

# sismat

**EFFICIENT SYSTEMS FOR REMOVING SOLID WASTES**

**Scrapers  
Thickeners**



## EFFICIENT SYSTEMS FOR REMOVING SOLID WASTES

Scrapers, which are used in repressing sedimented, thick substances that float from the water treatment plant, can also be used at several phases of water purification:

- Sand and oil separation
- Pre-sedimentation
- Final sedimentation
- DAF (Diffused Air Floatation)
- Sludge thickening





## EFFICIENT SYSTEMS FOR REMOVING SOLID WASTES

Sismat provides many alternatives for all sorts of different bridges, with circular or longitudinal scrapers that are designed according to the tank's geometry.

Scrapers can be grouped in terms of bridge lengths and types, scraping types, and modes of operation:

**a. According to bridge type**

- Profile
- Panel
- Cage
- Pipe
- Box

**b. According to scraping types**

- Suction
- Shield
- Picket fence

**c. According to bridge height**

- Full scale
- Half scale
- 3/4 scale

**d. According to mode of operation**

- Central driven
- Peripheral driven
- Linear





Simat designs its scrapers, based on thorough static calculations and its engineering expertise. The appropriate calculation of sludge load and mass, leads to a strong and reliable work process. As a result, the dead points in the sedimentation tank or the thickening tank are eliminated.



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## SCRAPERS



### **Longitudinal Scrapers – SDS**

Longitudinal scrapers are designed for use in sedimentation tanks with a rectangular section and they conform to DIN 19552/1 provisions. This equipment scrapes the sludge or sand longitudinally, and transfers it to the sludge collection hopper at the end of the tank. At the same time, the surface scraping palettes carry the foam or the oil to the discharge point at the opposite side.



Longitudinal scrapers are generally composed of the following parts:

1. Bridge
2. Bogie
3. Surface scraper
4. Bottom scraper
5. Travel paths
6. Electric feeding system
7. Electric control panel





## **Circular Scrapers – DKS/SKS**

Circular scrapers are generally composed of the following parts:

1. Bridge
2. Drive group
3. Surface scraper
4. Bottom scraper
5. Central bed
6. Sluice (channel lock) and diver curtain
7. Electric control panel



The peripheral driven rotating bridge scrapers (DKS) are composed of the following parts:

1. Bogie
2. Brush collector
3. Deflector

On the other hand, only a special lower bed is added to the main components of the central driven fixed bridge scrapers (SKS).



## THICKENERS



### **Thickeners – DKY/SKY**

Thickeners increase the density of solid wastes coming from water and wastewater treatment, and transmit it to the dewatering plant. The higher density of the sludge results in the reduction of the sludge flow and the size of the dewatering plant.

After the thickening process, the density of the sludge is 2-5 times higher, compared to its prior state.

Thickeners are generally composed of the following parts:

1. Bridge
2. Drive group
3. Bottom scraper
4. Main shaft and handles
5. Main bed
6. Sluice (channel lock)
7. Electric control panel
8. Picket fence



### PRE-TREATMENT EQUIPMENT

- Screens
- Screening Compactor
- Grit Classifier

### TREATMENT EQUIPMENT

- Screw Pump
- Surface Aerators
- Scrapers
- Thickeners
- Flow Control Devices

### DEWATERING EQUIPMENT

- Pre-dewatering Belt
- Beltpresses
- Filterpresses
- Chemical Preparation and Dosing Units

### PACKAGE TYPE BIOLOGICAL TREATMENT PLANT

- BIOPAK

### FILTRATION UNITS

- Pressure Sand Filter
- Ion Exchanger
- Activated Carbon Filter

### OTHERS

- Screw Conveyor
- Belt Conveyor
- Double Shaft Mixer
- Container Station
- Oil and Grease Separators

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