



Installation & Operation Manual



Gen 4 Electric - 240VAC

Gold Coast

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MARINE EQUIPMENT MANUFACTURERS, IMPORTERS & DISTRIBUTORS

Introduction

Thank you for purchasing a Stella watermaker. Our watermakers are the result of many years of experience operating, servicing, selling and installing all brands and types of watermakers. Proudly designed and manufactured in Australia, Stella watermakers combine simplicity with quality components to create a reliable, easy to use system that offers real value for money. Whether you are a seasoned superyacht engineer or a cruising yacht, our modular watermakers are designed for easy installation, operation and maintenance.

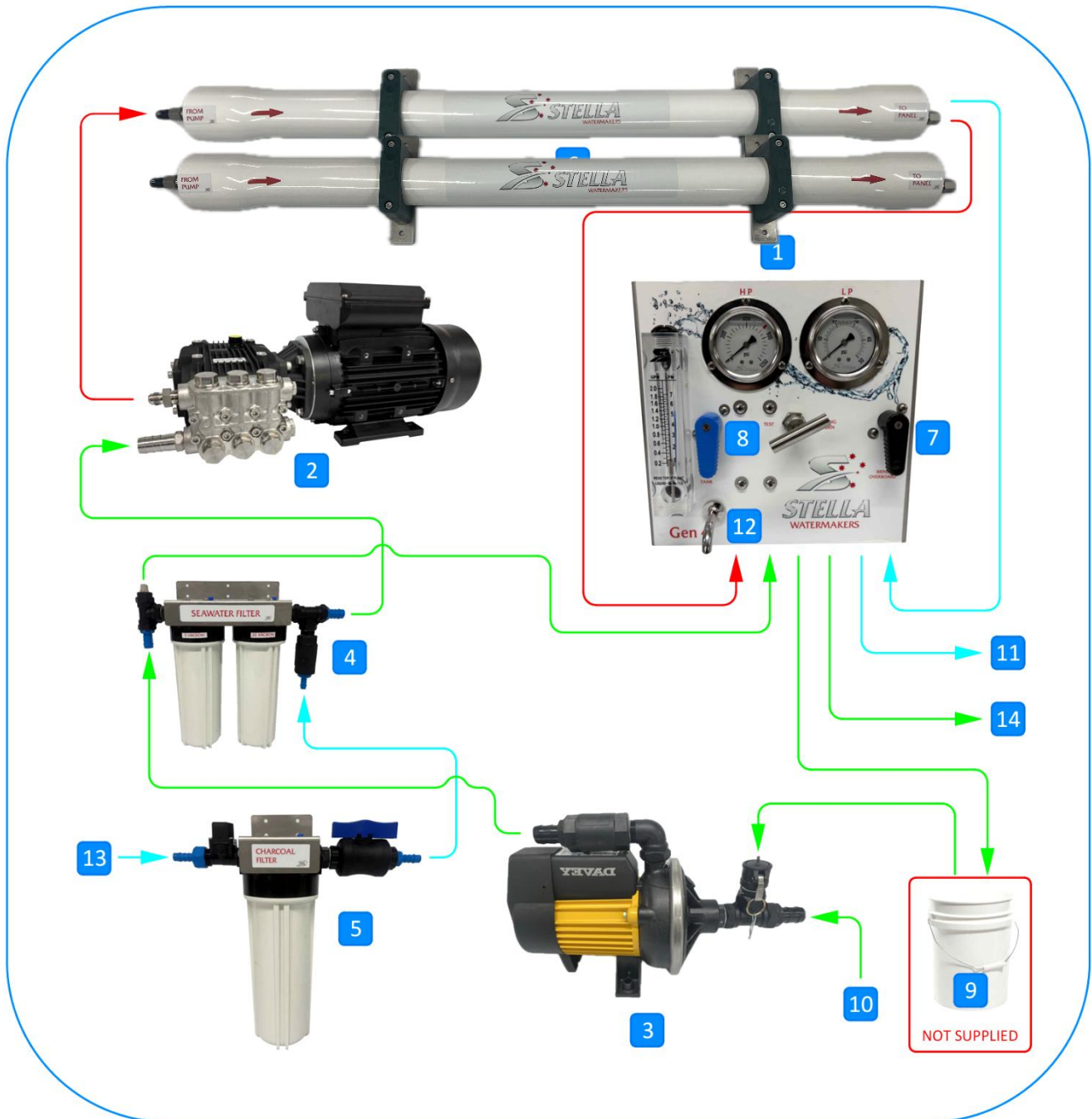
We strongly encourage you to spend some time reading through this manual before starting the installation. If you have any queries after reading this manual, please contact Stella Marine.

