

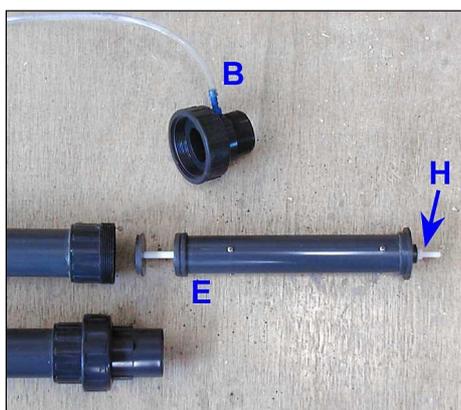
How to install the 'Low Site Valve Assembly' on your BubbleBead Filter ('TwinValve' Range)

The Low Site Valve Assembly (LSV) allows you to install your BubbleBead Filter ('TwinValve' model) in low sites where the filter inlet is below the level of water in the adjacent pond. The principles behind the operation of the LSV are outlined in the Appendix in your User's Guide.

Assembly Instructions:

1) Ensure that the filter is drained and the feed pipe from the pond is empty of water. Unscrew the dismantable union (A) on the inlet of your BubbleBead Filter. Disconnect the hydraulic feed pipe by loosening the hose clamp and hose and unscrewing the 1/4" BSP hoesetail (B).

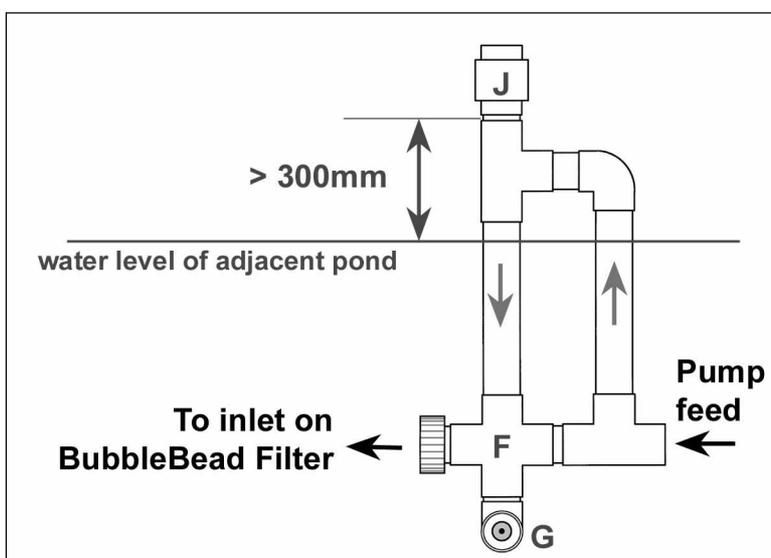
2) If the dismantable union has a narrow 'O' ring (C) as shown, leave it in place. If it has a wider rubber washer, remove this and keep it to one side. If it also has a plastic insert ring, remove this - it will not be required.



3) Remove the shuttle valve (D). Insert the new LSV backwash valve (E) in its place. Refit any rubber washer (if present) or 'O' ring, and thread on the LSV assembly.

The assembly may require support, especially when full of water, and should be bracketed or strapped to a suitable surface, as appropriate.

4) The 1/4" BSP hoesetail is threaded into the hole on the cross-piece (F) near the base of the LSV assembly using PTFE tape, and the hydraulic feed pipe reattached and the hose clamp tightened.



5) Fix the pump feed to the LSV inlet. (If you are using the original dismantable union fitting you will need to block off the hole left by the hydraulic feed pipe.)

6) The air inlet valve (J) must be at least 300mm (12") above the level of water in the adjacent pool. The Standard LSV is supplied with riser pipes approximately one metre high. If you need taller pipes the existing pipes can be cut and extended - alternatively ask your dealer to order a custom sized model.

(cont.)

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7) Attach a short length of hose to the hometail on the base of the LSV assembly, leading from the spring loaded release valve (G). This will direct a small volume of water to waste each time the backwash takes place. The flow from this should be visible e.g. direct the hose where the outlet can be seen, or use a section of clear hose.

Adjustments in use:

The LSV will need to be adjusted to suit the performance of your pump and pressure differences in your specific system.

When the pump is turned on, the loop in the LSV fills with water and the water pressure closes the air valve at the top of the unit (J), and the spring loaded release valve (G).

Water flows into the TwinValve assembly and pushes past the new backwash valve (E) and up into the filter.

If the pressure in the LSV is too low, water may leak from the spring loaded release valve in normal running.

There are two possible ways of dealing with this:

- i) Increase the pressure of the spring in the new LSV backwash valve. Remove the new backwash valve and adjust the nylon threaded shaft and locking nut (H). This is connected to the internal spring and adjusting the screw either way will increase or decrease the internal spring strength.
- ii) Weaken the spring loaded release valve so that it will stay in the shut position even with lower pressure pumps. Disassemble the valve and use a pair of sharp pincer pliers to trim back the length of the small spring inside it.

Backwash:

When the pump is turned off for backwash, the pressure drops inside the LSV assembly. Air enters through the top valve (J) and the water in the filter side of the loop drains out at the release valve (G). This lowers pressure in the LSV still further, and likewise in the hydraulic feed pipe, allowing the filter's hydraulic valve to open and the filter to backwash.

If either normal running or backwashing fails to take place as expected, adjust the backwash valve or the spring loaded release valve as described in **i)** and **ii)** above. This may also be necessary in future following any changes in pump size or plumbing configuration. Always closely monitor the backwashes and general filter operation following any changes made to the LSV valves and assembly .

If you have further questions please contact your dealer or your local area distributor.

