



HUBER Sandfilter CONTIFLOW®

- ▶ Modular design for high flexibility
- ▶ Low operating costs due to low-maintenance plants
- ▶ Filter bed cleaning during system operation

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The challenge – Our solution

Effluent quality requirements for municipal and industrial wastewater treatment plants are becoming increasingly demanding and complex.

To reliably meet the more stringent effluent standards, many applications require additional advanced treatment stages.

The HUBER Sandfilter CONTIFLOW® is a versatile, reliable and, above all, low-maintenance filter system for such applications.

It can be used for advanced municipal wastewater treatment (3rd and 4th treatment stage) as well as for the treatment of industrial and process wastewater in order to provide individually adapted process solutions tailored to meet specific requirements and conditions.

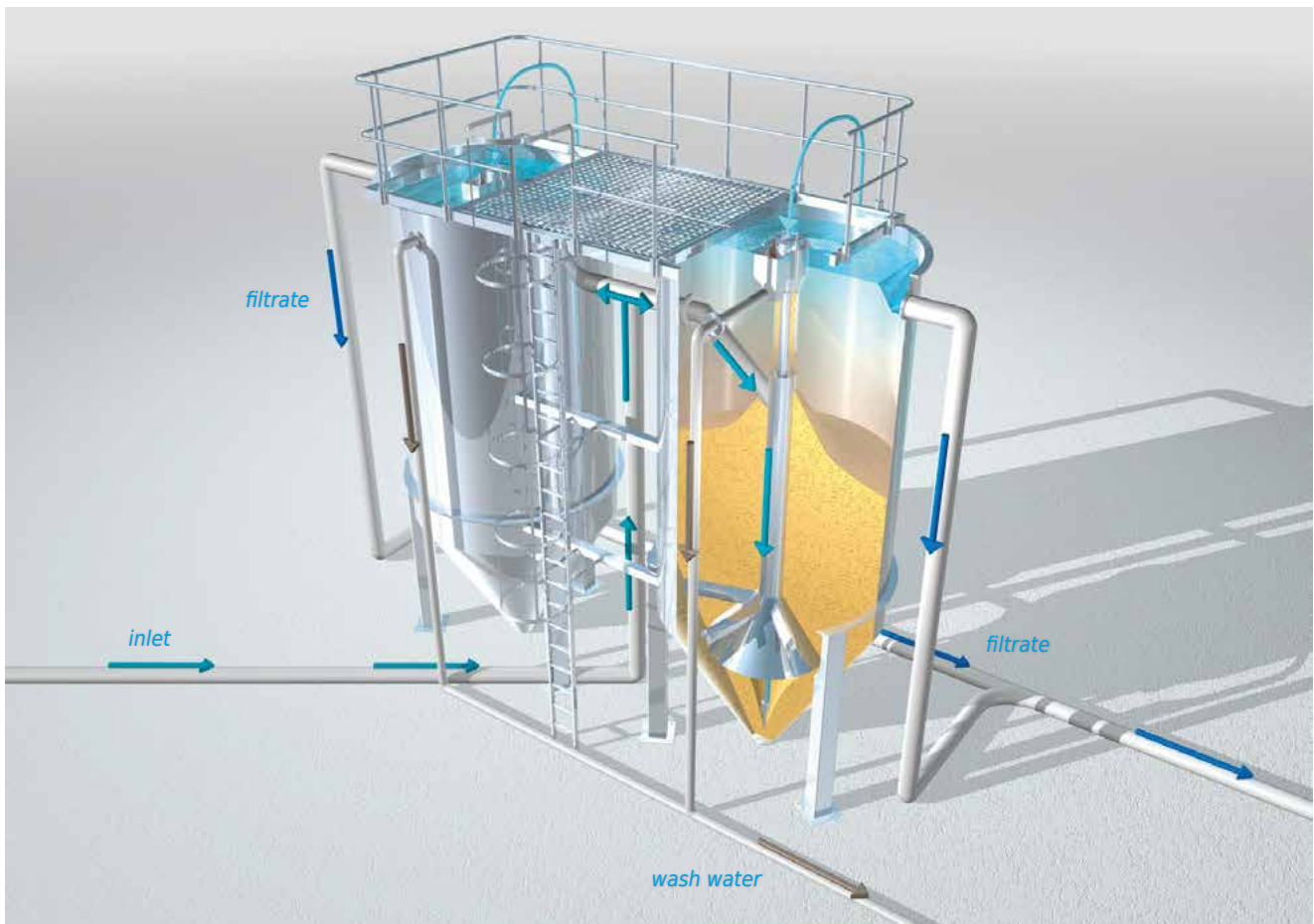
Functional description

The HUBER Sandfilter CONTIFLOW® is a deep-bed type upflow filter with continuous filter bed cleaning and meets even the highest effluent quality requirements. The system is highly efficient as no shutdowns for back-wash cycles are necessary for the sand washing process. The HUBER Sandfilter CONTIFLOW® is available as a steel tank design or concrete basin design. Its modular design ensures the optimal treatment of any throughput.

