



HUBER

Band Screen DualMax®

Durable fine screen for screening surface water, offering high operational reliability and the best possible economy

- ▶ Compact machine with throughputs of up to 100,000 m³/h
- ▶ Innovative sealing concept for removing dirt from the clean water side
- ▶ Rugged design for maximum uptime and reliability
- ▶ Extremely maintenance-friendly operation with low operating costs
- ▶ Machine design allows for shorter channels thanks to reduced laminar flows at the machine outlet

Safe and economical water withdrawal with the HUBER Band Screen DualMax®

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, tasked with filtering particularly coarse 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 rates using the smallest construction volume and low operating and maintenance costs, HUBER has developed the compact Band Screen DualMax®.

Thanks to the way in which the contaminated water flows into the machine from both sides through the filter elements and flows out of the DualMax® at the output, turbulent flows downstream of the fine screening machine are reduced. This permits a reduced distance to the pump and thus also a shorter channel on site. The selected frame design of the DualMax® minimises

installation times and required construction work, as the machine can be installed as an entire fine screen or in assemblies in the channel.

The DualMax® can be 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.

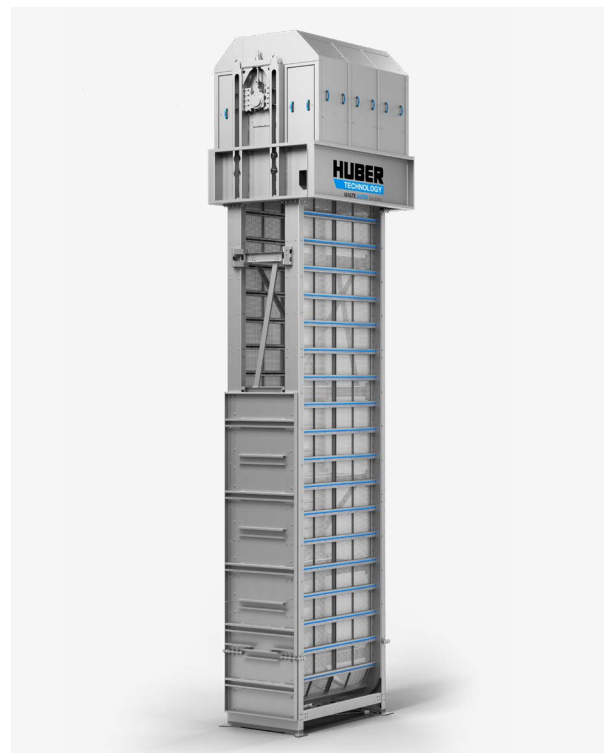
In addition to design, manufacturing, installation and commissioning, HUBER's service portfolio encompasses the complete after-sales service, including the supply of spare parts and system maintenance. If site conditions change, we also adapt the existing plant equipment.

Design and function of the machine

The HUBER Band Screen DualMax® is a screen with stainless steel screen elements and a flow from the outside to the inside of the channel. 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 an externally arranged launder channel. Coarser dirt particles that do not adhere to the screening element are also conveyed upwards by additional carrier bars installed on the screening element.

For environmental reasons, the machine can be equipped with fish buckets as an option to protect aquatic creatures.



Schematic diagram of a HUBER Band Screen DualMax®.

Fields of application

The HUBER Band Screen DualMax® is used as a fine screen for the treatment of river, lake and sea water in the following applications, among others:



Use as cooling water in thermal power plants.



Process and cooling water in chemical plants and refineries.



Process and cooling water in the paper industry and other industries.



Raw water for drinking water supply.



Raw water for seawater desalination.



Use for irrigation in agriculture.

Sizes and process engineering data

- ▶ Machine material selection possible from stainless steel to super duplex
- ▶ Channel width up to 6 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 m³/h per channel

Advantages of the HUBER Band Screen DualMax®

- ▶ Quick and easy installation of the machine in the structure thanks to self-supporting frame
- ▶ Zero carry-over: No carry-over of dirt particles to the clean water side to increase the operational reliability of subsequent process steps
- ▶ High levels of durability and low-maintenance operation thanks to compact machine design
- ▶ Easy maintenance – all maintenance steps can be carried out at operator level
- ▶ Long service life thanks to suitable selection of materials and use of corrosion protection systems
- ▶ Fish-friendly solution – optionally available thanks to specially developed fish bucket and fish return system
- ▶ Variable speed of operation to optimise the machines' running times and discharge capacities
- ▶ Lower laminar flows at the machine outlet enable on-site optimisation potential thanks to shorter channels

HUBER Band Screen DualMax® also meets demanding requirements

The HUBER Band Screen DualMax® can be manufactured in stainless steel, duplex or super duplex depending on the project-specific requirements. The combination of stainless steel and cathodic corrosion protection is also possible. Different discharge elements can also be selected for a wide range of contaminants. Thanks to innovative solutions, the HUBER Band Screen DualMax® can also meet special requirements such as the removal of jellyfish and seaweed or efficient water withdrawal without harming fish.

Based on the recommendations of US standard EPA CWA 316b and the EU Fauna-Flora-Habitat Directive, the machine can be optionally equipped with a fish return system.

In this system, the fish swimming towards the HUBER Band Screen DualMax® are carefully scooped out by buckets attached to the screening elements of the machine. The fish are then carefully transported with the water into a separate launder channel and returned to the water body. Only once the fish buckets have been emptied is the screen field intensively cleaned of adhering dirt at high pressure so that there is no risk of harming fish.



Sustainable water extraction takes into account the protection of aquatic life.



Large groups of jellyfish seasonally with jellyfish blooms.