



HYDROTECH

Discfilter

2200-series



 **VEOLIA**
WATER

Solutions & Technologies

Hydrotech Discfilter – 2200-series

Pictures show Hydrotech Discfilters in municipal wastewater treatment plants for effluent polishing. With it's large filter area and small footprint the 2200-series is especially well suited for this application. The Hydrotech Discfilter is also used for filtration of intake water and effluent from different types of industrial processes.

- ▶ Flow capacity: Up to 400 l/s per filter.
- ▶ Filter opening: 10-100 µm.
- ▶ Filter media is easy to change thanks to new innovative design.
- ▶ Moving backwash system for better cleaning, minimal water use and less wear on filter media.
- ▶ The water to be treated flows by gravity into the filter segments from the centre drum. Solids catch on the inside of the filter panels mounted on the two sides of the disc segments.
- ▶ As the solids catch on the inside of the filter media impeding the flow of water through the disc, the water level inside the discs begin to rise, triggering a level sensor to start the disc to rotate and a backwash cycle begins.
- ▶ High pressure rinse water backs the solids off the filter media and into the solids collection trough. Typically the backwash requires 1-2% of the total flow and filtered water is used.

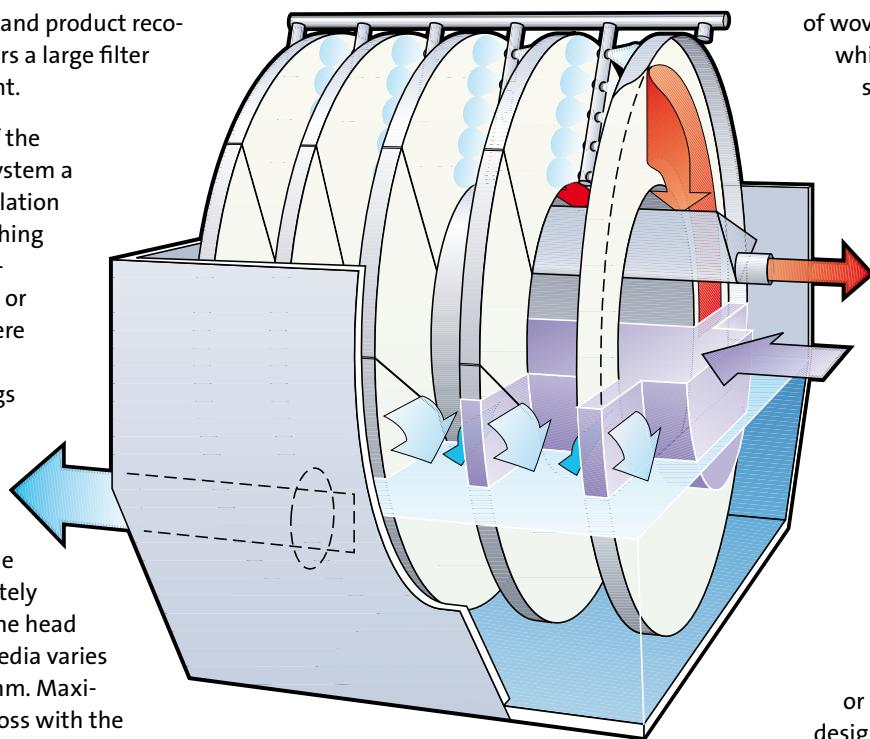


Typical applications:

- ▶ Effluent polishing
- ▶ Industrial process water
- ▶ Intake water

Hydrotech Discfilter is a woven media filter for fine solids removal and product recovery. The Discfilter offers a large filter area in a small footprint.

The compact design of the Discfilter makes this system a good choice for recirculation systems, effluent polishing of waste water, fine filtration of intake water or other applications where a space-saving filter with fine filter openings and larger filter area is required.



In normal operation the Discfilter is approximately 60% submerged and the head loss across the filter media varies between 50 and 200 mm. Maximum allowable head loss with the filter in operation is 300 mm. Backwash and rotation can be continuous or controlled by an automatic level control system.

The modular filter panels consist of woven polyester filter media which is held within a stainless steel frame. The structure of the Discfilter is as standard fabricated of 304 or 316L stainless steel. For extremely corrosive environments it can also be made of special alloys.

Flexibility is a key word for the Hydrotech Discfilter. The patented design of the panels means that replacement requires minimum service and downtime. If there is a change in operating or performance needs, the design also accommodates an easy switch to a filter media with a different size of opening.



Hydrotech's moving backwash spray header ensures better cleaning with minimal water use and longer life of the filter media.

The **filter panels** are inserted into the slots of the segments. The Hydrotech 2200-series new plastic disc design brings considerably lower weight and 50% more filter area per footprint compared to the Hydrotech stainless steel Discfilters.

There is space for up to 24 discs on the largest filter. A filter can be installed with fewer discs and more being added as flow rate increases.

Hydrotech's patented moving backwash spray header ensures efficient cleaning of the filter media, increased life time of the filter media and 20% savings of rinse water consumption. The spray headers fold out to facilitate maintenance of the spray nozzles, that can be replaced without any tools. Filtered water is used for backwash.



Hydrotech Discfilter type HSF2212 for installation in a concrete basin.



A HSF2214 being installed in small WWTP in Denmark.