The feed is introduced into the Sandfilter through a series of feed radials at the bottom of the filter. As the influent flows from the bottom upward through the sand bed, the solids contained within the influent are retained in the filter sand. The filtrate exits over a weir at the top of the filter.

The sand bed, along with the accumulated solids, is drawn downward to the trough bottom into the airlift pipe, which is located in the centre of the filter. The airlift transports the mix upwards to the sand washer. Inside the washer, the solids are separated from the filter sand with a small portion of the filtrate flow.

The clean sand falls down through to the bed, generating an internal sand circulation.



Flow diagram of a HUBER Sandfilter CONTIFLOW®.

Applications

In addition to mechanical filtration (filterable solids reduction, phosphorus elimination, removal of microplastics), the Sandfilter is also used for biological filtration (nitrogen reduction by denitrification, post-filtration for ozonisation in the 4th treatment stage).

Typical HUBER Sandfilter CONTIFLOW® applications:

Tertiary treatment

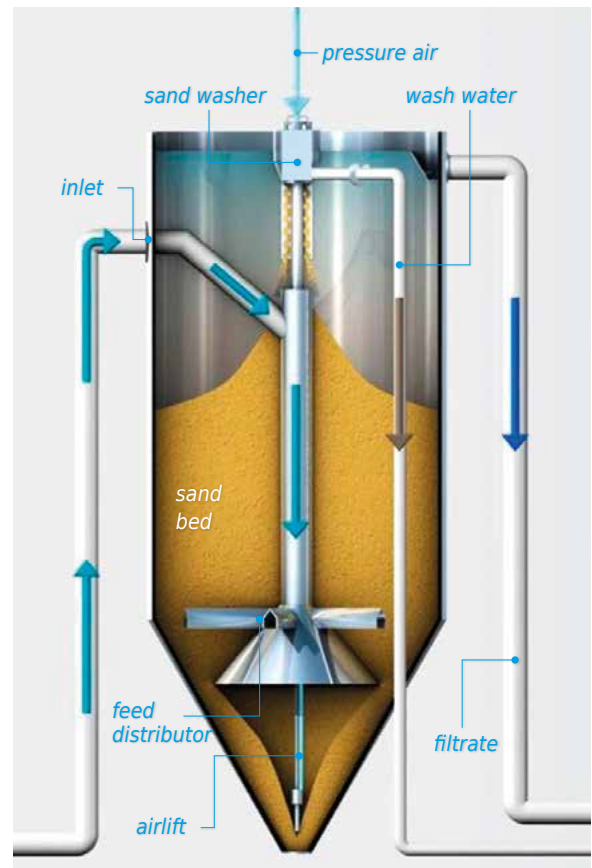
- ▶ Reliable retention of suspended solids
- ▶ Easy phosphorus removal through flocculation filtration
- ▶ Reliable removal of microplastics (>99.9 %)

