



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



**PERFORATED
BAND SCREENS**



PERFORATED BAND SCREENS

Perforated band screens are fine screening equipment which are used for capturing the solid materials that can negatively affect the following mechanical equipment in plant and the further treatment processes, and generally preferred to use in middle and large-sized municipal and industrial wastewater treatment plants. They are specially designed for providing high separation ratio in deep and wide channels. Together with the undesired solid materials such as inorganics, organic matters are removed as well.

This type of screen gives an outstanding performance especially for fine screening process. They are the equipment that can easily deal with the high amount of grit and gravel problem. Double-sided design of the perforated band screens obtains maximum solid-liquid separation efficiency by preventing long fibrous materials from passing through the screen.

The main screening media of this screen is composed of perforated plates which are integrated into a drive chain and it works as an endless loop. The rakes that are in the same width with the screen are placed on the perforated plates to avoid falling down of the captured screening materials. On the other hand, there is a reversely rotating brush placed at the top point of screen to be able to clean the equipment continuously. At the same time, nozzles increase the cleaning efficiency by spraying clean water on the screen plates.

Sismat Uluslararası Perforated Band Screens are mainly made up of frame, sprockets, chain, drive shaft, perforated belt, cleaning brush, nozzles, drive unit and discharge chute.



FEATURES AND BENEFITS OF SISMAT ULUSLARARASI PERFORATED BAND SCREENS

- Reliable and robust design
- High screening ratio
- Suitable for use in deep channels
- Minimum area requirement due to the compact design
- Easily installed and retrofitted into the existing channels
- Automatic self-cleaning mechanism
- Low operation and maintenance cost

APPLICATIONS

- Water treatment plants
- Municipal wastewater treatment plants
- Industrial wastewater treatment plants
 - Pulp and paper industry,
 - Textile industry,
 - Food industry,
 - Slaughterhouses,
 - Sugar industry, etc.
- Sludge screening processes (Primary and secondary sludge)
- Water intakes
- Pumping stations
- Power stations
- Cooling water screening
- Service water screening

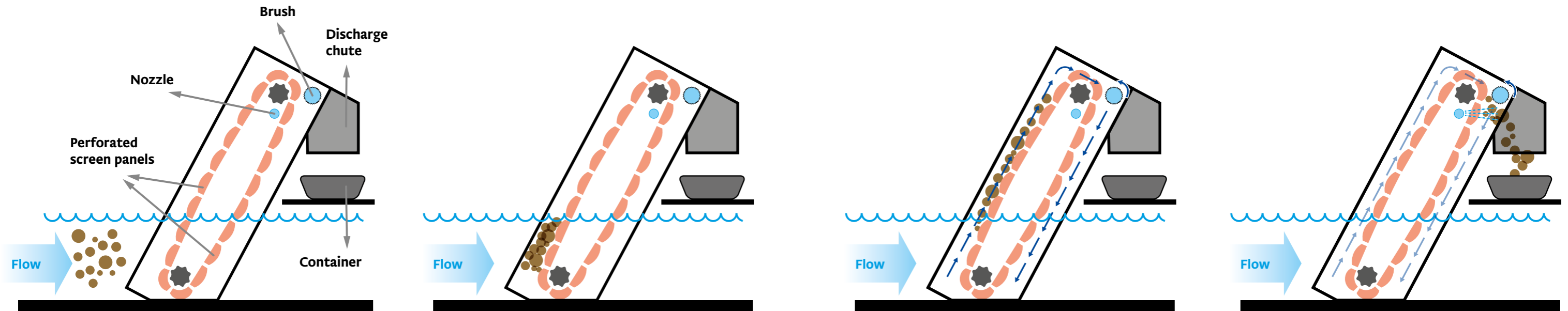
WORKING PRINCIPLE

Water flow enters the channel and approaches the perforated band screen. Solid materials which are present in the coming water are captured by the perforated belt and cause clogging of the openings by time. To clean the screen, the perforated belt starts to move and transfers the screenings to the top point. The screenings are dropped into a container or conveyor with the help of a reversely rotating brush. After discharging, the perforated belt is completely cleaned with the pressurized water.

OUR PERFORATED BAND SCREEN SPECIFICATIONS

Specifications	
Channel width	0.3 m - 3.0 m
Channel depth	up to 9.0 m
Inclination angle	45° - 75°
Perforation diameter	2 mm - 12 mm
Discharge height (from operation level)	300 mm - 1500 mm
Perforated belt speed	4 m/min - 6 m/min

*For special dimensions, please consult Sismat Uluslararası Sales Engineers.



1

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

2

The solid materials accumulate on the screen panels. That situation causes clogging of the screen openings.

