

CARE AND USE OF 8 CHANNEL MAGNETIC BEAD BUBBLE PADDLE RESERVOIR

**Motor Control Unit VP 766A-5A with VP 758A Series Direct Drive Bubble Paddle Reservoirs:
VP 758A-3, VP 758A-3PTFE, VP 758A-4PP, VP 758A-4PTFE**

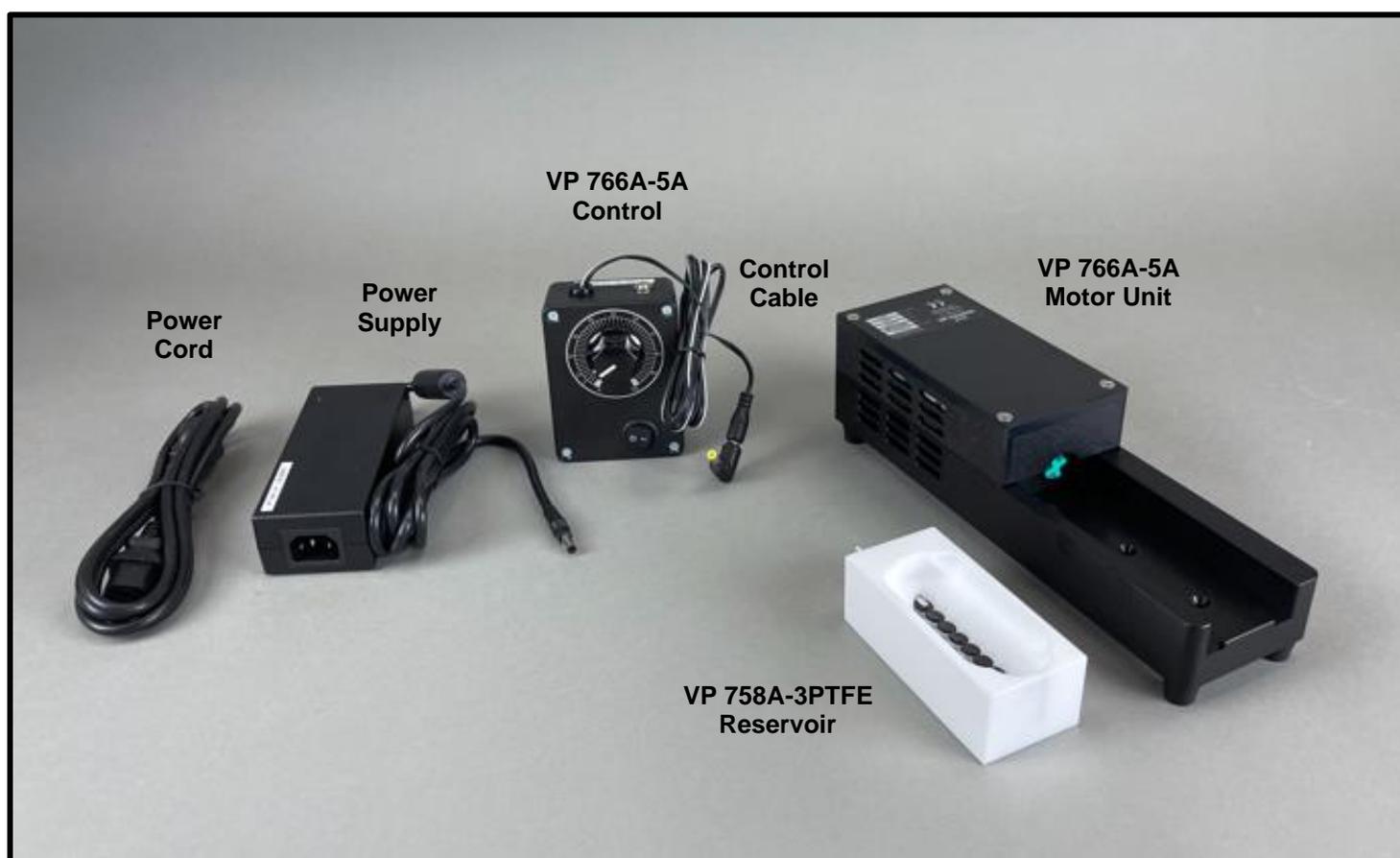


Figure 1. The VP 766A-5A system is shown with the VP 758A-3 PTFE Reservoir. Compatible with any of the VP 758A-3 or -4 series Direct Drive Bubble Paddle Reservoirs. Power cord sold separately- a selection of plug types is available.



Figure 2. The VP 766-5A system is shown with cables and cords attached.

SET-UP

- 1) To attach the VP 758A series Bubble Paddle Reservoir to the VP 766A-5A motor, turn the drive shaft so the Reservoir coupler jaws align with the openings in the motor coupler on the VP 766A-5A as in Figure 3 and slip the drive shaft coupler into the coupler 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 3. Aligning aluminum jaws of Reservoir coupler with green motor coupler.

- 2) To remove the VP 758A series Reservoir from the VP 766A-5A motor, lift up on the rear of the Reservoir just enough to clear the end of the motor unit and pull out.

- 3) If using with a robot, place the VP 766A-5A motor assembly on the deck using the robot locating features (see two options below). Position the robot pipet tips to be aligned with the notches in the bubble paddles and the depressions in the VP 758A series Bubble Paddle Reservoir (see Figure 4).

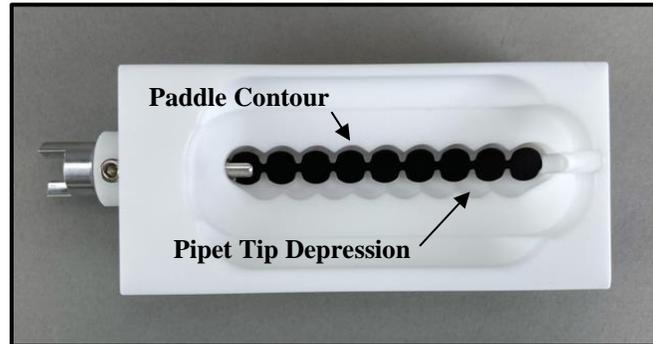


Figure 4. Close-up view of a Bubble Paddle Reservoir

- 4) If using a robot that uses an SBS microplate holder, order the Bubble Paddle Reservoir system with a VP 581B, a polypropylene SBS-sized adapter. Place the VP 766A-5A motor assembly with the attached VP 581B on the robot deck in the microplate holder (see Figure 5a). Alternatively, order with a robot-specific adapter such as the VP 581-PE-2 adapter for the Janus liquid handler. The VP 766A-5A motor assembly will be positioned by the locating pins on the adapter into the holes in the deck (see Figure 5b).

