



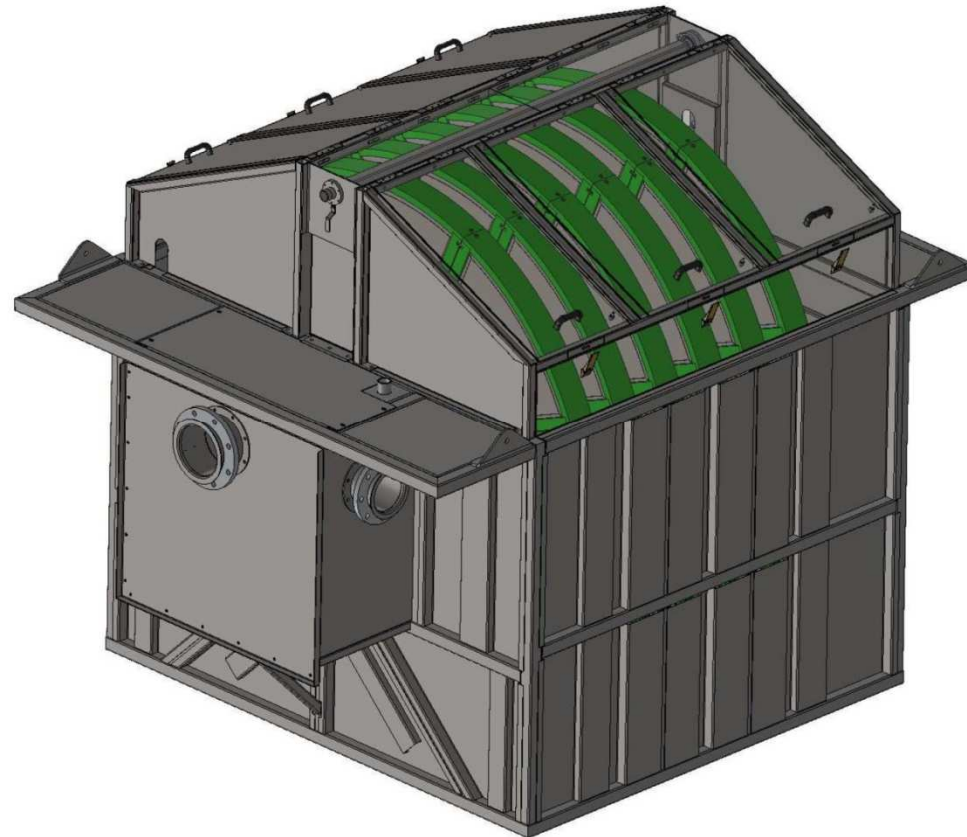
DFH

Microfiltration

Disc filter

Application

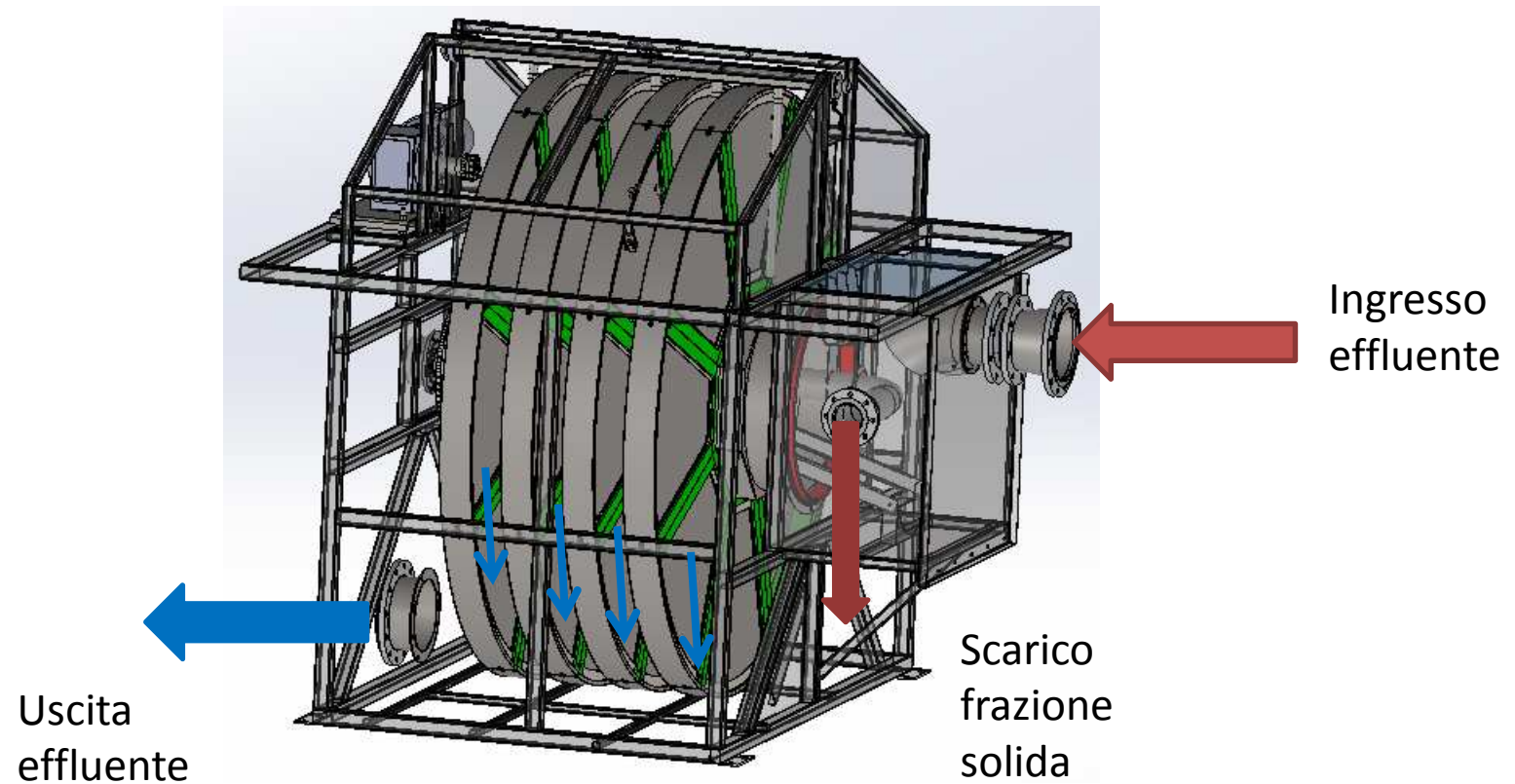
- Applications
- Tertiary treatment of wastewater.
- Pulp and paper industry.
- Purification of process water.
- Recirculation of cooling water in the steel



Benefit

- High hydraulic throughput capacity on a small footprint
- Gravity system with low headloss, no lifting of wastewater required
- Significant reduction of filterable solids, COD, BOD, phosphorus
- Reliable removal of powdered active carbon for the elimination of micropollutants
- Effluent standards are reliably met.
- Reduced wastewater discharge charges
- Form-locked and chemical-resistant thermal fixation of the mesh.
- No external wash water supply required as filtrate is used for cleaning
- For installation within a stainless steel tank or in customer's concrete tank
- Continuous operation even during backwashing
- Easy exchange of individual filter elements without the need for lifting devices

