

# HUBER DeWaTec Membrane Aeration System MembraneClearBox®



Sewage treatment at the highest stage

## ➤ Product Information

The membrane bioreactor HUBER MembraneClearBox® is a compact **small sewage treatment** plant with unmatched treatment performance and maximum reliability (**DIBt approvals Z-55.3-107, Z-55.3-196**).

The HUBER MembraneClearBox® is a complete biological treatment unit with additional ultrafiltration. It can be retrofitted into existing septic tanks or factory preassembled. So an existing, intact 3-compartment tank or multiple septic tanks can be used or a small sewage treatment plant can be delivered onsite as a pre-assembled complete plant.

The membrane treatment unit by HUBER DeWaTec achieves its **unmatched treatment performance** by using a **perfectly adjusted membrane module** with microscopically small pores, 1500 times smaller than the diameter of a human hair.

Air introduced in the scouring box below the membrane module prevents the formation of a covering layer on the membrane. An aerator, installed at the side of the module, introduces oxygen into the wastewater in the form of **very fine air bubbles**.

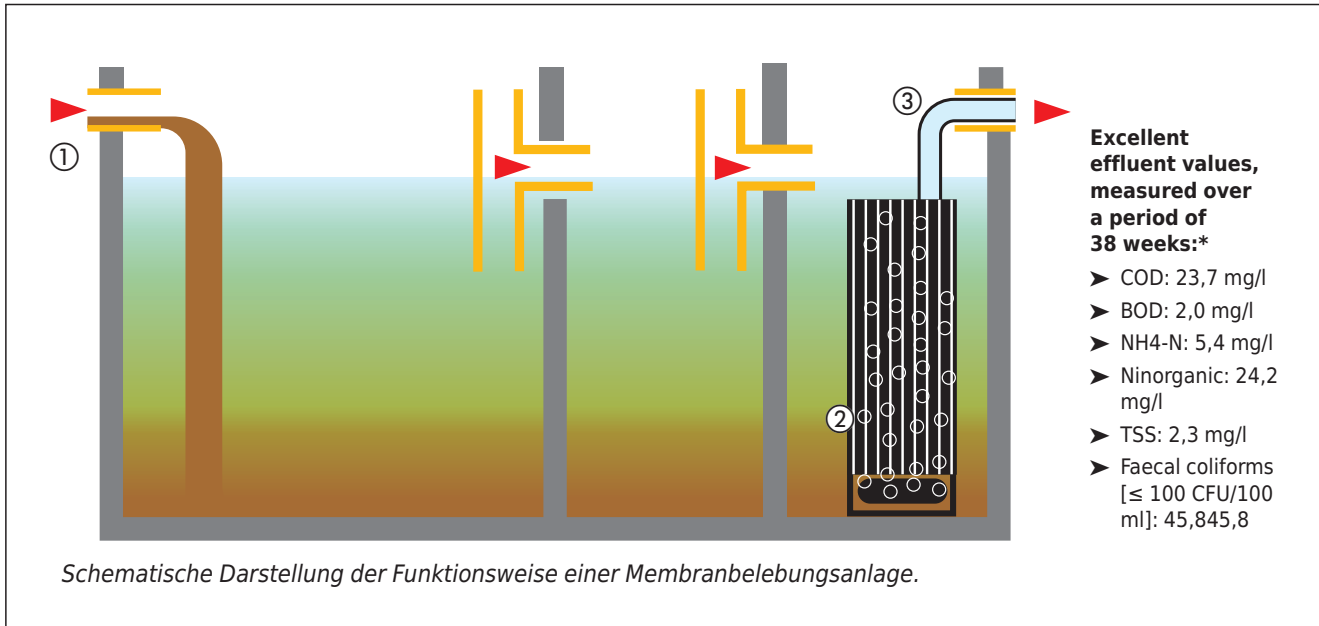
An **external control unit** regulates the addition of oxygen as well as the filtration and scouring that follows.

What makes this process so effective is that the microorganisms living in the wastewater get exactly the amount of oxygen they need for the reliable biological decomposition of organic material and dirt. At the same time the treated wastewater gets filtered through the membrane, which **reliably removes** all microorganisms including germs and pathogens.

Domestic wastewater is converted **without any chemical additives** into pure water (**performance classification +H**) which can be reused, for example, to flush the toilet. The HUBER MembraneClearBox® constantly performs above the international legal requirements and guidelines (including the European directive for bathing waters).



