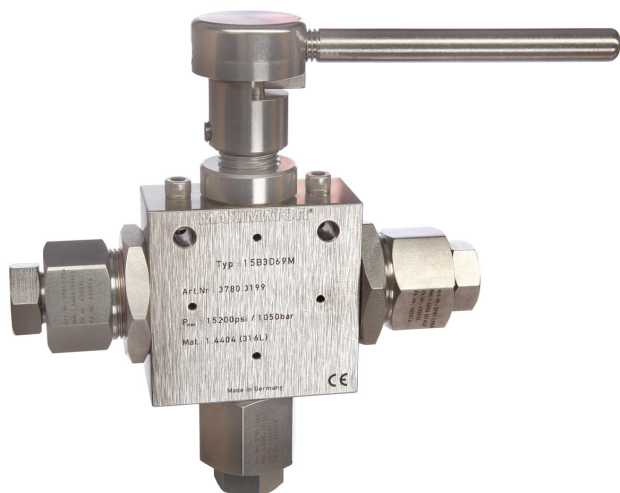
Catalog Number		Pressure Rating @ RT (psi.)*	O.D Tubing Size (in.)	Connection Type	Orifice Size (in.)	Cv	Valve Panel Hole (in.)	Block Thickness (in.)
3-Way 180° Switching	3-Way 90° Diverting							
21B3S34M	21B3D34M	21,000*	1/4	4MF	0.109	0.2	1.03	1.00
21B3S36M	21B3D36M	21,000*	3/8	6MF	0.188	0.5	1.03	1.00
21B3S39M	21B3D39M	21,000*	9/16	9MF	0.188	0.5	1.03	1.00
21B3S34H	21B3D34H	21,000*	1/4	4HF	0.094	0.15	1.03	1.00
21B3S36H	21B3D36H	21,000*	3/8	6HF	0.125	0.3	1.03	1.00
21B3S39H	21B3D39H	21,000*	9/16	9HF	0.188	0.5	1.03	1.00
15B3S32P	15B3D32P	15,200	1/8	FNPT	0.188	0.5	1.03	1.00
15B3S34P	15B3D34P	15,200	1/4	FNPT	0.188	0.5	1.03	1.00
15B3S36P	15B3D36P	15,200	3/8	FNPT	0.188	0.5	1.03	1.00
15B3S38P	15B3D38P	15,200	1/2	FNPT	0.188	0.5	1.03	1.00

* Maximum side connection inlet pressure is 15,000 psig.

3-Way Ball Valves – 3/8" Orifice

Pressures to 15,000 psi

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MAXIMATOR 3-Way Ball Valves have 3/8" orifices and are capable of safe handling of liquids and gases up to 15,000 psi pressure. Robust one-piece trunnion style stem design eliminates shear failure that is found in a two-piece stem design. There are two styles in the 3-way design:

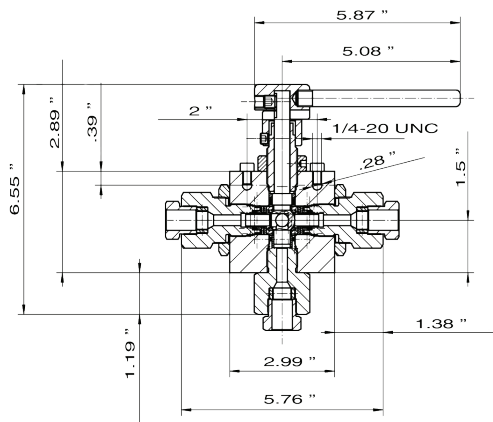
- The 180° rotating Switching Ball Valve is designed to have fluid enter in through the bottom connection and can be switched to either side connection. Also, the valve can be closed in the center "Off" position.
- The 90° rotating Diverting Ball Valve is designed to have fluid enter in through the bottom connection and can be diverted to either side connection. There is no center off position in the diverting design.

