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HUBER Active Carbon Filter CONTIFLOW® GAK



Quaternary Treatment for the Removal of Micropollutants

- **Ideal as fourth treatment stage**
- **Easy modular retrofitting**
- **Reuse of the activated carbon**

The HUBER Active Carbon Filter CONTIFLOW® GAK removes micropollutants from the wastewater flow. The system uses granulated active carbon and is installed downstream of the secondary clarifier. An important advantage of the HUBER Active Carbon Filter CONTIFLOW® GAK is that it has no influence on existing process-engineering systems on the sewage treatment plant and can be optimised further by adding a sandfilter or an upstream ozonisation plant.

The HUBER Active Carbon Filter CONTIFLOW® GAK is a deep-bed type upflow filter. The system is highly efficient as no shutdowns for backwash cycles are necessary for the active carbon washing process.

As the influent flows from the bottom upward through the active carbon bed, the solid particles contained within the influent are retained in the filter layer and micropollutants are adsorbed on the large inner surface of the active carbon. The decisive factor for the second process is the residence time of the inflow in the active carbon bed.

The clear filtrate exits over a weir at the top of the filter. The active carbon 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 active carbon washer. Inside the washer, the solids are separated from the active carbon with a small portion of the filtrate flow. The active

carbon is free of solids but still contaminated with micropollutants when it falls through to the filter bed so that an internal active carbon cycle is created. As the filter operation continues more and more micropollutants are adsorbed on the inner surface of the carbon.

Details

The HUBER Active Carbon Filter CONTIFLOW® GAK is a special product variant of our proven **HUBER Sandfilter CONTIFLOW®**: It is used as **quaternary treatment stage** on sewage treatment plants and removes micropollutants from the wastewater flow. The system uses granulated active carbon and is installed downstream of the secondary clarifier.

An important advantage of the HUBER Active Carbon Filter is that it has no influence on existing process-engineering systems on the sewage treatment plant and can be optimised further by adding a "classic" CONTIFLOW® Sandfilter or an upstream ozonisation plant.

Benefits

- Experience with more than 5,000 CONTIFLOW® installations worldwide
- Reliable removal of micropollutants
- Applicable as **quaternary treatment stage**
- Simple and easy-to-maintain system
- No influence on existing process-engineering systems
- Wearing parts reduced to one
- No shutdowns necessary for backwash cycles to clean the activated carbon bed
- Constant filtrate quality, no secondary filtration required as with PAC processes
- No complex carbon dosing technology as with PAC processes
- No dirt and dust loads as with PAC processes
- No precautions for explosion protection as with PAC processes
- Simple wash water treatment
- Minimum pressure drop

Case Studies

- **Two HUBER lighthouse projects of the fourth treatment stage: construction of the micropollutant removal plants in Bickenbach and Uhldingen is progressing rapidly**
- **Seefeldten sewage treatment plant at Lake Constance to receive 24 HUBER Active Carbon Filters CONTIFLOW® GAK as part of the fourth treatment stage**
- **Bickenbach Wastewater Treatment Plant: HUBER supplies technologies for Hesse's first plant for elimination of trace substances**
- **HUBER offers convincing key components for a tailor-made 4th treatment stage**
- **Research project: removal of micropollutants with the use of ozone and granulated active carbon**
- **Removal of micropollutants: Fourth treatment stage with the HUBER Sandfilter CONTIFLOW®**

