QUICK START GUIDE: Bladder Pump

This guide is meant to serve as a quick reference for operating the Portable Bladder Pump & Controller. It is for your convenience and is not intended to replace the information found in the Operations Manual provided.

1. Connect PRO Controller (in the OFF position) to power source.
2. Run air tube from PRO Controller to the air intake barb (on the 42mm Pump this is the smaller barb, on the 22mm Pump it is the lower of the barbs) on the Bladder Pump & attach sample tubing to the other barb.
3. Ensure tubing is covering both barbs entirely. The air intake tubing will help support the weight of the pump & prevent you losing the pump down the well.
4. Tie Dyneema cord through the hole in the top of the pump for extra strength to ensure the pump is not lost down the well. This is recommended even if the air and discharge tubing is on completely.
5. Gently lower Bladder Pump down the well to your desired height for sampling.
6. Now you can turn on the PRO Controller.
7. The "Fill" & "Discharge" knobs control the time it takes to fill the pump with water & the time the Controller supplies the pump with air to retrieve the sample. Use these to achieve desired cycle times.

Change your Bladder

1. If you have any questions, please call Van Walt before attempting to change the bladder.
2. To access the bladder you must remove the outer case, which screws onto the inner assembly. This can be difficult due to the design of the bladder pump and requires a degree of force – please be careful not to bend the barbs when you do this. You can use a spanner for the 42mm pump and gentle leverage for 42mm and 22mm.
3. You can tell the bladder needs to be changed when you can see clearly defined creases along its length.
4. Slide the old bladder off the inner assembly. Before you move the bladder, slide the white Teflon collars to the middle of the bladder. This will make it easier.
5. Slide the new bladder on. Stop halfway and slide the white collars onto the bladder and wait until the bladder is in place before pushing them back into their original positions.
6. Ensure the O-rings do not roll out of their grooves, use a small amount of water to lubricate them when sliding the bladder on/off if necessary.
7. Screw the outer case fully closed, hand tight.

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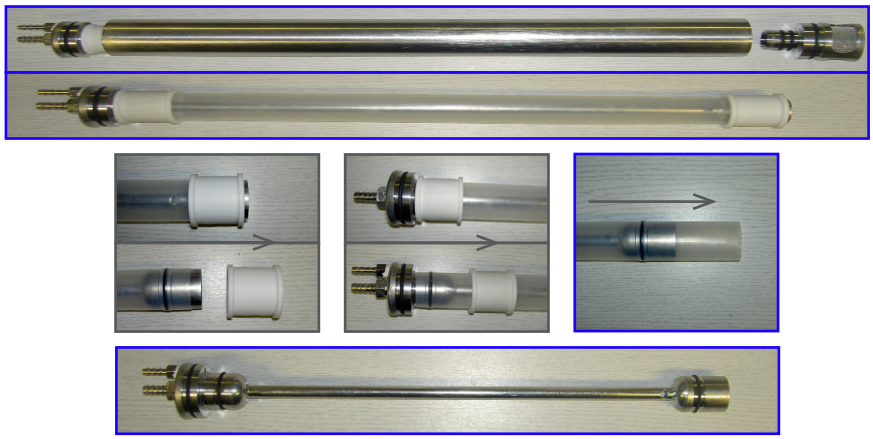

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Bladder pump Operational Tips

1. Be sure to have the correct tube connected to the controller/compressor. On the 42mm bladder pump this is the SMALLER tube. On the 22mm pump this is the tube connected to the SHORTER barbed connection.

2. Start the controller with both knobs set at zero and slowly increase each cycle. This will prevent the bladder inside from creasing/distorting. A creased bladder will not fill to full capacity.

3. In most cases the pump will start to yield a sample at between 5 to 10 seconds on both fill and discharge times. This is a good point to start from when fine tuning the dials.

4. Discharge time. If no sample flows during discharge time, the fill time should be increased (assuming an adequate fill time)

If the sample is still flowing when the compressor cuts out, the discharge time should be increased.

If the compressor is still running after the sample has stopped flowing, the discharge time should be reduced.

5. Fill time. Increase the fill time each cycle until the sample volume no longer increases. Maximum sample volume for the 42mm is 124ml. Maximum sample volume for the 22mm pump is 30ml.

If you are already achieving full sample volume you may wish to reduce the fill time until the sample volume starts to reduce.

6. Pressure indication. Every metre of lift above water level will require approximately 1.5 PSI. Add 10 PSI to the total pressure to allow for system efficiency. Example: Lift required is 26m. Therefore 1.5 x 26 = 39. Plus 10 = About 50 PSI

The bladder pump can be deployed to a maximum depth of 45m below ground level