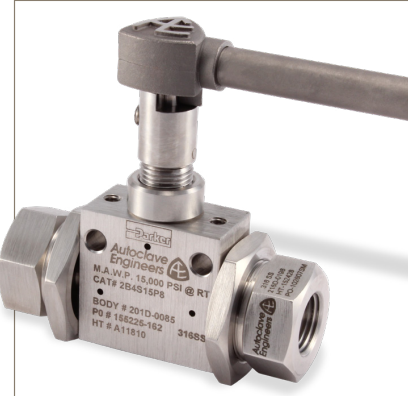




## 2 Way Quarter Turn Ball Type 1/4" to 1" Bore

Pressures to 20,000 psi (1380 bar)

2B4, 2B6, 2B8, 2B12, 2B16 Series

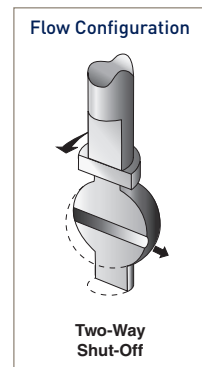


### 2 Way Ball Valve Features:

- One-piece, trunnion style, micro-finished ball-stem design eliminates shear failure and reduces side loading found in two-piece designs.
- Re-torqueable seat glands for longer seat life.
- PEEK™ seats offer excellent resistance to chemicals, heat, and wear/abrasion.
- Full-port, bi-directional, straight-through flow path minimizes pressure drop.
- Low friction, pressure assisted, graphite filled PTFE stem seal increases cycle life and reduces operating torque.
- Quarter turn (90° actuation) from open to close with positive stop.
- FKM Fluorocarbon (Viton®) O-rings are standard, 0° to 400°F (-18° to 204°C)
- Optional seals available for temperatures to 500°F (260°C) maximum.
- Wide selection of tube and pipe end fittings available.
- 24VDC, 120 & 220VAC Electric and pneumatic actuator options.

### 2 Way Ball Valve Applications:

- Laboratories
- Test Stands
- Control Panels
- Pilot Plants
- Chemical/Petrochemical
- Oil & Gas Production





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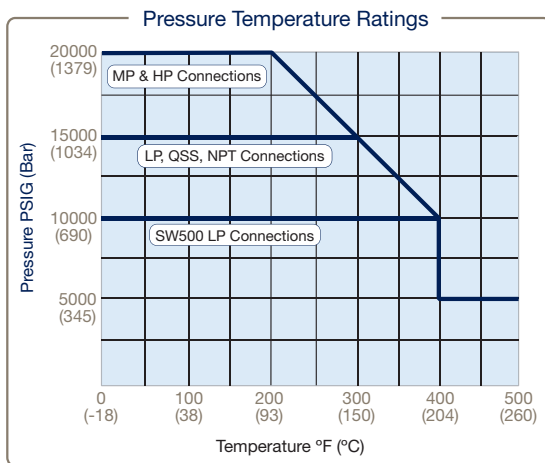
## 2 Way Series: 1/4" (6.35mm) Orifice - Pressures to 20,000 psi (1379 bar)



Connection Type	MAWP** at Room Temperature	Minimum Orifice Inches (mm)	Rated Cv*
SW250 (1/4" LP)	15,000 psi (1034 bar)	0.129 (3.28)	0.27
SW375 (3/8" LP)	15,000 psi (1034 bar)	0.250 (6.35)	1.51
SW500 (1/2" LP)	10,000 psi (690 bar)	0.250 (6.35)	1.51
SF250CX20 (1/4" MP)	20,000 psi (1379 bar)	0.109 (2.77)	0.17
SF375CX20 (3/8" MP)	20,000 psi (1379 bar)	0.203 (5.16)	0.94
SF562CX20 (9/16" MP)	20,000 psi (1379 bar)	0.250 (6.35)	1.51
F250C (1/4" HP)	20,000 psi (1379 bar)	0.094 (2.39)	0.12
F375C (3/8" HP)	20,000 psi (1379 bar)	0.125 (3.17)	0.25
F562C (9/16" HP)	20,000 psi (1379 bar)	0.188 (4.77)	0.68
1/4" FNPT	15,000 psi (1034 bar)	0.250 (6.35)	1.51
3/8" FNPT	15,000 psi (1034 bar)	0.250 (6.35)	1.51
1/2" FNPT	15,000 psi (1034 bar)	0.250 (6.35)	1.51
QS250 (1/4" QSS)	15,000 psi (1034 bar)	0.109 (2.77)	0.17
QS375 (3/8" QSS)	15,000 psi (1034 bar)	0.250 (6.35)	1.51

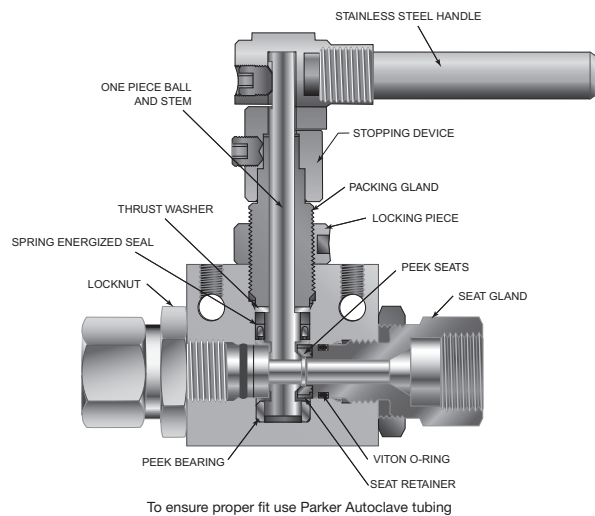
To determine MPa, Multiply Bar by 0.1

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance



**2-Way, 1/4" Bore Ball Valve**

Pressure Ratings are determined by the end connections chosen, see chart.  
Maximum Temperature rating is determined by the o-ring material (see following description)  
NPT connections are limited to 400°F max due to PTFE Sealant.



**NOTE: Critical gas applications such as Hydrogen or Helium is not recommended and should be evaluated on a case by case basis. Consult factory.**

See ball valve actuator section for full description, additional information, and options.



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### Ordering Guide:

2-way ball valves are furnished complete with tube or pipe connections. Standard valve uses FKM o-rings [400°F (204°C) maximum].

Building a Part Number: Example: 2B4S20M9							
Example Part Number:	2B	4	S	20	M9	-	XXX
Ordering Parameters/Options:	Valve Series	Ball Orifice Diameter	Material	Pressure (x 1000 psi)	End Connection		Options
Table Reference: (see below)	A	B	C	D	E		F

A - Valve Series	
2B	2 Way Ball Valve

B - Ball Orifice Diameter	
4	1/4" (6.35mm)

C - Base Material	
S	316 Cold Worked (non-NACE) Stainless Steel
S	2507 Super Duplex Wetted Material (needs "F" Material Code Suffix)
HC**	Hastelloy C
IN625**	Inconel 625 Wetted Material
IN825**	Inconel 825 Wetted Material
Additional Material Available, please contact factory.	

D - Pressure (x 1000 psi)	
10	10,000 psi (690 bar) (1/2" LP connection)
15	15,000 psi (1034 bar) (LP, NPT, and QSS Connections)
20	20,000 psi (1380 bar) (MP & HP Connections)

**Basic Repair Kits:** (see page 11 for kit contents)  
When ordering a basic repair kit add an "R" prefix before product model codes A, B, and C (see above). Example: R2B4S

When ordering with "F-Options" add an "R" prefix before model codes A, B, C and F (see above). Example: R2B4S-EPR Contact your Parker Autoclave Engineers Sales Representative with any questions or refer to the Operation & Maintenance manuals (found online at [www.Autoclave.com](http://www.Autoclave.com)) for proper maintenance procedures.

