Ball Valves

3-Way QS Series

Pressures to 15,000 psi (1034 bar)

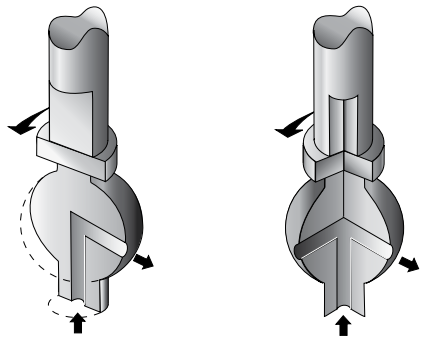
Parker Autoclave Engineers high-pressure ball valves have been designed to provide superior quality for maximum performance within a variety of valve styles, sizes, and process connections. Some of the more unique design innovations include an integral one-piece trunnion mounted style ball and stem that 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



3-Way Switching 180° Turn

3-Way Crossover 90° Turn

AE Ball Valve Features:

- One-piece, trunnion mounted style, stem design eliminates shear failure found in two piece designs and reduces 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 valve construction.
- Low friction pressure assisted graphite filled PTFE stem seal increases cycle life and reduces operating torque.
- Available in 90° turn diverter and 180° turn switching models.
- Viton o-rings for operation from 0°F (-17.8°C) to 400°F (204°C).
- Optional o-rings available for high-temperature applications.
- Electric and pneumatic actuator options.

Applications:

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

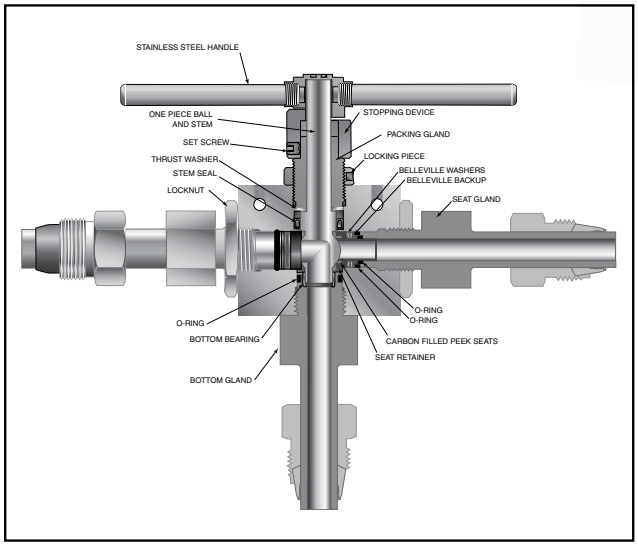
Ball Valves - 1/2" 3-Way QS Series

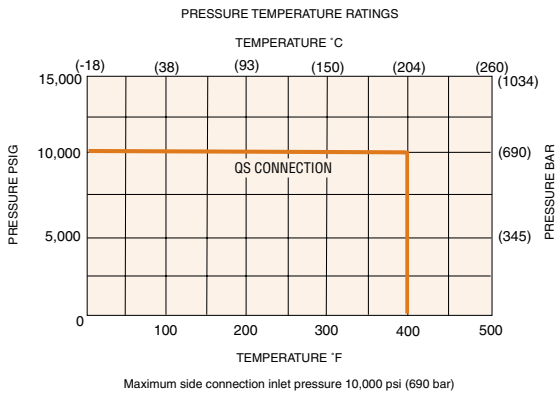
Pressures to 10,000 psi (690 bar) .500" (12.7mm) Orifice

Connection	MAWP @ Room Temperature	Minimum Orifice inches(mm)
Male QS750	10,000 psi (690 bar)	.500 (12.70)
	Valve C_V=4.4	

MAWP: Maximum Allowable Working Pressure







Maximum side connection inlet pressure 10,000 psi (690 bar)

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 see complete catalog.

Typical catalog number: **3B 8 S 10 MAQ12**

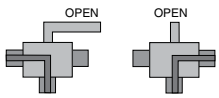
3B	8	S	10	MAQ12	—	XXX
Valve Series	**Ball Orifice Diameter**	**Material**	**Pressure (X 1000 psi)**	**End Connection**		**Options**
3B: 3-way **3BD:** 3-way diverter	**8**-1/2" (12.7 mm)	**S** -316SS (For material options contact factory)		**MAQ12** - Male QS750 (See Chart on next page)		**HT** - High Temperature (Ball Valve Actuators, see next page)

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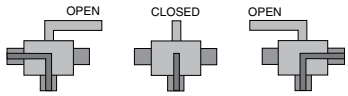
End Connection Options

Catalog Number	End Connection Number	Connection	MAWP @ Room Temperature	Square Inches(mm)
3B8S10MAQ12 3BD8S10MAQ12	MAQ12	Male QS750	10,000 psi (690 bar)	1.19 (30.2)

MAWP: Maximum Allowable Working Pressure



*3-Way Diverter Valve
90° Turn



3-Way Ball Valve
180° Turn

*The Diverter Valve design permits inlet flow through the bottom port. Outlet flow may be diverted to either valve side port.

