

MULTI RAKE SCREEN KHU 3D

The third dimension of mechanical wastewater treatment

The patented **KUHN KHU-3D** mechanical wastewater treatment screen combines simple, efficient and resource saving design with modern manufacturing techniques providing a welcome alternative to conventional belt filters.

The screen's hexagonal 3D perforated plate geometry enables high stability with minimal material usage while gaining maximized flow capacity. Achieved through additive manufacturing (AM), the **Bionik®** filtering element's precisely engineered, diverging aperture structure creates a self-cleaning effect, increases separation efficiency, and reduces clogging.

Screen operation takes place without flushing water (100% water savings) and without brush systems, thereby eliminating both microplastic inputs and the need for additional drives. A robust, multi-element raking system with numerous raking elements and low rotational speeds ensures reliable discharge and increases operational reliability, even during heavy rainfall. Flexible components protect against blockages and damage.

The Materials of construction have been specifically selected for excellent corrosion and abrasion resistance. By eliminating complex moving parts, maintenance requirements and operating costs are kept low, while the sturdy construction ensures a long service life and a low total cost of ownership (TCO).

Overall, the KHU-3D combines high hydraulic performance and separation efficiency with minimal resource consumption, making it a sustainable solution for water protection.

Technical Specifications

Compared to screens with conventional perforated plate geometries, the **KUHN KHU 3D** screen offers clear advantages, including:

- Patented **Bionik®** technology to achieve high separation efficiency, maximized operative area, excellent structural stability and corrosion resistance
- High performing materials for a durable and robust design
- Optimized hydraulics thanks to a static screen area with approximately double the open area and a reduced height
- Up to 50% lower head loss due to single-pass wastewater flow
- Excellent self-cleaning capabilities thanks to Bionik® geometry and integrated control features
- No flushing, washing, or brushing system required, resulting in low maintenance and resource conservation
- Efficient debris removal using “Blue plate®” technology with forced discharge
- Automatic adjustment of chain tension and contact pressure for reliable operation



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Exhaust ventilation

optional

Scraper, passiv moved

- No active drive
- No brushes
- No water consumption

Hygienic covers

- Removable
- Guarantee complete odor and hygienic encapsulation

Separation area

- Patented flow-optimized Bionik® perforated plate technology for maximum hydraulic flow rates
- 30° angle of attack for an expanded rake surface area to dissipate flow energy
- Perforation size freely selectable for any application
- Rake elements individually replacable

Eco bearing mount

Continuously lubricated by wastewater, reliable, maintenance-free, and proven over the long term.

Drive with overload protection

Optimal design for every application

Large-volume discharge hopper

Simple and safe transfer of screenings

Service hatch

optional

Viewing window

optional

System frame, stainless steel

Frames for difficult installation situations are also available in split versions

Multiple cleaning bars

- Blue Plate® Technology
- Adaptive pressure control for the chamber system
- For accelerated cleaning, particularly in cases of climate-related "first flush" issues

