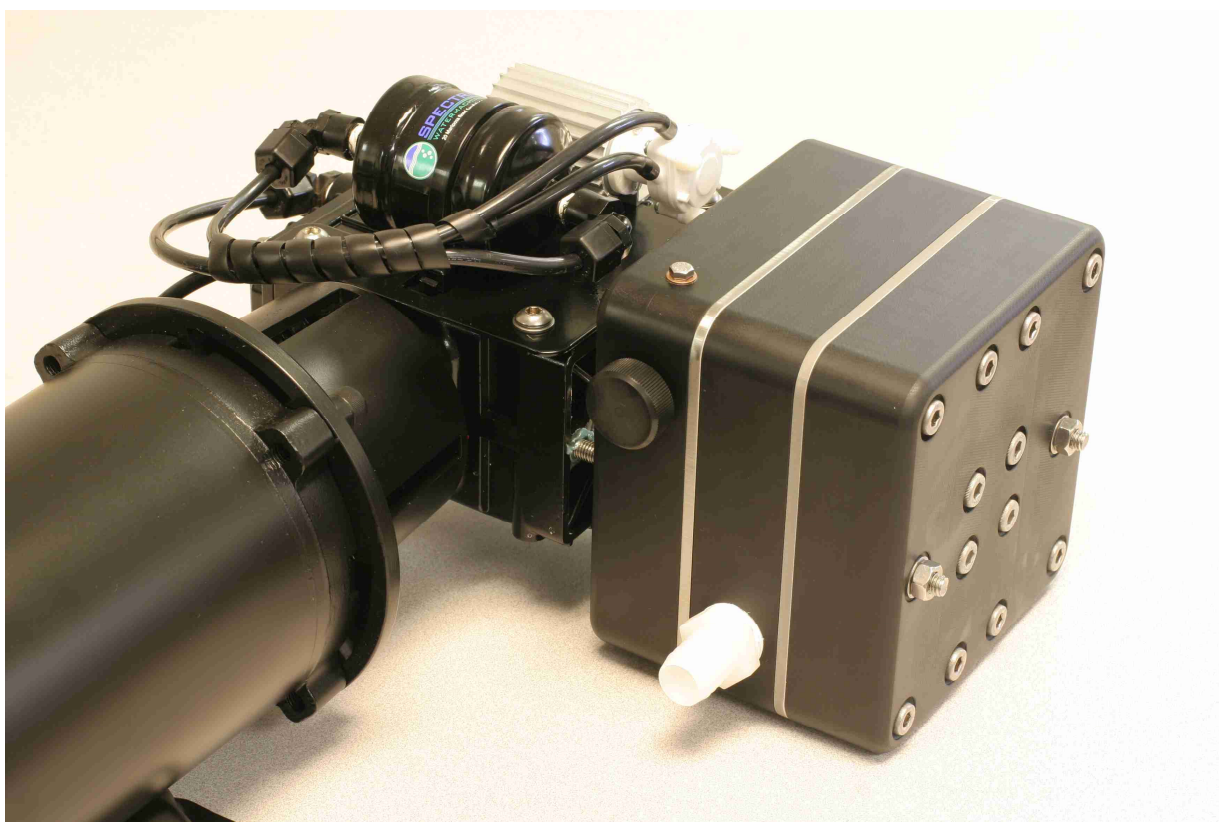




SPECTRA
WATERMAKERS

LB 1800

Operating Instructions



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Thank you for trusting Spectra Watermakers for your water purification needs. The Spectra LB-1800 comes equipped with the revolutionary Spectra Pearson Pump. This is a unique high pressure pump with integrated energy recovery that allows users to purify up to 75 gallons of seawater per hour on as little as 750 watts. If properly installed and cared for, your system will provide you with years of high quality, potable, fresh water. Please take a moment to review this manual before running the machine.

Parts List:

- | | |
|---|---|
| 1 | Spectra Pearson Pump High Pressure Module |
| 1 | Electrical Box |
| 1 | Control Panel |
| 1 | 20" Prefilter Housing |
| 1 | 5 Micron Prefilter |
| 1 | Service Kit |
| 1 | Installation/Users Manual |
| 1 | Installation Kit |

****Please inspect the contents of your shipment to ensure that all parts have been included. Any missing or damaged parts not reported to the factory with 1 business day of taking delivery will be considered lost and replacements will be supplied at list price.**



Table of Contents

	Page
Installation Instructions	
Component Description.....	6
Control Panel Connections.....	8
Plumbing Schematic.....	10
Plumbing Connections.....	11
Electrical Connections.....	13
Fitting Assembly Procedures.....	15
Operation	
Control Panel Layout.....	17
Initial Start-up.....	18
Normal Operation.....	19
Fresh Water Flushing.....	20
Care and Maintenance	
Maintenance.....	21
Oil Changes.....	22
Long Term Storage.....	23
Storing with Anitfreeze.....	24
Membrane Care.....	25
Membrane Cleaning.....	26
Reference	
Specifications.....	27
Wiring Diagrams.....	28



COMPONENT DESCRIPTION

The Spectra LB-1800 watermaker is designed to be installed in a building or pump house. Feed water must be supplied from a well or cistern capable of supplying: Up to 8 gpm (30lpm) at 20psi (3.5 Bar) maximum pressure. Feed water should be prefiltered to 50 microns before going through the Spectra supplied 5 micron filter. The machine separates the feed stream into two streams, a product stream and a brine stream. The brine contains the dissolved solids removed from the product water. Brine flow may be as high as 6.5 gpm (25L/min), depending on the running speed of the Spectra-Pearson Pump. The brine may be returned to the ground via an injection well, discarded into a storm drain, or disposed of in another manner as required by local authorities. Consult your dealer, the factory, or local government agency for more information about the best brine system for your application.



20" Prefilter Housing Contains the 5 micron feed water prefilter and housing. It is designed to be mounted to a wall and should be installed higher than the Feed Pump Module. Allow 3–4" of clearance on the bottom of the filter bowl to easily remove the filter housing when changing filters. Do not install the prefilter module over an outlet or any electrical device, as some water will be spilled when changing the 5 micron filter. Should be mounted within 10 feet of the Control Panel.

Spectra Pearson Pump High Pressure Module

This module contains the Spectra Pearson Pump, Oil pump and filter assembly, and 2 ea 4" x 40" seawater membranes. All high pressure fittings between the membranes and the pump come pre-assembled and connected. The fittings are field serviceable JIC 37 deg. female flare fittings. It is possible to remote mount the Spectra Pearson Pump from the pressure vessels by obtaining a longer section of hose from the factory. Consult your nearest distributor if you need to order longer lengths of high pressure hose for special installations. The Spectra Pearson Pump **MUST** be installed in an upright position, with the vented oil cap facing up.



