

YASHWANT

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Water Control and Treatment
Equipment & Solutions

Product Catalogue

Manual fixed Bar Screens

Static Fine Screens

Mechanical Trash Racked Screens

Mechanical Fine Screens

Belt Conveyers

Agitators

Clarifiers

Aerators

Yashwant Industrial Works Pvt. Ltd.

Manual Screens



The screen is typically installed in a pumping station or at the inlet of sewage or water treatment plants. The retained solids are then extracted by means of a cable driven manual raking system which lifts the solids outside the channel and discharges into a hopper.

To prevent material too coarse from reaching the travelling band screens, bar screens may be used in two stages where the first screen with wider bar spacing remove bulky solids; a second bar screen with smaller bar spacing then remove debris still coarse enough to clog travelling band screens installed downstream for finer screening.

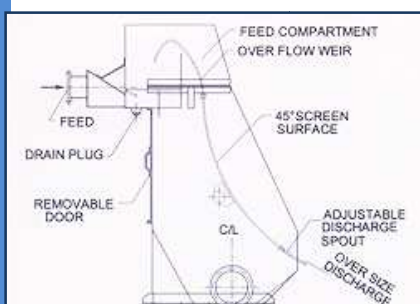
Filtration at the first stage of sewage water intake system is done by variety of Bar screens.

Bar screens can be categorized according to various properties:

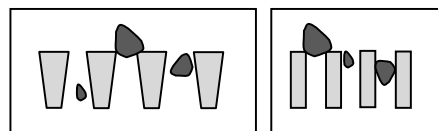
1. **Removable Type:** Screen can be removed & replaced from Frame.
2. **Fixed Type:** Screen is fixed to the channel or opening. This cannot be removed.

1. **Curved/ Hyperbolic Fine screen**
2. **Flat Fine Screen**

1. **Fine Screens-** Generally distance between two bars is
2. **Medium Screen-** Generally distance between two bars is
3. **Coarse Screen-** Generally distance between two bars is



1. **Wedge Type Bar Screen:** Easy to clean & lesser maintenance
2. **Straight/ Flat type Bar screen**

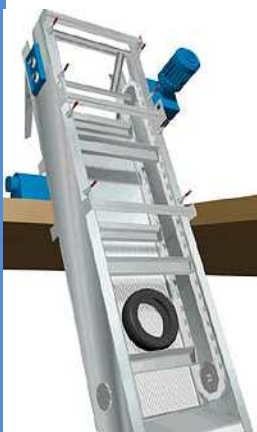


Static Screens are known for Low installation and operating cost & High capacity per unit area of screen.

Mechanical Bar Screens- Raked/ Linear Type



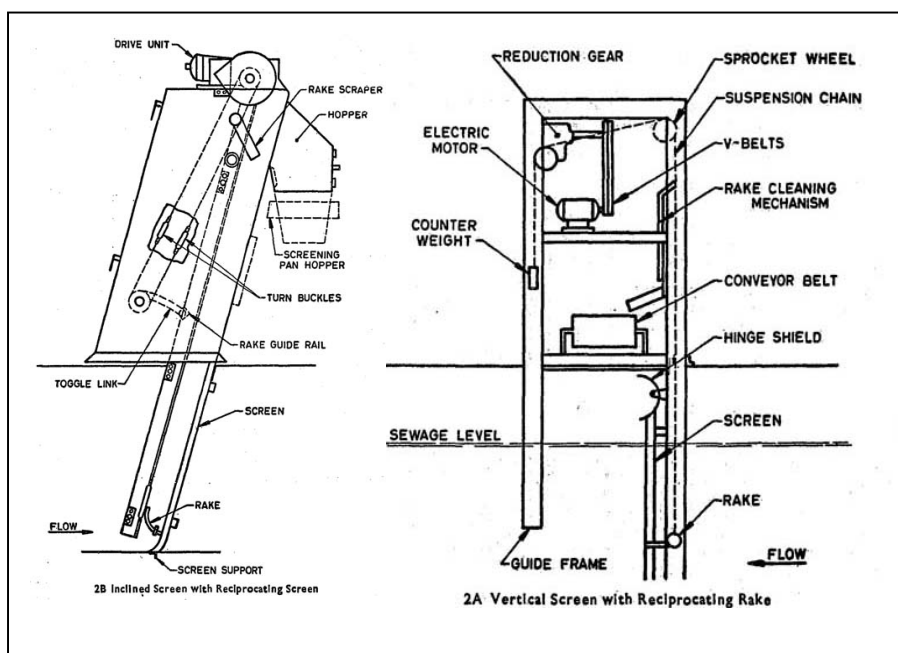
Mechanical screen with rakes of bar vertical way and linear in motion. They are installed in the wastewater channel with angle of 70 - 75°. The equipment consists of screen, motor-reducer, base frame, chain mechanism, rake and rake cleaning system. The motion is conveyed to the rakes with the help of the chain mechanism. Number of the rakes depends on to the depth of channel and in the consequence of the length of the screen.



