# Counterflow-Coarse Screen GSR

## clean water engineering

GRIMMEL
WASSERTECHNIK

# Counterflow-Coarse Screen GSR.

## SIMPLE, RELIABLE AND WELL ESTABLISHED

The Counterflow-Coarse Screen GSR, which has proved its worth for many decades, is designed for the most efficient and reliable removal of course materials before they reach sensitive parts of the system, with a gap width of 12 mm (e.g. before reaching pumping stations, rainwater reservoir inlets or fine screens that receive substantial volumes), thus providing good protection for any subsequent componentry.

## And this is how it works:

The removal of screenings from the grid is based on the counterflow principle. The screen comb moves in the opposite direction of the waste water as it flows into the screen grid which it cleans during its upward movement. This makes it impossible for screenings to squeeze through the grid or for course material to cause blockages between the screen comb and the grid.

The revolving movement of the screen comb on the GSR is realised via two drive chains situated on the side of the screen housing. The screenings are removed by the screen comb from the screen grid via a mechanical scraper. Before the screened material undergoes further treatment (e.g. wash press, conveyor, container, etc.), it passes through a discharge chute.


# “Our technology as source of a valuable environment”

**Stefan Albus** – Department of mechanical engineering

# Many advantages for your plant.

"The material, the workmanship and the low-maintenance, robust technology made the decision for the GSR easy."

What these screening units makes so special is the floodable design of their screen grids and the positions of all their movable parts behind the grid in the pre-cleaned waste water.

The floodable open-top screen grid makes it unnecessary to use a complex emergency bypass. In the event of an accident the screen grid is simply flooded, thus warranting a continuous flow to the subsequent treatment processes. This feature also allows you to remedy an existing overburdened screening unit by adding a counterflow screen to its emergency bypass channel. Again, this safeguards the waste water inlet to the sewage plant.

The mechanical components (i.e. screen comb, chains and deflectors) which are required for the cleaning of the screen grid, are located on the "clean water side" and come after the grid, so that they are not touched by any of the course waste water materials before the grid.

## GENERAL FEATURES

- No emergency bypass required, as the screen grid is floodable
- Operationally reliable and robust
- Maintenance-free bearings
- Automation upon request
- Maintenance-free drive unit with geared motor
- Easily accessible chain tensioning devices
- Long service life thanks to well-built, robust engineering and design
- All movable parts come after the screen grid
- Explosion-protected
- Chains and chain wheels are outside the waste water flow
- Simple bush conveyor chains are in use

