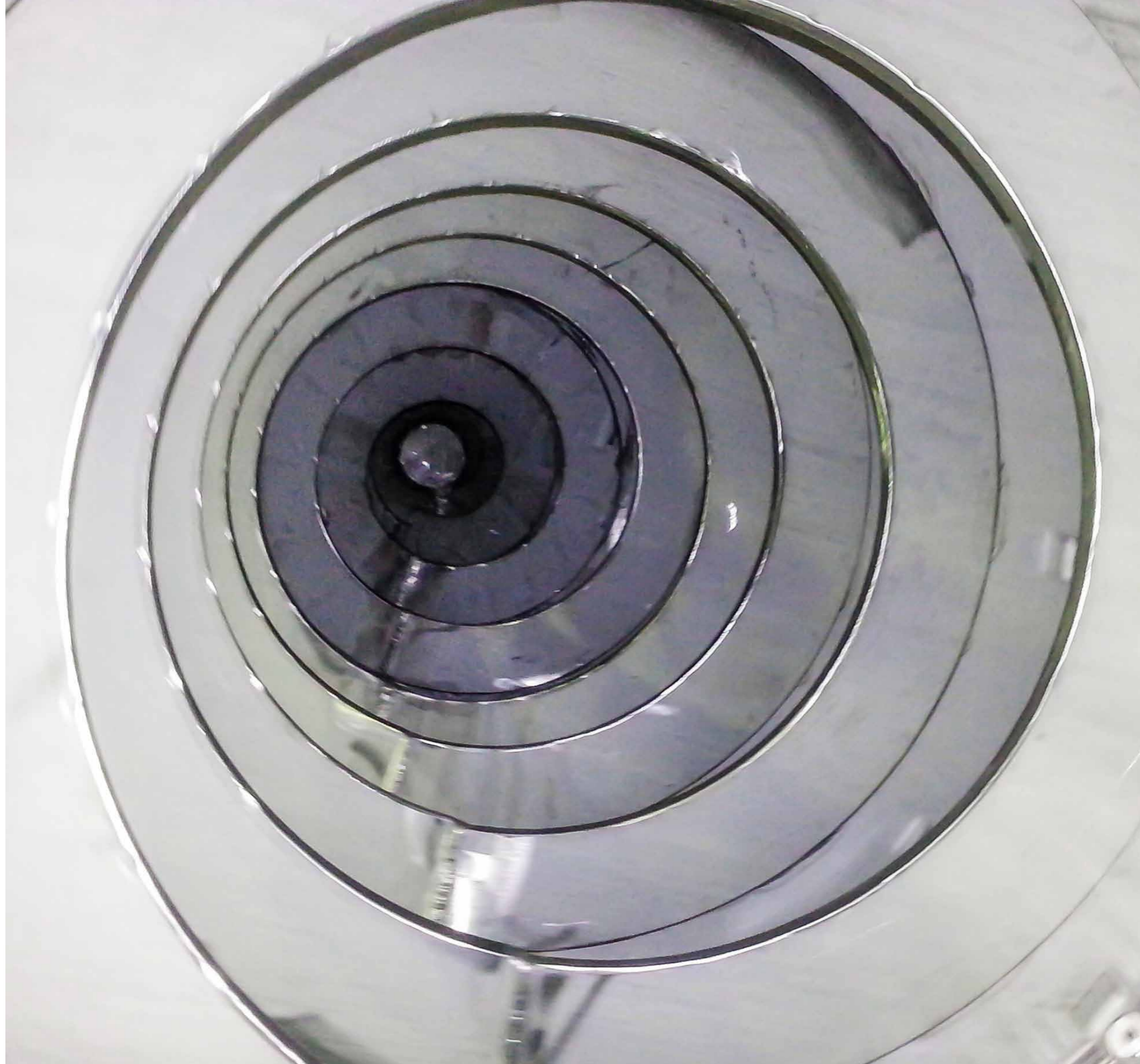




Sismat Uluslararası
Arıtma Makinaları
İnşaat Mühendislik
Sanayi ve Tic. A.Ş.



