

Trash rack cleaning systems



for small and large hydropower stations

Why should a trash rack be cleaned?

Trash rack cleaners automatically clean the protective screens of run-of-river power plants, irrigation canals and power plant intakes in a very economical, efficient and convenient way. Any foreign bodies that have washed up are quickly removed, eliminating your potentially costly flow losses.

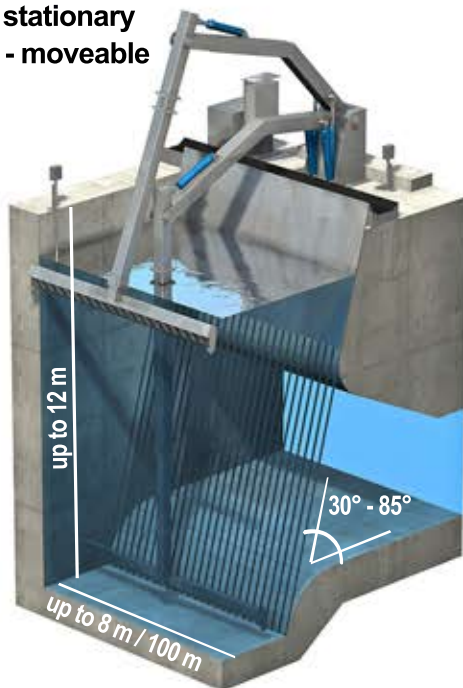
The stationary or movable OSSBERGER trash rack cleaning systems are quick and easy to install, particularly reliable in operation and require low drive power. They follow the "principle of simplicity" exemplified by OSSBERGER and are robustly constructed.

A most worthwhile investment for decades, because automatically cleaned rakes enable maximum flow and thus energy production at all times.