Contents

Page

System Flow Diagram	3
Installation	
Control Panel	4
High Pressure Pump	5
Membrane Housing	5
Low Pressure Pump	6
Seawater Filter	6
Charcoal Filter	6
Brine Overboard	7
Product Water	7
High Pressure Hose	7
Low Pressure Hose	8
Low Pressure Gauge	9
Auto Flush (Optional).....	9
Commissioning	9
Wiring	9
General Warnings	10
Operation	
Start Up	11
Shutting Down	13
Auto Flush (Optional)	13
Pickling the System for Storage	14
Troubleshooting	15
Maintenance	
System	16
Warranty	17

System Flow Diagram



Legend

→ Low Pressure Hose

→ High Pressure Hose

→ Product Water

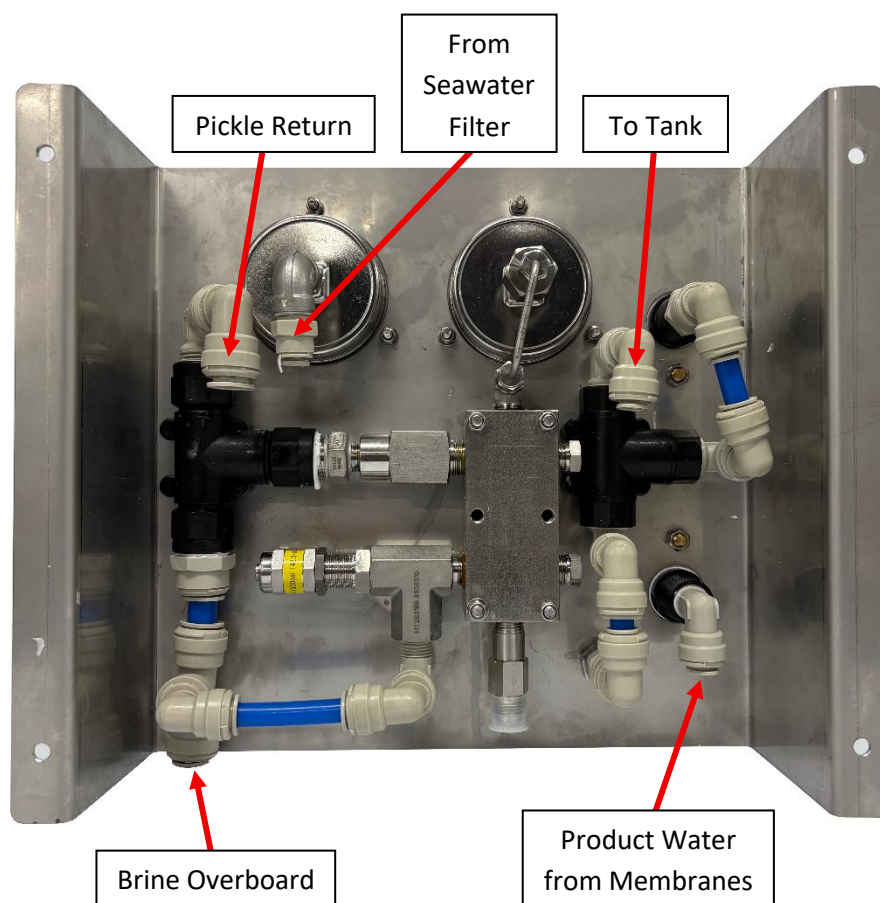
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|-----------------------|--------------------------|-------------------------------|
| 1. Control Panel | 6. Membrane Housing | 11. To Boat Water Tank |
| 2. High Pressure Pump | 7. Discharge Valve | 12. Test Spout |
| 3. Low Pressure Pump | 8. Product Valve | 13. From Boat Pressure System |
| 4. Seawater Filter | 9. Pickling Bucket | 14. To Brine Overboard |
| 5. Charcoal Filter | 10. From Seawater Intake | |

Installation

Please read the complete manual **before** beginning your installation

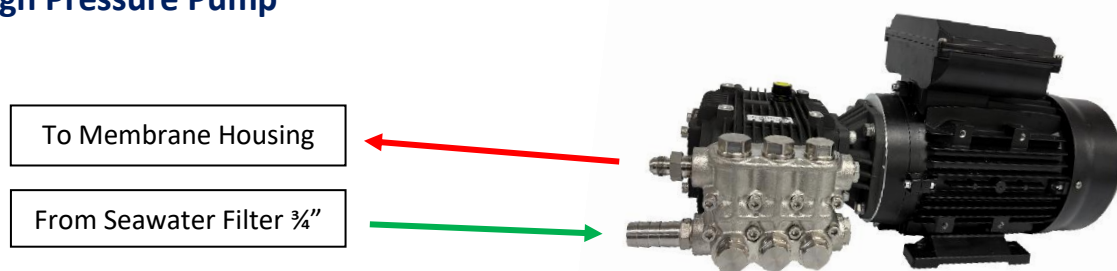
For easy watermaker operation and maintenance it is best to plan the mounting position of all components. We recommend mounting the Control Panel, Seawater Filter, Charcoal Filter, Auto Flush (optional) and electrical switches together if possible. This will allow you to operate the watermaker from one position. On larger vessels all components are usually mounted in the engine room. For smaller vessels the Control Panel can be remote mounted in a cockpit locker or bathroom cabinet, or wherever there is room. All metal components on the Control Panel are 316 Stainless Steel, so can be mounted in a wet area if required. We supply as standard two lengths (1-3m) of high pressure hose to connect the High Pressure Pump, Membrane Housing and Control Panel, with longer lengths available on request.