Screen rake for larger gap widths

Outdoor installation


Discharge hood, screenings washing press and exhaust air extraction

**Customer testimonials**

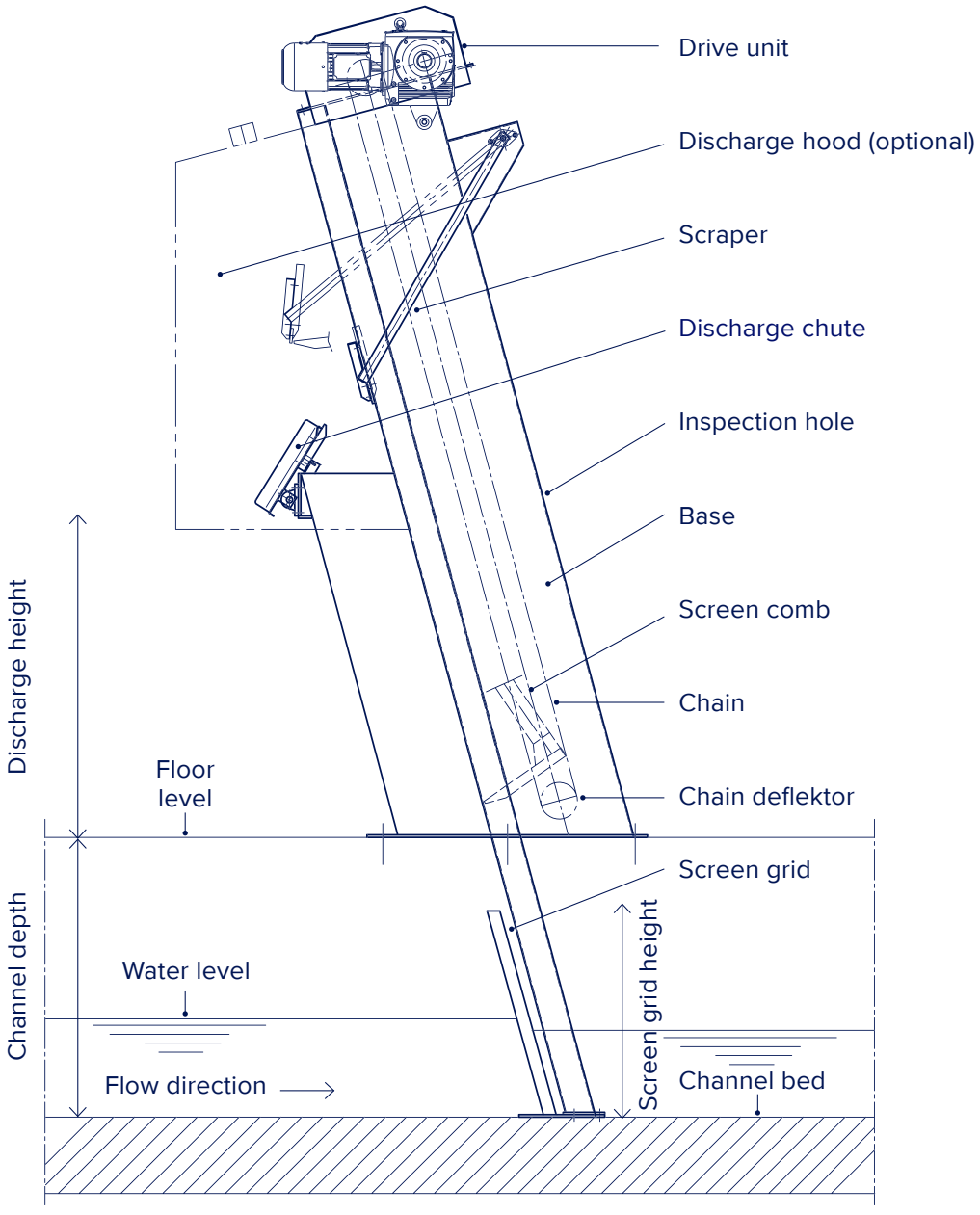
“We didn't need to build any additional emergency bypass, so we have with it real cost savings!”

“Even at deep sub-zero temperatures the machine is running proper!”

“Last time we had a power blackout - that water kept flowing freely to the plant, but this time without flooding the inlet area. The screen field was just overflowing!”

# System components and function.

MADE IN GERMANY




## 1 / Base

The base in the GSR consists of a stable stainless steel frame, which is bolted onto the channel and has cover segments that can be removed one by one. Optional we are offering an covering discharge hood for air extraction / sanitation purposes. Moreover, the Counterflow-Coarse Screen can be adapted for outdoor use.

## 2 / Screen grid

In its regular design, the bars in the floodable screen grid are made from stainless steel (Pic. 6+9). However, for some applications the grid can also be made available with special profile steel. It is welded to a robust base plate and bolted onto the flat channel bed. The screen grid and its base are usually installed in the opposite direction of the waste water flow, and the installation angle of the grid is normally 75° in relation to the channel bed.

## 3 / Screen arm/comb

The GSR only has one screen arm with a comb mounted onto the revolving bush conveyor chains. The conveyor chains are usually deflected above the water level.

## 4 / Scraper

Situated on the base of the screen, the Counterflow-Coarse Screen GSR have a scraper that can be lifted out and which has a discharge chute to send the screenings into a container or into a subsequent conveyor.

## 5 / Drive

The double-sided chains that drive the scraper comb are put into motion by a geared motor with a shaft and a chain wheel pair. Motor current sensors are used to monitor the load. They have been coordinated to suit the drive unit and are integrated into the control system.

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