

# AQUA-TEKNIK A/S

## DRUMFILTER



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Flow capacity:  
Up to 1000 l/s per filter.  
Filter opening:  
10-1000 µm.



**Over 2000 Drumfilters have been installed worldwide.**



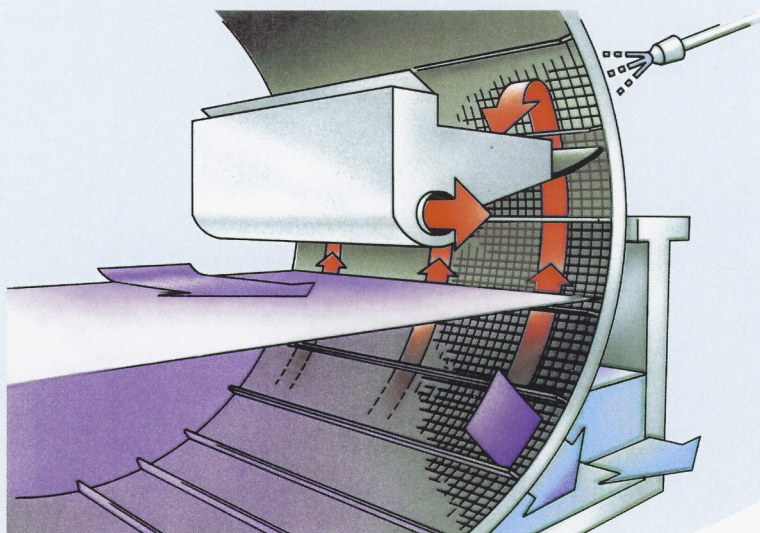
**Microscreening is an efficient and reliable technique for separation of particles from all kinds of liquids. High performance microscreen filters for water purification and product recovery are developed and manufactured.**

**The Drumfilter is a mechanical and self-cleaning filter specially designed with a view to achieving high performance in systems where it is essential to prevent the particles from fragmentation**

**The filter works without pressure** and is robustly designed with few moving parts to ensure long life and low maintenance costs.

The liquid is filtered through the periphery of the slowly rotating drum. Assisted by the filter panels special cell structure, the particles are carefully separated from the liquid. Separated solids are rinsed off the filter cloth into the solids collection tray and discharged.

Careful handling of the solids to prevent fragmentation is in many applications essential to achieve high filtration efficiency. **The** unique design of the filter panels makes this possible.



**Unique filter panels greatly simplify both the replacement and change out of the filter opening size. The drum is constructed in sections, each with up to 6 filter panels depending on diameter. This facilitates maintenance and makes it easy to adapt the filter to actual need of flow capacity and performance requirements of filtration.**

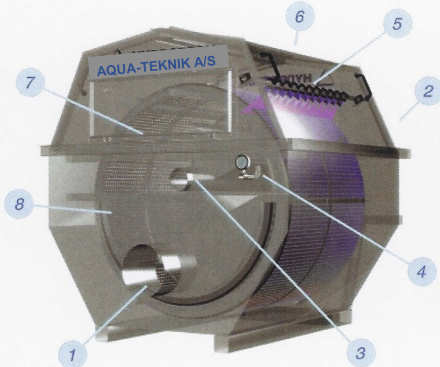
**Drum and tank** are made of stainless (AISI304) or acidproof steel (AISI316L). For use in extremely corrosive surroundings, special alloys, GRP or titanium is used. The filter panels structure, bearing wheels and main shaft bearing are made of resistant plastics. The filter cloth is made of polyester or stainless steel.

The operation of the drumfilter can be continuous or automatically controlled. Different types of automatic control systems are available.