SCREW SCREENS



SCREW SCREENS

Screw screens are the model of fine screens which are generally used in the narrow channels. They are especially preferred in some industries such as brewing industry, textile industry, slaughterhouses, paper mills, etc. This type of fine screen system is a high-efficient system which protects the following equipment and enhances plant operations by removing solid wastes from treatment processes.

Screw screens can be mounted at low angle according to wastewater channels or wherever they are placed. Screen filter type can be manufactured as perforated or wedge-wire. Screenings are moved up by a screw conveyor or removed from the system by a screen press. The mechanism works as time-controlled, level-controlled, or both time and level-controlled.

Sismat Uluslararası provides two types of screw screens:

- **Basket screw screens**
- **Rotary drum screw screens.**



BASKET SCREW SCREENS

Basket screw screens are designed for small and medium-sized plants. The main purpose is to achieve the maximum solid-liquid separation efficiency and provide reliable operation of following units.

Sismat Uluslararası Basket Screw Screens are mainly composed of basket screen (can be preferred as wedge-wire or perforated plate), washing system, transportation system (screw conveyor), integrated compaction unit and dewatering system.

They can be preferred as directly channel-mounted or tank-mounted.

FEATURES AND BENEFITS OF SISMAT ULUSLARARASI BASKET SCREW SCREENS

- Economic and high-efficient system
- Automatic cleaning mechanism
- Modular design
- Quick and easy installation
- Silent operation
- Low investment and maintenance cost
- Low energy consumption

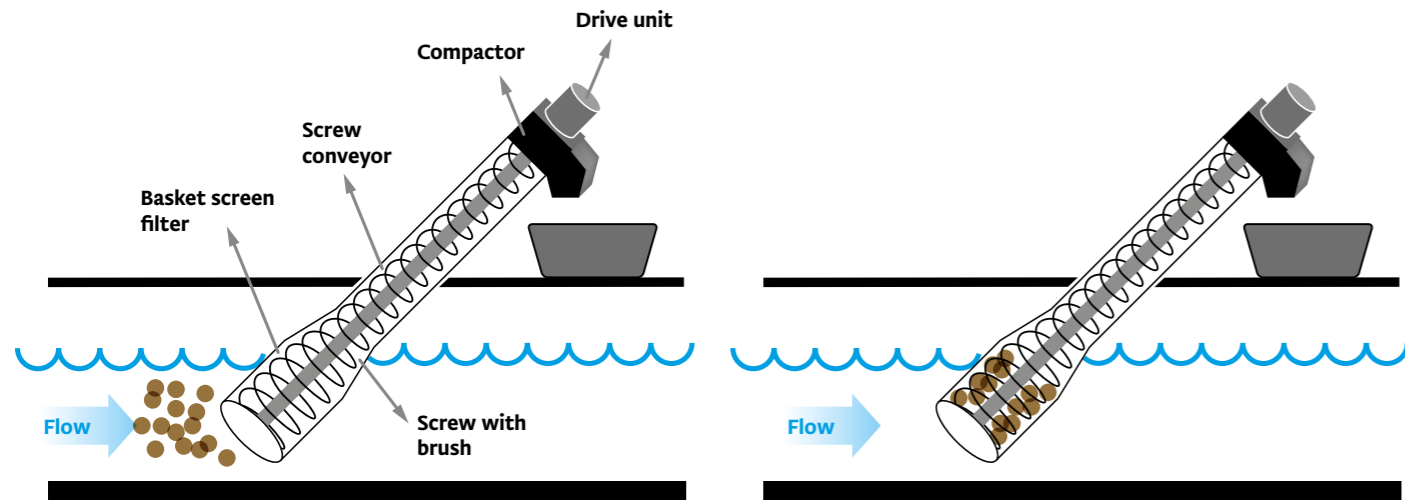
APPLICATIONS

- Water treatment plants
- Municipal wastewater treatment plants
- Industrial wastewater treatment plants
 - Brewing industry
 - Textile industry
 - Slaughterhouses
 - Paper mills etc.
- Intake structures
- Pumping stations

