



**TECHNOLOGIES  
AND EQUIPMENT**  
for wastewater treatment

# CATENARY BAR SCREEN

## NEW GENERATION OF EKOTON MECHANICAL SCREENS

The bar screen which does not jam.  
Reliable design.  
Minimal maintenance



## OPERATING PRINCIPLE

Catenary screen is consisted of stationary frame and movable rake mechanism connected with a swinging suspension. One of the main operational elements of the screen and in the same time – the part of the frame itself, is a filtering mesh, which collects debris from wastewater flow in a channel. Rake mechanism removes the waste collected on the bars into a discharge zone, from where they dumped into container or conveyor.

The catenary screen operation is based on the flexibility of the rake mechanism and self-regulation to debris size and their mechanical properties. The screen design does not contain any guidings, which set strictly trajectory of chains and rakes movement; efficient clamping is possible within the special design of rake mechanism. The chain is not fastened in the near-bottom part of the structure, allowing to avoid mechanism jamming.

## TECHNICAL CHARACTERISTICS

<b>CHANNEL WIDTH</b>	From 500 to 2100 mm
<b>CHANNEL HEIGHT</b>	From 600 to 6000 mm
<b>BAR SIZE</b>	From 6 mm or above
<b>INCLINATION</b>	75-45° (60° by default)
<b>MATERIAL</b>	Painted carbon steel
<b>MESH AND DEAD PLATE MATERIAL</b>	Stainless steel AISI304, AISI316
<b>RAKE AND WIPER MATERIAL</b>	UHMW PE

## ADVANTAGES OF CATENARY BAR SCREENS

1

The screen is capable of removing large solids **without jammings** owing to special patented chain construction which excludes the use of guiding skirts, bottom sprockets and bearings in the submerged part.

2

**Increased screen capacity** due to standard angle mesh modification from 80° to 60°.

3

**Better capture rate and discharge of various debris types** due to height of rakes and special wiper design.

4

**High resistance to deterioration** owing to use of the thermally treated steel and wear-resistant plastics.

5

**A longer useful life of movable parts** due to low mechanism speed and small gap between the rakes.

6

**Reduced hydraulic resistance** up to 15-30 % owing to use of streamlined bar shape of filtering mesh.

7

**Ease of maintenance.** The bar screen requires almost no maintenance and if necessary, it could be done without demounting from channel.

