



## **HUBER** **Belt Screen EscaMax®**

Versatile inlet screen

- ▶ Excellent separation efficiency due to its perforations
- ▶ Reliable cleansing of the perforated plates with an internal spray nozzle bar and counterrotating brush
- ▶ Very compact system with minimum space requirements
- ▶ Easy-to-retrofit into existing channels

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## Design and function

The HUBER Belt Screen EscaMax® complements the well-known HUBER program for municipal and industrial wastewater screening, as it is particularly well suited in situations where excellent separation efficiency is required in deep channels with high water levels.

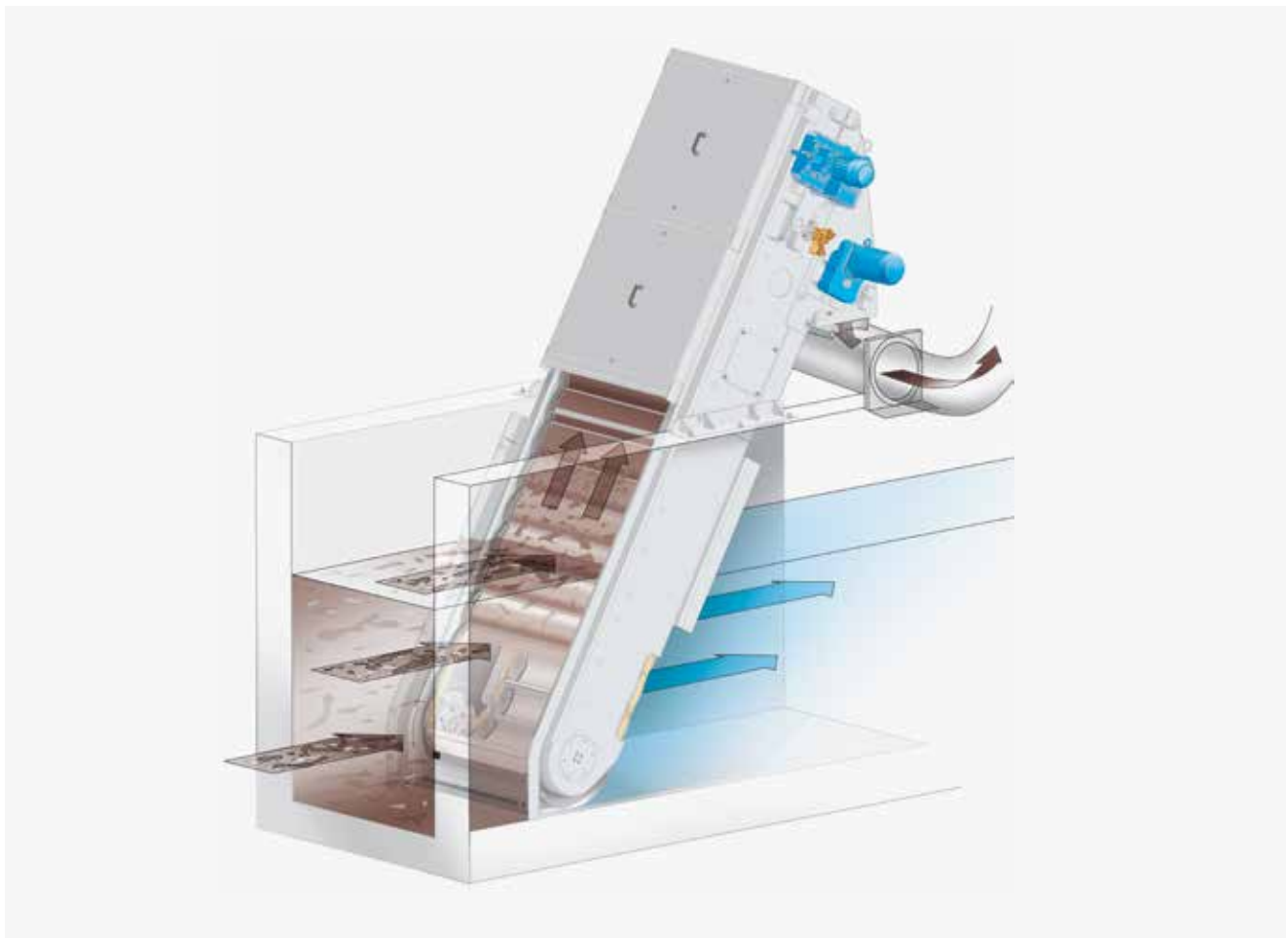
Perforated screening elements provide superior separation efficiency in comparison with slit screening elements. It has been determined that two-dimensional perforations are better than one-dimensional slits. Formation of screenings rolls is prevented by rake bars extending over the full width of the screen in combination with the screen's installation angle. Even cans and bottles are lifted by these rakes.