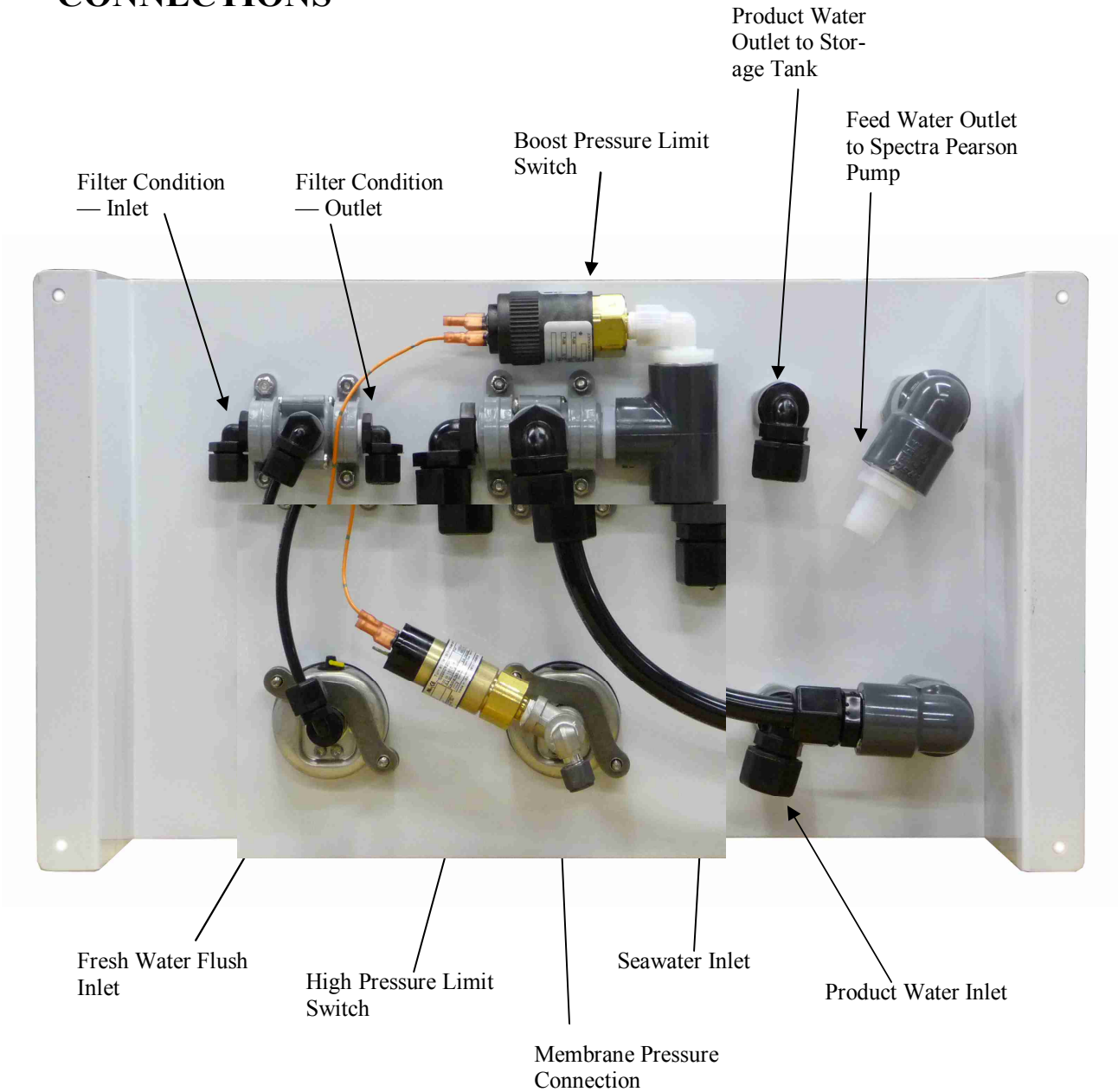


Control Panel The LB-1800 control panel has a series of analog gauges and valves mounted for easy reference to system operating parameters. There are two flow meters, one to measure the inlet flow from the well pump, the other to measure the product water volume. One three-way valve controls the feed water source to switch between running and flushing. The other three way valve is connected to the boost pressure gauge and switches between measuring the inlet and outlet pressure, allowing the user to quickly determine the condition of the prefilter.

Control Box The FRP watertight box contains the “brains” of the LB-1800. This box controls the run and flush speeds, activates the fresh water flush mode, and houses all of the necessary electronics to run the system. This module should be mounted away from any water source or where it could get sprayed or wet. Should the need arise to open the electrical box after installation, use caution as there are live AC wires inside (AC systems only).



**CONTROL PANEL
CONNECTIONS**



Control Panel Connections

Limit Switches The High Pressure limit switch is wired to the *Normally Closed* terminals on the top of the switch. The switch is factory preset to shut-down at 850 psi. Do not adjust the high pressure limit switch without consulting the factory first. The Boost Pressure limit switch is wired to the *Normally Open* terminals on the top of the limit switch. The Boost Pressure switch is factory set to close at 10psi. Do not change the settings on this switch without consulting the factory first.

Membrane Pressure Connect one end of the supplied 1/4" high pressure tubing to the 1/4" compression fitting on the membrane endcap and connect the opposing end to the back of the Membrane Pressure Gauge < see picture on previous pg>. Follow the instructions on pg. 17 for fitting assembly instructions.

Filter Condition Gauge Located on the inlet and outlet of the 5 micron pre-filter housing are 2 Parker Fast and Tight connections. Connect the supplied 1/4" Low Pressure tubing to each of these fittings. Lead the tubing from the inlet side of the prefilter to the fitting on the 1/4" 3way valve on the backside of the control panel marked in Red. Connect the tube from the outlet fitting of the 5 micron filter to the outlet fitting on the same 3way valve marked in Green.

Product Inlet Connect one end of the supplied 1/2" low pressure tubing to the product outlet fitting located on the *membrane endcap* to the Product Water Inlet fitting on the backside of the Control Panel.

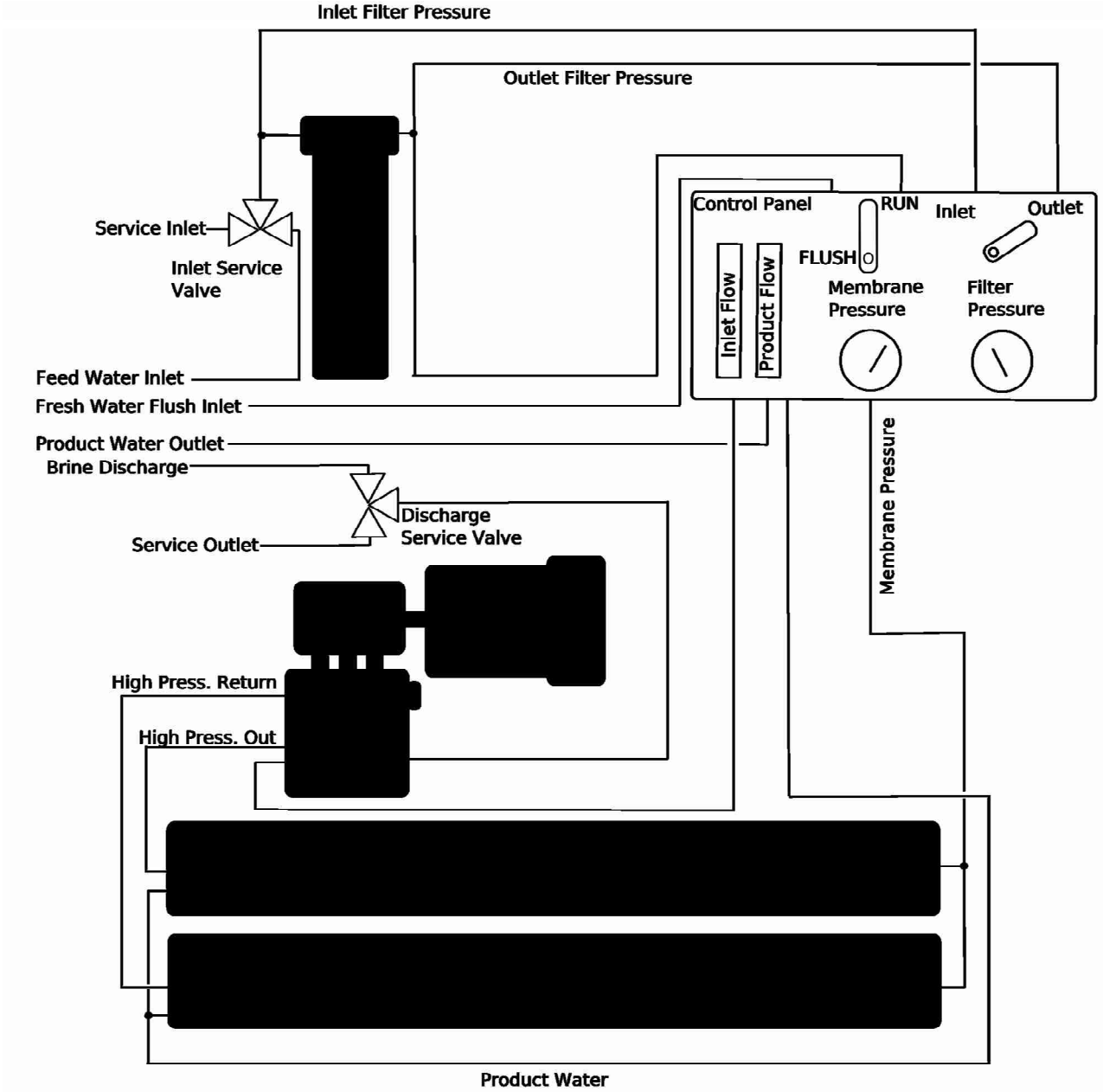
Product Outlet Connect one end of the supplied 1/2" low pressure tubing from the product water outlet on the backside of the Control Panel to the fresh water supply tank (not included) for distribution.

