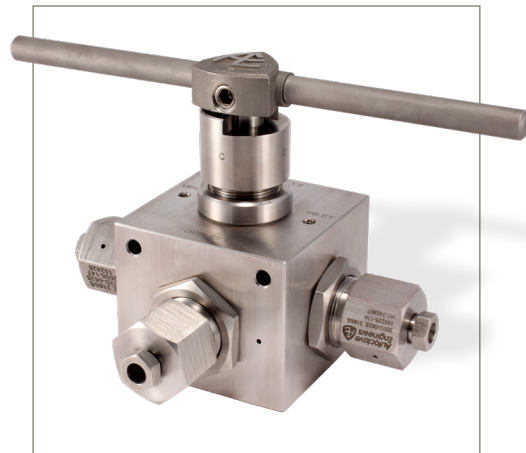


## 4 Way Quarter/180° Turn Ball Type 3/8" Bore

Pressures to 10,000 psi (690 bar)

4B6 and 4BS6 Series



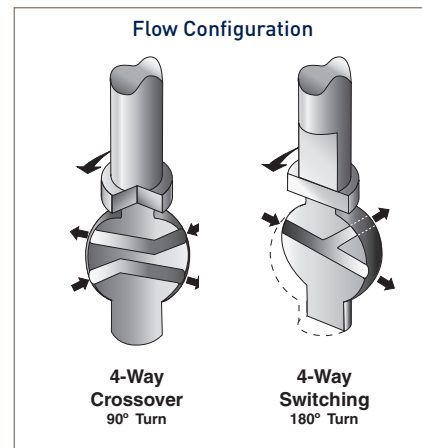
These ball valves can also be modified to incorporate the use of special materials, seals for high temperature applications, subsea models, and valve actuators. When it comes to high-pressure applications, these ball valves with the associated high-pressure components, provide the critical performance demanded by the high pressure market.

### 4 Way Ball Valve Features:

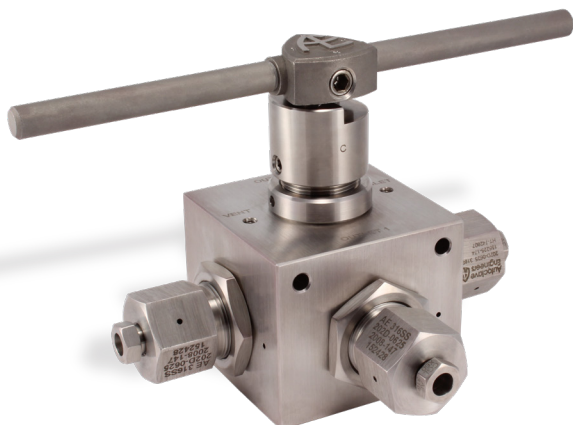
- One-piece, trunnion mounted style, stem design eliminates shear failure and reduces the effects of side loading found in two piece designs
- Re-torqueable seat glands for longer seat life
- Carbon filled PEEK seats offer excellent resistance to chemicals, heat, and wear/abrasion
- UNS S31600, 316 cold worked Stainless Steel construction
- Low friction pressure assisted graphite filled PTFE stem seal increases cycle life and reduces operating torque
- Quarter turn crossover, and 180° turn four way switching models available
- FKM (Viton®) o-rings are standard for operation from 0° to 400°F (-18° to 204°C)
- Optional o-rings available for high-temperature applications to 500°F (260°C)
- Optional wetted materials
- Electric and pneumatic actuator options