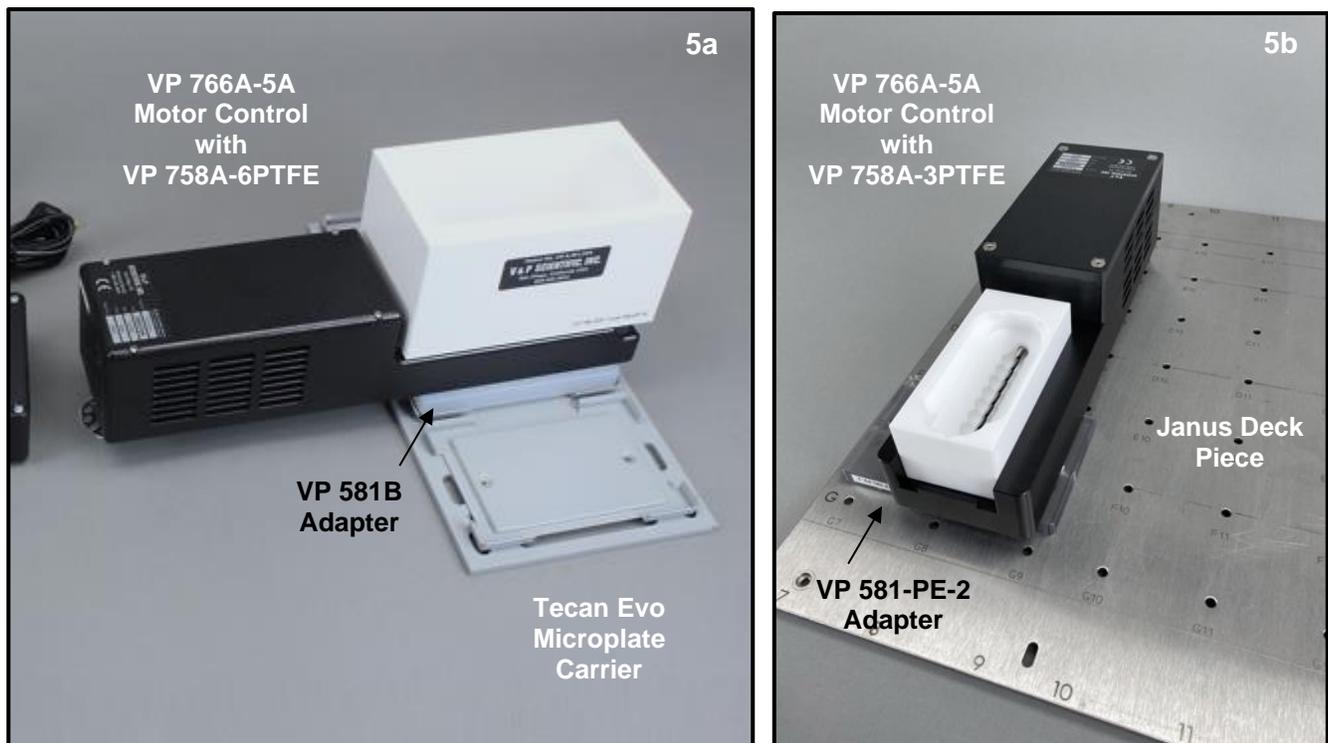