Seawater Inlet Connect the supplied 5/8" low pressure tubing from the Outlet of the 5 micron filter housing to the Seawater Inlet fitting on the 1/2" 3way valve on the backside of the Control Panel.

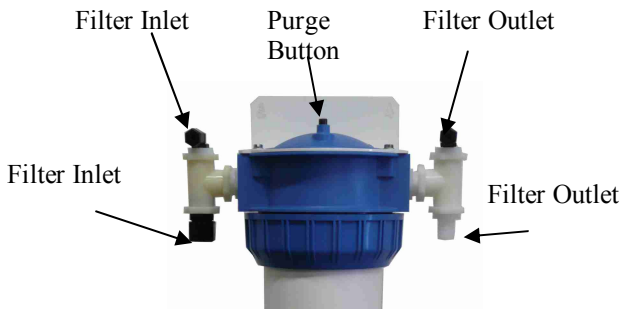
Fresh Water Inlet Connect one end of the supplied 1/2" nylon braided hose to the Fresh Water Inlet on the 1/2" 3-way valve on the backside of the Control Panel to a pressurized, unchlorinated fresh water source. This water will serve as the fresh water flushing supply source.

Feed Water Outlet Connect one end of the supplied 3/4" nylon braided pressure hose to the 3/4" hose barb fitting on the backside of the Control Panel, connect the opposing end of the nylon hose to the feed water inlet of the Spectra Pearson Pump on the high pressure assembly.

Plumbing Schematic



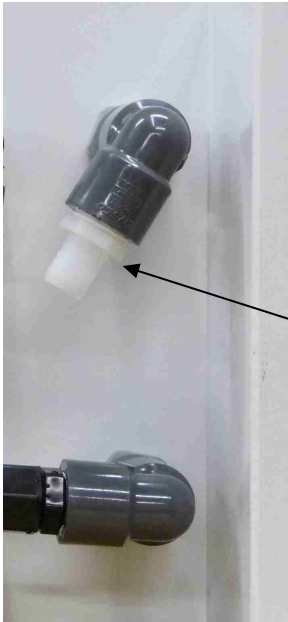
Plumbing Connections



Prefilter to Spectra Pearson High Pressure Module Attach the 1/4 Inch black nylon filter pressure sensing tubes to the corresponding fittings on the inlet and outlet sides of the filter. Use care to attach the inlet sensor tube to the inlet side of the filter and vice versa. On the raw water feed line, prior to the pre-filter, install the 3/4" 3-way service valve. Connect the Filter Outlet to the Sea-

water Inlet on the Feed Water Source Selector Valve (see pg 8).

Inlet Service Valve



Connect the 3/4" braided nylon hose on the outlet of the Feed Water Flow meter to the feed water inlet on the Spectra Pearson Pump.

Feed Water Flow Meter Out

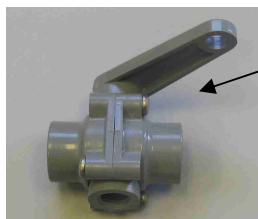


Feed Water Inlet

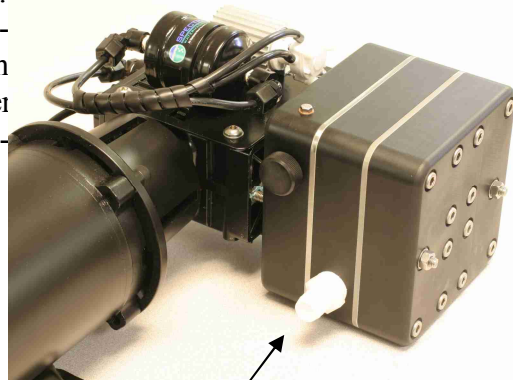
Spectra Pearson Pump

Connect the 3/4" brine discharge hose to the 3/4" hose barb fitting on the Spectra Pearson Pump. Install the 1/2" 3-way service valve in the brine discharge line. Lead the brine discharge output to a storm drain, injection beach well, or other discharge water location. Consult local authorities for a regulations regarding brine discharge requirements.

Connect the 3/4" brine discharge hose to



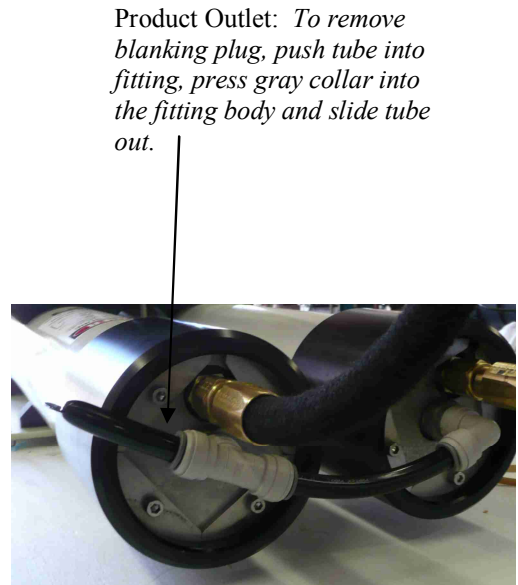
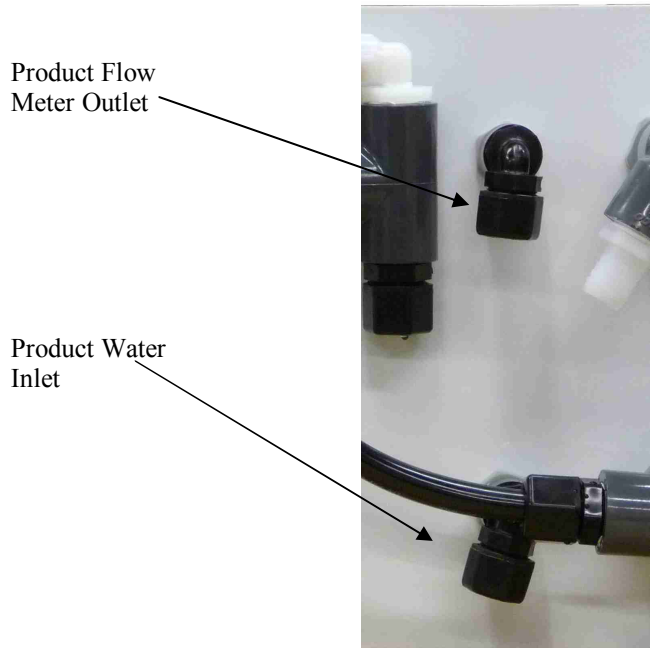
Brine Discharge Service Valve



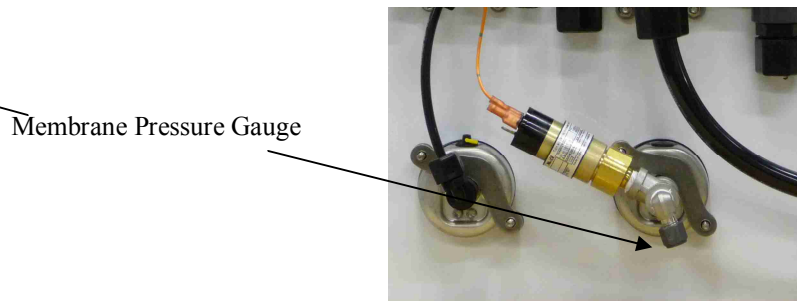
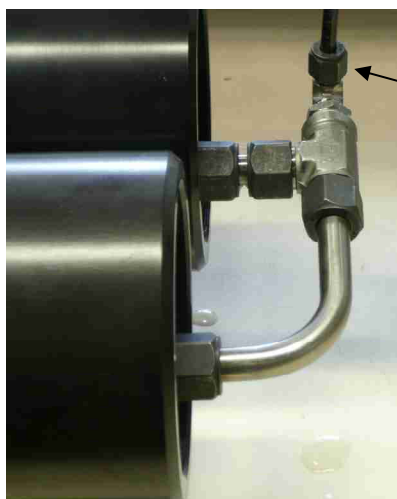
Brine Discharge Fitting



