



Especialistas en mecánica de fluidos

## Sand Trap Bridge



### INTRODUCTION:

The **scraper bridges** for rectangular sand collectors manufactured by **FILTRAMAS, S.A.** have been designed to extract sand and grease effectively.

The mechanism consists on a bridge that can be moved longitudinally to allow the sweeping scrapers to move vertically. The bridge is moved by means of double flange wheels that roll on rails located at the ends of the sweeping bridge.

Normally, this process is aerated by blower units that help to ensure the correct demulsified of the grease. Substances with a specific weight lower than water float forming a surface layer. In this way the grease is retained and removed by the squeegee. The sands that are deposited on the bottom are extracted by a pump for further treatment in a sand classifier; the fats and floats are sent to a fat concentrator and the water is returned to the primary decanter.

### DESCRIPTION:

The sweeping bridge for the sand collector channel consists of the following elements:

- **Structure:** The structure of the mechanism is a platform on the tanks mounted on two driving carriages located on the outer walls. The structure is made up of commercial profiles reinforced with cross braces. The carriages are constructed of profiles mounted under the main bridge. Access is provided at one end of the platform. The platform surface has been designed with removable galvanized TRAMEX-type flooring, to allow free access to the different lubrication points, anchored to the profiles that form the bridge.
- **Suspension:** The machine is supported on the outer walls by double flanged wheels mounted on bearings. These bearings shall be mounted on racks of trolleys. The double flange wheels must be designed in such a way that the machine is centred on the rail to absorb temperature-related contractions.



Especialistas en mecánica de fluidos

- **Diving Gearmotor Group:** The translation movement is established by means of a drive unit made up of a gearmotor. On the output shaft of the gear unit, the transmission rods are mounted on bearings and connected by means of detachable couplings. At the ends of these bars the drive wheels are stuck.
- **The scraper lifting/lowering unit:** The movement of the scrapers is carried out by means of a motor reducer of suitable power that drives the lifting and lowering of the scraper by means of a spindle and threaded nut.
- **Electrical transmission system:** The transmission is usually carried out by means of a power supply curtain.
- **Sliding rails:** The rails shall be of the trolley type. Anchors are provided at regular intervals for fixing to O.C. using anchor bolts and fixing clamps.
- **Sweeping scrapers:** Sweeping scrapers shall be made up of profiles and commercial plates which are suitably joined together. These parts shall be subjected to an anti-corrosion treatment. The scrapers will be finished off with 10 mm thick neoprene strips protruding approximately 50 mm from the metal parts.

### GENERAL DIMENSION:

