



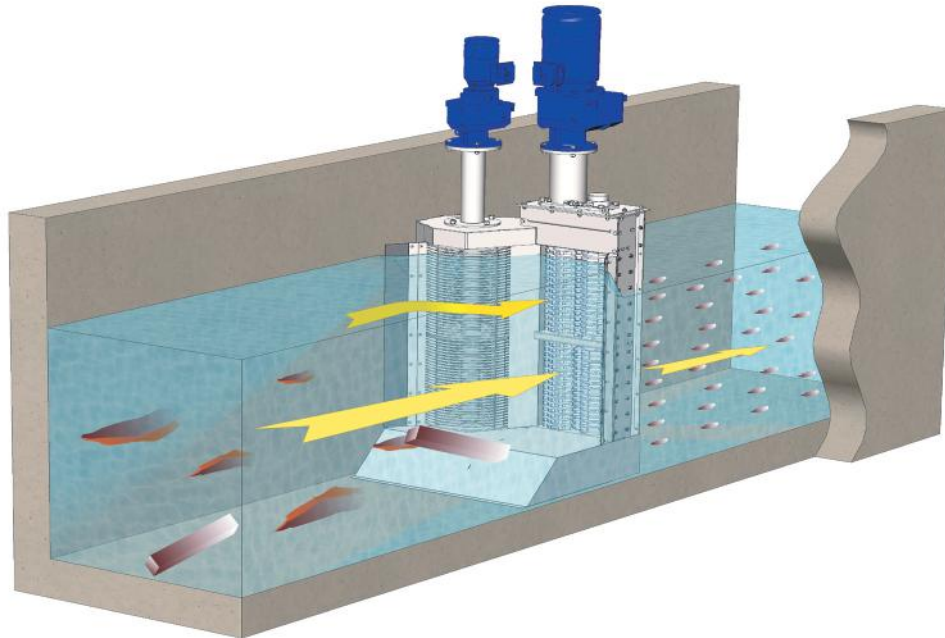
SEWAGE CUTTING SCREEN

STATE-OF-THE-ART TECHNOLOGIES AND WATER TREATMENT EQUIPMENT



SEWAGE CUTTING SCREEN

Sewer cutting screen (hereinafter ERDK) is installed within the channel at sewage pumping stations or sewage treatment plants. ERDK is intended for grinding solid waste contained in waste water with the aim to protect equipment and technological processes located behind it.



The ERDK consists of two modules as follows: a grinding module and a filtering module. For channels from 600 to 1000 mm wide, only the grinding module is installed. For wider channels, both modules are combined into one assembly.

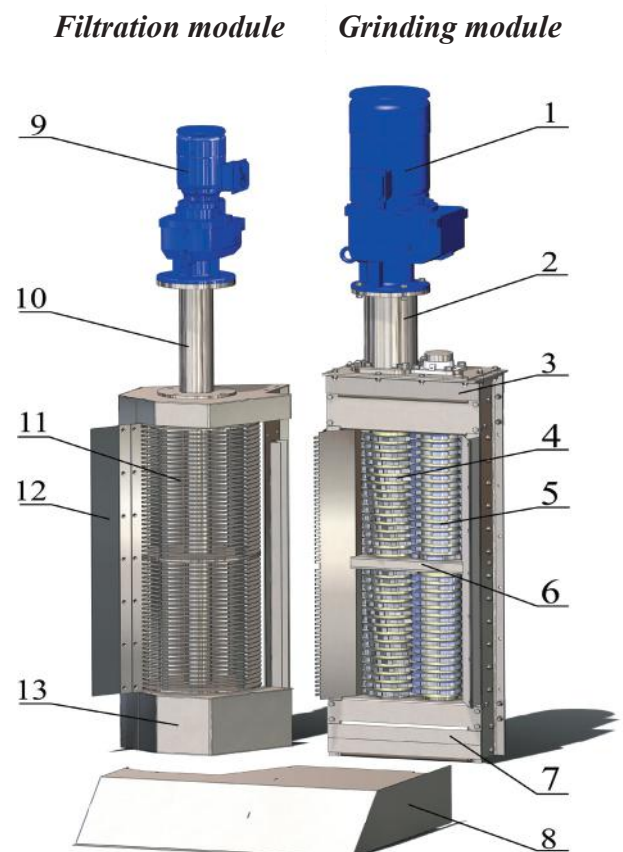
The grinding module is two-shaft, with two types of disk cutters. Cutters of each kind are assembled on its shaft. Spacers are installed between the cutters on the shaft. The thickness of cutters and spacers is the same. In the assembly between the cutters of one shaft and the cutters of the second shaft the clearance is not more than 0.1 mm, which ensures efficient grinding of waste. For reliable fixation of cutters preventing their slipping, the matching holes on the cutters are made to be hexagonal.

For deep channels, it is provided to install intermediate supports to reduce deflection of the shafts when grinding waste.

