

PRODUCT DATASHEET

Wastewater Headworks Screening Equipment

Coarse, fine and specialist screening for inlet works | eleven configurable product families

DATASHEET NO.

DS-YS-SCR-R03

ENGINEERING BASIS

11 TYPES

HEADWORKS EQUIPMENT RANGE

Coarse, fine, travelling, drum, micro-screen and grinder families address different solids duties.

1-300 mm

PUBLISHED OPENING RANGE

The required capture size is balanced against peak-flow head loss and screenings volume.

HYD.

CHANNEL DESIGN BASIS

Approach velocity, water levels, allowable differential head and bypass philosophy govern selection.

SOLIDS

SCREENINGS ROUTE

Discharge height, washing, compaction, conveying and disposal are defined with the screen.

CATEGORY OVERVIEW

YORA wastewater headworks screening equipment covers the first mechanical barrier at treatment-plant inlet works and water intakes through fine solids removal ahead of sensitive downstream processes. Selection begins with debris size and loading, then considers peak flow, approach velocity, allowable head loss, channel geometry, discharge route and operating philosophy. The eleven product families can be supplied individually or coordinated with conveyors, compactors, washing systems and local automation.



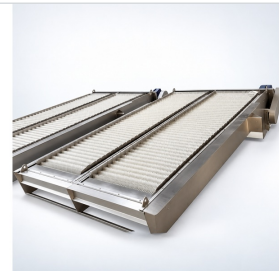
CLAW SCREEN

Heavy coarse-debris handling



TRAVELLING BAND SCREEN

High-flow continuous screening



MULTI-RAKE BAR SCREEN

Continuous fine screening



STEP SCREEN

Fine screen with self-cleaning



ROTARY DRUM SCREEN

Screening, conveying and compaction



CHANNEL GRINDER

In-channel debris size reduction

Representative, unbranded equipment views. Final dimensions, orientation, finish and accessories are project specific.

PRODUCT DATASHEET

Coarse & High-Capacity Screening

Debris interception for intakes, channels and pumping stations

PRODUCT FAMILY OVERVIEW

CS Claw Screen PRIMARY ROLE First-line coarse debris removal for deep, wide or multi-channel intakes. OPERATING METHOD A travelling hydraulic claw opens, lowers, closes on retained debris and transfers the load to the discharge point. INDICATIVE SELECTION Safe load 250-3,000 kg; claw width 1,100-2,500 mm; bar spacing 200-300 mm; screen angle 60-90 degrees. ENGINEERING DISTINCTION: One travelling cleaner can serve single or multiple screen channels.	MB Manual Bar Screen PRIMARY ROLE Simple coarse screening for small plants, intake sumps and low-screenings duties. OPERATING METHOD Fixed inclined bars retain large debris; operators remove accumulated material with a hand rake. INDICATIVE SELECTION Channel and bar spacing are project selected; standard inlet arrangements extend from compact packaged channels to approximately 2,000 x 2,200 mm. ENGINEERING DISTINCTION: Lowest equipment complexity and capital requirement where manual attendance is acceptable.
RB Rotary Bar Screen PRIMARY ROLE Automatic coarse screening for drainage and large hydraulic pumping stations. OPERATING METHOD A rear-mounted chain drives rake teeth upward along fixed bars and discharges debris by gravity to a chute or conveyor. INDICATIVE SELECTION Equipment width 2,500-5,000 mm; bar spacing 40-150 mm; channel depth 0.2-6.0 m; installation angle 70-80 degrees. ENGINEERING DISTINCTION: Large, rigid rake assembly handles bulky floating matter with overload protection.	CO Cable-Operated Bar Screen PRIMARY ROLE Heavy coarse screening for deep channels and high-volume debris loads. OPERATING METHOD Three synchronized cables guide a powered grab bucket down the fixed bars, then lift and scrape screenings into discharge equipment. INDICATIVE SELECTION Equipment width 1,000-3,500 mm; bar spacing 30-100 mm; channel depth 5-12 m; installation angle 60-90 degrees. ENGINEERING DISTINCTION: Large grab capacity and independent lifting / opening drives suit deep civil channels.
TB Travelling Band Screen PRIMARY ROLE High-flow continuous removal of fine suspended debris after coarse screening. OPERATING METHOD Linked screen panels form a continuous belt; captured solids are carried upward and washed into a discharge trough. INDICATIVE SELECTION Width 2,000-4,000 mm; aperture 3-10 mm; depth 0.5-20 m; maximum listed flow 2,350-5,050 m³/h. ENGINEERING DISTINCTION: Large screening area, multiple inlet arrangements and online self-cleaning.	GUIDE Coarse-Screen Selection PRIMARY ROLE Select the debris removal mechanism before fixing channel dimensions. OPERATING METHOD Manual raking suits low loads; chain-rake screens suit regular automatic cleaning; cable or claw systems suit deep channels and bulky debris. INDICATIVE SELECTION Confirm peak approach velocity, maximum differential level, screenings volume / density, lifting height, discharge route and redundancy. ENGINEERING DISTINCTION: Correct mechanism selection protects pumps while preventing unnecessary head loss and civil cost.