### 4 Way Ball Valve Applications:

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

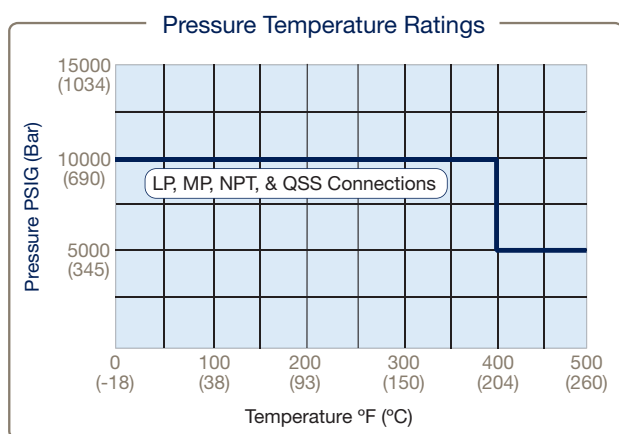


# 4 Way Series: 3/8" (9.52mm) Orifice - Pressures to 10,000 psi (690 bar)



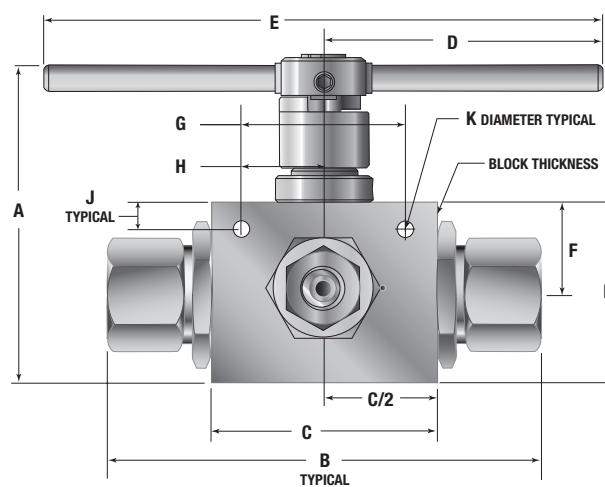
Connection Type	MAWP** at Room Temperature	Minimum Orifice Inches (mm)	Rated Cv*
SW500 (1/2" LP)	10,000 psi (690 bar)	0.375 (9.52)	2.5
SF375CX20 (3/8" MP)	10,000 psi (690 bar)	0.203 (5.16)	1.6
SF562CX20 (9/16" MP)	10,000 psi (690 bar)	0.312 (7.92)	2.4
SF750CX10 (3/4" MP)	10,000 psi (690 bar)	0.375 (9.52)	2.5
3/8 FNPT	10,000 psi (690 bar)	0.375 (9.52)	2.5
1/2 FNPT	10,000 psi (690 bar)	0.375 (9.52)	2.5
QS562 (9/16" QSS)	10,000 psi (690 bar)	0.359 (9.12)	2.5

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



## 4 Way 3/8" Bore Ball Valve

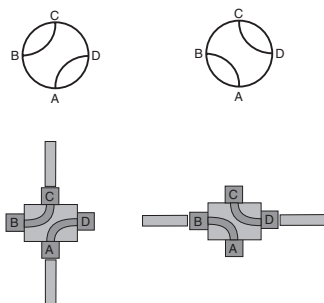
Pressure Ratings are determined by the end connections chosen, see chart.  
Maximum Temperature rating is determined by the o-ring material (see following description)  
NPT connections are limited to 400°F max due to PTFE Sealant.



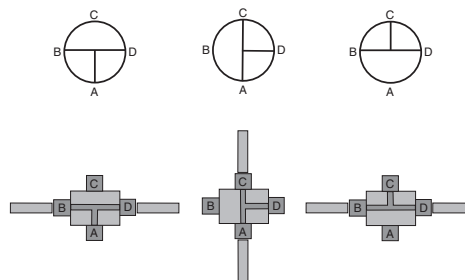
To ensure proper fit use Parker Autoclave tubing

**NOTE:** Critical gas applications such as Hydrogen or Helium should be evaluated on a case by case basis. Consult factory.

