

# AQUALOOP

On-Site Water Treatment

- ▶ The ONLY greywater process that is NSF 350 (C) certified
- ▶ Ultra-filtration for 99.9999% bacteria reduction
- ▶ Applications - NSF 350 greywater, potable rainwater, blackwater



Solving water problems one building at a time

Exclusive US Distributor

**Ecovie**  
water management

# AQUALOOP

On-Site Water Treatment



**AQUALOOP** recycles water regardless of whether the input water comes from greywater, rainwater, surface water, groundwater, or wastewater plants. AQUALOOP produces germ-free, high quality water. It is the only system certified to NSF 350 (C) standards for commercial greywater applications.

## INNOVATION

### Flexible Design and Installation

The AQUALOOP system consists of modular components that can be easily assembled as required.

- ▶ **Pre-filter**
- ▶ **Growth Media (Moving Bed)**
- ▶ **Membrane Station, Controller**
- ▶ **Membrane Cartridges**
- ▶ **Blower**

### Amount of Water to be Recycled

An AQUALOOP membrane station can be equipped with up to six filtering cartridges, depending on the amount of water to be recycled. Multiple membrane stations can be used in parallel to scale to larger volumes. The installation of multiple membrane stations ensures high system reliability for larger, commercial systems.

Capacities range from 80 to >8,000 gallons per day.

### Inflow Water Quality

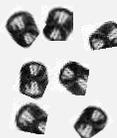
Design is flexible to select the optimal system to match incoming water quality with end use water quality requirements.

- The AQUALOOP pre-filter is used for filtering hair, lint, and other debris from the incoming greywater or rainwater stream.
- With greater organic load of inflow water biological growth media are supplied in the fluidized bed process for biological degradation. This is supplied with oxygen via the membrane station.
- Less organically contaminated water can be cleaned directly by the ultra-filtration membranes. For example rainwater can be treated this way for drinking water.

### Aqualoop Components



Pre-filter



Growth Bodies



Membrane Cartridge



Membrane Station



Blower

### Pre-filter and Growth Bodies

The AQUALOOP pre-filter and growth bodies provide a consistent improvement in the quality of organically contaminated water such as household grey water. This is achieved in the moving bed MBR process by biological degradation and ultra-filtration as well as by automatic extraction of sludge and floating debris from the collection tank.

### End Water Uses

AQUALOOP with NSF 350 (C) for greywater is suitable for spray irrigation, toilet flushing, cooling tower make up, laundry, and more. Using on-site water makes a home owner immune to water restrictions!

AQUALOOP used with captured rainwater is suitable for full potable use.



Certified to  
NSF/ANSI 350



## TECHNOLOGY



### Membranes

Patented AQUALOOP membrane cartridges are the core of the water treatment process. The membrane's special hollow fibres are designed to effectively exclude bacteria and virus to 6 log and 3 log reduction respectively. AQUALOOP improves water quality with no chemical additives such as hazardous chlorine. The AQUALOOP membrane cartridge's special design gives a long service life of over 10 years with only minimal maintenance.

Each membrane station contains a fully automatic system controller for operating and monitoring the pump and blower. The blower simultaneously fulfils the jobs aerating the bioreactor and keeping membranes clean through air scour.

### Tank

The water treatment plant's AQUALOOP prefilter and AQUALOOP membrane station can be integrated into any type of tank, regardless of whether it is situated indoors or outdoors, above or below ground.

### Membrane Station with System Control

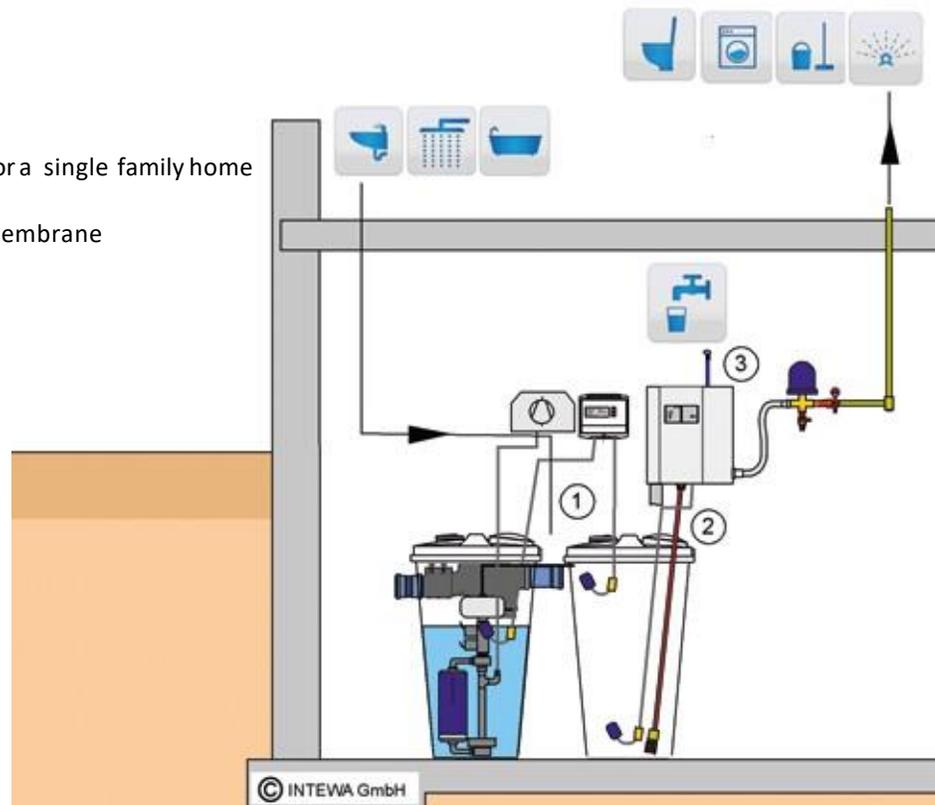
This membrane station includes a platform for the mounting of membranes. A permeate pump, back-flushing pump, back-flushing tank and blower connection are all integrated.

### Water supply units (a.k.a. Pumps)

Treated water is pumped throughout the building for uses such as toilet flushing, washing machine, irrigation, or drinking via the RAINMASTER pump and control system.

**Example:** Greywater recycling for a single family home

1. AQUALOOP bioreactor with membrane
2. AQUALOOP clear water tank
3. RAINMASTER pump



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## REFERENCES

. AQUALOOP is used worldwide for applications



Ecovie is the US distributor for INTEWA GmbH, Aachen, Germany Manufacturer of AQUALOOP, PURAIN, RAINMASTER, and DRAINMAX. Visit us at [us.intewa.net](http://us.intewa.net)



See examples of AQUALOOP applications at:



[us.intewa.net/en/products/aqualoop/references/projects/](http://us.intewa.net/en/products/aqualoop/references/projects/)

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