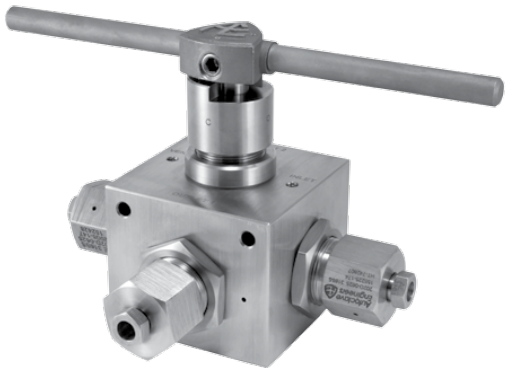
Ball Valves
4-Way Series

Pressures to 10,000 psi (690 bar)

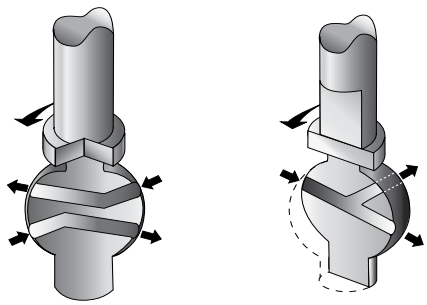
Parker Autoclave Engineers high-pressure ball valves have been designed to provide superior quality for maximum performance within a variety of valve styles, sizes, and process connections. Some of the more unique design innovations include an integral one-piece trunnion mounted style ball and stem that eliminates the shear failure common in two piece designs, re-torqueable seat glands that result in longer seat life, and a low friction stem seal that reduces actuation torque and enhances cycle life.

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.



Flow Configuration



4-Way Crossover 90° Turn

4-Way Switching 180° Turn

Ball Valve Features:

- One-piece, trunnion mounted style, stem design eliminates shear failure found in two piece designs and reduces the effects of side loading.
- Re-torqueable seat glands for longer seat life.
- Carbon filled PEEK seats offer excellent resistance to chemicals, heat, and wear/abrasion.
- Full-port flow path minimizes pressure drop.
- 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 the half turn four way switching models available.
- Viton o-rings for operation from 0°F (-17.8°C) to 400°F (204°C).
- Optional o-rings available for high-temperature applications.
- Optional wetted materials.
- Wide selection of tube and pipe end fittings available.
- Electric and pneumatic actuator options.

Applications:

- Laboratories
- Test Stands
- Control Panels
- Chemical Research
- Pilot Plants
- Water Blast Pumping Unit
- High volume chemical injection skids.

Parker Autoclave Engineers

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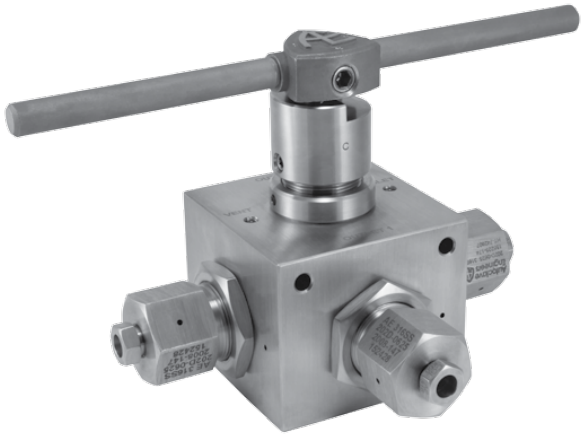
Ball Valves - 4-Way Series

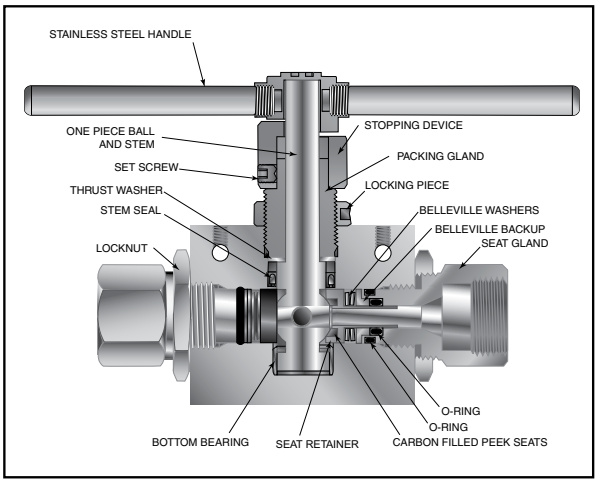
Ball Valves - 4-Way Series (3/8" Orifice)

