

Ball Valves

Actuators

Pneumatic Actuators *Electric Actuators*

Parker Autoclave Engineers ball valves can be supplied with either pneumatic or electric operators for automated or remote operation.

Pneumatic and electric operators can be supplied with a variety of features and options. Operators are sized for each valve series to provide reliable and trouble free operation. Listed below are the operator features and available options.

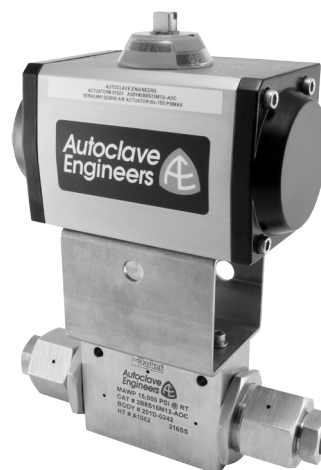
Ball Valve Actuator Features/Options:

Pneumatic Operators

- Used for remote and automatic operation
- Air-to-open/spring-to-close
- Air-to-close/spring-to-open
- Air-to-open and close (double acting)
- Limit switches or limit switches with visual indicators available
- High temperature option available.
- Stainless steel housing for corrosive applications available.
- Optional solenoid valve available
- Standard anodized aluminum housing
- Optional epoxy coated housing available

Electric Operators

- Interface with control systems for automated operation and monitoring
- 120 & 220 VAC, 50/60 Hz standard
- 24VDC
- Explosion proof available
- CE mark available

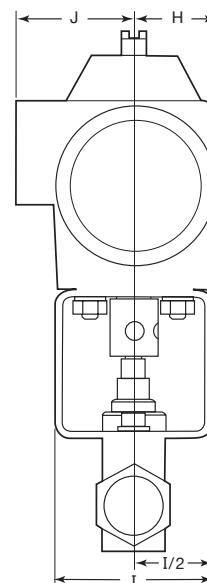
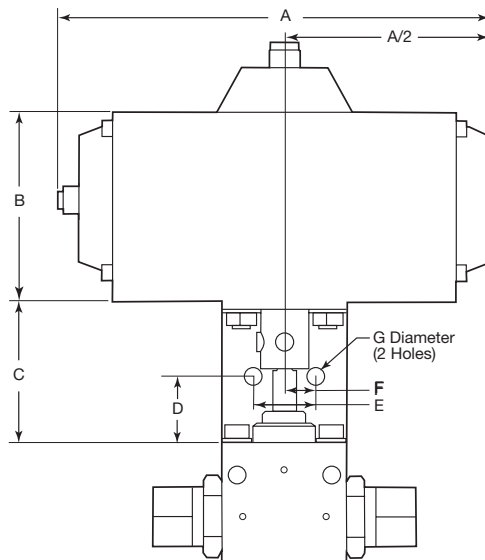


Pneumatic Operated Ball Valves

Add the suffix **-AO** or **-AC** to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)										MINIMUM REQUIRED
											AIR PRESSURE
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	
2B4-AO/AC	6.85 (173.99)	3.20 (81.28)	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	1.30 (33.02)	2.50 (63.50)	1.88 (47.75)	80 psi (5.5 bar)
2B6-AO/AC	7.28 (184.91)	3.86 (98.04)	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.63)	1.59 (40.39)	3.00 (76.20)	2.10 (53.34)	80 psi (5.5 bar)
2B8-AO/AC	9.38 (238.25)	4.62 (117.35)	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	2.00 (50.80)	3.00 (76.20)	2.48 (62.99)	80 psi (5.5 bar)
2B12-AO/AC	17.30 (439.42)	8.00 (203.20)	5.00 (127.00)	2.50 (63.50)	3.25 (82.55)	1.63 (41.40)	0.53 (13.46)	3.54 (89.92)	5.00 (127.00)	3.57 (90.68)	80 psi (5.5 bar)
2B16-AO/AC	17.30 (439.42)	8.00 (203.20)	5.00 (127.00)	2.50 (63.50)	3.25 (82.55)	1.63 (41.40)	0.53 (13.46)	3.54 (89.92)	5.00 (127.00)	3.57 (90.68)	80 psi (5.5 bar)
3BD3-AO/AC	6.85 (173.99)	3.20 (81.28)	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	1.30 (33.02)	2.50 (63.50)	1.88 (47.75)	80 psi (5.5 bar)
3BD6-AO/AC	7.28 (184.91)	3.86 (98.04)	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.63)	1.59 (40.39)	3.00 (76.20)	2.10 (53.34)	80 psi (5.5 bar)
3BD8-AO/AC	9.38 (238.25)	4.62 (117.35)	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	2.00 (50.80)	3.00 (76.20)	2.48 (62.99)	80 psi (5.5 bar)