E - End Connection			
	Connection	MAWP @ RT	Seat Gland Hex
L4	SW250 (1/4" LP)	15,000 psi	1"
L6	SW375 (3/8" LP)	15,000 psi	1"
L8	SW500 (1/2" LP)	10,000 psi	1"
M4	SF250CX20 (1/4" MP)	20,000 psi	1"
M6	SF375CX20 (3/8" MP)	20,000 psi	1"
M9	SF562CX20 (9/16" MP)	20,000 psi	1"
H4	F250C (1/4" HP)	20,000 psi	1"
H6	F375C (3/8" HP)	20,000 psi	1"
H9	F562C (9/16" HP)	20,000 psi	1-3/8"
P4	1/4" FNPT	15,000 psi	1"
P6	3/8" FNPT	15,000 psi	1"
P8	1/2" FNPT	15,000 psi	1-3/8"
Q4	QS250 (1/4" QSS)	15,000 psi	1"
Q6	QS375 (3/8" QSS)	15,000 psi	1"

F - Options (Suffix addition)	
BO	O-ring, Buna-N, 40° to 250°F (121°C)
EPR	O-ring, Ethylene Propylene Rubber, 0° to 250°F (121°C)
HT	O-ring, Perfluoroelastomer (Parofluor®) FFKM 30° to 500°F (260°C)
K	Antivibration Gland Fitting (Cone & Thread Only)
L	Lockout Bracket, (see page 43 for detail)
SOG*	ALL Parts NACE material, hardness Check, NACE Certification
2507**	2507 Super Duplex (20,000 psi max.) used with "S" Material Code
PM	Panel Mount Hardware
For Ball Valve Actuator Options see chart below	

**Notes:**  
316 SS Valve bodies are cold worked and not suitable for use in NACE/ISO 15156 applications. If required, contact factory for options.  
\* SOG suffix also changes CW 316 SS body material to Annealed 316 SS suitable for NACE service. Contact factory for pressure reduction.  
\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance.

### Ball Valve Actuator Suffix options: For Detailed Actuator Information please see pages 34-42

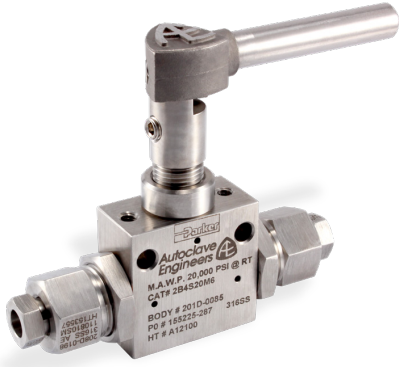
Pneumatic Actuator		Electric Actuator			Actuator Operating Temperature	
		WP	EXP			
<b>AO</b>	Air to Open / Spring to Close	<b>EO1</b>	<b>EO1X</b>	120 volt AC 50/60 Hz	<b>Pneumatic</b>	-10°F to 176°F (-23°C to 80°C)
<b>AC</b>	Air to Close / Spring to Open	<b>EO2</b>	<b>EO2X</b>	220 volt AC 50/60 Hz	<b>Electric</b>	0°F to 160°F (-17°C to 71°C)
<b>AOC</b>	Air to Open and Close (Double Action)	<b>EO3</b>	<b>EO3X</b>	24 VDC		



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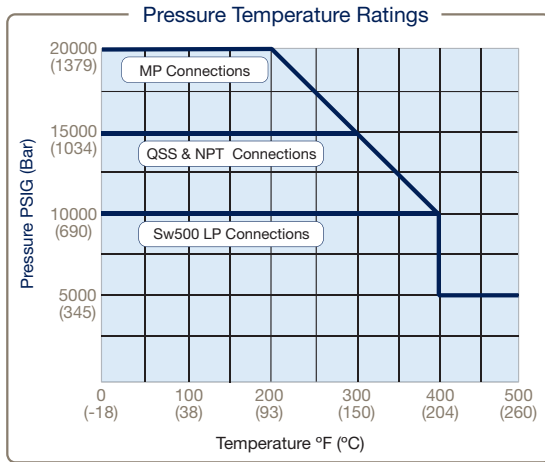
## 2 Way Series: 3/8" (9.52mm) Orifice - Pressures to 20,000 psi (1379 bar)



Connection Type	MAWP** at Room Temperature	Minimum Orifice Inches (mm)	Rated Cv*
SW500 (1/2" LP)	10,000 psi (690 bar)	0.375 (9.52)	5.20
SF375CX20 (3/8" MP)	20,000 psi (1379 bar)	0.203 (5.16)	0.94
SF562CX20 (9/16" MP)	20,000 psi (1379 bar)	0.312 (7.92)	3.24
SF750CX10 (3/4" MP)	20,000 psi (1379 bar)	0.328 (8.33)	3.40
1/4" FNPT	15,000 psi (1034 bar)	0.375 (9.52)	5.20
3/8" FNPT	15,000 psi (1034 bar)	0.375 (9.52)	5.20
1/2" FNPT	15,000 psi (1034 bar)	0.375 (9.52)	5.20
QS375 (3/8" QSS)	15,000 psi (1034 bar)	0.250 (6.35)	1.68
QS562 (9/16" QSS)	15,000 psi (1034 bar)	0.359 (9.12)	4.77

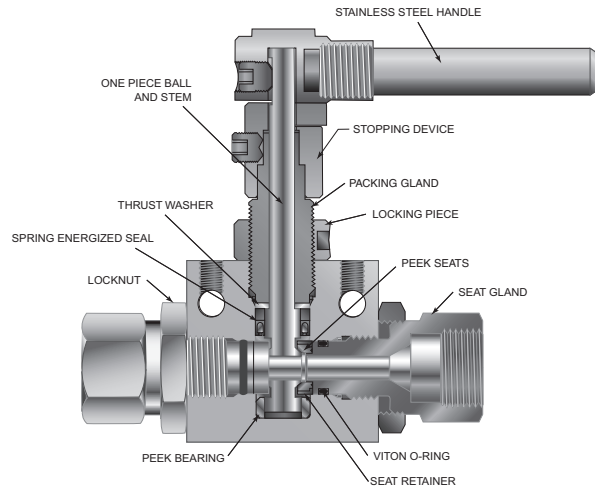
To determine MPa, Multiply Bar by 0.1

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance



### 2 Way 3/8" Bore Ball Valve

Pressure Ratings are determined by the end connections chosen, see chart.  
Maximum Temperature rating is determined by the o-ring material (see following description)  
NPT connections are limited to 400°F max due to PTFE Sealant.



To ensure proper fit use Parker Autoclave tubing

**NOTE: Critical gas applications such as Hydrogen or Helium are not recommended and should be evaluated on a case by case basis. Consult factory.**

See ball valve actuator section for full description, additional information, and options.



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### Ordering Guide:

2-way ball valves are furnished complete with tube or pipe connections. Standard valve uses FKM o-rings [400°F (204°C) maximum].

Building a Part Number: Example: 2B6S20M9						
Example Part Number:	2B	6	S	20	M9	XXX
Ordering Parameters/Options:	Valve Series	Ball Orifice Diameter	Material	Pressure (x 1000 psi)	End Connection	Options
Table Reference: (see below)	A	B	C	D	E	F

A - Valve Series	
2B	2 Way Ball Valve

B - Ball Orifice Diameter	
6	3/8" (9.52mm)

C - Base Material	
S	316 Cold Worked (non-NACE) Stainless Steel
S	2507 Super Duplex Wetted Material (needs "F" Material Code Suffix)
IN625**	Inconel 625 Wetted Material
Optional Material Available, please contact factory.	

D - Pressure (x 1000 psi)	
10	10,000 psi (690 bar) (1/2" LP Connection)
15	15,000 psi (1034 bar) (NPT & QSS Connections)
20	20,000 psi (1080 bar) (MP Connections)
Maximum MAWP based on connection type or material (whichever is lower)	

**Basic Repair Kits:** (see page 11 for kit contents)

When ordering a basic repair kit add an "R" prefix before product model codes A, B, and C (see above). Example: R2B6S

When ordering with "F-Options" add an "R" prefix before model codes A, B, C and F (see above). Example: R2B6S-EPR Contact your Parker Autoclave Engineers Sales Representative with any questions or refer to the Operation & Maintenance manuals (found online at [www.Autoclave.com](http://www.Autoclave.com)) for proper maintenance procedures.

