

Compact MBR System HUBER BioMem®



The complete solution for wastewater treatment

- Decentralized wastewater treatment for up to 20,000 GPD
- Ideal for hotels, residential estates and mobile applications
- Small footprint, excellent effluent quality
- Elimination of bacteria and germs
- Permits effluent reuse, e.g. for irrigation



►► The situation

Since building and operating sewer systems is frequently cost prohibitive, small compact systems – stationary or mobile – are becoming increasingly important.

Protection of eco-systems and scarcity of water in many regions require innovative solutions, such as the reuse of wastewater for irrigation.

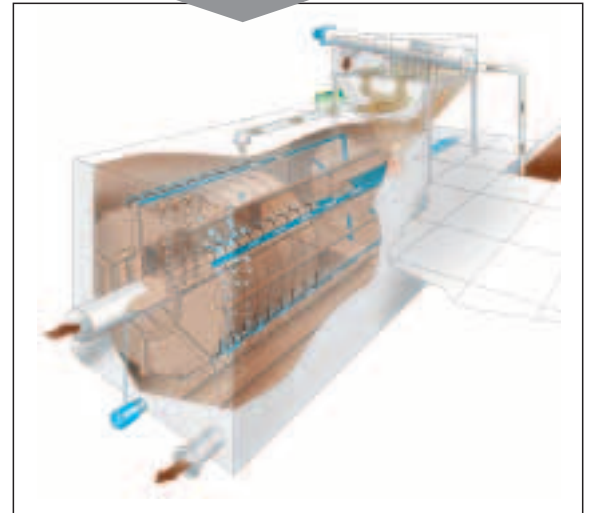
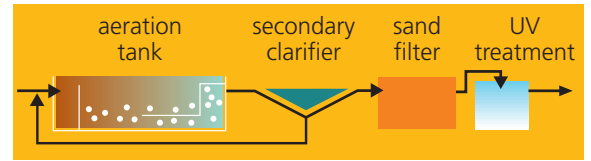
► Wastewater treatment in small or decentralized units – stationary or mobile

►► The solution

The HUBER BioMem® unit is a complete system for decentralized applications, consisting of mechanical and biological treatment and filtration through HUBER VRM® (Vacuum Rotational Membrane) membranes.

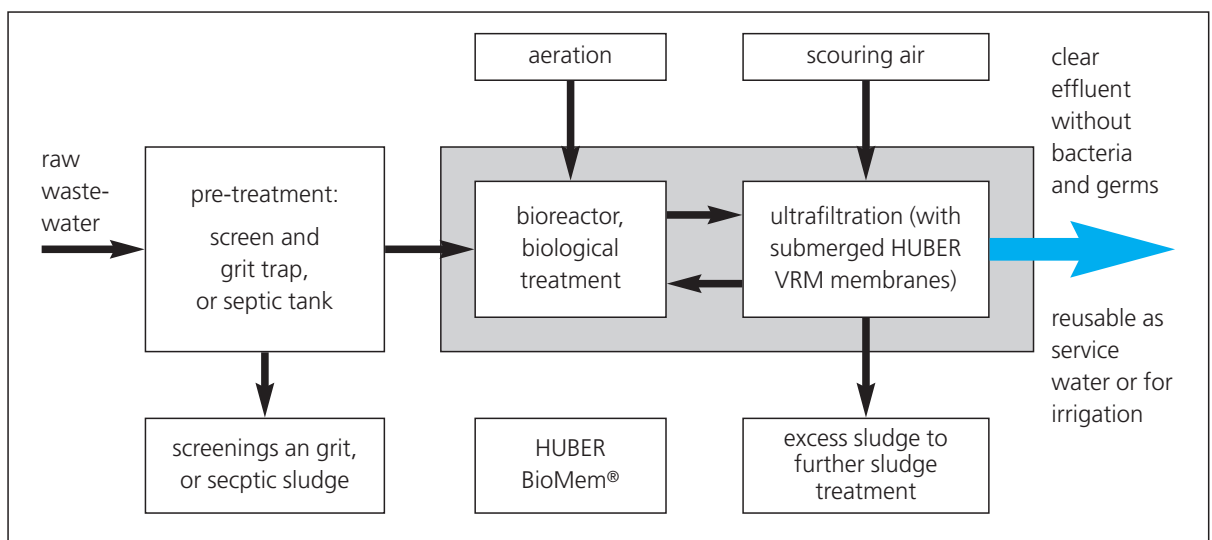
Submerged HUBER VRM ultra-filtration (UF) membranes retain all solids, bacteria and germs that are larger than approximately 38 nm (0.038 microns) thus guaranteeing excellent effluent quality. Compliance with most stringent effluent standards permits reuse of the effluent.

Modular design enables various system sizes for municipal and industrial applications.



