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HUBER Membrane Screen ROTAMAT® RoMem



Ultra fine screen with square mesh and excellent solids separation results

- Removal of fibrous material and hairs
- Increased operational stability of membrane bioreactors (hollow fiber and plate module systems)
- Significant COD/BOD reduction in river and sea outfalls

The ROTAMAT® Membrane Screen is used for screening of municipal and industrial wastewater and for separation of fibres and hairs. The screen can be installed either directly into a channel or a separate tank.

For the new type of membrane bioreactors that have recently been put on the market the efficiency of conventional screens with typical bar spacings and perforations of 3-10 mm is no longer sufficient.

The HUBER Membrane Screen is a very fine screen with a low headloss and provides a large screening surface due to its drum-shaped screen basket and 35° installation angle. The screen uses a square mesh that provides, contrary to conventional slot screens, a defined separation size and therefore ensures reliable separation of solids.

The two-dimensional design and very fine apertures especially prevents fibres and hairs being washed through the mesh before the screen basket surface is cleaned. Slot screens are not able to achieve the same efficiency due to their undefined separation size. In addition, square meshes have a very large free surface and are therefore able to cope with high hydraulic capacities despite their fine mesh.

The HUBER Membrane Screen ROTAMAT® RoMem is suitable for municipal and industrial wastewater flows of up to 3500 m³/h and can be equipped with a square mesh size from 0.5 to 1.0 mm.

The low space requirement and high efficiency through a complete treatment by the combination of screening, transport, compaction, dewatering and discharge in one compact unit make the ROTAMAT® Membrane Screen an efficient and economical solution for

removal of high solids concentrations. The screen can be installed either directly into a channel or a separate tank.

Optional "PRO"-Series: The special design of the RoMem PRO series isolates the water level in the trough from the water levels upstream and downstream of the screen. This operation method permits continuous screen operation with a constant water level upstream of the machine and significantly increases throughput capacity.

THE APPLICATIONS

Separation of hairs and fibres prior to membrane bioreactors

The selection of the mesh size depends on the applied membrane system. Membrane modules are divided into hollow fibre and plate modules. Separation of fibrous material is particularly important prior to hollow fibre membrane plants as fibres may lead to tressing or blocking of the membrane with the result of a reduced membrane permeability and membrane plant performance. As a result, as fine as possible screening is required, in particular for hollow fibre membrane plants.

Reduction of COD/BOD₅ in river and sea outfall applications

The maximum possible reduction of the oxygen-consuming load that will be discharged into the receiving water course is particularly important in river and sea outfall applications as most of them do not have a mechanical treatment stage. An extensive reduction of COD/BOD in river and sea outfall applications can be achieved with 0.5 to 1.0 mm mesh size.

Reduced load on downstream biological treatment systems

Fine mesh screens are able to remove high loads of filterable solids, COD and BOD and thus relieve the load on downstream treatment systems. Their space requirements and investment costs are only a fraction of what would have to be invested for a preliminary treatment system.

Treatment of industrial process wastewater

Due to new legislation concerning wastewater discharge into sewer systems, mechanical preliminary wastewater screening at source and treatment of the retained solids is required. The space-saving ROTAMAT® Membrane Screen is especially suitable for this purpose as it combines screenings separation, washing, transport and dewatering in one compact unit.

Benefits

The user's benefits

- Screening with a defined separation size provided by the square mesh
- Removal of hairs, fibres and fine suspended material
- Increased operational stability of subsequent membrane bioreactors
- Fine screening of large wastewater volumes in a gravity line without the need for lifting the wastewater; low headloss
- Extensive reduction of COD/BOD in river and sea outfall applications
- High efficiency through combination of screening, (washing if required), compaction, transport, dewatering and discharge of screenings in one compact unit
- Ideal for installation in existing channels
- Periodic high-pressure washing at 120 bar (twice a day) eliminates sedimentation on the screen basket.
- An especially designed sealing between the channel and screen basket prevents unscreened wastewater from passing through the screen basket.

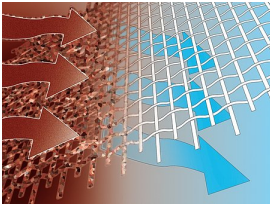
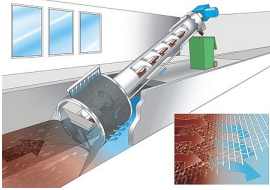
Downloads

 [Brochure: ROTAMAT® Membrane Screen RoMem](#) [pdf, 345 KB]

Case Studies

- [HUBER Rotary Drum Fine Screen ROTAMAT® on cruise ship of MV WERFTEN](#)
- [ROTAMAT® Membrane Screen RoMem](#)

Design Sketch



Media



Video: HUBER Membrane Screen ROTAMAT® RoMem - here at a municipal WWTP
<https://www.youtube.com/watch?v=YsFSSEnSAMs>

More products of this group: Ultra Fine Screens

- HUBER Drum Screen RoMesh®
- HUBER Drum Screen LIQUID

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