

PERFO SCREEN ZETA, PSZ

Remove contaminants from water efficiently with Perfo Screen Zeta, a modern perforated plate screen equipped with camera monitoring, vibration sensors, and remote supervision to predict issues and minimize the need for manual inspection.

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Perfo Screen Zeta is a perforated plate screen designed to separate solid particles, debris, and waste from water. The perforated plate screen is prepared to be equipped with camera monitoring (including IR), vibration sensors, and remote supervision. This means that with Perfo Screen Zeta, you can detect irregularities before problems arise, while also reducing the need for manual inspections and unnecessary trips for operators at unmanned plants. Perfo Screen Zeta comes standard with monitoring that detects and alerts you to large incoming particles that could damage the machine.

The accessibility of individual components in the machine has been improved to facilitate service and maintenance compared to existing technologies on the market. In addition, there is the option for self-diagnosis via PLC/control systems, and easier access for gearbox oil replacement, bearing access, and more. The perforated plate is designed to provide the best possible separation of debris while minimizing wear on the brush and other components.

Perfo Screen Zeta is a modern machine born from our technology, characterized by reliability, performance, and dependability.

FUNCTIONS

The well-engineered geometries, combined with a reduced amount of welding where bolted joints replace welded seams, ensure the machine's linearity, rigidity, and stability.

Even larger solid particles can be transported to the next process stage thanks to the perforated plate screen's lifting steps between the perforated plates.

The adaptive support legs allow for easier integration with existing systems such as wash presses, screw conveyors, piston presses, and more.

With the double-jointed linkage system, service and installation are simplified. The system also allows for a smaller footprint, enabling the machine to be installed in shorter channels.

SPECIFICATIONS

Discharge height	2-10 m
Machine width	500-1200 mm
Bar spacing	2-8 mm
Capacity	7000 l/s
Drive unit	SEW
Material	EN 1.4301, EN 1.4404

HYDRIA™ WATER

CONSTRUCTION AND APPLICATION

- Filtration of water and wastewater, separation reception stations, and applications for screening of digested sludge — particularly in sensitive downstream processes such as membrane plants.
- Cleaning of the perforated plate panels using the brush and wash water is critical for achieving a high separation efficiency. For optimal cleaning, the panels' profile is adapted to match the shape of the brush. This unique profile also enhances the ability to lift screenings and improves the panels' structural strength.
- The panels move along a path designed to create a perfect geometry where their shape allows the brush to reach the entire screening surface, minimizing the risk of carryover.
- The nozzles that control the direction of the wash water can be adjusted as needed, and visual alignment guides on the machine facilitate installation and optimization.
- Polyurethane sealing reduces the risk of hard particles getting trapped between panels and deforming them.
- Lifting steps between panels transport larger solid particles onward to the screenings handling system.
- The machine is protected from damage by a system that detects and alerts when oversized solid particles are present, automatically stopping the machine.
- Like other Hydria products, this unit is equipped with a spring-loaded bottom step that follows the movement of the panels, reducing the risk of particle leakage.
- Open side plates in the screening area reduce the risk of screenings accumulating at the bottom of the screen.
- Support legs with a double-jointed linkage system make service and inspection easier, while also reducing the machine's footprint and minimizing the need to dismantle surrounding equipment during maintenance.
- Visual alignment guides on the machine help ensure correct geometry during installation, service, and maintenance.
- The panel mounting system is designed to simplify maintenance and repairs.
- Reinforced rubber seals against the channel wall provide improved sealing and longer service life.
- Perforation size: 2 to 6 mm (0.08"–¼"); discharge height up to 10 meters (33 ft).
- Modular, bolted, fully stainless steel construction.
- Increases capacity in existing channels with screens without requiring modification of the channel itself.
- Suitable for municipal wastewater and pump stations, industrial wastewater, pulp and paper industry, pharmaceuticals, food processing, and many other industrial applications, including waste material recycling.
- The entire brush assembly, including drive and bearings, can be easily removed from the machine for inspection, service, and maintenance.
- A minimized amount of welding ensures linear geometric stability and consistent performance over time.

INSTALLATION

- For installation in a channel or in a separate stainless steel tank – suitable for retrofits/replacement units and new applications.
- Adjustable support legs for tilting/pivoting simplify installation and maintenance.
- Visual alignment guides ensure correct geometry during installation.

OPERATION

- Fully enclosed, odor-controlled, ultra-hygienic operation.
- Unique inward-facing panels with a plate design that ensures efficient screenings transport.
- Monitoring system to prevent machine damage caused by large solid particles.

HYDRIA™ WATER

- The brush works in combination with the spray bar to ensure optimal cleaning.
- The spray bar is easily adjustable with laser-engraved alignment guides for assistance.

MAINTENANCE

- Fully enclosed, safe, and hygienic machine with easily opened inspection hatches.
- Durable, self-lubricating drive system without bottom gear rings that can accumulate debris and wear out.
- Low maintenance and spare part requirements.
- The equipment's service life is exceptionally long due to minimal wear and few moving parts — the perforated plate screen operates mechanically only when needed (not continuously).
- The perforated plate screen can easily be pivoted out of the tank or channel to a convenient working height for inspection or maintenance within minutes, without the need to enter the tank or channel, as no disassembly is required.
- The brush mounting is designed to simplify the service process. Using simple tools, the entire brush assembly can be dismantled for inspection and maintenance.