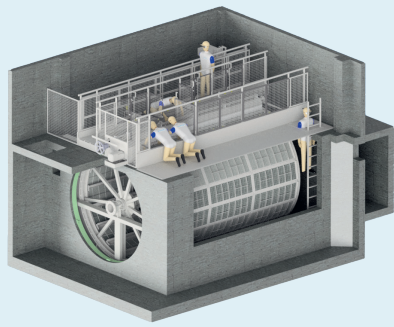


Hubert

Micro Screen



The Hubert micro screen is applied in places where high demands are made on the purity of surface, process and re-circulated water.



Hubert Micro Screen

Hubert micro screen or microstrainer can be found in freshwater intakes, acting as fine pre-filtration system of potable water for production plants, or production plants that consume a lot of processwater.

This filter can also be applied for process water recirculation. The recovery of useful raw materials from process water, stricter discharge requirements, and recycling of process water makes the use of these engineered filters increasingly interesting.

Other applications are treatment of effluent in a wastewater treatment plant and pre-filtration in membrane filtration systems.

Features and Benefits

- Light, stable, and robust construction
- Reliable
- Maintenance free
- Long lifetime (30 years or more)
- Resistant to abrasive water

Standard Dimensions and Materials

- Drum length: up to 6 m
- Drum diameter: from 0,7 up to 3,5 m
- Mesh opening from: 11 to 500 micron

Design and Construction

A Hubert micro screen is a rotating cylindrical construction, provided with a filter medium at the perimeter consisting of one or more layers of woven wire mesh. This filter is placed in a concrete container or steel tank and is usually applied under free fall conditions. Flow rates can be up to 5,000 cubic meters per hour per screen, depending on customer requirements and the application.

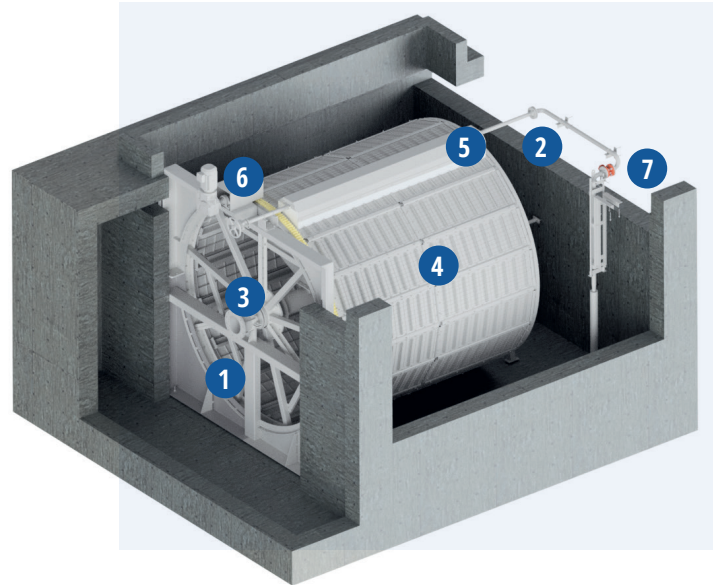
The woven wire mesh has a nominal filter rating (mesh opening or aperture) of 11 to 500 microns. The filtration fabric is supported by coarse mesh and sometimes reinforced with perforated plates. The efficiency and capacity of a micro screen strainer depend on several factors, including the characteristics of the fine filtration fabric, the rotation speed of the micro screen, the composition and quality of the water to be purified, and the amount of backwashing water.

It is important to mention that there is no standard method known to determine the nominal filter rating of a woven wire mesh. Depending on the filter fineness, different types of weaving patterns are possible. Therefore, the standard data often stated should be used with care. As a result, this type of filter is almost always first tested in a pilot setup in the field, often with different media. Also, the composition of the water (including changes due to factors such as seasonal influences and location) has a major influence on the filter results. In consultation with the customer, it is determined which filter mesh will achieve the best result.



Features and Benefits

- 1 Inlet (unfiltered water)
- 2 Outlet / overflow weir (filtered water)
- 3 Debris discharge through central shaft
- 4 Drum screen and filter panels
- 5 Spray water system
- 6 Drive and toothed gear
- 7 Concrete pit or tank



Filter Operation

The Hubert micro screen system consists of a drum screen fitted along its outer circumference with filter screen panels (4). The drum is placed in a concrete pit or tank (7) and rotates on a stationary hollow shaft (3) fitted with one or more funnel-shaped debris collectors. The feedstock of water enters the drum axially (1) and flows radially through the mesh panels. The dirt particles remain trapped in the mesh.

As the drum rotates, the row of screen panels pass under a set of high-pressure water jets at the top of the drum (5). The dirt particles are washed from the screen and discharged through the debris collectors and the hollow shaft (3). The debris is transported to a container. If the microscreen is positioned lower than the container, a screw pump or other conveyor belt can be placed to transport the debris to the container. The drum rotates using a reliable drive with toothed gears (6).

The 'clean' side of the screen compartment is fitted with an overflow weir (2) which enables the water inside the screening chamber to be kept at a constant level. This ensures that the largest possible screening area is constantly submerged, resulting in a high yield of solids. The contamination of the filters is low due to the use of filtered water in the spray water system and ultrasound. The special seal also prevents contamination of the bearing and ensures effective sealing of the micro screen.

Fish Friendly – Fish Recovery System

All our micro screens can be provided with a fish recovery system that allows trapped fish to be removed in a gentle and effective way. These recovery systems are tailor-made for each project.

References

- Drinking water companies (Dunea, Anglian Water, Concorde Trading)
- Industry (Dolfinarium, cocoa factory, potato industry, paper mill)
- Sewage treatment plant (Redstack, RWZI Limmel, RWZI Houtrust, Hollandia)
- Sewage polishing (Ras Lanuf, Prometall)
- Desalination plant (GEBE St. Maarten)

Hubert has several pilots in the field in addition to the already built installations. This is to gain new insights, to continuously improve the performance of the product, and to offer you the best solution.



Over 250 years of experience in water handling and treatment

From water intake systems to water cooling, from water management to wastewater treatment, pumping stations, hydropower and prize-winning innovations in the field of decentralised wastewater treatment. DeSaH, Hubert and Landustrie have joined forces. From Sneek in Friesland, our experts develop and manufacture future-proof solutions with an above-average lifespan.

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