Ordering Information

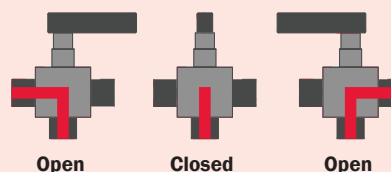
Typical catalog number: **21B3S69M**

21	B3S	6	9M	-
Pressure (x 1000 psi)	Valve Series	Orifice Diameter	Connection Type	Options
15 = 15,200 psi	B3S = 180° Switching B3D = 90° Diverting	6 = 3/8"	See chart below	See Ball Valve Actuators

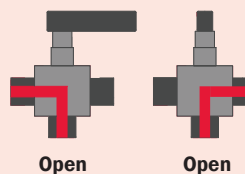
Manual 3-Way Ball Valve



3-Way, 180° Switching Style



3-Way, 90° Diverting Style



Catalog Number		Pressure Rating @ RT (psi.)*	O.D Tubing Size (in.)	Connection Type	Orifice Size (in.)	Cv	Valve Panel Hole (in.)	Block Thickness (in.)
3-Way 180° Switching	3-Way 90° Diverting							
15B3S69M	15B3D69M	15,200	9/16	9M	0.307	1.65	1.38	1.38
15B3S612M	15B3D612M	15,200	3/4	12M	0.322	2.1	1.38	1.38
15B3S64P	15B3D64P	15,200	1/4	NPT	0.250	2.1	1.38	1.38
15B3S66P	15B3D66P	15,200	3/8	NPT	0.250	2.1	1.38	1.38
15B3S68P	15B3D68P	15,200	1/2	NPT	0.250	2.1	1.38	1.38

Caution: Ball valves are not recommended for small molecular gases (Hydrogen, Helium).

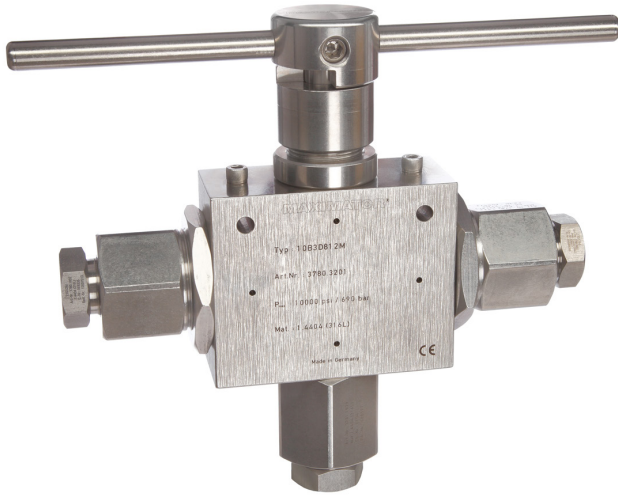
All dimensions are for reference only and subject to change.

See page 2 for pressure/temperature rating chart.
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3-Way Ball Valves – ½” Orifice

Pressures to 10,000 psi



MAXIMATOR 3-Way Ball Valves have ½” orifices and are capable of safe handling of liquids and gases up to 10,000 psi pressure. Robust one-piece trunnion style stem design eliminates shear failure that is found in a two-piece stem design. There are two styles in the 3-way design:

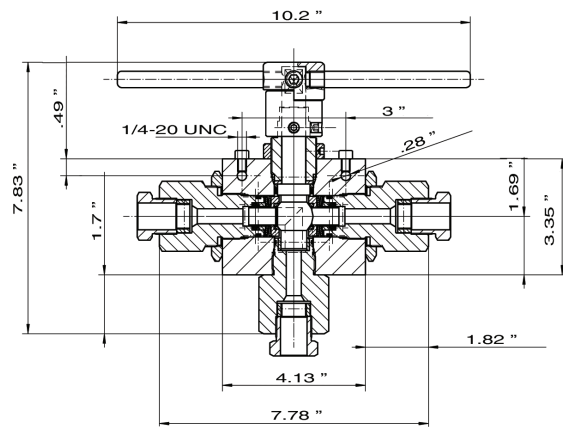
- The 180° rotating Switching Ball Valve is designed to have fluid enter in through the bottom connection and can be switched to either side connection. Also, the valve can be closed in the center “Off” position.
- The 90° rotating Diverting Ball Valve is designed to have fluid enter in through the bottom connection and can be diverted to either side connection. There is no center off position in the diverting design.

