

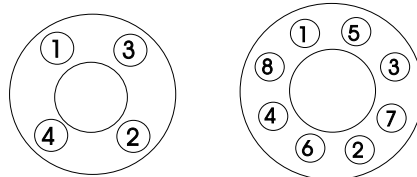
Flanged ball valve Installation

Remove end connection protectors (*if applicable*) and inspect the valve bore for foreign matter and clean if necessary. Inspect gasket contact area on valve flanges for damage. Do not dismantle valves prior to fitting, treat as a single unit. Install valve in line in either direction (Bi-directional close off). Secure valve in system by means of mating flange with full bolting and a suitable gasket. Tighten bolts evenly using the sequence shown in Figure 1. Make sure there is at least one thread of stud exposed on each side of the joint and that the valve to companion flanges are of the same pressure rating. After installation, cycle valve several times before putting into service.

Figure 1

Using the sequence shown at right, tighten the flange bolts evenly to assure uniform compression.

NOTE: Valves Must Be Installed With Suitable Gasket Material.



ANSI 150# Flanged Reduced Port

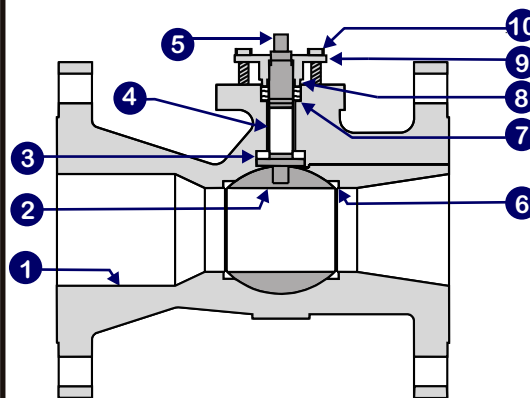
Valves are bi-directional 100% close off ANSI Class VI

Performance

Standard Valve Construction

Item	Description	Materials	Item	Description	Materials
Body Rating 285 psi WOG	1 Body	Carbon	6 Ball Seat	Glass Filled PTFE	
Steam Rating 150 psi Max.	2 Ball	Stainless	7 Stem Packing	Virgin PTFE	
Temp. Rating -20°F to 500°F	3 Stem Seal	Glass Filled PTFE	8 Gland Bushing	Virgin PTFE	
	4 Stem Bearing	Glass Filled PTFE	9 Gland	Stainless	
	5 Stem	Stainless	10 Gland Bolts	ASTM A193 B8	

NOTE: Valves Have Raised Face Flanged Ends And Require Gasketing Material
! Max. Temperature is at 0 psi, Steam is Saturated



ANSI 150# Flanged Full Port

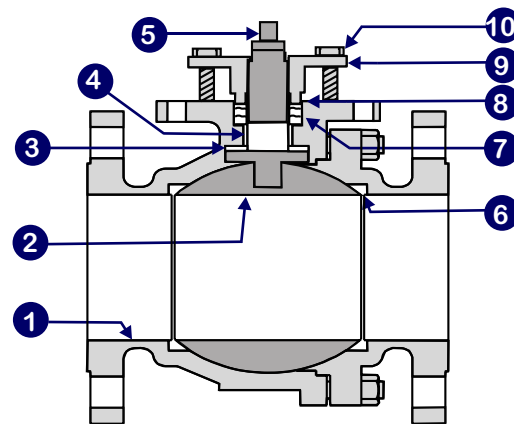
Valves are bi-directional 100% close off ANSI Class VI

Performance

Standard Valve Construction

Item	Description	Materials	Item	Description	Materials
Body Rating 285 psi WOG	1 Body	Carbon	6 Ball Seat	Glass Filled PTFE	
Steam Rating 150 psi Max.	2 Ball	Stainless	7 Stem Packing	Virgin PTFE	
Temp. Rating -20°F to 500°F	3 Stem Seal	Glass Filled PTFE	8 Gland Bushing	Virgin PTFE	
	4 Stem Bearing	Glass Filled PTFE	9 Gland	Stainless	
	5 Stem	Stainless	10 Gland Bolts	ASTM A193 B8	

NOTE: Valves Have Raised Face Flanged Ends And Require Gasketing Material
! Max. Temperature is at 0 psi, Steam is Saturated



1-Piece Body Model 5400 Standard Port Ball Valves

Automated Operation

Sufficient upstream and downstream piping runs must be provided to ensure proper valve capacity and flow response. Five diameters in each direction are recommended. Strainers should be installed to protect valve from debris. For specific details on the actuator refer to "Actuator" Section in catalog.

Maintenance

!!System Must Be De-Pressurized To Work On Valve!!