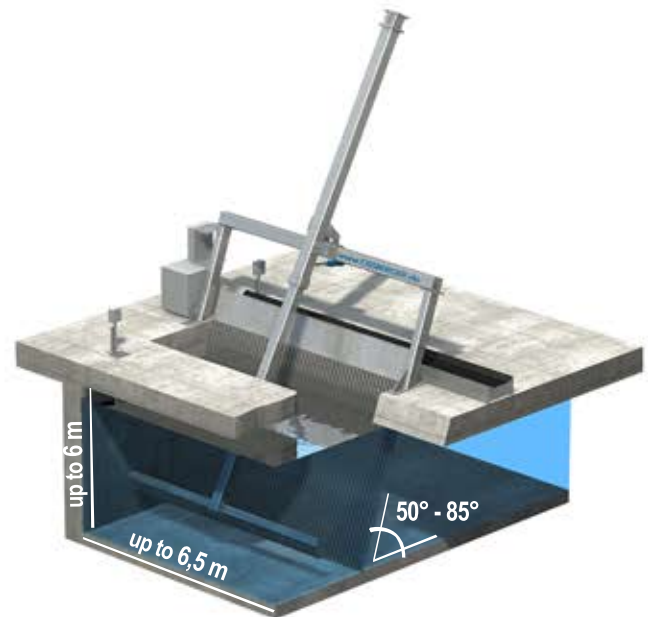
The OSSBERGER trash rack cleaning range

hydraulic trash rack cleaners

type RRH - stationary
type RRH-f - moveable

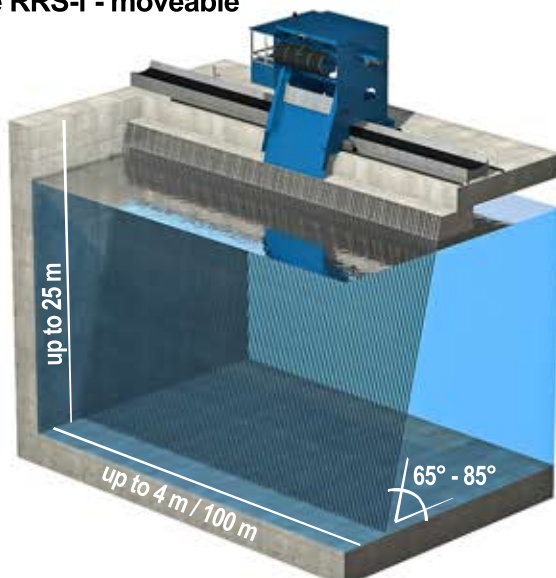


type RRT - stationary
type RRT-f - moveable



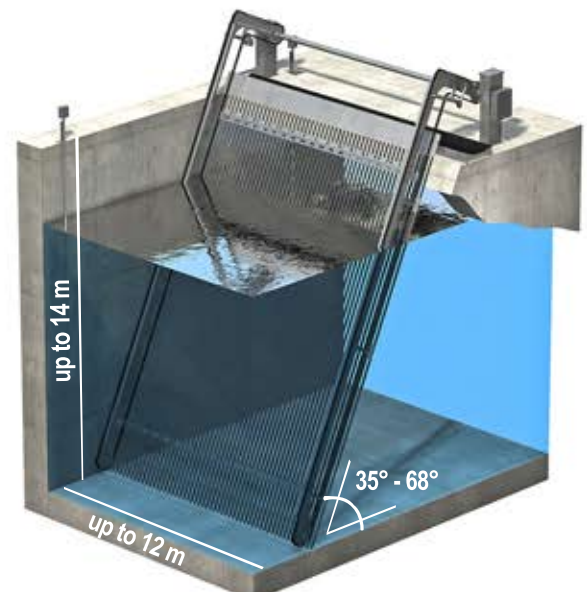
rope-driven trash rack cleaners

type RRS - stationary
type RRS-f - moveable



chain-driven trash rack cleaners

type RRM - stationary



Hydraulic trash rack cleaners

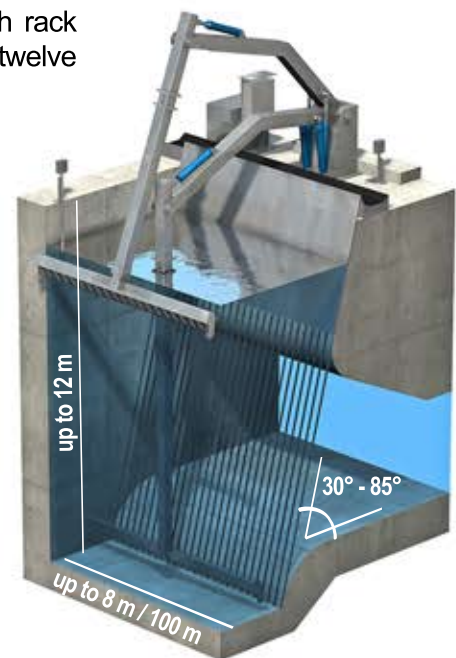
Type RRH - stationary

OSSBERGER developed the stationary, hydraulic trash rack cleaning machine type RRH for automatic cleaning of small and medium-sized screens at water intakes in front of turbines or pumps. This machine is equipped with a single-arm, wide-reaching angled boom on which a cleaning rake is attached transversely to the direction of flow. Hydraulic cylinders move the unit up and down according to the screen geometry.

The hydraulic unit is filled with environmentally friendly hydraulic fluid, the level of which is monitored visually and electronically. Pressure relief valves provide safe overload protection. On delivery, the hydraulic unit is already mounted on the machine stand, piped to the cylinders and wired to the control cabinet. A sturdy insulation cabinet protects it from external influences.

A minimum of maintenance is required for the machine to work efficiently and reliably for many years.

The RRH5 trash rack cleaner is the latest model in this series of trash rack cleaning machines and is suitable for cleaning screen depths of up to twelve metres. The draw-arm can be extended telescopically twice.



Type RRH-f - moveable

For screen widths of more than 8 metres, or for several intakes located next to each other, the RRH-f movable version is offered. An electrically driven chassis moves it along individual screen sections as required, which it then cleans automatically.

A conveyor belt or a mobile container, optionally with a folding floor panel, enables the convenient removal of the debris.

The construction of the movable RRH machine corresponds to that of the stationary types, but further strengthened for the greater loadings. The energy and signal transmission is conveyed by means of an energy supply chain, which also protects the cabling.



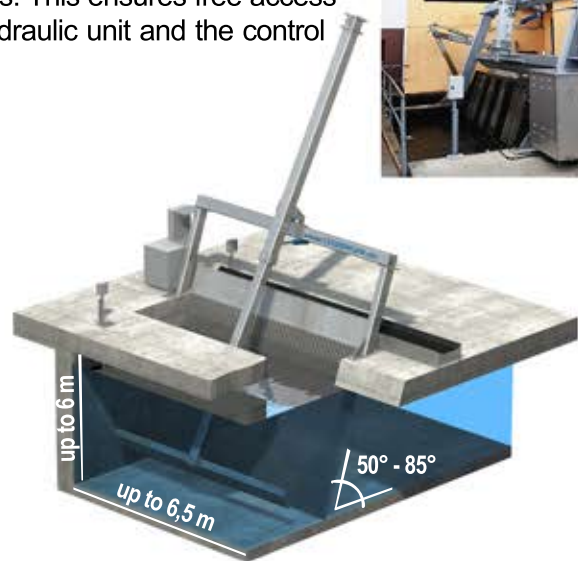
Hydraulic trash rack cleaning systems with telescope

Type RRT - stationary or type RRT-f - moveable

The RRT model is a hydraulic telescopic trash rack cleaner, which is used in the stationary version especially for small trash rakes up to 6.5 m wide. It excels due to its high performance combined with a very low space requirement. Thus, it can be mounted directly on the bar or the intake gate close to the screen in very confined spaces.

