

# Grey water- out of the grey water area at last

## Re-use water and save money

Re-using water in the home clearly helps to lower ever-increasing water and sewage costs. Good-quality water is often not available in large enough quantities.

## Enjoy having more water in periods of water shortages

Grey water recycling plants process used domestic grey water - i.e. water from showers, baths, basins - so that it is suitable for flushing toilets, cleaning purposes and watering the garden. When hosepipe bans are imposed - as is already the case in some European countries - grey water recycling systems are a blessing. Blossoming instead of wilting flowers, green not brown lawns, relaxation instead of exasperation. The combination of grey water and rainwater use hugely increases the availability of good quality water.

## Grey water recycling systems

produce high-quality service water and are gaining in importance alongside rainwater harvesting systems.

## What is grey water?

Grey water is residential wastewater that is free of faeces and highly contaminated kitchen wastewater. This means the water discharged from baths and showers, washstands and even washing machines. In a water-saving household, these items generate about 55 litres of grey water per person a day.

## What is service water?

Any grey water generated is processed and turned into service water. Service water is hygienically safe water can be used to operate household and industrial gadgets that use water but do not need water suitable for use as drinking water.

## Grey water is an inexhaustible resource

- Every household generates nearly the same quantities of grey water every day and - unlike run-off from the roof (rain-water) - no matter what the weather. It is slightly polluted, largely free of faeces, fats and solid particles with only slight bacterial contamination. Its heat can often be captured and made use of.

## Processed grey water can be used as service water for

- flushing toilets - irrigation - cleaning purposes

## Design of a grey water recycling system -

grey water recycling systems need a separate grid connection to collect grey water as well as one to distribute the service water.

## Savings potential -

The particular advantage of recycling grey water is that the amount of grey water generated by the average household permanently corresponds to the service water required. The two-fold use made of this water reduces residential drinking water consumption and the amount of wastewater generated by approx. 30%.

## Areas of application for grey water recycling systems -

detached houses, multiple dwellings, hotels, residential accommodation facilities, swimming pools and saunas

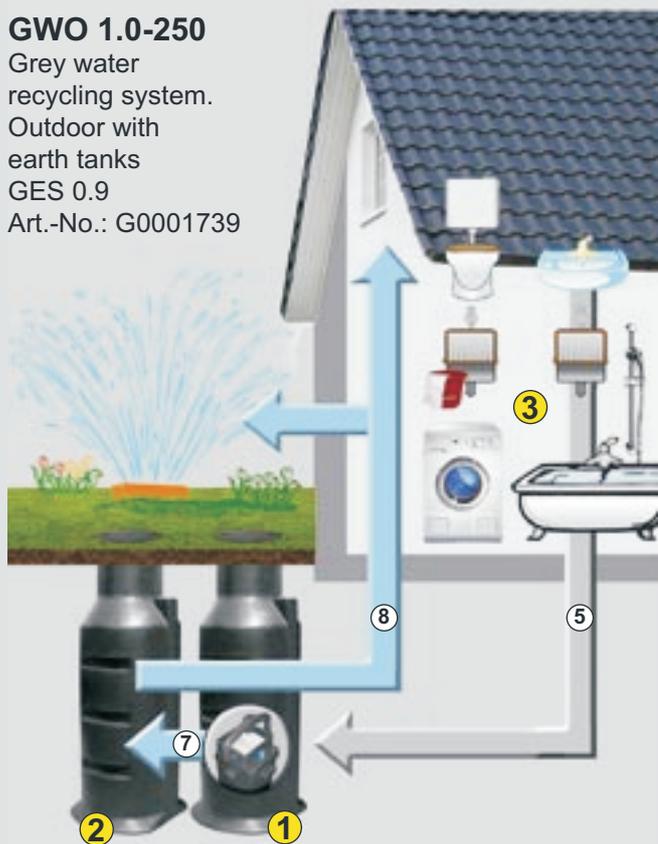
## How grey water recycling systems work

