

# AQ | AQUA ADVANCED WASTEWATER & IRRIGATION SYSTEM

## HOME OWNERS MANUAL

**Congratulations on the purchase of your new  
Aqua Advanced Wastewater & Irrigation system!**

**By purchasing this product you are supporting Australian  
manufacturing and helping us keep the industry strong.**

**- Everhard Industries**

Your Aqua Advanced system has been designed and manufactured locally by Everhard Industries. We are Queensland's largest manufacturer of recycled plastics and have been mastering drainage, wastewater & environmental solutions for over 90 years. Our products are designed for Australian homes and Australian conditions, working to conserve the environment for the future. With plastics and precast manufacturing factories in Brisbane, Everhard is committed to local and sustainable manufacturing for generations to come.

The Aqua Advanced Wastewater & Irrigation System uses similar processes and technologies to that of the sewage treatment plants used in large towns and cities. AQ Advanced will efficiently treat all of the wastewater from your laundry, kitchen and bathroom so that it can be safely reused in garden irrigation.

Aqua Advanced meets the National Standard AS/NZS1546.3 (2017) including any amendments and has tested to the Advanced Secondary Standard. Systems adhering to the Advanced Secondary Standard may be required by the regulatory authority in areas where there are ecosystems sensitive to high concentration of nutrients. The Aqua Advanced System has also passed a stringent testing program which was undertaken over a period of 34 weeks. This ensures your system will be strong and durable with the final effluent irrigated throughout your property being of the highest quality.

Your role now is to ensure that routine maintenance on your system occurs as outlined within this manual and you are aware of the functionality and limitations of the system to ensure its effective operation.

Please read this manual carefully as it includes important information about maintenance and care of your system.