Leakage at Stem

If leakage from the stem is detected, first retighten gland bolts with an evenly distributed amount of force. Care should be taken not to over tighten the bolts as it would cause damage to actuators and would also reduce elasticity and consequently sealing performance of packing. If leakage is still observed, stem packing must be replaced. Before loosening and removing any parts from the valve, make sure that the system has been de-pressurized. Cycle the valve a few times to make sure that there is no pressure trapped inside body cavity. To replace gland packing, fully close the valve and remove snap ring on top of operating handle and remove handle. If automated, remove actuator and mount kit. Remove cap from the body turning counterclockwise with tool which fits insert slots. Remove ball from the body making sure not to scratch the ball surface. Remove seats and body gasket. Remove lock plate from top of stem and remove gland bolts. Remove gland bushing from gland and inspect for damage. Replace if necessary. Withdraw stem along with thrust washer and stem bearing through body cavity. Remove thrust washer and stem bearing from stem and inspect for damage. Replace if necessary. Remove stem packing from the stuffing box and replace with new packing. Carefully re-assemble parts and inspect for leaks.

Leakage In - Line

Check that valve is fully closed by looking at the flats on the valve shaft. If the flats are perpendicular to the valve body and leakage is occurring, it is due to damaged (worn out) seats or ball sealing surface. In these cases, it will be necessary to replace damaged components within the valve body with the valve removed from the system. To replace damaged components, remove cap from the body turning counterclockwise with tool which fits insert slots. Remove ball from the body making sure not to scratch the ball surface. Remove seats and body gasket from body and inspect. Replace if worn or damaged.

Leakage at Pipeline Joint

Test for tightness of bolts around flange. If loose, tighten using correct torque specifications. If leakage continues, remove body bolts and inspect flange gasket and sealing surfaces for damage. Replace or correct as necessary. If leakage continues, valve flange or housing must have been damaged during installation and the valve body should be replaced.

2-Piece Split Body Model 6400 Full Port Ball Valves

Automated Operation

Sufficient upstream and downstream piping runs must be provided to ensure proper valve capacity and flow response. Five diameters in each direction are recommended. Strainers should be installed to protect valve from debris. For specific details on the actuator refer to "Actuator" Section in catalog.

Maintenance

!!System Must Be De-Pressurized To Work On Valve!!

Leakage at Stem

If leakage from the stem is detected, first retighten gland bolts with an evenly distributed amount of force. Care should be taken not to over tighten the bolts as it would cause damage to actuators and would also reduce elasticity and consequently sealing performance of packing. If leakage is still observed, stem packing must be replaced. Before loosening and removing any parts from the valve, make sure that the system has been de-pressurized. Cycle the valve a few times to make sure that there is no pressure trapped inside body cavity. To replace gland packing, fully close the valve and remove snap ring on top of operating handle and remove handle. If automated, remove actuator and mount kit. Remove body nuts from body studs and split the two piece body. Remove the ball from body making sure not to scratch the ball surface. Remove seats and body gasket. Remove lock plate from top of stem and remove gland bolts. Remove gland bushing from gland and inspect for damage. Replace if necessary. Withdraw stem along with thrust washer and stem bearing through body cavity. Remove thrust washer and stem bearing from stem and inspect for damage. Replace if necessary. Remove stem packing from stuffing box and replace with new packing. Carefully reassemble parts and inspect for leaks.

Leakage at Body Joint

Check the tightness in the body connector bolts. If loose, tighten body bolts with standard wrenches. Excessive force is not necessary, as it might cause the bolts to be damaged. If leakage is still observed, the Body gasket will need to be replaced. To replace damaged component, remove the body nuts from body studs to split the valve body. Remove the body seal(s) and inspect. Replace worn or damaged soft goods. Repair kit contains all soft goods.

Leakage In - Line

Check that valve is fully closed by looking at the flats on the valve shaft. If the flats are perpendicular to the valve body and leakage is occurring, it is due to damaged (worn out) seats or ball sealing surface. In these cases, it will be necessary to replace damaged components within the valve body with the valve removed from the system. To replace damaged components, remove body nuts from body studs to split the valve body. Remove ball from the body making sure not to scratch the ball surface. Remove seats and body gasket from body and inspect. Replace if worn or damaged.