The grey water collected in the grey water reservoirs are first processed biologically. Bacteria with the addition of oxygen decompose the organic substances in the grey water. Intelligent controls facilitate the required timings. In a second stage, the pre-cleaned water is processed further with a submerged membrane filter. The filter unit in the grey water reservoir cleans physically: the not quite clean water is passed through extremely fine pores, guaranteeing that no germs can remain in the water (MicroClear®System). The water cleaned this way is temporarily stored in the service water reservoir until needed. When service water is required, the pump located in the service water container automatically pushes water out into the separate consumer's service water network as long as necessary. If feasible, the grey water system can be connected to a rainwater harvesting system. This can increase the amount of water recovered enormously. If additional water is required, drinking water is automatically fed into the service water reservoir.

# Grey water recycling plants- extremely safe thanks to a patented process

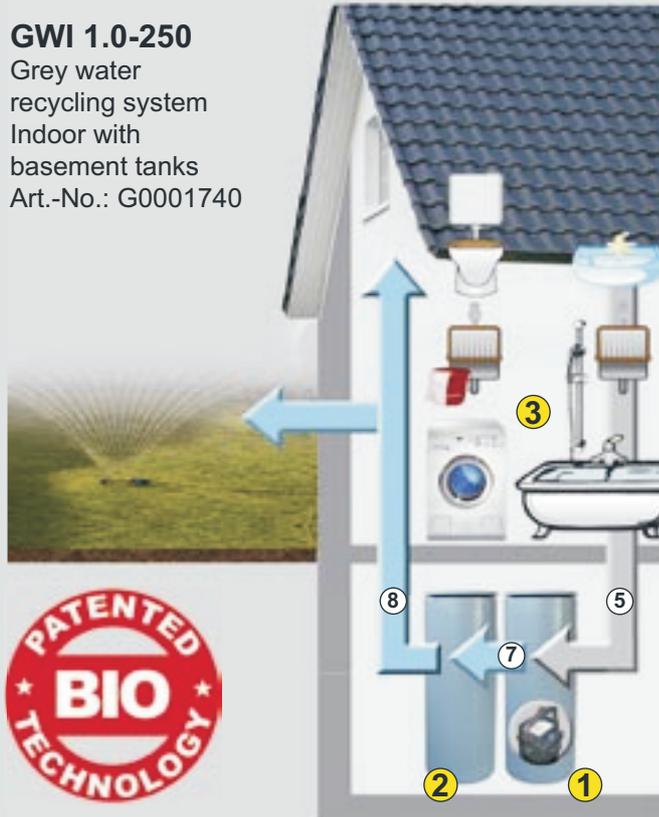
## GWO 1.0-250

Grey water recycling system.  
Outdoor with  
earth tanks  
GES 0.9  
Art.-No.: G0001739



