



MECHANICAL SINGLE RAKE AND SHAFT DRIVE MINI SCREENS



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General Description and Intended Use

Mechanical single rake and shaft drive mini screens are mechanical equipment designed to grab big solid materials received with the domestic or industrial wastewater in the wastewater treatment plants. Thus, the cases such as blockage and malfunction in the pumps, valves and pipes are minimized and the pollution load of the wastewater is reduced and the treatment is performed with lower costs.

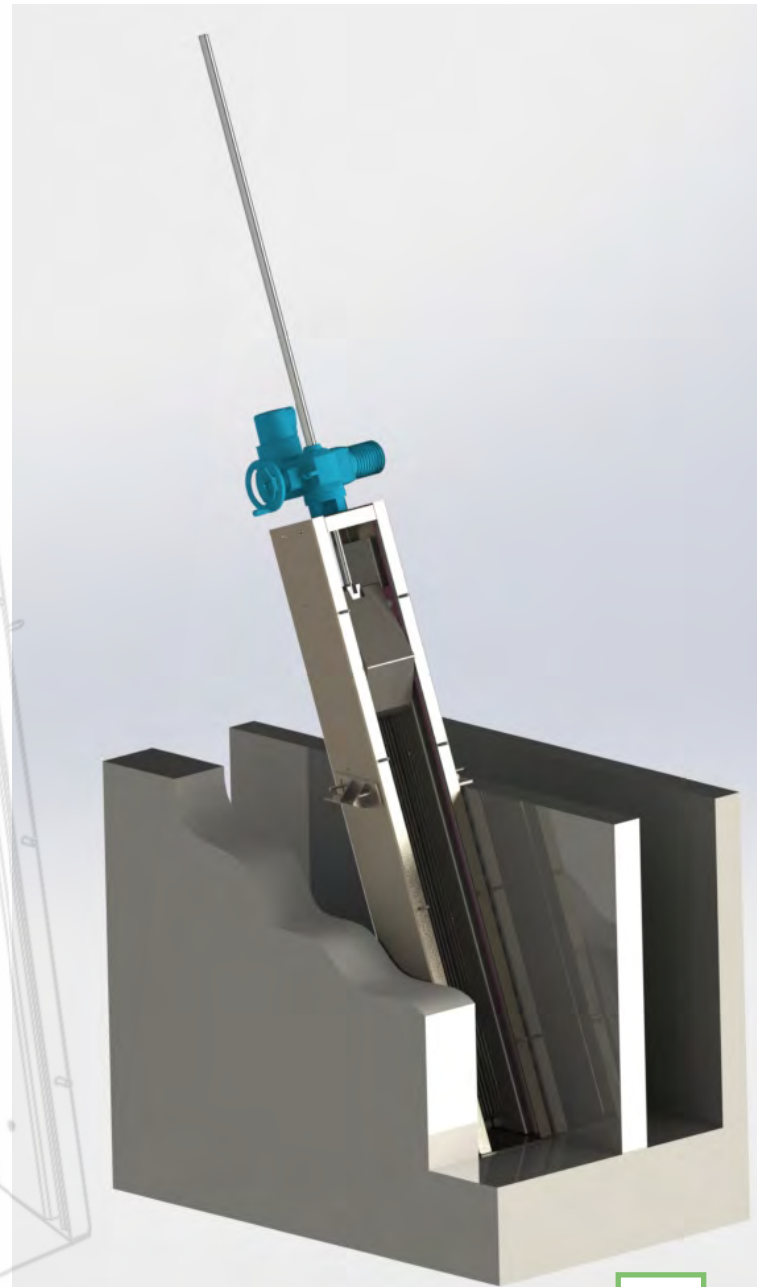
They are generally used in the inlet section of the plant. It is used to remove the solid materials of which particle sizes are larger than grab screen gap (10–30 mm in general).

Working Principle Of Equipment

They are mechanical equipment which rakes through and cleans the screen sheets assembled with an inclination of 60° – 70° at the bottom of the channel. The raking process in these screens are done by a scraper connected to a shaft driven by the drive group. Generally, it consists of a main frame, screen sheets, shaft, drive group and grab.

The grab assembled on the shaft driven by the drive group is moved downward in linear direction and when it reaches up to the bottom of the channel, the grab is closed and elevated and it carries up the wastes grabbed in front of the screen sheets. The wastes carried up with the grab are transferred to the waste collection container.

When the screen cleaning unit stops, the grab is parked at the top position and does not prevent the water flow.



Technical Specifications

- It is manufactured in any capacity and size.
- It is automatically operated depending on the water level in the screen channel or time without needing an operator.
- It is manufactured to serve for very narrow channels optimum.
- Thanks to its special design, the grab transfers the wastes between the screen bars to the waste container effectively.
- There are no movable parts requiring underwater intervention and maintenance.
- Thanks to the design of the grab, it is prevented the grabbed parts to fall into the pool.



Advantages

- *Comfortable Use in Narrow Channels,*
- *Compact Design in Desired Capacity and Size,*
- *Easy Transportation,*
- *Fast and Simple Assembling,*
- *Low First Investment Cost,*
- *Low Operation and Maintenance Costs,*
- *Possibility to Control and Follow the System Operation Over SCADA,*
- *Low Energy Consumption,*
- *Resistant Design,*
- *Long Operation Life.*

Material Details

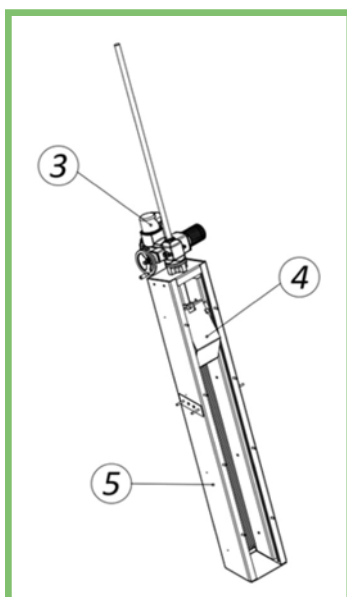
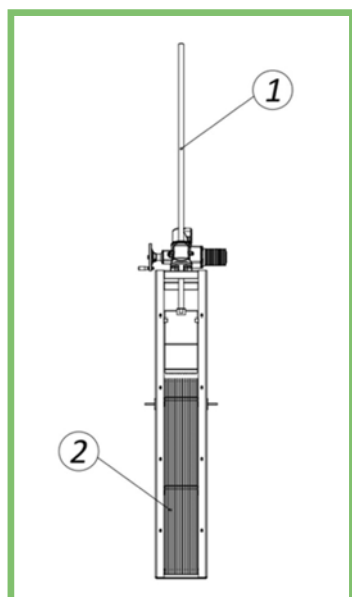
- Frame: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Sheet bars: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Grab Rake: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).

"Different materials can be preferred in accordance with the request of the customer."

Accessories

- Polycarbonate Shaft drive Protection Tube
- Waste Container*
- Emergency Button*
- Level Measuring Sensor*
- Local Power and Control Panel*

* **Optional accessories are defined.**



No	Part Name
1	Shaft
2	Screen Sheets
3	Drive Group
4	Grab Rake
5	Frame



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