



**ECO  
SPECTRUM**

# CATALOG OF WASTE SORTING PLANTS



ONLINE CATALOG



Skolkovo  
Resident



European Conformity  
(CE)



Enterprise  
Attestation



ISO  
Certificate



## ABOUT THE COMPANY



### OWN PRODUCTION

Own production facilities and expertise allow the company to take a leading position in the production of industrial equipment. The company is constantly improving and introducing unique innovative technologies both in production and development of equipment. Sorting plants can be used as waste sorting equipment, and along with incinerators manufactured by Eco-Spectrum, that allows not only to completely dispose of waste ends, but also to heat nearby production facilities.



### INDUSTRY LEADER

Eco-Spectrum has repeatedly become the industry leader in Russia as the production and engineering company among manufacturers of industrial equipment.

## SK SERIES

The priority task of the waste sorting equipment is the extraction of recoverable resources in terms of volume and value. We use the most modern technologies integrated into our sorting lines, allowing us to select more than 90% from recycled PET, HDPE, waste paper, ferrous and non-ferrous metals. Production of RDF/SRF with low moisture and high calorific value. Our unique sorting process produces high quality fuel. A mixture of film plastic, paper, plastic and other light high-calorie materials is suitable for further use in furnace. Composting and production of technical soil. Screenings, fractions 0-70/80 mm, make up 30-50% of the waste stream. Our sorting process allows us to obtain a fraction rich in organic matter, ideally suited for the production of industrial soil.

## Recovery systems

- SK-80
- SK-250
- SK-500

## Equipment

- Horizontal baler
- Static compactor
- Magnetic separator
- Optical sorter
- Conveyor systems
- Eddy current separator
- Ballistic separator
- Trommel screen
- Windshifter
- Primary shredder
- Bag opener
- MAX-AI sorting robot
- Disk screen separator
- RDF/SRF shredder
- Container

## Component parts

- Conveyor belts
- Conveyor rollers
- Motor reducers



SK-80



RDF/SRF shredder



HORIZONTAL BALER



Primary shredder



SK-250



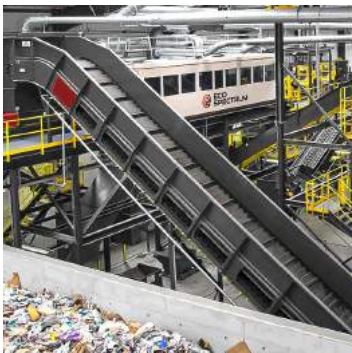
MAX-AI sorting robot



EDDY CURRENT SEPARATOR



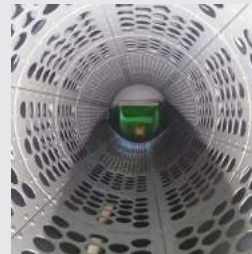
Windshifter



SK-500



Bag opener



Trommel screen



Ballistic separator



Optical sorter



Static compactor



Static  
compactor

## WASTE SORTING PLANT SK-80

### SPECIFICATIONS:

Capacity, 1000 tons/year

Sorting stations

Energy consumption, kW

Version

30-80

6-12

14,5 – 38,7

Manual version



MSW Sorting plant SK-80 includes 2 conveyors, a platform for manual selection of secondary material resources for 6 - 8 stations, chain feed and belt sorting conveyor, automatic control system and a vertical baler for secondary material resources with 30 tons compression force. Manual sorting unit has a climatic cabin and discharge bins equipped with control damper, that allows SK-80 plant all-year and open-air operating. Basic version of plant provides capacity up to 30,000 tons a year, using only 8 sorting stations, while operating 12 hours a day. Capacity of equipment in Standard version can be increased up to 80,000 t/year due to re-equipping with rotary separator and magnetic separator, as well as by increasing sorting stations up to 12. The sorting plant SK-80 manufactured by Eco-Spectrum is suitable for a settlement with 50 to 100 thousand people.

### Basic version

- Manual sorting platform.
- Chain feeding conveyor.
- Belt sorting conveyor.
- Automatic control system.
- Vertical baler.

### Standard version

- Manual sorting platform.
- Chain feeding conveyor.
- Rotary separator
- Belt sorting conveyor.
- Magnetic separator.
- Automatic control system.
- Vertical or horizontal baler\*.