E - End Connection			
	Connection	MAWP @ RT	Seat Gland Hex
L8	SW500 (1/2" LP)	10,000 psi	1-3/8"
M6	SF375CX20 (3/8"MP)	20,000 psi	1-3/8"
M9	SF562CX20 (9/16"MP)	20,000 psi	1-3/8"
M12	SF750CX10 (3/4"MP)	20,000 psi	1-3/8"
P4	1/4" FNPT	15,000 psi	1-3/8"
P6	3/8" FNPT	15,000 psi	1-3/8"
P8	1/2" FNPT	15,000 psi	1-3/8"
Q4	QS250 (1/4"QSS)	15,000 psi	1-3/8"
Q6	QS375 (3/4"QSS)	15,000 psi	1-3/8"

F - Options (Suffix addition)	
BO	O-ring, Buna-N, 40° to 250°F (121°C)
EPR	O-ring, Ethylene Propylene Rubber, 0° to 250°F (121°C)
HT	O-ring, Perfluoroelastomer (Parofluor®) FFKM 30° to 500°F (260°C)
K	Antivibration Gland Fitting (Cone & Thread Only)
L	Lockout Bracket (see page 43 for detail)
SOG*	ALL Parts NACE material, hardness Check, NACE Certification
2507**	2507 Super Duplex (20,000 psi max.) used with "S" Material Code
PM	Panel Mount Hardware
For Ball Valve Actuator Options see chart below	

**Notes:**  
316 SS Valve bodies are cold worked and not suitable for use in NACE/ISO 15156 applications. If required, contact factory for options.  
\* SOG suffix also changes CW 316 SS body material to Annealed 316 SS suitable for NACE service. Contact factory for pressure reduction.  
\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance.

### Ball Valve Actuator Suffix options: For Detailed Actuator Information please see pages 34-42

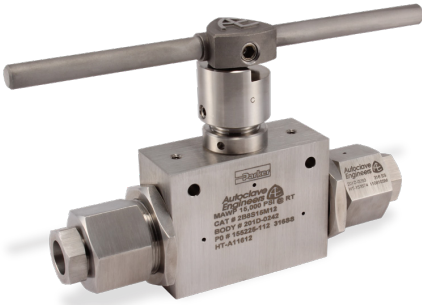
	Pneumatic Actuator	Electric Actuator			Actuator Operating Temperature	
		WP	EXP			
AO	Air to Open / Spring to Close	EO1	EO1X	120 volt AC 50/60 Hz	Pneumatic	-10°F to 176°F (-23°C to 80°C)
AC	Air to Close / Spring to Open	EO2	EO2X	220 volt AC 50/60 Hz	Electric	0°F to 160°F (-17°C to 71°C)
AOC	Air to Open and Close (Double Action)	EO3	EO3X	24 VDC		



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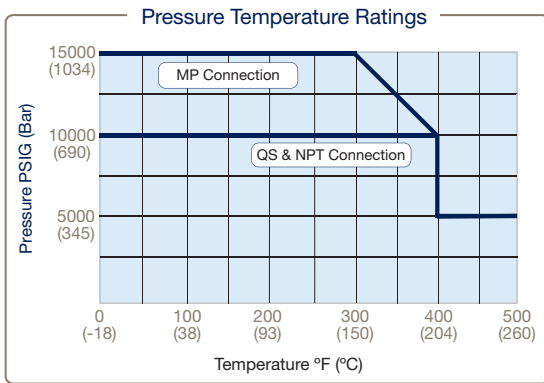
## 2 Way Series: 1/2" (12.7mm) Orifice - Pressures to 15,000 psi (1034 bar)



Connection Type	MAWP** at Room Temperature	Minimum Orifice Inches (mm)	Rated Cv*
SF750CX10 (3/4" MP)	15,000 psi (1034 bar)	0.500 (12.70)	10.20
SF1000CX10 (1" MP)	15,000 psi (1034 bar)	0.500 (12.70)	10.20
3/4" FNPT	10,000 psi (690 bar)	0.500 (12.70)	10.20
1" FNPT	10,000 psi (690 bar)	0.500 (12.70)	10.20
QS750 (3/4" QSS)	15,000 psi (1034 bar)	0.500 (12.70)	10.20
QS1000 (1" QSS)	15,000 psi (1034 bar)	0.500 (12.70)	10.20

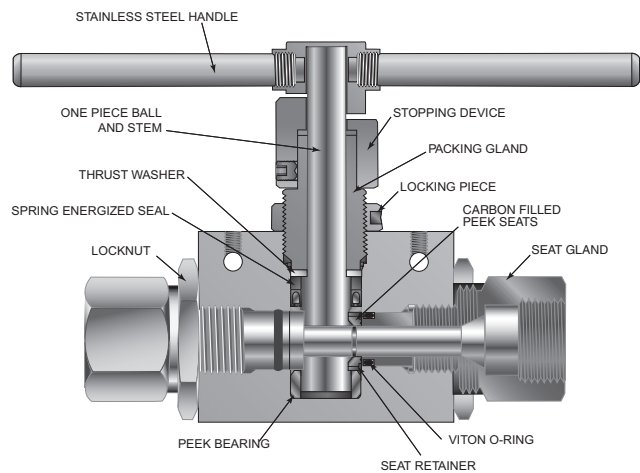
To determine MPa, Multiply Bar by 0.1

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance



2 Way 1/2" Bore Ball Valve

Pressure Ratings are determined by the end connections chosen, see chart.  
Maximum Temperature rating is determined by the o-ring material (see following description)  
NPT connections are limited to 400°F max due to PTFE Sealant.



To ensure proper fit use Parker Autoclave tubing

**NOTE:** Critical gas applications such as Hydrogen or Helium are not recommended and should be evaluated on a case by case basis. Consult factory.



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### Ordering Guide:

For complete information on available end connections and material options, see next page. 2-way ball valves are furnished complete with tube or pipe connections. Standard valve uses FKM o-rings [400°F (204°C) maximum].

#### Building a Part Number: Example: 2B8S15M12

Example Part Number:	<b>2B</b>	<b>8</b>	<b>S</b>	<b>15</b>	<b>M12</b>	-	<b>XXX</b>
Ordering Parameters/Options:	Valve Series	Ball Orifice Diameter	Material	Pressure (x 1000 psi)	End Connection		Options
Table Reference: (see below)	A	B	C	D	E		F

A - Valve Series	
2B	2 Way Ball Valve

B - Ball Orifice Diameter	
8	1/2" (12.7mm)

C - Base Material	
S	316 Cold Worked (non-NACE) Stainless Steel
S	2507 Super Duplex Wetted Material (needs "F" Material Code Suffix)
S	6 Moly (25-4SMO) Material (needs "F" Material Code Suffix)
Additional Material Available, please contact factory.	

D - Pressure (x 1000 psi)	
10	10,000 psi
15	15,000 psi
Maximum MAWP based on connection type or material (whichever is lower)	

E - End Connection			
	Connection	MAWP @ RT	Seat Gland Hex
M12	SF750CX10 (3/4" MP)	15,000 psi	1-3/4"
M16	SF1000CX10 (1" MP)	15,000 psi	1-3/4"
P12	3/4" FNPT	10,000 psi	1-3/4"
P16	1" FNPT	10,000 psi	1-3/4"
Q12	QS750 (3/4" QSS)	15,000 psi	1-3/8"
Q16	QS1000 (1" QSS)	15,000 psi	2" (square)

F - Options (Suffix Addition)	
BO	O-ring, Buna-N, 40° to 250°F (121°C)
EPR	O-ring, Ethylene Propylene Rubber, 0° to 250°F (121°C)
HT	O-ring, Perfluoroelastomer (Parofluor®) FFKM 30° to 500°F (260°C)
K	Antivibration Gland Fitting (Cone & Thread Only)
L	Lockout Bracket (see page 43 for detail)
SOG*	ALL Parts NACE material, hardness Check, NACE Certification
2507**	2507 Super Duplex (20,000 psi max.) used with "S" Material Code
25-4MO**	6 Moly (25-4SMO) Material (used with "S" material code)
PM	Panel Mount Hardware
For Ball Valve Actuator Options see chart below	

#### Basic Repair Kits: (see page 11 for kit contents)

When ordering a basic repair kit add an "R" prefix before product model codes A, B, and C (see above). Example: R2B8S

When ordering with "F-Options" add an "R" prefix before model codes A, B, C and F (see above). Example: R2B8S-EPR Contact your Parker Autoclave Engineers Sales Representative with any questions or refer to the Operation & Maintenance manuals (found online at www.Autoclave.com) for proper maintenance procedures.