Ordering Information

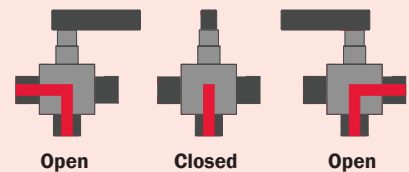
Typical catalog number: **10B3S812M**

10	B3S	8	12M	-
Pressure (x 1000 psi)	Valve Series	Orifice Diameter	Connection Type	Options
10 = 10,000 psi	B3S = 180° Switching B3D = 90° Diverting	8 = ½"	See chart below	See Ball Valve Actuators

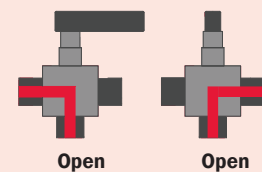
Manual 3-Way Ball Valve



3-Way, 180° Switching Style



3-Way, 90° Diverting Style



Catalog Number		Pressure Rating @ RT (psi.)*	O.D Tubing Size (in.)	Connection Type	Orifice Size (in.)	Cv	Valve Panel Hole (in.)	Block Thickness (in.)
3-Way 180° Switching	3-Way 90° Diverting							
10B3S812M	10B3D812M	10,000	3/4	12M	0.437	3.9	1.77	1.77
10B3S816M	10B3D816M	10,000	1	16M	0.494	4.4	1.77	1.77
10B3S812P	10B3D812P	10,000	3/4	NPT	0.494	4.4	1.77	1.77
10B3S816P	10B3D816P	10,000	1	NPT	0.494	4.4	1.77	1.77

Caution: Ball valves are not recommended for small molecular gases (Hydrogen, Helium).
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Ball Valve Actuators

Pneumatic Actuators - 1/4" Two Way, 3/16" Three Way

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Pneumatic Actuator Features

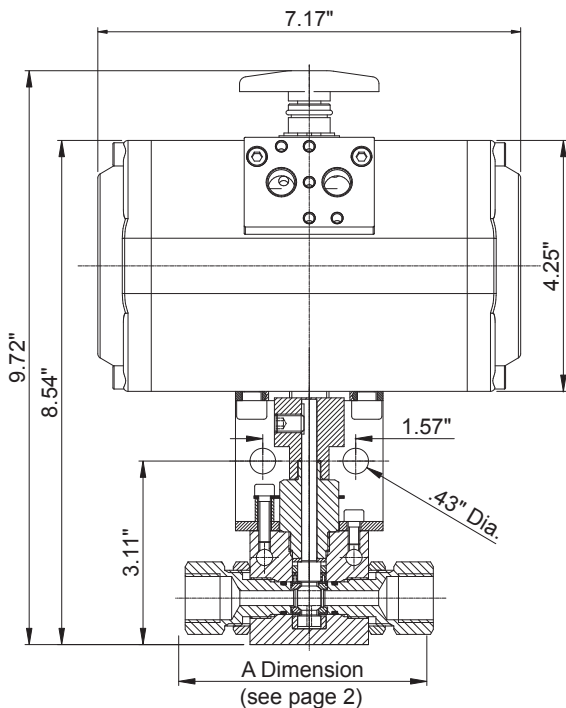
- ▶ Pneumatic actuators are designed to be used with 2-way & 3-way style ball valves for remote operation.
- ▶ Two styles available:
 - Double acting: (air to open / air to close)
 - Single acting: (air to open / spring to close)
- ▶ Optional limit switches with visual indication available.
- ▶ Actuators are anodized aluminum, which provides good corrosion resistance. Stainless steel material is available upon request.
- ▶ Maximum operating air pressure is 145 psi.
- ▶ Inlet air supply connection is 1/4" BSPP
- ▶ Actuator operating temperature: -4 °F to 203 °F.
- ▶ Minimal required air pressure is 80 psi.
- ▶ Opening & closing time is less than one second.
- ▶ Standard Namur Solenoid Interface

Ordering Information

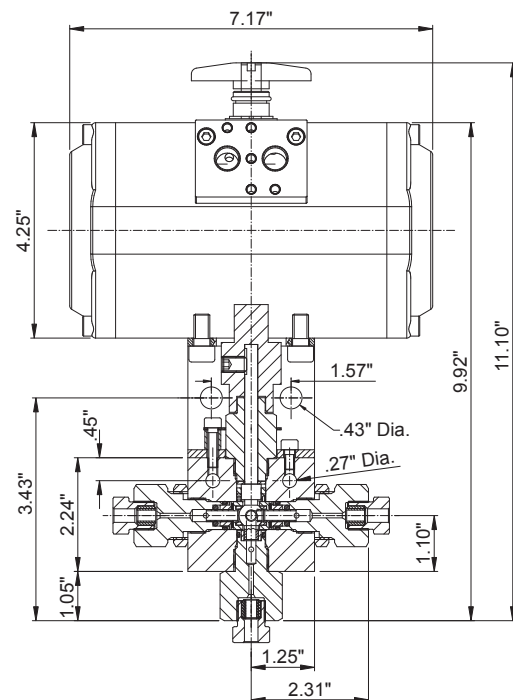
Simply add suffix to the manual ball valve catalog number:

- **DA** (Double Acting Air Actuators)
- **SA** (Single Acting Air Actuators)

Air Operated 2-Way Ball Valve



Air Operated 3-Way Ball Valve, 90° Diverter Style



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Pneumatic Actuator Features

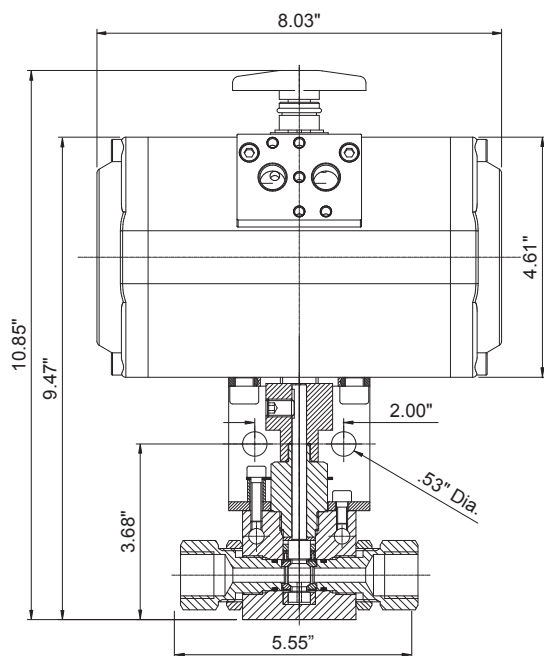
- ▶ Pneumatic actuators are designed to be used with 2-way & 3-way style ball valves for remote operation.
- ▶ Two styles available:
 - Double acting: (air to open / air to close)
 - Single acting: (air to open / spring to close)
- ▶ Optional limit switches with visual indication available.
- ▶ Actuators are anodized aluminum, which provides good corrosion resistance. Stainless steel material is available upon request.
- ▶ Maximum operating air pressure is 145 psi.
- ▶ Inlet air supply connection is $\frac{1}{4}$ " BSPP
- ▶ Actuator operating temperature: -4°F to 203°F .
- ▶ Minimal required air pressure is 80 psi.
- ▶ Opening & closing time is less than one second.
- ▶ Standard Namur Solenoid Interface

Ordering Information

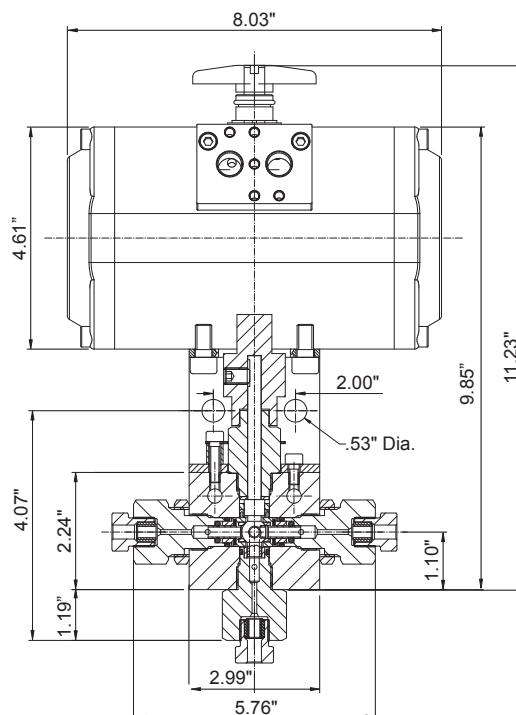
Simply add suffix to the manual ball valve catalog number:

- **DA** (Double Acting Air Actuators)
- **SA** (Single Acting Air Actuators)

