



Diamond Slimline Ball Valve Maintenance Instructions

SEAL KITS:

SIZE	PART No. (With Cavity Fillers)	PART No. (Without Cavity Fillers)
1.0"	KSLH10 _____	KSLS10 _____
1.5"	KSLH15 _____	KSLS15 _____
2.0"	KSLH20 _____	KSLS20 _____
2.5"	KSLH25 _____	KSLS25 _____
3.0"	KSLH30 _____	KSLS30 _____

IMPORTANT Please read carefully before commencing any work on this valve:

1. Ensure that the line pressure is zero and fully drained and that all pneumatic and power supplies are turned off and isolated.
2. When operating the valve ensure that fingers are clear of moving parts to avoid injury.
3. Gaskets and seals should be stored away from UV light to increase shelf life.
4. Ensure that pipes and connections are properly aligned before mounting the valve in position to avoid undue stress and leakage.
5. Valves should be stored in the open position to prevent seal set around the valve ball. If stored in the mid-position seal set will increase the closing torque when first operating the valve.
6. Always operate the valve open and closed several times before use to ensure correct function.
7. The user should adopt a maintenance programme for valves depending on frequency of use and application particulars. DPL recommends seal replacement at least every two years.

DISMANTLING PROCEDURE: Ensure that all of the IMPORTANT points listed on the left side of this page have been addressed prior to commencing work on your valve. The valve should be operated to a half open position (45 deg) as shown in fig 1 below to ensure that any pressure trapped behind the ball is released prior to removal from the line.

1. Secure the valve in a soft jaw vice and remove the handle or actuator as depicted below, see figures 2, 3 & 4 as applicable for your valve.
2. Loosen the valve flange bolts, a little at a time each, and remove them from the valve flanges.
3. Carefully remove the valve from the vice, taking care to hold the valve flanges together, thus keeping all valve internals in place.
4. Place the valve assembly on the bench and carefully remove the seals and all valve internals from the valve flanges. See figure 5. PTFE seals are easily damaged, take care when removing. The spindle seals can be carefully removed from the location ring as shown in fig 6.

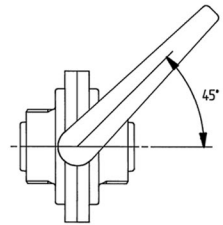


Figure 1. Ensure zero line pressure. Operate the valve to a half open position (45°) prior to removal from the line to release trapped pressure. If actuated, cycle open / closed.

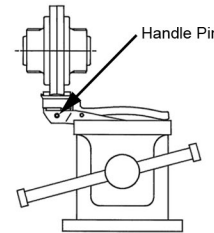


Figure 2. 1.0" to 2.0" Valves: Remove handle, if fitted, by removing the handle pin as shown to the left.

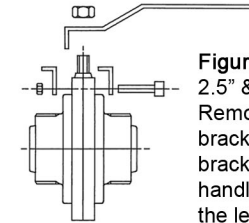


Figure 3. 2.5" & 3.0" Valves: Remove the handle bracket bolts, brackets and handle as shown to the left.

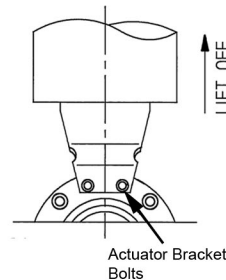


Figure 4. Remove actuator bracket bolts and remove actuator, if fitted. Note the open/ closed position of the valve to enable correct re-assembly.

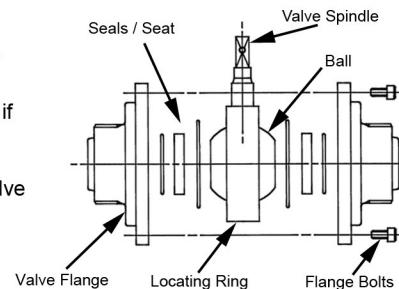


Figure 5. Remove flange bolts and separate the valve halves to reveal valve internals

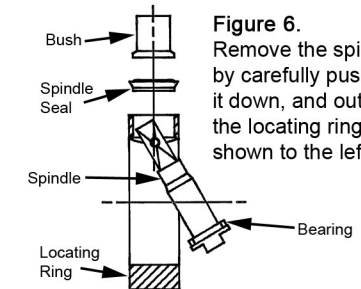


Figure 6. Remove the spindle by carefully pushing it down, and out of the locating ring as shown to the left.

ASSEMBLY PROCEDURE: The assembly procedure is the dismantling procedure in reverse order, and to include the following notes. Take care when fitting PTFE seals as they are easily damaged. Use a small amount of food grade grease to aid assembly, always use new seals.

5. To refit the spindle seal first fit the bearing onto the spindle then insert the spindle into the locating ring as depicted in figure 6. Hold the spindle in place with the bearing correctly located in the inner recess of the locating ring. Next push the spindle seal with "O" ring facing upwards onto the spindle followed by the bush. Push the spindle seal firmly into the locating ring using the bush. Make sure the spindle seal is fully home.
6. Replace all seals and internal components, flange bolts should be gradually tightened in a diagonal pattern to ensure even tightening.
7. Once all bolts are fully tight, keep fingers clear of moving parts and manually operate the valve open / closed to check for correct operation.
8. Re-fit the actuator or handle. Check that the ball is in the correct orientation when the valve is open and closed in accordance with the handle position / actuator state (as noted in figure 4). Keep fingers clear of the valve if operating open / closed using an actuator.
9. Valves should be pressure tested with water following maintenance. Follow your in-house test procedures, max operating pressure is 10 bar.



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