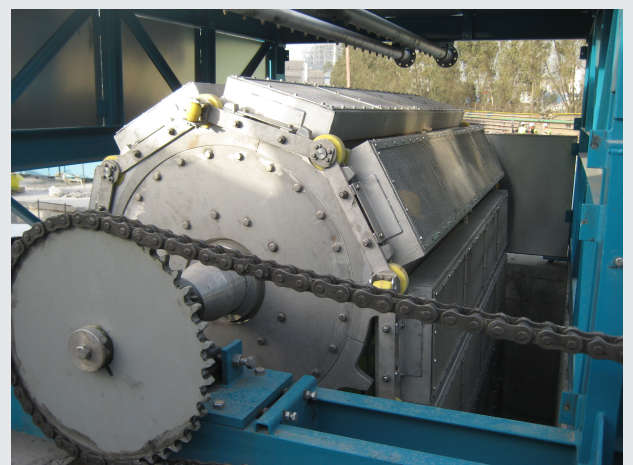




MESH BELT SCREENS

Water from surface sources is used for many reasons and purposes; either by municipalities for drinking water treatment or by many different industries for make-up and cooling. Both require large amount of water to be used therefore water intake structures are designed with huge dimensions searching for high capacity and high quality equipment.

Possessing a wealth of experience in water intake structures, Astim supplies high quality water treatment equipment which is specially designed to meet the challenges and considerations that need to be kept in mind in the design of a suitable intake.



Mesh Belt Screens are mainly used as fine screening equipment for high capacity water plants. They require only a small installation area due to the vertical construction. That is why this type of screen is applied in places where the construction area of the total cleaning installation has to be restricted or where big differences occur between water levels.

Astım Mesh Belt Screens “BND” are designed for fine filtration of water. BND can be used with channel depths of up to 15 meter and widths of up to 4 meter.

Operation Principles

The principle of operation is based on a conveyor belt. However, the belt is replaced by screen panels, which are mounted between two endless transport chains. The chains are driven by two sprockets. The debris, which is trapped on the screen panels, is removed by high pressure spray water and discharged through a chute. The cleaning process is executed automatically via spray water pipe. The drive unit and spray water pipe are mounted above deck level under a steel or reinforced plastic housing. Since none of the moving parts is constantly submerged, inspection and maintenance can be easily carried out at deck level. Also the debris removed at or above deck level so there is no need for a debris pump. Astım Mesh Belt Screens are suitable for large flow capacities and high water level differences.

There are mainly three models of installation for Mesh Belt Screens:

Through Flow Installation:

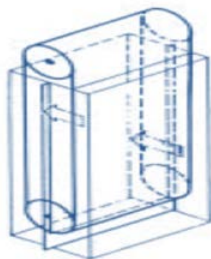
Equipment is installed perpendicular to water flow so that water passes radially through the mesh filter elements.

Center Flow Installation:

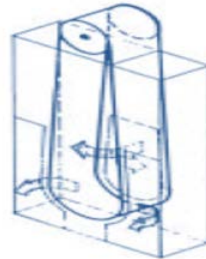
Equipment is installed parallel to water flow. The water enters the equipment from the center and water passes through the mesh filter elements towards side walls.

Dual Flow Installation:

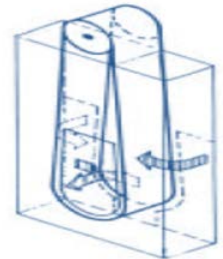
Equipment is installed parallel to water flow. The water enters the equipment from the two sides and passes through the mesh filter elements towards inside.



Through Flow Installation (BND-T)



Center Flow Installation (BND-C)



Dual Flow Installation (BND-D)

All three installation models can be designed as “Skid Type”; which is built in self-standing frame, as well as “Embedded Type”; which is mounted against the concrete walls on embedded anchor plates.