Working principle



Microfiltration DFH

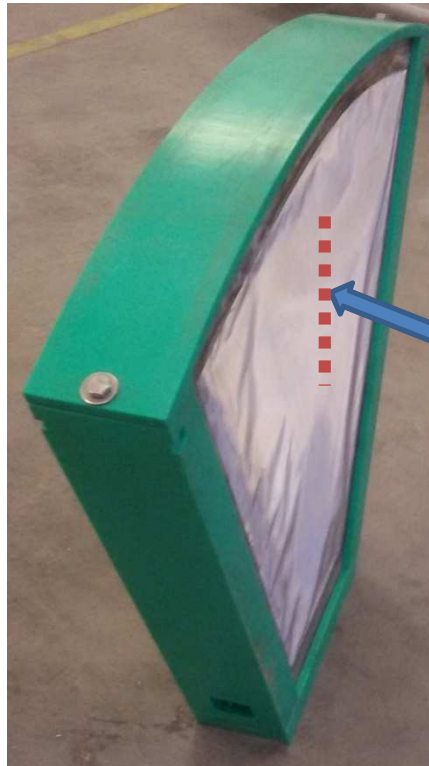


Filtration elements in stainless steel from 10 to 100 microns spacing



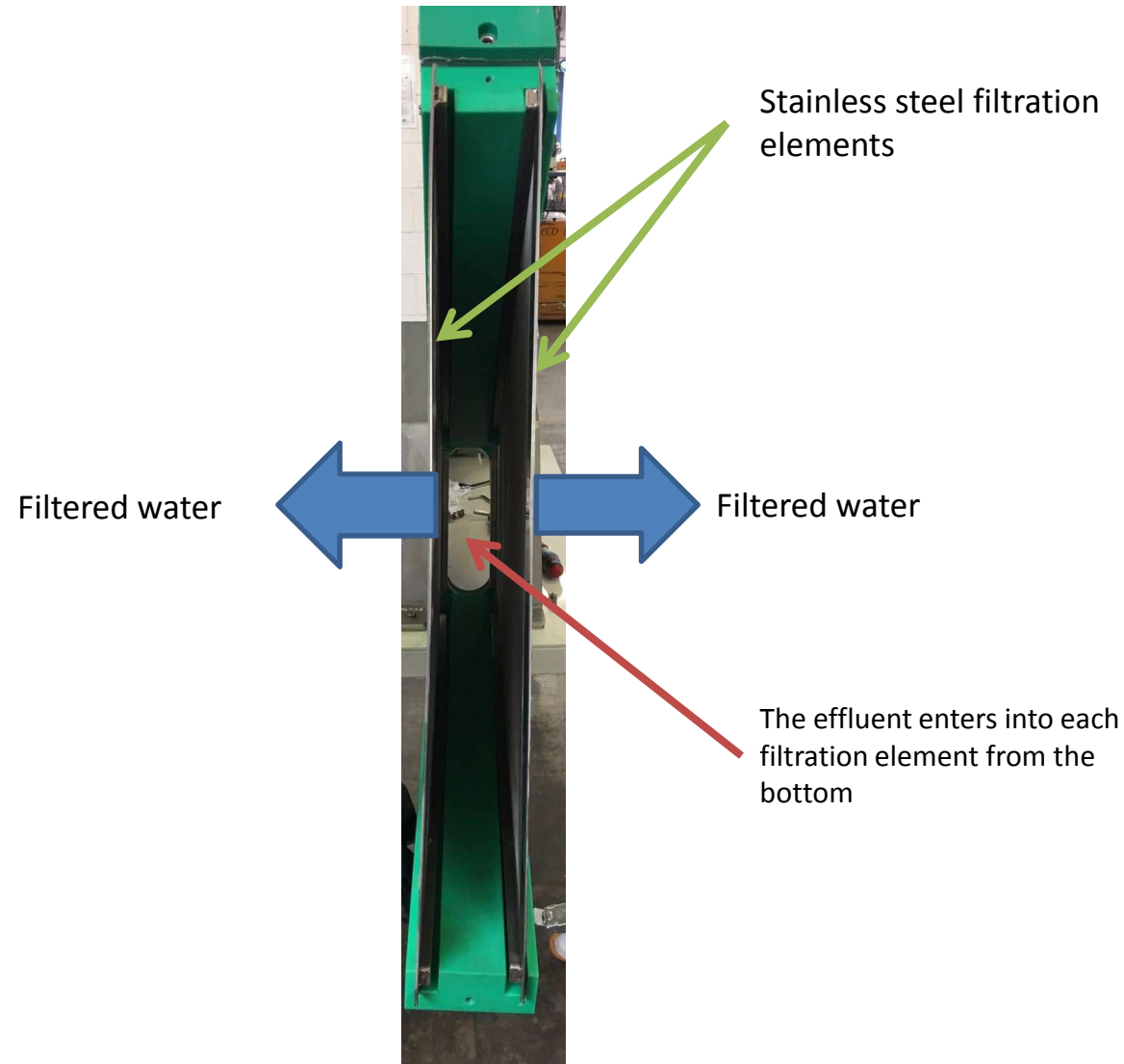
Why stainless steel filtration elements?