Control Panel



Mount the Control Panel in a suitable location with enough room to run hoses to the bottom of the panel. Keep in mind the position should be convenient to operate even when underway. Preferably this will be in a position that also has enough room to also mount the Seawater Filter, Charcoal Filter, Auto Flush (optional) and electrical switches. Install low and high pressure hoses as per the System Flow Diagram (Pg. 3). **If the Control Panel is installed below the waterline, install a vented loop above the waterline in the "To Pickling Bucket" hose.**

High Pressure Pump



Install the High Pressure Pump and 240VAC motor on a flat, dry, horizontal location with adequate ventilation, and bolt into place using the supplied (blue) anti-vibration engine mounts. The High Pressure Pump comes with a temporary plug fitted for transportation - please ensure this is switched with the oil plug provided prior to use. Wire the pump to a switch near the Control Panel. **Note that the Low Pressure Pump must be always be switched on and water flow confirmed, with a minimum of 6PSI showing on the Low Pressure gauge before operating High Pressure Pump.** The Pressure Relief Valve has been preset by Stella to open at 900PSI, relieving excess pressure via the pump manifold, and to close when the system pressure drops back below 900PSI. Install low and high pressure hoses as per diagram.

Membrane Housing



The Membrane Housing can be mounted on a bulkhead or deckhead panel, bilge or wherever there is space - horizontally, vertically or inverted. If mounting vertically, the flow must be running upwards and allow at least 50mm space on each end for hoses and fittings. Bolt down using the supplied brackets. **Be cautious not to hit the end fittings when installing, or damage may occur.** If installing more than one membrane housing, they will be joined together with a larger bracket and high pressure fittings. **Do not install the housing in direct sunlight.**

The high pressure hoses must be fitted in one direction, as per the diagram, to the outer ports on the membrane housing caps. The product water outlet can flow from either end of the Membrane Housing via the centre port. To change product water outlet ends, simply switch the plug and hosedtail. If installing more than one membrane housing, you will have been supplied John Guest fittings to join together multiple product water outlets. The membrane is supplied sealed within its housing via a plug at each end. It has been tested for quality at the factory, then pickled for storage. **If you are not installing and using the system immediately, the membrane will need to be re-pickled every 6 months** to avoid damage, (see section: Pickling the System for Storage). Install low and high pressure hoses as per diagrams.

Low Pressure Pump



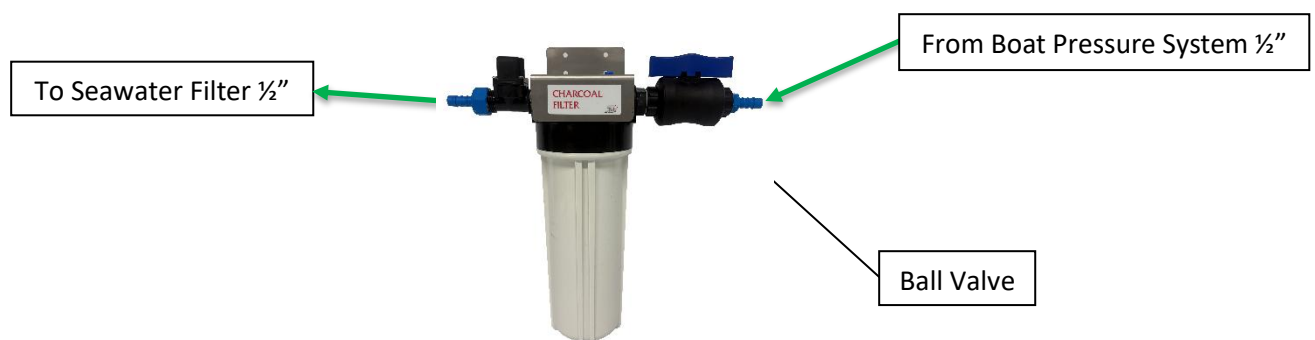
Install the Low Pressure Pump (240VAC) on a flat, horizontal surface with adequate ventilation **below the waterline**, with the outlet on the pump in the highest position facing up (see included Davey pump manual). Wire to a switch near the Control Panel. **The Low Pressure Pump must always be switched on before operating the High Pressure Pump.** Connect your boat's Seawater Intake to the Low Pressure Pump using 3/4" low pressure hose. This should be a minimum 3/4" thru-hull skin fitting and sea strainer (owner supplied). Install low pressure hoses as per diagram.

Seawater Filter



Mount the Seawater Filter near the Control Panel, allowing enough clearance below it to unscrew and remove the filter housings when cleaning. **Install new filters to each housing** as they are supplied empty. Water should flow through the 20 micron filter before the 5 micron filter (marked on blue ends). Install low pressure hoses as per diagram.

Charcoal Filter



Install the Charcoal Filter near the Control Panel, allowing enough clearance below it to unscrew and remove the filter housing when cleaning. **Install a new charcoal (carbon) filter to housing** as it is supplied empty. Connect a cold water line from your Boat Pressure System to the Charcoal Filter using 1/2" low pressure hose, to be used for Fresh Water Flushing the system. Install low pressure hoses as per diagram.