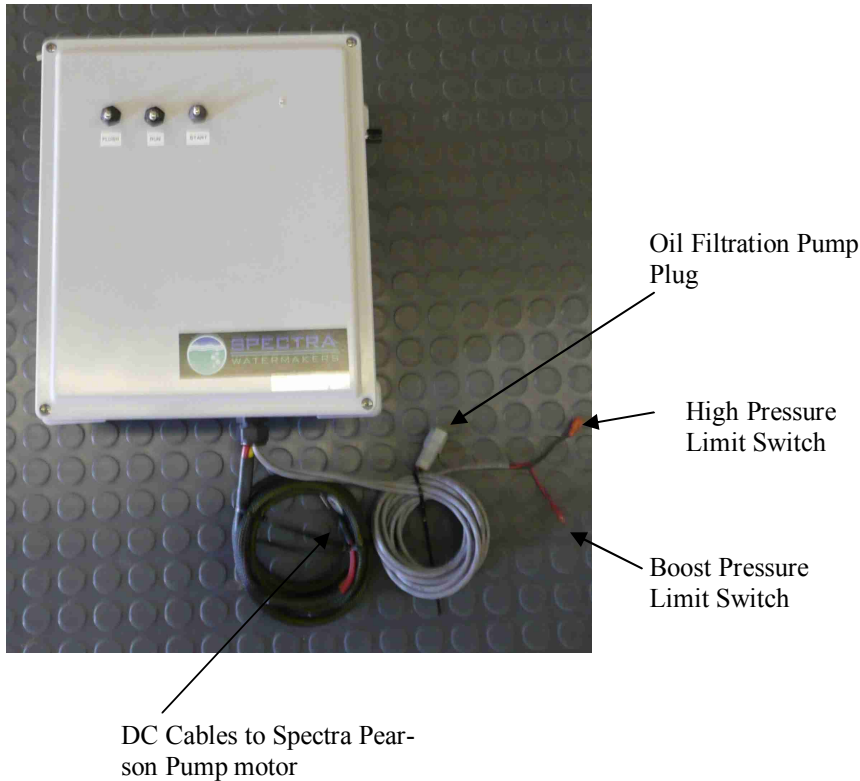
Product Water Outlet Connect the 1/2" black Parker tubing to the product water outlet fitting on the membrane endcap. Lead the 1/2" hose to the bottom fitting of the product flow meter on the Control Panel. Connect the product flow meter outlet fitting at the top of the flow meter to the common port of the supplied 3-way sampling valve. The outlet of one port of the 3-way valve should be plumbed to a sampling tap, and the other port should be plumbed to the potable water storage tank.



Membrane Pressure Gauge Connect one end of the supplied 1/4" high pressure hose using the supplied fittings and torque the ferrule fitting to 85 flbs (115 Nm). Connect the opposite end to the backside of the Membrane Pressure gauge on the Control Panel.



Electrical Connections DC Systems



Mount the Electrical Control Box within 6 feet (2meters) of the Spectra Pearson Pump high pressure assembly. Mount vertically, with the cable glands pointed down, in a dry location, preferably above the pump assembly to ensure proper ventilation across the heatsink and so that no water will accidentally spill on the switches or speed control knob.

Connect the DC Cables coiled outside the control box to the DC pos and neg posts on the Spectra Pearson Pump Motor.

Connect the Oil Filtration Pump plug to the corresponding plug on the oil pump located on top of the crankcase of the Spectra Pearson Pump

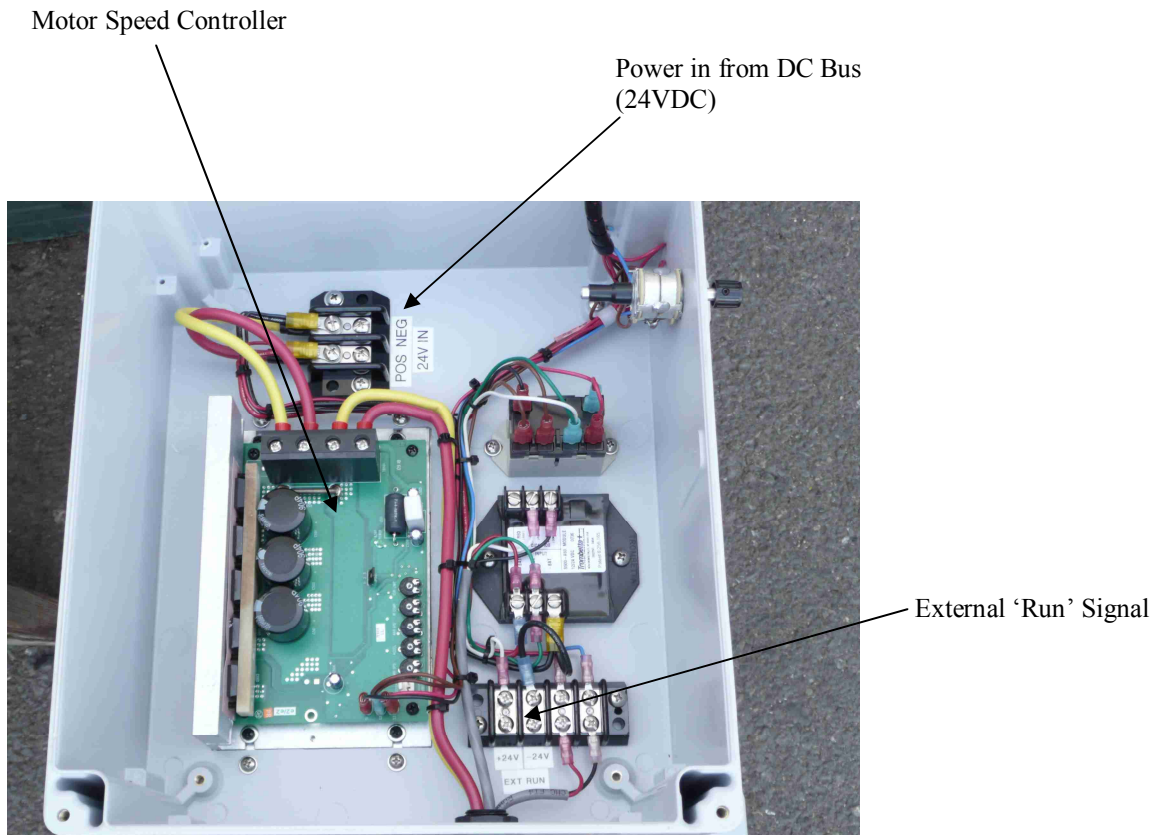
Connect the High and Boost pressure limit switch cables to the limit switches on the back of the Control Panel. The limit switches are both wired in series, thereby making them insensitive to polarity. Either cable can be connected to either limit switch.

Electrical Connections DC Systems

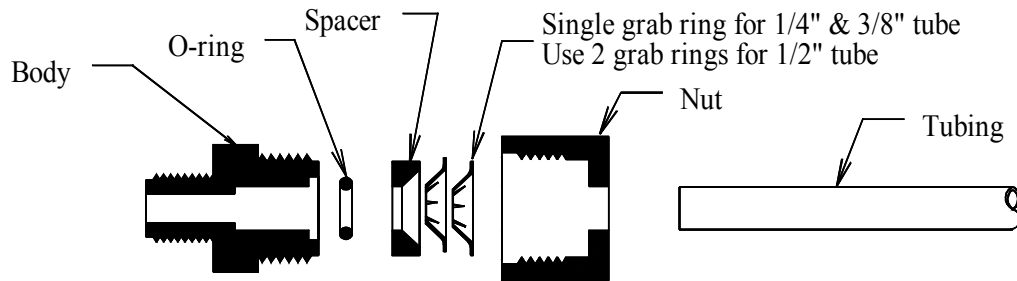
Connect the main DC Power leads from the DC Bus to the 2 position busbar located above the speed controller. Connect the DC + to the Red Conductor and DC - to the Yellow conductor.