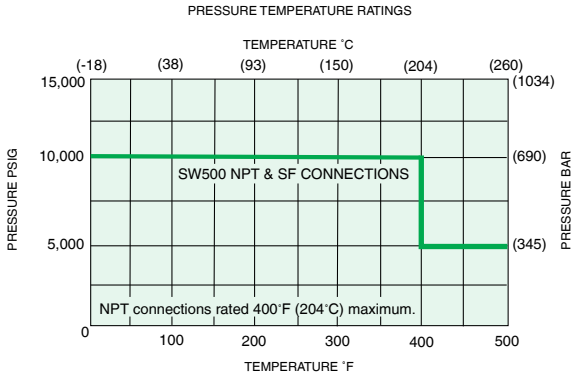
Pressures to 10,000 psi (690 bar) .375" (9.52mm) Orifice

Connection	MAWP @ Room Temperature	Minimum Orifice inches(mm)
SW500	10,000 psi (690 bar)	.375 (9.52)
SF375CX20	10,000 psi (690 bar)	.203 (5.16)
SF562CX20	10,000 psi (690 bar)	.312 (7.92)
SF750CX20	10,000 psi (690 bar)	.375 (9.52)
1/4" NPT	10,000 psi (690 bar)	.375 (9.52)
3/8" NPT	10,000 psi (690 bar)	.375 (9.52)
1/2" NPT	10,000 psi (690 bar)	.375 (9.52)
	Valve C_V=2.5	

MAWP: Maximum Allowable Working Pressure







Pressure ratings are determined by the end connections chosen, see chart.

NOTE: Ball valves are not recommended for critical gas applications such as Hydrogen, Helium or other small molecular gases.

Ordering Procedure

For complete information on available end connections and material options, see next page. 4-way ball valves are furnished complete with tube or pipe connections.

Typical catalog number: **4B 6 S 10 M9 — XXX**

4B	6	S	10	M9	—	XXX
Valve Series	**Ball Orifice Diameter**	**Material**	**Pressure (X 1000 psi)**	**End Connection**		**Options**
4B: 4-way crossover **4BS:** 4-way switching	**6**-3/8" (9.52 mm)	**S** -316SS (For material options contact factory)		**M9** - SF562CX20 (See Chart on next page)		**HT** - High Temperature (Ball Valve Actuators, see next page)

All general terms and conditions of sale, including limitations of our liability, apply to all products and services sold.

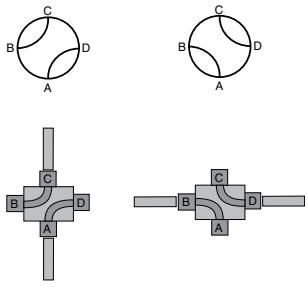
Tel: +45 63 12 83 00 | Email: ps@hymatik.com | www.hymatik.com | Hvidkaervej 27a, DK-5250 Odense SV, Denmark

End Connection Options

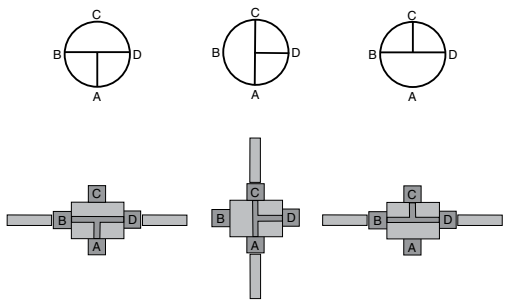
Catalog Number	End Connection Number	Connection	MAWP @ Room Temperature	Hex Inches(mm)
4B6S10L8 4BS6S10L8	L8	SW500	10,000 psi (690 bar)	1.38 (35.05)
4B6S10M6 4BS6S10M6	M6	SF375CX20	10,000 psi (690 bar)	1.38 (35.05)
4B6S10M9 4BS6S10M9	M9	SF562CX20	10,000 psi (690 bar)	1.38 (35.05)
4B6S10M12 4BS6S10M12	M12	SF750CX20	10,000 psi (690 bar)	1.38 (35.05)
4B6S10P4 4BS6S10P4	P4	1/4" NPT	10,000 psi (690 bar)	1.38 (35.05)
4B6S10P6 4BS6S10P6	P6	3/8" NPT	10,000 psi (690 bar)	1.38 (35.05)
4B6S10P8 4BS6S10P8	P8	1/2" NPT	10,000 psi (690 bar)	1.38 (35.05)

