



Diamond Series 3 Pressure Relief Valve

INSTALLATION & OPERATING INSTRUCTIONS

IMPORTANT INFORMATION - PLEASE READ CAREFULLY BEFORE INSTALLING YOUR VALVE

With regard specifically to the Pressure Equipment Directive (2014/68/EU), DPL valves fall within the category of Sound Engineering Practice (Not to be CE marked) for hygienic use at pressures not exceeding 10 bar and non-group 1 use. This is in-line with the pressure/size constraints in the directive for valves as per the British Valve and Actuator Manufacturers Associations (Trade Association) guidelines. Our Test Certificate will be issued with each valve order stating that the valve is within the PED requirements and giving the relevant group and category under Sound Engineering Practice.

The valve and the operating lever are packed separately for safe transport. The lever must be re-fitted to the valve on receipt. The lever should be fitted to the top of the valve and secured in place using the pin and clip provided. See the assembly view on page 2 for more information. To avoid potential harm to the operator, fingers must be kept clear of the valve ports at all times when lifting and lowering the lever.

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.

The relief pressure for the valve will have been set at the DPL factory. This can not be altered without first removing the lift lever and bonnet top as described in the separate Maintenance Instructions for this valve. The lift lever can be rotated to a suitable operating position without affecting the relief set-pressure.

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.

To allow for proper drainage this type of valve should be mounted vertically. If in use and the valve is operated infrequently, the valve should be manually operated, via the lift lever, under safe working conditions, periodically to avoid the seat seal sticking to the valve seat.

ATEX VALVES

Please refer to the separate document "Diamond Series 3 Pressure Relief Valves Installation & Maintenance - ATEX" to be used in conjunction with this document when installing or maintaining 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.

VALVE SPARES KITS

The user should establish a maintenance programme for valves depending upon the type of product and frequency of use. Spares kits and maintenance instructions are available from DPL sales.

Valve Size	Spares Kit Part No.	Seal Material Suffix
1.0" Valve	KP3R10 *	* Denotes the seal material suffix: E - EPDM V - Viton N - Nitrile S - Silicone P - PTFE
1.5" Valve	KP3R15 *	
2.0" Valve	KP3R20 *	
2.5" Valve	KP3R25 *	
3.0" Valve	KP3R30 *	
4.0" Valve	KP3R40 *	

Please Note: To aid in the identification of your valve, the Spares Kit Part Number is marked on the valve body together with the date of supply.



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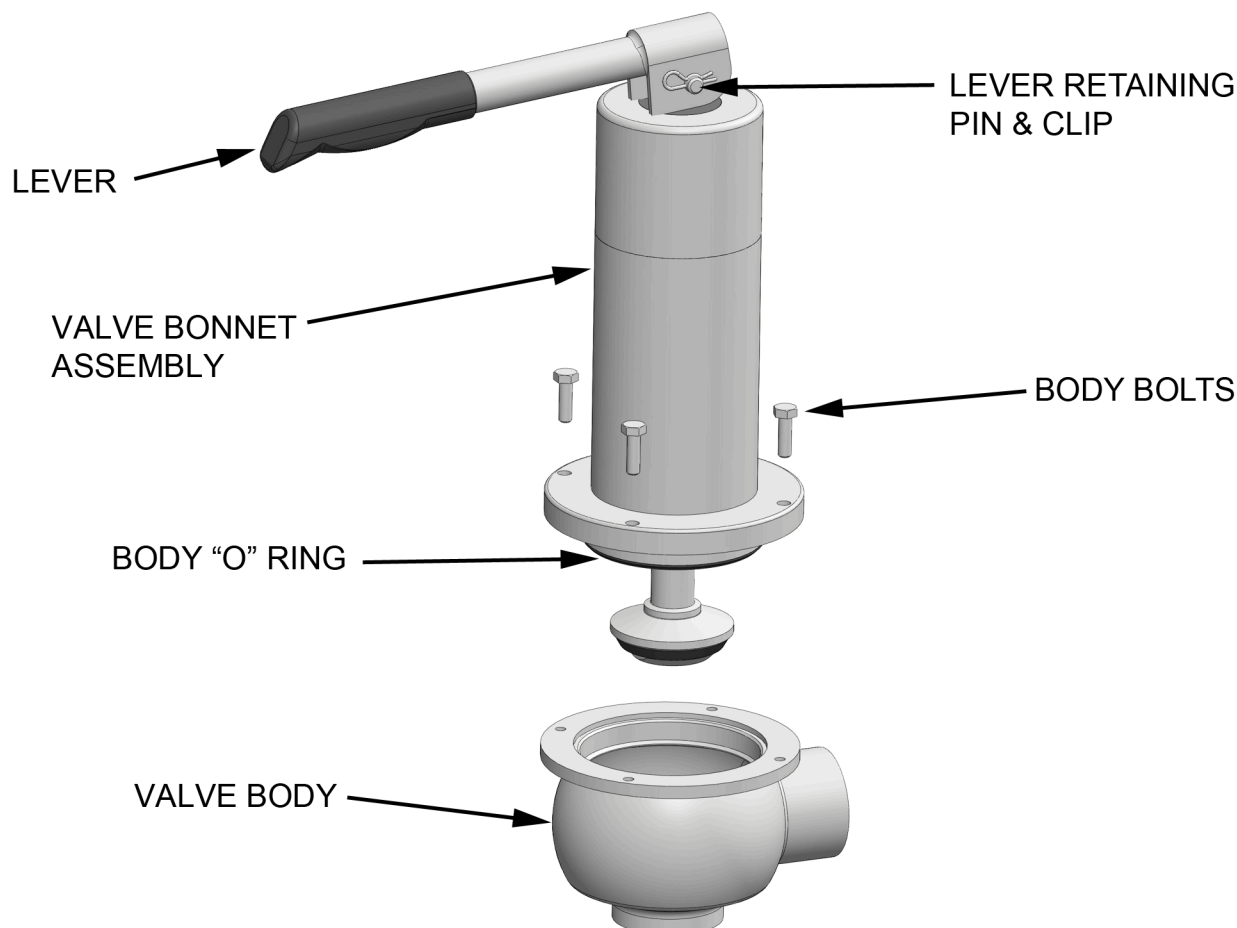
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DISMANTLING PROCEDURE FOR WELDING IN PLACE

1. Place the valve body in a soft jaw vice. Use only sufficient pressure to hold the valve in place, excessive force may damage the valve body. Lift the lever to relieve the spring pressure from the valve seat.
2. With the lever held in the raised position carefully undo and remove the four body bolts.
3. Carefully lower the lever. The bonnet assembly will lift away from the valve body slightly. Carefully lift the bonnet assembly away from the valve body. Make sure that the body O ring is also removed from the body.
4. Prepare the valve body for welding as per your welding procedure. Ensure that the ends to be welded are thoroughly clean. Do not use excessive heat when welding as this will distort the valve body. Use a minimum weld bead only. Allow the welds to cool.
5. Re-assemble the valve bonnet assembly into the valve body. Ensure that the body O ring is correctly located. Use a small amount of food grade grease to help hold the O ring in place on re-assembly. Lift the valve lever and replace the four body bolts, tightening each one in turn to ensure correct seating between the bonnet and body. Make sure there are no gaps between the bonnet and body flange as this could indicate incorrect assembly or that the body O ring has become trapped.
6. Carefully lower the valve lever so that the valve is seated closed once more. The valve is now ready for use.

NOTE:

If adjustment of the relief pressure is required, a calibrated test rig / hand pump should be used. Please follow the procedure for pressure relief adjustment which can be found in the separate Maintenance Instructions for this valve range.



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