

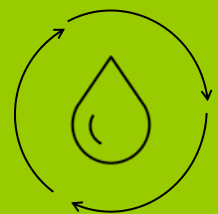


**Wastewater
recycling system MBBR
&
Rainwater harvesting**

&

Rainwater harvesting

TRANSPORTATION SECTOR



SYSTEM DESCRIPTION

The system is built on a **mobile** platform (3 x 2,5 m) including all necessary equipment (Image on the front-page and Image 1). The bottom frame is galvanized **preventing** it from rusting and the whole unit is **frost-proof**. In the unit, there is e.g. a tank (bioreactor) and a buffer tank for treated (recycled) water.

The wastewater is treated **biologically** with MBBR (Moving Bed Biofilm Reactor) method by bacteria. The system treats and recycles **100 %** of the trade effluent that drains into the trench drain. There is water loss that appears due to evaporation and when vehicles leave the washing area. The loss is compensated for by **harvested rainwater** or drinking water. The recycled water is as **clear** as **drinking** water (Image 2).

The system is **fully automatized** and can be controlled online (Image 3). It collects data about the amount of incoming water, water sent to car wash machine, discharge to local sewerage system, oxygen content and amount of salt in the water. You can **follow** the data and adjust the operational parameters **online** on your PC.

Unless additional water is run into the system, there is **no wastewater discharge**. In the winter period when road salt is applied, the system **regulates** the amount of salt in the system by thinning it with rainwater or drinking water. Because of this additional amount of water, there is a little discharge in winter periods.

There is a one-year **guarantee** on the system. We also offer a **service contract** in order to ensure proper service and maintenance of the system.

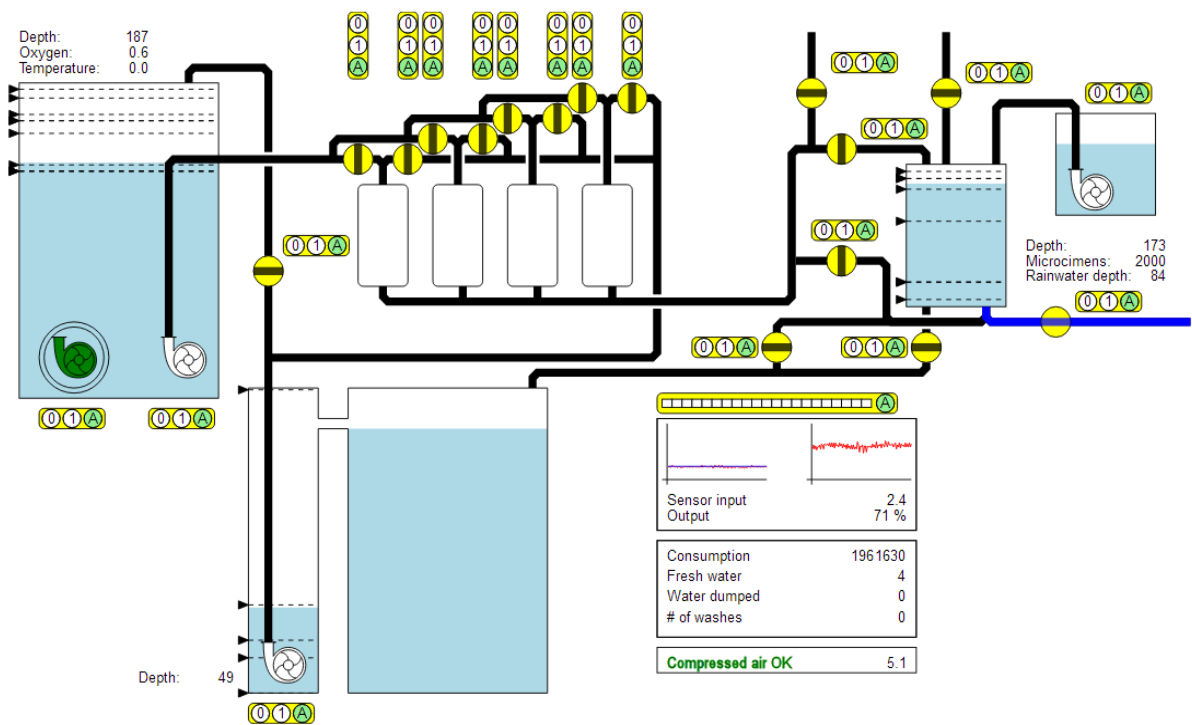
Image 1: The system without housing.



Image 2: Recycled water ready for wash (wastewater after the treatment).



Image 3: Online user control platform



BIOLOGICAL TREATMENT PROCESS

From a trench drain the wastewater is directed into a settling tank where larger particles (e.g. sand) settle. The wastewater then runs into a tank from which it is pumped up into a bioreactor. In the bioreactor, there are media (Image 4) that carry bacteria removing organic material from the water. The water is then led through two or four sand filters. In the end, the treated water is pumped into a storage tank where it is stored for the next wash.

Image 4: Bacteria carriers



WHY THIS SYSTEM?

- high quality of the recycled water
- utilization of rainwater
- environment-friendly technology
- no need for oil skimmer
- reduction of sludge
- very little maintenance
- mobile
- odourless

SAVES YOU MONEY ON:

- drinking water
- wastewater discharge
- installation, operation and maintenance of an oil skimmer
- sludge removal
- chemical agents
- service



6 CLEAN WATER
AND SANITATION



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



14 LIFE
BELOW WATER

The product contributes to the fulfillment of the following Sustainable Development Goals.
To read how, please visit our website www.cleantechaqua.com.

:

Treatment of industrial wastewater

Wastewater treatment & recycling (incl. process water)

Vehicle wash sites (e.g. cars, trucks, tanks, buses, trains, machines)

Treatment according to environmental certifications (e.g. Svanemærke)

Rainwater harvesting as complement to drinking water

Mechanical water softening (without magnets, electricity and chemical agents)



CLEANTECH
AQUA^{A/S}

VALUE OF WASTE WATER

Cleantech Aqua A/S · Bejlerholm 10 · DK-9400 Nørresundby
Tlf: +45 22 26 33 33 · info@cleantechaqua.com · www.cleantechaqua.com