

CARE AND USE OF 96 BUBBLE PADDLE RESERVOIRS AND MOTOR/MAGNETIC CLUTCH UNIT

Note on cleaning & sterilization

The VP 756C-96BPTFE Bubble Paddle Reservoir (4 paddle system) is made from PTFE and **can** be sterilized by autoclaving or hot air oven. You can also sterilize it by treatment with 10% bleach for 5 minutes followed by rinsing with sterile H₂O, then alcohol and air drying. Be sure that the inlet and outlet tubes are thoroughly exposed to the bleach and rinsed well. To clean, use mild detergent (Ivory dish soap), rinse with H₂O and alcohol.

Setup & operation

1. Place the VP 756C-96BPTFE Bubble Paddle Reservoir onto the VP 763BCE Motor/Magnetic Clutch/Heater/Chiller unit. Align the pins on the VP 763BCE to the registration holes on the VP 756C-96BPTFE. Make sure the Bubble Paddle Reservoir is level on the VP 763BCE. See Figures 1 and 2.
 2. The VP 763BCE unit has a feature on the bottom that will fit into a standard SBS footprint plate holder. Use this feature to locate and register the unit to a robotic platform or on to a product (FXALP-PM) we manufacture for attaching it to a Beckman FX ALP.
 3. Be sure the protective metal shim is in place between the wall of the reservoir and the bubble paddle magnetic clutches. See Figure 2. The metal shim will prevent the magnetic clutch from boring a hole in the reservoir wall.
 4. Connect the inlet and outlet tubing to the reservoir nipples and adjust the reservoir liquid level by turning the hollow overflow weir screw up or down with the provided Allen wrench, see Figure 5. If you are not going to be continuously adding solution, adjust the overflow weir to the highest level and place the inlet and overflow covers to prevent particulates from collecting in these areas as shown in Figures 1, 3 and 4.
 5. The inlet opening in the reservoir can be closed by screwing the set screw opposite the inlet opening so it blocks the opening. The inlet cover has a hole in it that the set screw passes through so the set screw will block the inlet and hold the inlet cover in place.
 6. Connect the heating/chilling tubing to the base inlet and outlet nipples.
 7. Plug the Control Unit into a 230 Volt outlet. Connect the VP 763BCE Stirring Unit to the Control Unit with the supplied control cord.
 8. Set the Speed Control Knob to 0. Turn on the power switch. Slowly increase Knob to 15.
 9. Carefully add the sample liquid to the reservoir after the unit is running. This prevents particulates from settling out. If the reservoir is attached to a peristaltic pump system,
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have the unit running before the pump is turned on. We recommend running the pump system continuously and recycling the overflow back to the source container. Alternatively the inlet flow rate can be matched to the pipetting rate and the overflow can be used as an emergency measure.

10. The optimal mixing speed will have to be determined for each application. At higher speed settings or with more viscous solutions, the magnetic clutches will decouple. It is best to gradually increase the speed to the desired setting rather than jump to the predetermined setting using the On/Off switch.
11. To turn off the unit, first turn down the speed control knob and then turn off the power switch. Never leave the Control Unit on with the power switch turned to 0 for long periods of time.
12. The reservoir is made from delrin. The paddles are made from parylene coated stainless steel with PTFE and delrin bearings. The magnets in the clutches are coated with parylene and sealed with a special sealant to prevent them from being corroded. Use mild detergents to clean these parts. Occasionally clean the magnets using tape to remove small bits of ferrous metal that are attracted to the magnet as the ferrous metal bits will rust when in contact with corrosive solutions.

Figure 1. Illustrates the VP 756C-96BPTFE reservoir and the VP 763BCE drive unit with its alignment pins to register the reservoir into the correct position.

