WaterFlow
Bringing Clarity to Wastewater

ECONOTREAT™

Advanced Secondary Treatment Aerated Wastewater System

Owner's Manual

EconoTreat Wastewater Systems

Owner's Manual

To the Owner

Thank you for choosing an EconoTreat System to treat and care for your on-site sewage and wastewater.

Your EconoTreat System is fully automatic in operation and requires little owner intervention to ensure years of service. It is useful that the owner/operator of the system understand some of the broad concepts of the system operation. This manual has been wrtten to provide this simple explanation and to serve as a future reference so that you can ensure that the system is operating effectively at all times.

We encourage you to monitor and care for your EconoTreat system with our backing and support. By doing so you will learn how your system works and operates and how to keep it in top working order. WaterFlow promises consistent results year after year.

Kind regards,
The Waterflow Team

Warranty

WATERFLOW NZ LTD warrants that the Waterflow NZ System will be free from defects in materials and workmanship for the following periods from the date of installation, under the following conditions:

1. Plastic-Moulded tanks: 15 years

2. Filter media: 5 years

3. Dosing float: 2 years

4. Electrical components and Pump: 2 years

WATERFLOW NZ LTD will, at its discretion, repair or replace any defective components with the same or equivalent part at no charge to the consumer, in accordance with the following terms:

5. Scope of Warranty: This warranty covers the repair or replacement of system components only. Labour, freight, or travel costs incurred in the repair or replacement of components are not covered unless otherwise required by the Consumer Guarantees Act 1993.

6. Conditions: This warranty is valid only for Waterflow NZ systems used to treat domestic wastewater inflow. It does not cover defects or damage arising from:

a. The introduction of waste sources not specified in writing by Waterflow NZ or outside the written instructions provided by Waterflow NZ.
b. Alterations to the landscape or surrounding environment (e.g., landscaping or drainage work) after system installation.
c. Failure to use the system according to Waterflow NZ instructions, including the Owner's Manual.
d. Failure to service the system annually, as recommended by Waterflow NZ. Annual servicing must be carried out by a Waterflow NZ accredited agent. Non-compliance will void this warranty.
e. Events beyond Waterflow NZ's reasonable control (force majeure events), such as earthquakes, floods, storms, and electrical faults.
f. Overloading the system beyond its hydraulic or biological design capacity.
g. Actions by third parties, or repairs/modifications by non-accredited service technicians.

7. Exclusions: This warranty does not cover:

a. Damage resulting from improper installation, including installations not performed by a Waterflow NZ accredited installer.

b. Damage caused by a failure of any LAS (land application system) not designed, supplied, or installed by a Waterflow NZ accredited installer.

c. Damage resulting from changes to the soil dispersal system not carried out by an accredited installer.

8. Owner Responsibilities: All charges for labour, repairs, or replacement of components not covered under this warranty are the responsibility of the owner. Owners must notify Waterflow NZ immediately upon becoming aware of any defects. Proof of purchase and relevant design, installation, and service documentation must be provided when making a warranty claim. Claims must be made before the warranty expires.

9. Payment Terms: This warranty is conditional upon full payment being received for the supply and delivery of the Waterflow NZ system.

10. Limitations: This warranty does not extend to components repaired or replaced during the warranty period.

11. Consumer Guarantees Act: The benefits under this warranty are in addition to the rights you have under the Consumer Guarantees Act 1993. If you are acquiring the Waterflow NZ system for personal, domestic, or household use, the provisions of the CGA apply. Waterflow NZ acknowledges that the CGA provides guarantees that cannot be excluded or modified by contract. Nothing in this warranty limits or restricts your rights under the CGA.

12. Exclusion of Liability: To the fullest extent permitted by law, Waterflow NZ will not be liable for any incidental or consequential loss beyond the rights guaranteed by the Consumer Guarantees Act 1993.