The 'External Run Signal' provides a 24vdc signal to run an external well pump. This circuit can handle a maximum of 5A. **DO NOT RUN THE BOOST PUMP DIRECTLY FROM THIS BUSBAR!!!**

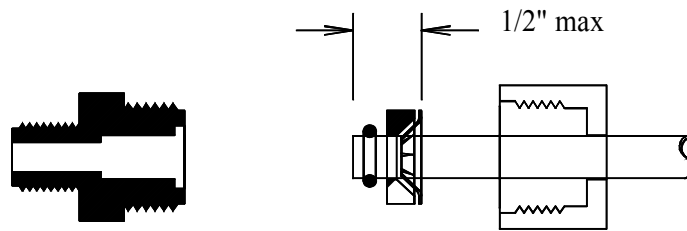
It is recommended that these cables connect to a supply pump controller as a 'Run' signal, or that they be wired such that they activate an external relay capable of handling the required current load of the supply pump. Contact the factory for any concerns.



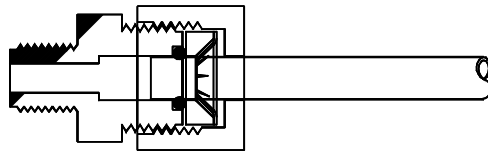
Parker Tube Fitting Assembly Procedure



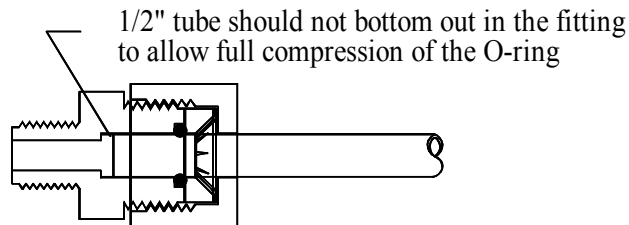
Step 1: Disassemble fitting components



Step 2: Install the Nut first then use the bevelled side of the Spacer to push the Grab Ring onto the tube no more than 1/2". Slip the O-ring over the tube to hold the Spacer in place. If the Grab Ring is pushed too far, trim back the tube so about 1/4" of tube extends past the O-ring.



Step 3: Gently fit the tube into the body and loosely thread on the nut. Be careful not to cross-thread the nut



Step 4: Hand tighten the nut. **DO NOT OVER TIGHTEN!** **DO NOT USE A WRENCH!** The tube should not come out if pulled by hand. If it does, tighten the grab ring tabs.

1/4", 3/8", 1/2" Parker Tube Fitting Assembly



Spectra High Pressure Tube Fitting Assembly

Use **ONLY** Dayco Imperial Nylo-Seal 88-NSR-1/2 tubing for high pressure connections.

Carefully fit and measure the tubing before cutting with a sharp razor knife or hose cutter and remove any burrs. Minimum tubing bend radius is 6". Route tubing away from excessive heat sources and secure from vibration and chafe. Have at least one shallow bend in a tube assembly after it is installed.

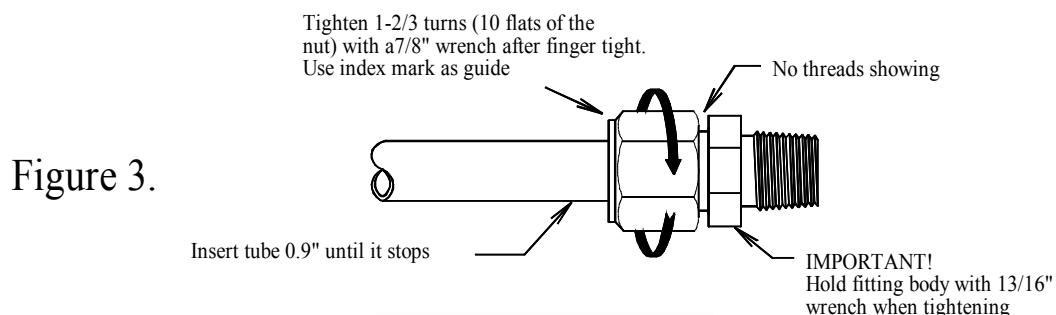
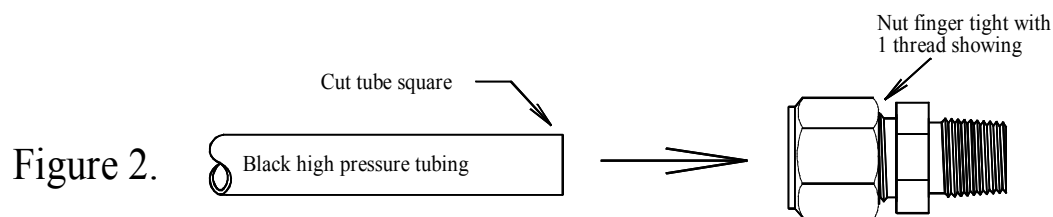
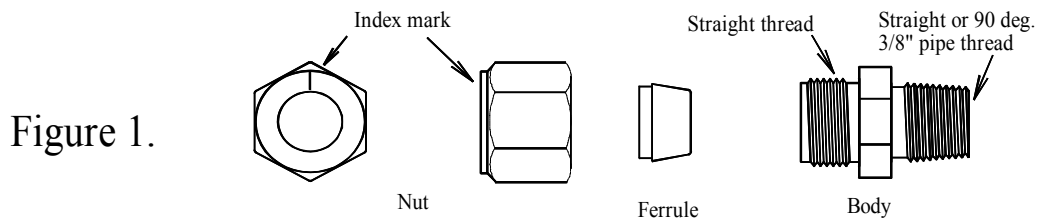
Refer to figure 1. If a fitting has been disassembled, reassemble as illustrated. The notch on the ferrule must engage the inside of the nut properly for the nut to seat down fully. Once the tube is inserted the ferrule and nut will naturally align.

Refer to figure 2. Insert tube fully into the fitting, it should go in 0.9". Tighten the nut finger tight while moving the tube around to prevent binding. One thread should be showing under the nut. Secure the tube so it won't back out when tightening.

