



ECO SMART
WATER TECHNOLOGIES NAMIBIA CC

Greywater Recycle System

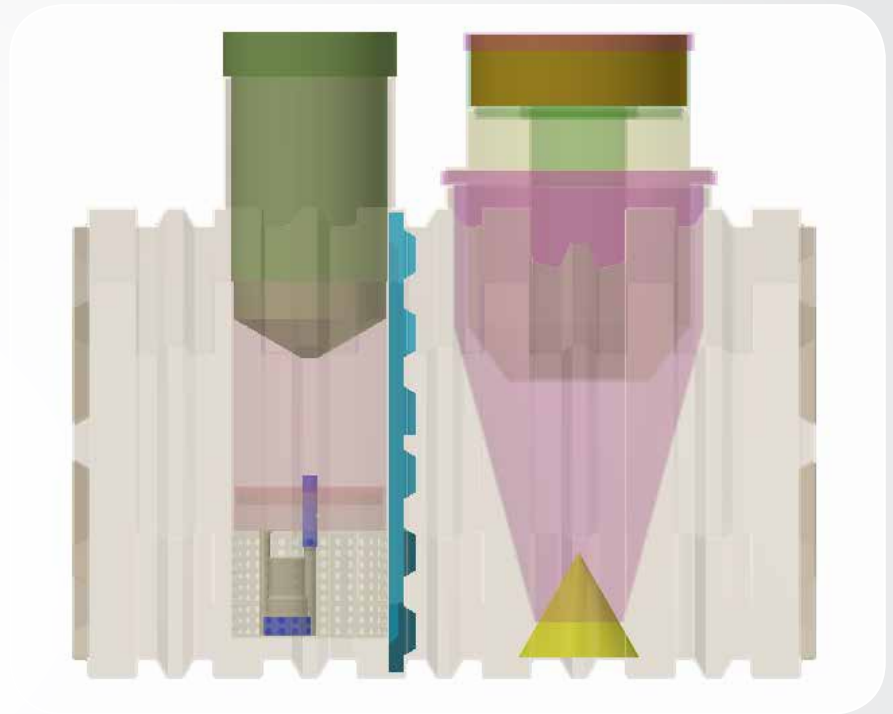
Optimising the re-use and recycling of waste water



GREYWATER RECYCLE SYSTEM

SAVE up to 40% on your monthly water bill by installing an ECO SMART Greywater Filtration and Recycling System.

- ECO SMART Water Technologies CC developed a new in-home water conservation technology which redirects grey water originating from bathtubs, showers, sink faucets and washing machines through a treatment process.
- After treatment, this process returns it back to the home for recycling.
- Treated grey water can be recycled to replenish water that is consumed by toilets and/or outside irrigation. It can also be used for the washing of cars, sidewalks, driveways, patios, and other exteriors.



Efficient Landscape Irrigation

Advanced Greywater Filtration

ECO SMART Greywater Systems

IS

A water saving recycling and irrigation system which optimize the re-using of domestic greywater

ECO SMART Greywater Systems

INCLUDES

The filtration and pumping systems required to prepare greywater for re-use in toilets and landscape irrigation