## GWI 1.0-250

Grey water recycling system  
Indoor with  
basement tanks  
Art.-No.: G0001740

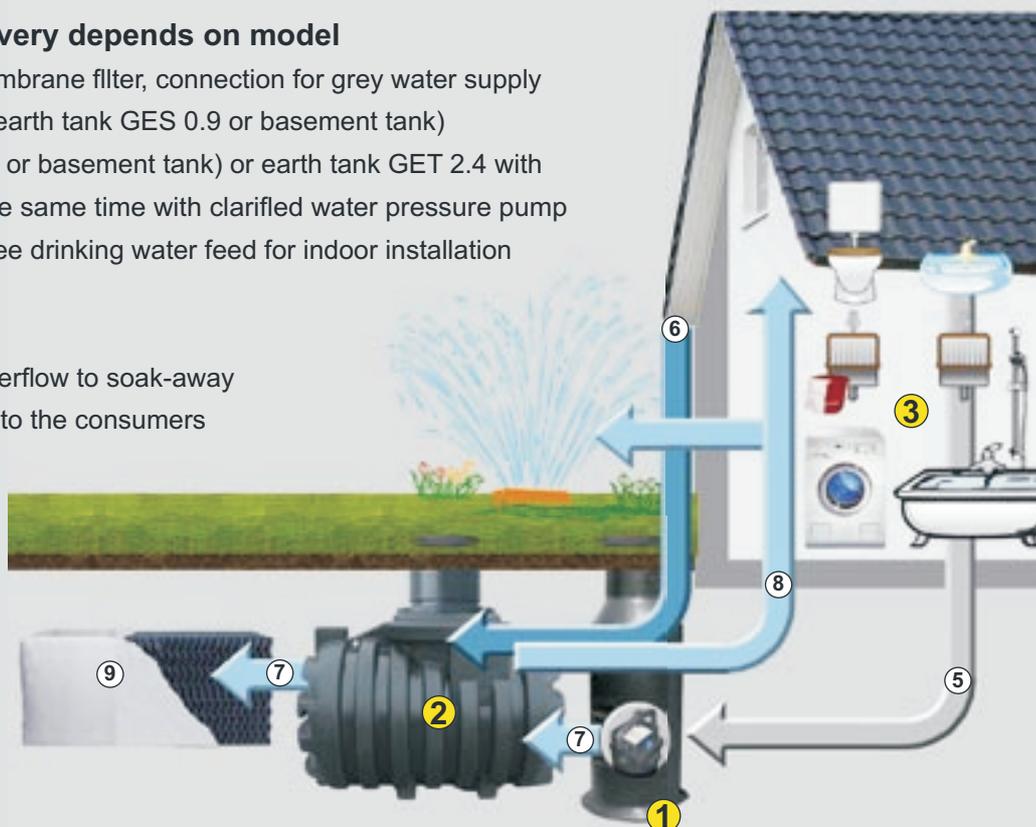


### Legend / 1 - 3 Scope of delivery depends on model

- ① Grey water reservoir with membrane filter, connection for grey water supply and clarified water overflow (earth tank GES 0.9 or basement tank)
- ② Clarified water tank (GES 0.9 or basement tank) or earth tank GET 2.4 with biovitor, using rainwater at the same time with clarified water pressure pump
- ③ Controls, ventilation pump, free drinking water feed for indoor installation
- ⑤ Grey water inflow
- ⑥ Rainwater inflow
- ⑦ Clarified water overflow or overflow to soak-away
- ⑧ Clarified water pressure pipe to the consumers
- ⑨ Soak-away reservoir

## GWO 1.0-250-2.4

Grey water recycling system/  
combined with rainwater  
Outdoor with earth tanks  
GES 0.9 and GET 2.4  
Art.-No.: G0001741