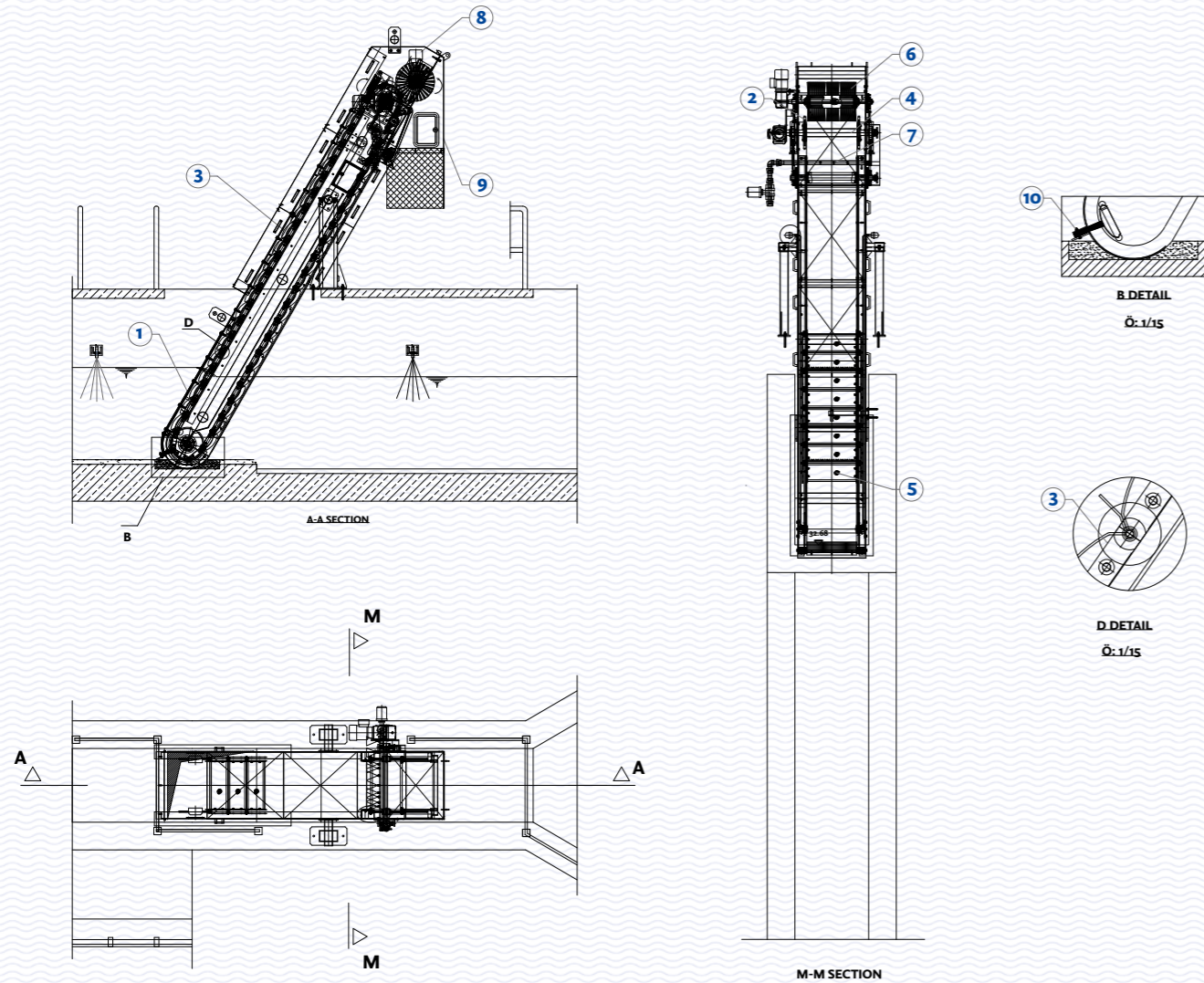
3

Cleaning mechanism is automatically activated and the screen belt starts moving to be cleaned.

4

The screening materials are conveyed and discharged into a container or conveyor by means of a brush. Then, the belt is properly cleaned by spraying water.

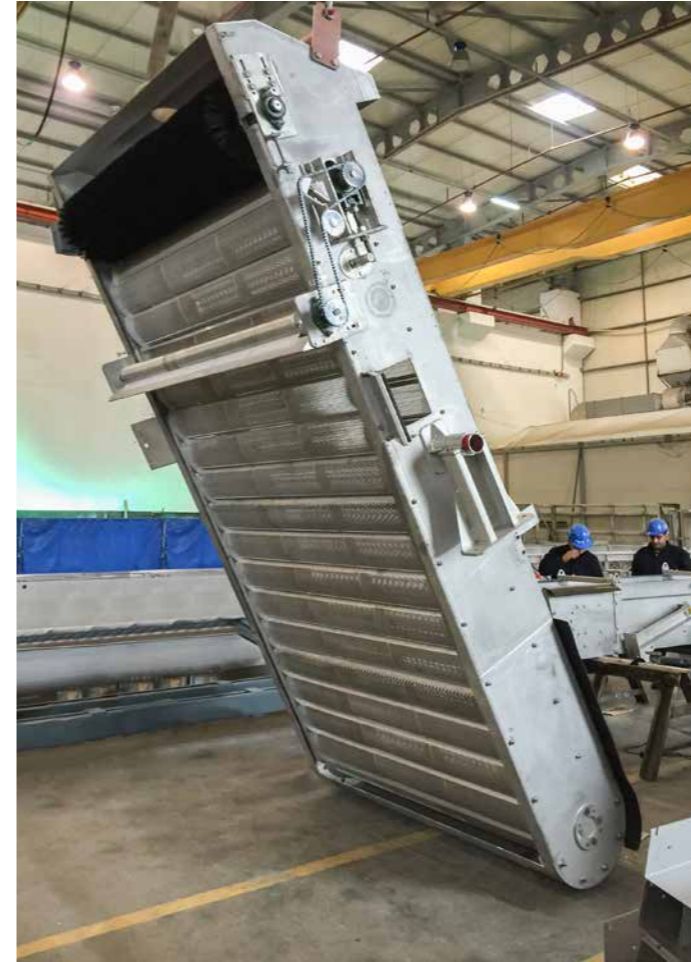
Typical Perforated Band Screen & Components



Typical drawings are for information only.

OUR PERFORATED BAND SCREEN COMPONENTS

	Perforated Band Screen Components	Materials Available
1	Frame	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
2	Sprockets	Cast iron, steel with hardened or UHWM teeth
3	Chain	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
4	Drive shaft	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
5	Perforated belt	AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX, UHWM
6	Cleaning brush	Nylon
7	Nozzles	PPRC
8	Drive unit	-according to norm of manufacturer
9	Discharge chute	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
10	Fasteners	A2, A4 , DUPLEX or SUPER DUPLEX





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