ECO SMART Greywater Systems

CONSERVES

More water than any other water conservation system available

GREYWATER RECYCLE SYSTEM

Filtering System

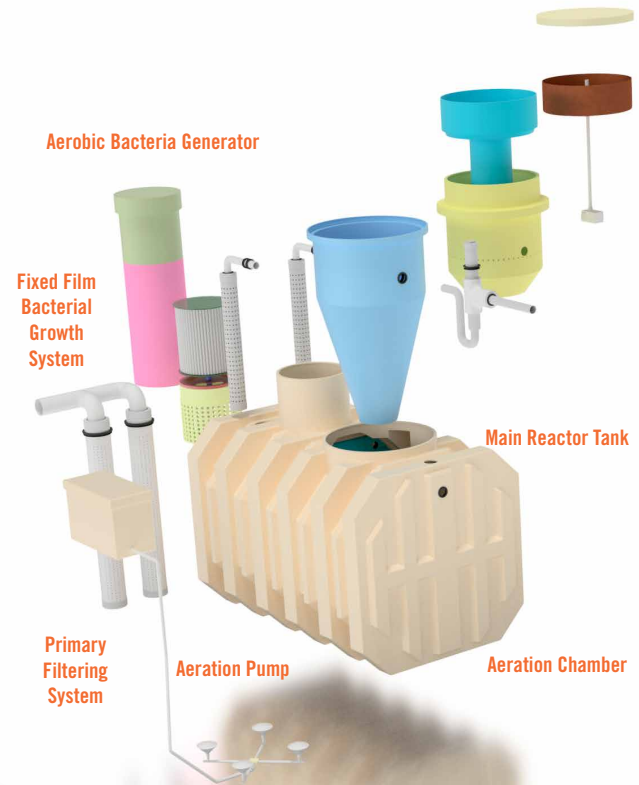
Greywater is filtered through a multi-stage filtration process

Aerobic Bacteria Generator

Grey water enters the aerobic bacteria generator chamber through the primary filter system where the aerobic bacteria generator, a system that is designed to promote fixed film bacterial growth in order to handle higher than normal levels of biomass in the wastewater, continue to break down and digest waste.

Denitrification Filtering System

The denitrification filtering chamber is fitted with a nano filter (Denitrification Filter) and a water circulation pump. Water passes from the clarifier into the denitrification filtering chamber, where the water is continuously recycled through the nano filter by the water circulation pump, enhancing the water quality by removing phosphates, nitrates, heavy metals and other dissolved contaminants.



Clarifier

Clear odorless effluent rises into the clarifier chamber from the bottom up. This is the settling out phase of the system as the cone shaped clarifier ensures that any fine solids still present sink down and settle out back into the aeration chamber. The clarifier also act as the anoxic zone where some denitrification take place, as there is no aeration taking place in the clarifier.

GREYWATER RECYCLE SYSTEM

On average, approximately **70%** of all water used is indoors with bathroom toilets being **27%** which represents the largest consumer of all indoor water. This is primarily due to repeat usage.

A typical household consumes the following:

- A bathtub holds: **122 liters**
- Showers: **6-8.5 liters per minute**
- Sink faucets: **3 liters per minute**
- Dishwasher load: **68 liters**
- Clothes washer load: **85 liters**
- Toilet flush: **1.2 - 1.6 liters**
- Outdoors watering: **6 liters per minute**



ECO SMART Greywater Systems

Build-in Greywater storage / surge containment which is expandable

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Greywater can be pumped immediately to the irrigation system or temporarily stored for scheduled irrigation.

ECO SMART Greywater Systems

ECO SMART Greywater Systems provides high-head pumping, allowing for the delivery of pressurized water to landscapes of varying elevation gain.

ECO SMART Greywater Systems

If insufficient greywater is produced to adequately supply water to toilet cisterns or to irrigate, additional potable water can be added to the system.

GREYWATER RECYCLE SYSTEM



PAY FOR YOUR WATER **ONCE** GET TO USE IT TWICE

Benefits of re-use

- Demand on conventional water supplies and pressure on sewage treatment systems is reduced by the re-use and recycle of greywater.
- Re-using greywater also reduces the volume of sewage effluent entering watercourses which can be ecologically beneficial.
- In times of drought, greywater use in gardens or toilet systems helps to achieve some of the goals of ecologically sustainable development.

The separate treatment of greywater falls under the concept of source separation which is one principle commonly applied in ecological sanitation approaches.

GREYWATER RECYCLE SYSTEM

ECOLOGICAL SUSTAINABLE DEVELOPMENT:

BENEFITS OF GREYWATER RECYCLING BENEFITS OF RE-USE

- Reduced freshwater extraction from rivers and aquifers
- Less impact from septic tank and treatment plant infrastructure
- Reduced energy use and chemical pollution from treatment
- Groundwater recharge

The principle of recycling water from your home for re-use in your toilets and/or landscape irrigation is not only economical but also the environmentally correct thing to do



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