Stainless steel filtration are more resistant compared to traditional polyester used for the realization of the filtering elements. The pressure required for the cleaning is 8 Bar. The element in stainless steel guarantees a greater resistance to this operating pressure.



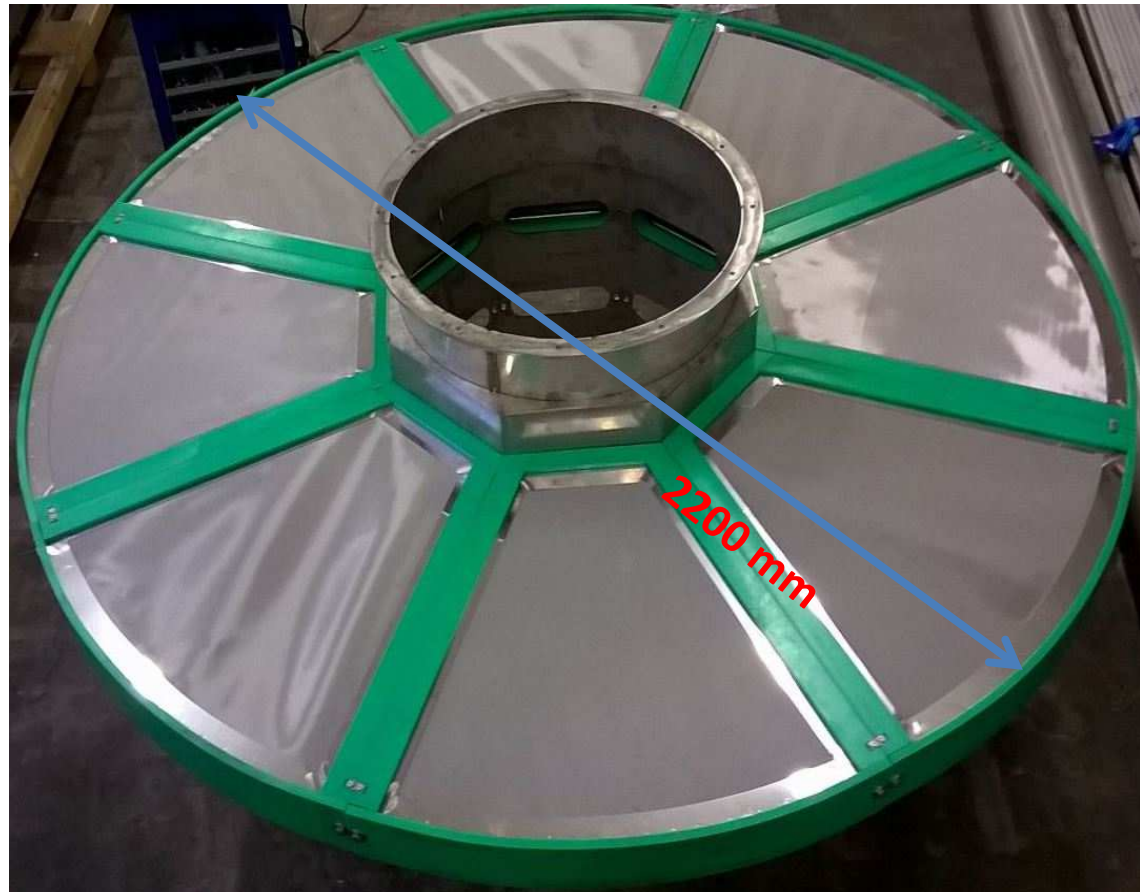
The major resistance of the stainless steel filtration element gives the possibility to wash the filter more frequently. This possibility will increase the efficiency of the disk filter