Dean Hoyle | Managing Director

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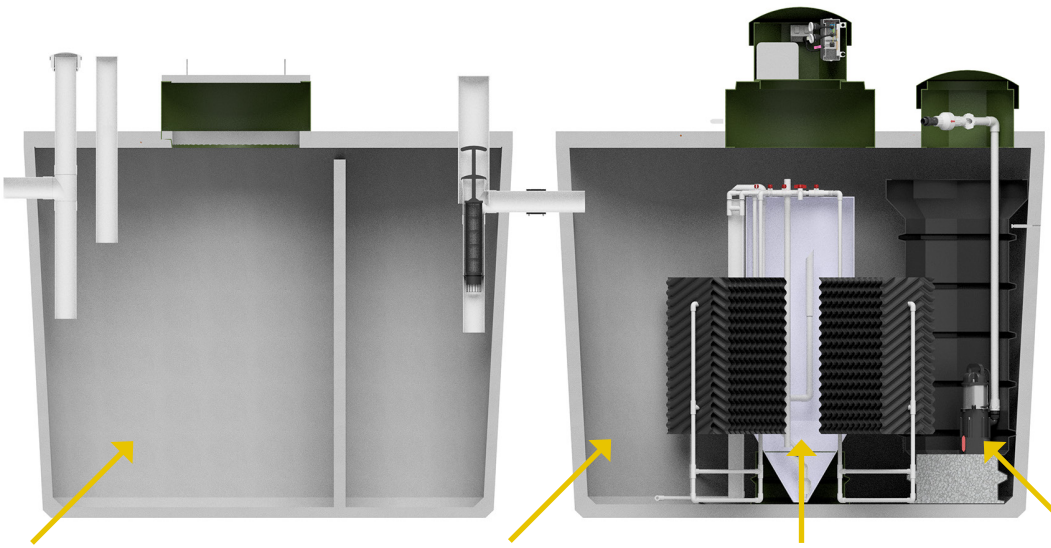
How it works

Primary Chamber / Tank
Influent enters the chamber via the source whereby scum and solids capable of settling are separated from the raw influent. Primary treated effluent flows through a transfer port to the aeration tank. This primary tank will also act as a storage chamber for sludge returned from the Clarification Chamber.

Aeration Chamber
Water enters from the Primary Chamber. Air is introduced into this chamber via an air blower to create an environment for aerobic bacteria and other helpful organisms to consume the organic matter present. The aeration tank is designed in a manner to help prevent short circuiting of the wastewater to ensure extended aeration. Media is present in the tank to support the growth of bacteria.

Clarification Chamber
The Clarification chamber is essentially a quiescent zone where suspended particles/solids are settled out of the water. These particles are returned to the Primary chambers via a sludge return which aids in further biological reduction, denitrification and providing a constant food supply rich in microbes supporting the system through periods of limited flows.



Servicing

Your EconoTreat System requires annual service and maintenance inspections unless otherwise specified by local regulations. This will need to be done by our trained technicians. We will phone to arrange a suitable time to attend to your servicing needs.

A record sheet (in duplicate) will be completed by our technician at the time of service. One copy is for you the customer and available upon payment, the other copy will be retained for our records.

Please call our office on the number listed at the back of this manual for the cost of servicing after the initial 12-month period.

Servicing includes:

1. A general inspection of tank area, irrigation and drainage.
2. Inspection of electrical equipment including timer, Low powered Blower, irrigation pump, warning lights and connections.
3. Inspection of Pump-out Chamber and septic tank, checking air lines, adjusting air supply (if necessary), operating de-sludging unit, resetting air control, operating submersible switch, checking bio-mass growth, checking sludge level.
4. Inspection of irrigation including lines, jets and outlets. Between 4 - 9 years the tank will need to be de-sludged (pumped out) as with any septic tank. We will notify you of this requirement, as the service technicians will be monitoring sludge depth annually.

Holiday Precautions

There are no precautions to take. Your EconoTreat can be left to function automatically for 6 to 12 months. However, if you are likely to be away from home for more than six months you may like to contact our office, so we can make a routine check.

Responsibility

As the owner of the system you are responsible for the correct operation and maintenance and to conform to Councils requirements.
The homeowner needs to clean the outlet filter in the septic tank, and flush the irrigation lines every three months. It is also the home owners responsibility to ensure the taps on the irrigation are kept clear and accessible for servicing.

Troubleshooting

To ensure the most effective operation of your EconoTreat System you should familiarize yourself with the contents of this manual. The EconoTreat has been designed to include additional safety margins and minor mishaps and normal household usage will not usually affect the operation of the system.

However, if the alarm sounds or strong odours persist, please call your service agent.