**Notes:**  
316 SS Valve bodies are cold worked and not suitable for use in NACE/ISO 15156 applications. If required, contact factory for options.

\* SOG suffix also changes CW 316 SS body material to Annealed 316 SS suitable for NACE service. Contact factory for pressure reduction.

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance.

### Ball Valve Actuator Suffix options: For Detailed Actuator Information please see pages 34-42

	Pneumatic Actuator	Electric Actuator		Actuator Operating Temperature	
		WP	EXP		
<b>AO</b>	Air to Open / Spring to Close	<b>EO1</b>	<b>EO1X</b>	120 volt AC 50/60 Hz	<b>Pneumatic</b> -10°F to 176°F (-23°C to 80°C)
<b>AC</b>	Air to Close / Spring to Open	<b>EO2</b>	<b>EO2X</b>	220 volt AC 50/60 Hz	<b>Electric</b> 0°F to 160°F (-17°C to 71°C)
<b>AOC</b>	Air to Open and Close (Double Action)	<b>EO3</b>	<b>EO3X</b>	24 VDC	



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### 2 Way Ball Valve Dimensions:

2 Way Ball Valve: 1/4" thru 1/2"		VALVE MODELS - inches (mm)			
		2B4S	2B6S	2B8S	
	<b>A</b>	4.33 (109.99)	4.99 (126.75)	5.97 (151.64)	
	<b>B</b>	4.19 (106.49)	5.53 (140.41)	7.73 (196.46)	
	<b>C</b>	2.00 (50.80)	3.00 (76.20)	4.13 (104.78)	
	<b>D</b>	3.37 (85.55)	4.99 (126.82)	5.12 (130.04)	
	<b>E</b>	3.83 (97.28)	5.45 (138.43)	10.24* (260.10)	
	<b>F</b>	1.13 (28.58)	1.38 (34.92)	1.76 (44.70)	
	<b>G</b>	1.50 (38.10)	2.00 (50.80)	3.00 (76.20)	
	<b>H</b>	0.75 (19.05)	1.00 (25.40)	1.50 (38.10)	
	<b>J</b>	0.44 (11.18)	0.41 (10.31)	0.50 (12.70)	
	<b>K</b>	0.28 (7.11)	0.28 (7.11)	0.28 (7.11)	
	<b>L</b>	1.91 (48.41)	2.50 (63.50)	3.09 (78.58)	
	Block Thickness		1.00 (25.40)	1.38 (35.05)	1.75 (44.45)

### Panel Mounting Dimensions:

2 Way Ball Valve Panel Mounting		VALVE MODELS - inches (mm)		
		2B4S	2B6S	2B8S
<p>All dimensions are for reference only and are subject to change without notice.</p>	<b>A</b>	1.50 (38.10)	2.00 (50.80)	3.00 (76.20)
	<b>B</b>	0.75 (19.05)	1.00 (25.40)	1.50 (38.10)
	<b>C</b>	1.06 (26.92)	1.50 (38.10)	1.88 (47.63)
	<b>D</b>	0.28 (7.11)	0.28 (7.11)	0.28 (7.11)
<b>Note:</b> Body Mounting 1/4" - 20 threads				

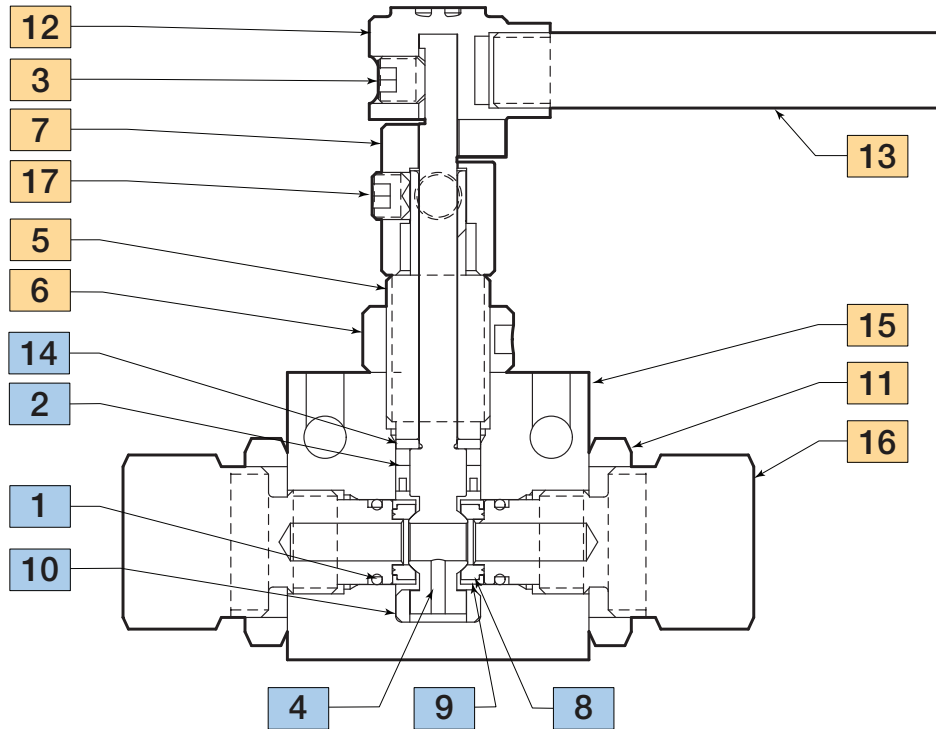




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Parts Listing and Material: Typical 1/4", 3/8" and 1/2" - 2 Way Ball Valve Series



**Material of Construction:**

Item #	Description	Material
1	O-Ring	FKM
2	Stem Seal	Graphite Carbon PTFE
3	Set Screw, 5/16-18	Stainless Steel
4	Stem	316 CS SS
5	Packing Gland	316 CS SS
6	Locking Piece	316 SS
7	Stopping Device	316 CW SS
8	Seat	316 CW SS
9	Seat Retainer	316 CW SS

Item #	Description	Material
10	Bottom Bearing	PEEK
11	Locknut	316 SS
12	Handle Hub	316 SS
13	Handle	304 SS
14	Thrust Washer	AMPCO 45
15	Body	316 SS
16	Seat Gland	316 CW SS
17	Set Screw, 5/16-24	Stainless

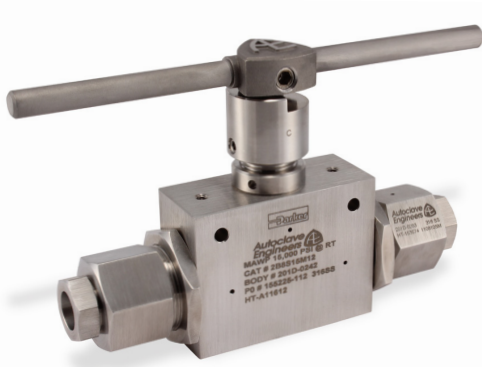
Typical spare parts found in Repair Kits



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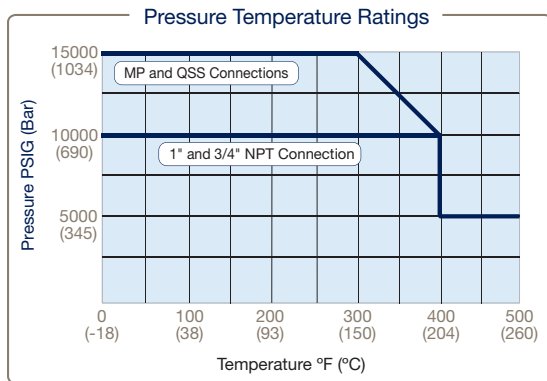
## 2 Way Series: 3/4" (19.05mm) Orifice - Pressures to 15,000 psi (1034 bar)