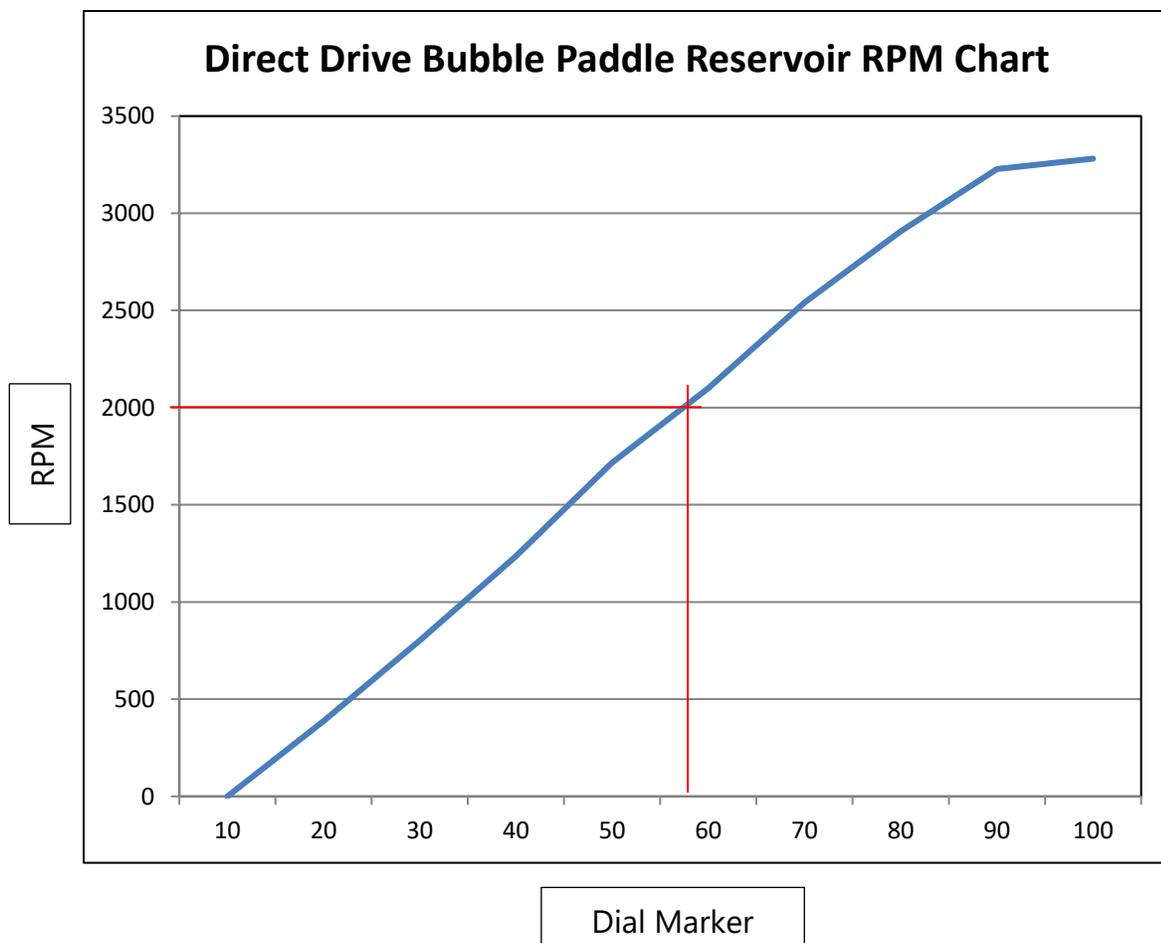


