

LINEAR GRIT AND GREASE CHAMBER UNIT SCRAPERS



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General Description and Intended Use

It is generally used to remove the grit and the oil received with the wastewater in the grit and grease retainer pools in the front treatment section of the treatment plants. The grits which can settle in the wastewater surface pollutants and the such as grease, grease etc. in the wastewater are removed from the system separately and the pollution load in the treatment plant is reduced. The blockage and breakdowns in the pump, pipe, valves and other equipment are minimized with the segregation of the grits from the wastewater. By reducing the pollution load in the treatment plant with the removal of the grease and grease, it helps to operate economical by reducing the energy amount and the consumption of the chemical materials.



Advantages

- Fully Automatic Operation,
- Possibility to Tracking and Check the System Operation Over SCADA,
- Resistant Heavy-Duty Design,
- Design According to Single or Double Pool,
- Long-Life Use,
- Design Suitable for Outdoor Operation,
- Easy Maintenance Possibility,
- Designing Surface Scrapers and Deep Scrapers According to the Sector,
- Grit Pump or Scraper Pallet Selection Option,
- Single Reducer Use with Shaft Instead of Double Reducer.



Working Principle Of Equipment

When the bridge starts to move, the scraper arms connected to the bridge get down and move with the bridge in longitudinal direction. The up and down movement of the surface scraper arms is controlled with switches. After the surface scraper gets down, the grit pumps or deep scrapers start to operate and the longitudinal scraper bridge starts to move forward. When the bridge moves to the scraping ramp, the surface scraper in the grease channel collects the dirt, grease, etc. pollutants on the surface of the wastewater and directs them to the scraping ramp. When the wastes collected by the surface scraper reach the scraping ramp, they are taken from the water surface and remove from the water. The grits settled at the bottom are collected with the grit pump or deep scrapers and transmitted to the grit classifiers. The movement of the bridge is stopped by the switch. Before the bridge starts to move in the opposite direction, the scraping arms are ascended with the help of the reducer. After the surface scraper is ascended, the longitudinal scraper bridge starts to move backward and returns to its initial position. After the bridge completes one tour and rests a period of time adjusted repeats the same loop and continues to operate.





Technical Specifications

- It is specially designed according to grit and grease channel size.
- All design loads and allowed deflections are calculated and manufactured according to the pool size.
- As a result of resistance calculations, the bridge frame is manufactured as pipe type on full metal sheet side wall, semi metal sheet side wall with guardrail or the type on the supporting beam with guardrail.
- The bridge guardrails also provide additional safety in terms of occupational health and safety.
- While the surface scrapers remove the pollutants such as grease and solid material etc., the grit at the bottom is removed by the grit pump or deep scrapers.
- In drive systems, a spinning warning sensors is used against cold weather and icing conditions.
- The whole scraper bridge is designed by considering the cabling system and cable routes on it.

Material Details

- Frame: They can be manufactured as S235JR (St52) + Hot Dipping Galvanized Coating, S235JR + Epoxy Paint, DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Underwater Material: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Wheel: It is manufactured as 1050 Tool Steel + Electro Galvanized.
- Rail: It is manufactured as S-Series Rail Steel + hot dipping galvanized coating.
- Walkway Grids: They can be manufactured as S235JR
 Hot Dipping Galvanized
 Coating, DIN 1.4301 (AISI 304)
 or DIN 1.4401 (AISI 316) or CTP.

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



No	Part Name
1	Frame
2	Cable Carriage Rail
3	Motor / Reducer
4	Grease Channel Surface Scraper
5	Scraping Ramp
6	Walkway Grids
7	Life Buoy Hanger
8	Jib Crane
9	Grit Scraping Pump
10	Bridge Wheel Rail
11	Bridge Stop Wedge
12	Bridge Stopper

Accessories

- Bridge Stoppers
- Reducer Stands
- Scraper Rope
- Spinning Switch
- Control Mechanism*
- Grit Pumps*
- Grease Sheets*
- Grease Channel Cleaning Systems*
- Bridge Stairs*
- Tube Diffusers*
- Life Buoy*
- Jib Crane*
- Torque Safety System*
- Coil Cable Carriage System*
- Electric Pans*
- Lighting Over the Bridge*
- Infrared Deicers*
- Emergency Button*
- Local Power and Control Panel*
- Cabling Systems*
- * Optional accessories are defined.



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