The smooth running, endless track system employs a gear-driven cleaning rake to carry screenings from the submerged bar rack to a discharge chute for removal – without the use of chains, sprockets, cables or any underwater moving parts.

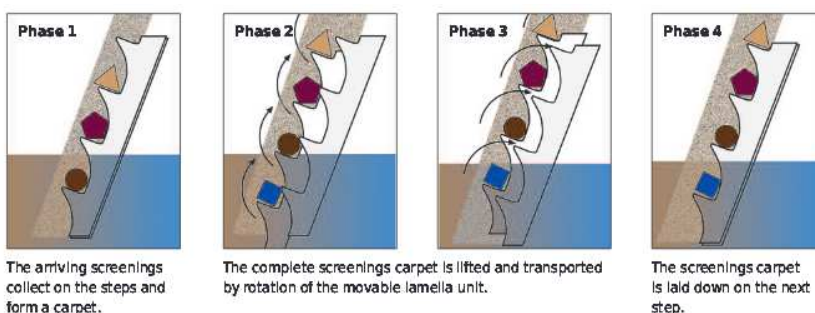
Applications- STP headwork: protect downstream equipment, Pumping stations; flood control; Water intake for remove large debris; Ideal for both municipal and industrial use.

Benefits: Above water operation, No submerged moving parts; Flexible & customized design, Heavy duty, wide range, Positive screening discharge.



Mechanical Fine Screens- Step type

The step screen consists of a series of stationary and mobile steps alternating with each other. As the effluent flows through the step screen, a screening mat develops along the surface of the screen. The mobile steps progressively lift the mat of solids along the inclination of the screen. On reaching the top of the step screen, the solids are discharged by gravity into a screw conveyor or similar device. The low-inclination angle ensures that a screening mat is retained continuously during the entire operation and prevents the roll down encountered in steeper screens.



operation and prevents the roll down encountered in steeper screens.

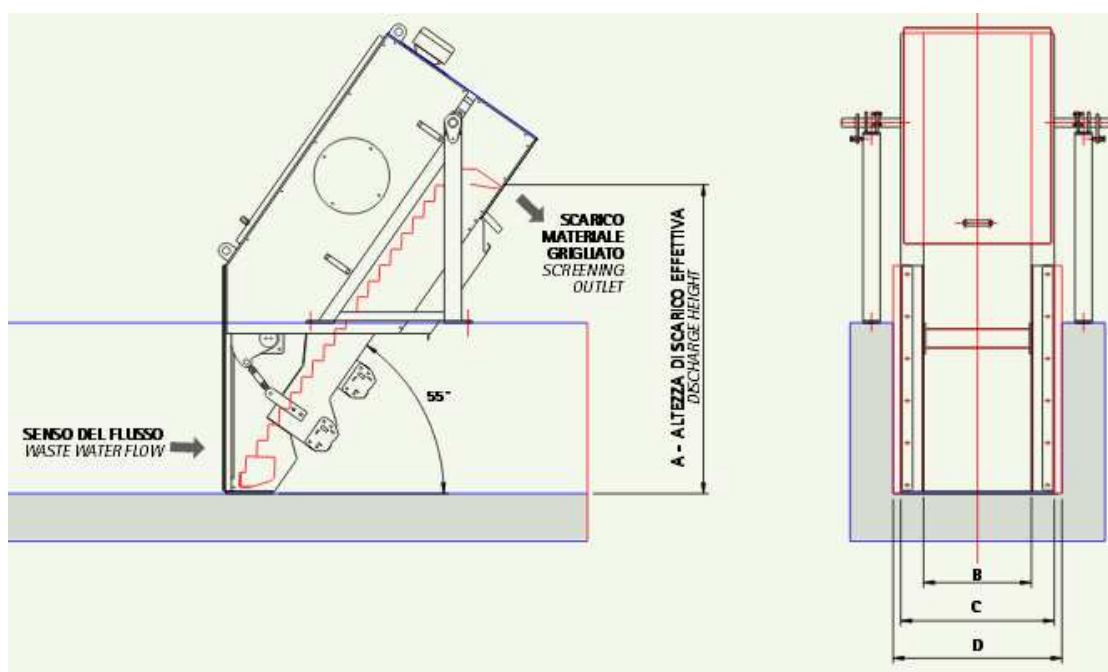
A consistent screening mat contributes to a uniform and high-solids capture rate. Step screen is capable

of handling flows of up to 23,775 gpm / 5,400 m³/hr through a single unit.

