

FSM® MultiRake Bar Screen

A heavy-duty bar screen for high flows and heavy solids
HUR & HUR αβ



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A heavy-duty bar screen for high flows and heavy solids

Meets the most demanding requirements and conditions

Treating wastewater starts at the headworks of a plant where solids can be removed before they interfere with the treatment process. Everything downstream operates more efficiently and at a lower cost if the solids have already been removed.

The FSM MultiRake Bar screen is designed to remove coarse and fine solids which eliminates the need for dual screening. These heavy duty screens are able to handle large flow while removing a high solids load. Multiple cleaning rakes clean the bar rack fast.

Principle of Operation

Tapered stainless steel bars are attached to the side frames of the screen. As flow passes through the screen, the fixed bars trap the solids. The bar rack is designed with the ability to replace single bars if necessary. The solids are then removed by a series of rotating rakes mounted on heavy-duty chain. The rakes begin to remove solids at the very bottom of the channel without the need for a channel bottom recess.

The revolving chain guide features a zero maintenance lower sprocket with a non-lubricating bushing, ceramic collar and GARMAX® bearing surface. The chain is fully contained within a stainless steel guide assembly throughout its entire travel path thus insuring the rake positively engages the entire bar field at all times. A simple chain tensioning adjustment completes the low maintenance features of the chain guide.

The rake teeth penetrate the bar openings removing the collected solids as they move up the bar rack. As the rake reaches the discharge point, an automatic cleaning device removes the solids. The return path of the rakes is on the upstream or dirty side of the bar field. This prevents any carry-over of screenings to the clean side of the channel.



Over 150 FSM MultiRakes installed worldwide.

Applications

- Wastewater pretreatment
- Secondary sludge screening
- Primary sludge screening
- Sea water screening
- River intake water screening.
- Pulp & Paper
- Textiles
- Food Processing
- Breweries
- Meat Processing
- Power Generation



Field assembly of long MultiRake Screen.



The next section is moved into place.



Final assembly and inspection of 180 foot screen.

Important Features

- High separation performance.
- Insensitive to grit and stones.
- Low dynamic headloss.
- Fast cleaning intervals.
- No solids carry over.
- Rakes return on the upstream (dirty) side of the screen.
- Multiple speed operation for rapid cleaning.
- Lower revolving or static cycle guide available.
- Tapered bar design.
- Capable of single bar replacement.
- Zero maintenance lower sprocket.
- Non-lubricating bushing with ceramic collar.



Covers with a view

Two Lower Guide Options



Revolving (recommended)



Stationary

Maximize Flow With the FSM® Multi-Angle MultiRake Bar Screen HUR αβ

Narrow channels with high flow can present a problem. The HUR αβ style screen creates a larger area in the channel with a smaller footprint and lowers the velocity through the screen. These features combine to promote better solids capture.

The multi-angle bar screen utilizes the same rake design as the standard FSM MultiRake except the bar field starts at 30 degrees extending to an 85 degree dead plate. This design is ideal for retrofit applications.



Specifications

Bar Rack Widths	2 – 19 feet
Bar Spacing	0.125 in. – 4 in.
Dead Plate	4 – 6 mm
Mounting Angle	60, 75, 85 and 90 degrees
αβ Mounting Angle	30/85 degrees

Materials of Construction

Frame & Bars	304 SS (316 SS optional)
Roller Chain	304 SS (optional 316 SS)
Rollers	PA 6 – 304 SS (316 SS optional)
Sprockets	Stainless steel

Note: Special corrosion resistant materials available for sea water or brackish water.