Brine Overboard

Connect the boat's Brine Overboard outlet to the bottom of the Discharge Valve on the Control Panel, using ½" low pressure hose. The outlet should be a ½" (minimum) thru-hull skin fitting (owner supplied), fitted above the water line in an easily visible area of the hull for any future troubleshooting.

Product Water

Connect the top of the Product Valve on the Control Panel to the Product Water Test outlet using ½" low pressure hose. This can simply be a short piece of food-safe hose into a bucket, or to a bathroom/galley sink with a spigot for taste testing with a cup. **If using a spigot, it must always be open (non-closing) and never be allowed to block the flow of product water.** Connect the bottom of the Product Valve on the Control Panel to the Boat Tank using ½" low pressure hose.

High Pressure Hose

Stella supply as standard two lengths (1.5m each) of high pressure hose, with 9/16" JIC fittings crimped to each end. Longer customised lengths are available if required, at an additional cost.

When installing the hoses:

1. Place the JIC hose fitting onto the male JIC fitting (membrane cap), and tighten until finger tight
2. Place a spanner on the stationary male JIC fitting
3. Place a spanner on the female JIC fitting (hose)
4. Tighten up the hose fitting taking care not to turn the male fitting (hold the male fitting in place with the spanner to prevent movement)



Install high pressure hose from the outlet port on the High Pressure Pump to the end of the Membrane Housing marked "From Pump". The hose connects to the outer port of the end plug as per diagram. You will need to unscrew the caps on each of the end plug fittings before connecting the hose fittings. The Membrane Housing will have pickling solution in it for storage after factory testing. **Do not attempt to over-tighten the port connections, as this may damage the end plugs.**

Install the second High Pressure Hose from the other end of the Membrane Housing (marked “To Panel”) to the Pressure Valve on the Control Panel. **Please be sure to secure hose with saddles or clamps firmly along the entire length to avoid vibration, hose chafing and harmonics.**

When installing the high pressure hoses to the Membrane Housing, always use the correct size spanner on both the end plug fitting and hose end fitting. The end plug can spin in the housing (this will not affect operation), so **always use a spanner on both fittings when tightening. Do not over tighten - tighten to hand tight and then nip up with a spanner.** When commissioning the watermaker check the high pressure fittings, and if there is a small drip nip up the fittings again with spanners until the drip stops - this should only be a small adjustment.

Low Pressure Hose

All Low Pressure Hose (owner supplied) should be food/drinking water rated. We recommend using clear wire helix reinforced hose from the Seawater Intake (sea strainer) to the Low Pressure Pump (suction), and clear nylon reinforced hose for all other low pressure hoses. All hose must be secured to hosetails with suitable hose clamps.

1. Install ¾” hose from boat’s Seawater Intake (sea strainer) to hosetail at the front of the Low Pressure Pump.
2. Run ¾” hose from the hosetail at the top of the Low Pressure Pump to the hosetail on the inlet side of the Seawater Filter.
3. Install ½” hose from the Boat Pressure System (cold water line) to the hosetail on the inlet (valve) side of the Charcoal Filter.
4. Connect ½” hose from the outlet side of the Charcoal Filter to the hosetail on the bottom of the inlet side of the Seawater Filter.
5. Run ¾” hose from the outlet side of the Seawater Filter to the hosetail on the High Pressure Pump.
6. Connect ½” hose from the product water outlet on the Membrane Housing (centre port) to the bottom of the Flow Meter on the Control Panel. You will need to remove one plug first and leave a plug in the other end of the Membrane Housing.
7. Run ½” hose from the top of the Product Valve on the Control Panel to the Product Water Test outlet. This may be a hose into a bucket, or to a spigot in a sink.
8. Connect ½” hose from the bottom of the Product Valve on the Control Panel to the Boat Tank. **Under no circumstances should the product water line be blocked while the system is running. Do not install shut-off valves anywhere in this line. If using a spigot it must always be open (non-closing), and never be allowed to block the flow of product water.**
9. Install ½” hose from the bottom of the Discharge Valve on the Control Panel to the Brine Overboard outlet (thru-hull).
10. Connect ½” hose from the top of the Discharge Valve on the Control Panel to the Pickling Bucket. This is usually a short length of hose rolled up and stored below the Control Panel, ready for placement into a bucket (pickling return) when pickling the system. **If the Control**

Panel is mounted below waterline, install a vented loop above waterline in this hose.

11. Cut and store another small length of ¾" hose with supplied ¾" hoesetail, for connecting the Pickling Bucket to the plugged tee fitting on the Low Pressure Pump when pickling.

Low Pressure Gauge

Your Generation 4 Stella watermaker is fitted with a low-pressure gauge. The main purpose of the gauge is to indicate the condition of your seawater filters. The normal operating pressure should be 10-18 PSI, however you may see pressure as high as 25 PSI depending on the operating conditions. If your low pressure gauge falls below 8 PSI we recommend changing your seawater filters. **Failure to replace the filters will starve the system of flowing water, and cause cavitation of the High-Pressure Pump. Never operate the system under 6PSI.**

Auto Flush (Optional)

If you have requested the optional Auto Flush, you will be supplied with a solenoid valve at the voltage of your choosing. The Charcoal Filter will have the solenoid valve mounted on the outlet. The Auto Flush box should be mounted next to the Control Panel and pump switches. Wire the Auto Flush to the onboard Boat Pressure System power circuit and solenoid valve.