- NOTE:
- Maximum allowable air pressure is 150 psi (10.34 bar)
 - 1/4" NPT female air connector
 - AO: Air to open/spring to close
 - AC: Air to close/spring to open
 - Actuators operating temperature: -10°F to 176°F (-23°C to 80°C)
 - High temperature actuator option available, consult factory
 - Stainless steel housing actuator models available, consult factory
 - Actuators available with limit switches and visual indicators.
 - Corrosion resistant anodized aluminum housing.
 - Epoxy coated housing available.
 - Solenoids available, direct or nipple mount.



Ball Valves - Actuators

Pneumatic Operated Ball Valves

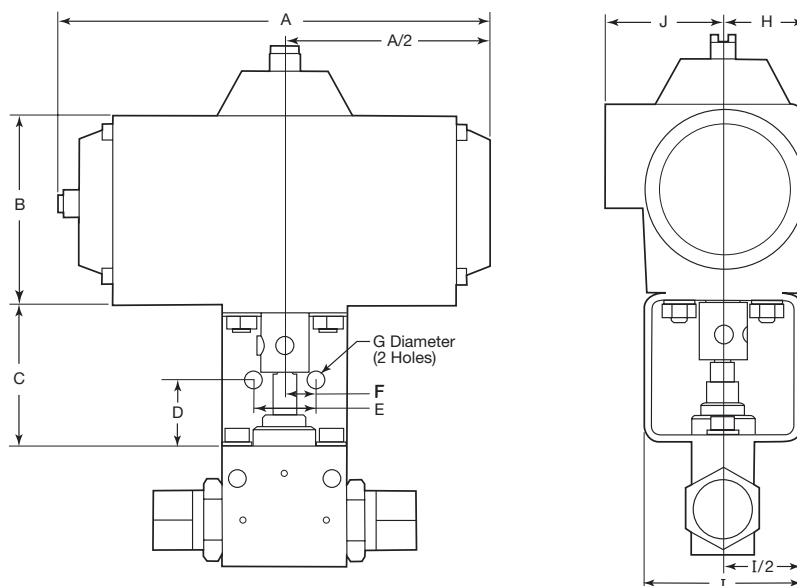
Add the suffix **-AOC** to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)										MINIMUM REQUIRED
											AIR PRESSURE
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	
2B4-AOC	6.85 (173.99)	3.20 (81.28)	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	1.30 (33.02)	2.50 (63.50)	1.88 (47.75)	80 psi (5.5 bar)
2B6-AOC	6.85 (173.99)	3.20 (81.28)	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.63)	1.30 (33.02)	3.00 (76.20)	1.88 (47.75)	80 psi (5.5 bar)
2B8-AOC	7.28 (184.91)	3.86 (98.04)	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	1.59 (40.39)	3.00 (76.20)	2.10 (53.34)	80 psi (5.5 bar)
2B12-AOC	11.82 (300.23)	6.10 (154.94)	5.00 (127.00)	2.50 (63.50)	3.25 (82.55)	1.63 (41.40)	0.53 (13.46)	2.55 (64.77)	5.00 (127.00)	2.55 (64.77)	80 psi (5.5 bar)
2B16-AOC	13.98 (355.09)	6.56 (166.62)	5.00 (127.00)	2.50 (63.50)	3.25 (82.55)	1.63 (41.40)	0.53 (13.46)	2.86 (72.64)	5.00 (127.00)	2.95 (74.93)	80 psi (5.5 bar)
3B3-AOC	9.50 (241.30)	3.59 (91.19)	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	1.37 (34.80)	2.50 (63.50)	1.98 (50.29)	80 psi (5.5 bar)
3B6-AOC	9.50 (241.30)	3.59 (91.19)	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.63)	1.36 (34.54)	3.00 (76.20)	1.99 (50.55)	80 psi (5.5 bar)
3B8-AOC	10.21 (259.33)	4.47 (113.54)	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	1.67 (42.42)	3.00 (76.20)	2.10 (53.34)	80 psi (5.5 bar)
3BD3-AOC	6.85 (173.99)	3.20 (81.28)	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	1.30 (33.02)	2.50 (63.50)	1.88 (47.75)	80 psi (5.51 bar)
3BD6-AOC	6.85 (173.99)	3.20 (81.28)	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.63)	1.30 (33.02)	3.00 (76.20)	1.88 (47.75)	80 psi (5.5 bar)
3BD8-AOC	7.28 (184.91)	3.86 (98.04)	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	1.59 (40.39)	3.00 (76.20)	2.10 (53.34)	80 psi (5.5 bar)

