



Diamond Single Seat Valve Maintenance Instructions

| SINGLE BODY VALVES | | |
|--------------------|-------------------|----------|
| SIZE | SEAL KIT PART No. | THIS KIT |
| 1.0" | KSVS10 _____ | _____ |
| 1.5" | KSVS15 _____ | _____ |
| 2.0" | KSVS20 _____ | _____ |
| 2.5" | KSVS25 _____ | _____ |
| 3.0" | KSVS30 _____ | _____ |
| 4.0" | KSVS40 _____ | _____ |
| DOUBLE BODY VALVES | | |
| SIZE | SEAL KIT PART No. | THIS KIT |
| 1.0" | KSVD10 _____ | _____ |
| 1.5" | KSVD15 _____ | _____ |
| 2.0" | KSVD20 _____ | _____ |
| 2.5" | KSVD25 _____ | _____ |
| 3.0" | KSVD30 _____ | _____ |
| 4.0" | KSVD40 _____ | _____ |

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

1. Ensure that the line pressure is zero and fully drained and that power supplies are turned off and isolated.
2. When operating the valve open & closed ensure that fingers are clear of the valve to avoid injury.
3. No attempt must be made to dismantle the actuator cylinder, the compressed spring inside may cause serious harm if released.
4. The additional ATEX / Equivalent UK Regulations Installation & Maintenance Instructions must be used in conjunction with this document to ensure safe use of ATEX / equivalent UK regulations rated valves. **CONNECTING PIPEWORK MUST BE EARTHED.**
5. Gaskets and seals should be stored away from UV light to increase shelf life.
6. Ensure that pipes and connections are properly aligned to avoid undue stress and leakage.
7. The user should adopt a maintenance programme for valves depending on application particulars. DPL recommends seal replacement at least every two years.

DISMANTLING PROCEDURE:

Ensure that all **IMPORTANT** points listed on the left side of this page have been addressed prior to commencing work on your valve. The line pressure must be zero and the product line / valve bodies drained prior to removal of the valve assembly from your process line. Be sure to have a new seal kits to hand prior to dismantling. Seal kits are available from DPL using the part numbers shown on the left side of this page.

NORMALLY CLOSED VALVES ONLY (spring pushing down)

The following procedure to dismantle the valve involves actuating the valve (using compressed air) to the open position. Great care must be taken when introducing air pressure to the actuator. During pneumatic operation the central valve shaft / actuator shaft / seat assembly will move. Hands / fingers / loose clothing should be kept away from moving parts wherever possible during actuation. Refer to the valve assembly drawing on page 3 whilst following the procedure below.

1. Locate a suitable airline feed with a 5.5 bar supply pressure. Ensure that the airline pressure is zero, then connect to the lower air connection of the valve actuator. Keeping fingers clear of the valve, apply air pressure to the actuator. The valve will open.
2. For single body valves: - Using an appropriate size spanner, undo and remove the valve body End Cap Bolts. Lift off the actuator taking with it the spindle, guide and seat assembly as one unit. Place the body to one side for now. Check that the body seals came out with the assembly when removed. Now go to section 5.
3. For double body valves: - Using an appropriate size spanner, undo and remove the 4 bolts that join the valve bodies together (Body Joining Bolts). Lift off the actuator and the upper valve body assembly, taking with it the spindle, guide and seat assembly. Place the lower body to one side for now. Check that the body seals came out with the assembly when removed.
4. Keeping fingers clear of the valve assembly, remove the air supply to the actuator. The valve will return to the closed position. Undo and remove the valve body End Cap Bolts.
5. Remove the lower coupling retaining clip, and remove the coupling pin. Pull the spindle / seat assembly out and away from the guide / valve assembly. The valve internals are now accessible, and should be cleaned ready for seal replacement.
6. Place the spindle / seat assembly in a soft jaw vice, holding securely on the spindle shaft. Place a suitably sizes screw driver shaft through the hole at the coupling end of the spindle. Whilst holding the screwdriver in place the seat assembly can be un-screwed using an adjustable spanner on the flats at the base of the assembly. Once loose, the seat assembly can be dismantled, cleaned and seals replaced.
7. To reassemble the valve following the above procedure in reverse order, to include the following points: Ensure the 'O' ring body seals are correctly located on the guide. Food grade, process compatible grease can help hold the seals in position. Tighten bolts evenly, a little at a time so as to ensure even compression of the body seals. Ensure that hands/fingers are clear of the valve when applying or disconnecting the airline supply to avoid injury from moving parts.
8. Valves should be pressure tested with water following maintenance. Follow your in-house test procedures, max operating pressure is as follows: 1.0" Valves: 10 Bar. 1.5" to 3.0" Valves: 7 Bar. 4.0" Valves: 4.5 Bar.