Connection Type	MAWP** at Room Temperature	Minimum Orifice Inches (mm)	Rated Cv*
SF1000CX10 (1" MP)	15,000 psi (1034 bar)	0.688 (17.48)	21.00
3/4" FNPT	10,000 psi (690 bar)	0.750 (19.05)	24.00
1" FNPT	10,000 psi (690 bar)	0.750 (19.05)	24.00
QS1000 (1" QSS)	15,000 psi (1034 bar)	0.688 (17.48)	21.00

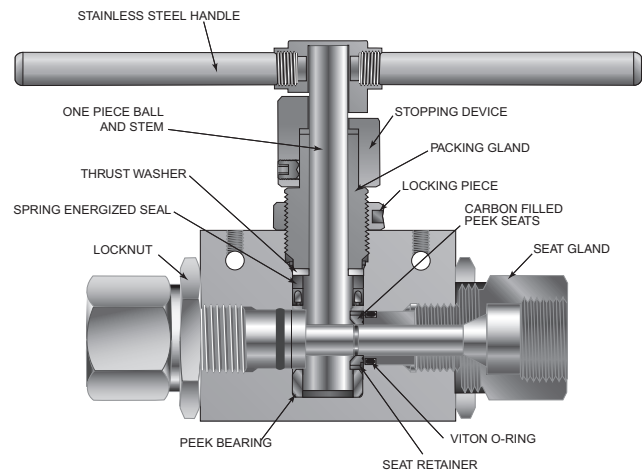
To determine MPa, Multiply Bar by 0.1

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance



### 2 Way 3/4" Bore Ball Valve

Pressure Ratings are determined by the end connections chosen, see chart.  
Maximum Temperature rating is determined by the o-ring material (see following description)  
NPT connections are limited to 400°F max due to PTFE Sealant.



To ensure proper fit use Parker Autoclave tubing

**NOTE:** Critical gas applications such as Hydrogen or Helium are not recommended and should be evaluated on a case by case basis. Consult factory.



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### Ordering Guide:

2-way ball valves are furnished complete with tube or pipe connections. Standard valve uses FKM o-rings [400°F (204°C) maximum].

#### Building a Part Number: Example: 2B12S15M16

Example Part Number:	<b>2B</b>	<b>12</b>	<b>S</b>	<b>15</b>	<b>M16</b>	-	<b>XXX</b>
Ordering Parameters/Options:	Valve Series	Ball Orifice Diameter	Material	Pressure (x 1000 psi)	End Connection		Options
Table Reference: (see below)	A	B	C	D	E		F

A - Valve Series	
2B	2 Way Ball Valve

B - Ball Orifice Diameter	
12	3/4" (19.05 mm)

C - Base Material	
S	316 Cold Worked (non-NACE) Stainless Steel
S	2507 Super Duplex Wetted Material (needs "F" Material Code Suffix)
S	6 Moly (25-4SMO) Material (needs "F" Material Code Suffix)
Additional Material Available, please contact factory.	

D - Pressure (x 1000 psi)	
10	10,000 psi
15	15,000 psi
20	20,000 psi
Maximum MAWP based on connection type or material (whichever is lower)	

E - End Connection			
	Connection	MAWP @ RT	Seat Gland Hex
M16	SF1000CX10 (1" MP)	15,000 psi	1-7/8"
P12	3/4" FNPT	10,000 psi	1-7/8"
P16	1" FNPT	10,000 psi	1-7/8"
Q16	QS1000 (1" QSS)	15,000 psi	2" (square)

F - Options (Suffix addition)	
BO	O-ring, Buna-N 40° to 250°F (121°C)
EPR	O-ring, Ethylene Propylene Rubber, 0° to 250°F (121°C)
C	PTFE U-Cup Seal 0° to 500°F max (260°C) (replaces O-rings)
K	Antivibration Gland Fitting (Cone & Thread Only)
L	Lockout Bracket (see page 43 for detail)
SOG*	ALL Parts NACE material, hardness Check, NACE Certification
2507**	2507 Super Duplex (20,000 psi max.) used with "S" Material Code
PM	Panel Mount Hardware
25-4MO**	6 Moly (25-4SMO) Material (used with "S" Material Code)
For Ball Valve Actuator Options see chart below	

#### Basic Repair Kits: (see page 15 for kit contents)

When ordering a basic repair kit add an "R" prefix before product model codes A, B, and C (see above). Example: R2B12S

When ordering with "F-Options" add an "R" prefix before model codes A, B, C and F (see above). Example: R2B12S-EPR Contact your Parker Autoclave Engineers Sales Representative with any questions or refer to the Operation & Maintenance manuals (found online at [www.Autoclave.com](http://www.Autoclave.com)) for proper maintenance procedures.

**Notes:**  
316 SS Valve bodies are cold worked and not suitable for use in NACE/ISO 15156 applications. If required, contact factory for options.

\* SOG suffix also changes CW 316 SS body material to Annealed 316 SS suitable for NACE service. Contact factory for pressure reduction.

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance.

### Ball Valve Actuator Suffix options: For Detailed Actuator Information please see pages 34-42

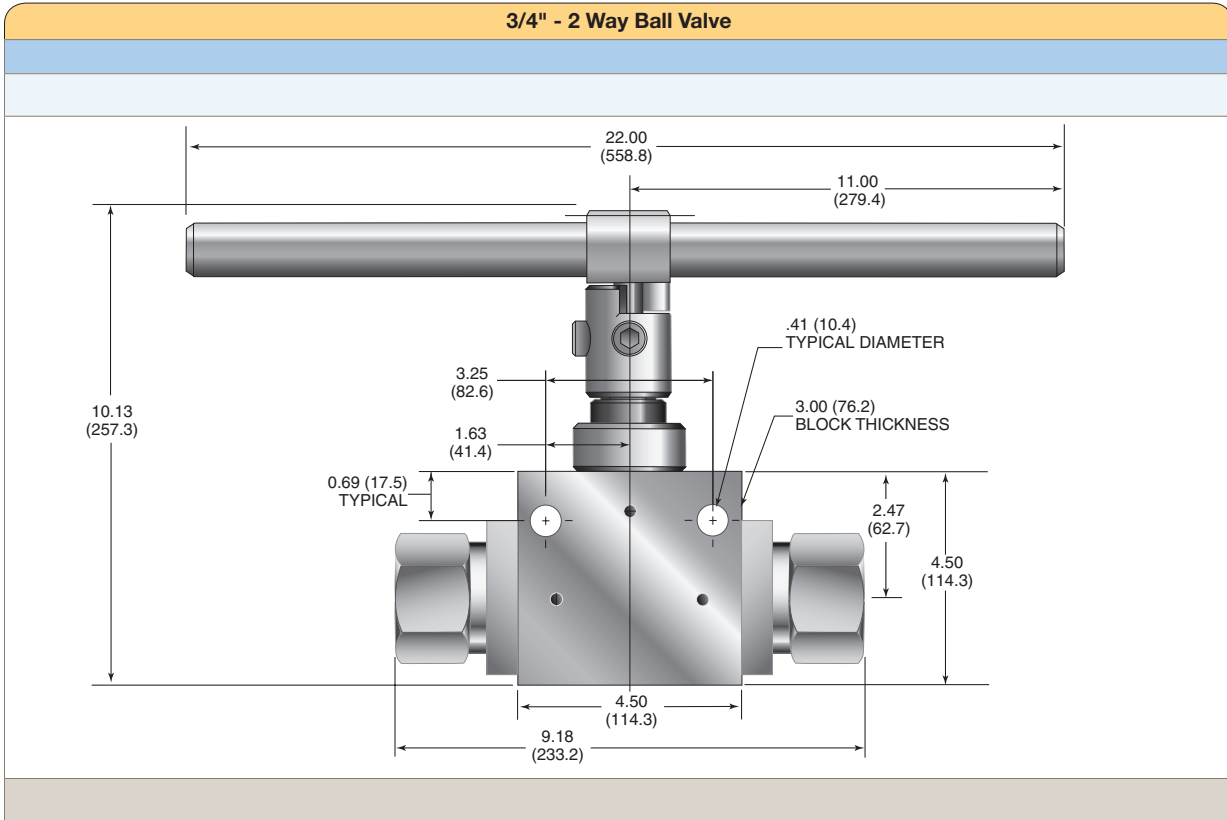
	Pneumatic Actuator	Electric Actuator		Actuator Operating Temperature	
		WP	EXP		
<b>AO</b>	Air to Open / Spring to Close	<b>EO1</b>	<b>EO1X</b>	120 volt AC 50/60 Hz	<b>Pneumatic</b> -10°F to 176°F (-23°C to 80°C)
<b>AC</b>	Air to Close / Spring to Open	<b>EO2</b>	<b>EO2X</b>	220 volt AC 50/60 Hz	<b>Electric</b> 0°F to 160°F (-17°C to 71°C)
<b>AOC</b>	Air to Open and Close (Double Action)	<b>N/A</b>	<b>N/A</b>	24 VDC	



