

VP-8 DC SPECTRA™ SPEED CONTROL

DC powered Newport Mk II model watermakers shipped after January 1, 2007 are equipped with a Spectra™ feed pump speed controller. (See Note) The 12 and 24 Volt DC models use the same speed controller. Three preset, and one variable speed are available. 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, and feed pressure. The Flush Speed setting regulates the flush water flow rate during “Auto Store” mode and when the manual switch is set to “Flush Manual”. Some models have a third “Service speed”.

On the speed control circuit board are two magnetic switches for adjusting the pump motor rpm. The switches are narrow silver colored bars about 1/2” (1.5cm) long. The Increase Speed switch is labeled S2 and is located near the upper right corner of the board. The Decrease Speed switch is labeled S3 and is located to the right of the six cylindrical capacitors. Each time a small magnet is placed near the switch while the pump is running, a signal will be sent to the controller, changing the speed setting, and the pump will speed up or slow down slightly.

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 SERVICE PREFILTER 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.

SERVICE SPEED: Limits the feed flow through the membranes during cleaning procedures and pickling to maintain feed pressure below 50psi.

MAXIMUM CURRENT LIMIT: The current limit is adjusted at the factory and can not be adjusted in the field.