

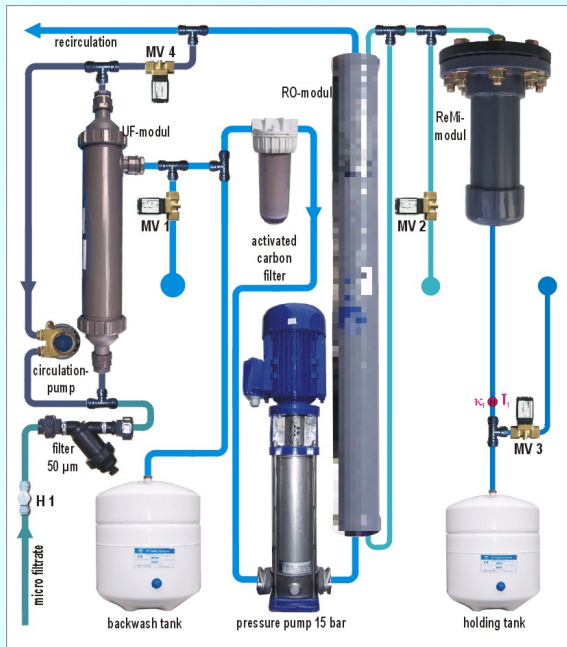
# Busse WT: Recycling of raw water to different water qualities in arid areas



Clean water is worldwide a restricted resource and clean, hygienically safe water is not available everywhere in sufficient amount and already not at all drinking water.

Therefore, the Busse GmbH has developed a multistage water treatment system for arid areas, which can be adapted to individual requirements.

The first step of this system forms the membrane bioreactor plant Busse MF. In this treatment plant hygienically safe, nearly sterile custom water is won by the biological cleaning and membrane filtration of sewage.



Function scheme of the Busse WT

The second step is the processing system Busse WT. Here an ultrafiltration of the custom water takes place by which one receives absolutely sterile service water by the application of the second barrier. By the double barrier technology the Busse WT fulfils the requirements of the Federal Environment Agency with regard to the exclusion of health risks with the re-use of the service water. This can be used without limitation for the garden irrigation, as toilet flushing water, for the washing machine or to fill-up the swimming pool.

Beside the filtrate of the Busse MF rainwater and with slight adaptation also surface water can be included as a water resource to the processing.

The intermediate stage of the reverse osmosis is necessary for the next processing of the service water to „drinking water on-line“. The accruing intermediate product here is pure water, which is qualified ideally to be used in a dish washer, because of the extremely high cleanness no annoying salt depositions can arise.

The re-mineralization of the pure water, which is unsuitable for consumption, follows this interstep finally. From this addition of mineral substances originates „drinking water on-line“ which is suitable for the direct withdrawal and for the current use.

A storing of „drinking water on-line“ is not possible, because attached preventive disinfections takes not place and therefore a bacterial contamination cannot be excluded. Because of this, the discharge in a central water supply network is also excluded.

The re-mineralised water is checked constantly by the attached located analysis systems and therefore a constantly high drinking water quality can be guaranteed with freshly taken „drinking water on-line“.

„Drinking water on-line“ is suited for the human use as a drinking water to the direct consumption, to the food preparation and for the personal hygiene.

The Busse WT was developed to guarantee the availability of the vital drinking water also in areas poorer in water and to be regardless of temporary interruptions of the central drinking water care. An other application possibility is the improvement of available water out of wells.

The Busse WT is the first compact system for decentralised water treatment up to drinking water quality which also can make available low amounts (from 1 to 10 m<sup>3</sup> / day) drinking water economically. For example, the smallest plant type of the Busse WT can generate an amount from up to 2 m<sup>3</sup> service water daily, accordingly of the available raw water. With „drinking water on-line“ - yield of approx. 50% therefore fresh drinking water is available „by button pressure“ per day up to 1 m<sup>3</sup>. The other 50% are necessary for flushing processes and afterwards can be used for the garden irrigation.

To conceive the ideal solution for your individual application case, please contact the Busse GmbH.

Development:

Fabrication and distribution:



**BUSSE GmbH**  
Zaucheweg 6  
D-04316 Leipzig  
Germany

**BUSSE IS GmbH**  
Zaucheweg 6  
D-04316 Leipzig  
Germany

Tel.: 0341-65984-0  
Fax: 0341-65984-10

Tel.: 0341-65984-25  
Fax: 0341-65984-26

Email: [info@busse-gmbh.de](mailto:info@busse-gmbh.de)  
<http://www.busse-gmbh.de>

Email: [info@busse-is.de](mailto:info@busse-is.de)  
<http://www.busse-is.de>