## Diverter Flow Control:



4 Way Crossover  
90° Turn (4B6 Series)



4-Way Switching  
180° Turn (4BS6 Series)  
(supplied with "D" port plugged)

## Ordering Guide:

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

### Building a Part Number: *Example: 4B6S10M9*

Example Part Number:	4B	6	S	10	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		E

A - Valve Series	
4B	4 Way Ball Valve Crossover (90° Turn)
4BS	4 Way Ball Valve Switching (1800° Turn)

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

C - Base Material	
S	316 Cold Worked (non-NACE) Stainless Steel
Additional Material Available, please contact factory.	

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

**Basic Repair Kits:** (see page 33 for kit contents)

When ordering a basic repair kit add an “R” prefix before product model codes A, B, and C (see above). Example: R4B6S

When ordering with “F-Options” add an “R” prefix before model codes A, B, C and F (see above). Example: R4BS6S-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)	10,000 psi	1-3/8"
M9	SF562CX20 (9/16" MP)	10,000 psi	1-3/8"
M12	SF750CX10 (3/4" MP)	10,000 psi	1-3/8"
P6	3/8" FNPT	10,000 psi	1-3/8"
P8	1/2" FNPT	10,000 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
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.

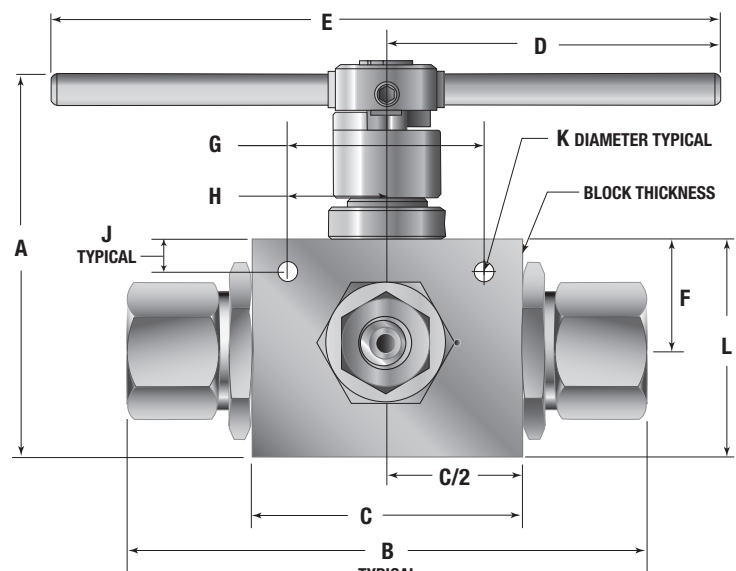
## Ball Valve Actuator Suffix options: For Detailed Actuator Information please see pages 34-42

Pneumatic Actuator		Electric Actuator		Actuator Operating Temperature	
		WP	XP		
AO	Air to Open / Spring to Close (Diverter Style Only)	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 (Diverter Style Only)	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	

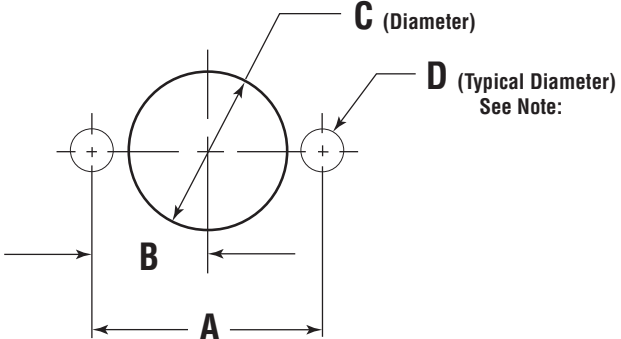
\* 24VDC Electric Actuator not available in 180° Actuation option (4B8 Series)

