

## VP-5 DC SPEED CONTROL NEWPORT SERIES

Most Newport model watermakers are equipped with a feed pump speed controller (See Note). The 12 and 24 Volt DC models use a speed controller that has adjustable settings for Run Speed, Flush Speed, and in some cases Service Speed. Changes in Run Speed change the feed water flow rate during “Auto Run” and “Run” modes, and when the manual switch is in the Manual Run position. Changes to the Run speed setting will affect the Product flow rate, system power consumption, feed pressure, and possibly pump life. The Flush Speed setting regulates the flush water flow rate during “Auto Store” mode and when the manual switch is set to “Flush Manual”.

Speed settings are controlled either by a “Pot,” or variable resistor, which is adjusted with a screwdriver to set the desired speed, or by a reed switch, which is adjusted by waving a magnet across the switch. The Pots are mounted on the speed control which is attached to the back wall of the Feed Pump module above the Relay Module, or soldered directly on to the input terminals of the speed control. The reed switches are integral to the board. Consult the user manual that came with your system to determine which version you have. The MPC control pcb, as well as the manual control switches, send a control signal to the speed control for Run Speed or Flush Speed.

**SETTING FLUSH SPEED:** Flush speed should be set to run the pump slowly enough that the vessels fresh water system can supply a sufficient flow of water through the charcoal filter, so that no sea water is drawn in during the flush cycle. The maximum flow through the Charcoal filter is 1.5 gpm (6lpm), so at flush speed the pump must discharge less than this amount. Flush speed can be checked by closing the sea cock during the flush cycle. If the system shuts down on the Check Sea Strainer alarm the feed pump is running too fast and drawing sea water into the system to make up the difference.

**SETTING RUN SPEED:** Run Speed should be adjusted so that the Watermaker produces the specified amount of product flow at the specified power consumption and nominal feed pressure. Since feed pressure and power consumption vary with sea temperature and salinity, it may be desirable to adjust the Run Speed to optimize the pressure or power consumption in very cold or high salinity waters.

**MAXIMUM CURRENT LIMIT:** The current limit is adjusted with a pot located near the center of the board. It should be adjusted to maximum current (fully clockwise). This feature is not available on the Newport Mk II systems.

**NOTE:** Some early Newport watermakers did not have a speed control. Instead the feed pump was pulsed to reduce flow during the flush cycle. See the MPC-3000 Service Manual for instructions on adjusting the flush water flow.