*The complete biological treatment unit with membrane filter plates guarantees maximum wastewater treatment performance as required by wastewater classification +H.*

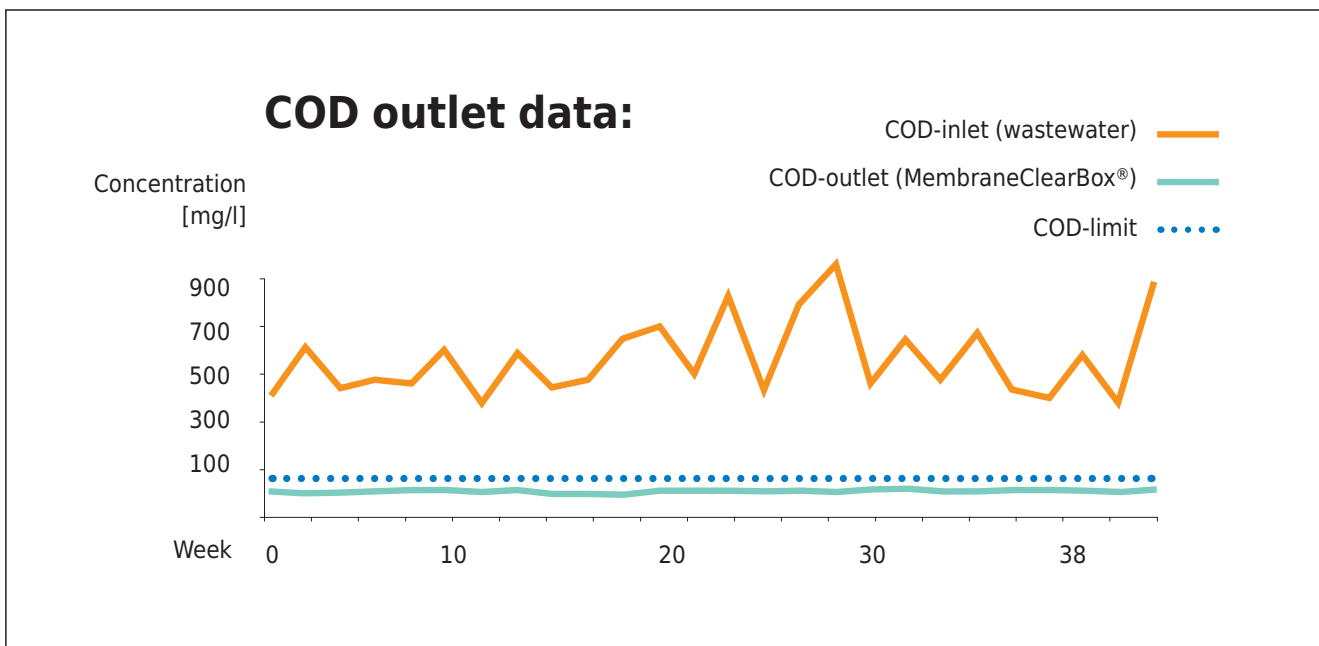


## ➤➤ Reliable treatment of domestic wastewater:

For mechanical pre-treatment the wastewater enters a – possibly existing – multi-compartment tank 1.

After larger solids settle out the wastewater flows into the membrane bioreactor 2. Here the wastewater is aerated. This activates the microorganisms living in the wastewater: they decompose carbon compounds – at the same time they convert ammonia/ammonium into nitrate (nitrification). Then the biologically treated wastewater is drawn through the membrane filter plates.

Microscopically small pores retain even germs and potential pathogens. The filtered water leaves the plant almost free of particles and can be collected in a storage tank 3.



## ➤ Benefits provided by the HUBER membrane bioreactor:

The membrane bioreactor is especially suited for all applications in sensitive discharge areas and where an environmentally friendly solution is sought. The **purified wastewater** can be reused for irrigation or toilet flushing.

The plant has been developed by the Hans Huber AG. The membrane technology from HUBER has been proven in decentralised and centralised wastewater treatment, in municipal as well as in industrial application and in all possible sizes.

The **compact plant** meets all legal requirements (EN 12566 and DIN 4261, performance classification +H; DIBt approval Z-55.3-107, Z-55.3-196).

The sophisticated control technology "made in Germany" is installed in a separate, **high quality** and **easily accessible** control enclosure (**CE certification**).

### **Additional benefits:**

- highly efficient with excellent effluent quality
- further use of existing, intact septic tanks is possible
- fast installation, reduced installation costs, easy maintenance
- electronic record keeping reduces control time and effort to a minimum
- optional remote control technology with fault signal via modem
- guaranteed durability



*Only a matter of a few hours for qualified specialists: the installation of a HUBER MembraneClearBox® that has been completely factory pre-assembled.*

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