MAWP: Maximum Allowable Working Pressure

See ball valve option/details section for end connection details, material, and high temperature options.



4-Way Crossover
90° Turn



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

Ball Valve Options

Pneumatic Actuator:

AO - Air-to-open/Spring to close
AC - Air-to-close/Spring to open
AOC - Air-to-open-and-close (double action)

Electric Actuator:

EO1 - 120 volt AC 50/60 Hz
EO2 - 220 volt AC 50/60 Hz
EO3 - 24 VDC

Actuator Operating Temperature:

Pneumatic: 0˚F to 175˚F (-17˚C to 79˚C)
Electric: 0˚F to 160˚F (-17˚C to 71˚C)

Note: Consult factory for additional actuator information.

High Temperature Option: HT for media temperatures up to 500°F (260°)

HT - for media temperature up to 500˚F (260˚C)

Valve Maintenance

Repair Kits: add "**R**" to the front of valve catalog first 4 (5 for switching) numbers for proper repair kit.
(Example: **R4B6S**)

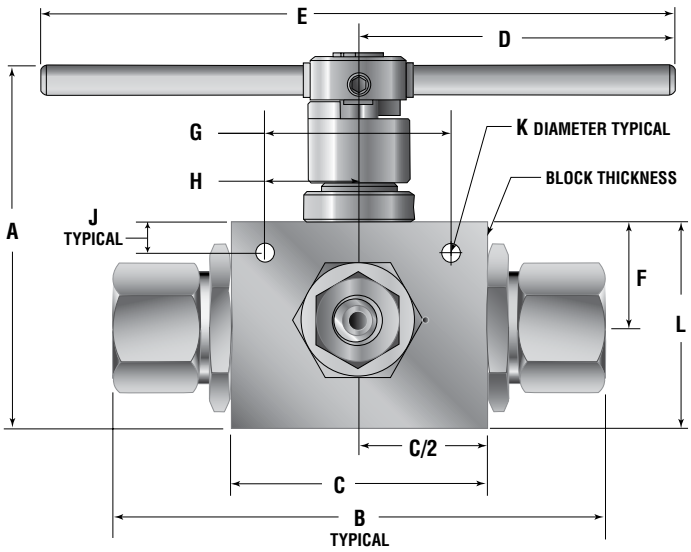
Consult your Parker Autoclave Engineers representative for pricing on repair kits. Refer to the Operation and Maintenance manual for proper maintenance procedures.

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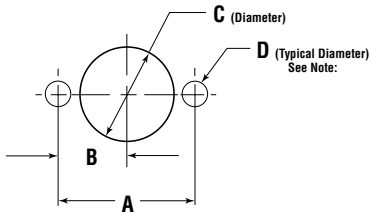
Ball Valve Dimensions - inches (mm)

VALVE MODELS	
4B6S/4BS6S	
A	5.81 (147.57)
B	6.79 (172.47)
C	3.50 (88.90)
D	5.13 (130.18)
E	10.25 (260.35)
F	1.63 (41.28)
G	2.63 (66.68)
H	1.13 (33.34)
J	0.41 (10.32)
K	0.28 (7.11)
L	2.97 (75.39)
Block Thickness	3.50 (88.90)



Ball Valve Panel Mounting Dimensions - inches (mm)

VALVE MODELS	
4B6S/4BS6S	
A	2.63 (66.68)
B	1.31 (33.34)
C	1.88 (47.63)
D	0.28 (7.11)



All dimensions are for reference only and are subject to change without notice.

Note: Body mounting 1/4" - 20 threads

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! 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