Air Operated 2-Way Ball Valve



Air Operated 3-Way Ball Valve, 90° Diverter Style



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Ball Valve Actuators

Pneumatic Actuators - 1/2" Two Way, 1/2" Three Way

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Pneumatic Actuator Features

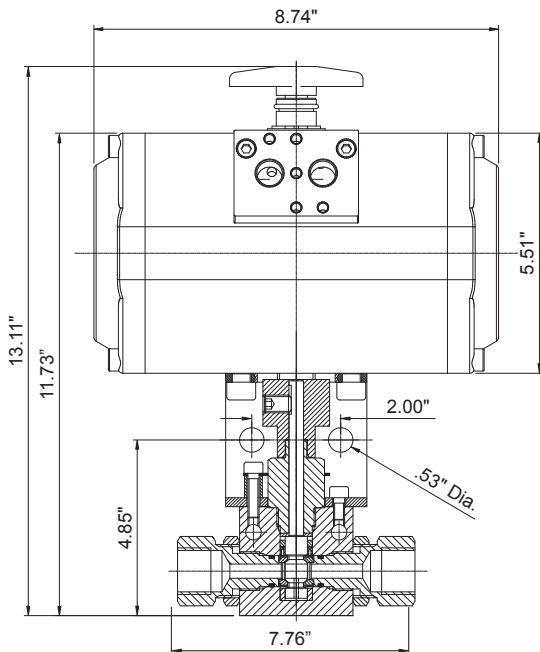
- ▶ Pneumatic actuators are designed to be used with 2-way & 3-way style ball valves for remote operation.
- ▶ Two styles available:
 - Double acting: (air to open / air to close)
 - Single acting: (air to open / spring to close)
- ▶ Optional limit switches with visual indication available.
- ▶ Actuators are anodized aluminum, which provides good corrosion resistance. Stainless steel material is available upon request.
- ▶ Maximum operating air pressure is 145 psi.
- ▶ Inlet air supply connection is 1/4" BSPP
- ▶ Actuator operating temperature: -4 °F to 203 °F.
- ▶ Minimal required air pressure is 80 psi.
- ▶ Opening & closing time is less than one second.
- ▶ Standard Namur Solenoid Interface

Ordering Information

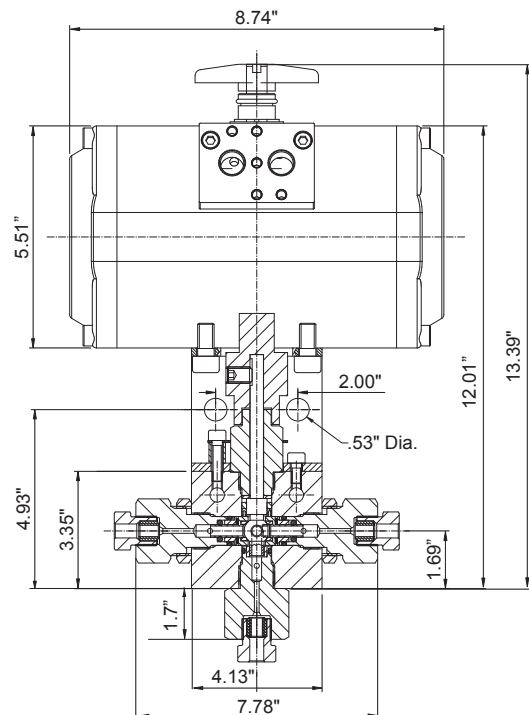
Simply add suffix to the manual ball valve catalog number:

- **DA** (Double Acting Air Actuators)
- **SA** (Single Acting Air Actuators)

Air Operated 2-Way Ball Valve



Air Operated 3-Way Ball Valve, 90° Diverter Style



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Electric Actuator Features

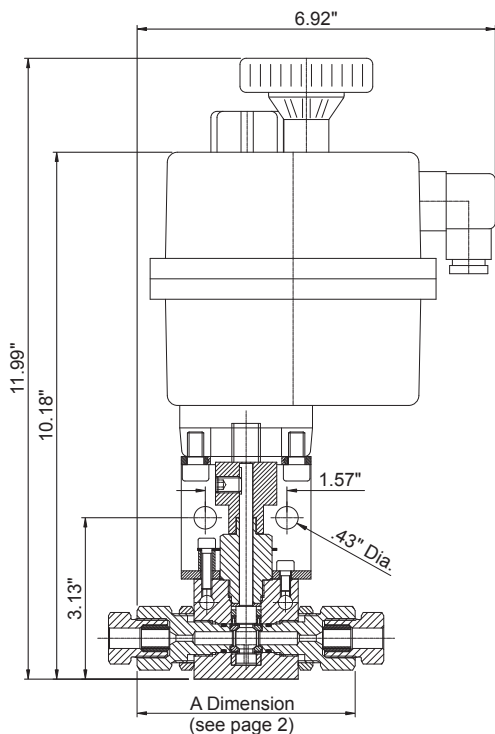
- ▶ Electric actuators are designed to be used with 2-way & 3-way style ball valves for remote operation.
- ▶ Actuators will accept a wide range of single phase input voltages from DC or AC currents.
- ▶ Optional limit switches with visual indication available.
- ▶ Manual override option is standard.
- ▶ Actuators are made with polyamide material, which provides good corrosion resistance.
- ▶ Actuator operating temperature: -0° F to 160° F.
- ▶ Opening & closing time is less than ten seconds with 90° actuators.

