

# **MULTI-RAKE BAR SCREEN**



MODERN EQUIPMENT FOR WATER TREATMENT TECHNOLOGIES



- 3. plate chain;
- 4. filter screen;
- 5. lower rail;
- 6. supports with swing joints;
- 7. the drive shaft rotation
- non-contact control unit.

# **BRIEF DESCRIPTION**

Multi-rake bar screen is designed for wastewater treatment from solid wastes and may be included in the mechanical wastewater treatment complex on the WWTP. It also protects pumps at sewage pumping stations.

Solid wastes are deposited on the screen surface and between its bars. Clearance of the screen surface and bar spacing from the screenings and its transfer to the upper part of screen and discharge area is carried out by rakes.

Both sides of the rakes are fastened to the two closed plate chains, that driven by a gear-motor drive through a drive sprocket. Screenings are removed from the rakes by the ejector and fall into a container or conveyor.

Screen operation is totally automated. Automation system is based on PLC. Removing screenings from the screen surface takes place periodically depending on the selected operation mode - the timer. the water level in the channel before screen, or mixed mode (which event occurs first). Turnovers gear-motor (rake speed) are regulated by frequency converter.

Screens supplied with the control cabinet, local control panel, level sensor and other elements of automatic control system, passport and operation and installation manual, supporting documents.

## **EFFICIENCY**

High efficiency of treatment is achieved due to: • The filter screen design does not require the use of transverse stiffeners that increase the flow resistance and a source of screen blockage fiber wastes:

• The rakes design, length and form of its teeth enable effectively purify not only screen surface and bar spacing throughout the depth profile of the bars.



#### **THE BENEFITS**

• The screen frame, chain, filter screen and other elements in contact with wastewater are made of stainless steel AISI 304 and wear-resistant polymeric materials with a low friction coefficient.

• No rotating machinery at the submerged part of the screen.

• The screen has two degrees of protection – mechanical and electronic. Mechanical protection is provided by friction clutch integrated into a gear-motor. Electronic protection is activated by a signal from drive shaft rotation non-contact sensor.

• The filter screen and bars are dismountable, which makes it possible to replace any bar or damaged rake tooth in conditions of the operating object without dismantling the screen or its components.

• The mechanism of chain tension interlocked with ejector, that allows not to correct the position of the ejector with each tension chain.

• IThe intelligent system of automatically

- elimination of filter screen clogging.
- The ability to display information about

the equipment condition (work, emergency shutdown, etc.) or complete its integration into the process control system via any standard communication protocols.

#### INSTALLATION

When installing the screen based on the channel side and fastened to the concrete floor or metal channel framing.

> Such fastening allows to install the screen without channel emptying. Supports and the screen are joined by the swing joints that allows bring the screen in a horizontal position above the channel for its maintenance.

The tightness in the channel is achieved by flexible sealing screens that fixed on the screen sidewall the entire channel depth.

#### SERVICE

We offer a full range of installation and commissioning, personnel training, warranty and

post-warranty service of the supplied equipment.

#### WARRANTY PERIOD - 5 YEARS.

#### **TECHNICAL SPECIFICATIONS**

Chain rolls and lower

rails is made of modern

wear-resistant polymeric

material with a low

friction coefficient.

Parameter title	Value
Channel width, mm*	400 – 2400
Channel depth, mm*	400 – 2600
Bar spacing, mm*	6; 8; 10; 12; 14; 16; 20; 40
Installation angle*	75°
Screenings discharge high, mm*	850; 1200; 1500
Rake speed, m/min	3.5 – 5.1
3-fase gear-motor (380 V, 50 Hz), Power, kW	0.37; 0.55
Index of protection	IP 55 – IP 68

\* - other sizes – under the Customer request



# WHY DO CLIENTS CHOOSE OUR EQUIPMENT?

- we have been successfully working in the sewage treatment market;
- our equipment ideally meets the criterion of QUALITY-PRICE;
- we provide a WARRANTY for the manufactured products;
- we provide INTEGRATED SERVICES including: advising and equipment selection, sales of individual components and complete sets up to subsequent maintenance service;
- choosing our equipment, the Customer provides RELABILITY AND COST-EFFECTIVENESS in operation of wastewater treatment plants;
- more than 1000 enterprises of the industry have already chosen the equipment manufactured by «Factory Ecopolymer».
- It's time for QUALITY, MODERN TECHNOLOGIES AND TAKING INTEGRATED SOLUTIONS now.
- Manufactured in Russia according to the programme of IMPORT PHASE-OUT.

... our equipment will solve your tasks in ecoLOGICALLY-FRIENDLY way!

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