WORKING PRINCIPLE

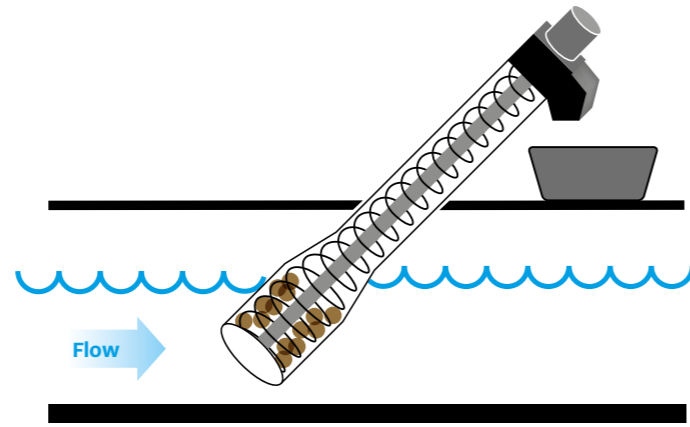
Water flow enters the system in the lower and open end of the basket which can be manufactured from wedge-wire or perforated plate, and passes through the cylindrical screen filter while solids are retained on the interior side of filter surface. Because of that reason, the filter surface gets blind over time and blinding of the surface generates an additional filtering effect. After a while, the screen needs to be cleaned. Therefore, cleaning mechanism starts to operate and a screw moves up the screenings. An additional cleaning is achieved by the brushes fitted to the screw flights.

A screw conveyor is used to transport the screenings through a closed and inclined pipe. It allows to dewater and compact them without any odour problem. At the end, the screenings are dropped into a container or a subsequent conveyor unit.



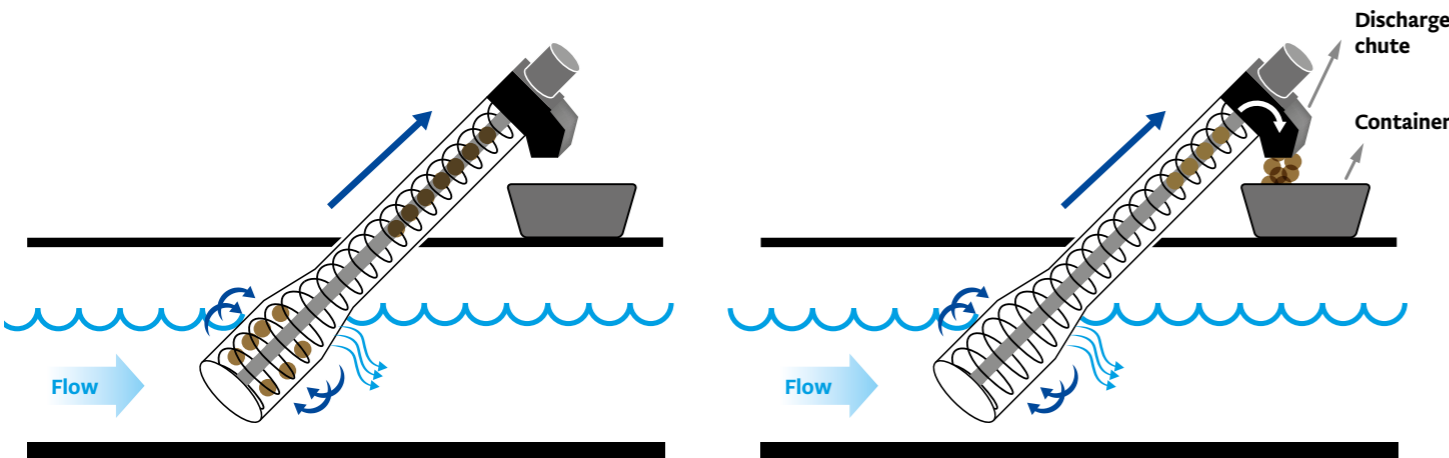
1

Water flows through the channel and brings solid materials with it.