Ordering Information

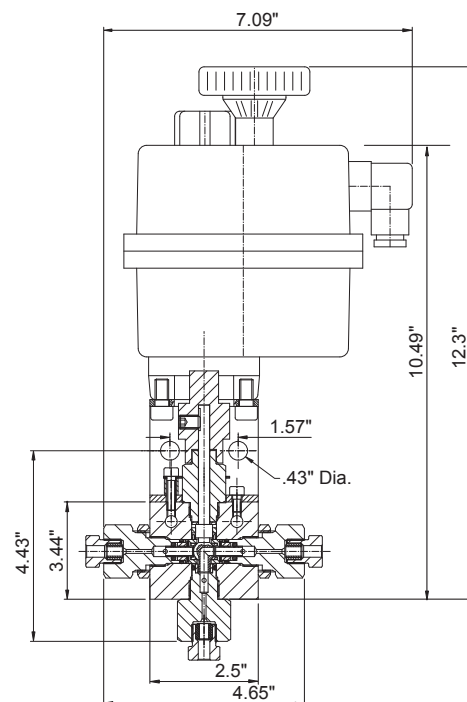
Simply add suffix to the manual ball valve catalog number:

- **EAL** = Electric Actuator, Lower voltage,
(12 Volt AC or DC)
- **EAH** = Electric Actuator, Higher voltage,
(24 - 240 Volts AC or DC)

Electrically Operated 2-Way Ball Valve



Electrically Operated 3-Way Ball Valve



All dimensions are for reference only and are subject to change

Ball Valve Actuators

Electric Actuators - 3/8" Two Way, 3/8" Three Way

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Electric Actuator Features

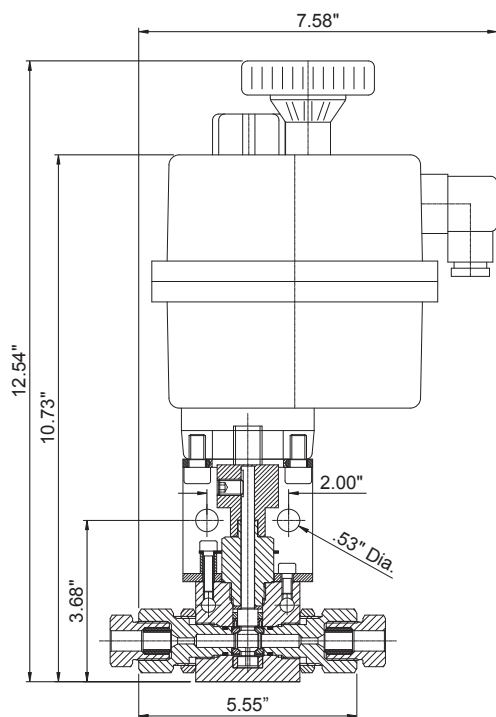
- ▶ Electric actuators are designed to be used with 2-way & 3-way style ball valves for remote operation.
- ▶ Actuators will accept a wide range of single phase input voltages from DC or AC currents.
- ▶ Optional limit switches with visual indication available.
- ▶ Manual override option is standard.
- ▶ Actuators are made with polyamide material, which provides good corrosion resistance.
- ▶ Actuator operating temperature: -0 °F to 160 °F.
- ▶ Opening & closing time is less than ten seconds with 90° actuators.