NOTE:

- Maximum allowable air pressure is 150 psi (10.34 bar)
- 1/4" NPT female air connector
- AOC: Air to open/Air to close (double acting)
- Actuators operating temperature: -10°F to 176°F (-23°C to 80°C)
- High temperature actuator option available, consult factory

- Stainless steel housing actuator models available, consult factory
- Actuators available with limit switches and visual indicators.
- Corrosion resistant anodized aluminum housing.
- Epoxy coated housing available.
- Solenoids available, direct or nipple mount.



Electric Operated Ball Valves

Add the suffix **-E01**, **-E02** or **-E03** to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)						VOLTAGE	
	"A"	"B"	"C"	"D"	"E"	"F"		
2B4-E01	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	2.50 (63.50)	120 VAC	Figure 1
2B4-E02							240 VAC	
2B4-E03							24 VDC	
2B6-E01	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.64)	3.00 (76.20)	120 VAC	
2B6-E02							240 VAC	
2B6-E03							24 VDC	
3B3-E01	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	2.50 (63.50)	120 VAC	
3B3-E02							240 VAC	
3B6-E01	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.64)	3.00 (76.20)	120 VAC	
3B6-E02							240 VAC	
3BD3-E01	2.50 (63.50)	1.25 (31.75)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	2.50 (63.50)	120 VAC	
3BD3-E02							240 VAC	
3BD3-E03							24 VDC	
3BD6-E01	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.64)	3.00 (76.20)	120 VAC	
3BD6-E02							240 VAC	
3BD6-E03							24 VDC	

NOTE:

- 1/2" NPT female conduit connection
- Manual Override
- Powder coated aluminum housing
- CE & CSA approved

- 120 & 240 Volt are 50/60 Hz, for other voltages consult factory
- Actuator operating temperature: 0°F to 160°F (-17°C to 71°C)
- For other options consult factory