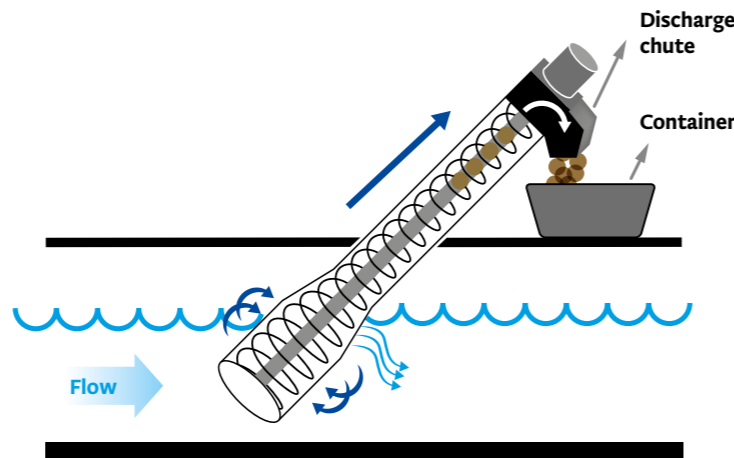
2

Solid materials are captured by the basket screen filter. It causes a clogging on the screen surface and screening efficiency decreases by time.



3

The cleaning mechanism starts to operate and elevates the screenings by means of helical movements.



4

At the end, the compacted and dewatered screenings are dropped into a container or conveyor.