Cutters and hexagonal shafts are made of quality chrome steel with high hardness (HRC 52 – 56) and wear resistance. The housing of the grinding module is made of stainless steel grades AISI 304 and AISI 321.

Depending on the width of channel at the location of cutting screen installation, it can be equipped with one or two filtration modules, on both sides of the grinding module. Owing to its original design, the filtration module, which does not allow waste to accumulate inside it, high performance and reliable operation of the cutting screen are ensured.

The filtration module has a separate drive rotating the filter drum, which detains solid waste and provides its transportation to the grinding module. The filter



Grinding module:

1. drive; 2. drive column; 3. reduction gear; 4. a shaft with grinding cutters; 5. a shaft with catching cutters; 6. intermediate support; 7. foot support unit.

Filtration module:

9. drive; 10. drive column; 11. filter drum; 12. thickener; 13. foot support unit; 8. foot board.

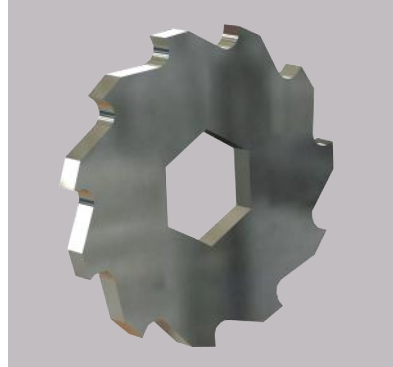
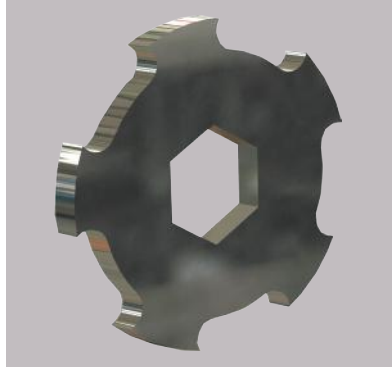
drum can have both flat crevices and a perforated filter surface. The type of filter drum is selected depending on the type and amount of solid waste in the wastewater.

All parts of the filtration module except bearing units are made of stainless steel grades AISI 304 and AISI 321.

ERDK is equipped with a control cabinet that

provides its operation in manual and automatic modes, as well as protection of its parts from breakage.

The operating mode of the ERDK is cyclic depending on the selected control scheme: by the timer, on water level in the channel in front of the cutting screen, mixed (which of the events occurs



Cutting edge profile of the cutters is designed in such a way to provide effective that during the operation one type of cutter ensures effective catching of solid and fibrous waste, and another type of cutter ensures guaranteed level of waste grinding

earlier) or by any other required algorithm. Smooth start and speed control of the motor-reducers of both modules are regulated by a frequency-to-current converter.

The automatic control of ERDK is carried out

using a programmable logic controller. In case of jamming of any of the EDRK modules, both its drives automatically switch to reverse rotation and after a period of time that can be adjusted, they switch back to the operating mode.

MAJOR ADVANTAGE

- **Reliable protection of pumps, other equipment and technological processes behind the cutting screen due to the powerful grinding mechanism and two types of cutters.**
- **Eliminates the manual treatment of waste and reduces the cost of their removal at the site of mechanical treatment.**
- **The modular design of the structure provides**

easiness and flexibility when installing it in channels with a width from 600 to 2000 mm with a minimum or no construction work, ease of maintenance during operation.

- **Automated system of protection against jamming of the cutting screen by solid substances provided with a reversal and restart of the cutting screen.**

ENGINEERING SPECIFICATION

Parameter	Unit	The model of cutting screen		
		ERDK 1000	ERDK 1500	ERDK 2000
The range of channel width in the place of installation	mm	600 - 1000	1000 - 1500	1500 - 2000
Effective height of the cutting module	mm	600, 1000 and 1500		
Thickness of the cutters	mm	6, 11 and 15		
Crevices (perforation) of the drum	mm	6, 11 and 15		
Driving power of the cutting module	kW	5,5	5,5 - 7	7 - 11
Driving power of the filtration module	kW	n/a	0,37	0,75

* Controlled by means of frequency-to-current converter. At the request of customer, another range of control is possible.

WHY DO CUSTOMERS CHOOSE OUR EQUIPMENT?

Due to the facts that:

- we have been successfully working in the sewage treatment market for 25 years already;
- our equipment ideally meets the criterion of QUALITY-PRICE;
- we provide a WARRANTY for the manufactured products;
- we provide INTEGRATED SERVICES including:
from advising and equipment selection, sales of individual components and complete sets to subsequent maintenance service;
- choosing our equipment, the Customer provides RELIABILITY AND COST-EFFECTIVENESS in operation of wastewater treatment plants;
- leading enterprises of the industry have already chosen the equipment manufactured by «EcoPolymer».

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

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