Fourth treatment stage

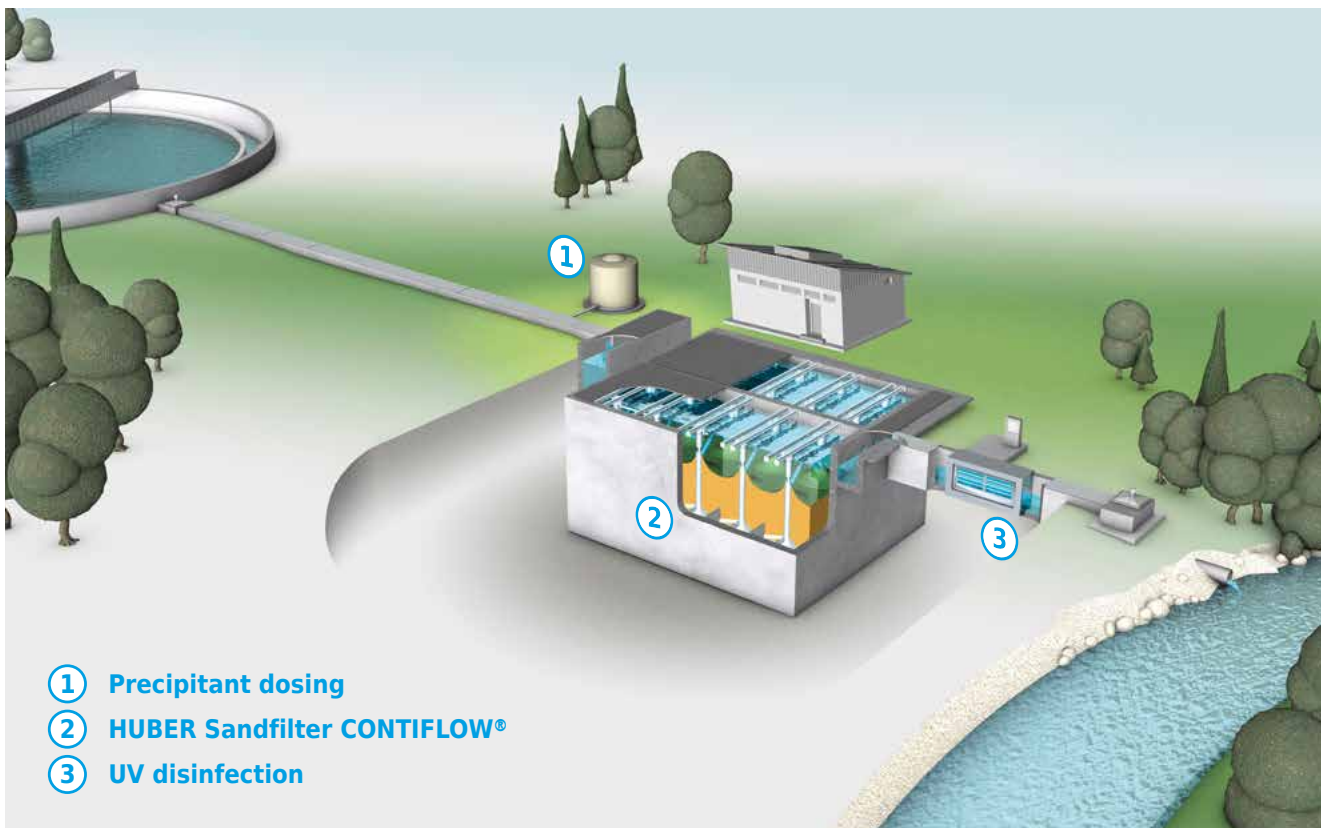
- ▶ Proven police filter before ozonation or activated carbon filtration (GAC)
- ▶ Proven post-filtration following ozonation or activated carbon filtration (GAC)

Other applications

- ▶ Treatment of industrial process water, cooling and circulation water
- ▶ Treatment of surface waters and removal of algae
- ▶ Denitrification for biological nitrogen reduction



Design and function of the HUBER Sandfilter CONTIFLOW®.



Tertiary treatment: flocculation filtration for phosphorus elimination with downstream UV disinfection.

The user's benefits

- ▶ Versatile system, sturdy design, well proven over many years
- ▶ No complicated, cost-intensive backwash technology for filter bed cleaning
- ▶ Optimum efficiency due to the use of filtrate as wash water
- ▶ Sand bed cleaning without shutdowns
- ▶ Continuous filtration saves operating and investment costs
- ▶ Modular design for easy adaptation to any flow rate
- ▶ Easy to retrofit on existing sewage treatment plants
- ▶ Gravity feed without pumps
- ▶ High operating reliability due to constantly high filtrate quality
- ▶ No moving parts and only one wearing part for easy maintenance

Capacity

	50 C	51	72
Filter area	5.0 m ²	5.1 m ²	7.2 m ²
Maximum throughput	70 m ³ /h	70 m ³ /h	100 m ³ /h
Maximum amount of air	5.6 Nm ³ /h	5.6 Nm ³ /h	9.2 Nm ³ /h



HUBER Sandfilter CONTIFLOW® 50 C , Wolfratshausen, Germany.



HUBER Sandfilter CONTIFLOW® 72, Montebello, Italy.



HUBER Sandfilter CONTIFLOW® 50 C, Rincon de Leon, Spain.

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