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BOTTOMSCRAPE HBS

BOTTOM SCRAPPER

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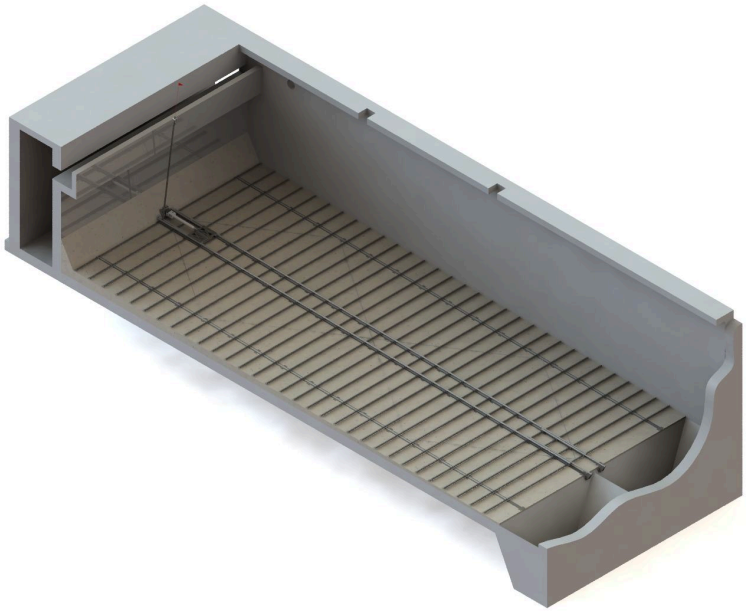

Bottom scraper HBS with submerged drive unit

MAIN CHARACTERISTICS AND APPLICATIONS:

- one construction with only few moving parts
- low maintenance costs
- continuous sediments removal
- noninterruptible sedimentation
- resistant and strong
- easy adaption in existing reservoirs
- thickening of sediment
- for treatment of complete bottom area
- available with submerged and wall-mounted drive

OPERATING PRINCIPLE

The HBS Bottom Scraper is designed to continuously remove sediment from settling tanks, including sand traps. It operates based on the reciprocating movement of its profiles, creating hydrodynamic conditions that facilitate the transport and removal of sediment. The scraper profiles feature concave surfaces to move sediment towards a designated pit or evacuation area during the forward stroke. During the return stroke, wedge-shaped profiles slide underneath suspended sediment layers. This reciprocating motion ensures continuous sediment transport without disrupting the sedimentation process.

DESCRIPTION OF THE DEVICE

Scraper Profiles: The scraper consists of interconnected profiles welded together to form a unified unit. These profiles are designed to create hydrodynamic conditions for efficient sediment removal.

1. **Power Source:** The scraper is powered by a hydraulic system, offering flexibility in both installation and operation. The hydraulic station can be positioned in a location convenient for the client, allowing for greater adaptability and ease when retrofitting existing reservoirs.
2. **Movement Mechanism:** The scraper profiles move back and forth within the settling tank, effectively serving as a mobile bottom. The reciprocating motion is optimized to transport sediment towards a designated evacuation area.
3. **Sediment Compaction:** As the scraper moves, it also effectively compacts the sludge, further enhancing sediment removal efficiency.
4. **Hydrodynamic Design:** The scraper profiles feature a hydrodynamic design that promotes the efficient movement and removal of sediment. Concave surfaces facilitate sediment transport during the forward stroke, while wedge-shaped profiles slide underneath suspended sediment layers during the return stroke.
5. **Adaptability:** The scraper can be easily adapted for use in existing horizontal settling tanks, offering versatility in installation and retrofitting.
6. **Flexibility:** The scraper's design allows for flexible hydraulic station placement, accommodating variations in tank width and orientation. It can operate effectively whether sediment is pushed towards the pit or pulled up.