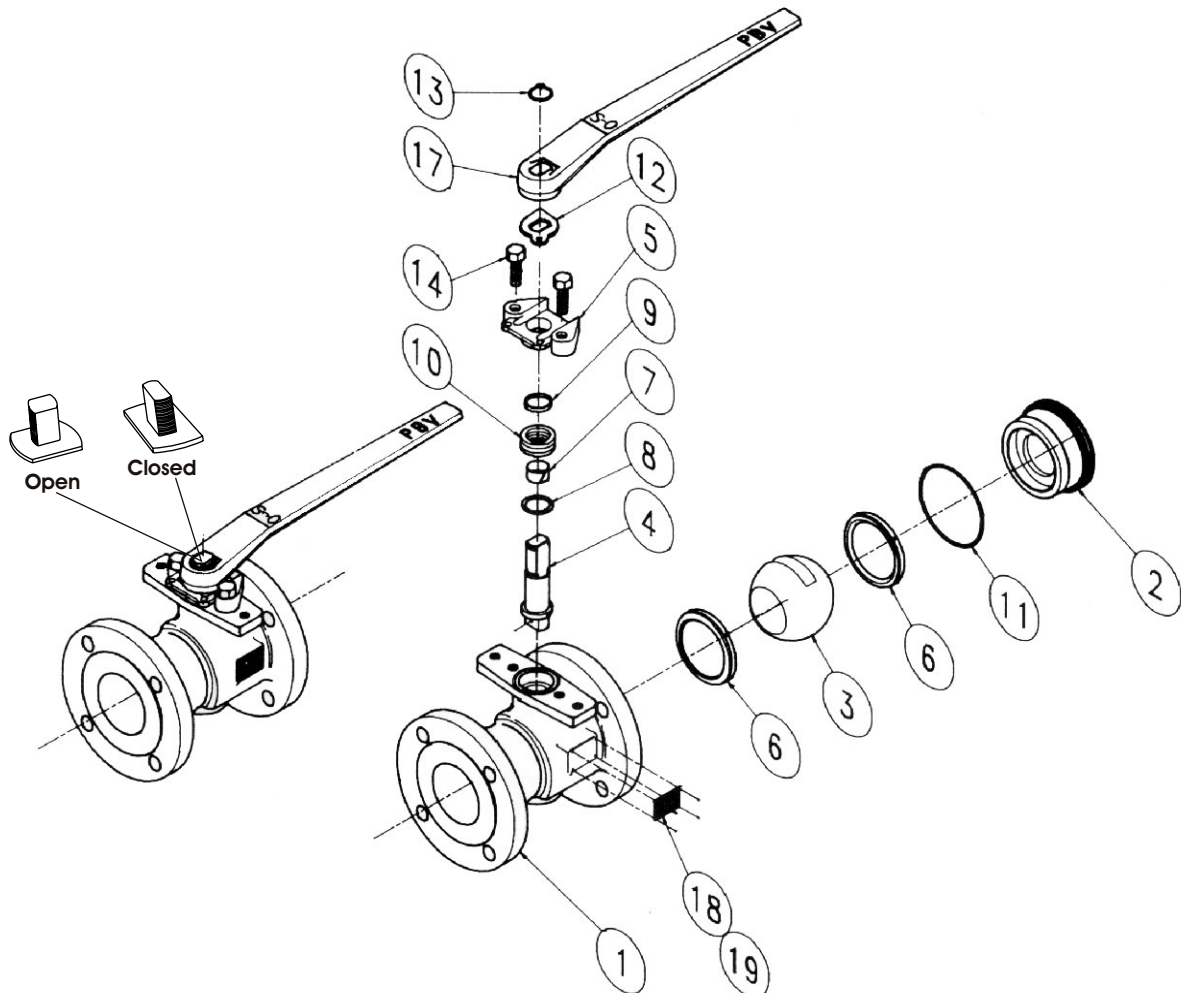
Leakage at Pipeline Joint

Test for tightness of bolts around flange. If loose, tighten using correct torque specifications. If leakage continues, remove body bolts and inspect flange gasket and sealing surfaces for damage. Replace or correct as necessary. If leakage continues, valve flange or housing must have been damaged during installation and the valve body should be replaced.

Exploded View

ANSI Class 150#, 300#, 600#

Part	Part Name	Materials	Part	Part Name	Materials
1	Body	Carbon / Stainless	11	Body Gasket	Virgin PTFE
2	Cap	Carbon / Stainless	12	Lock Plate	Stainless Steel
3	Ball	Carbon	13	Snap Ring	Stainless Steel
4	Stem assembly	Stainless	14	Gland Bolt	ASTM B7 or B8
5	Gland	Carbon	15	Body Stud	ASTM 2HM or 8A
6	Seat	Glass Filled PTFE	16	Body Nut	Stainless Steel
7	Stem Bearing	Glass Filled PTFE	17	Handle	Ductile iron
8	Thrust Washer	Glass Filled PTFE	18	Name Plate	Stainless Steel
9	Gland Bushing	Virgin PTFE	19	Drive Screw	Stainless Steel
10	Stem Packing	Virgin PTFE			



Exploded View

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7	Stem Bearing	Glass Filled PTFE	17	Handle	Ductile iron
8	Thrust Washer	Glass Filled PTFE	18	Name Plate	Stainless Steel
9	Gland Bushing	Virgin PTFE	19	Drive Screw	Stainless Steel
10	Stem Packing	Virgin PTFE			