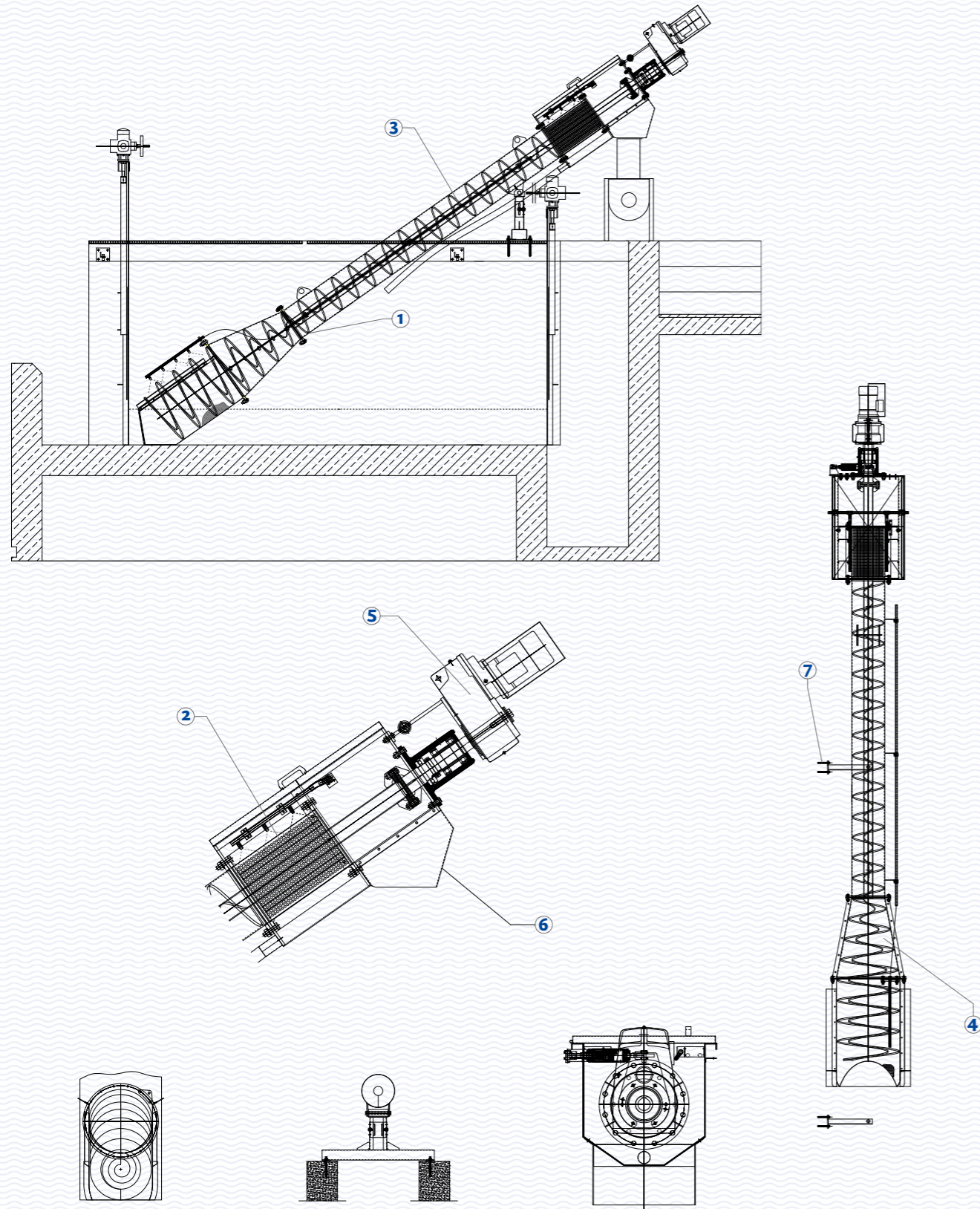


OUR BASKET SCREW SCREEN SPECIFICATIONS

Model	Flowrates (m ³ /h)							
	Wedge Wire Screen				Perforated Plate Screen			
	0.25 mm	0.5 mm	1 mm	2 mm	3 mm	4 mm	5 mm	6 mm
SKI300	28.8	57.6	86.4	108	75.6	97.2	115.2	129.6
SKI400	54	90	126	151.2	115.2	151.2	169.2	198
SKI500	79.2	144	216	252	198	234	270	306
SKI600	144	234	342	396	324	378	414	468

*Capacity values are given for clean water.

Typical Basket Screw Screen & Components



Typical drawings are for information only.

BASKET SCREW SCREENS



OUR BASKET SCREW SCREEN COMPONENTS

	Basket Screw Screen Components	Materials Available
1	Frame	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
2	Screen	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti
3	Screw	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
4	Brush	Nylon
5	Drive unit	-according to norm of manufacturer
6	Discharge chute	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
7	Anchor bolts	A2, A4 , DUPLEX or SUPER DUPLEX



ROTARY DRUM SCREW SCREENS

Rotary drum screw screens are designed for larger plants. The main purpose is to achieve the maximum solid-liquid separation efficiency and provide reliable operation of following units.

Sismat Uluslararası Rotary Drum Screw Screens are mainly composed of drum filter screen (can be preferred as wedge-wire or perforated plate), washing system, transport system (screw conveyor), integrated compaction unit and dewatering system.

They are produced as channel-mounted only.

FEATURES AND BENEFITS OF SISMAT ULUSLARARASI ROTARY DRUM SCREW SCREENS

- Available for high flow rates
- High solid-liquid separation ratio
- Modular design
- Low head loss due to the shape of drum and inclination angle
- Low energy consumption
- Low maintenance cost