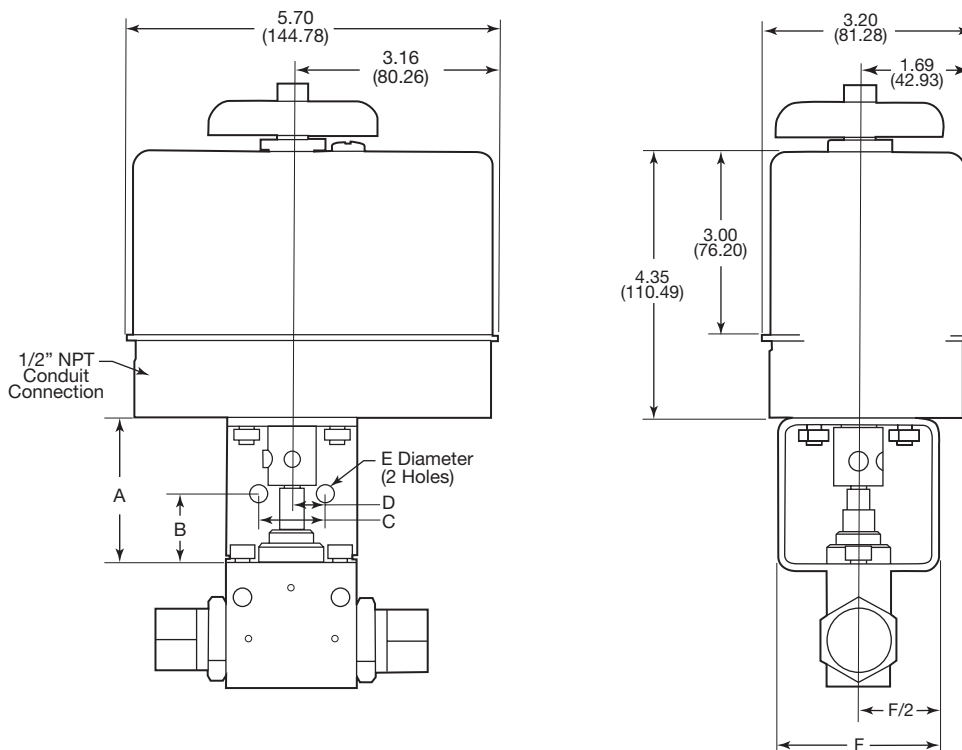


Figure 1

Ball Valves - Actuators

Electric Operated Ball Valves

Add the suffix -E01, -E02 or -E03 to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)						VOLTAGE	
	"A"	"B"	"C"	"D"	"E"	"F"		
2B8-E01	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	3.00 (76.20)	120 VAC	Figure 2
2B8-E02							240 VAC	
2B8-E03							24 VDC	
3B8-E01	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	3.00 (76.20)	120 VAC	
3B8-E02							240 VAC	
3BD8-E01	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.53 (13.46)	3.00 (76.20)	120 VAC	
3BD8-E02							240 VAC	
3BD8-E03							24 VDC	

- NOTE:
- E01: Electric 120 VAC
 - E02: Electric 240 VAC
 - E03: Electric 24 VDC
 - For other options consult factory
 - Actuator operating temperature: 0°F to 160°F (-17°C to 71°C)
 - Powder coated aluminum housing
 - CE & CSA approved for NEMA 4 & 4X
 - For other options consult factory
 - Manual Override
 - 1/2" NPT female conduit connection

