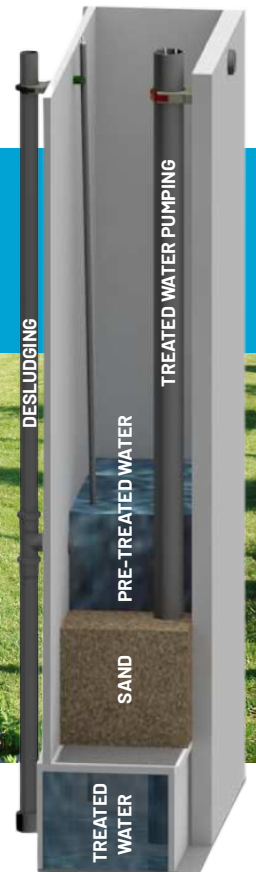


SAND FILTER

European
patent no.
EP-2554230



DESCRIPTION OF ADDITIONAL EQUIPMENT

The sand filter (SF) is an additional device that is part of the TOPAS wastewater treatment plant with a sand filter. It is located directly in the treatment plant and cannot be removed. It is used for mechanical treatment of biologically treated wastewater. SF is necessary if the treated water is still used in the household (toilets, washing machine, etc.) or for drip watering. It can be delivered to all types of treatment plants but it cannot be installed in the treatment plant afterwards.



ADVANTAGES OF SAND FILTER

This is a unique device protected by an European patent (EP). Thanks to the sand filter TOPAS treatment plants can stably achieve a treatment quality that is practically unattainable with conventional treatment plants. Its great advantage is that it is automatically washed several times a day while the turbid water returns to the treatment plant.



FUNCTIONAL DESCRIPTION OF SF

The sand filter is a separate tank with an interbottom. A layer of sorted sand with a grain size of 1-3 mm is stored on the interbottom floor. Water seeps through a layer of sand into the space to the bottom of the SF below the interbottom and thus it is **filtered**. The interbottom has holes smaller than the grain size of the sand. The filtered water free of small undissolved substances is forced through a layer of sand and interbottom into the tank of filtered water by hydrostatic overpressure. From there it is pumped to the outlet. During the **washing** of SF compressed air is supplied under the interbottom space which passes through the filter holes into the sand layer, clarifies the sand and brings turbidity to the surface. Part of the turbid treated water (approx. 10%) is then returned to the accumulation.

