

Our Features Set Us Apart...

Exclusive Adjust-O-Seal®

design allows the valve seats to be restored in-line to leak-tight condition, compensating for normal wear and reducing repair costs.

Spring-loaded washers

create a live-loaded stem assembly for positive sealing.

Direct Mount Actuation

improves stem alignment and increases cycling life.

1/4-turn operation

means valves open and close quickly.

Encapsulated gaskets

in valve body eliminate cold flow and reduce recesses where media could accumulate and contaminate the process.

Large port size

assures unobstructed flow and helps prevent cavitation problems in piping systems.

Bottom entry stem

design provides added protection and safety against inadvertent stem removal and is ideally suited for high torque applications.

Stainless steel handles

with vinyl end covers are designed for sure grip. Handle position visually indicates whether the valve is open or closed.

Standard stainless steel

balls are precision machined to reduce torque and flow resistance, as well as provide added protection against corrosion and wear.

Optional cavity fillers

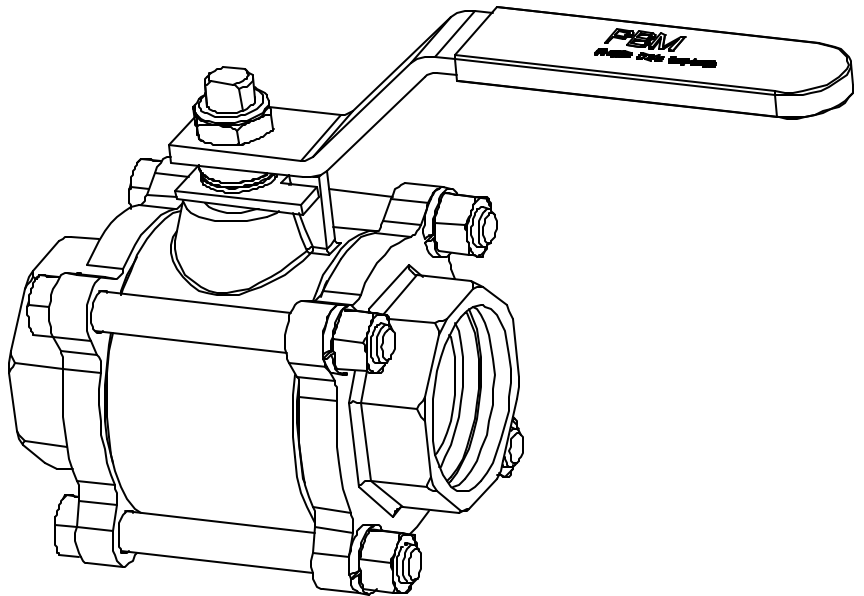
minimize areas where media could become trapped and contaminate the process.

Seawater Applications Product Bulletin

Two-Way Ball Valves

PBM manufactures reliable, high quality ball valves for marine applications.

This product bulletin describes our Series 1 Two-Way ball valves, available in sizes 1/4" through 6", and in various alloys compatible with seawater service.