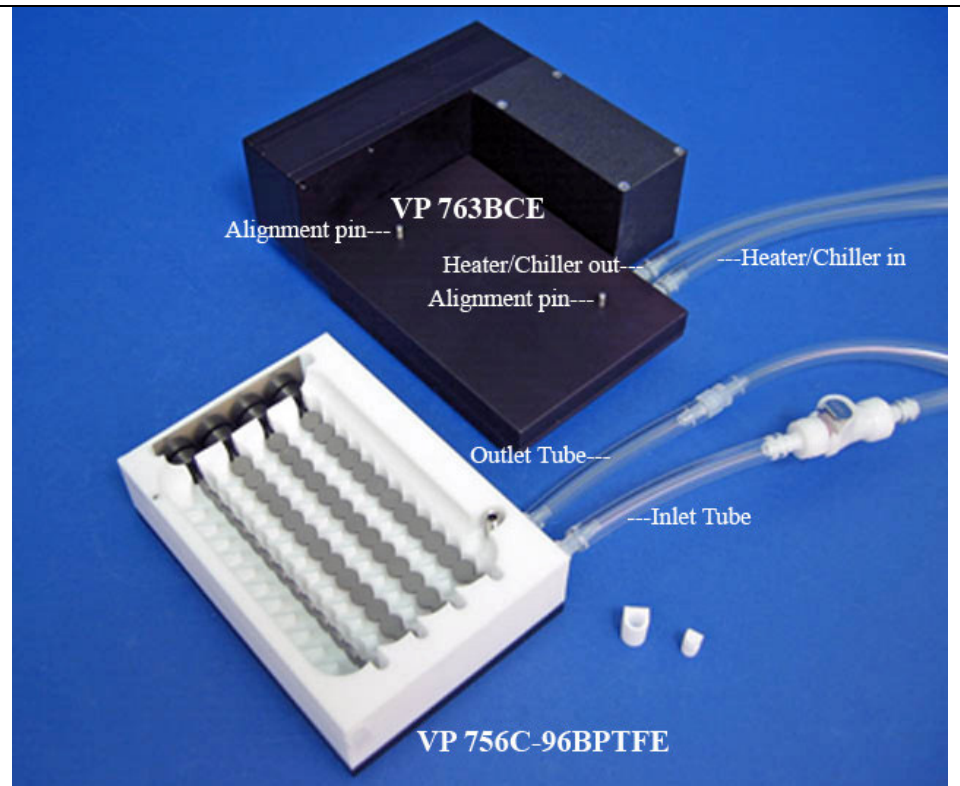


Figure 2. Illustrates the assembled VP 756C-96BPTFE Bubble Paddle Reservoir and the VP 763BCE motor drive unit. The tubing for filling and draining the reservoir and for chilling or heating the reservoir. Also illustrated are the reservoir inlet and outlet covers used in static operations.