*\* Infeed chain conveyor is required for horizontal baler*



## WASTE SORTING PLANT SK-250

### SPECIFICATIONS:

Capacity, 1000 tons/year

Sorting stations

Energy consumption, kW

Operating option

**up to 250**

**48 – 52**

**152 – 320**

**manual**

**semi-automatic**

**automatic**



MSW sorting plant SK-250 consists of two parallel sorting lines. Each of sorting lines includes: feeding and sorting conveyors, preliminary and main sorting platforms, magnetic and rotary separators, it is also possible to use additional equipment for process automation. MSW sorting plant SK-250 manufactured by Eco-Spectrum is suitable for a settlement with up to 500 thousand people. The plant is designed to sort up to 250,000 tons/year using only 48 sorting stations, provided 16 hours/day operation. Basic version of the plant reaches a capacity up to 200,000 tons/year, using only 52 sorting stations, provided 16 hours/day operation. Capacity in the Standard version of the plant can be increased up to 250,000 t/year due to re-equipping with bag openers, optical separators, and a preliminary sorting platform with cullet selection stations. Making up the set in Standard+ version can be supplemented with a site for destructuring thermal waste tails and production of technical soil.



### Basic version

- Chain feeding conveyors.
- Platform and climate cabin manual pre-sorting.
- Belt sorting conveyors.
- Belt feeding conveyors.
- Rotary trommel
- Belt outfeed conveyors.
- Magnetic separators.
- Chain reversible conveyors.
- Main sorting and climate cabin platform
- Automatic control system.
- Horizontal baler

### Standard+ version

- Bag openers.
- Chain feeding conveyors.
- Manual pre-sorting climate cabin and platform with cullet selection.
- Belt sorting conveyors.
- Belt feeding conveyors.
- Rotary trommel.
- Belt outfeed conveyors.
- Magnetic separators.

### Standard version

- Bag opener
- Chain feeding conveyors.
- Manual presorting climate cabin and platform with cullet selection.
- Belt sorting conveyor.
- Belt feeding conveyors.
- Rotary trommel
- Belt outfeed conveyors.
- Magnetic separators.
- Chain reversible conveyors.
- Optical separators.
- Main sorting and climate cabin platform
- Automatic control system.
- Horizontal baler.
- Compressor station

- Chain reversible conveyors.
- Optical separators. Main sorting and climate cabin platform.
- Automatic control system.
- Horizontal baler.
- Compressor station.
- Incinerators.
- Technical soil production system.



## WASTE SORTING PLANT SK-500

### SPECIFICATIONS:

Capacity, 1000 tons/year

Sorting stations

Energy consumption, kW

Operating option

up to 500

86

1300–1800

manual/  
semi-  
automatic



Waste sorting plant SK-500 consists of three mixed waste sorting lines and one sorting line for separate waste collection, it meets the latest requirements for MSW processing and accumulation. Each of the main sorting lines includes the entire range of modern sorting equipment. And most of the incoming MSW flow separation in terms of composition and morphology is conducted automatically. The sorting line for separate collection is equipped with a sorting cabin, where the selection of useful fractions takes place manually. Waste sorting plant SK-500 also has a SRF (RDF) production site, a site for bulky waste, a site for production of technical soil and a site for burning medical and biological waste. MSW sorting plant SK-500 made by Eco-Spectrum is suitable for a settlement with up to 1 million people. The plant is designed for sorting MSW up to 500,000 tons/year, using only 86 sorting stations, provided that plant is operating 22 hours/day.

### The plant consists of:

- Bag opener
- Chain feeding conveyors.
- Manual presorting climate cabin and platform with cullet selection.
- Belt sorting conveyors.
- Belt feeding conveyors.
- Rotary trommel.
- Belt outfeed conveyors.
- Magnetic separators.
- Eddy current separators.
- Chain reversible conveyors.
- Optical separators.
- Ballistic separators.
- Main sorting and climate cabin platform
- Shredder for bulky waste
- Secondary SRF(RDF) shredder.
- Windshifter
- Automatic control systems.
- Horizontal baler.
- Compressor station.
- Incinerators.
- Technical soil production system



### 1. FULL CYCLE PRODUCTION



#### STAGE 1.

**Identification of customers' needs, defining Terms of Reference.**

A comprehensive solution for the development of a general concept of the project and the technical equipment of the sites, taking into account customers' specifications.