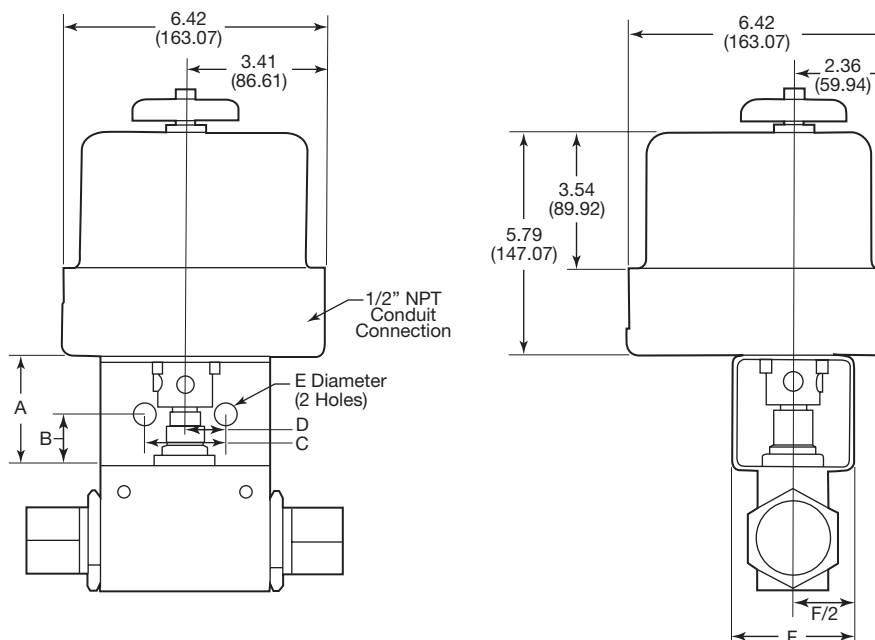


Figure 2

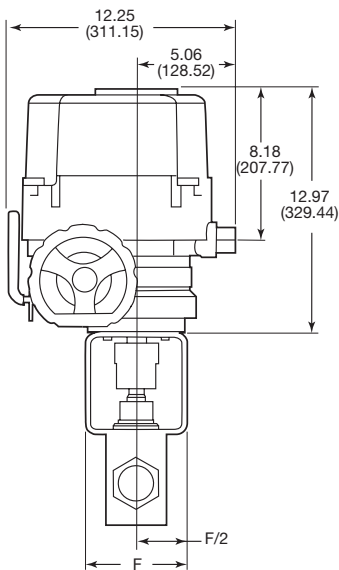
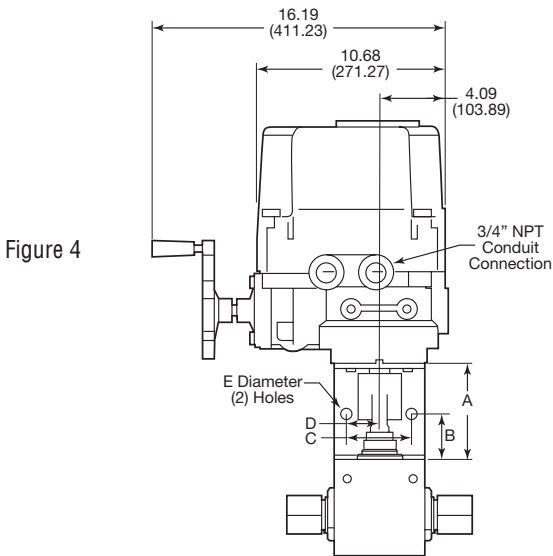
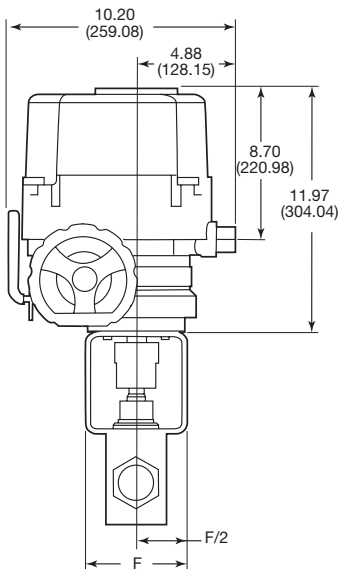
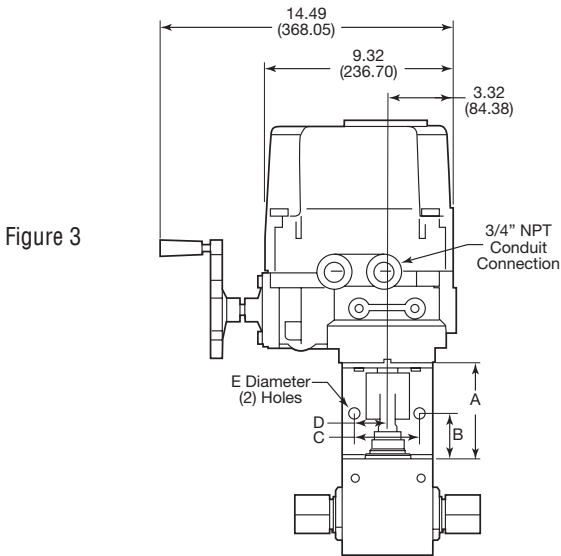
Electric Operated Ball Valves

Add the suffix **-E01**, **-E02** to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)						VOLTAGE	
	"A"	"B"	"C"	"D"	"E"	"F"		
2B12-E01	5.00	2.50	3.25	1.63	0.53	5.00	120 VAC	Figure 3
2B12-E02	(127.00)	(63.50)	(82.55)	(41.40)	(13.46)	(127.00)	240 VAC	
2B16-E01	6.00	3.00	3.25	1.63	0.53	6.00	120 VAC	Figure 4
2B16-E02	(152.40)	(76.20)	(82.55)	(41.40)	(13.46)	(152.40)	240 VAC	

- NOTE:

 - E01: Electric 120 VAC
 - E02: Electric 240 VAC
 - For other options consult factory
 - Actuator operating temperature: -4°F to 158°F (20°C to 70°C)
 - Powder coated aluminum housing
- 3/4" NPT female conduit connection
 - CE & CSA approved for NEMA 4 and 4X
 - Manual Override
 - Weatherproof enclosure, IP67, Type 4, 4X, 6