Problem	Potential Cause(s)	Remedial Action(s)
Alarm sounds (will indicate air or water alarm)	Irrigation pump not working Air supply not working No power at the tank Blocked Septic filter	Check water levels Listen for the air compressor Check power supply source Clean Septic filter
Water around tank	Irrigation pump not working Irrigation lines blocked or kinked	Check water levels Check irrigation lines and clear sprinklers
Excessive foaming	Too much laundry detergent Too many washes	Use recommended quantities Spread wash loads over different days
Persistent odors	Too much water usage Excessive chemicals in use	Add biologic starter pack Install water saving devices System will recover
Irrigation system not working	Pump failure Irrigation lines blocked	Check water level Clear irrigation lines
Water ponding on irrigation field	Irrigation line blocked Excessive water use	Installation should comply with original approval Install water saving devices Repair irrigation pipe

DO NOT FLUSH BABY WIPES DOWN TOILETS

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Caring for Your Wastewater System

Components of Your Complete Wastewater Septic System
A typical wastewater septic system has two main components: a Wastewater Treatment System and a Land Application System (or disposal field). This is simply treatment then discharge.

Efficient Water Use - it really does make a difference
Average indoor water use in the typical single-family home is approximately 180ltrs per person per day. The more water a household conserves, the less water enters the septic system. Efficient water use can improve the operation of the wastewater system and reduce any risk of disposal field overload.

High-efficiency toilets
Toilet use accounts for 25 to 30 percent of household water use. Most older homes have toilets with 11+ liter reservoirs, while newer high-efficiency dual flush toilets use 6.3/5.5ltrs or down to 4.5/3ltrs of water per flush. Consider reducing the volume of water in the toilet tank with a volume displacer (fancy name for a brick, stone etc!) if you don't have a high-efficiency model or replacing your existing toilets with high efficiency models.

Check to make sure your toilet's reservoir isn't leaking into the bowl. Add five drops of liquid food coloring to the reservoir before bed. If the dye is in the bowl the next morning, the reservoir is leaking, and repairs are needed. N.B. Did you know leaky toilets can waste as much as 700ltrs each day.

Water fixtures
A small drip from a faucet may add many liters of unnecessary water to your system every day. To see how much a leak adds to your water usage, place a cup under the drip for 10 minutes. Multiply the amount of water in the cup by 144 (the number of minutes in 24 hours, divided by 10). This is the total amount of clean water travelling to your septic system each day from that little leak.

Faucet aerators and high efficiency showerheads
Faucet aerators help reduce water use and the volume of water entering your septic system. High-efficiency showerheads also reduce water use.

Washing machines
By selecting the proper load size, you'll reduce wastewater. Washing small loads of laundry on the large-load cycle wastes precious water and energy. If you can't select load size, run only full loads of laundry. N.B. A new Energy Star washing machine uses 35 percent less energy and 50 percent less water than a standard model.

Watch your drains!
What goes down the drain can have a major impact on how well your wastewater system works.

What shouldn't you flush down your toilet?
Dental floss, feminine hygiene products, diapers, cotton swabs, cigarette butts, cat litter, and other kitchen and bathroom items that can clog and potentially damage septic system components if they become trapped. Flushing household chemicals, gasoline, oil, pesticides, antifreeze, and paint can also stress or destroy the biological treatment taking place in the system or might contaminate surface or ground waters.

Care for your Land Application System
Your land application system is an important part of your wastewater system. Here are a few things you should do to maintain it:

- Flush driplines regularly – every 3 months recommended
- Plant only recommended wetland plants over and near your wastewater system. Roots from nearby trees or shrubs might clog and damage the drain field
- Don't drive or park vehicles on any part of your wastewater system. Doing so can compact the soil in your drain field or damage the pipes, tank, or other septic system components
- Do not build any structures over it or seal it with concrete, asphalt etc.
- Keep roof drains, basement sump pump drains, and other rainwater or surface water drainage systems away from the drain field. Flooding the drain field with excessive water slows down or stops treatment processes and can cause plumbing fixtures to back up
- Trees with very aggressive roots, such as willows, should be kept well away from the disposal system, see page 11 for list of recommended planting
- A soggy drain field won't absorb and neutralize liquid waste. Plan landscaping, roof gutters and foundation drains so that excess water is diverted away from the Land Application System

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Need a hand? We're here to help.

0800 628 356

www.waterflow.co.nz

sales@waterflow.co.nz