

GRIT REMOVAL MECHANISM

(Detritor and Classifier Mechanism)

The grit removal consists of two essential elements- grit collecting mechanism and grit washing mechanism. Each operates separately but in hydraulic communication with one another.

The removal of grit is essential to

- Protect moving mechanical equipment from abrasion and accompanying abnormal wear.
- Reduce formation of heavy deposits in pipeline, channels, and conduits.



The grit collected is given a thorough washing and is delivered from the top of the classifier through a chute for further disposal.

The Organic Return Pump / Mixer returns the washed organic liquor lying in the classifier back to the detritor collection chamber.

Special Features

- Voltas make classifier has no bearings or moving parts under water. Hence maintenance required for the mechanism is minimal.
- Turning vanes at the inlet streamlines the flow across the tank.

Mechanism

The detritor is a continuous flow tank in which the grit settles due to gravity and the water overflows through the outlet weir on the opposite side.

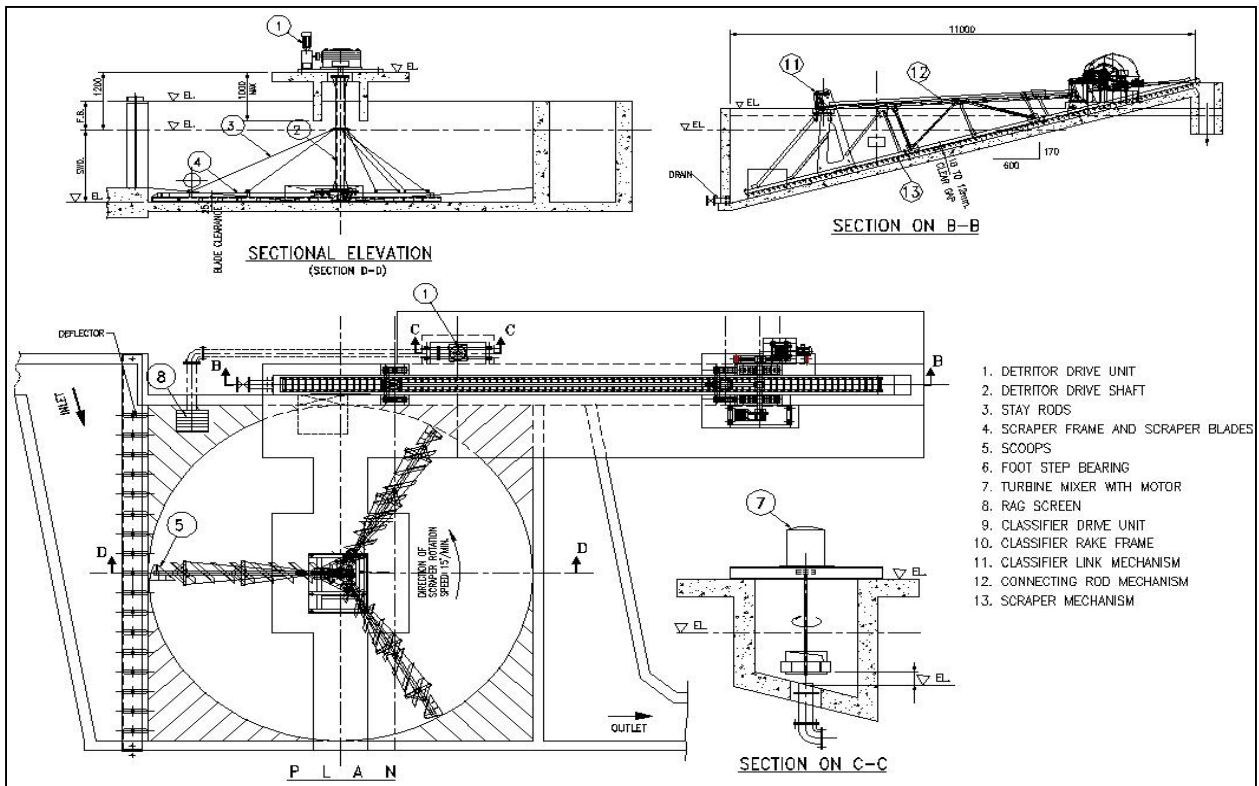
The settled grit is scrapped by means of a scraper mechanism towards the openings on the classifier sidewall at the bottom.

The collection chamber works on velocity principle and is so designed that only grit settles down and organic matter overflows.

The classifier mechanism consists of a reciprocating rake driven by a gear drive fitted with a motor.



Reciprocating Classifier Mechanism



Sectional Views of a Typical Detritor Classifier Mechanism

Performance

With an efficiency of 90%, Voltas' grit removal system is ideal for sand and grit particles with specific gravity of around 2.65.

Applications

Part of the primary treatment process, grit removal is required for sewage and wastewater applications

Size Range

Voltas has designed and installed grit removal mechanism for tank size from 3 m x 3 m to 12 m x 12 m.

Material of Construction (Under Water Parts)

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

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