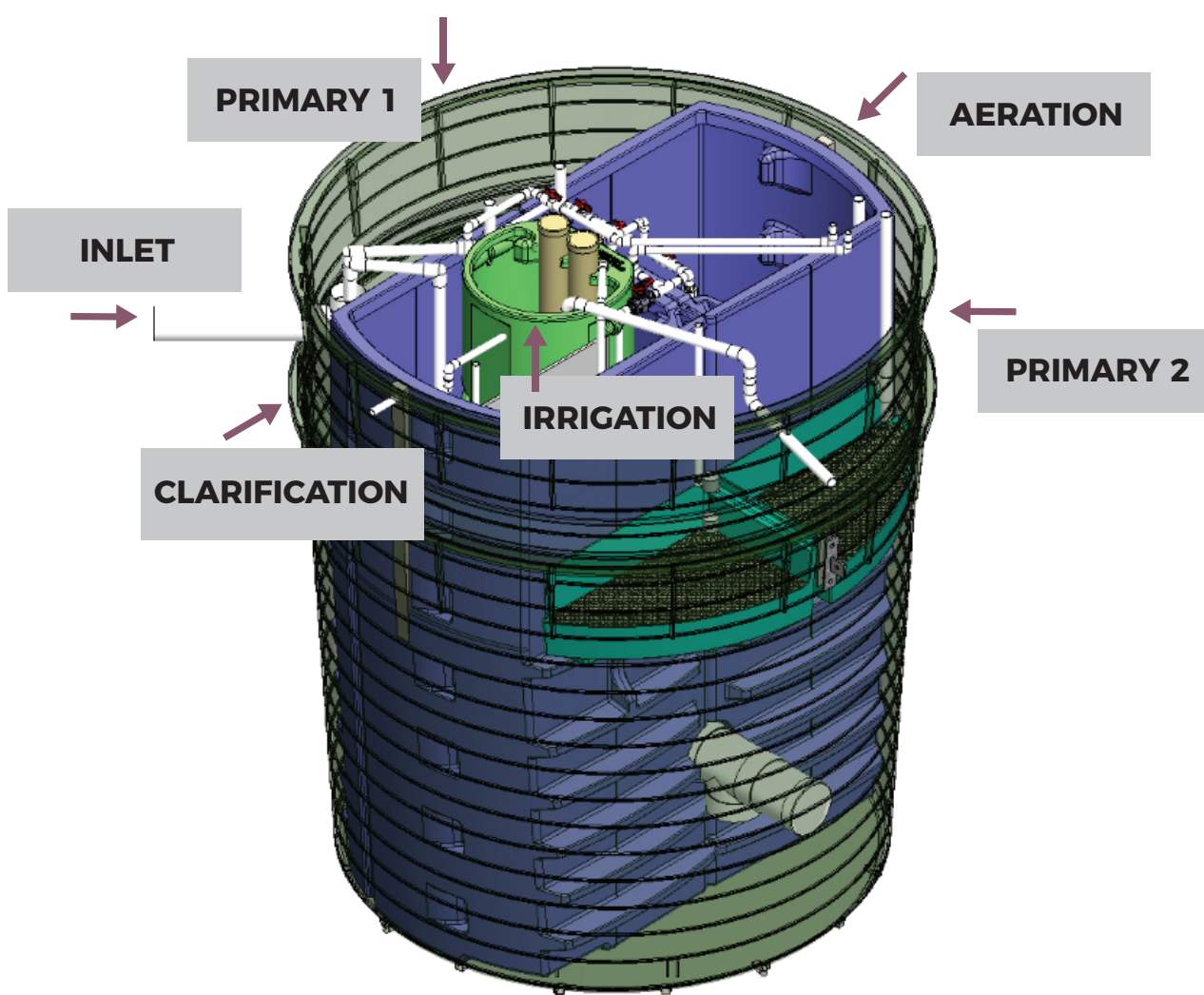
## HOW THE SYSTEM WORKS

The Aqua Advanced System is an innovative single tank system, designed with a 5-stage process to generate clean, safe wastewater for irrigation into your garden. The system provides a fully integrated and completely automatic treatment process which is designed to treat up to 1,200 Litres of household wastewater per day. The system is also designed to operate with zero inflows for a number of weeks, meaning it will cover holiday periods. The system relies on physical, biological and chemical treatment processes to produce high quality water.

ACTIVE ZONE	DESCRIPTION
<b>Primary (anaerobic) Treatment</b>	All wastewater flows into a Primary Chamber that allows for the removal of solids and fats from the raw sewage. This chamber is split to allow efficient separation of solids and fats, before an active anaerobic filter bed starts the initial treatment process.
<b>Secondary (aerobic) Treatment</b>	Wastewater then flows into an aerobic zone that has air pumped into an aerator. This zone is fitted with media, which allows for aerobic bacterial growth called biofilm. The biofilm and air bubbles work to consume and biodegrade residual organic material.
<b>Clarification</b>	Aerated water undergoes a final clarification. This allows most of the residual solids to settle, which are then pumped back to the primary tank at the designated service interval. There is also a further filtration bed to ensure that the water entering the chlorinator is clean and clear.
<b>Disinfection</b>	Clarified water is disinfected by the chlorinator assembly. This is achieved by allowing the water to flow over chlorine tablets, providing enough chlorine concentration to eliminate any residual bacteria.
<b>Irrigation</b>	When sufficient wastewater has been treated, a pump will activate allowing safe, recycled water to disperse, via the irrigation system, to your garden or lawn.

## SYSTEM DIAGRAM

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## BACTERIA, CHEMICALS & YOUR SYSTEM

The system uses bacteria to biodegrade organic material, for the system to run efficiently it relies on the growth of this bacteria. Disposing of poisons, chemicals and cleaners can kill the bacteria that the system needs to operate effectively and can result in water of poor quality being produced.

Owners are encouraged to limit the amount of disinfectants that they use in cleaning, and to adopt practical measures to minimise their general use. If these chemicals must be used, we suggest diluting the material prior to or during disposal.

Follow these practical hints to help keep your system working to full capacity.