Ball Valve Options

Pneumatic Actuator:

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

Electric Actuator:

EO1 - 120 volt AC 50/60 Hz
EO2 - 220 volt AC 50/60 Hz
E03 - 24 VDC

Actuator Operating Temperature:

Pneumatic: -20˚F to 175˚F (-29˚C to 79˚C)
Electric: -20˚F to 160˚F (-29˚C to 71˚C)

High Temperature Option:

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

Valve Maintenance

Repair Kits: add "**R**" to the front of valve catalog numbers for proper repair kit. (Example: **R3B8S**)

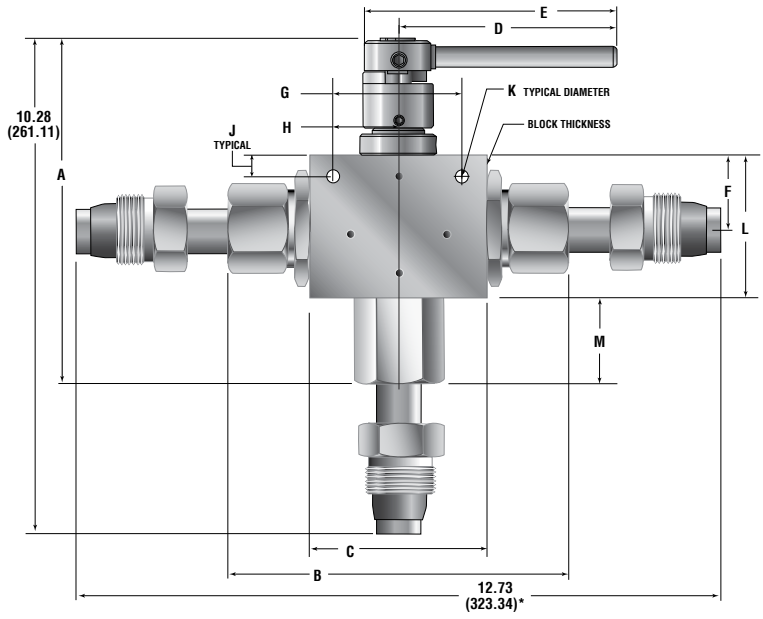
Consult your Parker Autoclave Engineers representative for pricing on repair kits. Refer to the Operation and Maintenance manual for proper maintenance procedures.

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

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Ball Valve Dimensions - inches (mm)

	VALVE MODELS		
	3B3S/3BD3S	3B6S/3BD6S	3B8S/3BD8S
A	5.64 (143.35)	6.55 (166.37)	7.37 (187.20)
B	4.72 (119.94)	5.74 (145.79)	6.92 (175.77)
C	2.50 (63.50)	3.00 (76.20)	4.13 (104.78)
D	3.37 (85.55)	4.99 (126.82)	5.12 (130.04)
E	3.90 (99.02)	5.52 (140.32)	*10.25 (260.35)
F	1.13 (28.58)	1.38 (34.93)	1.66 (42.16)
G	1.50 (38.10)	2.00 (50.80)	3.00 (76.20)
H	0.75 (19.05)	1.00 (25.40)	1.50 (38.10)
J	0.43 (10.92)	0.41 (10.31)	0.50 (12.70)
K	0.28 (7.11)	0.28 (7.11)	0.28 (7.11)
L	2.25 (57.15)	2.88 (73.03)	3.34 (84.94)
M	0.97 (24.64)	1.19 (30.22)	1.25 (31.75)
Block Thickness	1.00 (25.40)	1.38 (34.92)	1.75 (44.45)

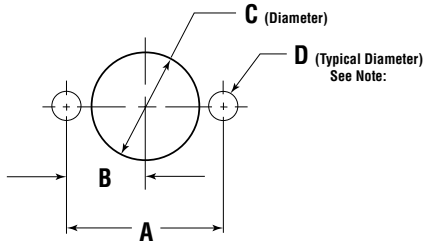


*3B8S10MAQ12 and 3BD8S10MAQ12 Valves Only

Ball Valve Panel Mounting Dimensions - inches (mm)

	VALVE MODELS		
	3B3S/3BD3S	3B6S/3BD6S	3B8S/3BD8S
A	1.500 (38.10	2.000 (50.80)	3.000 (76.20)
B	0.750 (19.05)	1.000 (25.40)	1.500 (38.10)
C	1.06 (26.92)	1.50 (38.10)	1.88 (47.63)
D	0.28 (7.11)	0.28 (7.11	0.28 (7.11)

Note: Body mounting 1/4" - 20 thread



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

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