APPLICATIONS

Industrial Applications

- Petro chemistry; Raw Water Extraction & Recovery
- Power plants; Cooling water
- Waterworks; Raw Water Extraction
- Chemical industry; Raw Water Extraction & Recovery

Municipal applications

- Water pre-treatment; fine screening

FEATURES

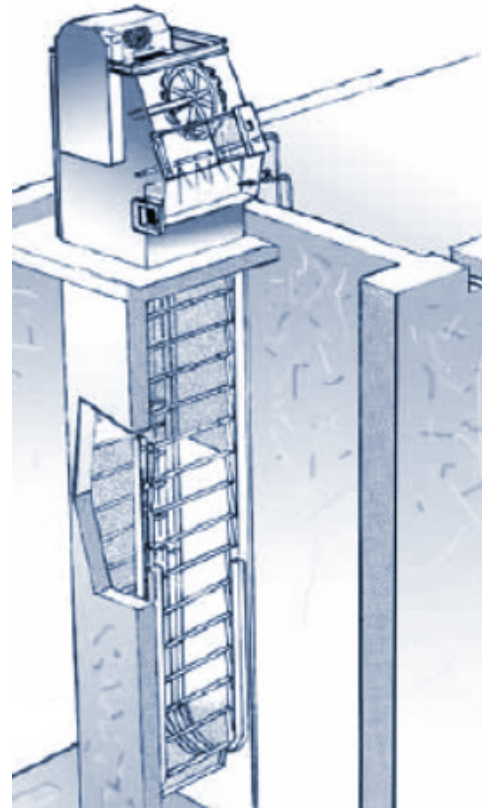
Mesh opening: between 1 and 10 mm.

Channel Depth: up to 20 m

Panel Width: up to 4 m

Material: Coated Carbon Steel or Stainless Steel

Height above Deck Level: ~1,5 to 3,5 m
(depending on discharge type)



PROCESS DATA

No of panels at lower bend	Screen Panel Width (mm)		
	1000	1500	3000
	4 pc.	6 pc.	8 pc.
Water Depth	Q (m ³ /hr)		
3 m	10.000	15.000	32.000
4 m	12.500	20.500	43.000
5 m	16.000	25.000	52.000
6 m	19.500	29.000	62.000
8 m	26.500	39.500	82.000
10 m	32.500	49.500	100.000

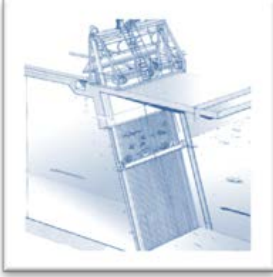
Screen mesh 5x5mm / Wire Diameter 1 mm

ADVANTAGES

- large flow capacities
 - needs small space due to vertical installation
 - suitable for large level difference
 - none of the moving parts permanently submerged
- maintenance easily carried out at deck level



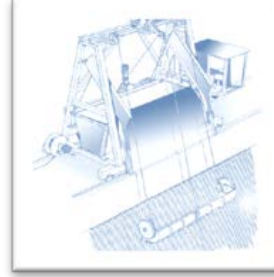
OTHER EQUIPMENT IN SCOPE of ASTİM FOR WATER INTAKE STRUCTURES



CABLE OPERATED SCREENS

FEATURES

Bar Spacing: 8 - 100 mm.
Channel Depth: 30 m
Channel Width: 6 m
Installation Angle: 70° - 90°
Height Above Platform: ~2 m



TRAVELING GRAB SCREENS

FEATURES

Bar Spacing: 8 - 100 mm.
Channel Depth: 30 m
Channel Width: 6 m
Installation Angle: 70° - 90°
Height Above Platform: ~2 m



MONORAIL LADLE SCREENS

FEATURES

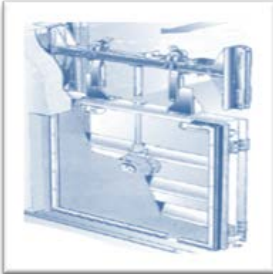
Bar Spacing: 20 - 100 mm.
Channel Depth: 20 m
Ladle Width: 2 m
Installation Angle: 70° - 90°



MULTI RAKE SCREENS

FEATURES

Bar Spacing: 8 - 100 mm.
Channel Depth: 15 m
Channel Width: 6 m
Installation Angle: 70° - 90°
Height Above Platform: ~2 m



STOP LOGS

FEATURES

Channel Width: 6 m.
Height: 12 m
Pressure: 30 mWC



STATIC MESH SCREENS

FEATURES

Chanel Width: 6m
Height: 12 m