



BIO URO CLEAN

"Protecting Our Environment"



Owners Manual

Manufacturers of

- **Certified domestic effluent treatment systems**
- **Water Storage tanks**
- **Pump Stations and Pumps**

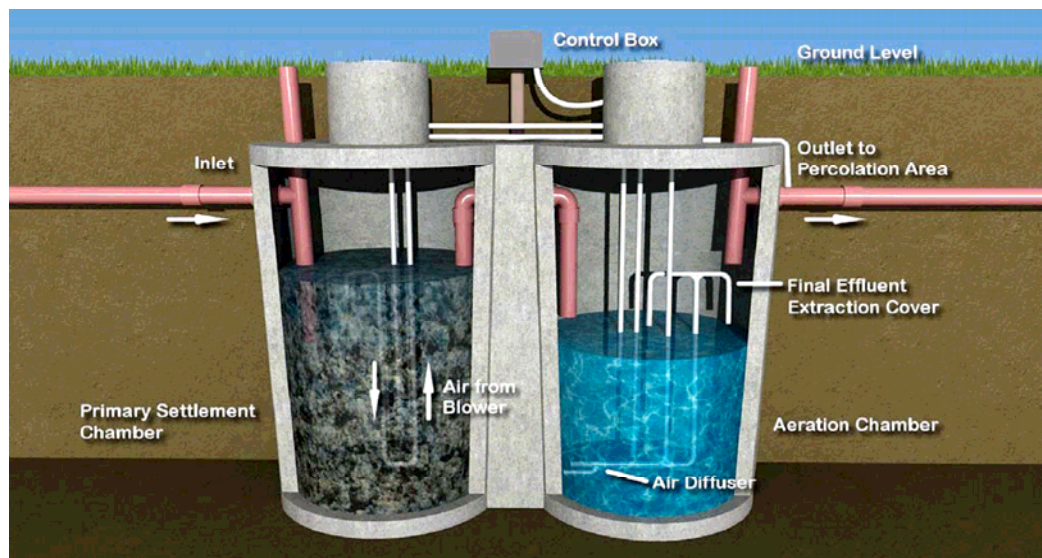


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The Bio Uro Clean Wastewater Treatment System

Congratulations! You are the owner of an advanced wastewater treatment system that combines aerobic and anaerobic processes in one system. Your system is tested and certified under the Irish Agreement Board (Cert. no 01-0132) and CEN European Standard 12566 part 3. The Bio Uro Clean system meets the needs for onsite wastewater treatment beyond the capabilities of conventional septic tanks. Like all onsite wastewater treatment systems, the Bio Uro Clean system must be operated and maintained in accordance with the manufacturers requirements. When properly operated and maintained, your system will produce an effluent that will meet and exceed all planning requirements.



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How it works-

The Bio Uro Clean wastewater treatment system is a combined anaerobic and aerobic system that utilises a Sequential Batch Reactor (**SBR**) process to treat domestic wastewater from dwellings to a very high standard. The Bio Uro Clean system is designed to treat all liquid waste from household bathroom, toilet and laundry. Treatment is carried out in two phases, in the primary settlement chamber and secondary treatment chamber, as follows:

Primary chamber:

The primary settlement chamber is the first stage in the treatment of wastewater. Domestic wastewater enters the primary chamber, which has adequate capacity to accommodate and balance out peak flows (e.g. morning or evening). Here, solids settle out on the base of the chamber. Anaerobic digestion takes place in the primary chamber on the settled solids where microorganisms break down the solids in the absence of oxygen. Lighter debris and grease rise to the surface of the liquid to form a crust. At regular intervals, a predetermined volume of the settled liquid is transferred, to the treatment chamber.

Secondary treatment chamber:

The secondary treatment chamber is the second stage in the treatment of the wastewater. Here the liquid transferred from the primary settlement chamber is aerated for hours, enabling the cultivation of colonies of aerobic bacteria (biomass), which break down the organic matter. After aeration the system is allowed to settle for a period of time. Following the settling period, the clarified effluent is pumped for discharge to the percolation area. The system is designed to provide three cycles per day.

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Important items to remember

The Bio Uro Clean system is designed to treat typical domestic wastewater. Flows from and materials in garages, storm water drains, floods, sumps and the like will adversely affect the systems operation. Excessive amounts of cleaners, solvents, paints, greases, etc., will also affect the performance of the system.

The following of these simple rules will decrease or eliminate maintenance problems and prolong the life and efficiency of your system.