#### STAGE 2.

**Designing equipment taking into account the technical conditions of the loading platform.**

Professional design is carried out by engineers who have highest grades in computer-aided engineering systems.



#### STAGE 3.

**Equipment manufacturing**

Production is equipped with modern machines based on numerical program control, that ensures high quality and manufacturing precision. Assembly of equipment is carried out by a qualified staff. Full engineering cycle production of equipment is carried out by the experts of the Instrumentation and Automation Department and Automated Process Control Department.



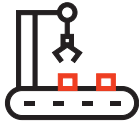
#### STAGE 4.

**Commissioning**

It's carried out by «Eco-Spectrum» engineers. Full-time specialists carry out work on commissioning, installation, supervision and putting into operation have the appropriate qualifications and the necessary permits that guarantee quality and safety of operating equipment.



## 2. COMPANY ENGINEERING RESOURCES



TECHNICAL RESOURCE  
**MORE THAN 200  
UNITS OF MACHINERY  
AND EQUIPMENT**



HUMAN RESOURCE  
**MORE THAN 120  
EMPLOYEES**

## 3. QUALITY CONTROL AND INSPECTION DEPARTMENT

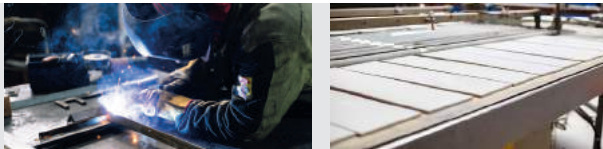


QUALITY CONTROL  
**TESTING OF  
MANUFACTURED  
PRODUCTS**



QUALITY COMPLIANCE WITH  
INTERNATIONAL STANDARDS

**CE CERTIFICATE  
NO. 211299358**



# COMPANY DIPLOMAS AND AWARDS

Eco-Spectrum LLC annually sends its own employees to advanced training courses, and also regularly complies with standards quality for equipment. The Company takes an active part in national and international conferences and forums. The company is the winner of the national certificate «Industry Leader 2020» according to Russian Statistics Agency.



National Certificate  
"Industry Leader 2020"



Patent for invention of  
"Incinerator"



Participation at online  
auctions



Utilization Certificate, 2018



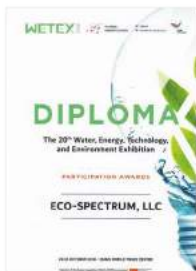
Useful Model Patent "Water-  
heating gasproof boiler"



Useful Model Patent "Water-  
heating gasproof three-course  
boiler"



Useful Model Patent  
"Rotary Incinerator"



WETEX Diploma, 2018



Certificate of Expert  
Maturity



WASMA  
Diploma 2022



Southern Environmental  
Forum



Golden Mercury Diploma,  
2021

# CERTIFICATES AND QUALIFICATIONS



STATE ENVIRONMENTAL ASSESSMENT FOR 4000 TYPES OF WASTE



SANITARY-EPIDEMIOLOGICAL STATEMENT



EUROPEAN CONFORMITY CERTIFICATE



EURASIAN ECONOMIC UNION DECLARATION



ENVIRONMENTAL CONFORMITY CERTIFICATE



EURASIAN ECONOMIC UNION DECLARATION



EXPERT REPORT



CERTIFICATE OF CONFORMITY ISO 9001:2015



TRADEMARK CERTIFICATE FOR VOLKAN



TRADEMARK CERTIFICATE FOR HURIKAN



CERTIFICATE OF CONFORMITY ISO 9001:2015



CERTIFICATE OF CONFORMITY ISO 14001:2015



State Environmental Expert Review at the Federal level



European Conformity



Enterprise Attestation



ISO Certificate

# DELIVERY GEOGRAPHY

MORE THAN 500 UNITS OF  
EQUIPMENT DELIVERED TO  
OVER 130 CITIES OF RUSSIA  
ARE ALREADY IN OPERATION.