Commissioning

The installation process is not complete until the system has been thoroughly tested. Please read the following operating instructions and run the system from start up to shut down. Check for leaks in both the low and high pressure hose, as well as the fittings, and reseal if required. Purge any air from the system, make sure all filters are installed in the correct housings, check product water output, then run through the fresh water flush and pickling procedure (without pickling solution). If the watermaker is not installed by the boat owner, please run through the complete procedure again with the boat owner during handover.

Wiring

All electrical work should be completed by a licensed electrician, and all wiring and components should be sized for the application. Install two switches (owner supplied) near the Control Panel, one for the Low Pressure Pump and one for the High Pressure Pump. Wire up so that the Low Pressure Pump must be switched on before the High Pressure Pump will start. Cable and switch size depends on distance from batteries. Pump Wiring is as follows; Yellow (active), Blue-Black Bridged (Neutral), Red-Brown Bridged (Isolated), Earth is attached to the green screw under the cover at back of electrical box.

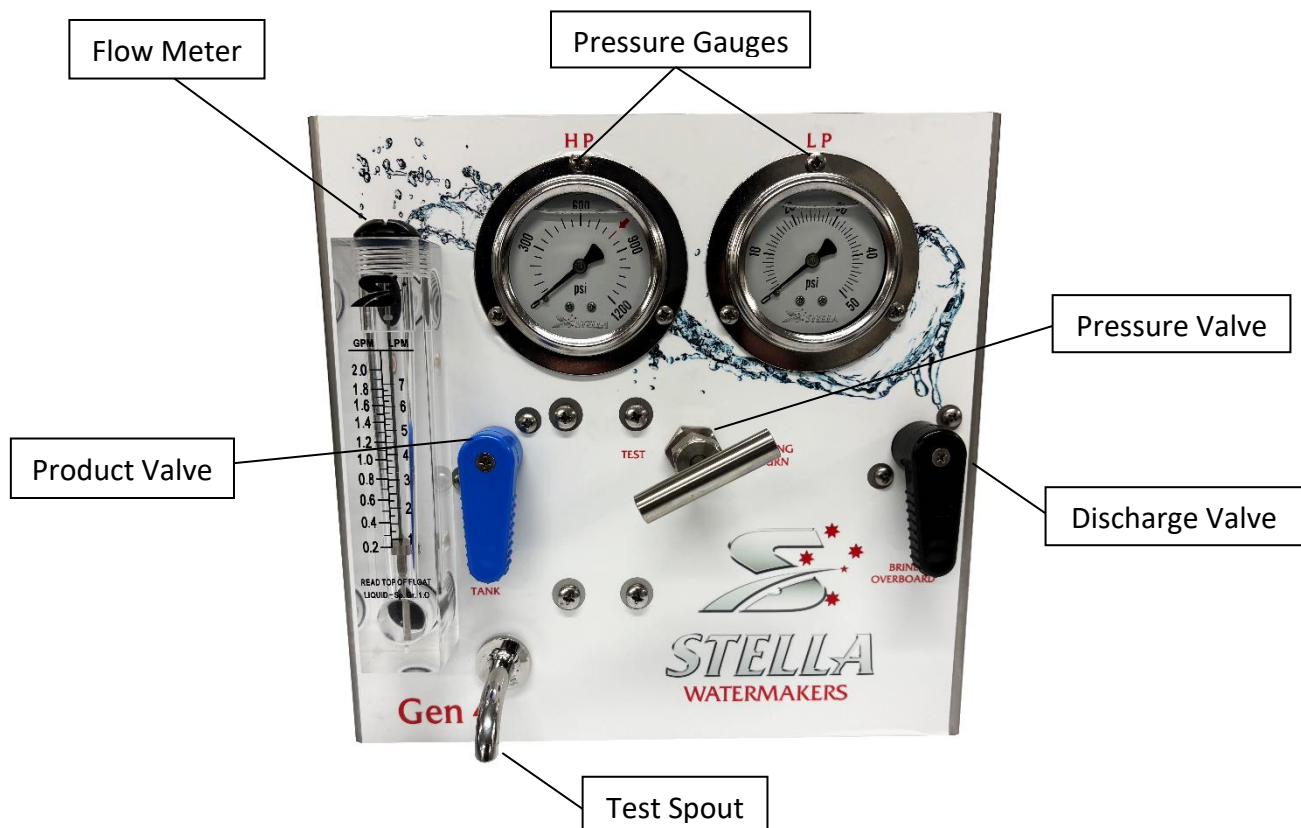
General Warnings

Incorrect installation or operation of the Stella watermaker can lead to damage to system components, reduced operational life, and, in some cases, can create the risk of personal injury. Understanding how the system works and following the recommended procedures will help ensure safe operation, reliable performance, and long service life.

