

# Small size sewage treatment system

with micro-filtration type BusseMF turns domestic waste water into service water

## Water of the next generation

The **BusseMF** Domestic Sewage Treatment System uses microfiltration, currently the most advanced method of local waste water treatment. Microfiltration eliminates even bacteria and germs. This restores waste water to hygienic condition fit for use as service water, for example, to water the garden or flushing the WC. In this way the consumption of drinking water in a household can be reduced by about one third. The constantly high level of water treatment in the **BusseMF** system ensures that the discharged water is considerably cleaner than the law requires, it is even better than the limits for bathing water prescribed by EC legislation. Thus, water treated by microfiltration can be discharged in sensitive areas and water protection zones. Even if still stricter legislation should be enacted and more stringent treatment values prescribed, the **BusseMF** system remains a product with a future.

In addition to the installation of the system in the basement, existing systems, e.g., septic tanks, can be adapted. The design makes the system suitable not only for small households but also for larger developments, such as hotels, camping sites or office buildings up to 200 population equivalent.

**How it works** - The **BusseMF** Small Size Sewage Treatment System comprises two treatment steps, namely pre-treatment and aeration. At the pretreatment step, which also serves as waste water store, biologically edegradable coarse material such as, e.g., faeces, toilet paper, is dissolved and the non-dissolving components separated from the waste water by an aerated sieve. A pump pumps the water, from which the coarse material has been separated, to the aeration section. At this step the organic matter in the waste water is degraded biologically by microorganisms and oxygen. In addition to this, the waste water is treated physically by microfiltra-

tion membranes (ultrafine filter with 0.4 µm pore size). These membrane filters eliminate suspended material, even bacteria and germs, ensuring that only absolutely clear, odourless, hygienically harmless water (filtrate) leaves the system.

The **BusseMF** system was tested successfully by the University of Hannover and the Technical University in Berlin and the water by the system in practical service is more than significantly better than the limits set by DIBt Berlin\* (Z-55.3-60) and the applicable law. Due to the immersed microfiltration membranes, in combination with a technologically required high concentration of biomass, the COD level in the discharged water can be reduced to under 30 mg/l\* and the BOD<sub>5</sub> value to under 5 mg/l\*.

## Advantages at a glance

- The **BusseMF Small Size Sewage Treatment System** has been designed for plots exempted from the obligation to connect to the public sewerage system
- Cleaning of domestic waste water without addition of rain water
- Reduction of the consumption of drinking water in the household by up to one third due to the use of the treated waste water as service water (e. g., for watering the garden or flushing the toilet)
- Reliable function and high sustained cleaning effect ensured by qualified maintenance personnel
- Low operating cost due to intelligent control
- The technological process obviates the need for regular sewage sludge disposal
- System needs only a few hours to be installed and ready for service
- No additional building cost for standard installation
- Small footprint due to the novel technological solution
- High safety due to the use of double-walled safety tanks made of PE plastic with a jacket of galvanized steel plate
- Low noise level due to quiet running compressors
- Modular construction ensures that the system can be expanded from 4 up to 100 population equivalent
- Automatic unattended mode ensures that the biological capacity of the system remains fully functioning for up to 4 weeks of your vacation
- Safe investment because the actual values of the treated water are very much below the limits currently permitted by law



Installation of the BusseMF system in a garden shed in combination with an existing septic tank



Design qualification approval of Deutschen Institut für Bautechnik DIBt Z-55.3-60

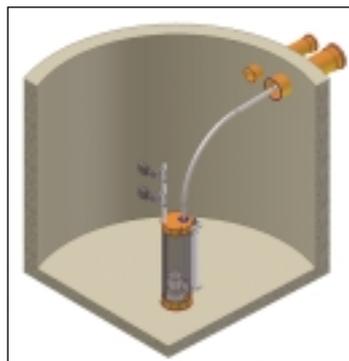
The plant type MF-HKA 4 for 4 inhabitants consists of two double-walled safety tanks, installed in a few hours, immediately ready for operation.



Installation of plant type MF-G-HKA 4 in a garage in combination with an existing septic tank



Complete solution for a single occupancy house installed in a cellar



Septic tank with submerged pump and coarse matter separator



Plant type MF-HKA 8 for 8 inhabitants installed in the basement of the house

Supported by:  
Deutsche Bundesstiftung Umwelt  
(German Ecological Foundation)

Recommended by:  
Umweltbundesamt  
(federal Environmental Authority)



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