



# Diamond Double Seat Valve

## IMPORTANT INFORMATION - PLEASE READ CAREFULLY BEFORE INSTALLING YOUR UNIT

### INSTALLATION INFORMATION

A process system can generally be associated with many varying conditions such as water hammer, pressure shock, vibration and thermal expansion due to temperature change. Stress and strain within the pipeline will result, and unless such conditions are allowed for at the system design and installation stages, the valve and pipe assembly may be damaged.

When installing the valve into a pipe assembly system, careful consideration must be made to ensure adequate support by means of framework and pipe clip fasteners, for both the valve and the surrounding pipe assembly.

If welding the valve body directly into the pipeline, the valve should be partly disassembled and all seal components removed from the valve body ( see instructions over page ). This will prevent heat damage to the valve seals and other internal components. Gas backed TIG welding is recommended, a minimum weld bead should be produced to reduce the risk of heat distortion within the valve body.

The actuator air inlet / exhausts are located on the side or top of the actuator cylinder. Air fitting size is 1/8" BSP Female. Recommended air supply pressure is 5.5 bar. Maximum air supply pressure is 6 bar. **\*\*IMPORTANT\*\*** Great care should be taken when operating the valve. Fingers should be kept clear to avoid the risk of entrapment / crushing from moving parts. To avoid serious injury, the actuator cylinder is a welded closed assembly. No attempt should be made to dismantle the actuator cylinder as this houses a powerful spring under compression.

### IMPORTANT INFORMATION FOR DOUBLE SEAT VALVES

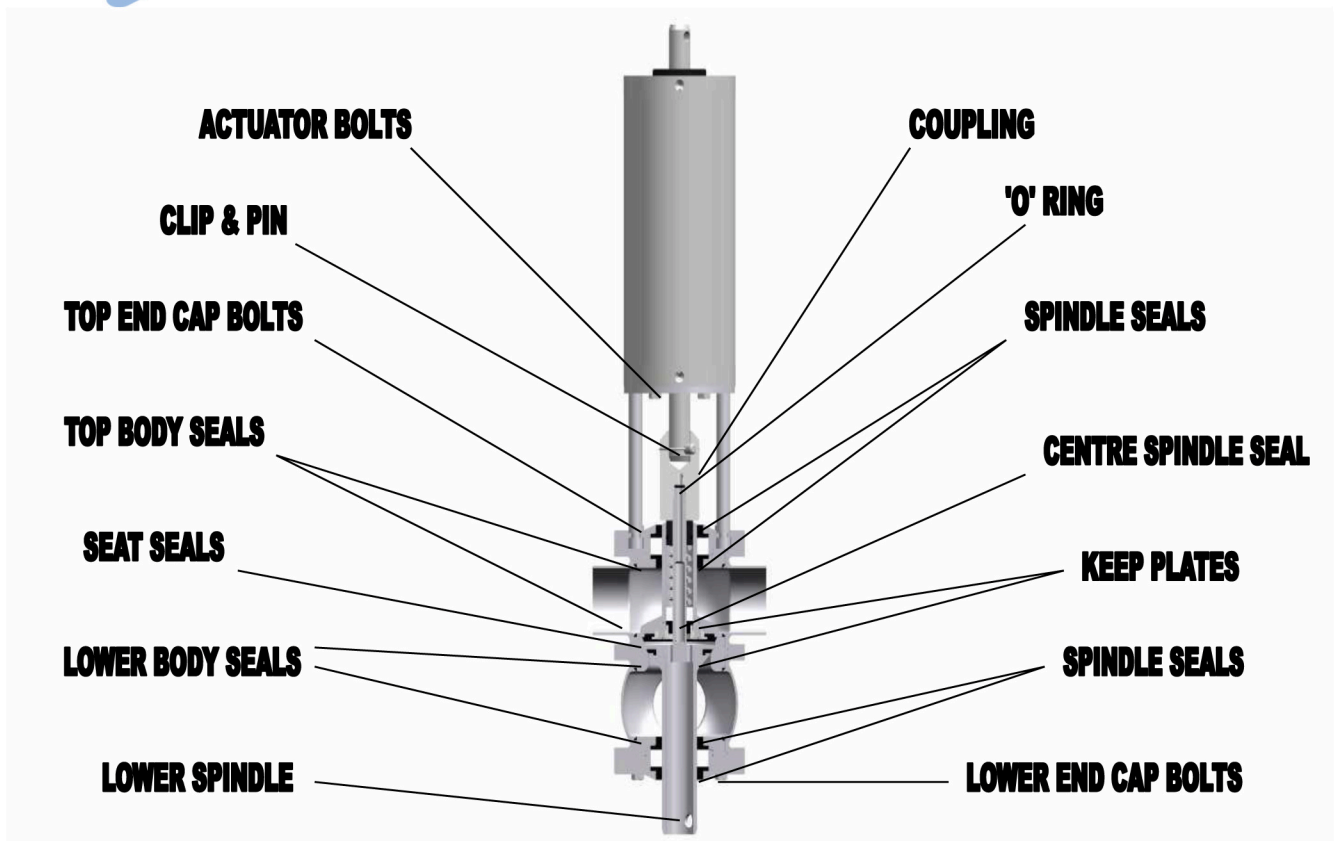
As with all valves of this type of design, to allow for future maintenance it is advisable not to weld both the upper and the lower valve bodies into a pipe assembly. It is recommended that all the ports or the upper body ports are of a coupling type so that this part of the valve body can be separated from the manifold/line to allow maintenance of the lower body seals. If the valve is to be welded in place please read carefully the note over page.

### PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU

Article 4, paragraph 3 - Sound Engineering Practise (SEP) applies to this product for non-group 1 use and at pressures not exceeding: 1.0" & 1.5" Valves = 5.5 Bar. 2.5" & 3.0" Valves = 6.0 Bar. 4.0" = 5.5 Bar.

### VALVE SPARES KITS

The user should establish a maintenance programme for valves depending upon the type of product and frequency of the valve use. Spares kits with full maintenance instructions are available from Dairy Pipe Lines sales. See the table in this leaflet for spares kit numbers for your valve.



**WELDING IN PLACE:** If the upper and lower bodies are to be welded in place, a minimum of 50 mm movement must be allowed between the upper and lower pipe work to fit the valve centre seat O-rings. All seals should be removed before welding tube or fittings to the valve bodies.

For Normally Closed Valves (spring pushing down).

The following procedure to remove the actuator from the valve involves actuating the valve to the open position (using compressed air). Great care must be taken when introducing air pressure to the actuator. As the valve is actuated the central valve/actuator shaft will move. Hands/fingers and loose clothing should be kept away from the moving parts of the valve wherever possible, as the valve is actuated. **Normally open valves should not be actuated, thus skipping item 1 below.**

1. First of all actuate the valve to the open position by applying 80 psi air pressure to the air fitting on the lower side/underside of the actuator, this will ease the removal of the four Top End Cap Bolts.
2. Remove the four "Top End Cap Bolts". The actuator, lantern and valve spindle can then be lifted away from the bodies as a sub-assembly. The sub-assembly contains most of the seals. Lay this to one side to avoid damage. The air supply can now be released if required, taking great care due to moving parts as the air is released, as noted above.
3. The remaining 8 body bolts can now be removed allowing access to remove the 3 O-rings (body seals).
4. It is recommended that the two bodies are bolted back together without the O-rings for welding to ensure correct alignment of the body bolts. Use the appropriate weld procedures to weld the bodies accordingly.
5. Following welding allow all parts to cool before proceeding. The body seals should now be replaced and the 8 body bolts tightened. Tip: Use process compatible grease to hold the seal rings in place during assembly.
6. Actuate the valve sub-assembly open as in step 1 (if normally closed) before refitting into the valve bodies. Actuation will ease the re-fitting of the top end cap bolts. Fit the remaining 4 bolts and as a final check ensure that all seals are fitted and that all bolts are tight before releasing the air pressure to the actuator on completion.



**SEAL KITS AVAILABLE FOR ROUTINE MAINTENANCE  
THE VALVE SIZE IS GIVEN BY THE PORT SIZE**

**DOUBLE SEAT VALVE**

Valve Size:	Kit Part Number:
1.5 inch	KDSV15 +Seal Suffix letter
2.0 inch	KDSV20
2.5 inch	KDSV25
3.0 inch	KDSV30
4.0 inch	KDSV40

Specify the seal material required by adding the suffix letter to the above Part Numbers:  
E: EPDM   V: VITON   N: NITRILE   F: FEP   S: SILICONE

For more information on this or any other product within our range please contact us and we will be pleased to assist you. Tel: 01799 522885. Web: [www.dpluk.co.uk](http://www.dpluk.co.uk)