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

STEP SCREENS

STEP SCREENS

Step screens are the type of fine screens that are designed to handle large flow rates and extremely big screenings volumes in water and wastewater treatment plants with low head losses. Main purpose of this type of screen is to separate suspended solids from liquid by operating based on “stepping” working principle. They are widely accepted screens due to their efficient operation and simple cleaning mechanism.

Step screens are also applied into many different industrial fields even though they are primarily designed for sewage inlet works. They are the equipment installed treatment plants, after separation of large-sized solid materials, to protect the following units from damage or to prevent interruption of further treatment processes.

Sismat Uluslararası Step Screens are mainly made up of frame, screen bars, chain, drive unit and discharge chute.

FEATURES AND BENEFITS OF SISMAT ULUSLARARASI STEP SCREENS

- Robust and reliable design
- High capture efficiency of fine solid wastes, inorganic materials and floating particles
- Available for high flow rates
- Easy-to-follow and reliable operation
- Automatic cleaning mechanism
- Low head loss
- Low energy consumption
- Minimal and low-cost maintenance

APPLICATIONS

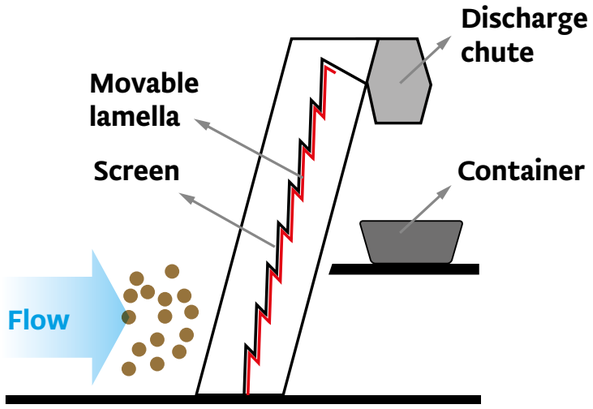
- Water treatment plants
- Municipal wastewater treatment plants (including sludge treatment)
- Industrial wastewater treatment plants (including sludge treatment)
  - Beverage industry
  - Food industry
  - Plastics recycling industry
  - Pulp & Paper industry
  - Slaughterhouses
  - Tanneries
  - Dyeing works

WORKING PRINCIPLE

Water flow approaches the step screen and brings solid materials with it. The solid materials which are retained on the screen form a carpet by time. The carpet creates an additional filtering effect and helps to keep increasingly finer particles. As soon as the level difference between upstream and downstream reaches to the predetermined point, the cycle automatically starts to clean the screen. During the cycle, steps move upwards and mobile lamella lifts the screenings onto the next step until reaching the discharge point.

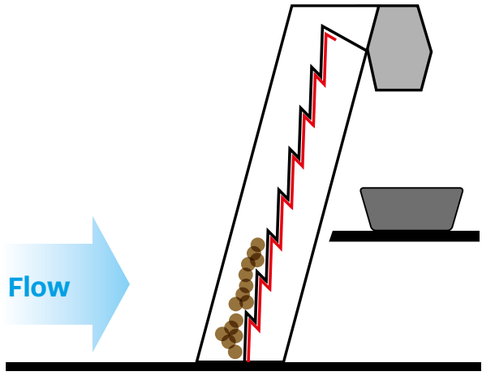
OUR STEP SCREEN SPECIFICATIONS

Specifications	
Bar spacing	3 mm - 6 mm
Mounting angle	50° - 60°
Speed	5 m/min
Rated power	0.75 kW - 3.0 kW
Discharge height (from operation level)	800 mm - 3000 mm
Channel width	500 mm - 2000 mm



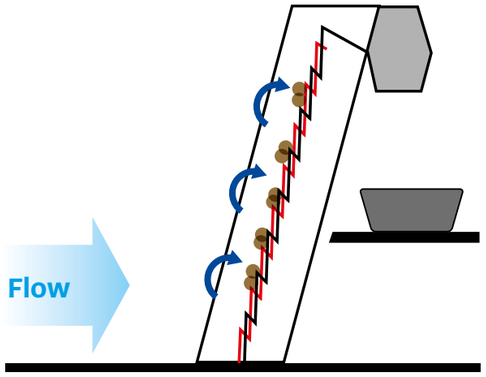
1

Water flows through the channel.