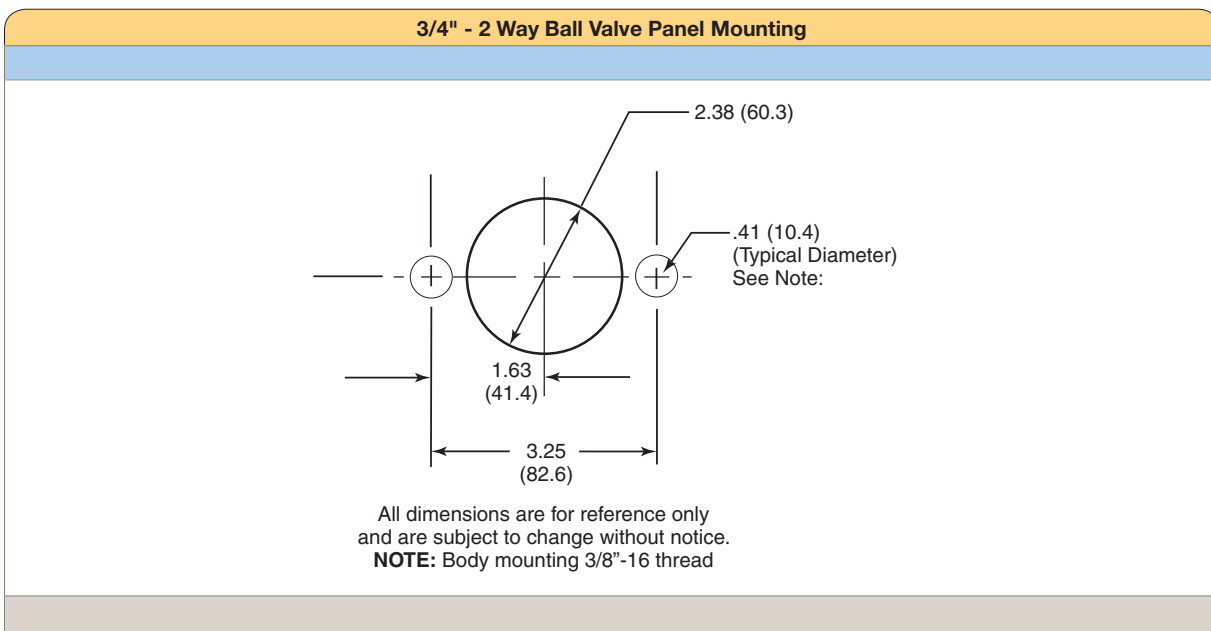
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### 2 Way Ball Valve Dimensions:



### Panel Mounting Dimensions:

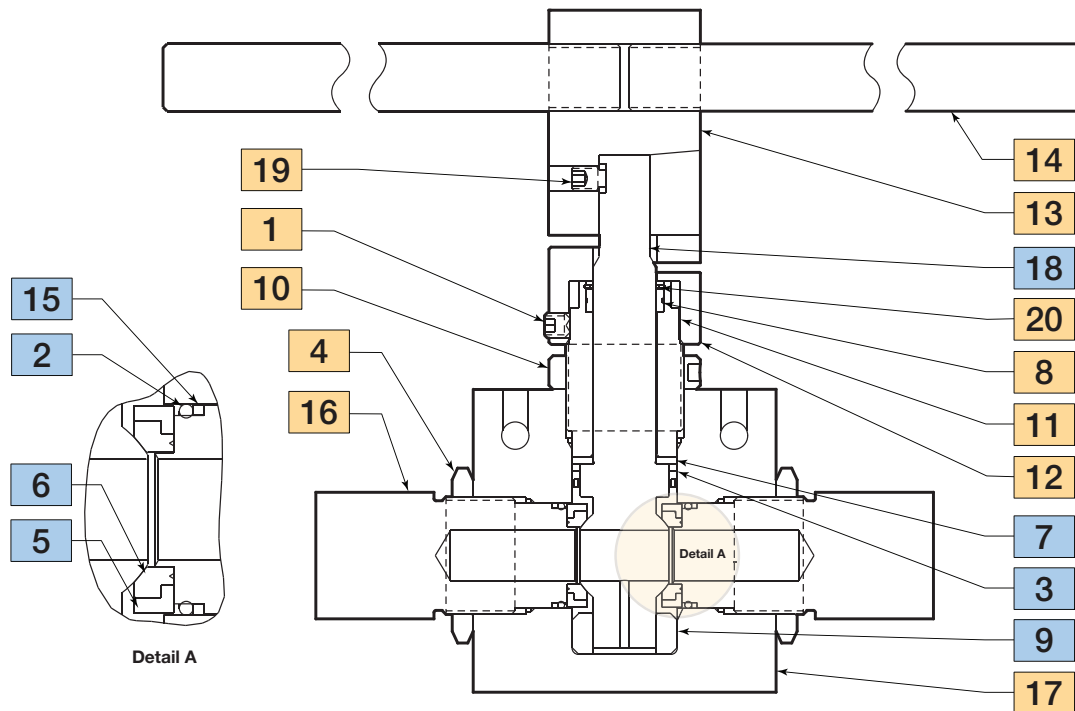




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Parts Listing and Material: 3/4" - 2 Way Ball Valve Series



**Material of Construction:**

Item #	Description	Material
1	Set Screw, 3/8 -16	316 SS
2	O-ring	FKM
3	Stem Seal	PTFE with Graphite
4	Locknut	316 SS
5	Seat	PEEK
6	Seat Retainer	Zeron 100
7	Thrust Washer	AMPCO 45
8	Top Bearing	Virgin PEEK
9	Bottom Bearing	Virgin PEEK
10	Locking Piece	316 SS

Item #	Description	Material
11	Stopping Device	316 SS
12	Packing Gland	316 SS
13	Hex Handle Hub	316 SS
14	Handle	316 SS
15	O-ring Backup	AMPCO 45
16	Seat Gland	316 CW SS
17	Body	316 CW SS
18	Stem	316 CW SS
19	Set Screw, 3/8-16	316 SS
20	Retaining Ring	302 SS

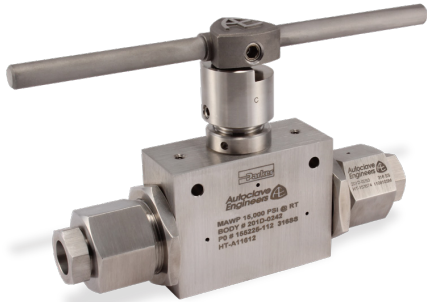
Typical spare parts found in Repair Kits



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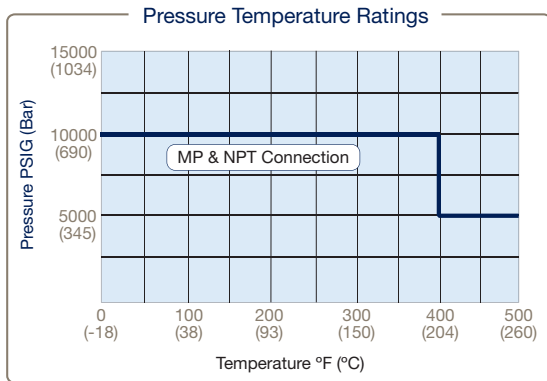
## 2 Way Series: 1" (25.40mm) Orifice - Pressures to 10,000 psi (690 bar)