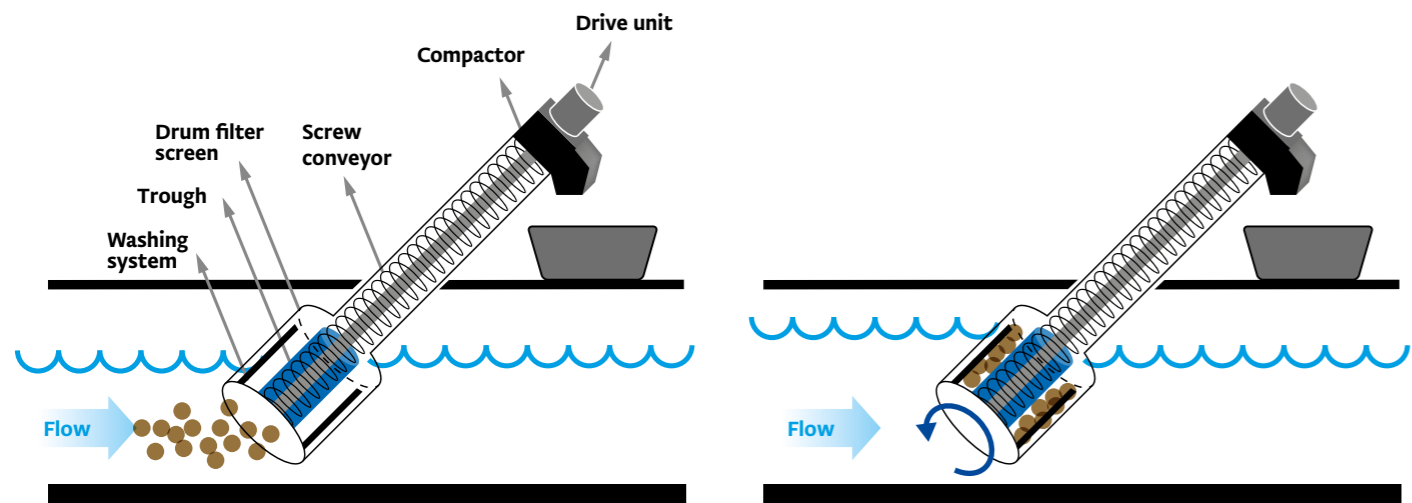
APPLICATIONS

- Water treatment plants
- Municipal and industrial wastewater treatment plants
- Intake structures
- Pumping stations

WORKING PRINCIPLE

Water flow enters the system in the lower and open end of the drum filter screen which can be manufactured from wedge-wire or perforated plate, and passes through the drum filter screen while solids are retained on the interior side of filter surface. Because of this reason, the filter surface gets blind over time and blinding of the surface generates an additional filtering effect. After a while, the screen needs to be cleaned. Therefore, the drum filter screen starts to rotate and lifts the screening materials. The lifted materials are dropped into a trough which is placed at the central point of screen. Screenings are removed from the drum with the help of a scraper brush and spray nozzle bars.

A screw conveyor is used to transport the screenings through a closed and inclined pipe. It allows to dewater and compact them without any odour problem. At the end, the screenings are dropped into a container or a subsequent conveyor unit.

