



HUBER Storm Screen ROTAMAT® RoK2 for stormwater discharges

Automatically cleaned screen for solids retention in stormwater tanks and overflows

- ▶ Efficient solids separation
- ▶ Continuous automatic screen cleaning
- ▶ For discharges with limited upstream head possibilities
- ▶ Ideal for combination with water retention elements
- ▶ Sturdy, low-maintenance stainless steel design

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The situation

During and after storm events large amounts of debris are discharged to streams, rivers and lakes through discharge structures of combined and sanitary sewer systems. Frequently, even the installation of scum boards is insufficient to prevent such pollution.

The polluting items, such as sanitary products, toilet paper, faeces, plastic foils, etc. are not only unsightly but also responsible for considerable cleaning and/or disposal costs. On the basis of the DWA sheet A 102 (an instruction issued by an association dealing with wastewater treatment) efforts to fundamentally improve the protection of waters in this sector have been increased. Particularly endangered receiving water courses and nature preservation areas require more extensive measures concerning the treatment of stormwater.



Unsightly matter discharged during storm events, typical for stormwater discharges without coarse material retention.

Solution

The HUBER Storm Screen ROTAMAT® RoK2 is the ideal solution for this task, whether for new structures or refurbishment. The screen belongs to a group of fine screens designed for high flow rates at an extremely low hydraulic resistance. Two-dimensional screening guarantees a very high solids retention combined with automatic, gentle cleaning of the perforated plate.

Function

HUBER Storm Screen ROTAMAT® RoK2 screens are horizontally installed at the upstream side of overflow weirs. A screw flight is mounted on a half cylinder of perforated plate. As the stormwater flows through the horizontal perforated half-pipe of the screen trough the solids are retained. A screw, with a brush attached on its flights, rotates within the semi-circular screen trough. It cleans the screen and pushes the separated solids gently towards the lateral discharge. The screenings remain on the polluted water side of the screen from where they are taken along with the wastewater flow. During storm conditions the screen is automatically started and then works fully automatically.



HUBER Storm Screen ROTAMAT® RoK2 installed at a stormwater discharge.

The installation conditions

The HUBER Storm Screen ROTAMAT® RoK2 can be flexibly installed on the left or right side of the weir overflow to optimally meet different local hydraulic conditions. For maximum availability of the screen surface, the screenings are discharged from the screen area without compression and transported away with the wastewater flow. This minimises the hydraulic resistance in combination with a very high solids retention.

Applications

HUBER Storm Screen ROTAMAT® RoK2 units can be used for a variety of applications in the combined sewage sector.

To avoid another point of maintenance it is generally not intended to remove screenings from the structure. Instead, the screenings remain within the sewer or tank and are introduced into the wastewater treatment plant after the storm event.

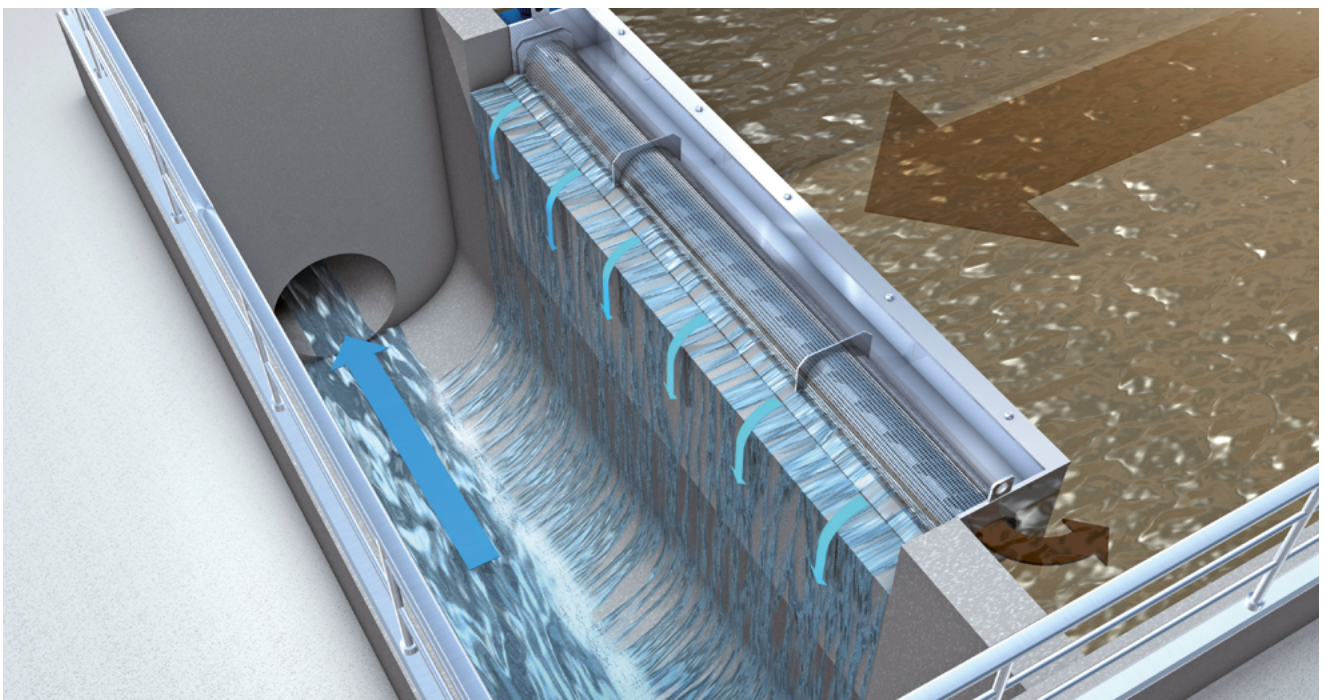
The user's benefits

The screen is installed in front of the weir overflow. This design results in the following favourable benefits:

- ▶ Optimal solids retention by means of two-dimensional screening (perforated plate)
- ▶ Screenings remain on the polluted water side
- ▶ No downstream impact on the screen efficiency
- ▶ For problem-free retrofitting into existing structures
- ▶ The perfect solution for discharges with limited upstream head possibilities
- ▶ Optional emergency overflow
- ▶ Deflection measurement possible with optional step weir



HUBER Storm Screen ROTAMAT® RoK2 after completed installation.



Flow diagram of a HUBER Storm Screen ROTAMAT® RoK2 installed at a weir overflow.

Installation examples

A selection of installation examples will convince you of the HUBER Storm Screen ROTAMAT® RoK2



HUBER Storm Screen ROTAMAT® RoK2 before overflow.



HUBER Storm Screen ROTAMAT® RoK2 with an integrated gauging weir for overflow measurement.



View of the downstream side of a HUBER Storm Screen ROTAMAT® RoK2.



HUBER Storm Screen ROTAMAT® RoK 2 – Optional version with emergency overflow.

Technical data

Screen selection and sizing depends on specific hydraulic requirements and structural conditions.

Screen basket diameter:
300, 500, 700, 1000 mm

Perforation:
6 mm standard, other perforations available on request

Trough length: up to 7,500 mm

Throughput: up to 5,000 l/s per machine