



Technical Data Sheet

MicroClear® Aquacell 5000 Greywater Treatment Unit Installation set

The MicroClear® greywater treatment unit is made for the treatment of greywater from showers and hand-wash basins. We do not recommend connecting the effluent of the kitchen sink.

The MicroClear® Technology guarantees the complete retention of bacteria with the barrier of an ultrafiltration membrane. Even smallest virus will be removed to a degree of 99.9999%. Therefore, the treated water can safely be used for the purpose of reuse (not drinking water).

Guaranteed effluent values:

BOD₅: < 15 mg/l 24 h mixed sample, normally <= 5 mg/l
< 20 mg/l random sample
COD: < 75 mg/l 24 h mixed sample, normally <= 40 mg/l
< 90 mg/l random sample
NH₄-N: < 10 mg/l 24 h mixed sample
N_{anorg.}: < 25 mg/l 24 h mixed sample, filtrated

The hygienically values exceeds the standards set by the European Guideline for bathing water (2006).

We recommend the reuse of the treated greywater for toilet flushing, cleaning and car wash, or for irrigation.

Scope of delivery:

– Membrane- Bioreactor- unit, ready for installation in existing tank incl. these components:

a. Membrane unit, consisting of:

- 2 piece MicroClear® membrane module MCXL, plate distance 6 mm
21 active membrane plates, surface area total 14 m²
design output with ½ year maintenance 30 l/m²h
design output with maintenance once per year 15 l/m²h
plate module resistant pH value 1 to 13
cleaning with chloride containing chemicals possible
European patent Nr. EP1016449
- 2 piece filter housing MA03-XL for MicroClear® filter, with optimized:
flow channel for the efficient cleaning of the filter in operation
fitting for the connection with **Easy**-Mounting device
- plate diffusor with EPDM-membrane for fine bubble aeration

b. Filtrate withdrawal, consisting of:

- 2 piece permeate extraction FA ½
Incl. Permeate box, permeate pump, vacuum membrane pump, vacuum pressure gauge, venting valve, level switch inside the permeate box

a. Easy-Mounting device, consisting of:

- 2 piece stainless steel-pipes 33,7 mm
- 2 piece float switch for the detection of levels inside the tank

a. Electric box and control unit, consisting of:

- 1 piece Rittal box 500 x 500 x 350 mm
- 1 piece WWS- controller, adjustment of operating parameters, determination of the operating hours, with USB interface and automatic recording of the relevant plant data
- 3 piece blower, max. power 130 W

e. Recommended tank sizes:

Raw water storage tank:

- Volume 4000 L

MBR tank:

- Waterlevel 1,2 m
- Volume 4000 L

– **Installation kit for clean water storage tank with these components:**

- level switch
- inlet
- tank emptying with manual valve
- Fresh water back feed, consisting of:
 - Magnetic valve 3/8"
 - level switch
- Recommended tank volume 4000 L

Option: automatic controlled pressure pump to feed the clean water into the pipe system of the house.

Caution: The clean water may not be connected to the drinking water system, but must be fed into a separate pipe system.