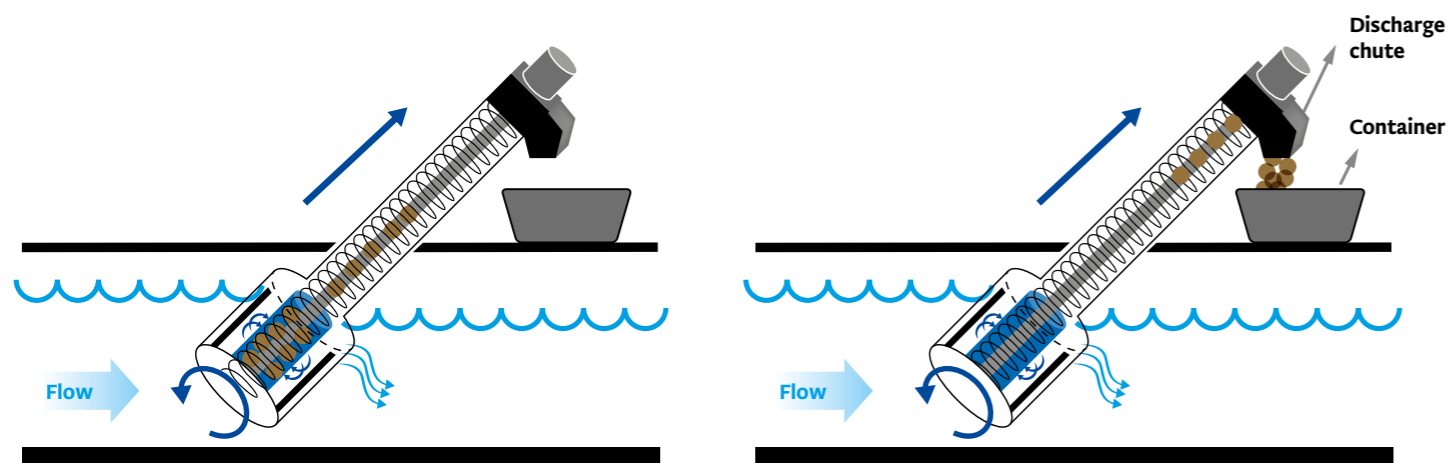


1

Water flows through the channel and brings solid materials with it.

2

Solid materials are captured by the drum filter screen. It causes a clogging on the screen surface and screening efficiency decreases by time. Because of that reason, drum filter screen starts to rotate to clean itself.



3

Solid materials are dropped into the trough by means of scraper brushes when they reach to the top point.

