

## HUBER System Solutions for Combined and Stormwater Treatment



Innovative combinations of mechanical treatment systems for combined and stormwater overflows

- Reduced investment and operating costs
- Sustainable environmental protection and improved water quality by means of preceding screens
- Maximum operating reliability due to proven technical system solutions



## ►► Stormwater screening combined with a constant design retention level

### ►► The situation

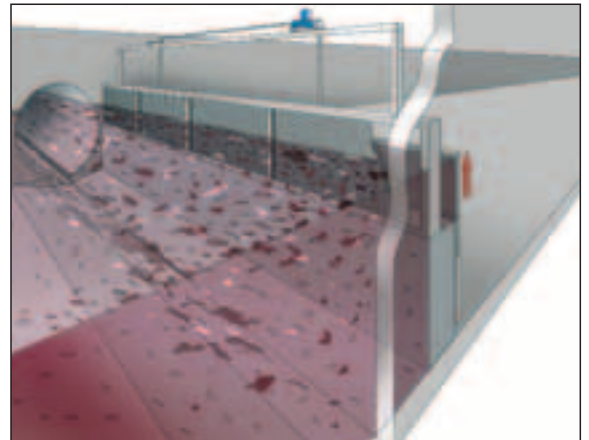
Stormwater overflows within combined sewer systems typically have a fixed weir. When the critical rainfall intensity is exceeded they overflow at a defined water level height and discharge into a receiving watercourse. Fixed weirs, however, have the disadvantage in that the water is already being discharged before the maximum permissible water level is reached with the consequence that the actual storage capacity of the inlet structure remains unused. Frequently this results in new structures having to be built or existing structures extended which ultimately involves high civil costs. Additionally, without screens considerable amounts of floating and coarse material will be discharged into the receiving watercourse which results in water pollution and furthermore backwater caused by flooding may affect the sewer system and ultimately reduce its efficiency.



*Unused storage capacity in a storage structure*

### ►► The solution

A HUBER system solution would be to utilise a screen and an automatically controlled storage element which will allow optimal utilisation of the available storage capacity as the screened stormwater will not be discharged until the maximum permissible water level has been reached. As a result, the pollution load, frequency of discharge and discharge volumes are significantly reduced and temporary storage after a storm event leads to a more regular inflow to the wastewater treatment plant thus optimising its efficiency. The HUBER system solution available provides further advantages to enable even further reduction in operating costs.



*HUBER High Performance Flow Screen HSW with closed flushing gate*

### ►► The user's benefits

- Activation of storage capacity
- Reduced discharge overflow volume and frequency
- Improved protection of receiving water courses through preceding screening
- Prevention of back-flooding into the sewer network
- Option for discharge volume measurement
- Management of stormwater storage
- Maintenance of the maximum level of backed-up water
- Maximum operating reliability due to low-tech systems
- Saving in civil costs for new storage structures
- Sustainable environmental protection and improved water quality
- Reduction in the costs for combined overflows

## ➤➤ Combined water screening with integrated discharge volume measurement

### ➤➤ The situation

In the event of heavy rainfalls large amounts of combined water may pass into the receiving water course via overflow discharge structures or stormwater overflow tanks. Frequently, there is no screening plant installed with the consequence that the discharged water contains floating and coarse material. Such material is not only a heavy burden for the receiving water courses but also unsightly and will result in significant cleaning and disposal costs. In addition, the discharged overflow is frequently not measured and with the omission of measuring equipment will mean a significant loss of critical information relating to the operating behaviour of the storage and overflow structure.



*Separating structure without a screen and discharge measuring equipment*

### ➤➤ The solution

The HUBER system solutions combine a HUBER screen with a gauging weir and thus provides an option for removal of the floating and coarse material from the combined overflow including accurate measurement by means of a gauging weir and fully automatic measuring and evaluation equipment. The operator is therefore able to monitor the operating behaviour and identify unfavourable conditions (such as backwater, influence of floodwater, etc.). Additionally, the calculated discharge volumes expected can be routinely compared with the actual obtained measuring data to enable further optimisation of the entire sewer network control and ultimately reduction of the discharge volumes.



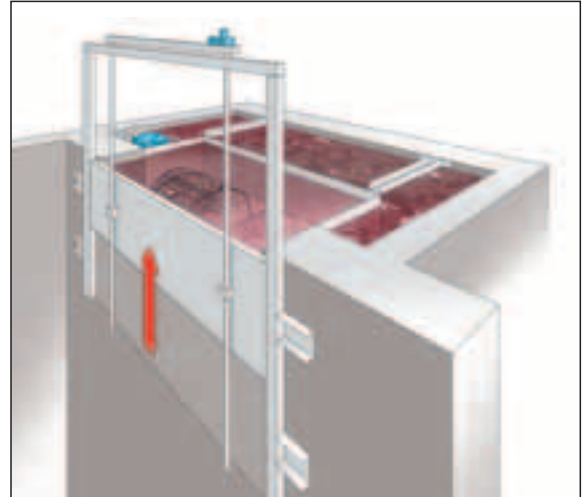
*ROTAMAT® Storm Screen RoK2 with integrated gauging weir during overflow discharge*

### ➤➤ The user's benefits

- Co-ordination of critical information regarding servicing, operation and maintenance of stormwater tanks
- Detection of unfavourable operating conditions
- Obtain valid results and figures with regard to the operating behaviour of storage and overflow structures
- Reduction of cost for combined overflows
- Increase in optimisation of WWTP inflow and combined surplus flow
- Reduction of the load on receiving watercourses due to improved calculations based on the data obtained by means of the measuring equipment
- Measurement of overflow discharge frequency and duration.

➤➤ Stormwater screening  
combined with a constant  
design retention level

- ▶ ROTAMAT® Storm Screen RoK 2 with a vertically movable slide gate
- ▶ ROTAMAT® Storm Screen RoK 2 with a radially movable flap gate
- ▶ ROTAMAT® Storm Screen RoK 2 with a horizontally movable flushing baffle
- ▶ HUBER High Performance Flow Screen with a vertically movable slide gate



*HUBER ROTAMAT® Storm Screen RoK 1 with closed slide gate*

➤➤ Combined water screening  
with integrated overflow  
discharge volume  
measurement

- ▶ ROTAMAT® Storm Screen RoK 1 with integrated gauging weir
- ▶ ROTAMAT® Storm Screen RoK 2 with integrated gauging weir
- ▶ HUBER High Performance Flow Screen with innovative screening chamber and gauging weir

➤➤ Technical information

The optimally suitable system solution is individually assessed and selected for each project in order to specifically meet the requirements for local hydraulic and constructional conditions within the overflow discharge structures.



*HUBER High Performance Flow Screen HSW with innovative screening chamber and integrated gauging weir during overflow discharge*

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Subject to technical alteration

**HUBER System Solutions  
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