1. Never start the watermaker under pressure, as this will cause a surge of highly pressurised water to the membrane causing immediate damage.
2. Never operate the watermaker at a system pressure above 850 PSI, as this will damage the membrane. Normal operating pressure is 820 PSI.
3. Never run the high pressure pump dry or without adequate water supply, as this will damage the pump.
4. Never run the watermaker in oily water, as this will damage the membrane.
5. Never rinse the membrane with chlorine or bleach, as this will damage the membrane.
6. Always fresh water flush the system after each use, to avoid reduced product water quality and/or damage to the components from biofilm build-up (organic growth) and corrosion.
7. The watermaker should not be left for more than 7 days without Fresh Water Flushing or Pickling the System for Storage.
8. Do not let the membrane housing dry out, as this will damage the membrane.
9. Never block the flow of product water from the membrane housing, as this will damage the membrane.
10. Operating the system in brackish water can damage the membrane - never allow the product water output to exceed the unit's rated output. To avoid damage you must reduce the system operating pressure, so that output is reduced to a normal level.
11. Do not install the membrane housing in an area with high temperatures, this will damage the membrane. Do not install in direct sunlight.
12. Do not let the membrane freeze, this will damage the membrane.
13. The membrane is pickled after testing – on first start up run for at least 30 minutes to flush the preservative out of the system before switching to Boat Tank, as well as after pickling.
14. Always operate the High Pressure Pump with the supplied pressure relief valve installed, and with undamaged high pressure hoses. The pump is capable of creating a dangerous stream of water up to 1500 PSI.
15. As with all electrical components, please use a suitably qualified marine electrician for safe connection and do not mount either pump in a wet area.

Operation

The following instructions must be followed each time your Stella watermaker is operated. Failure to follow these steps can result in serious damage to the membranes and High Pressure Pump.



Start-Up

1. Open the boat's Seawater Intake (thru-hull with seacock).
2. Check that the output of the Product Water Test hose is in a bucket, or plumbed to a free flowing sink outlet. **Blocking this outlet will damage the membrane.**
3. Turn the Discharge Valve on the Control Panel to the Brine Overboard position.
4. Turn the Product Valve on the Control Panel to the Test position.
5. Turn off the optional Auto flush (if fitted) by pressing the "OFF" button on the Auto Flush panel.
6. Make sure that the Pressure Valve on the Control Panel is fully open (zero pressure) by turning the T-handle anti-clockwise until it no longer turns. **Starting the watermaker without the valve in the fully open position (under pressure) will result in a surge of high pressure water to the membrane causing immediate damage.**

7. Switch on the Low Pressure Pump and run for 3-4 minutes, making sure the system is primed and purged of all visible air bubbles. Check and fix any visible leaks. Check that seawater is reaching the Seawater Filter by pushing the red button on top of each housing, which will release a small amount of water. Check that seawater is running through the system and out the Brine Overboard (overboard discharge). Once water is confirmed to be flowing out of the Brine Overboard outlet it is safe to start the High Pressure Pump.
8. Switch on the High Pressure Pump and check that you have an increased and steady stream of water flowing through the system, and out of the Brine Overboard. Run for a few minutes to clear air bubbles from the system. Check and fix any visible leaks. **Never run the High Pressure Pump without adequate water flowing through the system.**
9. Slowly increase the system pressure by turning the T-handle (Pressure Valve) clockwise on the Control Panel. When adjusting system pressure turn the handle very slowly, while constantly watching the Pressure Gauge on the Control Panel. Bring the pressure up to 700 PSI and pause to let the system stabilise, at this stage you should start seeing some product water coming through the Flow Meter on the Control Panel and into your bucket/sink. It is normal to hear some noise coming from the Control Panel. If everything is running smoothly and the pressure gauge is sitting steadily on 700 PSI, increase the pressure to the normal operating pressure of 820 PSI. **Never operate the watermaker at a system pressure above 850 PSI. While the Pressure Relief Valve will bleed off excess pressure, damage to the membrane can occur. Normal operating pressure is 820 PSI.**
10. Once the system is stable at 820 PSI with a constant flow of Product Water, check the water quality by tasting or with a TDS meter. If using a TDS meter, the water reading should be below 500ppm. Check the Flow Meter on the Control Panel to measure Product Water output. It should be making approximately 70-80L/hour per membrane with normal operating conditions. **Operating the system in brackish water can damage the membrane, never allow the Product Water output to exceed the unit's rated output. To avoid membrane damage you must reduce the system operating pressure so output is reduced to a normal level.**
11. Turn the Product Valve on the Control Panel to Tank, and begin filling your boat's water tank. Continue to monitor the Pressure Gauge and adjust if necessary to maintain a constant system pressure of 820 PSI. **Blocking this outlet will damage the membrane, so make sure your boat's storage tank does not overfill. If the membrane has been Pickled for Storage (as supplied from factory), product water from the first 30 minutes should be discarded. If the membrane is new, product water from the first hour should be discarded.**