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| DOUBLE BODY VALVES | | |
| SIZE | SEAL KIT PART No. | THIS KIT |
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| 2.0" | KSVD20 _____ | _____ |
| 2.5" | KSVD25 _____ | _____ |
| 3.0" | KSVD30 _____ | _____ |
| 4.0" | KSVD40 _____ | _____ |

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

1. Ensure that the line pressure is zero and fully drained and that power supplies are turned off and isolated.
2. When operating the valve open & closed ensure that fingers are clear of the valve to avoid injury.
3. No attempt must be made to dismantle the actuator cylinder, the compressed spring inside may cause serious harm if released.
4. The additional ATEX / Equivalent UK Regulations Installation & Maintenance Instructions must be used in conjunction with this document to ensure safe use of ATEX / equivalent UK regulations rated valves. CONNECTING PIPEWORK MUST BE EARTHED.
5. Gaskets and seals should be stored away from UV light to increase shelf life.
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DISMANTLING PROCEDURE:

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NORMALLY OPEN VALVES ONLY (spring pushing up). See page 1 for normally closed valves.

The following procedure to dismantle the valve involves actuating the valve (using compressed air) to the closed position. Great care must be taken when introducing air pressure to the actuator. During pneumatic operation the central valve shaft / actuator shaft / seat assembly will move. Hands / fingers / loose clothing should be kept away from moving parts wherever possible during actuation. Refer to the valve assembly drawing on page 3 whilst following the procedure below.