Each end of the filter belt of the HUBER Belt Screen EscaMax® is connected with a drive chain that is driven by chain wheels. Each chain wheel is driven by a sprocket on a common shaft and a flange mounted gear motor. When they have passed the upper turning point the screening elements are cleaned by an internal spray nozzle bar which operates against screening direction.

A separately and continuously driven roller brush enhances the cleaning process additionally. The roller brush operates against the travel direction of the filter belt, this improves cleaning efficiency significantly.

Another advantage of this cleaning method is that a majority of the screenings, including abrasive material, are removed from the screening elements already in the first step of the cleaning process by the spray bar. It is obvious that the wear of both the screening elements and the roller brush is considerably reduced in this way.

The sturdy HUBER Belt Screen EscaMax® is able to reliably cope with even high amounts of gravel and grit. The two-dimensional screening elements prevent especially long fibres from passing through the screen and achieve thus the maximum separation efficiency.



Flow diagram of a HUBER Belt Screen EscaMax®.

## The challenge – Our solution

We have been challenged to provide screens combining ever increasing separation efficiency with operational reliability. The HUBER Belt Screen EscaMax® is our answer to this challenge.

State-of-the-art design of a perforated plate screen that guarantees the highest efficiency, low maintenance and long life required attention to every detail.

Our Perforated Plate Screen EscaMax® sets new standards, due to its innovative features.

## Functional details of the HUBER Belt Screen EscaMax®

### **Innovative cleaning system with an internal spray nozzle bar and counterrotating brush**

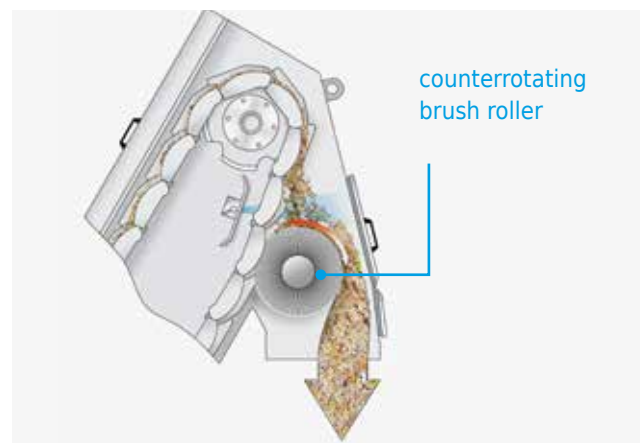
The distinctive feature of the innovative perforated plate cleaning system compared to other state-of-the-art systems is its significantly improved efficiency due to its special arrangement and counterrotating brush.

Furthermore, we have risen to another technical challenge and developed a new concept for the critical area where the screening elements are cleaned subsequently. The results have exceeded all expectations: The constant spacing between the roller brush and the semicircular screening elements guarantees gentle yet highly effective cleaning, especially with extremely high screenings loads.

Other systems require an additional scraper roller to remove screenings from the trough edge. A counter-rotating brush eliminates this problem so that no additional scraper roller is required for trough edge cleaning.

Wear-resistant plastic elements ensure proper **sealing between the travelling screening elements and the frame** whilst the perforated plates are moving. The connection between the plastic and screening elements is designed to allow quick and easy replacement.

**The submerged chain wheel bearing** consists of a highly wear-resistant and maintenance-free ceramic bearing which has proven its reliability for years in our grit washing plants. The drive chain is made of hardened wear-resistant steel. The chain and chain wheels are electrogalvanised and yellow chromated for durable corrosion protection. As an option, the chains and chain wheels are available in stainless steel.



## The benefits of the EscaMax® Screen at a glance

- ▶ Excellent separation efficiency due to travelling perforated plates
- ▶ Reliable cleansing of the perforated plates with an internal spray nozzle bar and counterrotating brush
- ▶ No scraper roller for trough edge cleaning required
- ▶ All submerged bearings are wear-resistant ceramic bearings.
- ▶ Compact design with a low installation height above ground level
- ▶ Completely odour-encased screen with easy to remove covers
- ▶ Easy-to-retrofit into existing channels, installation without channel recesses possible
- ▶ The screen consists of a self-supporting folded stainless steel profile so that it can easily be lifted out of the channel.
- ▶ Not hindered by gravel or grit
- ▶ Simple and easy-to-access chain tensioning unit
- ▶ All machine components in contact with the medium are made of stainless steel and acid treated in a pickling bath (except chains, drives, bearings). As an option, the chains and chain wheels are available in stainless steel.

## Installation examples



Rear view of the HUBER Belt Screen EscaMax® with subsequent launder channel for wear-free screenings transport.



Fully enclosed, odour-free HUBER Belt Screen EscaMax® with easy to remove covers.

## Screen sizes

- ▶ Channel width: up to 3,000 mm
- ▶ Discharge height: up to 10,500 mm
- ▶ Perforations:  $\geq 3.5$  mm
- ▶ Installation angle:  $45^\circ - 70^\circ$