Indicative selection values support preliminary screening only. Additional sizes and channel arrangements are available on request.

PRODUCT DATASHEET

Fine, Continuous & Specialist Screening

Solids capture, washing, compaction and in-channel size reduction

PRODUCT FAMILY OVERVIEW

MR Multi-Rake Bar Screen PRIMARY ROLE Continuous automatic fine screening for municipal and industrial wastewater. OPERATING METHOD A closed rake-tooth chain moves upward through the channel; intermeshing teeth and rear brushes provide continuous self-cleaning. INDICATIVE SELECTION Nominal width 300-1,500 mm; bar spacing 1-50 mm; design velocity about 0.8 m/s; capacity selected by width and gap. ENGINEERING DISTINCTION: Compact, low-energy continuous capture across a broad opening range.	SS Step Screen PRIMARY ROLE Fine removal of hair, plastics and small debris after coarse screening. OPERATING METHOD Stepped stainless-steel panels lift screenings against the water flow; brushes or backwash assistance are included where applicable to the selected execution. INDICATIVE SELECTION Equipment width 500-2,000 mm; common apertures 3 / 5 / 10 mm; allowable flow velocity 0.5-1.0 m/s. ENGINEERING DISTINCTION: Modular panels can be replaced from the platform without underwater work.
CF Center-Flow Screen PRIMARY ROLE Compact secondary fine screening to protect downstream treatment and membranes. OPERATING METHOD Center-fed water passes outward through rotating panels; medium / high-pressure washing transfers debris to an internal hopper. INDICATIVE SELECTION Nominal width 1,000-2,000 mm; standard opening 2 mm; up to 800-1,650 m³/h at 1 m submergence; depth up to 15 m. ENGINEERING DISTINCTION: No submerged transmission components and plug-in screen panels simplify maintenance.	RD Rotary Drum Screen PRIMARY ROLE Integrated fine screening, conveying, washing and screenings compaction. OPERATING METHOD A drum installed at 35 degrees retains solids internally; rotation and spray cleaning feed an inclined screw for dewatering and discharge. INDICATIVE SELECTION Drum diameter 600-3,000 mm; typical gap 1-5 mm; channel depth 0.6-2.5 m; discharge height 0.8-2.0 m. ENGINEERING DISTINCTION: Fully enclosed solids handling limits odor and secondary contamination.
MS Micro Screen PRIMARY ROLE Fine suspended-solids separation for polishing and membrane protection. OPERATING METHOD A rotating micro-perforated drum retains particles; a scraper and backwash system clean the surface and discharge solids continuously. INDICATIVE SELECTION Drum diameter 600-1,500 mm; length 1,000-2,000 mm; 4-20 r/min; motor 0.75-3 kW; backwash 2.5-5 m³/h above 0.4 MPa. ENGINEERING DISTINCTION: Large filtration area in a compact, enclosed and continuously cleaned package.	CG Channel Grinder PRIMARY ROLE In-channel comminution where lifting and handling screenings at grade is undesirable. OPERATING METHOD Rotating drums guide debris to differential-speed cutters that reduce solids to approximately 6-10 mm for onward transport with the flow. INDICATIVE SELECTION Listed design flow 540-4,270 m³/h; double or single cutting arrangements; underground guide-rail installation. ENGINEERING DISTINCTION: Avoids conventional surface screenings handling where the downstream process accepts comminuted solids. Grinding reduces size but does not remove solids mass.