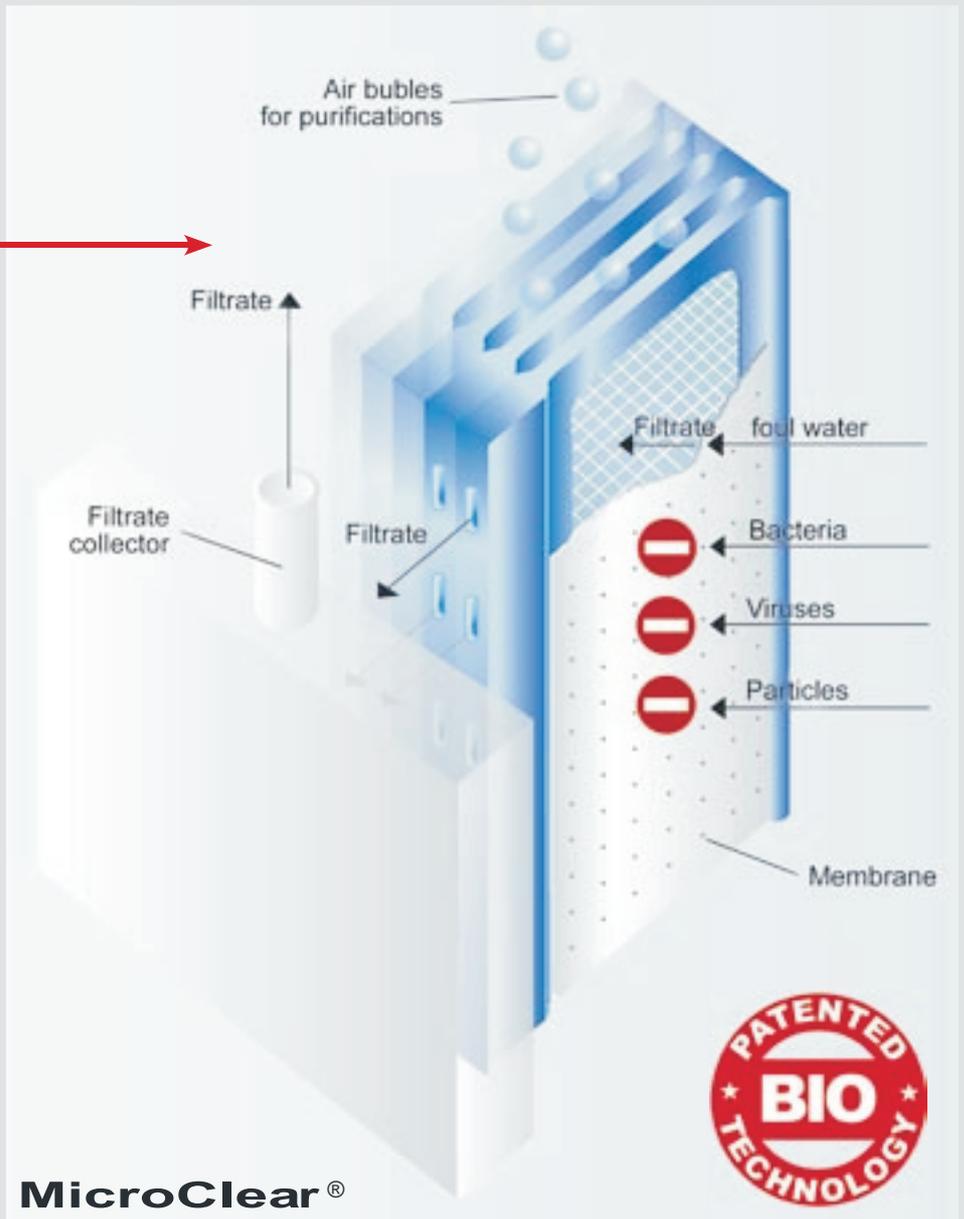
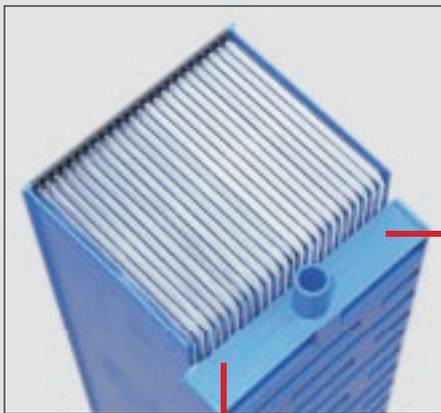
# Membrane Filter technology

extremely safe thanks to patented process

The heart of grey water use:  
the patented membrane filter  
with the carrying container  
pictured below -

The mode of operation of biological filtering right through to the filtrate that can be safely used as clarified or service water in the home.

The amount of maintenance required is extremely low: once yearly check that the system parts still function well - simple back-flushing of the membrane filter if necessary.



MicroClear®

Freewater UK Ltd 269B Brant Road, Lincoln, Ln5 9AB

Tel: 01522-720862, Fax: 01522-720862, Mail: [info@freewateruk.co.uk](mailto:info@freewateruk.co.uk), [www.freewateruk.co.uk](http://www.freewateruk.co.uk)