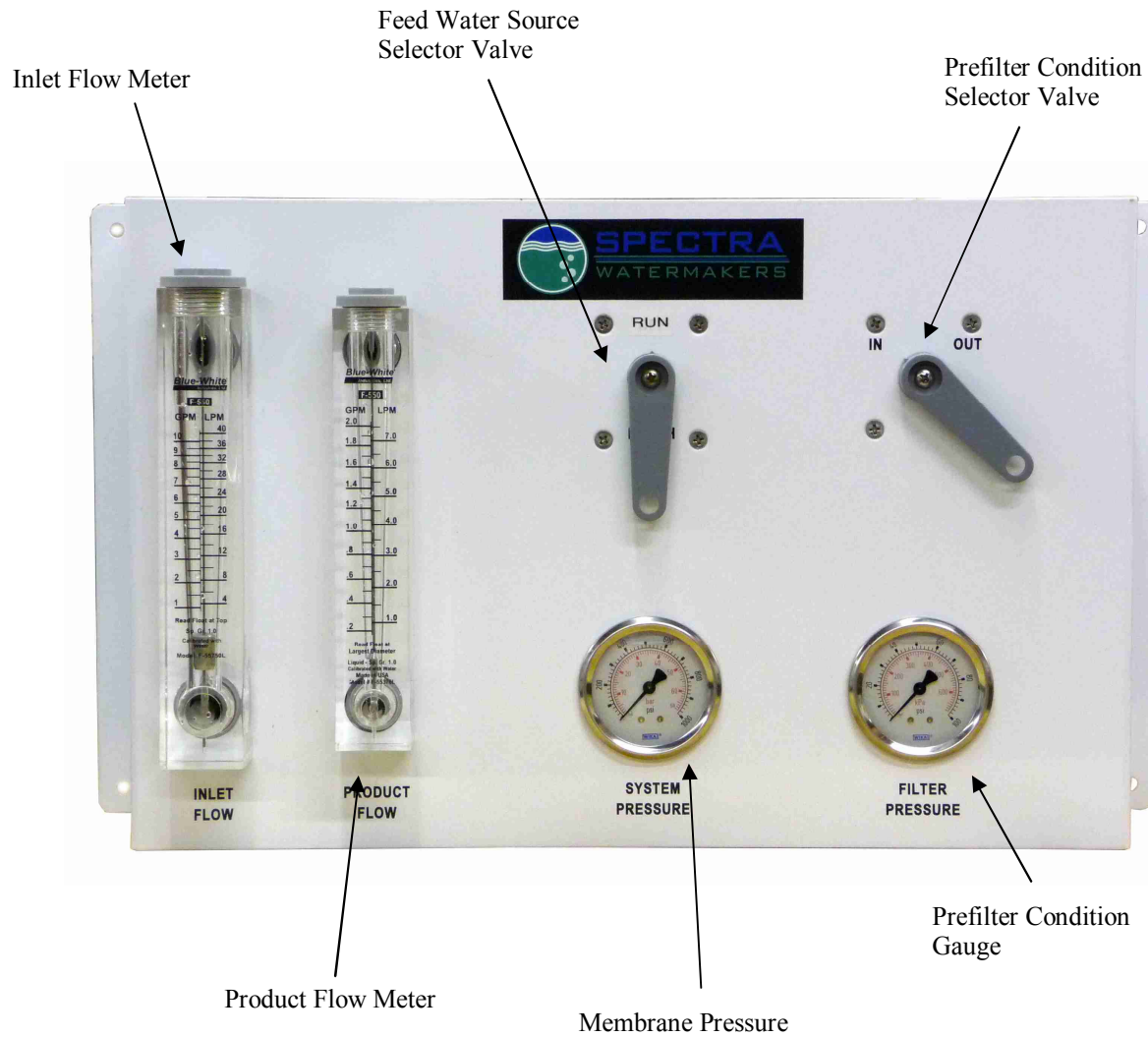
Refer to figure 3. Use 13/16" wrench to hold a straight body fitting or a 3/4" wrench for a 90° body, and a 7/8" wrench for the nut. Hold the body, recheck the tube insertion, then tighten the nut 1 1/4 turns. Use the index mark on the nut as a guide. The threads should be completely covered by the nut.

Make Sure these fittings are tight on initial assembly or they will fail!

The correct Torque is specification is 85 foot pounds



Control Panel

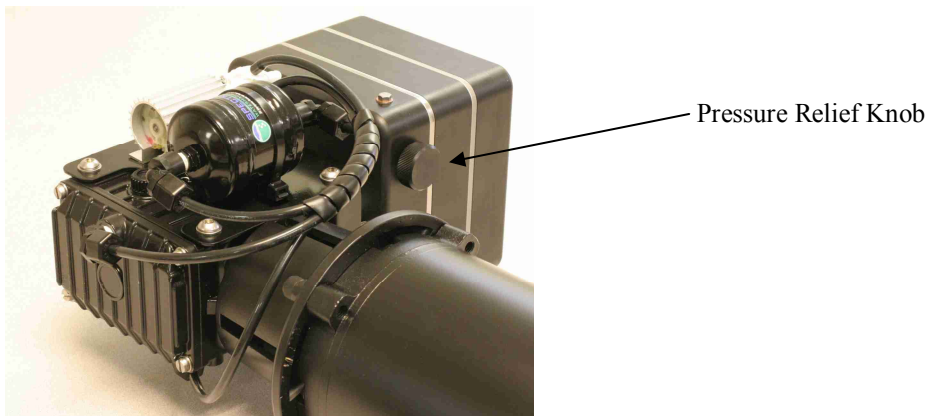


Initial Startup (Purging)

Note: The Giant crankcase in this unit shipped from the factory with oil in the crankcase and a shipping plug in the dipstick hole. Remove the plug and install the dipstick before operating the watermaker. Confirm that the crankcase is roughly half full oil before starting the watermaker.

When starting the machine for the first time set the product water sampling valve to a drain so that the product can be discarded until it becomes potable. Turn the flush valve handle to the “UP” position, covering the Flush Button. Set up the feed water supply system and ensure that there is 20 psi and at least 5 gpm available at the Feed Water Inlet. Bleed the feed water supply system of any air. Ensure that there is a 5 micron filter in the housing.

Open the pressure relief knob on the Spectra Pearson Pump 1/2 turn!!!



To start the Purge, set the Pump Speed Control knob to minimum, put the ‘Run’ switch on the electrical box in the ‘On’ Position and hold the ‘Start’ switch in the up position until the feed water pressure reaches 10 PSI.

The 5 micron pre-filter is equipped with an air purge button. If the system has difficulty priming, run the supply pump with the purge button depressed until all air is bled from the feed line.

When the pressures and flows have stabilized adjust the pump speed control knob until the Feed flow meter reading is about 4.5 GPM. **DO NOT EXCEED 60 PSI MEMBRANE PRESSURE!!**

Run the watermaker for at least 20 minutes with the pressure relief valve open to Purge the preservatives from the membranes.

After 20 minutes close the pressure relief knob. Water will begin to flow out of the Product hose. Discard this water for at least 20 minutes.

After 20 minutes test the water for salinity and taste. When the salinity is good and the water tastes acceptable, turn off the ‘Run’ switch and restart the watermaker according to the Normal Operation Instructions, or fresh water flush the watermaker if the machine will not be used until later.

Normal Operation

Note: If the system contains preservative or antifreeze, or if the condition of the membrane is unknown, follow the “Initial Startup” (purging) instructions on the previous page.

Starting: Set the product sampling valve to send the product to a drain. Put the Flush Valve in the “UP” position, so that the ‘Flush’ label is covered and the ‘Run’ label is exposed. Set the Pump Speed Control to Zero.

All valves in the product line must be open and unobstructed. Product must be allowed to flow freely at all times.

Make sure there is power to the external supply pump.

Turn the power switch to the ‘Run’ position and hold the ‘Start’ switch up until the feed pressure exceeds 10psi (0.7Bar).

When the pressures and flow rates have stabilized, adjust the Pump Speed Control to increase the production and membrane pressures to 5.5 GPM feed flow, as read on the control panel.

****Consult the factory if it is necessary to adjust the feed flow by more than 10% above or below the factory recommended flow rate. DO NOT EXCEED 850 PSI MEMBRANE PRESSURE!!**

After about one minute water will begin to flow out of the product hose. Test the product with the supplied hand held salinity tester. If it is within acceptable range it may be distributed as potable water.

Operation: Monitor the Filter Pressure gauge during operation. Pressure drop across the filter can be determined by comparing the gauge reading with the valve in the “Inlet” position to the reading when the valve is in the “Outlet” position. Note the difference in the reading when the filter is new and clean. When the pressure differential begins to climb the filter is getting dirty. When the differential has increased by 10psi (0.7 bar) the prefilter should be changed. If the Filter Outlet Pressure drops below 10psi (0.7 bar), the machine will stop.

Monitor the sound of the Spectra Pearson Pump. If the feed pump makes a heavy knocking noise, or very loud rattling noise it is cavitating or there is air in the feed water. Excessive cavitation or air in the feed water inlet will permanently damage the pump.

Stopping: Stop the machine at any time by turning the ‘Run’ switch down to the ‘Off’ position.



Fresh Water Flushing

If the machine is to be turned off for more than 12 hours it should be flushed with unchlorinated fresh water. This process should be repeated once every 5—7 days, depending on climate, that the machine is not in use.