How filtration element works



Disk dimension

- Disk external diameter is 2200 mm.
- Each complete disk represents 4,5 m² of filtration area.
- Open area changes depending from the meshes.
- Each complete disk filter can contain from 2 to 24 different disks



Washing cleaning

Each single filtration element is cleaned by spray washing pipe (pressure 8 Bar). There is not clean water consumption because the water utilized for washing is same water processed by the disk filter.

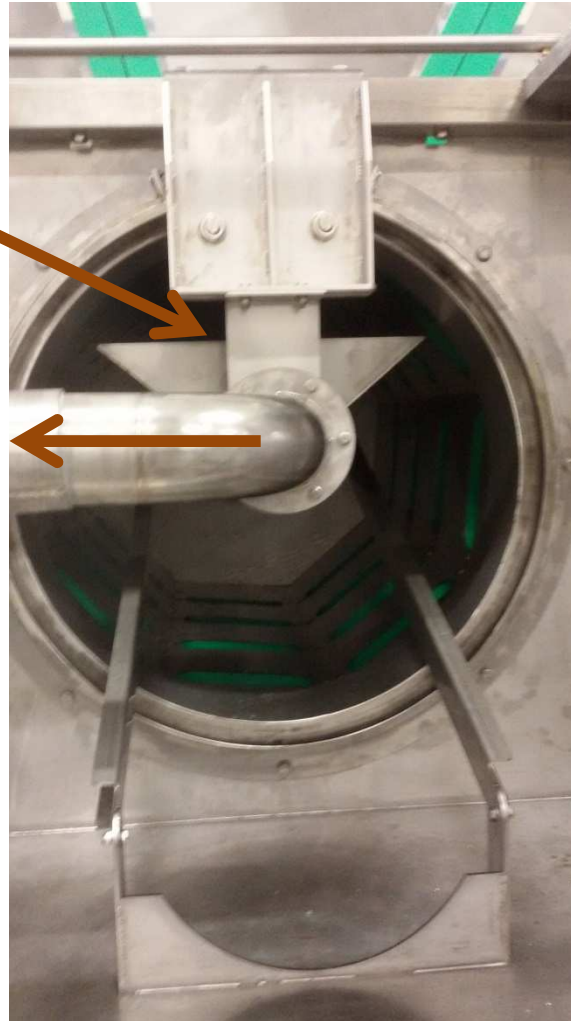
Disk filter is supplied with a pump for washing. The pump is located in the tank of the disk filter.



Solids removal

collection of solids
retained by the
filter

Solids flow out



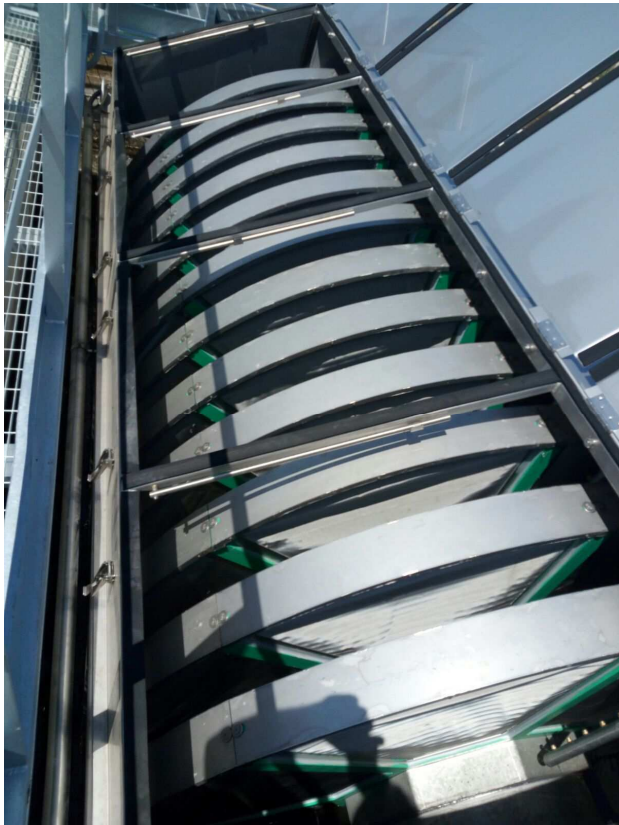
Filtration elements inspection and replacement