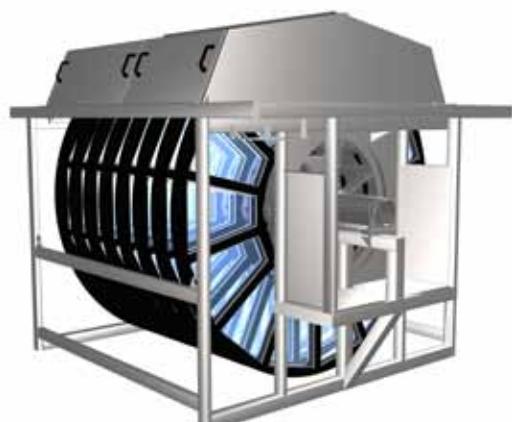
Type 1, tank version



- 1 Inlet
- 2 Outlet
- 3 Backwash outlet

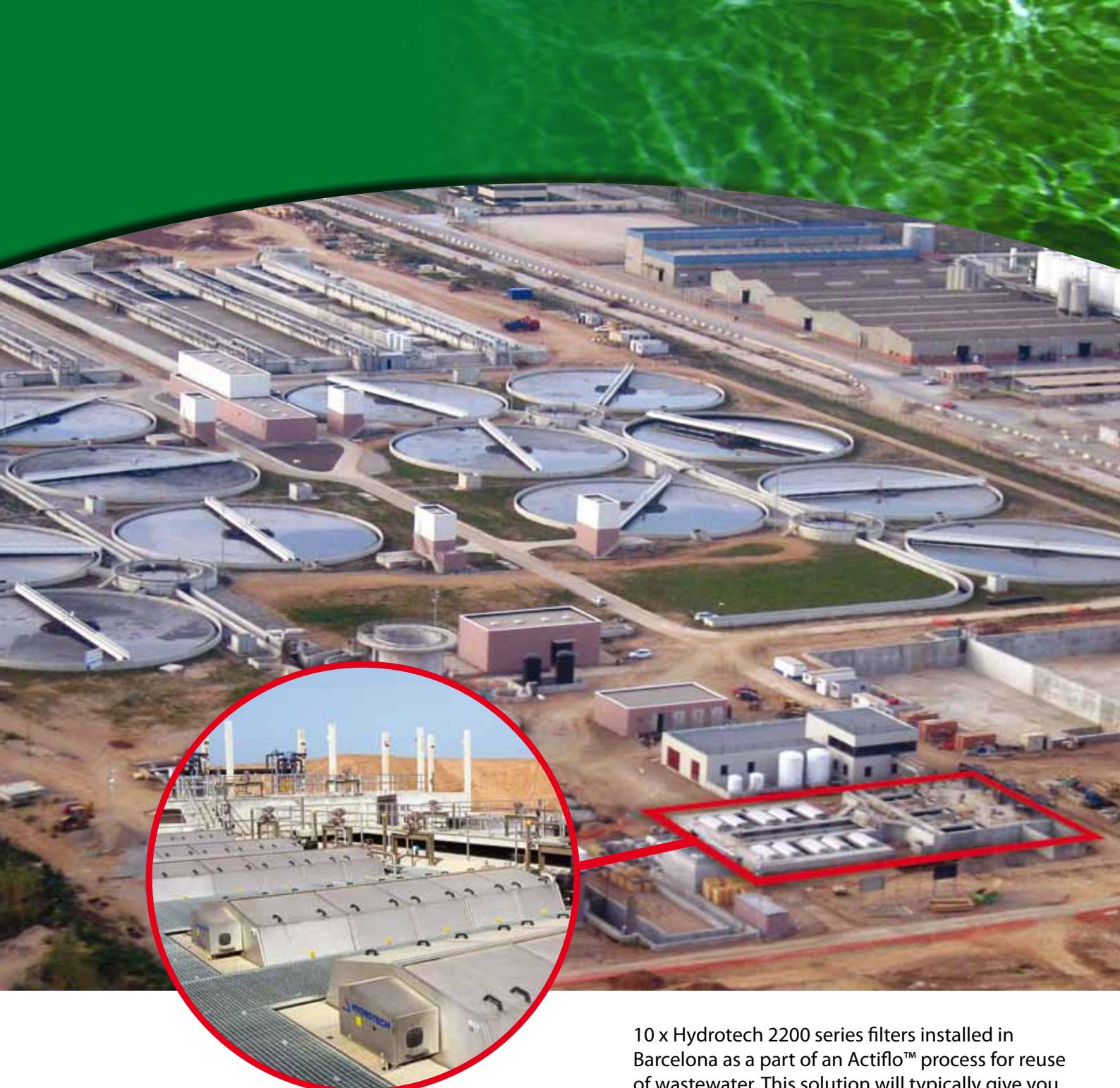
- 4 Rinse water conn.
- 5 Filter discs
- 6 Drive unit

Type 2, without tank



The tank version of Hydrotech Discfilter is provided with an internal emergency by-pass and a level weir to maintain the water level after the filter.

The versions without tanks are designed for installation in a concrete channel or basin.



10 x Hydrotech 2200 series filters installed in Barcelona as a part of an Actiflo™ process for reuse of wastewater. This solution will typically give you 80% savings on space requirements, compared to alternative solutions.

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