



Diamond Three Way Ball Valve

INSTALLATION AND OPERATING INSTRUCTIONS IMPORTANT - PLEASE READ CAREFULLY BEFORE INSTALLING YOUR VALVE

INSTALLATION

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 Ball Valve into a pipe assembly system, careful consideration must be made to ensure good alignment and adequate support for the weight of the valve and pipe assembly by means of framework and pipe clip fasteners. For future maintenance, always make allowance for pipe movement within the pipe assembly (by releasing clips etc) to allow access to the valve seals / coupling seals.

VALVES WITH COUPLING FITTINGS

If the valve is fitted with end connections the valve does not require dismantling prior to installation.

VALVES WITH PLAIN ENDS FOR BUTT WELDING

If welding the valve directly into the pipeline, the valve flanges should be disassembled from the valve body and all seal components removed from the valve body (see page 2). This will prevent heat damage to the valve seals and other internal components. The alignment and squareness of the butt weld joints is important to ensure correct operation and leak tightness of the valve. Gas backed TIG welding is recommended, a minimum weld bead should be produced to reduce the risk of heat distortion within the valve flanges.

IMPORTANT Upon re-assembly it is very important to ensure that the valve ball is correctly orientated. The 'T' or 'L' path through the valve ball should correspond with the 'T' or 'L' marked on the valve stem. This marking is located on the top end of the valve stem. PTFE seals will 'bed in' with use and the valve should be periodically checked for tightness of the body seal and the spindle stem seal.

VALVE SPARES KITS

The user should establish a valve maintenance programme dependant upon the product and frequency of use. Spares kits (part numbers below) with full maintenance instructions are available from DPL.

Valve Size:	Spares Kit Part No.
0.5"	KB3WLV05
0.75"	KB3WLV07
1.0"	KB3WLV10
1.5"	KB3WLV15
2.0"	KB3WLV20
2.5"	KB3WLV25
3.0"	KB3WLV30

The Pressure Equipment Directive 2014/68/EU & The UK Pressure Equipment (Safety) Regulations 2016 SI 1105: Sound Engineering Practise (SEP) applies to this product for non-group 1 use and at pressures not exceeding 10 bar.



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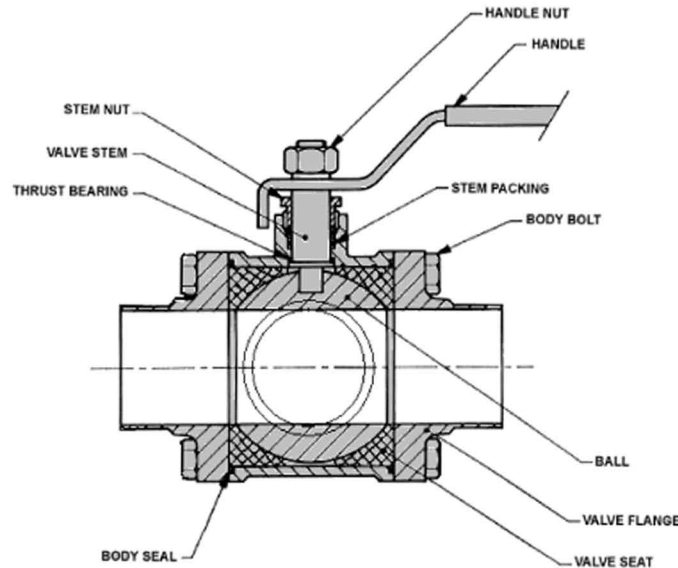
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WELD IN PLACE PROCEDURE

1. Prepare the pipe and valve flange ends for welding as per your company welding procedure.
2. Remove the actuator if fitted, noting the drive coupling / valve ball position for correct re-assembly. Using a suitable size spanner / wrench, loosen the 4 body bolts on each of the three valve port flanges and re-tighten to finger tight (12 bolts in total).
3. Align the ball valve to the pipe and using minimum heat, tack weld the butt weld ends of the flanges to the pipes. Allow to cool.
4. Carefully remove the body bolts from each of the 3 flanges and remove the centre body assembly intact.
5. Remove the PTFE seals and the ball from the valve body.
6. Replace the valve body back between the flanges tightening the body bolts finger tight only to hold the three flanges square, ready for welding.
7. Weld the flange ends in position as per your company welding procedure. Leave to cool.
8. Carefully remove the body bolts from the 3 welded flanges, remove the centre body from between the flanges.
9. Upon re-assembly it is very important to ensure that the valve ball is correctly orientated. The 'T' or 'L' path through the valve ball should correspond with the 'T' or 'L' marked on the valve stem. This marking is located on the top end of the valve stem.
10. Re-assemble the ball and PTFE seals into the valve body. Rotate the ball via the stem / handle to ensure correct function / orientation as per step 9.
11. Once more, replace the valve body assembly back between the flanges, initially tightening the body bolts finger tight only. Tighten the bolts gradually using a spanner / wrench, working on one flange at a time, working in a diagonal pattern to ensure even tightening of each flange. Ensure all 12 bolts are fully tight on completion.
12. Keeping fingers clear of the ball, open and close the valve via the stem / handle to ensure correct operation / orientation as described in step 9 above.
13. If an actuator was fitted, this should now be refitted to the valve, ensure correct orientation as previously noted in step 2. Once fitted, the actuator should be operated open / closed, keeping fingers clear of moving parts, to check for correct function / correct orientation of the ball.

VALVE SPARES KITS with full maintenance instructions are available from DPL please contact us using the information provided below.



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