4

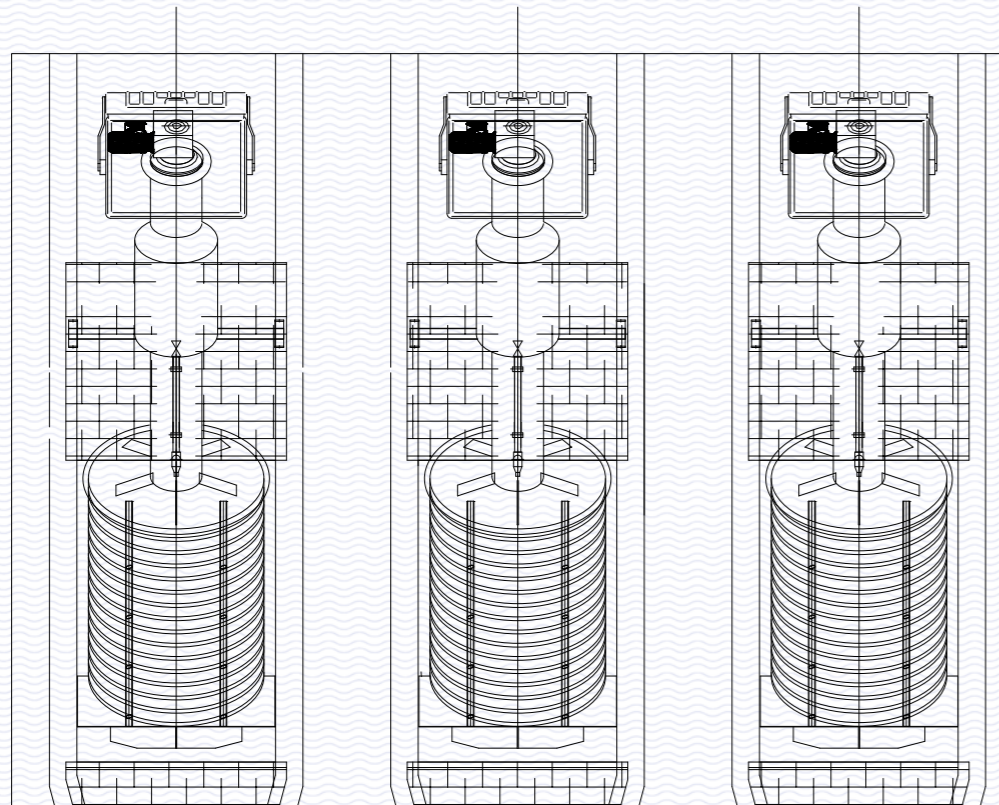
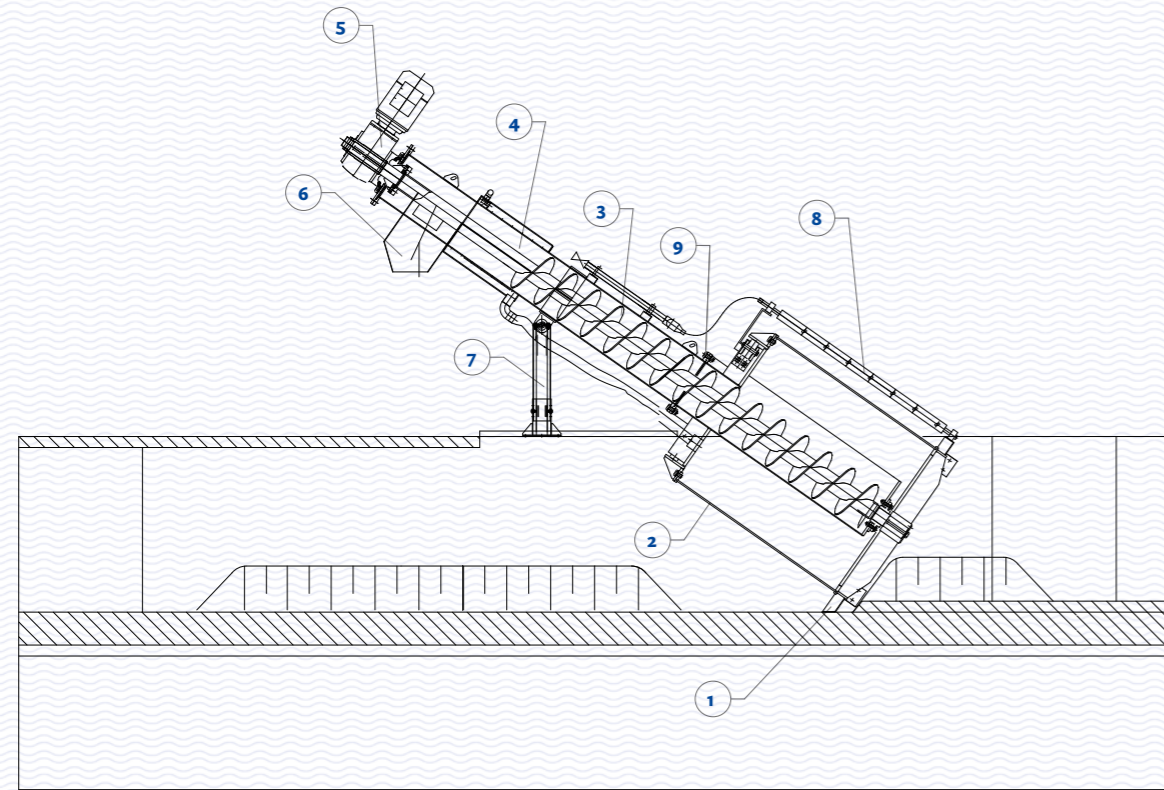
The solid materials are transferred by the screw placed into the screw conveyor and discharged into a container or conveyor after compacting and dewatering processes.



OUR ROTARY DRUM SCREW SCREEN SPECIFICATIONS

Please consult Sismat Uluslararası Sales Engineers.

Typical Rotary Drum Screw Screen & Components



Typical drawings are for information only.

ROTARY DRUM SCREW SCREEN



OUR ROTARY DRUM SCREW SCREEN COMPONENTS

	Rotary Drum Screw Screen Components	Materials Available
1	Frame	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
2	Screen	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti
3	Screw	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
4	Compacting unit	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
5	Drive unit	-according to norm of manufacturer
6	Discharge chute	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX
7	Support	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX
8	Washing system	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX
9	Fasteners	A2, A4 , DUPLEX or SUPER DUPLEX



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