Electric Explosion Proof Operated Ball Valves

Add the suffix **-E01X**, **-E02X** or **-E03X** to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)						VOLTAGE	
	"A"	"B"	"C"	"D"	"E"	"F"		
2B4-E01X	3.00 (76.20)	1.50 (38.10)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	3.00 (76.20)	120 VAC	Figure 1
2B4-E02X							240 VAC	
2B4-E03X							24 VDC	
2B6-E01X	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.64)	3.00 (76.20)	120 VAC	
2B6-E02X							240 VAC	
2B6-E03X							24 VDC	
3BD3-E01X	3.00 (76.20)	1.50 (38.10)	1.00 (25.40)	0.50 (12.70)	0.28 (7.11)	3.00 (76.20)	120 VAC	
3BD3-E02X							240 VAC	
3BD3-E03X							24 VDC	
3BD6-E01X	3.00 (76.20)	1.50 (38.10)	1.50 (38.10)	0.75 (19.05)	0.34 (8.64)	3.00 (76.20)	120 VAC	
3BD6-E02X							240 VAC	
3BD6-E03X							24 VDC	

- NOTE:
- 3/4" NPT female conduit connection
 - Manual Override
 - Powder coated aluminum housing
 - CE & CSA approved
 - Explosion-Proof enclosure II 2 G, E Ex d IIB T4, IP67

- 120 & 240 Volt are 50/60 Hz, for other voltages consult factory
- Actuator operating temperature: -4°F to 158°F (-20°C to 70°C)
- For other options consult factory
- Designed to comply with NEMA 7 Explosion Proof
- Watertight enclosure (IP68 10M 72HR)

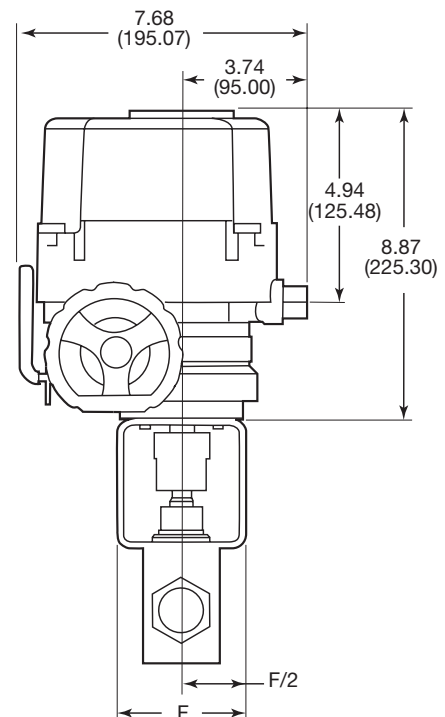
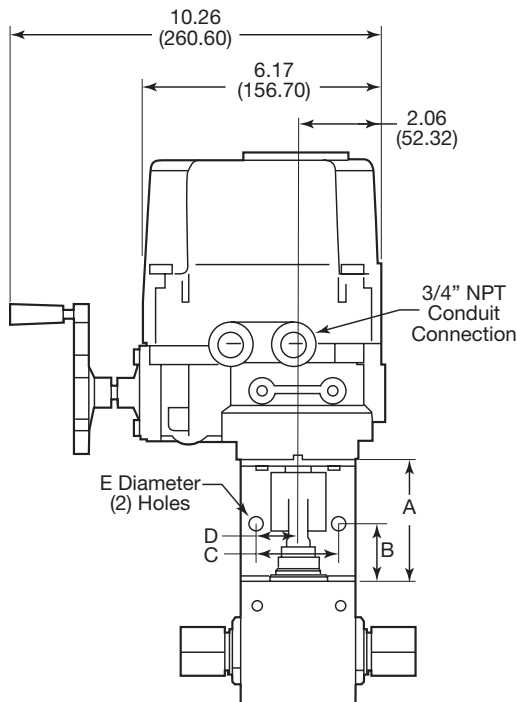


Figure 1

Electric Explosion Proof Operated Ball Valves

Add the suffix **-E01X**, **-E02X** or **-E03X** to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)						VOLTAGE	
	"A"	"B"	"C"	"D"	"E"	"F"		
2B8-E01X	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.56 (14.22)	3.00 (76.20)	120 VAC	Figure 2
2B8-E02X							240 VAC	
2B8-E03X							24 VDC	
3BD8-E01X	3.00 (76.20)	1.50 (38.10)	2.00 (50.80)	1.00 (25.40)	0.56 (14.22)	3.00 (76.20)	120 VAC	
3BD8-E02X							240 VAC	
3BD8-E03X							24 VDC	