Ordering Information

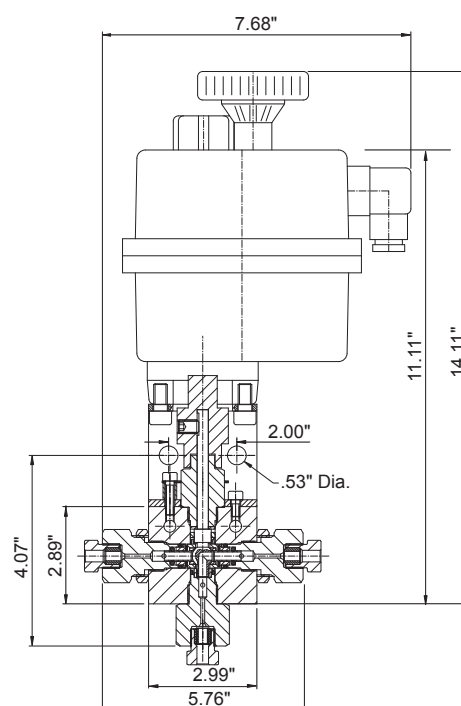
Simply add suffix to the manual ball valve catalog number:

- **EAL** = Electric Actuator, Lower voltage,
(12 Volt AC or DC)
- **EAH** = Electric Actuator, Higher voltage,
(24 - 240 Volts AC or DC)

Electrically Operated 2-Way Ball Valve



Electrically Operated 3-Way Ball Valve



All dimensions for reference only and are subject to change.

Electric Actuator Features

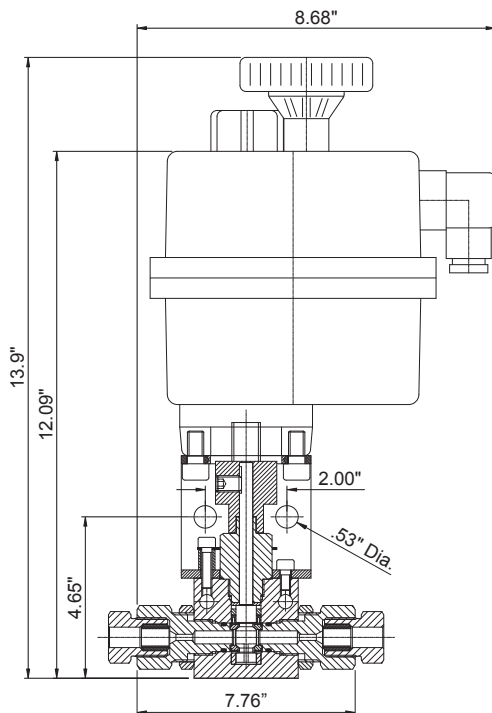
- ▶ Electric actuators are designed to be used with 2-way & 3-way style ball valves for remote operation.
- ▶ Actuators will accept a wide range of single phase input voltages from DC or AC currents.
- ▶ Optional limit switches with visual indication available.
- ▶ Manual override option is standard.
- ▶ Actuators are made with polyamide material, which provides good corrosion resistance.
- ▶ Actuator operating temperature: -0° F to 160° F.
- ▶ Opening & closing time is less than ten seconds with 90° actuators.

Ordering Information

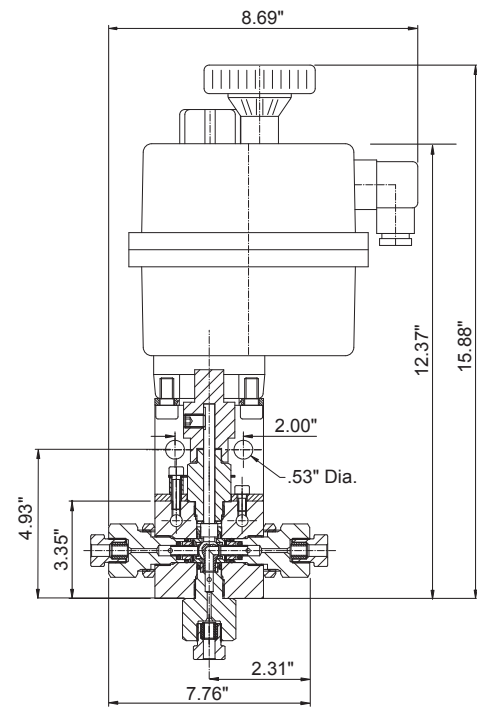
Simply add suffix to the manual ball valve catalog number:

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Electrically Operated 2-Way Ball Valve



Electrically Operated 3-Way Ball Valve



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