Applications: municipal waste water treatment plants, industrial waste water treatment plants such as: paper mill, slaughterhouses, food industry, fish industry, chemical industry.

Advantages: separation of non-biodegradable solids, floating or inorganic substances, self-cleaning screen, low operating costs, available also in stainless steel tank, with nozzles.

Yashwant



Belt Conveyers/Screen Conveyor



Belt Conveyors are used in treatment plants to carry away screened material, dewatered sludge or other materials to be disposed. Produced in desired length and width, Belt conveyors may have two or three rollers.

Product is equipped with slide preventing mechanism and shield that holds carried material against spill.

APPLICATIONS: Wastewater Treatment Plants; Compost and Incineration Plants; Glass, Ceramic and Mine Industry; Petrochemical Industry

MATERIAL: Chasis can be made of hot dip galvanized steel or AISI 304/316 stainless steel as well depending on customer's request. Conveying rollers are electro galvanized steel. Belt is made of nitrile rubber with 10 mm thickness and is durable against chemical reactions and friction. Scraper blade is made of high dense polyethylene (UHMW PE1000).

Screw Conveyers



Shaftless Spiral Conveyors follow the principle of traditional shaftless screw conveyor design. The shaftless spiral is driven by a direct drive without the need for hanger bearings. Lengths of up to 40m are achievable without hanger bearings. Our technology is in

the design of a very high tensile strength spiral which allows us to manufacture shaftless spirals of up to 700mm in diameter.



The shaftless spiral runs on either special ultra high molecular weight polyethylene liner with strong wear resistant properties. These are available with wear indicators. Alternatively for very abrasive material such as sand/grit stainless steel bars are used. The liners are long life and easily replaceable.

Agitators



Useful for poly-dosing tanks, electrolyte dosing tanks, lime dosing tanks

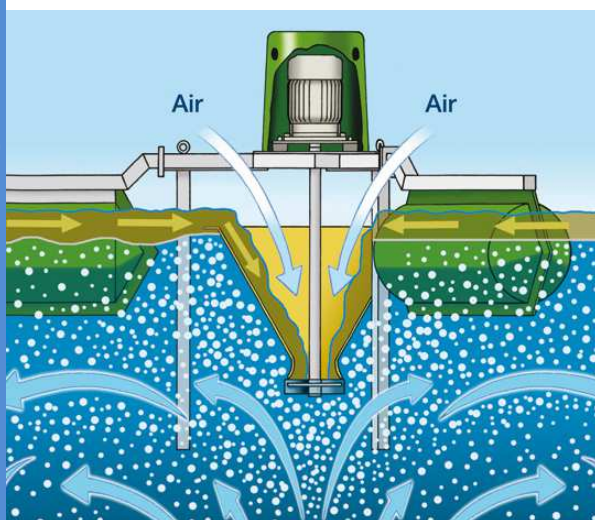
Alum dosing tanks & other chemical & agro processes.

With Crompton Greaves Motor, Elecon Gearbox agitators are available in SS 316, SS304, MS-EP, MS-FRP, MS-Rubber materials. The agitator's primary application is the processing of flowable mixtures in a low to medium viscosity range.

Aerators

Sewage sludge is highly reactive. Long-term storage may lead to septic conditions resulting in bad odors which bother not only residents.

The aeration of sludge limits the formation of odors caused by anaerobic bacteria. The sludge is kept fresh. Additional treatment of the off-gas is not required. The aerator provides for effective aeration and thorough mixing of the sludge and simultaneously controls the foam layer.



Thus capital costs are reduced. In case redundancy is needed several smaller units can be used. Basically the aerator consists of drive, foam cone and impeller. The rotating impeller sucks sludge from below and air or foam from above through the foam cone and swirls the mixture of both radially to the sides.

The unique design of the Aerator makes it very sturdy and low-maintenance. There are no bearings or seals in the immersed part and all submerged parts are made of

stainless steel or plastics. Aerator with Foam Control can either be mounted with a mounting bracket or on float assemblies.

Clarifiers

We manufacture both varieties: Peripheral and Centrally Driven Clarifiers. Our Yashwant Clarifiers are made from Single Internal Spur Gear with Cyclo Gearbox Drive to reduce power and maintenance requirements. Yashwant Clarifiers are easy to install and provide years of hassle-free and un-interrupted service to our clients. Our design is robust and indigenous, with easily replaceable spares and top-notch after sales and maintenance services.