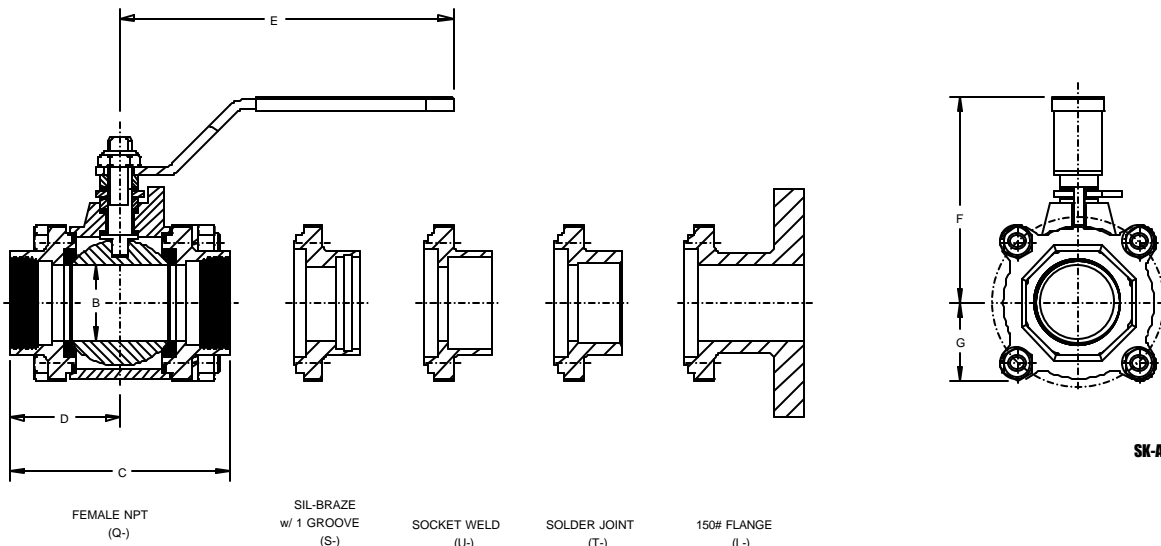
The best way to ensure valve performance is to match the valve to the process.

Choosing the right valve

The following dimensional data applies to PBM Two-Way Series 1 ball valves with 150# Flange (L-), Female NPT (Q-), Sil Braze with 1 Groove for Pipe (S-), Solder Joint for Copper Tube (T-), and Socket Weld for Pipe (U-) end fittings.

Valve Size	Port Diameter	Face to Face		Cl. to Face		Handle Length from Cl.	Cl. to Top of Handle	Cl. to Bottom	Weight (lbs.)	
		Q-, S-, U-, T-	L-	Q-, S-, U-, T-	L-				Q-, S-, U-, T-	L-
		1/4"	0.62	3.1	Note 2				1.6	Note 2
3/8"	0.62	3.1	Note 2	1.6	Note 2	5.1	3.0	1.3	2	Note 2
1/2"	0.62	3.1	5.3	1.6	2.6	5.1	3.0	1.3	2	6
3/4"	0.81	3.4	5.8	1.7	2.9	5.1	3.0	1.5	3	7
1"	1.00	3.9	6.3	1.9	3.1	6.1	4.1	1.7	4	9
1-1/4"	1.25	4.5	7.4	2.3	3.7	8.1	4.8	1.6	7	16
1-1/2"	1.50	5.4	7.0	2.7	3.5	8.1	5.1	1.7	9	18
2"	2.00	5.7	8.4	2.9	4.2	8.1	5.4	2.0	14	25
2-1/2"	2.50	8.3	10.8	4.2	5.4	12.1	5.4	2.8	34	47
3"	2.75	8.6	12.0	4.3	6.0	12.1	6.7	3.9	51	74
4"	3.50	10.5	12.9	5.2	6.5	12.1	7.2	4.5	79	115
6"	5.25	13.1	20.0	6.6	10.0	NOTE 6	NOTE 6	6.3	225	277

- Notes:**
1. Dimensional data shown in inches unless otherwise noted.
 2. No standard exists for 1/2" and 3/8" flanges. Consult PBM before ordering.
 3. Approximate weights (lbs.) shown are for Bronze valves. Other materials may affect weight.
 4. Drawings are for illustration purposes only. Consult PBM prior to fabrication or installation.
 5. Consult PBM for actuator mounting dimensions, if applicable.
 6. A gear operator is recommended. Consult PBM.



Ordering the right solution

The complete part number must contain 15 characters, using options from the table below. Typical delivery is stock to two weeks.