Turn off the feed water supply pump and close the feed water inlet valve if fitted, to ensure that no raw water is drawn in during the flush.

Turn the Flush Valve to the “Down” position, covering the 'Run' label and exposing the 'Flush' label.

Turn on the 'Flush' Switch on the Control Box. The machine will start and water will flow from the brine hose.

Stop the machine when the brine discharge water salinity is below 1,000ppm (1,000 mg/L).



Flush Valve in 'Fresh Water Flush' position

Maintenance

General

Periodically inspect the entire system for leaks and chafe on the tubing and hoses. **Repair any leaks as soon as possible.** Check for corrosion around the fittings. If any rust appears, remove, clean, and reassemble the fitting. Rust is a sign of crevice corrosion inside the fitting and must be dealt with promptly.

Some salt crystal formation around the Spectra Pearson Pump mating surfaces is normal. Wash down any salt encrusted areas with a damp cloth. Keep the watermaker clean, dry, and salt free.

The 5 Micron Filter

A clogged 5 Micron filter will cause the controls to shut down the watermaker. **Avoid letting the 5 micron get so dirty the unit shuts down automatically.**

After a filter change it may be necessary to expel the air from the feed line using the purge button, located on top of the 5 micron filter lid.

When the system is put into storage, remove, rinse, and reinstall the 5 micron filter dry to impede corrosion. Check frequently during operation.

The 5 micron filter must be properly maintained to protect the Spectra Pearson Pump. Use only Spectra approved filters.

Use silicone grease on the o-ring to ensure a proper seal between the filter bowl and lid. **Do not use a petroleum based product, such as Vaseline or mineral oil, as it will permanently damage the filter housing bowl.**

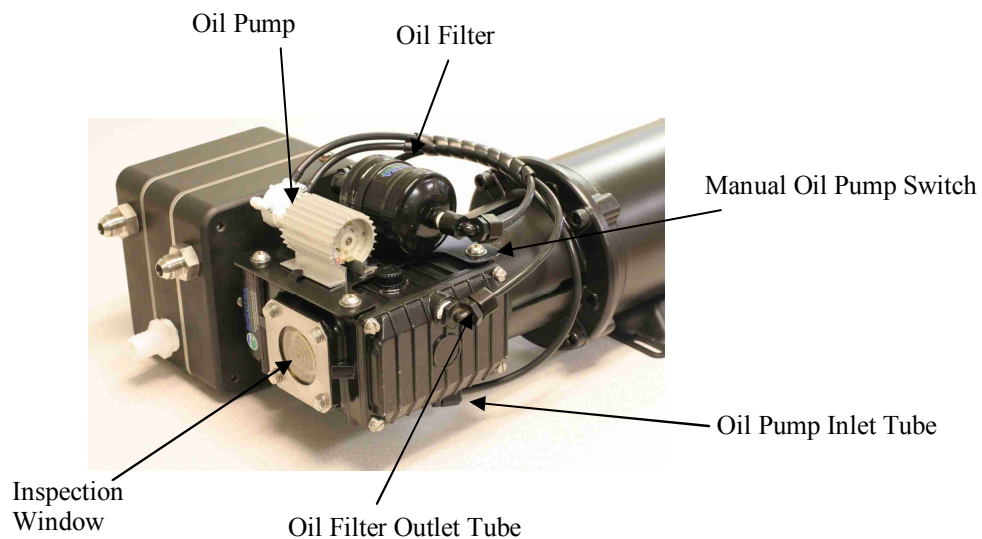
Giant Crankcase

Change the crankcase oil and filter every 4000 hours or if it begins to darken in color or become milky. Use high quality synthetic motor oil. SAE 5W30 or equivalent is recommended in most climates.

Oil Changes

The Spectra Pearson Pump uses a Giant P318 model crankcase attached to the motor to drive the pump. On top of the crankcase there is an oil pump and filter assembly to extend the life of the oil, allowing for much longer intervals between oil changes. The crankcase and filter assembly uses approximately 1.5 pints of oil, and **should be changed every 4000 hours**.

Spectra recommends changing the oil filter at this time, the entire module can be replaced for faster and easier oil changes. Use Spectra part number *KIT-SPP5-OP*.



Step 1: Stop the system, leave the power *on* to the Control Box.

Step 2: Remove the Oil filter Outlet Tube from the fitting on the crankcase and lead it to a container.

Step 3: Press and hold the Manual Oil Pump Switch located on the top of the Spectra Pearson Pump next to the oil pump and run the pump until the crankcase is empty.

Step 4: If replacing the filter/pump assembly, remove the Oil pump Inlet Tube from the bottom of the crankcase and replace module at this time.

Step 5: Replace the Oil Filter Outlet Tube back into the crankcase and remove the vented oil cap.

Step 6: Fill the crankcase with oil until level is just above the halfway mark on the crankcase window (roughly 1.5 pints). Replace vented cap.

Step 7: Run the system briefly, 3–5 minutes, then recheck oil level. Top off so that oil level is no less than halfway up the inspection window.

NOTE: Use only API SM, ILSAC GF-4, or SAE 5W-30 Synthetic Oil in the Crankcase. Use of other oils may void the warranty.

Long Term Storage

If the machine will not be used for more than seven days it should be treated with preservative. Spectra Watermakers Preservative SC-1 powdered preservative may be used if there is no danger of freezing. **Do not use other brands of preservative, they will damage the equipment!** If there is danger of freezing Propylene Glycol potable water antifreeze should be used instead of Spectra Watermakers SC-1. **The Pressure Relief Knob on the Spectra Pearson Pump must be open while circulating preservatives or cleaning compounds!**

If SC-1 chemical is to be used: You will need 2 cans of SC-1, 5 gal. (20L) of chlorine free water and the system must have already been thoroughly flushed. The feed water supply must be shut off.

Mix two cans of Spectra Watermakers SC-1 chemical into the unchlorinated water, stir until well dissolved.

Attach the intake and discharge service hoses to the corresponding connectors on the service valves. Place the intake service hose and the brine discharge service hose into the bucket with the storage chemical mixture.

Open the pressure relief valve on the Spectra Pearson Pump.

Turn the 'Flush' switch up to the 'On' position. The preservative will begin to circulate. Circulate the solution for about ten minutes.

Push the Stop button. Remove the brine hose from the bucket and put it in a drain.

Turn on the 'Flush' switch again. The machine will pump the remaining solution to the drain.

Turn the flush switch to the 'Off' position when the bucket is empty.

Leave the pressure relief knob open. The watermaker can now be stored for up to six months. If the machine has not been used for six months the preservative procedure should be repeated.



Note: Color of dot may vary. Consult product label to ensure proper chemical is being used.

Storing with Antifreeze (Winterizing)

You will need approximately 5 US gal (20L) of Propylene Glycol potable water antifreeze*. **The system must have been fresh water flushed thoroughly.**

Open the Pressure Relief Knob!

Attach the intake and discharge service hoses to the corresponding connectors on the service valves. Place the intake service hose into the bucket with the propylene glycol. Lead the brine discharge service hose to a drain.

Turn the 'Flush' switch on the control box to the 'On' position. Water will begin to flow out of the brine hose into the drain. When antifreeze begins to come out of the brine hose turn the 'Flush' switch to the 'Off' position.

Place the end of the brine hose in the bucket with the propylene glycol. Turn the 'Flush' switch on again to begin circulating the antifreeze. Circulate the antifreeze for 10 minutes.

Turn the 'Flush' switch off. Put the end of the brine hose to the drain again.

Turn on the 'Flush' switch. The system will pump the antifreeze in the tank into the drain.

Turn the flush switch off when the bucket is empty.

Leave the pressure relief knob open. The 5 micron prefilter can be removed and the filter housing left empty at this point**.

