

SCREENS

Surface water often has large debris, such as sticks, leaves, fish, and trash, which clog water treatment systems. The primary function of screening is protection of downstream facilities rather than effective removal of solids from the plant influent. Debris collected on the screens has to be removed by rakes or similar devices and based on the method used they can be designated as hand cleaned / manual or mechanical. Screens can be further classified as coarse or fine screens based on the spacing between the bars of the screen.



Mechanical Grab Type Screen

The screen assembly consists of a main framework carrying the drive system and the screening discharge mechanism above deck level. The inlet channel below deck level consists of screen bar assembly through which sewage flows.

Models

Grab Type Screen

The bar assembly is vertical with spacing between the bars ranging from 10 mm to 150 mm depending on application.

The raking mechanism consists of tynes attached to a roller. A flexible chain enables the roller and tynes to rotate.

Curved Bar Screen

As the name suggests this screen consists of curved bars with spacing between bars ranging from 10 mm to 50 mm

The mechanical version has tyne rakes moving in a curvilinear motion getting engaged at the bottom of the bars and disengaged at the top, thus in the process removing the screenings. Special features include spring-loaded action for cushioning and feathering action over clogged materials and adjustable stroke of raking mechanism.

In the manual mode, a hand rake is provided to dispose the accumulated debris.



Mechanical Curved Bar Screen

Inclined Bar Screen

The inlet channel below deck level consists of a screen bar assembly of inclined bars through which the sewage flows. Screen bar assembly is designed in such a way that the space occupied is considerably reduced as compared to other bar screens. Bar spacing ranges from 10 mm to 30 mm.



Mechanical Inclined Bar Screen

Special Features of Screens

- Simple yet robust mechanism
- Special design facilitates to remove screen bars in separate bunches without disturbing the total assembly thereby making maintenance work easier
- No moving parts is continuously under water
- Complete reliability with minimum routine maintenance
- Designs for deep channel and shallow channel application available
- Fully automatic operation
- Rapid removal of screenings possible
- Suits all weather conditions
- A range of bar spacing is available to suit individual installations

Fine Screens

For fine screening applications, Voltas offers fine screens designed for shallow channels with perforated plates in place of screen bars and raking is done with the help of rubber scraper or nylon bristle brushes. The perforation size ranges from 2 mm to 10 mm in diameter

Size Range

Voltas has the capability to manufacture screens with the following size range

Grab Type Screen:	Width: 1 – 3 M Depth: 3 – 20 M or more as required
Curved Bar Screen:	Width: 1 – 2.6 M Depth: 1 – 2.6 M
Inclined Bar Screen:	Width: 0.5 – 2.5 M Depth: 0.5 – 3.0 M
Fine Screens:	Width: 0.5 – 1.0 M Depth: 0.5 – 1.5 M

Material of Construction

Mild Steel Epoxy Coated/ Galvanized/ Stainless Steel 304/ Stainless Steel 316

For more information contact:

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