Ball Valves

3-Way Series

Pressures to 20,000 psi (1379 bar)

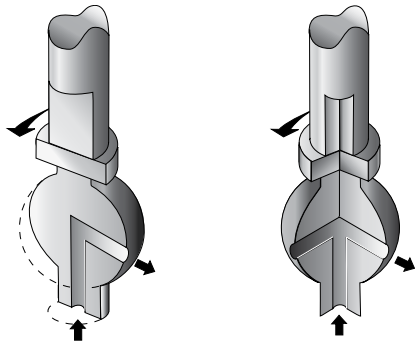
Parker Autoclave Engineers high-pressure ball valves have been designed to provide superior quality for maximum performance within a variety of valve styles, sizes, and process connections. Some of the more unique design innovations include an integral one-piece trunnion mounted style ball and stem that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

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 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.
- 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 Units
- High volume chemical injection skids.

Parker

Autoclave Engineers

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Ball Valves - 3-Way Series

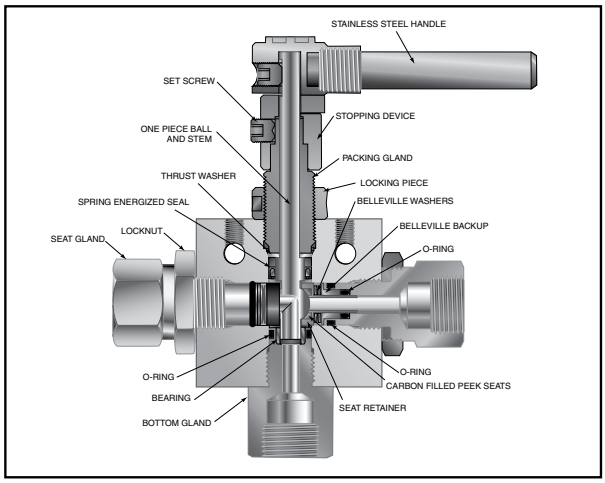
Ball Valves - 3/8" 3-Way Series

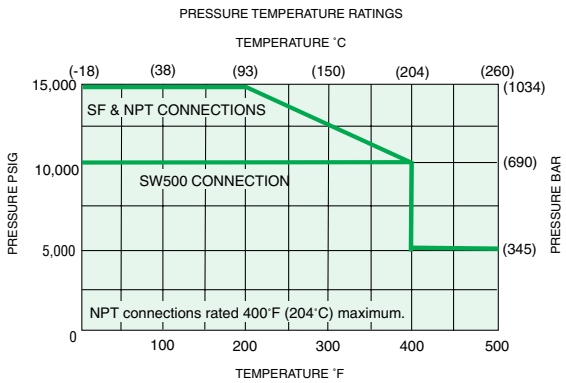
Pressures to 15,000 psi (1034 bar) .328" (8.33mm) Orifice

Connection	MAWP @ Room Temperature	Minimum Orifice inches(mm)
SW500	10,000 psi (690 bar)	.328 (8.33)
SF375CX20	15,000 psi (1034 bar)	.203 (5.16)
SF562CX20	15,000 psi (1034 bar)	.312 (7.92)
SF750CX20	15,000 psi (1034 bar)	.328 (8.33)
1/4" NPT	15,000 psi (1034 bar)	.328 (8.33)
3/8" NPT	15,000 psi (1034 bar)	.328 (8.33)
1/2" NPT	15,000 psi (1034 bar)	.328 (8.33)
	Valve C_V=2.1	

MAWP: Maximum Allowable Working Pressure
C_V listed is for maximum orifice size of .328 inches only.
Consult factory for C_V of valves with reduced orifice sizes.







Pressure ratings are determined by the end connections chosen, see chart.
Side connection pressure not recommended.

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. 3-way ball valves are furnished complete with tube or pipe connections.