### AROUND THE HOME

- / Avoid using disinfecting agents, bleaches and dyes in the laundry, kitchen or bathroom that will drain into the system. We recommend using natural biodegradable cleaning products e.g. crème, sodium, phosphorus-free and alkaline cleaners
- / Do not use or pour kerosene into the system
- / Avoid using toilet cleaners as they are anti-bacterial and will affect the system
- / Ensure foreign matter e.g. sanitary napkins or nappies don't enter the system, creating blockages or adding to waste
- / Minimise the use of a garbage grinder as the solids produced will overload the system
- / If you are using bleaches, antibacterial, or antiseptic solutions, use these in a bucket and dispose of the water in the yard
- / Try using liquid soaps to prevent build up on hard surfaces as this makes them easier to keep clean
- / Try cleaning heavily stained toilets using a bowl of hot suds and allow to stand before brushing
- / Try using washing soda in hot water, emptied into the plug hole at night to eliminate any smells that may occur
- / Try using only a small amount of detergent to prevent excessive foaming
- / Try using washing soda as an effective fabric softener
- / Try pre-soaking soiled nappies in 45g of Bicarbonate Soda dissolved in warm water and wash in hot soapy water
- / Try washing the dog in the yard rather than the laundry tub or bath
- / Try cleaning paint brushes outside using a bucket of water and don't dispose of water down the sink

## MANAGING ORGANIC LOADS

- / Ensure scraps and produce peelings are not disposed of down the sink, instead consider composting these
- / Ensure you do not dispose of fats, oils, greases or mineral based greases down the si
- / Try to minimise the operation of food disposal units

## MANAGING HYDRAULIC FLOWS AND CONSERVING WATER

- / Ensure you use one water appliance (washing machine, dishwasher, etc.) at a time
- / Try installing water saving fixtures (shower roses, tap nozzles, etc.)
- / Try having shorter showers
- / Try to spread laundry washing throughout the week
- / Try placing a sponge or your plug angled over the plug hole to slowly release water when emptying a bath or spa

## AROUND THE TANK

- / Ensure no regular pedestrian traffic over tanks are permitted
- / Ensure no vehicle traffic is permitted within 600mm of the tanks
- / Ensure access and inspection covers and the control box are always freely accessible and not buried

## IRRIGATION

- / Ensure you do not relocate fixed sprinkler or sub-surface irrigation outlets without the approval of local authority
- / Ensure irrigation outlets are not located where the treated effluent may enter watercourses or dams
- / Ensure you do not allow treated wastewater to come into direct contact with crops or other vegetation used for foodstuffs
- / Ensure treated wastewater is not used for drinking or for bodily contact

If you have any queries regarding the use of certain products in your system, please contact your Service Provider.

## CARE OF YOUR SYSTEM

Looking after your system and following our guidelines will ensure your system operates at maximum efficiency. We have compiled a checklist to assist you in maintaining your system:

### THINGS TO CHECK OR DO EVERY 4 TO 6 WEEKS

- / Trim the grass or other surface cover plants around the system
- / Remove clippings, leaves and other waste plant material from on and around the system. These actions are intended to make sure seeds and roots do not enter the system.
- / Make sure the lid and inspection covers are firmly affixed.
- / Make sure the control box and lid are firmly affixed.
- / Inspect the system for signs of leaks. If you suspect a leak, contact your service provider.
- / Listen for the blower inside the control box – you should hear it humming quietly.
- / Make an effort to observe the irrigation system working, making sure the sprinklers are all working properly (not clogged or blocked). If the irrigation is working then the pump is also working. If you need to clean sprinkler heads, use waterproof gloves and wash your hands thoroughly with antibacterial soap immediately after you have finished.
- / If you have a separate grease trap, make sure this is cleaned out (wear gloves).
- / If you have absorption trench systems, make sure the area is not soggy, doesn't smell and doesn't have prolific vegetation growth.
- / If you encounter any issues of any nature, contact your Service provider.
- / As a homeowner or tenant, this is all you need to do to care for the physical system. All other service and maintenance activities will be taken care of by your Service provider.



## TROUBLESHOOTING GUIDE

In the unlikely event that you experience an issue with your System, this trouble shooting guide may help you to solve the problem. If you cannot solve the problem then a call to a Service provider will be required.

