

STEP SCREEN® Flexible SSF



- for deep channels
- for high flows and low head loss
- for high screenings loads
- for lifting of screenings from the channel bottom
- for reliable operation and long life



►► HUBER – The World Leader

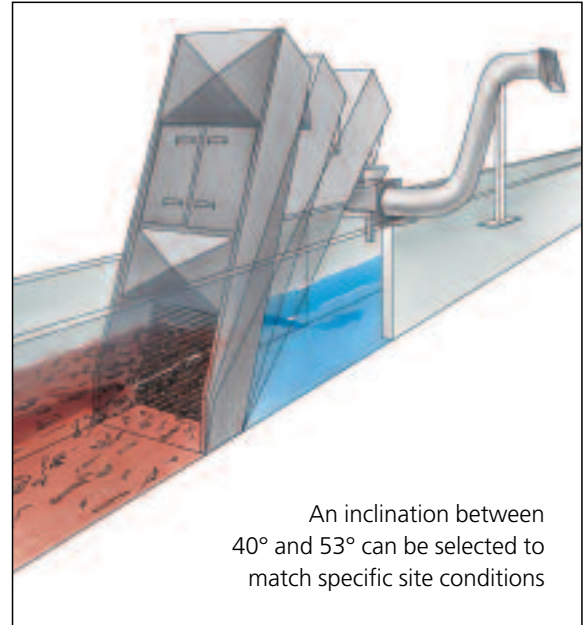
With over 12,000 installations worldwide we are the unrivalled market leader as supplier of headwork equipment. No other screen supplier has comparable experience and expertise. We have thousands of STEP SCREEN® installations.

►► The STEP SCREEN® System

The STEP SCREEN®, invented by HUBER-Hydropress, has been so successful because of its simple and self-cleansing function. STEP SCREENS® are not only highly efficient screens, but at the same time conveyors for gentle lifting and discharging of the screenings. They are suitable for deep channels; they handle high hydraulic and solids loads; and they are easy to operate and maintain.

►► STEP SCREEN® Flexible – SSF

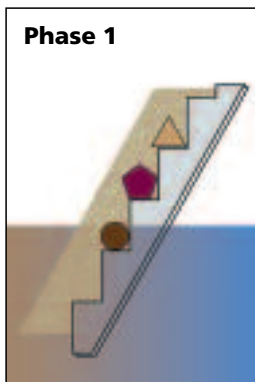
The SSF is installed in channels with an inclination between 40° and 53°. This variable inclination permits optimal adjustment to site conditions, such as channel depth and space constraints. Its discharge height is up to 11.5 ft (3.5 m) above the channel floor. The SSF has a linkage system with lubrication-free bearings, defining



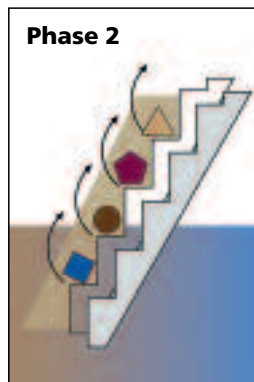
An inclination between 40° and 53° can be selected to match specific site conditions

the exact and parallel movement of the lamellae over their entire length. Use of difficult-to-maintain chains and sprockets and water contamination by oil and grease is thus avoided.

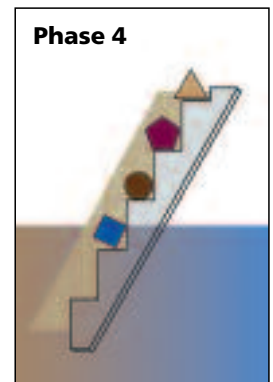
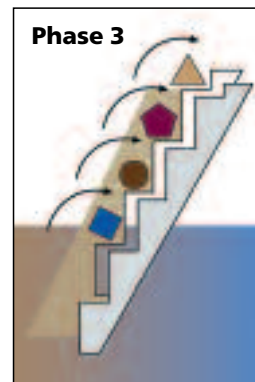
►► Operating principle



Phase 1
Screenings are retained on the steps and form a mat.