A HUBER BioMem® system replaces conventional units (aeration tank, clarifier and sand filter), and reduces the costs for disinfection

►► HUBER BioMem® System

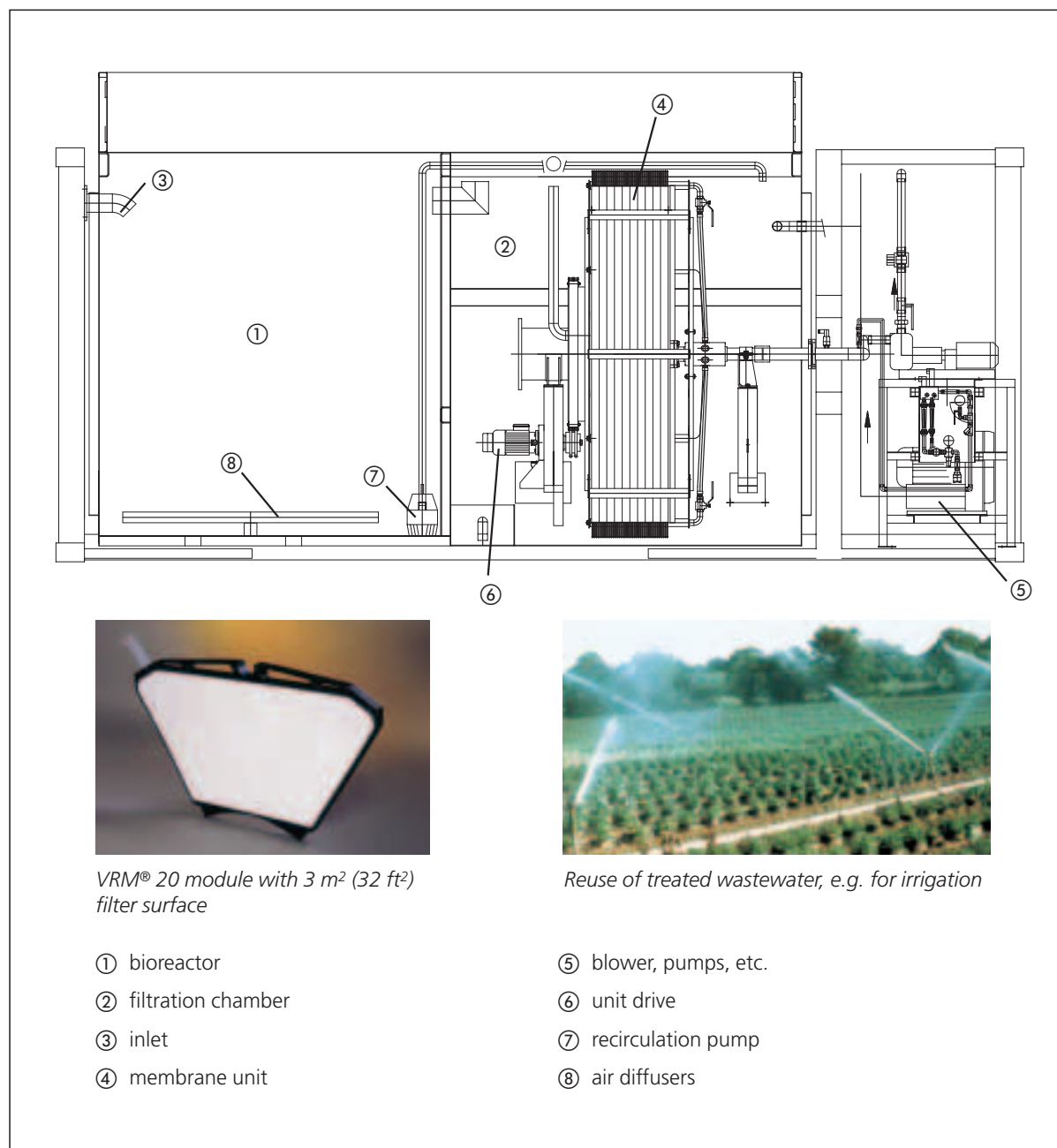


System description

Raw wastewater is pumped to a MiniCop unit or any other suitable screen for separation of coarse material (3 mm / 1/8") and grit removal.

The pre-screened wastewater flows into the biological reactor of the BioMem® plant where it is biologically treated and then pumped into a filtration chamber. Concentrated activated sludge overflows from the filtration chamber back to the biological reactor (internal sludge recirculation). Finally, the biologically treated wastewater is filtered through the membranes.

The control system permits automatic operation without the need for operator attention. Periodically, excess sludge is removed.



►► Benefits of HUBER BioMem® Systems

- Modular and compact design
- Crystal clear effluent
- Minimized costs for disinfection
- Optional nitrogen and phosphorus removal
- Separation of all bacteria and germs
- Reuse of effluent as service water or for irrigation
- Effective prevention of fouling with minimal energy and air demand due to sequential cleaning of the membrane surfaces
- No need for back-pulsing or for regular chemical cleaning
- Frost-proof design available
- In ground installation possible
- Inexpensive MiniCop® screen and grit trap for pre-treatment of the influent

►► Applications

- Treatment of wastewater for small municipalities, residential areas, hotels or housing estates
- Reuse of water and nutrients



MiniCop screen and grit trap for pre-treatment



VRM 20/120-Unit



Membrane Bioreactor pilot-plant

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Subject to technical modification

HUBER BioMem®
Complete Plant