

SULZER

Nordic Water

Filtration solutions

SuperCloth fiber disc filter



Main industries and applications

The SuperCloth fiber disc filters provide high quality filtration performance for municipal and industrial water, wastewater, and water reuse applications using the pile cloth filtration technique.

SuperCloth fiber disc filters are a part of Nordic ZeroP®, a Nordic Water process, and are used in tertiary treatment stages proven to keep outlet phosphorus levels less than 0.1 mg/l. SuperCloth filtration combines to some extent the deep-bed and surface filtration, giving low footprint, low wash water usage and could at some sites reduce phosphorus to very low values without using polyelectrolytes. This filtration technique is particularly suitable where high quality effluent is required with low TSS (Total Suspended Solids) or low NTU values.

SuperCloth fiber disc filters are available in a variety of sizes, they are designed for use in applications such as:

- Tertiary treatment after clarifiers
- Phosphorous removal
- Algae removal
- Pharmaceutical residual removal
- Filtration for reuse of water
- Pretreatment of river and lake water
- Industrial filtration water, cooling water, and steel manufacturing plants
- Agriculture
- Pretreatment for advanced processes
- Primary treatment of wastewater in place of clarifiers
- CSO (Combined Sewer Overflows) applications

How SuperCloth works

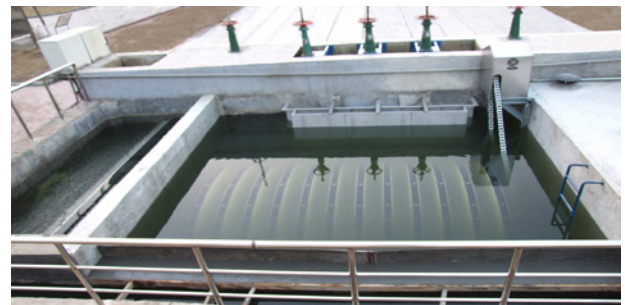
Water to be filtered, flows by gravity into the filter disc, from the outside to the inside through the pile cloth fiber media.

Suspended solids in the water accumulate in the fiber media, causing the water level inside the filter tank to rise.

When the water level reaches a preset value, the suction backwash process will start cleaning the filters without stopping the filtration, and the water level will drop again. The collected solids are discharged through a solid collection system.

The solids that settle at the bottom of the tank are discharged by a pump at preset cycles.

After filtration, the water flows into the center drum and further towards use or discharge.



Features and benefits

1 High filtration efficiency

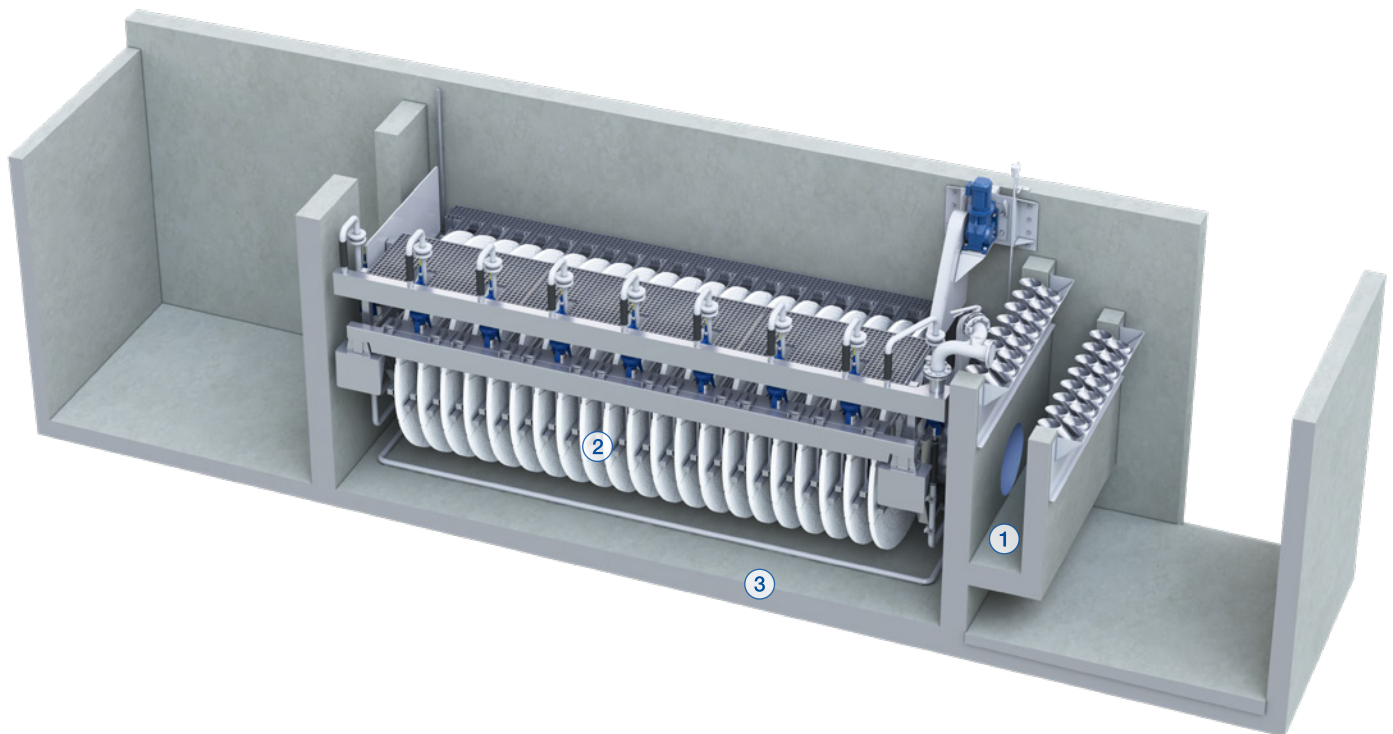
- Efficient removal of SS (Suspended Solids) and phosphorous by a combination of sieve filtration and depth filtration
- Produces high quality final effluent less than 10 mg/l SS
- High flowrate capacity

2 High operational reliability in combination with low costs

- Well proven fiber media cloth ensures efficient and reliable filtration
- Long filter cloth life for low maintenance requirements
- Gravity flow through the filter for low energy consumption
- Easy to inspect and replace the fiber media
- High solids loading ability
- Low head loss

3 Continuous filtration during backwash and discharge

- No need for standby units
- Stable and continuous operation due to the cleaning of the fiber media with efficient suction shoes
- No need for chemical cleaning
- No need for high pressure backwash
- Low volumes of reject backwash water, typically 1-3 %



The Sulzer Flow division keeps your processes flowing. Wherever fluids are treated, pumped, or mixed, we deliver highly innovative and reliable solutions for the most demanding applications.

The Flow division specializes in pumping solutions specifically engineered for the processes of our customers. We provide pumps, agitators, compressors, grinders, screens and filters developed through intensive research and development in fluid dynamics and advanced materials. We are a market leader in pumping solutions for water, oil and gas, power, chemicals and most industrial segments.

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