

SCRAP-VAC

THE SUCTION-TYPE SLUDGE COLLECTOR



SCRAP-VAC

THE SUCTION-TYPE SLUDGE COLLECTOR

Overview

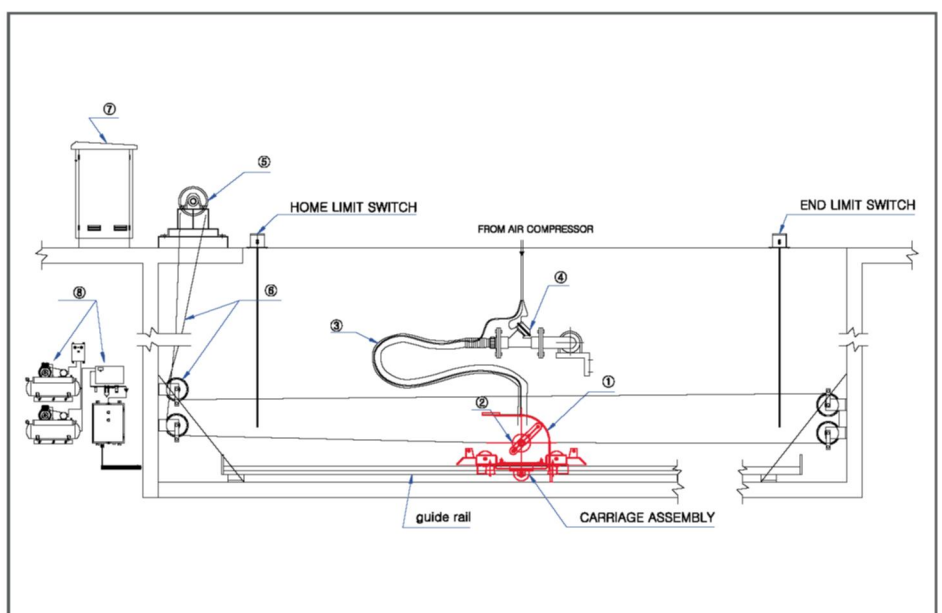
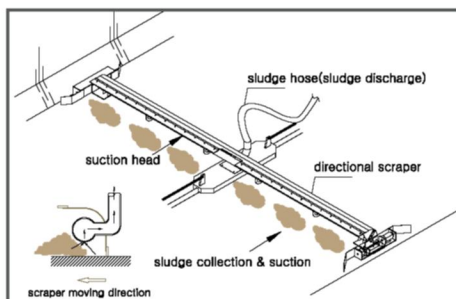
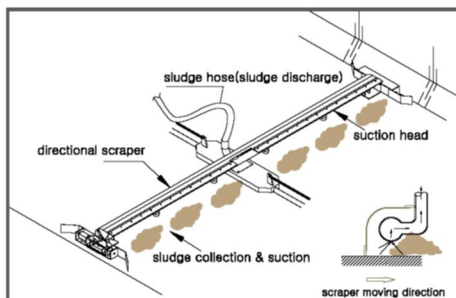
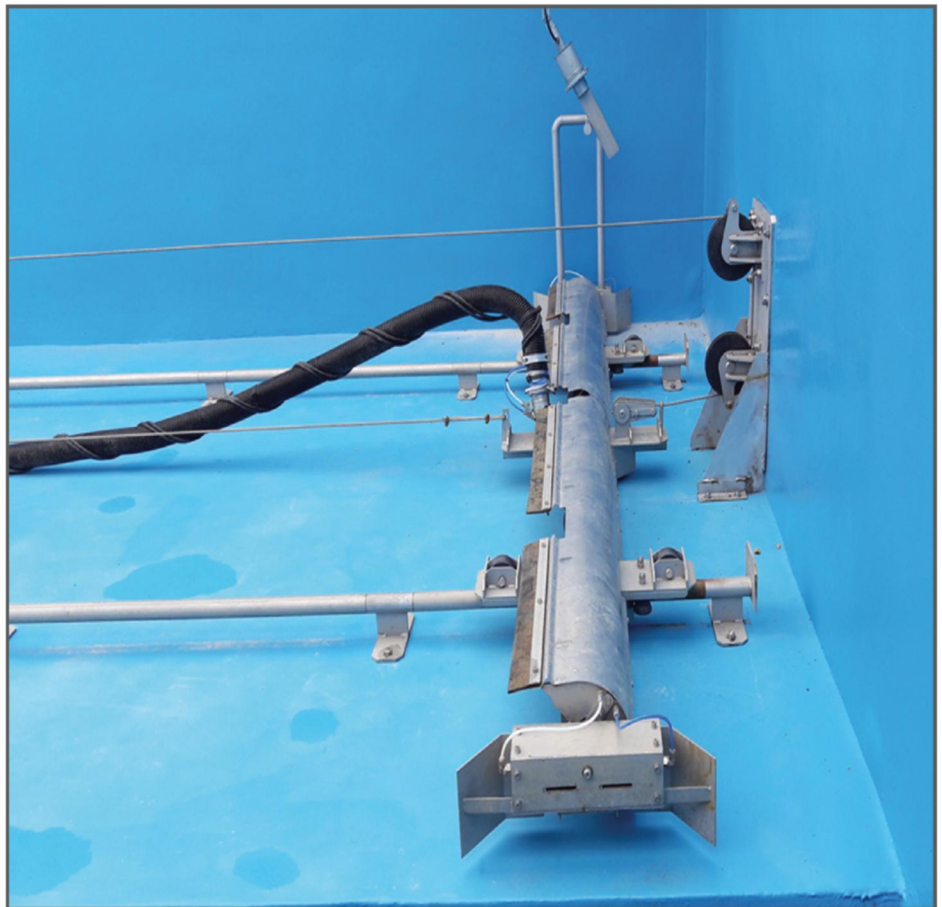
This suction type sludge collector forces collection and discharge of sludge intermittently or continuously, significantly improving the issues of conventional vacuum suction sludge collectors.