- NOTE:
- 3/4" NPT female conduit connection
 - Manual Override
 - Powder coated aluminum housing
 - CE & CSA approved
 - Explosion-Proof enclosure II 2 G, E Ex d IIB T4, IP67
 - 120 & 240 Volt are 50/60 Hz, for other voltages consult factory
 - Actuator operating temperature: -4°F to 158°F (-20°C to 70°C)
 - For other options consult factory
 - Designed to comply with NEMA 7 Explosion Proof
 - Watertight enclosure (IP68 10M 72HR)

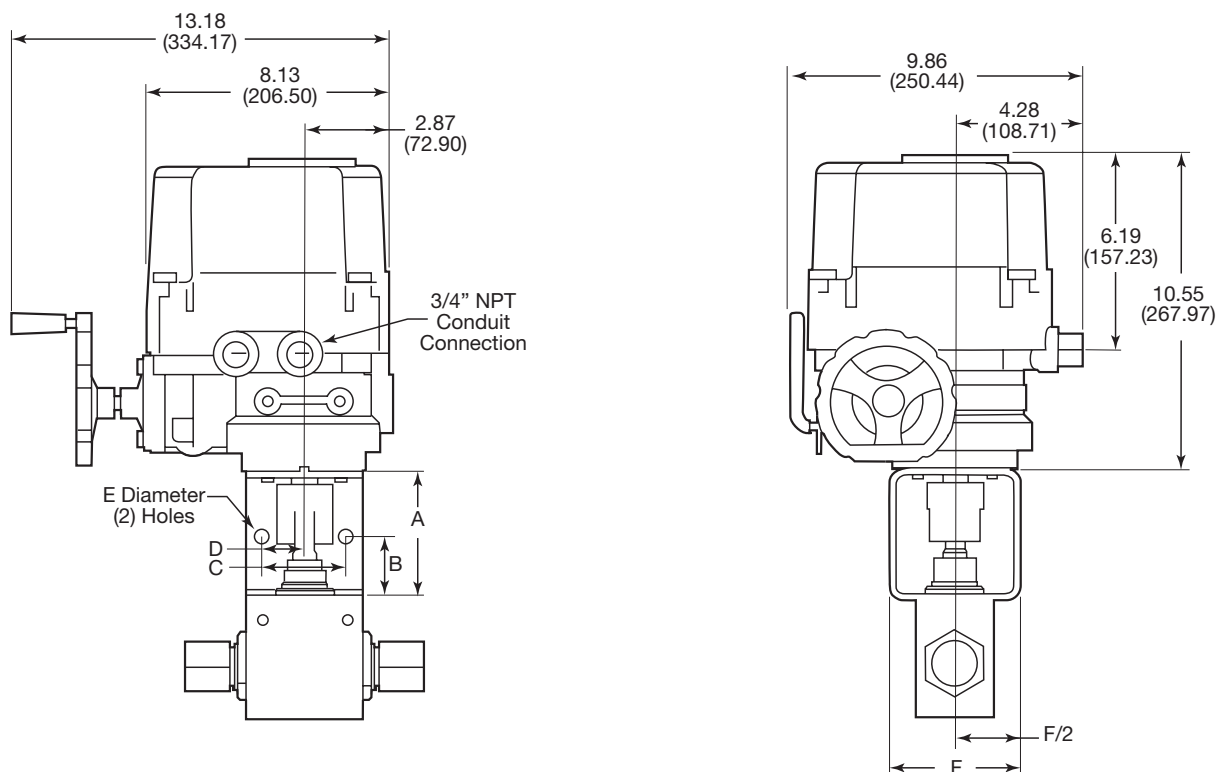


Figure 2

Electric Explosion Proof Operated Ball Valves

Add the suffix **-E01X**, **-E02X** to the appropriate valve catalog number for a complete valve assembly