ISSUE/PROBLEM	POTENTIAL CAUSES	ACTIONS & SOLUTIONS
<b>The alarm is sounding</b>	Has there been a power failure?	The system may be over full (no power to operate irrigation pump). Make sure power is restored to the system control box and wait for 2 to 3 hours to allow the system to catch up. Try to limit flow into the system. Once the level drops the alarm will cancel.
	Has there been a large amount of system inflow (e.g. lots of laundry, bathing, emptying a spa, using the dishwasher etc. at the same time?	You may have accidentally overfilled the system. Allow the system to process the waste for 2 to 3 hours. Try to limit flow into the system. Once the level drops the alarm will cancel.
	The air blower has failed	Walk out to the control box and listen for the soft humming sound of the blower. If you cannot hear it, the blower has likely failed ,and you should call your Service provider.
	System is overflowing	Make sure there is power to the system. If there is power, the irrigation pump may have failed. Call your Service provider.

TROUBLESHOOTING GUIDE CONTINUED ON NEXT PAGE

## TROUBLESHOOTING GUIDE CONTINUED...

ISSUE/PROBLEM	POTENTIAL CAUSES	ACTIONS & SOLUTIONS
<b>There is a bad odour from the system</b>	The system has seen an inflow of acidic, caustic, disinfectant or antibacterial liquids	Try releasing fresh water into the system to dilute the chemicals. Run a tap for around 10 to 15 minutes to allow clean water into the system. After 24 hours the biological activity should recover and the odour should reduce or disappear. If not, call your Service provider.
	Reduced biological activity in the system	Low temperatures may cause a slowing of biological activity (below 10°C), which may be a cause of odours. Biological activity in the system may also be reduced if one or more persons in the household are taking antibiotics.
<b>The system is totally silent</b>	Power Failure	Make sure there is power at the property and make sure that the circuit breaker(s) for the system are in the 'on' position. If the system is making noises (blower humming) again, then you should be OK. If not, call your Service provider.
	Blower Failure	If the system is pumping and irrigating, but there is no sound from the blower, then the blower may have failed. If this is the case, the system alarm should have been activated. Call your Service provider.
<b>The system is overflowing</b>	Don't Panic. Your system is designed to cope with adverse events and water leaving the overflow is chlorinated. It could be that your system may be over full.	If the system is over full, the alarm will be sounding. If so, wait for 2 to 3 hours for the system to catch up. Try to limit flow into the system. Once the level drops the alarm should cancel and the overflowing should have stopped. If the alarm does not cancel, the irrigation pump may have failed. Call your Service provider.
	The irrigation system is not working or is blocked.	A blockage in the irrigation system will mean the system can't empty itself. Try opening a relief valve, or disconnecting a union near the pump to see if water is trying to flow. If water is trying to flow the irrigation system is the problem. If water is not trying to flow then call your Service provider as the irrigation pump has failed.

## EMERGENCIES

In the unlikely event that an emergency occurs, contact your service provider or installer and request that they come and review your system. Generally service providers will attend to the issue within an agreed period of time (typically mentioned in a service contract). If the emergency requires more urgent attention, service providers may be able to attend sooner however be aware that this may incur additional costs.

All Everhard domestic wastewater treatment systems are equipped with an audible alarm, which uses a small panel fitted within your house. The alarm will activate if fault conditions are detected by the controller. See our troubleshooting guide for further advice.

The audible alarm will NOT be activated if there is a general power failure, or if the supply to the system is interrupted. Following any general power failure you should check that the circuit breaker for the system is still set to supply power to the system.

Service calls can be minimised by the owner first making some simple checks and observations that may indicate to the Service provider what the problem may be. In the event of a system fault or alarm, refer to the troubleshooting guide.

If you do need to call for a service provider, minimise water usage as much as possible until the fault is corrected.

Call for a plumber if any toilet or other fixtures fail to drain freely. Such problems are usually due to pipe blockages rather than a failure of your wastewater treatment system. The plumber will advise you if there is a problem with the system.

## WARRANTIES

Your system is fully warranted with 20 years for the tank case and 2 years for Electrical and all other components. During the first twelve months the warranty is for parts and labour. After this period all warranties cover parts only.

Keep this manual and all service reports regarding your System in a safe place. They should be handed to the next homeowner if you decide to move.