The sludge collector is designed to collect and discharge intermittently or continuously, while setting the operation mode based on the amount of sludge produced and enabling process operation according to the conditions of a sediment basin.

Principle of Operation

Installed at the lower part of a sediment basin, this sludge collector moves in two directions with a built-in scraper for sludge collection and a discharger.

The sludge collecting scraper is in an "L" shape and rotates 90 degrees from the discharging pipe to collect sludge according to the direction of the collector while removing sludge intermittently or continuously, according to the amount of sludge accumulated using the suction power created based on a self-suction pump or siphonage.



Sludge Collector & Discharger

Installed at the lower part of a sediment basin, the sludge collector moves in two directions to collect and discharge sludge with a built-in scraper which changes its form based on the direction of its movement for a more effective collection and discharge of sludge.



Sludge Discharging Hose

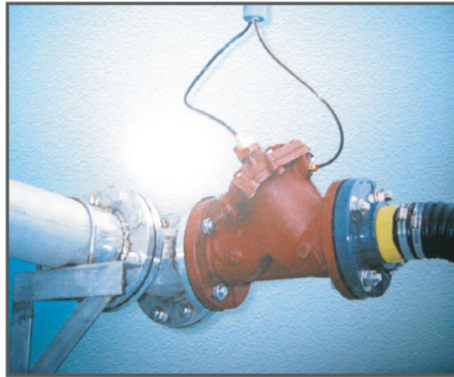
Made of high-density polyethylene with a specific gravity of 0.93 or higher, the sludge discharge hose is designed to discharge sludge from the sludge collecting and discharging unit and has a corrosion resistance and durability that can withstand 1 atmospheric pressure or less. Its exterior is in the shape of multi-layered creases for better flexibility whereas the interior is made of smooth PVC to minimize the loss of head.



Pneumatic Sludge Valve

Connected to the sludge discharge hose, the sludge discharge valve is designed to serve as a check valve.

It is a pneumatic Y-shaped diaphragm type made of cast iron and each valve is made of buna. The valve closes by spring power and stays closed normally. Each valve works as a check valve when air pressure is lost.



Drive

It connects the sludge collecting and discharging unit to the wire rope and operates them in two directions and is designed to adjust the speed of movement (0.2~2m/sec) by identifying the position of the unit.



Position Detection Sensor for Sludge Collection & Discharging Unit

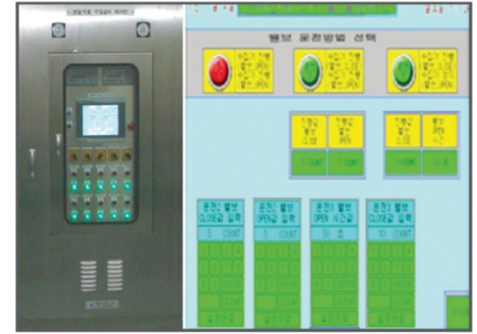
It connects the sludge collecting and discharging unit to the wire rope and operates them in two directions and is designed to adjust the speed of movement (0.2~2m/sec) by identifying the position of the unit.



Control Panel

It is a fully automatic control panel using PLC and built-in control units for system operation.

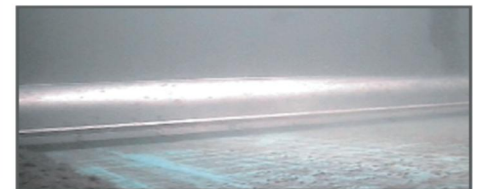
The control panel is designed to control the speed and direction of movement and discharge mode



Assessment of Sludge Removal Performance



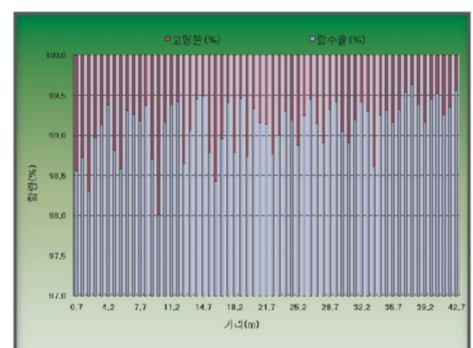
Before Removing Sludge



After Removing Sludge

Assessment of Moisture Content in Discharged Sludge

- 2m from the feed of a sediment basin - Moisture content(avg) : 98.64%
- From 2m to the release of a sediment basin - moisture content(avg.) : 99.15%
- moisture content(avg.) of discharged sludge : 99.11%



Features

- Small-sized sludge collection facilities
(Reduce the size of facilities with built-in collecting and discharging unit due to small collection, small discharge.)
 - Discharge hopper and sludge valves are not required
-
- The speed of movement and discharge mode can be controlled according to the season or distance of a sedimentation basin.

Benefits

- Improved stability of sedimentation water stream and reduce the power cost
 - Reduce the initial installation costs and maintenance costs.
-
- Improve the applicability of the collector based on the conditions of the sludge settlement.
 - Secure more stable moisture content in discharged sludge.
 - Reduce the load on the linked process by ensuring smaller discharged amount.



동양수기산업(주)

DongYang Water Technologies Co., Ltd.

ISO 9001:2008 Certified

ISO 14001:2008 Certified

Quality Management System

www.dowatech.kr

📍 672, Samyang-ro, Gangbuk-gu, Seoul, Republic of Korea

☎ Tel) +82 2 996 9231 Fax) +82 2 996 9233

E-mail : dowatech@dowatech.kr