Phase 2
The complete screenings mat is lifted and transported, one step at a time, by rotation of the movable lamellae.



Phase 4
The screenings mat is laid down on the next step.

►► Advantages of a screenings mat

The screenings mat or carpet forms a filter retaining particles that are smaller than the width of the spaces between the lamellae. The solids capture rate of the SSF

is thus further improved. The structure of the mat keeps the screenings together as they travel to the discharge point.

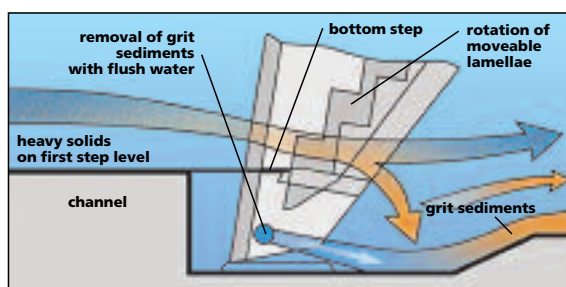
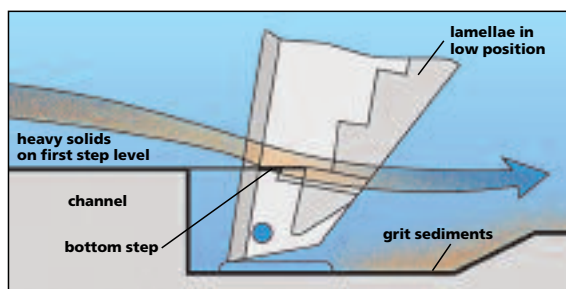
SSF – HE Version

It has always been our main objective to reduce operation and maintenance work to a minimum, and to improve the reliability not only of our headworks equipment, but also of all downstream treatment processes.

The SSF-HE, when installed in channels without a bottom step or recess, has a vertical plate in front of the lowest step. Grit and gravel settles in front of this plate and should be removed from time to time. Installation of a bottom flap, as done by some competitors and intended for flushing grit and gravel through the bottom of the screen when opened, is no solution. Such flaps are hardly operable due to grit jamming. If they could be opened, coarse solids would be flushed through the open flap thus defeating the screen's purpose of protecting downstream equipment and processes from coarse and impairing material.

We have developed an optimal bottom step design for the SSF-HE screen preventing grit and gravel sedimentation and guaranteeing removal of rocks and gravel. The lowest step of the SSF-HE is flush with the channel floor. A horizontal plate extends from the channel floor to the edge of the first step, directing wastewater and solids onto the first step. The lowest step of the fixed lamellae is doubled up with stainless steel plates thus reducing its spacing. Gravel and rocks are thus retained on the lowest step. They are lifted up and removed when the lamellae rotate. Sedimentation in front of the screen is thus eliminated.

The SSF-HE is provided with a flush pipe for automatic and periodic flushing of grit that has settled underneath or behind the screen.

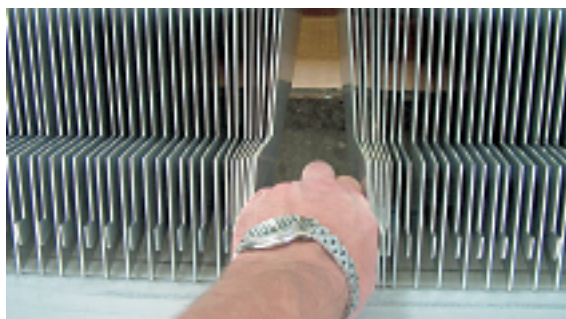


STEP SCREEN® with optimal bottom step design. The channel floor is flush with the top of the lowest step.

SSF – HF Version

The SSF-HF does not have a vertical plate in front of its lowest step. It therefore has the largest open area, the highest flow capacity and the lowest head loss off all screens of this type.

While the movable lamellae rotate, they are removed from the lowest step for a short period of time. Edges of the movable lamellae engage the screenings and lift them to the next steps. The increased flow through the fixed lamellae flushes grit and gravel through the bottom of the screen. A flush pipe is not required.