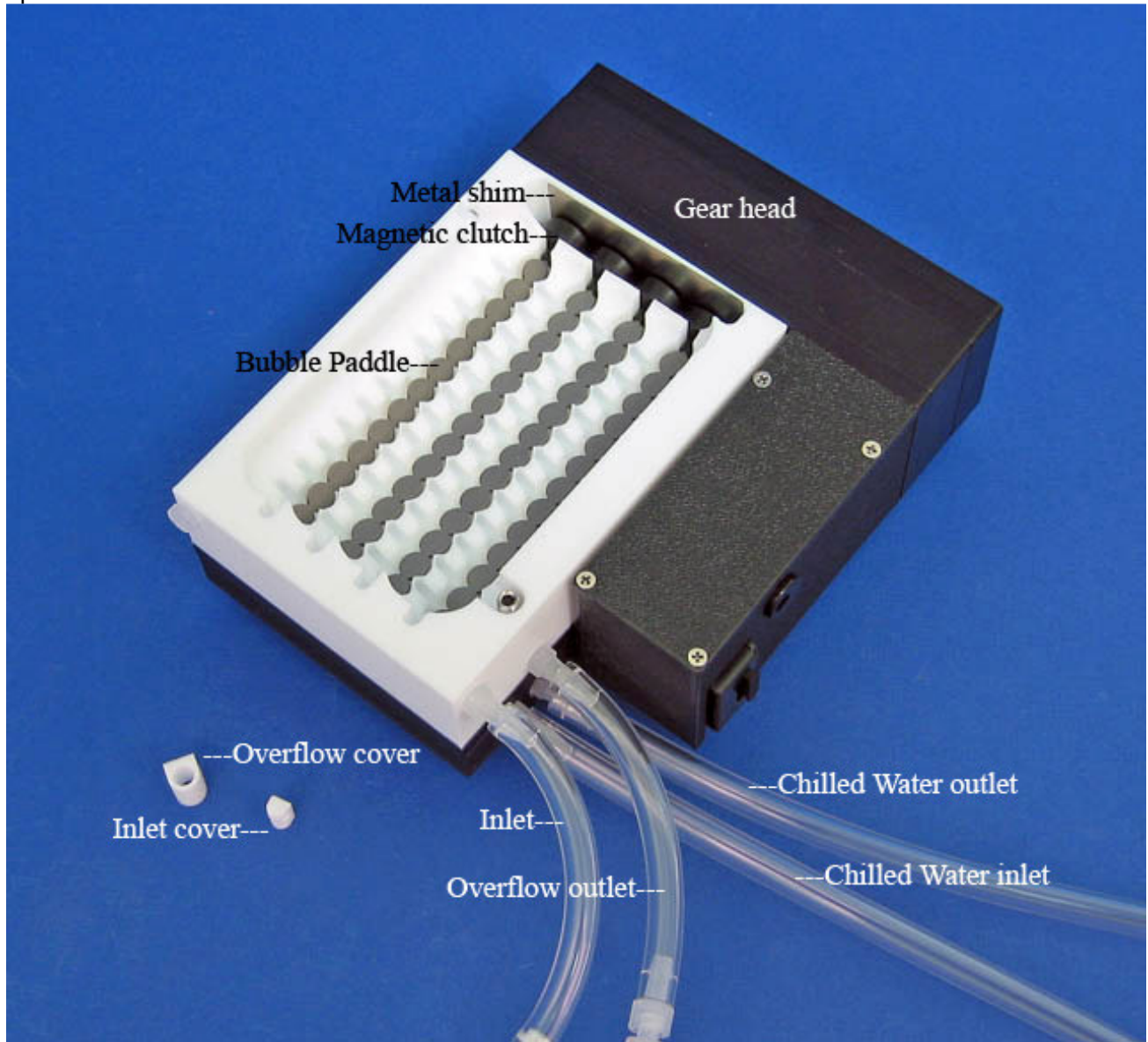


Figure 3 Illustrates the placement of the overflow weir cover on the weir in static operational conditions.

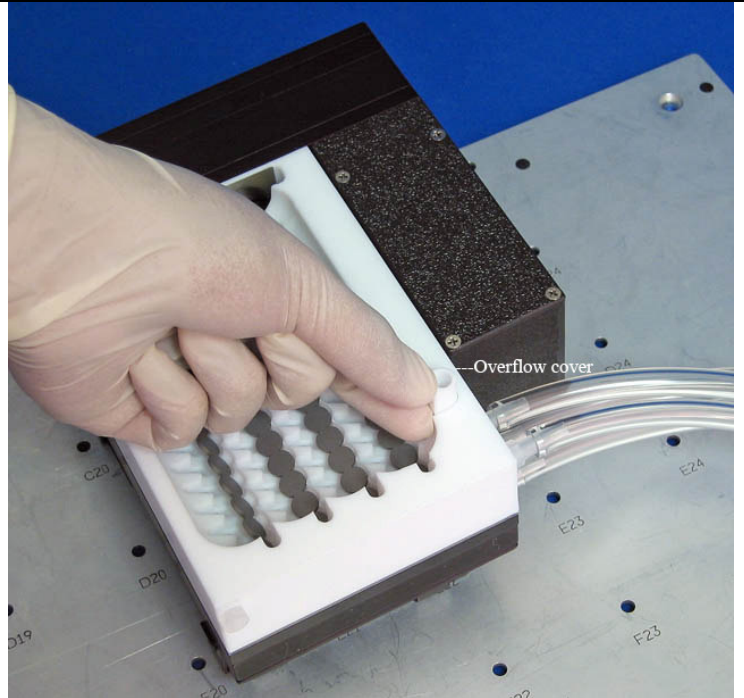
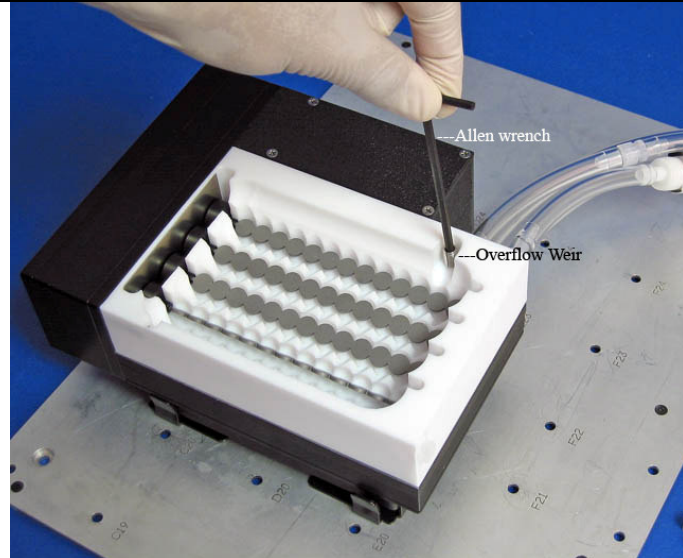


Figure 4 Illustrates the placement of the Inlet cover in the inlet in static operational conditions.



Figure 5. Illustrates how to adjust fluid level by screwing the hollow Overflow Weir up or down.



TROUBLE SHOOTING

PROBLEM : Unit will not run and light is on in control box.

1. Check the control cord for proper connection.
2. Check for a bad fuse.

Remove 2 screws from top of Speed Control Panel and remove top panel. Examine the left fuse (2amp), If bad, replace with a new 2A Fast Fuse. If the fuse looks good, test with a new fuse or test with an Ohm meter. Reinstall cover.

PROBLEM : Unit will not run and light is out in control box.

1. Check the Power Cord for proper connection.
2. Check for a bad fuse.

Remove 2 screws from top of Speed Control Panel and remove top panel. Examine the fuse in the right hand fuse clip and the Yellow fuse holder (2 – 6 amp fuses).

If bad, replace with new 6A Fast Fuses. If the fuse looks good, test with a new fuse or test with an Ohm meter. Reinstall cover.

We have provided spare fuses for this unit, a 2 amp motor fuse and two 6 amp line fuses.

If this does not solve the problem, call V&P Scientific, Inc. at (858) 455-0643.