



SPECTRA
WATERMACHINES™

Z-BRANE OPERATION AND RETROFIT MANUAL



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Spectra Watermakers Inc.
20 Mariposa Rd., San Rafael, CA 94901
Phone 415-526-2780 Fax 415-526-2787
Email: spectra@spectrawatermakers.com
[Http://www.spectrawatermakers.com](http://www.spectrawatermakers.com)

The **Z-brane** is a revolutionary product which incorporates the Z-Guard High Voltage Capacitive technology into the membrane pressure vessel. Always active, the Z-Brane creates an environment that is unfriendly to bio-film and bacteria. The Z technology also assists in the prevention of scale formation on the membrane surfaces. The Z-Brane allows the system to be shut down or decommissioned for extended periods of time without chemicals or preservatives. The Z-Brane will not prevent freezing so that in cold climates Propylene Glycol is still required.

The Z-Brane system is integral with the watermaker unit and only requires continuous 12V or 24V DC power to be operative. The installation of the Z-Brane only consists of wiring the power supply to a continuous source. The Z-brane power supply can tolerate voltages between 10V and 28V DC.

Note: There is no reason to open the transformer enclosure. Do not service this unit without disconnecting the power source! There may be high voltage present.

It is recommended that the Z-Brane be connected to a discreet continuous power source. The power must be on during the time that the system is operation and during the time the Z-Brane is used for membrane storage. If the power is obtained from the MPC then the MPC must be powered up at all times during storage. This may not be desirable.

Fuse the power at the source with a 5 amp fuse or circuit breaker.

Red is Positive (+) , Black is Ground (-)

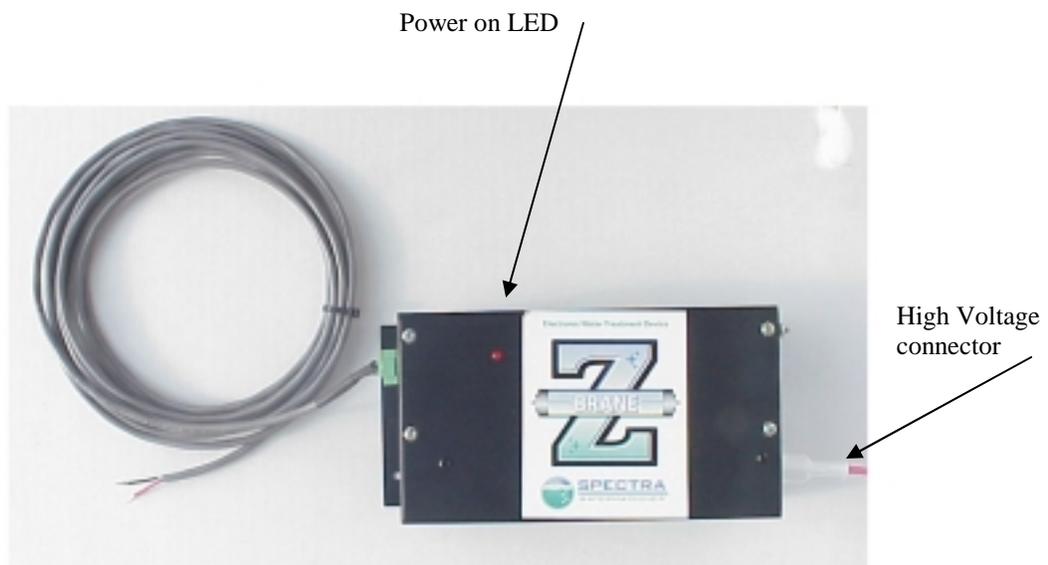


Z-Brane Power Harness

Operation

During normal operation the Red LED should be on . Power needs to be supplied to the Z-Brane unit at all times that you wish to have the biofouling and scale protection. We recommend that your watermaker be flushed after each use not only to protect the membrane but to prevent corrosion in the feed water system. To achieve full effectiveness thoroughly fresh water flush the watermaker several times before leaving the vessel.

The Z-Brane may be de-powered if the system is stored with chemicals or winterized with Glycol.



**DO NOT DISCONNECT
OR SPLICE ANY OF THE
HIGH VOLTAGE WIRING!**

Contact the factory if
modifications are required.



Z-Brane Retrofit

REV 8-20-03

Z-Brane Kit Consists of
Z-brane Control and Power Supply
1 ea ground end cap per ZB
1 ea Z-rod end cap per ZB
Wiring harnesses
Ground ring terminal 14 GA x 1/4"
Heat shrink tubing
Silicone grease.



Using 7/8" and 13/16" end wrenches remove the tube nuts from the pressure vessel ends.



If you have access to a ring removal tool use it to remove the pressure vessel end ring.



If the ring removal tool is not available a block of wood and a mallet will work as well.



Gently pry out the end cap while you are unscrewing the retainer ring.



Put a bit of silicone grease on the pressure vessel threads. Line up the Z-Rod with the product tube and install the new end cap. Do not force the rod into the tube.

If the product tube is too tight you may need to gently ream or drill out the tube to fit. Exercise caution to clean out any plastic particles from this process. Do not use Chlorinated water for cleaning! Use Air, distilled or product water.

Tighten the ring just past hand tight.



Remove the opposite end cap and install the Z-Brane ground end cap.



The cable assemblies should be complete as supplied. If you need to modify the ground wire or the power cable, use heat shrink to seal the terminations. **DO NOT** modify the high voltage cables. Make sure that they are clear from moving items that could cause abrasion on the cable.

Do not unplug the high voltage cable while there is power applied to the unit. Shut down the source and allow one hour before disconnecting.



Place the terminal on the end stud and tighten nut.



Use the wire tie straps to fasten the enclosure to the pressure vessel.



Route the power cable to a fused power source. The Red wire is the positive feed (+). The black is ground (-). Fuse the power lead with a 5A fuse.



Using two wrenches reinstall the tube nuts. Do not Allow the tube fitting that is threaded into the cap to rotate! The tube fitting relies on an O-ring to seal so it does not need to be threaded in past hand tight.

The tighten the tube nuts very firmly!



Fresh Water Anyone?