Figure 5. (a) Bubble Paddle Reservoir system positioned on a Tecan deck via the VP 581B adapter in a microplate carrier. (b) Bubble Paddle Reservoir system positioned on a Revvity Janus deck piece with VP 581-PE-2 adapter

OPERATION

1. Operate at speeds and liquid levels that do not aerosolize the liquid. At lower liquid levels use slower speeds.
2. 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.
3. **Do not use the speed controller to stop the stirrer. Use the on/off switch.**
4. **Do not operate dry as this will wear out the seal. Always operate with liquid.**
5. **Do not operate at speeds over 2000 RPM or ~60 on the Speed Dial.**



CARE

- 1) The VP 758 series 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 repeatedly pull the drive shaft out of the Sealed Bearing to release the Bubble Paddle as there is a 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.
- 2) Replacement Sealed Bearing units (VP 758A-3S, see Figure 6) are available in the event the reservoir begins to leak. To remove the 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.
- 3) Clean the bearing hole and apply a thin coat of silicone grease. Hand press a new VP 758A-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. See Technical Note 208A for more details.



Figure 6. Replacement Sealed Bearing Unit (VP 758A-3S)

- 4) Replacement Bubble Paddles (VP 758AL) are also available if necessary. **Caution: Doing this repeatedly, however, is not recommended because of the risk of damaging the seal.** If seal is damaged and starts to leak, the Sealed Bearing Unit (VP 758A-3S) will have to be replaced (see above or Technical Note 208A).
 - a) Remove VP 758A series Reservoir from the VP 766A-5A motor as described in step 2 of Set-Up.
 - b) Turn the Bubble Paddle so that it is in a vertical position. Gently pull the drive shaft partially out of the Sealed Bearing to release the Bubble Paddle (see Figure 7a).
 - c) Lift up in the far end of the Bubble Paddle (see Figure 7b). Pull Bubble Paddle out of the drive shaft slot by pulling away from the Sealed Bearing.
 - d) Place the end of the replacement Bubble Paddle that does not have the Teflon hub into the drive shaft notch. Gently place the hub end of the paddle into the contoured notch at end of the reservoir. Do not force into place. If necessary, grasp the Bubble Paddle near drive shaft and move slightly up and down until hub end falls into place.

