

ROTAMAT® Rotary Drum Screen RoMesh®



Fine screen, river and sea outfall
Service water recovery
Defined separation size
COD/BOD reduction
Separation of hairs, fibres, fine suspended material



►► The situation

Separation of hairs, fibres and suspended material from municipal and industrial wastewaters is in many applications essential for trouble-free and maintenance-free operation of subsequent treatment stages. Limited financial resources and high separation requirements call for economical and particularly efficient equipment. Fine screening offers the possibility of reliable mechanical removal of high solids concentrations and thus the oxygen-consuming substances.

towards the discharge point where they are de-watered further or conveyed to another location. A spray bar with alternately operating spray nozzles cleans the screen surface while the drum rotates. The screened wastewater can be reused as wash water if a sufficiently fine mesh is used.

►► Our solution

The RoMesh® Screen consists of a horizontal square mesh basket (0.2 - 1 mm mesh) or a perforated plate basket (2 - 3 mm). The wastewater flows from inside to outside the basket through the screen surface. Filtrate is discharged vertically from the bottom of the drum and the screenings are transported horizontally by the rotation of the screen

square mesh [mm]			
0.2	0.5	0.75	1

perforated plate [mm]	
2	3



Schematic drawing of the ROTAMAT® Rotary Drum Screen RoMesh®

➤➤ Screen sizes and throughputs

The RoMesh® Screen is available in six different sizes. The throughput depends on the mesh or bar spacing and the solids content of the waste/process water to be treated. A throughput of up to 280 l/s per unit is achievable with unscreened municipal wastewater.

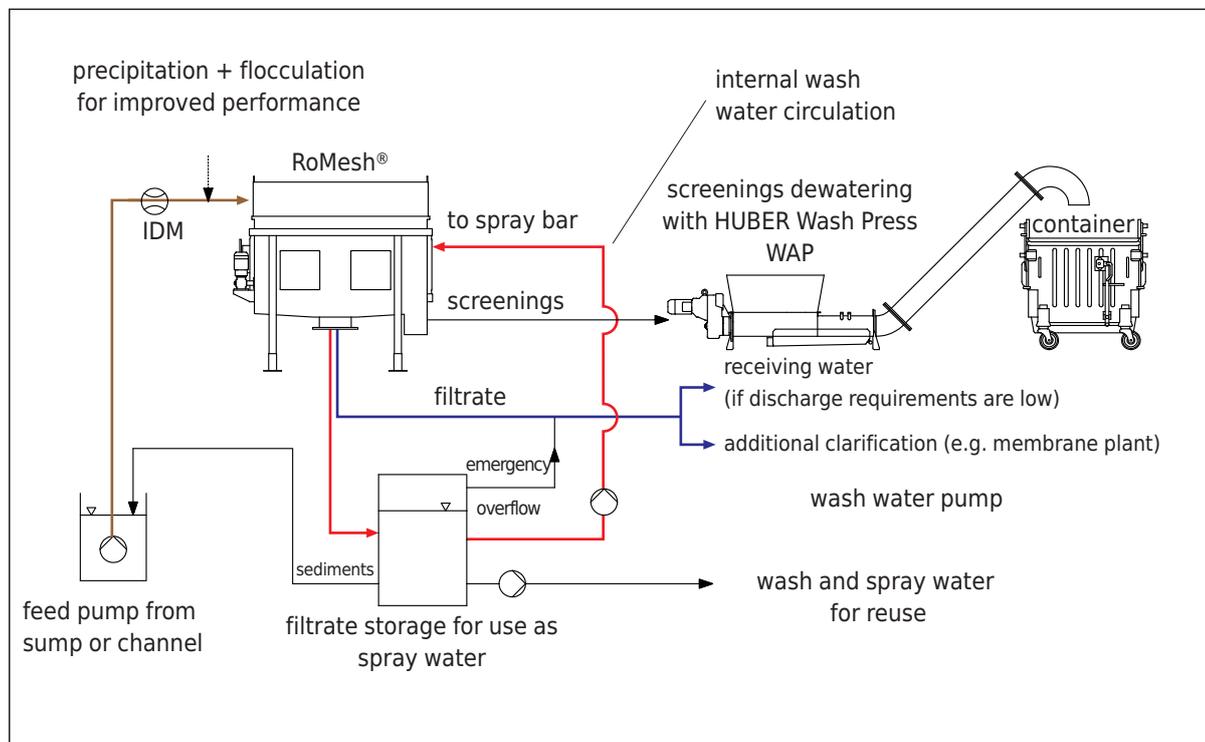
Reduction of COD/BOD₅ in river and sea outfalls

Where river and sea outfalls have only a mechanical treatment stage, it is important to reduce the oxygen-consuming loads in the wastewater to avoid eutrophication of the receiving water. The RoMesh® Screen is able to reduce BOD₅ by 20% and filterable solids (AFS) by 50% and thus can meet the required discharge standard. Even better performance can be achieved with prior precipitation and flocculation.

➤➤ Applications

Separation of hairs, fibres and suspended material from municipal and industrial wastewaters

Preliminary separation of fine material is very important for Membrane Bioreactors, amongst other technologies, since such fine material can not only impair the plant's performance, but also cause major operational problems.



Flow diagram

Recovery of wash water and service water free of hairs and fibres

Separation of hairs and fibres is essential if you want to reuse wastewater as wash water.

The RoMesh® Screen with its square mesh provides a defined separation size and is able to remove such materials.

Treatment of industrial process water

- Paper and pulp industry: separation of fine fibres
- Meat processing industry: separation of scraps
- Agricultural industry: separation of fruit and peel residues
- Breweries: mechanical preliminary treatment of all process waters
- Laundries: separation of fibres from wash waters

➤➤ The benefits of the RoMesh® Screen

- The square mesh provides a defined separation size
- Low headloss
- Mechanical COD/BOD reduction by up to 30 %
- Filterable solids (AFS) reduction by up to 60 %
- Optional periodic high pressure cleaning (120 bar)
- Addition of precipitants and flocculants reduces AFS up to 95%, COD/BOD up to 65%, phosphorus up to 60%.
- Enclosed, compact design
- Very high hydraulic throughput



Optimal separation of fibres



ROTAMAT® Rotary Drum Screen RoMesh® for optimal separation of very fine particles

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Subject to technical modification

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