The machine stand is mounted directly on the intake walls. This ensures free access to the screen and debris can be easily removed. The hydraulic unit and the control cabinet are mounted directly on the machine stand.

The system is supplied with a ready-to-install connection.

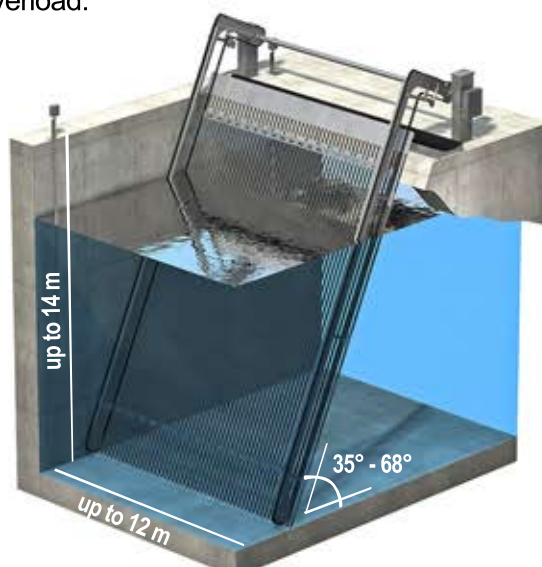


Chain-driven trash rack cleaning systems

Type RRM - stationary

RRM machines are stationary trash rack cleaners with rotating cleaning rakes pulled by two endless chain belts. The drive and deflection wheels above water have relubricating bearings, the two wheels working under water are maintenance-free.

The cleaning rake is equipped with a wear-resistant rubber scraper and the chains of the system can be easily retightened via an accessible tensioning device. To protect the system, a torque sensor automatically switches off the motor in case of overload.



Cable-driven trash rack cleaning systems

Type RRS - stationary or type RRS-f - moveable

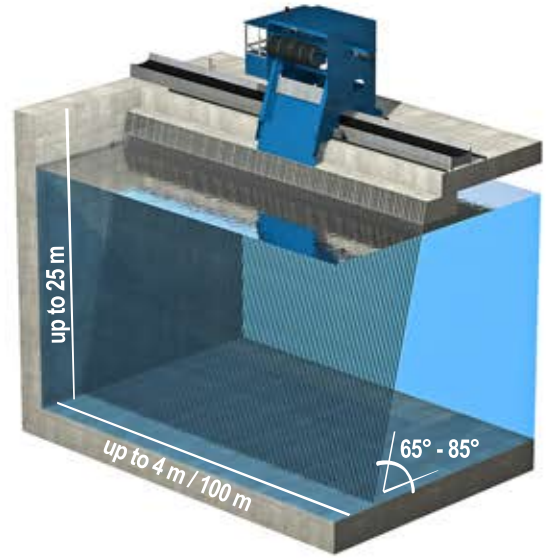
This trash rack cleaner with cable winch type RRS is available as either a moveable or stationary machine.

The cleaning rake is moved over the screen surface by means of an electric motor-driven lifting cable winch with two pull cables and a swivel cable. This allows even large lifting heights to be handled. Overload and slack rope conditions are reliably monitored.

The moveable machine of the type RRS-f is used to keep several intakes next to each other free of debris for unrestricted water flow. By means of a chassis with electric drive, it operates the various screen sections fully automatically.

Energy and signals are transmitted by means of an energy chain, which also ensures the protection of the cabling.

The following options are available for debris removal: conveyor belt, flushing channel, mobile container for exchange or with a flap bottom.



Automation and debris removal

Regulation and control

OSSBERGER trash rack cleaning systems are all equipped with an optional level difference monitoring system for automated operation. The control system is housed in a heatable cabinet, which is thus protected against condensation and is mounted directly on the trash rack cleaner. A colour touch screen allows easy entry of password-protected parameters in five languages.

For on-site electrical installation, only the supply line and the level difference control unit need to be connected.

The rake cleans either by manual start, timer function or when the set water level difference is exceeded. In the latter case, the levels in front of and behind the rake are monitored. If the depth measuring sensors attached to the rake detect a drop in the water level behind the rake due to the accumulation of too much floating debris, the level difference control automatically starts the cleaning process to maintain optimum screen performance.



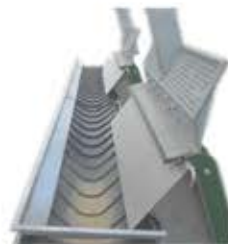
Debris removal

Trash debris can be removed either via a conveyor belt for recycling or a flushing channel.

For moveable systems, OSSBERGER also offers a mobile container, which optionally has a flap bottom for easy emptying.



flushing channel



conveyor belt



container

The OSSBERGER product range

Hydropower turbines up to 10 MW: Crossflow, Kaplan

Trash rack cleaning systems, also for large hydropower plants

Automation systems "OTmation"

For detailed offers, advice and information on our other products, please feel free to contact us.



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