

ESMIL Waste Grinders

The equipment, proven by many years of practical use, is intended for grinding various types of waste and solids extracted from industrial and domestic wastewater.



High
performance



Reliable and solid
design



Minimal installation and
maintenance costs



Durability – the device is
manufactured from corrosion-
resistant materials

WHAT IS THE PURPOSE OF WASTE GRINDERS?

- Protection of pumping equipment, process equipment and pipeline fittings in case of the return of ground waste to wastewater;
- Pretreatment of waste before washing and dewatering.

APPLICATION:



Wastewater treatment
plants;



Wastewater pumping
stations;



Industrial enterprises
(waste grinding).



PERFORMANCE, EFFICIENCY AND RELIABILITY

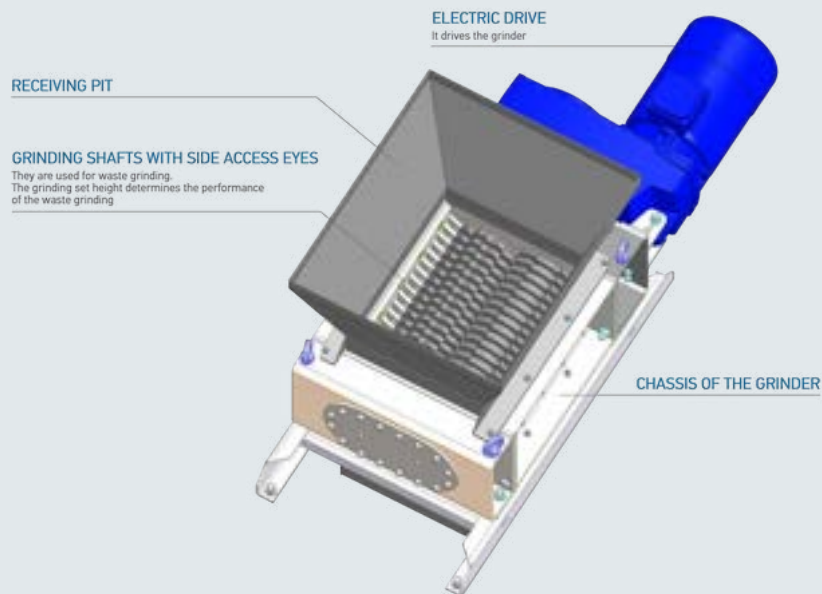
HOW DOES THE WASTE GRINDER WORK?

The grinder consists of two sets of rotary cutters placed horizontally and enclosed in a housing. On top of the housing, there is a loading hopper for feeding waste. A slide is located in the lower part of the housing for the directional discharge of ground waste. Depending on the application, the grinder can be installed on a skid or a mounting frame.

The initial waste (reject) is fed into the grinder's loading hopper for grinding by means of counter-rotating cutters located on the shafts in the housing. The shafts are driven by a gear train. The electric drive (geared motor) provides the required torque and rotation speed of the drive shaft. Ground waste is removed from the screen.

ADVANTAGES OF THE SOLUTION:

- » ESMIL waste grinders crush wood, fabrics, rubber, plastic and other debris.
- » The use of waste grinders helps to keep the organic substances in wastewater.
- » Reduces expenses for waste transportation.
- » The difference in angular speeds and the configuration of the teeth of the cutters provide excellent crushing of both solid and fibrous debris.
- » The use of forward and reverse stroke cycles when debris of increased hardness get to the equipment.
- » Driven by Nord Getriebebau.



TECHNICAL SPECIFICATIONS OF ESMIL WASTE GRINDERS:

Parameter	Units	Value
For the grinder with a capacity of 300-600 kg/h		
Grinder drive:		
<i>gear motor</i>	<i>pcs.</i>	<i>1</i>
<i>power</i>	<i>kW</i>	<i>5,5</i>
<i>shaft rotation speed</i>	<i>rpm</i>	<i>41</i>
Grinder overall dimensions:		
<i>width</i>	<i>mm</i>	<i>590</i>
<i>length</i>	<i>mm</i>	<i>1450</i>
<i>height</i>	<i>mm</i>	<i>355</i>
Weight	<i>kg</i>	<i>515</i>
For the grinder with a capacity of 1000 kg/h		
Grinder drive:		
<i>gear motor</i>	<i>pcs.</i>	<i>1</i>
<i>power</i>	<i>kW</i>	<i>7,5</i>
<i>shaft rotation speed</i>	<i>rpm</i>	<i>44</i>
Grinder overall dimensions:		
<i>width</i>	<i>mm</i>	<i>920</i>
<i>length</i>	<i>mm</i>	<i>1450</i>
<i>height</i>	<i>mm</i>	<i>355</i>
Weight	<i>kg</i>	<i>735</i>

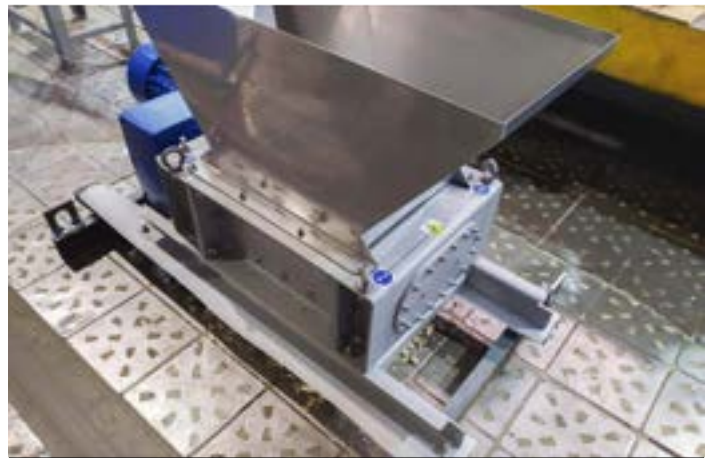
«SMART» OPERATION

ADVANTAGES OF EKOTON WASTE GRINDERS:

- » Synchronization with existing mechanized screens or a conveyor.
 - » The shafts rotate towards each other at different speeds for self-cleaning of cutters and creating a tearing effect. To eliminate the possibility of jamming, an automatic reverse stroke of the grinding unit drive is provided. This significantly increases the degree of autonomous operation of the equipment.
 - » Reduced requirement for pumping station maintenance personnel and waste disposal costs.
 - » The use of waste grinders helps to keep the organic matter in wastewater increasing efficiency of the further biological treatment process.
 - » Waste grinders do not have complex mechanisms and components that require constant maintenance.
 - » High corrosion resistance:
 - Grinder housing and mounting frames are made of AISI 304 stainless steel;
 - Cutters and shafts are made of hardened alloy steel. The option of manufacturing from specialized high-hardness steel is possible, which gives the cutters high strength and increased wear resistance;
- The use of high-quality materials provides additional cost savings and extends equipment life.
- » Operation of the waste grinder is controlled by control cabinet supplied with the grinder.
 - » Easy service due to the accessibility of the main components in operating condition.

OUR OPTIONS:

- » The ESMIL waste grinder can be equipped with a sorter – a mesh screen with a certain mesh size, which is installed at the unit's bottom near the cutters. It keeps waste in the grinding zone of the unit until it is shattered into particles that can pass through the mesh openings. This option is used when there is a need to improve the quality of grinding.
- » The waste grinder can be equipped with a water spreading system for the grinding zone for request. It increases performance, service life of the cutters and helps to wash off the adhered ground particles from the cutters. The spreading system can be controlled either by an electromagnetic valve, or using a manual non-automatic valve.



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