- Maintain a maintenance contract with the manufacturer.
- Check the green light is on.
- Follow the manufacturers advice. He/she is trained to ensure that your unit operates at its maximum efficiency.
- Use non bleach biodegradable detergents.
- Keep non-disposable items out of your system. Some examples include but are not limited to: wet strength paper towels, disposable baby nappies, sanitary napkins, rubber and plastic products, rags and grit.
- Avoid putting grease into your system.
- Do not pour paint, solvents, etc into your system. These substances will harm the bacteria.
- Check the system periodically for the need to desludge. A bar can be inserted into the primary chamber vent pipe to check sludge levels.

Alarm system and alarm condition

Every Bio Uro Clean system comes equipped with an alarm system.. The alarm system is located on the side of the control box. The alarm system should be checked periodically. The green light should be on at all times during normal operation. If an abnormal condition develops a permanent red light will be displayed. If a red light is displayed, contact Bio Uro Clean.

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Maintenance Program

Your Bio Uro Clean system requires periodic servicing.

Maintenance of your system is required to ensure proper operation and longevity.

Your system comes with an initial one year maintenance warranty which covers all parts and labour in the unlikely event of a problem, the only exception is "physically abused" parts or abuse to the system.

BIO URO CLEAN MAINTENANCE WARRANTY DOES NOT COVER THE COST OF SERVICE CALLS, LABOUR, OR MATERIALS REQUIRED DUE TO THE FOLLOWING:

1. Misuse, abuse, or any repair or alteration performed by anyone other than Bio Uro Clean personnel.
2. The use of non Bio Uro Clean components.
3. Non wastewater flows caused by infiltration, storm water connections, floods, leakage from improperly maintained plumbing fixtures, etc.
4. Failure to maintain electrical power to the system .
5. Disposal into the system of non-bio degradable materials i.e. plastics, chemicals, solvents , grease, oil, paint, medicines, metals, toxins and the like which will damage the biological treatment process.
6. Wastewater flows to the system that exceeds the units hydraulic or organic capabilities.

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Bio Uro Clean system – Basic information.

Treatment capacity	4080 litres
Primary chamber treatment capacity	2040 litres
Treatment chamber capacity	2040 litres
Chamber Diameter	1170 mm
Overall length	2730 mm
Total Height	2070 mm
Weight (empty)	2000 kg
Design flow rate	1200 litres/day
BOD load	0.36 kg/day
Inlet invert to base	1890 mm
Outlet invert to base	1890 mm
Ground level to inlet/outlet invert level	600 mm
Retention time (based on design flow)	80 hours
Electrical consumption	0.5kWh/d
Treatment efficiency:	
	COD 92%
	BOD 96.5%
	TSS 95.1%
	NH4-N 98.3%

Bio Uro Clean Treated Waste Water Results:

Parameter	Units
Biochemical oxygen demand (BOD 5)	<10 mg/l
Total suspended solid @ 103°C	5 mg
Ammonia (NH3-N)	0.06 mg/l
Nitrate (NO3-N)	5.4 mg/l
Total phosphorus (P)	7.2 mg/l
pH (Electrometric Determination)	6.9

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Recommended Prohibitions

The following is a list of items, which can cause your treatment system to operate below its potential. These items are known to damage the system and even cause it to fail.

Inert materials: Plastics, Rubber, condoms, Scouring pads, Dental floss, Bandages, Hair, Mop strings, Lint, Rags, Cloth and Towels do not degrade and can cause blockages. Inert materials will build up solids, and lead to system malfunction, back up or increased pump replacement.

Paper products: Disposable nappies, paper towels, baby wipes, facial tissues, moist toilet paper.

Food wastes: Do not put animal fats and bones, grease, coffee grounds, citrus and melon rinds, corn cobs, egg shells. Spoiled dairy products may cause excessive growth of microbes that do not degrade sewage.

Medicines: Do not flush baby wipes, Lotion, female sanitary products, cotton balls, condoms or expired medicines/antibiotics, disinfecting tablets will kill the organisms needed to consume waste.

Chemicals and Toxins: Kill the microbes necessary to consume waste. Paint, paint thinner, solvents, volatile substances, drain cleaners, fuels, pesticides, herbicides, fertilisers, metals, disinfectants, bleach, and excessive use of household chemicals.

Laundry practices: Excessive use of detergents, especially those containing bleach can affect system performance. Liquid detergents are recommended over powder.

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