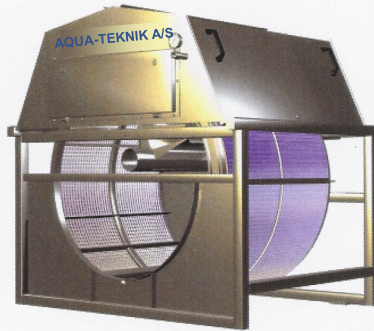


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Type 1, with tank



Type 2, without tank  
– open inlet



Type 3, without tank  
– pipe inlet



1. Inlet
2. Outlet
3. Solids outlet
4. Rinse water connection

5. Back-wash header
6. Drive unit
7. Filter panels
8. Rubber lip sealing

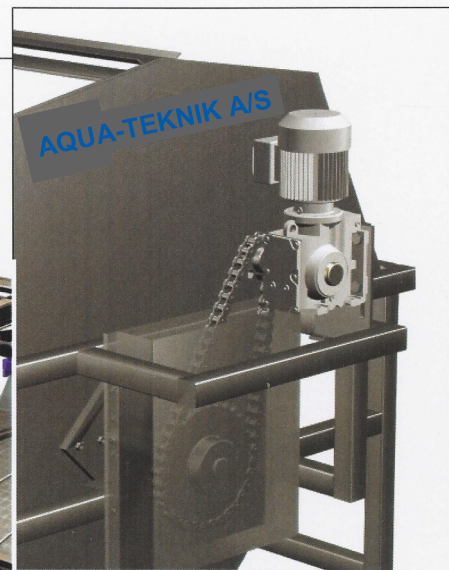
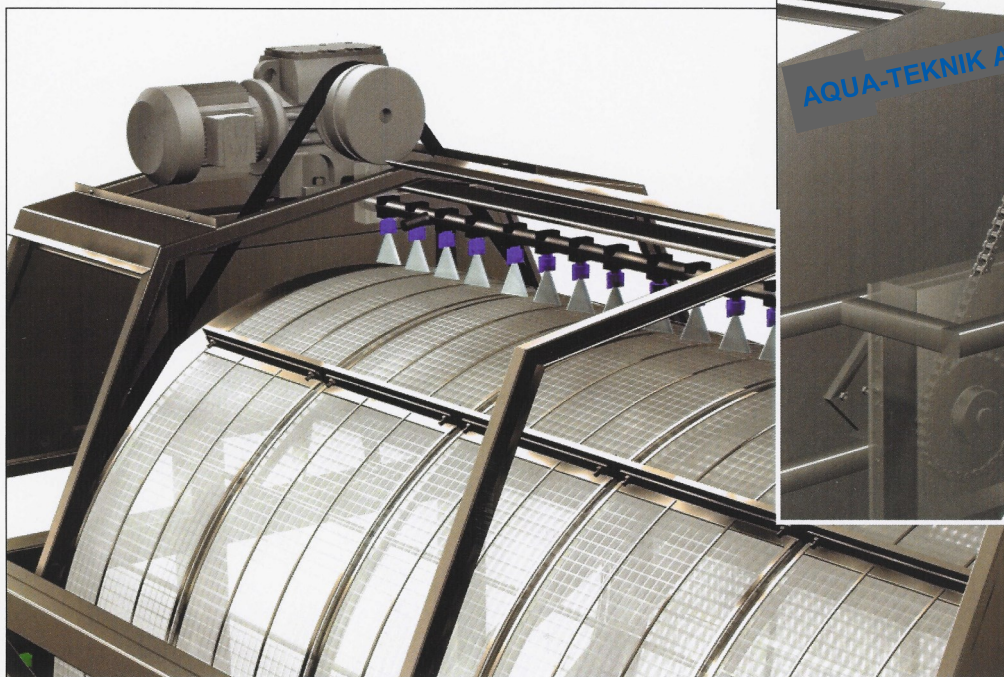
The tank of Drumfilter Type 1 is provided with an internal emergency by-pass and a level weir to maintain the water level after the screen. The versions without tanks are designed for installation in a concrete channel or basin.

## Modular design with very high flexibility

The modular design incorporates 6 different drum diameters from 0.5 m to 2.4 m with filter areas from 0.35 m<sup>2</sup> for the HDF501 to 21.6 m<sup>2</sup> for the HDF2408. In total there are 20 different drum filter sizes. The standard modular filter panel measures 1.2 x 0.4 m. As an example, the 1.6 m drum diameter series has from 1 up to 8 sections, with from 4 up to 32 filter panels.

## Available in three drive systems

The Drumfilter is available in three drive system versions; direct drive, chain transmission and belt transmission. The direct drive is used on the two smallest drum sizes with 0.5 and 0.8 m drum diameter. The chain drive versions is a well proven solution with filters in operation for more than 10 years. The belt driven L-series is a relatively new design available for 1,6 and 2 m drum diameter.



Chain drive system.

Moving back-wash system is available only on the belt driven drumfilters. This patented innovation reduces the need off back-wash which in turn saves energy and filter media.

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## ■ Fields of application

- \* Filtering intake water from streams and lakes for municipal and industrial water supply systems
- \* Polishing effluent from municipal waste water treatment works. The Drumfilter can also replace primary or secondary clarifiers.
- \* The Drumfilter is suitable in fish farming systems where it is essential to prevent the particles from fragmentation. This is important specially in recirculated systems and in open systems for intake and outlet water.
- \* Food processing industries are using the Drumfilter for treatment of waste water and process water.
- \* Other examples are filtering transport water in plastic industries and purification of scrubber water in power plants.



*Picture showing a part of the wide drumfilter product line.*

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