Each filtration element can be inspected and eventually replaced very easily. It is only necessary to remove **the top cover**. After removing the top cover it is possible to extract **the element** to check it or to replace it with a new one



Capacities and sizes



Number of discs are from 2 to 36
Inlet flow capacity until 2000 mc/h

Flow capacity and calculation

Flow capacity of the Disk filter depends from the filtration meshes and from the solids concentration at the inlet.

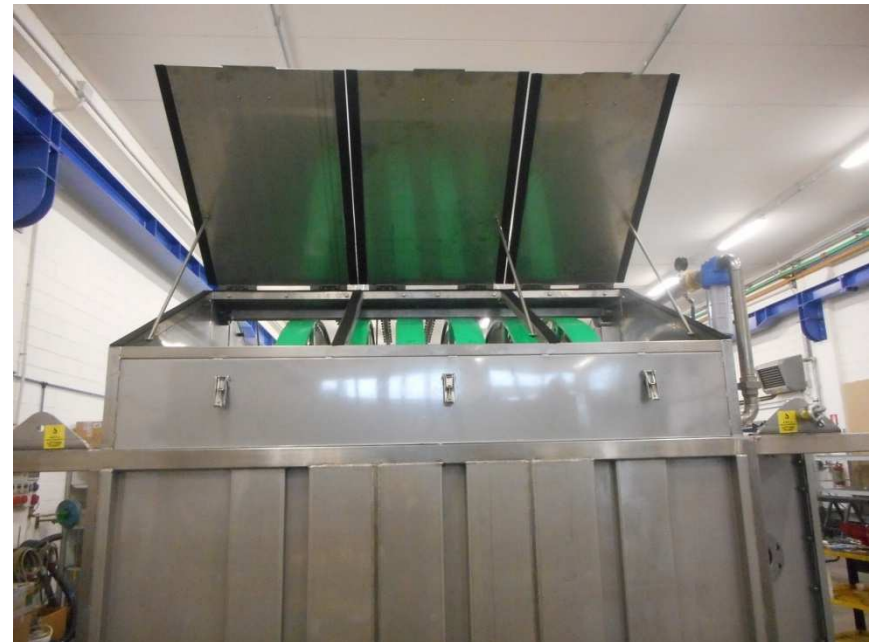
Maximum inlet solids concentration = 480 mg/lit

Meshes from 10 to 100 microns

For this specific equipment, we don't provide a flow chart, but for each different application, our technical department makes a complete calculation to size the correct unit for each single scope.



Compact system in ss tank



Compact system in concrete channel



Successful installation



Performance



The Consortium is located inside the Park of The consortium is located inside the Po Delta Park. It is a protected and particularly supervised area. The activity of the consortium is aimed at fishing for molluscs, processing and packaging.

The water used is sea water. Before discharging this water into the sea it is necessary to reduce the presence of suspended solids to a maximum of 8 mg / lt. We have successfully installed our Disk filter DFH with N°6 disks, 10 microns meshes in the condition to receive 130 mc/h. Suspended solids present in the water before disk filter are from 80 to 130 mg/lt. Every single week the Consortium checks the results and from the beginning they never found more than 8 mg/lt of suspended solids after DFH disk filter.

Picture of installation