Connection Type	MAWP** at Room Temperature	Minimum Orifice Inches (mm)	Rated C <sub>v</sub> *
SF1500CX10 (1.5" MP)	10,000 psi (690 bar)	0.938 (23.83)	34
1" FNPT	10,000 psi (690 bar)	1.00 (25.40)	37.2

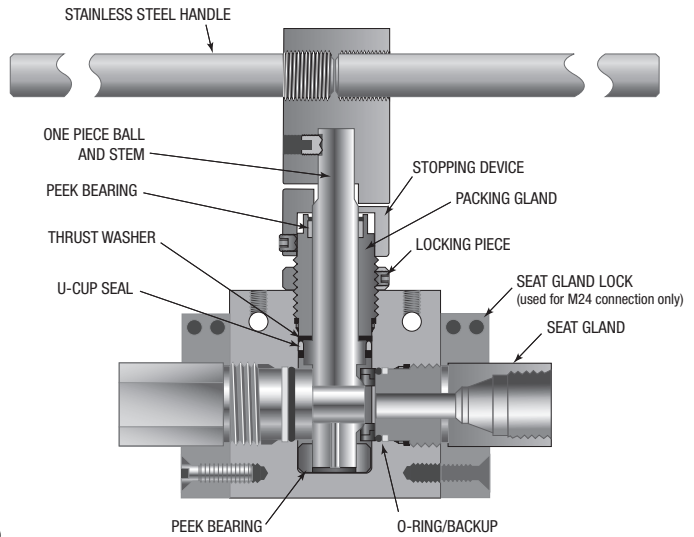
To determine MPa, Multiply Bar by 0.1

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance



2 Way 1" Bore Ball Valve

Pressure Ratings are determined by the end connections chosen, see chart.  
Maximum Temperature rating is determined by the o-ring material (see following description)  
NPT connections are limited to 400°F max due to PTFE Sealant.



To ensure proper fit use Parker Autoclave tubing

**NOTE:** Critical gas applications such as Hydrogen or Helium are not recommended and should be evaluated on a case by case basis. Consult factory.



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### Ordering Guide:

2-way ball valves are furnished complete with tube or pipe connections. Standard valve uses FKM o-rings [400°F (204°C) maximum].

Building a Part Number: *Example: 2B16S10M24*

Example Part Number:	<b>2B</b>	<b>16</b>	<b>S</b>	<b>10</b>	<b>M24</b>	-	<b>XXX</b>
Ordering Parameters/Options:	Valve Series	Ball Orifice Diameter	Material	Pressure (x 1000 psi)	End Connection		Options
Table Reference: (see below)	A	B	C	D	E		F

A - Valve Series	
2B	2 Way Ball Valve

B - Ball Orifice Diameter	
16	1" (25.4 mm)

C - Material	
S	316 Cold Worked (non-NACE) Stainless Steel
S	2507 Super Duplex Wetted Material (needs "F" Material Code Suffix)
S	6 Moly (25-4SMO) Material (needs "F" Material Code Suffix)
Additional Material Available, please contact factory.	

D - Pressure (x 1000 psi)	
10	10,000 psi
15	15,000 psi
20	20,000 psi
Maximum MAWP based on connection type or material (whichever is lower)	

E - End Connection			
	Connection	MAWP @ RT	Seat Gland Hex
M24	SF1500CX10 (1.5" MP)	10,000 psi	2-1/4"
P16	1" FNPT	10,000 psi	1-7/8"

F - Options (Suffix addition)	
BO	O-Ring, Buna-N 40° to 250°F (121°C)
EPR	O-Ring, Ethylene Propylene Rubber, 0° to 250°F (121°C)
C	PTFE U-Cup Seal 0° to 500°F max (260°C) (replaces O-rings)
K	Antivibration Gland Fitting (Cone & Thread Only)
L	Lockout Bracket (see page 43 for detail)
SOG*	ALL Parts NACE material, hardness Check, NACE Certification
2507**	2507 Super Duplex (20,000 psi max.) used with "S" Material Code
25-4M0**	6 Moly (25-4SMO) Material (used with "S" material code)
PM	Panel Mount Hardware
For Ball Valve Actuator Options see chart below	

**Notes:**  
316 SS Valve bodies are cold worked and not suitable for use in NACE/ISO 15156 applications. If required, contact factory for options.

\* SOG suffix also changes CW 316 SS body material to Annealed 316 SS suitable for NACE service. Contact factory for pressure reduction.

\*\* Special materials often have reduced MAWP ratings, see Technical brochure for assistance.

**Basic Repair Kits:** (see page 19 for kit contents)

When ordering a basic repair kit add an "R" prefix before product model codes A, B, and C (see above). Example: R2B16S

When ordering with "F-Options" add an "R" prefix before model codes A, B, C and F (see above). Example: R2B16S-EPR Contact your Parker Autoclave Engineers Sales Representative with any questions or refer to the Operation & Maintenance manuals (found online at [www.Autoclave.com](http://www.Autoclave.com)) for proper maintenance procedures.

### Ball Valve Actuator Suffix options: For Detailed Actuator Information please see pages 34-42

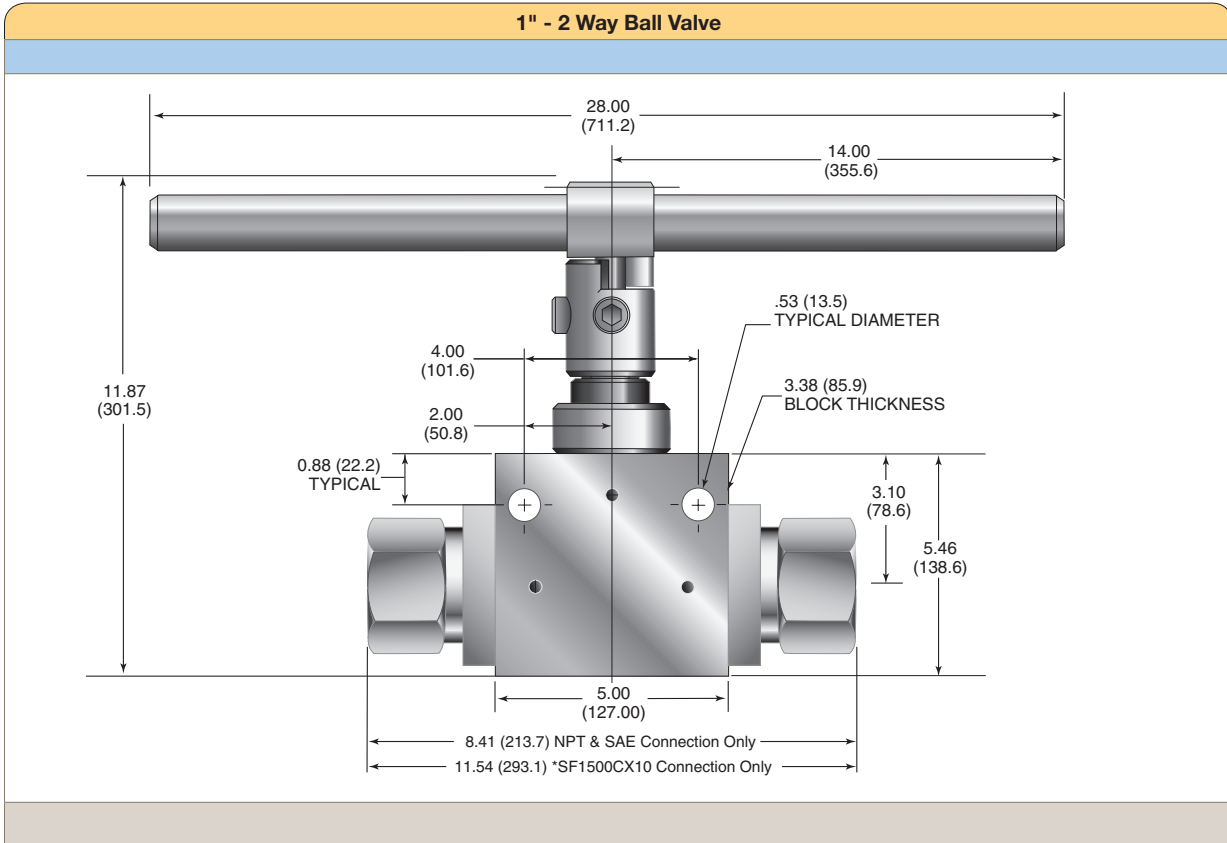
	Pneumatic Actuator	Electric Actuator		Actuator Operating Temperature
		WP	EXP	
<b>AO</b>	Air to Open / Spring to Close	<b>EO1</b>	<b>EO1X</b>	120 volt AC 50/60 Hz <b>Pneumatic</b> -10°F to 176°F (-23°C to 80°C)
<b>AC</b>	Air to Close / Spring to Open	<b>EO2</b>	<b>EO2X</b>	220 volt AC 50/60 Hz <b>Electric</b> 0°F to 160°F (-17°C to 71°C)
<b>AOC</b>	Air to Open and Close (Double Action)	<b>N/A</b>	<b>N/A</b>	