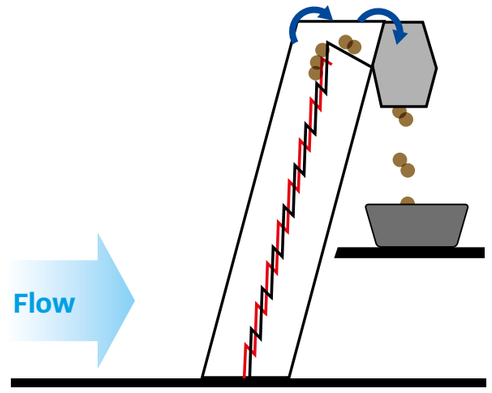
2

Solid materials present in the water accumulate on the bar screen and cause clogging of the screen openings.



3

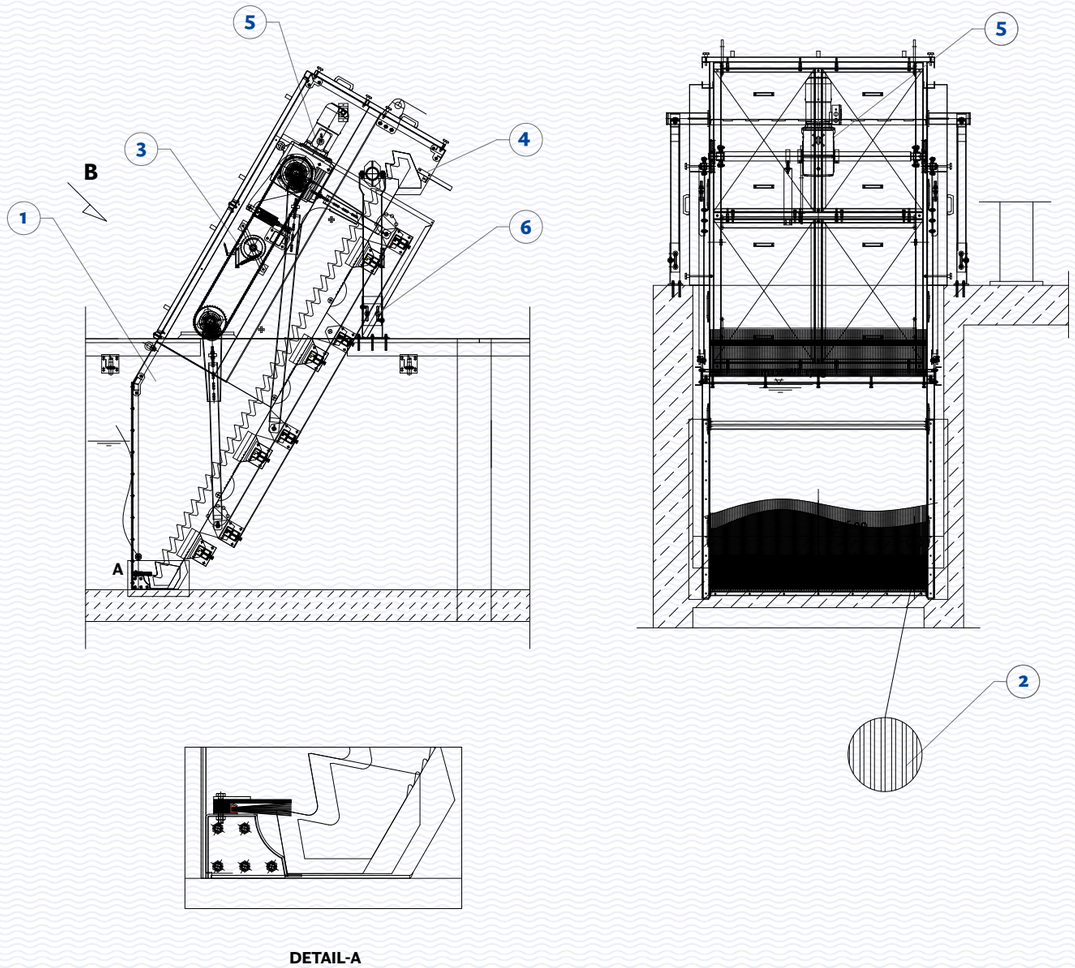
The cleaning mechanism which works based on “stepping” principle starts to work and moves the screenings up by rotation of the movable lamella.



4

Finally, the screenings are discharged into a container or conveyor.

Typical Step Screen & Components



DETAIL-A

Typical drawings are for information only.

OUR STEP SCREEN COMPONENTS

	Step 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, DUPLEX or SUPER DUPLEX
3	Chain	Heavy duty special chain steel
4	Discharge chute	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
5	Drive unit	- according to norm of manufacturer
6	Fasteners	A2, A4 , DUPLEX or SUPER DUPLEX

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Learn More by visiting

www.sismat.com.tr

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