## MAINTENANCE SERVICE CONTRACT

The service contract is an agreement between the homeowner and the installer or organised company. All states require that the System is serviced every three months. Failure to have the system serviced and maintained may void all warranties.

For most States and Councils, new installations must be sold with a service contract. This automatically comes into effect on commissioning your System. The initial service contract may include:

- / The initial commissioning, and services at three-month intervals, at which time samples of the treated effluent are tested for clarity, and the presence of chlorine
- / The purging of settled solids from the clarification chamber back into the primary chamber, the replenishment of the chlorine tablets when required, testing and inspection of the electrical / control system and testing & inspection of the aerator and irrigation pumps
- / Issued reports of the work done, and any test results, will be supplied to the owner. Copies will be forwarded to the local authority as required

Local authorities may also require samples of treated effluent to be tested at any time at the owner's expense. These tests are not included in the regular service contract.

Service calls which are the result of household practices generally sit outside of the Service Agreement.

## SERVICE CONTRACTS RENEWAL

After the first year of operation, it is essential to enter into a three-monthly service contract as required by law. Only personnel trained and competent to service these systems should be permitted to carry out any work on the treatment system. Owners of systems are strongly encouraged to select a Service provider appointed and trained by Everhard Industries Pty Ltd and approved by the local authority.

In many cases, local authorities insist that a maintenance contract exist before approval to operate a system is granted. Local authorities also insist that contracts for existing installations are in force. Service providers are required to notify local councils about terminated contracts.

## IMPORTANT SERVICING INFORMATION

For the purposes of regular servicing both concrete and polymer systems will be installed so that the access and inspection covers are exposed. The green lid of the polymer tank may be lightly covered over with mulch or bark, however, access and inspection covers and the control box must always be freely accessible and never buried. Do not bury the lid of a concrete system under any material of any type.

## CONTACT DETAILS FOR AFTER SALES SERVICE & WARRANTY

Make a note in the space provided of your local authorised service agent for your system. For all service callouts, use your local Service provider.

**For all service calls, contact your service agent:**

Agent:

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Address:

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Telephone:

Fax:

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System Type: Aqua Advanced Polymer / Aqua Advanced Concrete

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You will need to quote your contract number:

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The EVERHARD WARRANTY starts from the Commissioning date: / /

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For all Warranty Claims, contact your Service Agent first to arrange for a claim to be processed.

Alternatively, you can contact us:

by phone on 131 926

by email at [info@everhard.com.au](mailto:info@everhard.com.au)

online via our Contact Form at [everhard.com.au](http://everhard.com.au)

## **SERVICE SCHEDULE**

Your system will be serviced every three calendar months over the contracted period for a total of four services in any one year period. As part of servicing the following duties will be performed:

1. Perform onsite testing of treated effluent quality, limited to free residual chlorine, pH, clarity, Dissolved oxygen and temperature
2. Replace air filters
3. Evaluate aerator and pump operation
4. Test aerator pressure switch and high level float switch
5. Test irrigation pump failure level switch
6. Purge aeration lines and operate sludge return
7. Perform sludge monitoring in primary chamber, clarifier and irrigation pump chamber
8. Clean / purge clarifier and irrigation pump chamber
9. Check irrigation lines and irrigation sprinklers (where possible)
10. Replace or top up disinfection agent as required
11. Clean any other media filters as required
12. Issue service reports to the owner and local authority as required by law.

## **SERVICES NOT COVERED BY THIS AGREEMENT:**

1. Emergency / alarm callouts
2. Asset replacement, including pumps and blowers
3. Pump out tanks and transfer of untreated wastewater off-site
4. Any additional work requested by the owner.

## **ASSET REPLACEMENT**

All pumps, blowers and other items supplied in maintaining the system will remain the property of the servicing company until full payment for those items is received by the service company.

## SERVICE RECORD

Here is a Maintenance Record for you to keep track of your three-monthly services.

Date Serviced	Service Agent	Note Any Maintenance Issues Addressed

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### MANUFACTURER DETAILS

EVERHARD INDUSTRIES  
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GEEBUNG, QLD, 4034

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INFO@EVERHARD.COM.AU