1. For single body valves: - Using an appropriate size spanner, undo and remove the valve body End Cap Bolts. Lift off the actuator taking with it the spindle, guide and seat assembly as one unit. Place the body to one side for now. Check that the body seals came out with the assembly when removed. Now go to section 4.
2. For double body valves: - Using an appropriate size spanner, undo and remove the 4 bolts that join the valve bodies together (Body Joining Bolts). Lift off the actuator and the upper valve body assembly, taking with it the spindle, guide and seat assembly. Place the lower body to one side for now. Check that the body seals came out with the assembly when removed.
3. Keeping fingers clear of the valve assembly, apply the 5.5 bar air supply to the upper air connection on the actuator. The valve will move to the closed position. Undo and remove the valve body End Cap Bolts.
4. Remove the lower coupling retaining clip, and remove the coupling pin. Pull the spindle / seat assembly out and away from the guide / valve assembly. The valve internals are now accessible, and should be cleaned ready for seal replacement.
5. Place the spindle / seat assembly in a soft jaw vice, holding securely on the spindle shaft. Place a suitably sizes screw driver shaft through the hole at the coupling end of the spindle. Whilst holding the screwdriver in place the seat assembly can be un-screwed using an adjustable spanner on the flats at the base of the assembly. Once loose, the seat assembly can be dismantled, cleaned and seals replaced.
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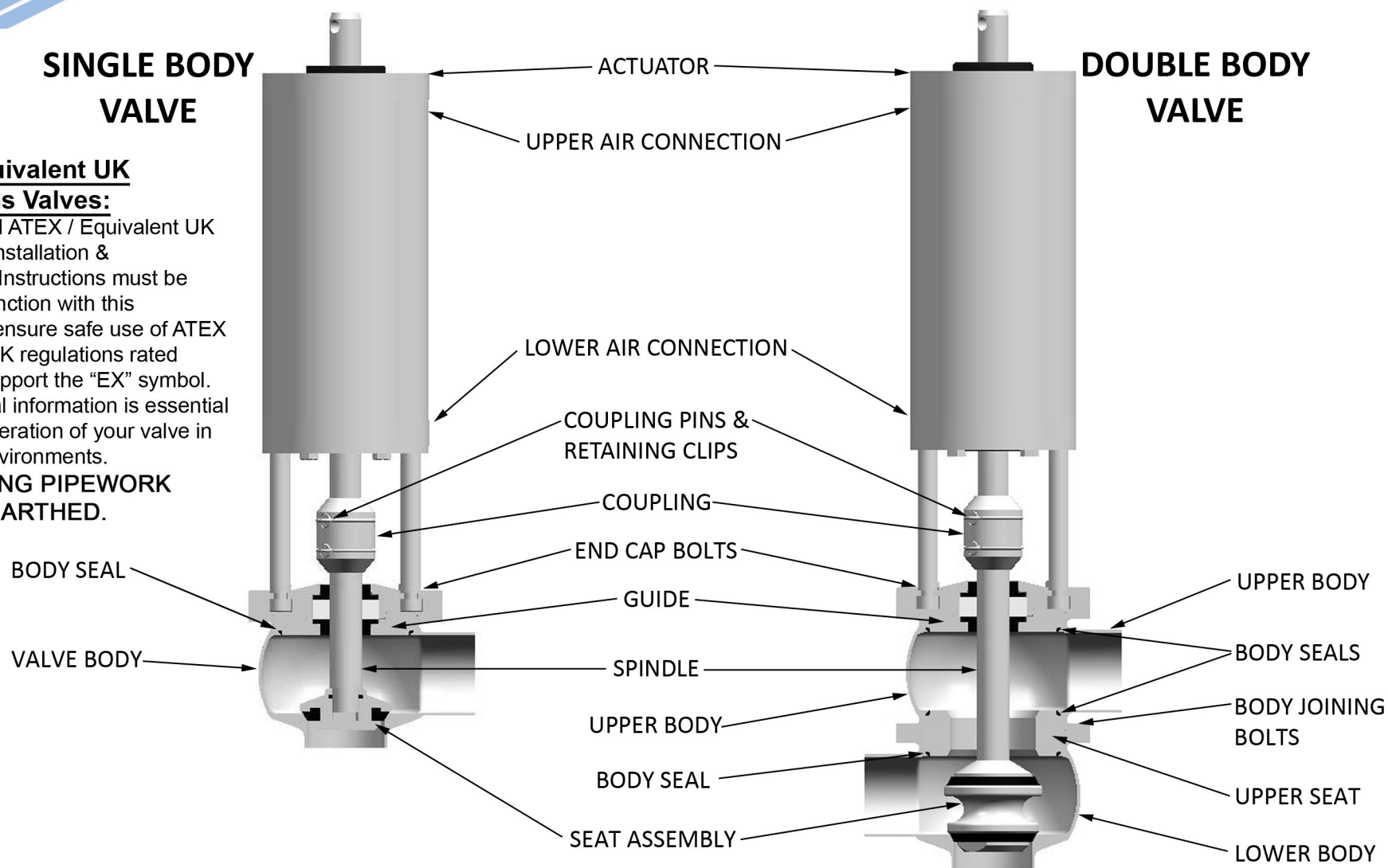


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ATEX / Equivalent UK Regulations Valves:

The additional ATEX / Equivalent UK Regulations Installation & Maintenance Instructions must be used in conjunction with this document to ensure safe use of ATEX / equivalent UK regulations rated valves that support the "EX" symbol. This additional information is essential to the safe operation of your valve in hazardous environments.

CONNECTING PIPEWORK MUST BE EARTHED.



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