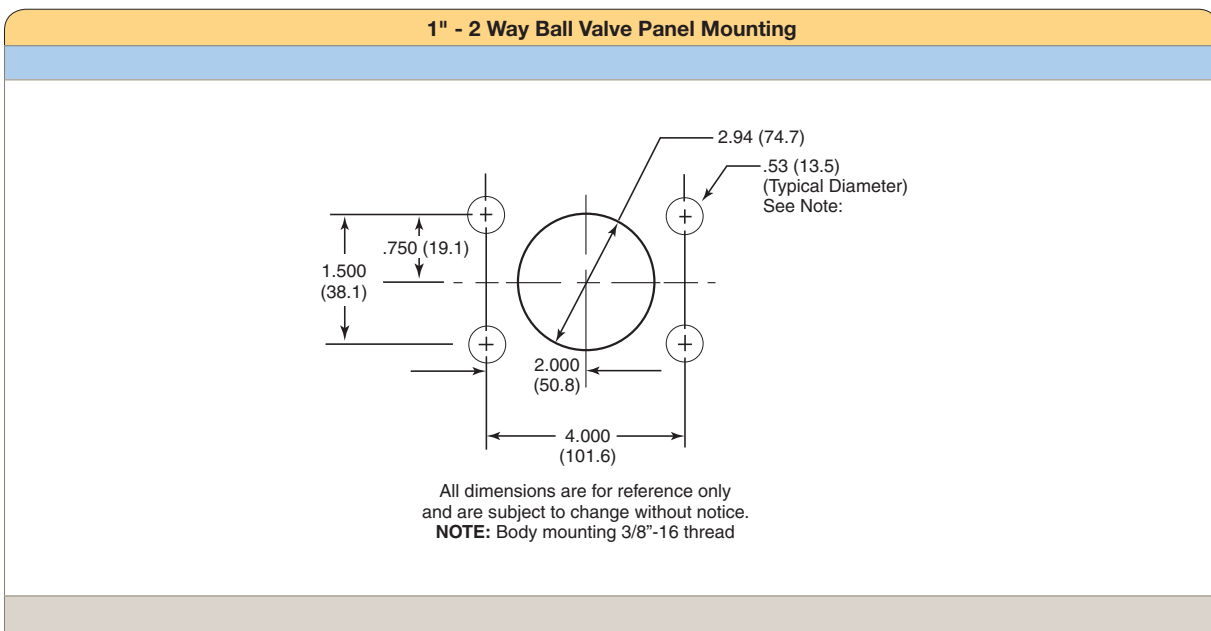
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### 2 Way Ball Valve Dimensions:



### Panel Mounting Dimensions:



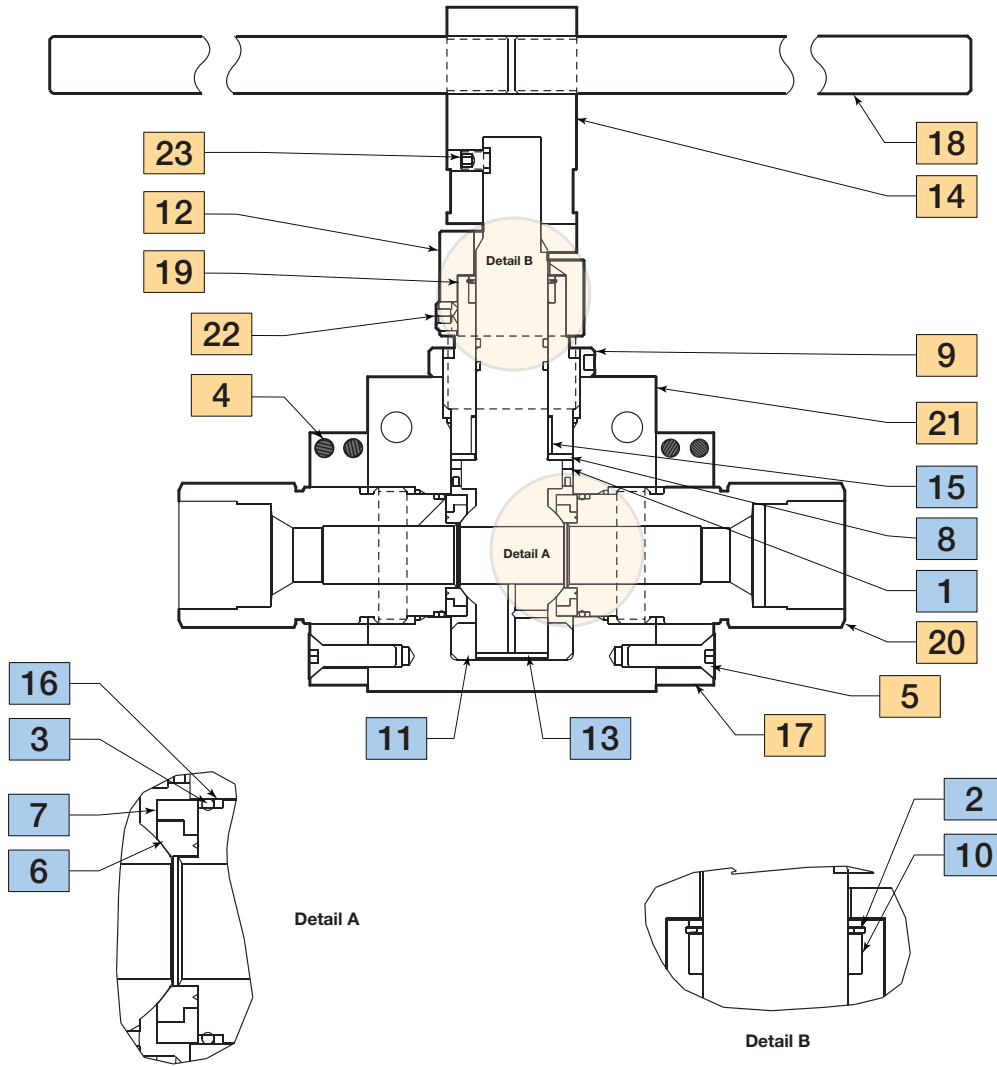




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### Parts Listing and Material: 1" - 2 Way Ball Valve Series



### Material of Construction:

Item #	Description	Material
1	Stem Seal w/ Spring	PTFE w/ Graphite
2	Retaining Ring	316 SS
3	O-Ring	FKM
4	Hex Cap Screw, 5/16-18	316 SS
5	Flat Head Cap Screw, 3/8-16	316 SS
6	Seat	PEEK
7	Seat Retainer	316 CW SS
8	Thrust Washer	AMPCO 45
9	Locking Piece	316 SS
10	Top Bearing	Virgin PEEK
11	Bottom Bearing	Virgin PEEK
12	Stopping Device	316 SS

Item #	Description	Material
13	Stem	316 CW SS
14	Hex Handle Hub	316 SS
15	Bearing	AMPCO 45
16	O-Ring Backup	AMPCO 45
17	Locking Device	316 SS
18	Handle	316 SS
19	Packing Gland	A286 SS
20	Seat Gland	A286 SS
21	Body	316 CW SS
22	Set Screw, 1/2-13	300 Series SS
23	Hex Set Screw, 3/8-16	316 SS

Typical spare parts found in Repair Kits