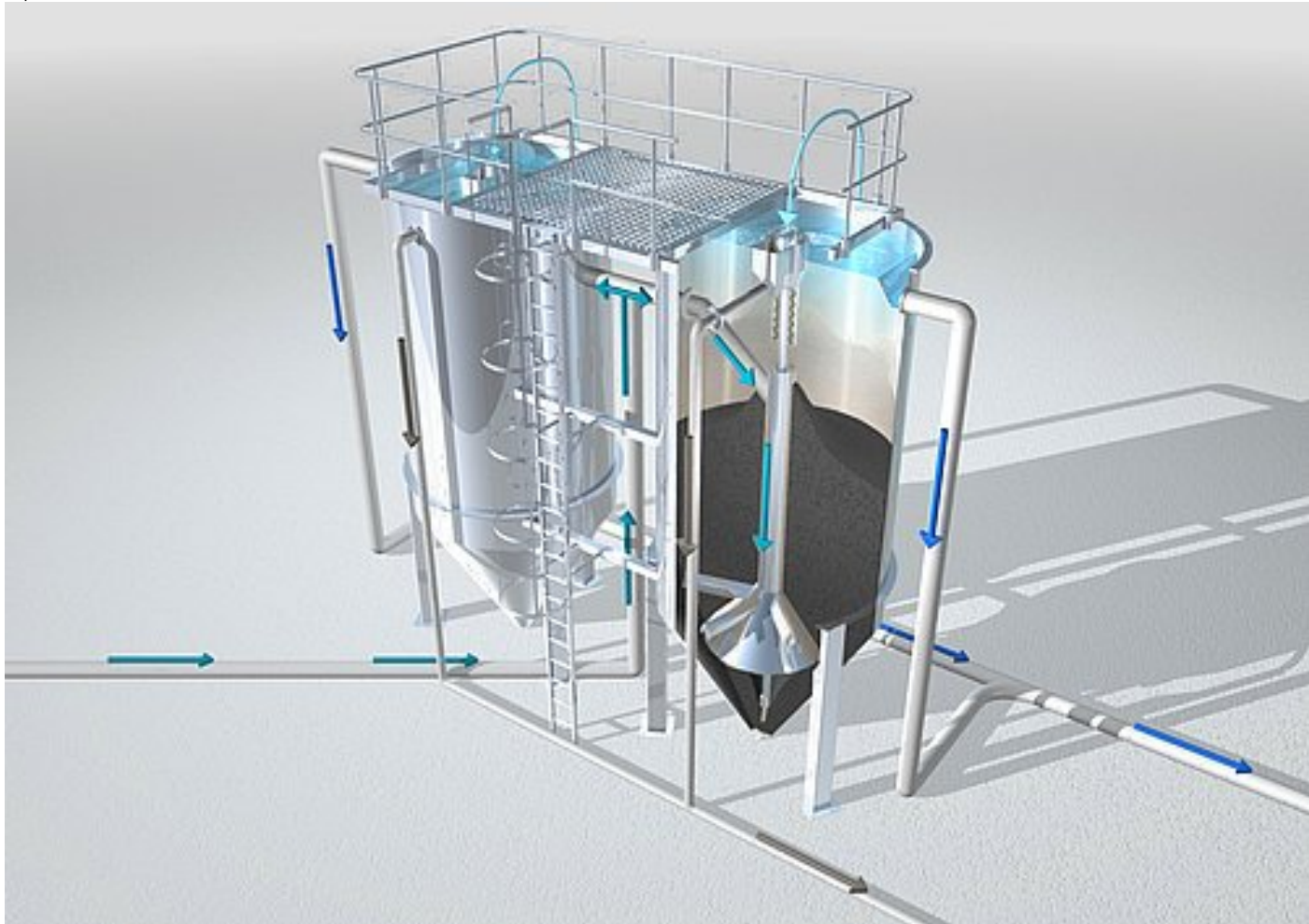
Applications

- Ideal solution for the 4th treatment stage for the removal of trace substances, also as biological activated carbon filtration (BAC filtration) following ozonisation.
- Reliable removal of dissolved COD compounds in industrial wastewater treatment (process wastewater, recirculation water)
- Optimal solution for COD reduction in the treatment of vapour condensate from sludge drying

Downloads

 **Brochure: HUBER Active Carbon Filter CONTIFLOW® GAK** [pdf, 360 KB]

Design Sketch



HUBER Active Carbon Filter CONTIFLOW® GAK: functional principle

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