VALVE SERIES	DIMENSION DATA - Inches (mm)						VOLTAGE	
	"A"	"B"	"C"	"D"	"E"	"F"		
2B12-E01X	5.00	2.50	3.25	1.63	0.53	5.00	120 VAC	Figure 3
2B12-E02X	(127.00)	(63.50)	(82.55)	(41.40)	(13.46)	(127.00)	240 VAC	
2B16-E01X	6.00	3.00	3.25	1.63	0.53	6.00	120 VAC	Figure 4
2B16-E02X	(152.40)	(76.20)	(82.55)	(41.40)	(13.46)	(152.40)	240 VAC	

- NOTE:
- E01: Electric 120 VAC
 - E02: Electric 240 VAC
 - For other options consult factory
 - Actuator operating temperature: -4°F to 158°F (20°C to 70°C)
 - Powder coated aluminum housing
 - Explosion-Proof enclosure II 2 G, E Ex d IIB, T4, IP67

- 3/4" NPT female conduit connection
- CE & CSA approved for NEMA 4 and 4X
- Manual Override
- Designed to comply with NEMA 7 Explosion Proof
- Watertight enclosure (IP68 10M 72HR)

Figure 3

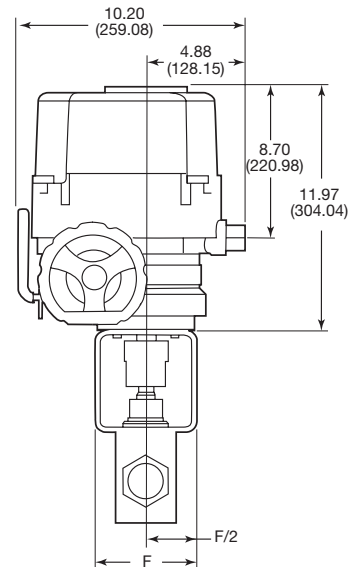
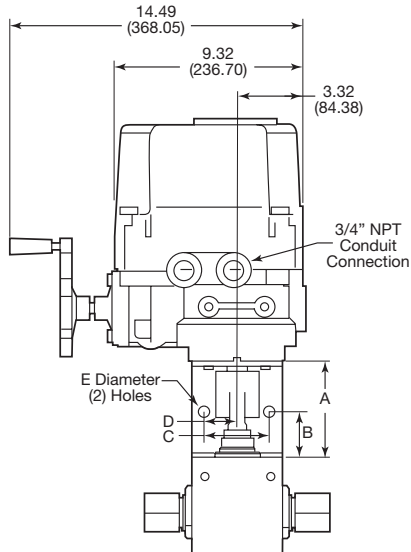
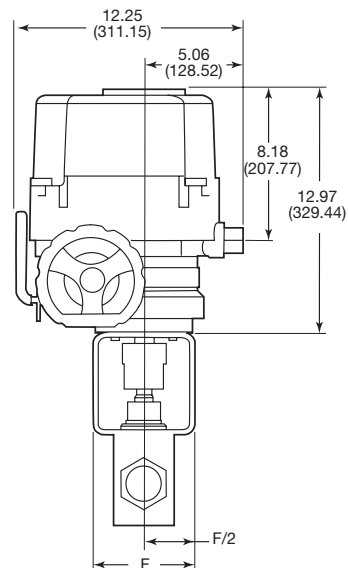
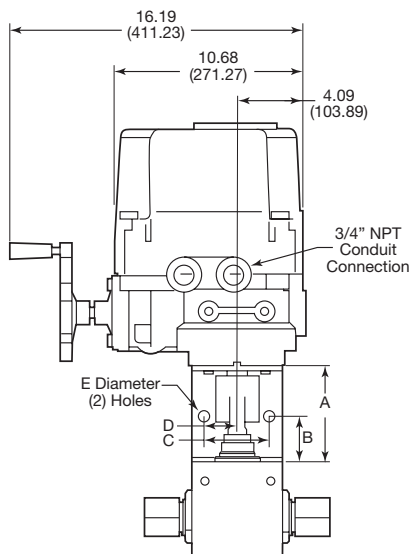


Figure 4



WARNING

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Caution! Do not mix or interchange parts or tubing with those of other manufacturers. Doing so is unsafe and will void warranty.

Caution! Parker Autoclave Engineers Valves, Fittings and Tools are not designed to work with common commercial instrument tubing and will only work with tubing built to Parker Autoclave Engineers AES Specifications. Failure to do so will void warranty.

ISO-9001 Certified