Shutting Down

1. Once you have made an adequate amount of water, turn the Product Valve on the Control Panel back to the Test position. This diverts Product Water back to your bucket or sink outlet.
2. Slowly decrease the system pressure back to 0 PSI by turning the T-handle (Pressure Valve) anti-clockwise on the Control Panel until it stops turning (fully open). Product Water will stop flowing to your bucket or sink outlet.
3. Switch off the High Pressure Pump.
4. Switch off the Low Pressure Pump.
5. Close the boat's Seawater Intake (thru-hull with seacock), check the sea strainer for debris and clean if required.
6. Turn the Ball Valve on the Charcoal Filter to open position for approximately 2-5 minutes. This performs a Fresh Water Flush of the complete system, using the onboard pressure system and boat tank water. All seawater is purged out of the system via the Brine Overboard outlet. The Charcoal Filter removes any chlorine present in the boat's water tank to avoid damaging the membrane. **Never Fresh Water Flush the system without an active Charcoal Filter element. The Charcoal Filter element must be replaced every 6 months to avoid membrane damage.** Turn the Ball Valve back to the closed position.* **Always Fresh Water Flush the system after each use to avoid reduced product water quality and/or damage to components from biofilm build-up (organic growth) and corrosion.**

*If fitted with the optional Auto Flush panel, please disregard this step and simply press the "ON" button on the Auto Flush panel.

7. Check the 5 and 20 micron filters in the Seawater Filter (twin) housing, and clean if required using product water (un-chlorinated) or seawater. Be careful not to lose the O-ring from the top of the filter housing. **Using dock water or tank water with chlorine will damage the membrane. If chlorinated water is used, rinse the filter with product water (un-chlorinated) or seawater afterwards to remove the chlorine before replacing.** Cleaning frequency will depend on usage and water quality, we recommend checking and cleaning the filters after each use so the system is always ready for operation.

Auto Flush (Optional)

To use the Auto Flush, the boat's onboard pressure system must be left switched on with sufficient water in the boat's storage tank for weekly Fresh Water Flushing.

When you press the "ON" button of the Auto Flush panel the solenoid valve will open for 2-5 minutes, Fresh Water Flush the system, and then close. The timer will then start automatically and perform the same Fresh Water Flush for 2-5 minutes every 7 days until you turn the Auto Flush off (using the "OFF" button).

Pickling the System for Storage

If you are leaving your water maker unused for an extended period of time (without manually flushing or using Auto Flush), we recommend pickling the system for storage.

1. Complete the Shutting Down procedures and Fresh Water Flush the system.
2. Make up a bucket of pickling solution by mixing 2L of Propylene Glycol with a 10L bucket of Product Water (un-chlorinated water). Alternatively, if this is not available to you, Sodium Metabisulfite is an acceptable alternative. In this case, mix at a ratio of 1 tablespoon Sodium Metabisulfite per 2L of Product Water. **Never use chlorinated water for pickling the system as it will damage the membrane.**
3. Place the unattached end of the ½" low pressure hose (pickling return) from the top of the Discharge Valve on the Control Panel into the bottom of the Pickling Bucket, as per diagrams.
4. Connect the small length of ¾" low pressure hose from the bottom of the Pickling Bucket to the tee fitting on the inlet side of the Low Pressure Pump, as per previous diagrams. Unscrew the plug in the tee fitting, and screw in the supplied ¾" hoesail to connect the hose.
5. Turn the Discharge Valve on the Control Panel to the Pickling Return position.
6. Turn on the Low Pressure Pump and circulate the pickling solution for 30 minutes, making sure the hose ends remain in the bottom of the bucket.
7. Turn off the Low Pressure Pump.
8. Turn the Discharge Valve on the Control Panel to the Brine Overboard position.
9. Remove the hoesail from the Low Pressure Pump tee fitting, and replace with the ¾" plug. Empty the bucket and store the hose for use next time. The system can now safely be stored for up to 6 months. **If storing for longer than 6 months, re-pickle the system every 6 months to avoid damage to the membrane.**

When restarting the system after being pickled for storage, product water from the first 30 minutes should be discarded.

Troubleshooting

Problem	Possible Cause	Solution
Low Pressure Pump does not turn on	- No power to pump - Faulty pump	- Check switch is turned on, circuit breaker is not tripped, and no loose/ broken wiring - Check power source, that all fuses/ circuit breakers are in correct position and that fuse has not blown - Check pump impeller is free from debris - Check and clean strainer at seacock - Check for airlock in system, remove hose at filter and check for water flow
High Pressure Pump does not turn on	- No power to pump - Faulty electric motor	- Check switch is turned on, circuit breaker is not tripped, and no loose/ broken wiring - Check power source, that all fuses/ circuit breakers are in correct position and that fuse has not blown - Check all fuses and circuit breakers are in the run position and in good order
Water not flowing through the system	- Low pressure pump not working - Airlock in system - Blocked filters	- Check Low Pressure Pump is running - Bleed air from system via red buttons on seawater filters - Check Low Pressure Gauge indication (6-25psi) - Change filters if required
System does not build pressure to 820 PSI	- Closed seacock - Blocked filters - Pressure relief valve is open - Leaks in high pressure system	- Check seacock is open - Check/replace filters - Check pressure relief valve is closed - Repair leaks in high pressure system
Product water has low production rate	Incorrect operating pressure	- Check operating pressure is 820-840 PSI - Check that the needles on both pressure gauges are steady - if not, check the filter and clean or change if necessary - Check that the pressure relief valve is set at 900 PSI
Product water has a salty taste/has a reading above 500ppm	Membrane/s in poor condition	- Perform wash for 2-3 hours with 5% citric acid solution, then retest (following Pickling procedure) - Replace membrane/s
No product water is reaching the storage tank	Product valve is not set correctly/leaks in hose	- Ensure valve is set to 'tank' not 'test' - Identify leaks and repair
Leaks at high pressure fittings	Incorrect/loose fitting	- Tighten fittings ¼ turn clockwise - Re-apply sealant to fittings

Maintenance

The following instructions must be followed to maintain your Stella Watermaker. Failure to follow these steps can result in serious damage to the components and reduced lifespan of the system.