Our clarifiers have been installed in Industrial and Municipal Sewage Treatment Plants throughout India and up to Tank Diameters as large as 40 Meters. Our Centrally Driven Clarifier has at its heart a 1200mm Diameter Spur Gear which provides prolonged service without breakdown and interruptions.

The clarifier tanks can be classified in two groups:

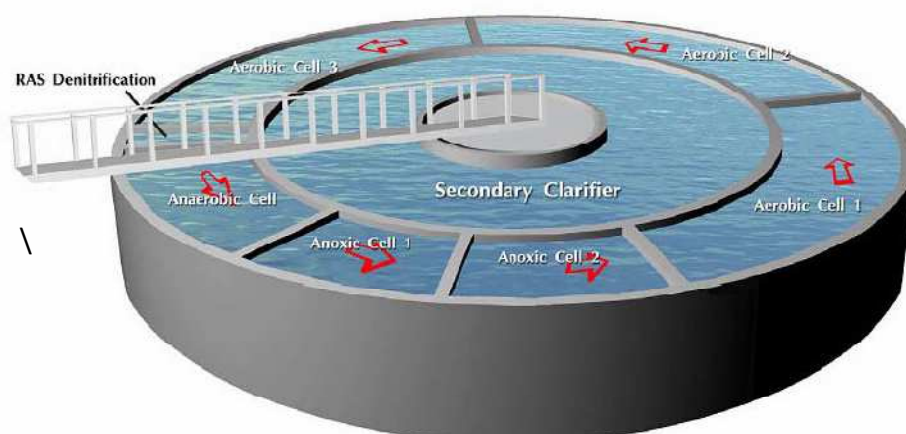
Mechanized and Un-mechanized

In an un-mechanized clarifier, the bottom of the tank is shaped like a funnel, with a steep slope. The sludge slowly settles towards bottom, and slides down the slope to collect at the lowest point of the funnel-shaped bottom.

In a mechanical clarifier, the bottom of the tank has only a gentle slope toward the center. The sludge settles uniformly across the floor of the tank. A set of slowly rotating rubber blades sweep the sludge into a hopper at the center of the tank.

Early torque ratings were based on the Lewis Beam formula, a criteria that considered tooth strength only. In the 1970's, specifications began to appear requiring that spur gear ratings be based upon AGMA standards, at that time AGMA 210 and 220 for spur gearing, and AGMA 440 for worm gearing. AGMA 210 brought durability into the rating equation. Since that time, AGMA 210 and 220 were combined into new standard AGMA 218, and later into ANSI/AGMA 2001. AGMA 440 evolved into ANSI/AGMA 6034. Throughout the evolution of Clarifiers throughout India, our gear drives have consistently evolved incorporating the best design practices and indigenous designs and concepts. Only suppliers such as us who have kept current with, and reacted to, the changing standards

can truly state that their gear drives are "Designed in full conformance with required standards."



Technical Specifications:**Size Range**

Yashwant Clarifiers are available for Tank Dimensions

Central Driven Version 5 – 10 Meters

Peripheral Drive Versions for 10 – 20 Meters & 20 – 40 Meters Ranges.

Housing

Cast Iron Grade FG : 200 in Single Part .

Gears

Flame hardened Cast Iron Spur Gears made with 10 Module teeth and compatible EN 8 Pinion.

Gearbox

Our Gearbox is Cycloid and provides more efficient and durable operation

Types

Peripheral and Central driven.

For Central Driven Clarifiers, Pedestals are provided for mounting of Clarifier unit.

Torque Limiters

We also provide Torque Limiters (Optional Variant) for monitoring the torque requirements of the Clarifiers with alarm facility in case of excessive torque being subjected on the clarifier drive.

Lubrication

Our clarifiers have completely oil-immersed Gears for extended gear life.

Bridges & Structural Their Designing

- Erection of Bridges have immense important in the working of a clarifier.
- We understand the vitality of designing and manufacturing bridge to mount our clarifier assembly. The bridge though as light as possible must also be as strong as possible.
- Hence we pay special attention to designing and manufacturing
- We have special consultants with expertise from Clarifier Manufacturing and Erection Field to design and analyze the Structural Design Aspects of the Bridges.
- Our Bridges are manufactured with highest safety standards and safety factors for withstanding high load & stress application at site.
- The bridges are designed so as to facilitate easy on site assembly and also provide for highest strength and structural stability.
- We have expertise in manufacturing full and half bridge structures which are easy to assemble , highly cost effective yet comprehensive in strength.