



**CARE AND USE OF
MAGNETIC BEAD BUBBLE PADDLE STIRRER
WITH MAXIMUM VOLUME RESERVOIR**



Figure 1. VP 758-3MAX and VP 767-2MAX with controller

1. To attach the VP 758-3Max Reservoir to the VP 767-2Max motor, turn the drive shaft so the wheel spokes align with the slots in the motor wheel coupler on the VP 767-2 and slip the drive shaft wheel into the wheel slot on the motor (it helps to lift up on the drive shaft end of the reservoir while pushing forward). Once the coupler is engaged press down on the rear of the Reservoir and it will “snap” into position



Figure 2. Bubble Paddle inside VP 758-3Max Reservoir

2. Place the VP 767-2Max motor assembly on the robot deck using the robot-specific locating features. Position the robot pipet tips to be aligned with the notches in the bubble paddles and the depressions in the VP 758-3Max Bubble Paddle Reservoir (see Figure 2 for view of bubble paddle in bottom of reservoir).

3. To remove the VP 758-3MAX Reservoir from the VP 767-2MAX motor, lift up the far end of the Reservoir just enough to clear the trough it sets in. Then pull straight out
4. **Do not use the speed controller to stop the stirrer; use the on/off switch.**
5. **Do not operate dry as this will wear out the seal. Always operate with liquid.**
6. Operate at speeds and liquid levels that do not aerosolize the liquid. At lower liquid levels use slower speeds. The maximum speed is 1,500 RPM and is set at the factory.
7. To lengthen the life of the seal, operate at the lowest possible speed that keeps particles in suspension. In addition, operate only when necessary as this will prolong the life of the seal. Operation at 50% speed for 2hrs, followed by a 30 min “off period” allows for extended runs.
8. In tests with paramagnetic particles (MagneSil from Promega) good suspension was seen at speeds between 30% and 50% speed. Turning off the Bubble Paddle Stirrer, allowing the particles to settle completely and then turning back on at 40% speed re-suspended the particles. Depending on what type of particles are to be stirred, initial re-suspension might have to be accomplished by stirring with a serological pipette before turning on Bubble Paddle Stirrer.
9. The VP 758-3MAX Bubble Paddle Reservoir can be cleaned with detergents and rinsed with distilled water and or ethanol/isopropanol. It can also be sterilized by autoclaving if necessary. These operations should be done while the reservoir unit is assembled (drive shaft and sealed bearing in place). Do not pull the drive shaft out of the sealed bearings to release the bubble paddle. This is not recommended because of the risk of damaging the seal. The reservoir can also be disinfected by soaking in a 10% bleach solution for 5 minutes followed by sterile water rinses and an additional rinse in alcohol.
10. Replacement sealed bearing units (VP 758-3S) are available in the event the reservoirs begins to leak. To remove sealed bearing unit from the reservoir, remove the screw at the bottom of the reservoir and pull out the sealed bearing unit. It is secured in the reservoir by a friction fit from two O rings. The set screw at the top of the sealed bearing unit should **NOT** be removed.



Figure 3. Replacement Sealed Bearing Unit (VP 758-3S)

11. Clean the bearing hole and apply a thin coat of silicone grease. Hand press a new VP 758-3S into the reservoir. Line up the slot on the drive shaft with the end of the bubble paddle. Insert and tighten screw at bottom of reservoir to lock the sealed bearing unit in place. Send the leaky sealed bearing unit to V&P for repair and replacement.