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

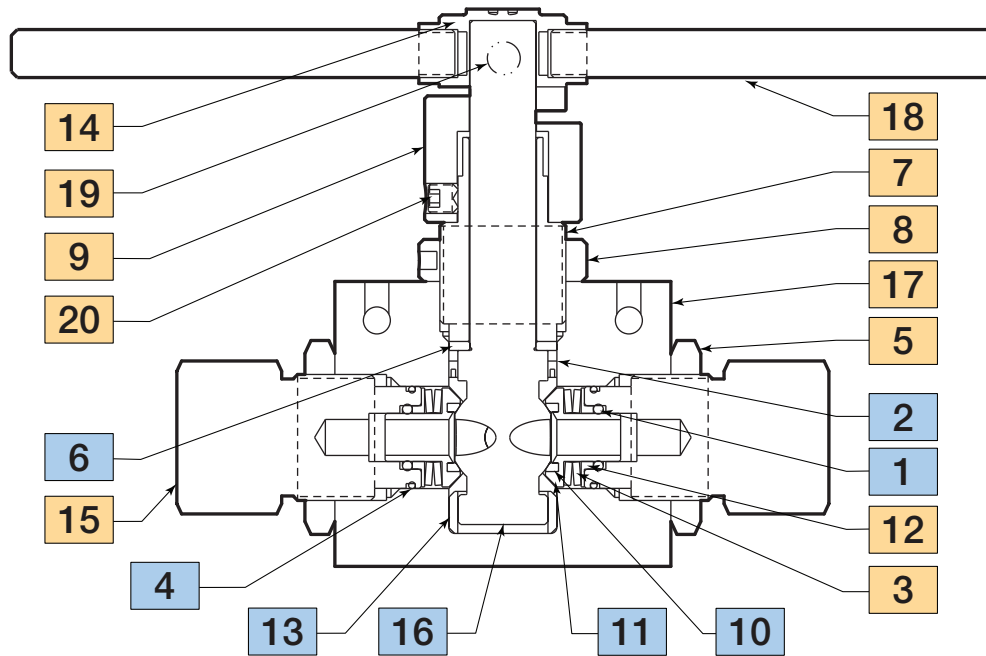
4 Way Ball Valve Dimensions:

4 Way Ball Valve		VALVE MODELS inches (mm)
		4B6S / 4BS6S
	A	5.81 (147.57)
	B	6.79 (172.47)
	C	3.50 (88.90)
	D	5.12 (130.05)
	E	10.24 (260.10)
	F	1.63 (41.23)
	G	2.63 (66.68)
	H	1.31 (33.27)
	J	0.41 (10.32)
	K	0.28 (7.11)
Block Thickness		2.97 (75.39)
		3.50 (88.90)

Panel Mounting Dimensions:

4 Way Ball Valve Panel Mounting		VALVE MODELS inches (mm)
		4B6S / 4BS6S
 <p>All dimensions are for reference only and are subject to change without notice.</p>	A	2.63 (66.68)
	B	1.31 (33.34)
	C	1.88 (47.63)
	D	0.28 (7.11)
Note: Body Mounting 1/4" - 20 threads		

## Parts Listing and Material: Typical 4 Way Ball Valve Series



### Material of Construction:

Item #	Description	Material
1	O-Ring	FKM
2	Stem Seal w/ Spring	PTFE with Graphite
3	Belleville Washer	17-7PH
4	O-Ring	FKM
5	Locknut	316 SS
6	Thrust Washer	AMPCO 45
7	Packing Gland	316 CW SS
8	Locking Piece	316 SS
9	Stopping Device	316 SS
10	Seat	ARLON 1260

Item #	Description	Material
11	Seat Retainer	Nitronic 50 HC
12	Belleville Washer Backup	316 CW SS
13	Bottom Bearing	AMPCO 45
14	Handle Hub	316 SS
15	Seat Gland	316 CW SS
16	Stem	316 CW SS
17	Body	316 CW SS
18	Handle	304 SS
19	Hex Set Screw, 1/2-13	Stainless
20	Set Screw, 5/16-18	Stainless

Typical spare parts found in Repair Kits