



Technical Data Sheet

MicroClear® Aquacell 12 P.E. small sewage treatment plant

Small sewage treatment plant based on a membrane bio reactor with MicroClear ultrafiltration modules.

DIBT certification no.: Z-55.6-269
CE label no.: (Nov. 2009)

Guaranteed effluent values:

BOD5: < 3 mg/l from 24-h sample, homogenized
< 5 mg/l from a random sample, homogenized
COD: < 30 mg/l from 24-h sample, homogenized
< 40 mg/l from a random sample, homogenized
NH4-N: < 2 mg/l from 24-h sample, homogenized, T>12°C
Nanorg.: < 25 mg/l from 24-h sample, homogenized, T> 12°C
faecal
coliforms
100 ml: < 10 from a random sample
AFS: < 5 mg from a random sample

The values are below those specified by the European guideline for bathing water

The retention rate of the MicroClear® system has been tested and approved by the University of Applied Sciences at Giessen-Friedberg, Germany and Institute for wastewater Technology PIA in Aachen/ Germany.

The plant performance is subject to the right design of the biological treatment and the pre-treatment of the water. If the design is made according to our recommendations, the designed outlet water quality can be expected.

MicroClear® Aquacell 12 P.E. for a MBR small sewage treatment plant

Article number : 80100019

for the complete biological sewage treatment using ultrafiltration membranes, ready functioning unit (tank not included) for easy installation through the tank opening (diameter min. 600 mm), also into existing septic tanks.



Scope of Delivery:

1. Membrane unit, consisting of:

- 3 piece MicroClear® membrane modules MC03, plate distance 5.5 mm
24 active membrane plates each filter, surface area total 10.5 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
- 3 piece filter housing MA03-1 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

2. Easy-Mounting device, consisting of:

- 3 piece stainless steel pipe diameter 33.7 mm with base plate and lid, mounting at concrete wall with clamp
- 2 pieces float switch for the detection of levels inside the membrane filtration tank

3. Equipment for recirculation of sludge, consisting of:

- 1 piece sludge pump, fitting for the connection with **Easy**-Mounting device
- connecting cable 10 m

4. Filtrate withdrawal, consisting of:

- 1 piece filtrate tank, PE, welded
- 1 piece filtrate pump, maintenance free
- 1 piece float switch for the control of the pump and controlling the filtration output in operation
- connections 12 mm for filtrate inlet, outlet, aeration
- connecting cable 10 m

5. Equipments for the aeration unit within biological tank, consisting of:

- 1 piece plate diffusor
- 1 piece stainless steel pipe diameter 33.7 mm
- 1 piece submerged sewage pump with connecting cable 10 m
- 1 piece float switch for the detection of levels inside the tank
- Growth media, fitting 12 p.e.



6. Control cabinet and electrical box, consisting of:

- 1 piece Rittal 600 x 600 x 350 mm for outside placement at a protected location, with aeration
- 1 piece WWS microcontroller unit with functions for the registration of the filtrate output, adjustment and logging of operating parameters, determination of the operating hours

Also installed in this cabinet:

- 2 piece membrane suction pumps
- 1 piece pressure gauge
- 3 piece magnetic valve
- 1 piece 3-way valve
- 4 pieces air blower

Conditions for Operation:

The manual for operation and maintenance should be obeyed.
The minimum waterlevel of 1,2m must be ensured