Final opening, hydraulic capacity and capture performance depend on the actual solids distribution, water level and approved channel design.

PRODUCT DATASHEET

Configuration, Scope & Final Selection

Project-specific civil interface and operating philosophy

SCREEN SELECTION BASIS

DESIGN FACTOR	INFLUENCE ON SELECTION	REQUIRED PROJECT BASIS
Solids profile	Determines coarse, fine, micro-screen or grinder duty	Debris type, minimum particle / fiber size, volume and density
Hydraulic duty	Sets clear area, screen width and number of channels	Average / peak flow, upstream and downstream water levels
Opening / capture	Balances protection level against head loss and screenings load	Required bar spacing, aperture or downstream protection target
Civil interface	Controls screen geometry and maintenance access	Channel width, depth, angle, discharge height and lifting route
Cleaning method	Determines manual, rake, wash, brush, drum or grab mechanism	Operating hours, staffing, redundancy and acceptable downtime
Screenings route	Defines chute, conveyor, wash, compaction or in-flow grinding	Disposal method, odor control, dryness requirement and downstream acceptance of comminuted solids
Materials / controls	Establishes service life and automation scope	Water chemistry, corrosion class, hazardous area and SCADA standard

TYPICAL CONFIGURATION & SCOPE

ITEM	AVAILABLE PROJECT CONFIGURATION
Construction	SS304, SS316, coated carbon steel, engineering plastics and wear-resistant alloy components according to model and duty
Drive and protection	Geared motor, hydraulic or cable drive; overload, shear-pin, torque / overcurrent and level-difference protection as applicable
Cleaning	Rake teeth, brushes, pressurized spray, medium / high-pressure wash, scraper or manual rake according to screen type
Screenings handling	Discharge chute, waste trolley, conveyor, washer, compactor, container or in-channel grinding
Control	Local panel, automatic timer / differential-level control, alarms, remote interface and duty / standby sequencing

STANDARD SUPPLY SCOPE	EXTRA OPTIONS
› Selected screen body, frame and cleaning mechanism › Drive unit and mechanical overload protection › Main supports and channel interface details › Local controls for supplied equipment › General arrangement and equipment documentation	› Screenings conveyor, washer and compactor › Washwater booster, strainers and spray headers › Platforms, handrails, guards and lifting equipment › Differential-level instruments and SCADA integration › Installation supervision, commissioning and training › Bypass / standby channel or manual emergency screen arrangement

INFORMATION REQUIRED FOR FINAL SELECTION

1 HYDRAULICS	2 CHANNEL	3 SOLIDS	4 PROJECT BASIS
Average / peak flow and operating water levels	Width, depth, angle, discharge and available access	Debris size, type, volume, density and capture target	Materials, controls, redundancy and disposal route

Published ranges provide preliminary selection guidance. Final hydraulic capacity, approach velocity, head loss, opening, dimensions, motor power, washwater demand, redundancy / bypass philosophy, guarding, access, applicable standards and screenings performance are confirmed from actual solids, channel conditions and client technical specifications. Non-standard additions are identified as Extra Options.