



## HUBER Band Screen CenterMax®

Compact fine screen for high-throughput screening of surface water

- ▶ Compact machine with very high screenings removal capacity
- ▶ Maximum flow rates of up to 100,000 m<sup>3</sup>/h per channel
- ▶ Innovative sealing concept for separating the dirty water side from the clean water side
- ▶ Rugged design for maximum uptime and reliability
- ▶ Extremely maintenance-friendly operation with low operating costs

## Safe and economical water withdrawal with the HUBER Band Screen CenterMax®

Plant operators need robust fine screening machines that effectively protect pumps and membranes from dirt particles being carried over to the clean water side. The decisive factor here is to optimise the flow behaviour of the water in the sewer as far as possible.

As a rule, coarse screens are installed upstream of the fine screening machines, which separate particularly large impurities.

The correct choice of the mechanical screens determines the stability of subsequent process steps and thus the economic efficiency and safety of the entire plant. In view of the increased demands of operators for high throughput with the smallest construction volume and low operating as well as maintenance costs, HUBER has developed the compact CenterMax® band screen.

Thanks to innovative solutions, the HUBER Band Screen CenterMax® can also meet special requirements such as the removal of jellyfish and seaweed or efficient water withdrawal without harming fish.

The CenterMax® is manufactured in stainless steel, duplex or super duplex depending on the project-specific requirements. A combination of stainless steel and cathodic corrosion protection is also available to enable safe machine operation in corrosive media for many years.

In addition to design, manufacturing, installation and commissioning, HUBER's service portfolio encompasses the complete after-sales service, including the supply of spare parts and system maintenance. If site conditions change, we also adapt the existing plant equipment.

## Design and function of the machine

The HUBER Belt Screen CenterMax® is a screen with stainless steel screen elements flowing through the channel from the inside to the outside. Depending on the requirement profile, the screening elements can be supplied in mesh or perforated plate design with different separation sizes. The screening elements are connected to a chain and powered by a drive motor. The chain is guided by a guide track in the lower area and a chain wheel in the upper area of the machine.

During operation, dirt particles settle on the screening element. They are conveyed upwards by the movement of the screening elements and removed from them by a spray nozzle system arranged upstream of the screening elements and discharged into a launder channel. Coarser dirt particles that do not adhere to the screening elements are also conveyed upwards by additional carrier bars on the screening element.

For environmental reasons, the machine can be designed to protect aquatic creatures with fish buckets, which safely remove fish accumulating upstream of the screen and return them to the water body using a launder channel.



*Delivery and installation of a HUBER Belt Screen CenterMax®.*

## Fields of application

The HUBER Belt Screen CenterMax® is successfully used for fine screening in water withdrawal stations in various areas of application:

- ▶ Use as cooling water in thermal power plants
- ▶ Use as process water in paper mills, chemical plants, refineries, steel mills and other industrial plants
- ▶ Use as raw water for drinking water supply and sea water desalination
- ▶ Use for irrigation in agriculture and parks

## Sizes and process engineering data

- ▶ Machine material selection possible from stainless steel to super duplex
- ▶ Channel width up to 4 m
- ▶ Channel depth up to 18 m
- ▶ Installation angle: 90°
- ▶ Separation size 1 – 10 mm
- ▶ Available with perforated plate or mesh element
- ▶ Flow rates of up to 100,000 m<sup>3</sup>/h per channel

## Advantages of the HUBER Band Screen CenterMax®

- ▶ Quick and easy installation of the machine in the structure
- ▶ Zero carry-over: No carry-over of dirt particles to the clean water side to increase the operational reliability of subsequent process steps
- ▶ Excellent screen surface cleaning thanks to a highly efficient nozzle system with low water pressure and low water consumption
- ▶ Easy maintenance – all maintenance steps can be carried out at operator level
- ▶ Low-wear solution – all moving parts are located on the clean water side
- ▶ Increased corrosion resistance thanks to a suitable selection of materials or corrosion protection systems
- ▶ Variable screen belt speed to optimise machine runtimes and dirt removal
- ▶ High levels of durability and longevity thanks to compact machine design with frame
- ▶ Fish-friendly solution optionally available featuring a fish return system based on the recommendations of the EPA 316b standard

## Optional fish protection available

The machine can optionally be equipped with a fish return system based on the recommendations of the US EPA CWA 316b standard and the EU Habitats Directive to protect aquatic life.

In this system, the fish swimming towards the HUBER Band Screen CenterMax® are carefully scooped out by buckets attached upstream of the screening elements. The fish are then carefully transported with the water into a separate launder channel and returned to the water body. Only once the fish have left the fish buckets are the screen elements cleaned intensively of adhering dirt.



## Success stories

HUBER has supplied numerous solutions for new plants and the modernisation of existing plants worldwide. High-quality screens ensure smooth water withdrawal



and reliably protect downstream systems from damage caused by contamination.

### Lanaken / Belgium

- ▶ Modernisation of an existing river water extraction system
- ▶ Optimum integration into the existing structure
- ▶ Compact, low-maintenance band screen that reliably removes the various contaminants from the water
- ▶ Field of application: Process and cooling water for paper mill
- ▶ 1 x HUBER Band Screen CenterMax®
- ▶ Commissioned in 2021



### Taiyuan Huyan / China

- ▶ Timely installation following pre-assembly
- ▶ Project-specific design that also allows for shell removal
- ▶ Low maintenance operation with high throughput
- ▶ Field of application: Drinking water production
- ▶ 2 x HUBER Band Screen CenterMax®
- ▶ Commissioned in 2021



### Bozhou Chengnan / China

- ▶ Easy installation due to pre-assembly; machines were lifted directly into the channel
- ▶ Project-specific design that takes into account the customer's specific requirements
- ▶ Low maintenance operation with high throughput
- ▶ Field of application: Drinking water production
- ▶ 2 x HUBER Band Screen CenterMax®
- ▶ Commissioned in 2020

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