System

1. Always Fresh Water Flush the system after each use, to avoid reduced product water quality and/or damage to components from biofilm build-up (organic growth) and corrosion. Never leave saltwater sitting in the system as it will quickly foul filters and membranes, taint product water and decrease the lifespan of all system components.
2. The watermaker should not be left for more than 7 days without Fresh Water Flushing or Pickling the System for Storage. Even after flushing with fresh water, you will still get water and membrane fouling if left unattended. Depending on boat usage, the system needs to be flushed manually with fresh water every week, have an Auto Flush fitted, or be pickled for storage.
3. Clean or replace 5 and 20 micron sediment filters in the Seawater Filter housing after each use. There will be a build-up of marine life/waste after running the system, more so in dirty or tropical water. If left, this will reduce the quality of your product water and block filters, starving the system of water supply. We recommend removing and cleaning filters as part of the Shutting Down process, so that the system is always ready for use. The filters supplied are a quality washable type that will last many weeks or months (depending on use), and will need to be replaced when they are looking frayed or torn. When replacing, use a standard 10" x 2.5" polyester pleated sediment filter, but be sure to use a quality unit that won't fall apart and damage the membrane.
4. Replace Charcoal Filter element every 6 months. The carbon filters have a definite shelf life after opening and will degrade. To avoid risking damage to the membrane, we recommend changing them, at minimum, every 6 months. When replacing, use a standard 10" x 2.5" carbon filter, but be sure to use a quality unit that won't fall apart and damage the membrane.
5. The oil in the High Pressure Pump should be checked regularly and changed at 50 hours running time, and thereafter every 3 months or 300 hour intervals, as per the manufacturer's specifications. Use standard grade 68 hydraulic oil, or genuine General Pump oil.
6. The high pressure tubing, fittings and overall system should be kept clean and checked for damage, kinks, leaks, etc. regularly. The High Pressure Hose should be adequately clamped down to avoid chafing from vibration.
7. The membrane cannot be allowed to freeze, cook in high temperatures or dry out. Remove, pickle and store if required. Always have adequate ventilation so the membrane doesn't overheat, and keep it wet by flushing weekly – or by pickling every 6 months if in storage.

Warranty

Stella Limited Warranty

Stella Marine warrants to the original purchaser that, when installed, operated, and maintained in accordance with this manual, the product will be free from defects in materials and workmanship and will perform substantially in accordance with its published specifications for a period of twelve (12) months from the date of shipment.

Any replacement product or component supplied under this warranty will be covered for the remainder of the original warranty period or thirty (30) days from the date of replacement, whichever is longer.

Exclusions

This warranty does not apply where:

- A defect is not reported within the warranty period;
- The product has been improperly installed, operated, maintained, modified, altered, misused, abused, neglected, or damaged;
- Damage results from chemical exposure, contaminated feed water, environmental conditions, acts of nature, or causes beyond Stella Marine's control;
- The claim relates to normal wear and tear, routine maintenance, or consumable items.

This warranty does not cover products or components with removed, altered, or defaced serial numbers.

The following items are considered consumables, and are therefore excluded from warranty coverage:

- 5-micron and 20-micron sediment filter elements
- Charcoal filter elements
- Pressure gauge and flow meter calibration
- High-pressure pump crankcase oil
- High-pressure pump valves, seals, packing, and ceramic plungers

Warranty Claims

If a component fails during the warranty period, Stella Marine will, at its discretion, inspect, repair, or replace the defective component.

The purchaser is responsible for all costs associated with removing, packaging, shipping, and reinstalling components. Freight to and from Stella Marine's service facility on the Gold Coast, Australia, is **the responsibility of the purchaser**.

Purchaser Responsibilities

As a condition of this warranty, the purchaser must:

- Perform maintenance as specified in this manual and by component manufacturers;
- Operate the system within the limits specified in this manual.

Failure to comply with these requirements may void this warranty.

Limitation of Liability

Except as required by law, Stella Marine excludes all warranties not expressly stated in this document.

Stella Marine's liability under this warranty is limited to the repair or replacement of the defective component and shall not exceed the original purchase price of that component.

To the extent permitted by law, Stella Marine shall not be liable for any indirect, incidental, special, or consequential loss or damage, including loss of profits, loss of use, business interruption, removal or installation costs, freight costs, or third-party claims.

Australian Consumer Law

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law.

You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

No agent, dealer, distributor, installer, or other person is authorised to make any warranty or representation on behalf of Stella Marine other than those expressly stated herein.