- e) Push the drive shaft back into the Sealed Bearing to lock the Bubble Paddle into the slot in the drive shaft (see Figure 7c).

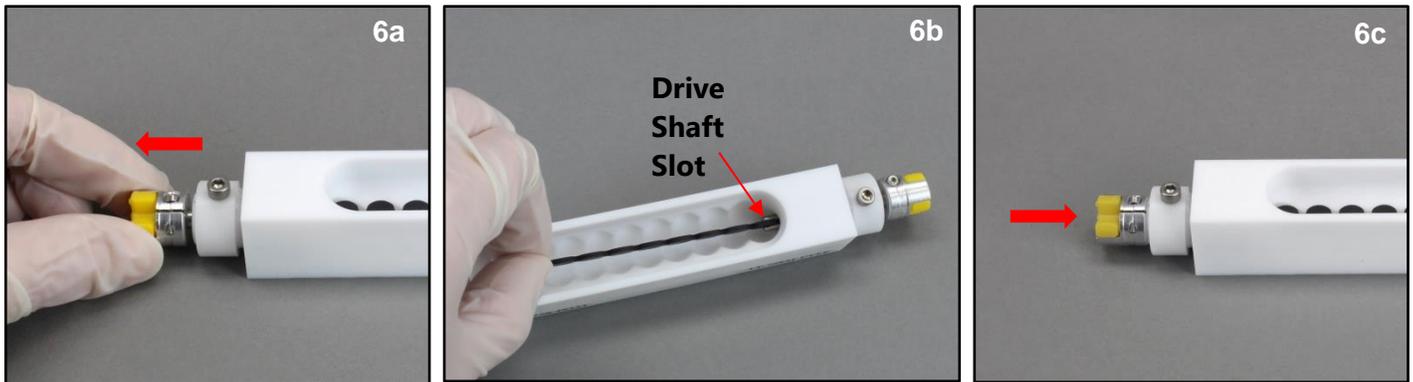


Figure 7 (a-c). Replacement of the Bubble Paddle (VP 758AL)

SAFETY PRECAUTIONS

The use of motor controls, like that of all utilization of concentrated power, is potentially hazardous. The degree of hazard can be greatly reduced by proper design, selection, installation, and use, but all hazards cannot be completely eliminated.

The following safety precautions must be observed during all phases of installation, operation, service, and repair of this motor control product. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the products. V&P Scientific assumes no liability for the customer's failure to comply with safety requirements and practices.

WARNING
To avoid personnel injury caused by electrical shock, do not remove the motor cover when the power is ON.

CAUTION
Do not disconnect motor during operation. Otherwise, over-current breakdown may result.

WARNING
To avoid personnel injury caused by electrical shock, do not remove the motor cover when the power is ON.

WARNING
Do not exceed over 60 on the speed dial.

WARRANTY

V&P Scientific, Inc. warrants this product to be free from defects in material and workmanship when used under normal laboratory conditions for one year. This warranty begins from the date of delivery by V&P Scientific.

In the event this product fails under normal laboratory conditions within the specified period of time because of a defect in material or workmanship, V&P Scientific will, at its option, repair or replace the product. Damage to the product caused by user negligence is not covered.

This warranty is made in lieu of other warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose. V&P Scientific shall not be liable for loss or damages arising from the use of these products nor for consequential damages of any kind.

Please keep the special shipping carton in case the unit needs to be shipped back to V&P Scientific. If assistance is required, contact V&P Scientific, Inc. 858-455-0643 or sales@vp-sci.com