Flexible 0.08" (2 mm) thick lamellae at the bottom of the SSF-HF

►► Benefits

Operational Principle

- Gentle and complete lifting of screenings and rocks from the channel floor

Variable Inclination

- Adjustable to site conditions

Outstanding Hydraulics

- Highest flow / lowest head loss of its class

Great Capture Rate

- High separation efficiency due to narrow slots, further improved by formation of screenings mat

Cleaning

- Self-cleansing design. No spray water or brushes are needed.

Odor Control

- Fully enclosed screen

Maintenance

- No need for regular lubrication

Reliability

- Low susceptibility to jamming by grit, gravel and rocks;
- Overload-protection with rocker arm and proximity switch

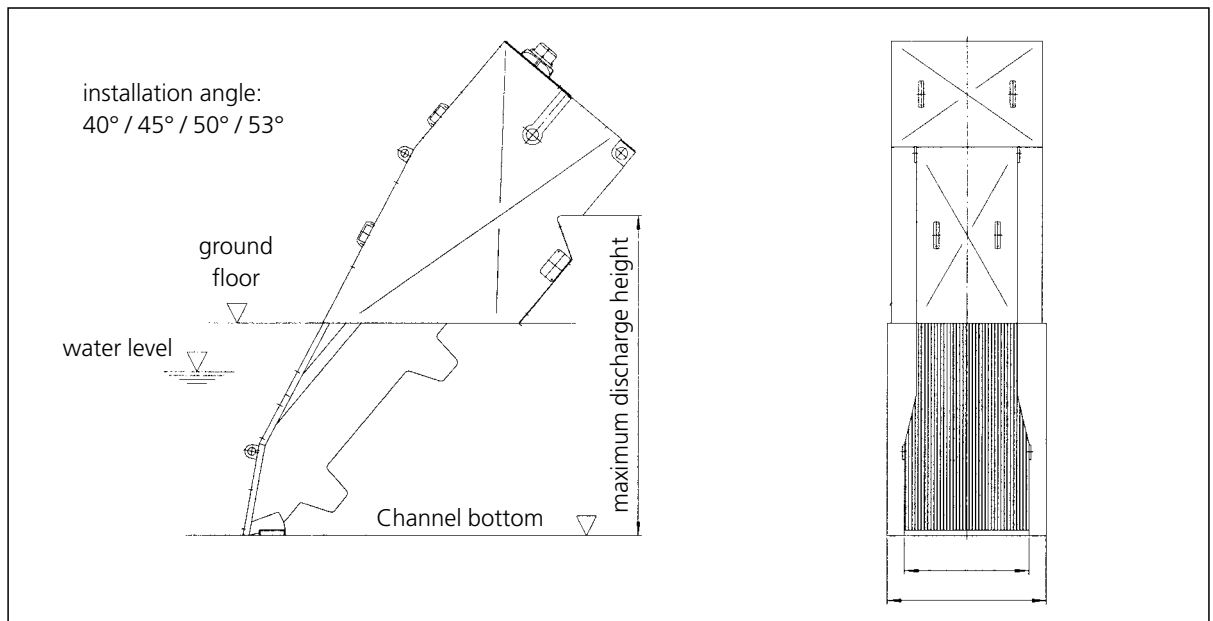
Durability

- Sturdy design
- Made of stainless steel, pickled in an acid bath

Experience

- Unsurpassed for more than 20 years; thousands of installations

►► Technical data



Flow: up to 60 MGD per unit
 Inclination: 40° to 53°
 Discharge height: max. 11.5' (3.5 m)
 Channel width: 20" to 6.5' (0.5 to 2 m)

Water level: max. 7.5' (2.3 m)
 Spacing: 1/8" or 1/4" (3 or 6 mm)
 Lamella thickness: 0.08" / 0.12" (2 / 3 mm)

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Subject to technical modification

STEP SCREEN®
Flexible