



TASK

The separation of solids from solids/liquid mixtures by means of a bar rack cleaned by multiple rakes within municipal or industrial wastewater treatment processes.

SOLUTION

The JOHNSON SCREENS® Multi Rake Bar Screen DEFENDER DUO offers you a machine with a revolutionary screen concept of coarse and fine screening in a single unit, which has been successfully tried and tested in the process technologies of wastewater treatment plants. The application of state-of-the-art laser cutting and 3D folding technology is the key to its production-optimised lightweight construction.

FUNCTION

The wastewater treatment is carried out by means of revolving rake elements which are transported over a chain guide assembly by roller chains. The JOHNSON SCREENS® Multi Rake Bar Screen DEFENDER DUO has good hydraulics as a result of its frameless bar rack installation. First step is the coarse screen that will handle the big solids, then small solids arrive in front of the fine bars panel and are removed by a cleaning rake and then conveyed to the discharge chute. A reverse chain mode simplifies maintenance and clogging monitoring.

PRODUCT VARIANTS

Depending on the gap width, the bar rack can be completed as follows:

- From 6 mm till 12 mm bar space = bar profile 6 x 40 mm
- From 15 mm till 80 mm bar space = bar profile 10 x 40 mm

DESIGN SIZES

- Channel width: 400–2,000 mm
- Channel depth: 400–10,000 mm
- Discharge height: customisable
- Gap width: 6–80 mm
- Installation angle: 75°–90°

BILFINGER WATER TECHNOLOGIES

JOHNSON SCREENS® Multi Rake Bar Screen DEFENDER DUO

BENEFITS

- Double screen solution:
 - coarse and fine screen in a single unit
- Gap widths possible up to min. 6 mm
- Low maintenance, low wear and tear due to:
 - maintenance-free stainless steel roller chain
 - no bearing below the waterline
 - cleaning without brush
- Bottom guides in S.S. material:
 - No bearing in contact with the effluent
- Lateral guides in HDPE high density:
 - chain always in axe with the frame
 - cleaning rakes always alligned on the axe of chain
- Removable panel bars:
 - each single bar can be removed separately
- Removable cleaning rakes:
 - each cleaning rake is bolted to the chain and can be removed for maintenance



MATERIALS

Frame, bottom chain guide, scraper	
frame, discharge chute, bar rack:	AISI 304L or AISI 316L
Chain, roller and links:	AISI 304L or AISI 316L
Scraper wiper and lateral guides:	HDPE
Sprockets:	AISI 304L or AISI 316L

OPTIONS

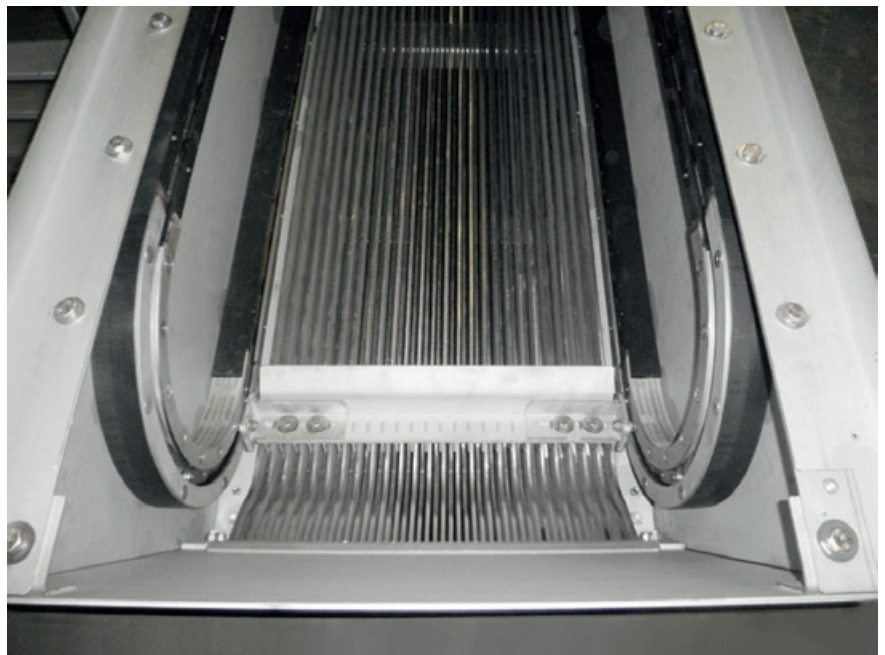
Control panel, level indicator (ultrasonic or electrode type)

APPLICATIONS & FIELDS OF OPERATION

The JOHNSON SCREENS® Multi Rake Bar Screen DEFENDER DUO is suitable for coarse or fine screening and can be employed in municipal or industrial wastewater treatment.

UNIQUE FEATURES

All the main parts of the JOHNSON SCREENS® Multi Rake Bar Screen DEFENDER DUO are bolted to grant an easy and fast maintenance without removing the screen from the channel. The DEFENDER DUO can be also installed in an angle of 90° to suit installations with limited space.



Water Technologies

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