PRODUCT Position 1 + 2		MATERIAL 3 + 4		SIZE 5		SERIES 6	END FITTING 7 + 8		SEAT / SEAL 9	
SP	Two-Way	B -	836 Bronze	A	1/4"	1	L -	150# Flange	A	RTFE
		N -	922 Bronze	B	3/8"		Q -	Female NPT	B	RTFE with VTFE Cavity Filler
				C	1/2"		S -	Sill Braze with 1 Groove (for Pipe)		
				D	3/4"		T -	Solder Joint for Copper Tube		
				E	1"		U -	Socket Weld for Pipe		
				F	1-1/4"					
				G	1-1/2"					
				H	2"					
				J	2-1/2"					
				K	3" *					
				L	4" *					
				M	6" *					
FLOW PATTERN 10 + 11		BALL / STEM 12		OPERATOR 13 + 14		POLISH 15		CLEANING 16		
Insert two dashes (- -)		-	316 Stainless Steel	--	With Lever Handle	Insert one dash (-)		L	Lox cleaning	
		J	With 932 Bronze ball	02	Without Handle, prepared for actuation					
		L	With Monel ball, stem & followers	03	With Handle, prepared for actuation					
		Q	With 922 Bronze ball and Monel stem & followers	04	Locking device					
				05	Stainless Oval Handwheel					
				08	Gear Operator					
<p>Notes:</p> <ul style="list-style-type: none"> * Non-Full Port. Refer to the table on page 2 for port size data. 1. 3-, 4-, and 5-way valves also available. 2. 836 Bronze standard valve material. Other materials available upon request. 3. Other end fittings available upon request. 4. RTFE seats and seals standard. Other materials available. Cavity fillers available. 5. 316 Stainless Steel ball and stem standard. Other ball and stem options available upon request. 6. Stainless Steel handle and body fasteners standard. 7. Other operators, including pneumatic and electric actuation packages, available. Consult Factory. 										

Example:

Product 1 + 2	Material 3 + 4	Size 5	Series 6	End Fitting 7 + 8	Seat/Seal 9	Flow Pattern 10 + 11	Ball/Stem 12	Operator 13 + 14	Polish 15	Cleaning 16
SP	B -	H	1	S -	A	- -	J	05	-	L

Example: SPB-H1S-A--J05- is the correct code for a Two-Way, 836 Bronze, 2", Series 1 ball valve, with Sil Braze with One Groove end fittings, RTFE seats/seals, 932 Bronze ball, and S/S Oval Handwheel, with Lox cleaning

PBM has Solutions for...

Marine Applications

PBM valves are well-suited for the following marine applications:

Application	PBM Valves
Fire Main—Main Deck	Two-Way valves in Bronze
Vents/Drains	Diverter Port (3-way) and Two-Way valves in Bronze
Fuel Oil Transfer	Multi-Port valves and Fabflex® valve and manifold assemblies
Soil Water Drains	Diverter Port (3-way) and Two-Way valves in Bronze
Fuel Oil—Fill and Transfer	Multi-Port valves
Sewage Transfer	3" and 4" Diverter Port (3-way) valves and Two-Way valves
Oily Bilge	Two-Way and Multi-Port valves
Fuel Oil Service	Multi-Port valves and Fabflex® valve and manifold assemblies
Sewage Vacuum System	Two-Way valves in Bronze
Compressed Air	Two-Way valves with Stainless Steel trim
Anti-Roll Ballast Tank	6" Flush Tank valves
Sewage Overboard Discharge Systems	3" and 4" Diverter Port (3-way) valves
Fresh Water Systems	3" and 4" Diverter Port (3-way) valves and Two-Way valves

- Notes:** 1. For more information about PBM Diverter Port, Multi-Port, and Flush Tank valves, or Fabflex valve and manifold assemblies, visit our website or call 800.967.4PBM.
2. MIL-V-24509 valves available upon request.

Call 800.967.4PBM to learn more -- or fax this coupon to 724.864.9255 today!

Yes, I want to know more about PBM's seawater ball valves. Please contact me!

Name _____

Company _____

Address _____

City/State/Zip _____

Phone _____ Date _____

Testing and Certification

Shock and Vibration

testing available upon request.

Documentation

packages for provisioning available.

USCG Category A

PBM valves, when specified, meet USCG Category A shut-of. Material and Compliance Certification available upon request.

Important Notice

Due to PBM, Inc.'s commitment to advancing the quality and reliability of its product, PBM specifications and designs are subject to change. PBM reserves the right to modify product design without prior notice, and without incurring any liability to furnish or install such modifications on products previously or subsequently sold.

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