Typical catalog number: **3B 6 S 15 M9** — **XXX**

3B — **Valve Series**
3B: 3-way
3BD: 3-way diverter

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

S — **Material**
S -316SS
(For material options contact factory)

15 — **Pressure (X 1000 psi)**

M9 — **End Connection**
M9 - SF562CX20
(See Chart on next page)

XXX — **Options**
HT - High Temperature
(Ball Valve Actuators, see next page)

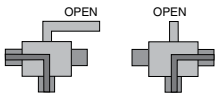
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End Connection Options

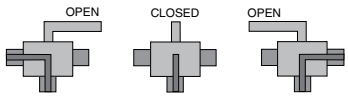
Catalog Number	End Connection Number	Connection	MAWP @ Room Temperature	Hex Inches(mm)
3B6S10L8 3BD6S10L8	L8	SW500	10,000 psi (690 bar)	1.38 (35.05)
3B6S15M6 3BD6S15M6	M6	SF375CX20	15,000 psi (1034 bar)	1.38 (35.05)
3B6S15M9 3BD6S15M9	M9	SF562CX20	15,000 psi (1034 bar)	1.38 (35.05)
3B6S15M12 3BD6S15M12	M12	SF750CX20	15,000 psi (1034 bar)	1.38 (35.05)
3B6S15P4 3BD6S15P4	P4	1/4" NPT	15,000 psi (1034 bar)	1.38 (35.05)
3B6S15P6 3BD6S15P6	P6	3/8" NPT	15,000 psi (1034 bar)	1.38 (35.05)
3B6S15P8 3BD6S15P8	P8	1/2" NPT	15,000 psi (1034 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.



*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-close/Spring to open (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
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)

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: **R3B6S**)

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

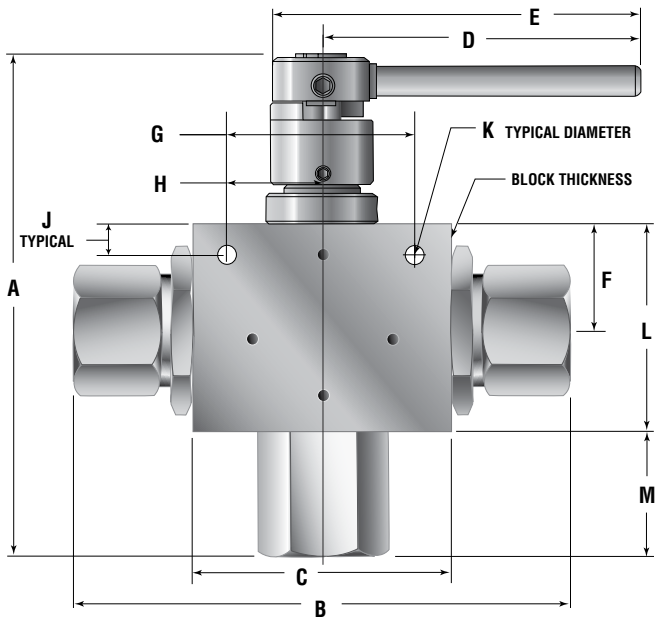
See ball valve actuator section for full description, additional information, and options.

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

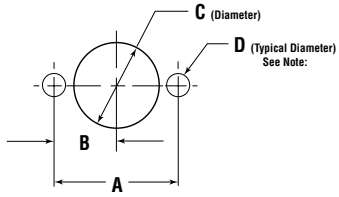
Ball Valve Dimensions - inches (mm)

	VALVE MODELS		
	3B3S/3BD3S	3B6S/3BD6S	3B8S/3BD8S
A	5.64 (143.35)	6.55 (166.37)	7.83 (198.79)
B	4.72 (119.94)	5.74 (145.79)	7.77 (197.36)
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)	1.70 (43.18)
Block Thickness	1.00 (25.40)	1.38 (34.92)	1.75 (44.45)



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)



All dimensions are for reference only and are subject to change without notice.
Note: Body mounting 1/4" - 20 thread

WARNING

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Instrumentation Products Division
Autoclave Engineers Operation
8325 Hessinger Drive
Erie, Pennsylvania 16509-4679 USA
PH: 814-860-5700 FAX: 814-860-5811
www.autoclave.com

Parker Hannifin Manufacturing Ltd.
Instrumentation Products Division, Europe
Industrial Estate Whitemill
Wexford, Republic of Ireland
PH: 353 53 914 1566
FAX: 353 53 914 1582

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