***USE THE MOST CONCENTRATED FORMULA PROPYLENE GLYCOL AVAILABLE, -100 FORMULA OR GREATER CONCENTRATION.**

**** Be sure to replace the 5 micron filter before running the system again.**

The Membranes

- Membranes need to be cleaned only when feed pressures have risen 10% or production has dropped 10% *due to fouling*, or the product quality degrades. Causes of fouling are: Biological growth that occurs when the system is left unused without flushing or pickling, and mineral scaling if the feed water contains carbonates, sulfates, silicates or other sparingly soluble salts. Colloidal particles can also clog the membrane. Monitor the product salinity and feed pressure for higher than normal readings for the conditions. Look for all other causes before cleaning the membrane, i.e. feed water temperature and salinity, pump speed, hose restrictions, Membrane life can be shortened by unnecessary cleaning.
- There are two types of cleaners: acid and alkaline. The acid cleaner (SC3) will remove mineral scaling. The alkaline cleaner (SC2) is used to remove biological by-products, oil, and dirt particles that get past the prefilters. The acid cleaner should be used first. If the membrane fails to respond to both cleanings, this is an indication of another problem with the system, or that it is time to replace the membrane. Contact Spectra Watermakers before removing a membrane.

Membrane Cleaning

For normal cleaning, the SC3 Acid Cleaning Compound is used first, then the SC2 Alkaline Cleaning Compound. If known biofouling is present, the SC-2 may be used first. Using warm water if possible, up to 120°F (50°C) is recommended as it greatly enhances the ability of the cleaners to do their jobs.

Note: Procedures are the same for the SC-2 and SC-3 cleaners

Warning! The pressure relief valve on the Spectra Pearson Pump must be open for this procedure or membrane damage may result.

Spectra Cleaning Compounds (SC-2 or SC-3) must be mixed with unchlorinated fresh water at a ratio of 1 container of compound to 3 gallons (12L) of water to have the proper solution. About 4 gallons (16L) of water is already present inside an 1800 system. This water has to be figured into the mixture. An 1800 system will use 2 containers of compound.

SC-2 and SC-3 are never mixed together. Do not use them for storage pickling solution

Cleaning Procedure:

You will need 5 gal (20 L) of chlorine free water and the system must have already been thoroughly flushed. Mix two cans of Spectra Watermakers cleaning chemical into the water and stir until well dissolved. Some chemical may remain out of solution in the bucket, this is normal.

Position the bucket as high and as close as possible to the Spectra Pearson Pump. Do not perform this procedure with the bucket more than 2 feet below the inlet to the Spectra Pearson Pump.

Open the Pressure Relief Valve. Install the inlet service hose and the brine discharge service hose on the corresponding service valves and lead them into the bucket containing the cleaning solution.

If possible, heat the solution to 120 F (50 C) to provide maximum cleaning power. Turn the 'Flush' switch to the 'On' position. The cleaning chemical will begin to circulate. Circulate the solution for about ten minutes.

If heating the solution is not possible, allow the system to soak for several hours. Occasionally start the pump by turning on the flush switch to agitate the solution.

When finished cleaning, remove the brine hose from the mixture and put it in a drain. Turn the flush switch on again to pump the remaining solution to the drain.

Turn the 'Flush' switch off when the bucket is dry.

Remove and replace intake hose so the system is now setup for normal operation.

When putting the system back into service, follow the Purge instructions for New System Startup.

Specifications

Electrical Input

240 volt systems: 208, 220, 230, 240 volts 50/60 Hz 6 amps

110 volt systems: 110, 115, 120 volts 50/60 Hz 12 amps

24 volt systems: 30 amps

** Power consumption will vary depending on feed water conditions and motor RPM. Do Not Exceed Factory Recommended Max/Min values.**

Feed Water Supply

Minimum Pressure: 10 psi, .7 bar

Maximum Pressure: 20 psi, 1.4 bar

Max (Min) Flow Rate: 8 (5) gpm, 30 (19) L/min.

Recommended Flow Rate: 5.5 gpm, 21 L/min

Total Dissolved solids: 0-45,000 mg/L

pH range: 4-11

Continuous free chlorine: 0 ppm

Temperature: 0° to 45° C

Turbidity: 1 NTU max

Silt Density Index: 1 max (after prefiltration)

Product

Rejection: 99.5%

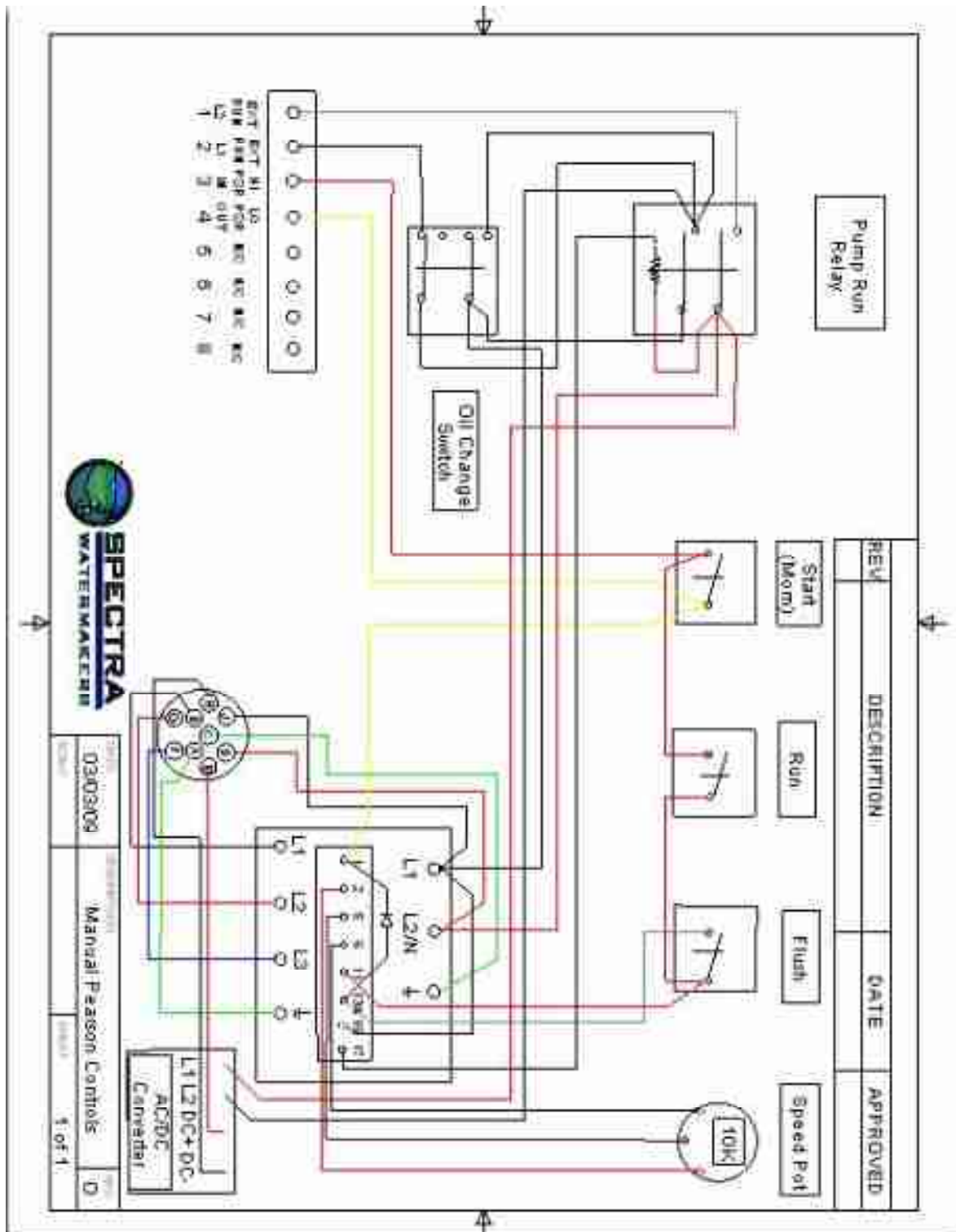
Flow: 1 - 1.6 gpm, 3.8 - 5.5 lpm

Lubricant:

O-rings and seals: Dow Corning Silicon Lubricant

Giant Pump: 5W-30 or equivalent synthetic motor oil

AC Wiring—LB1800



DC Wiring—LB1800