 RUSSIA

 MONGOLIA

 KAZAKHSTAN

 PAKISTAN

 AZERBAIJAN

 ARMENIA

 DR CONGO

 TAJIKISTAN

 UZBEKISTAN

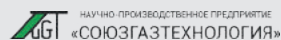
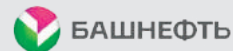
 UAE

 PERU

 SAUDI ARABIA

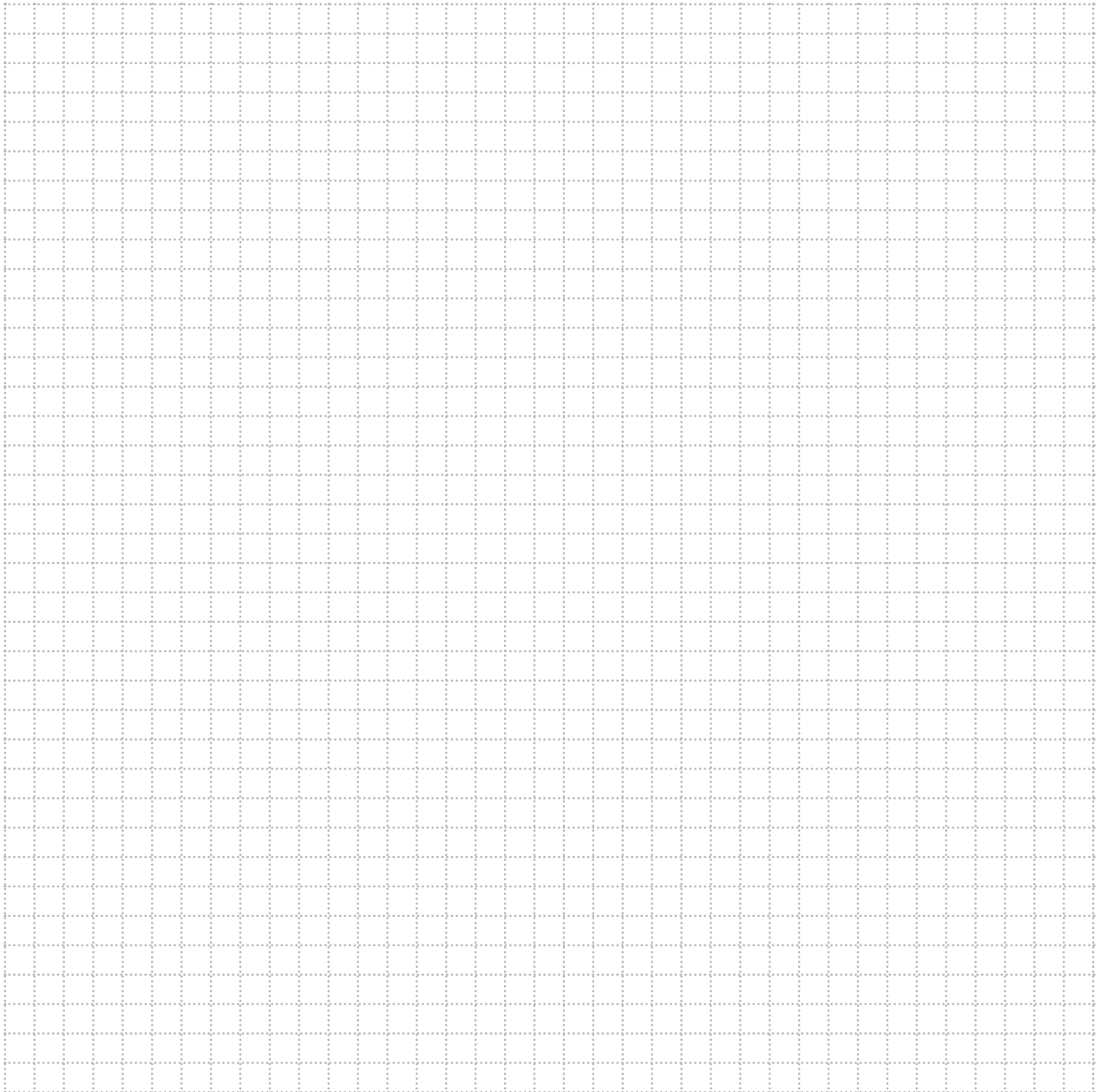


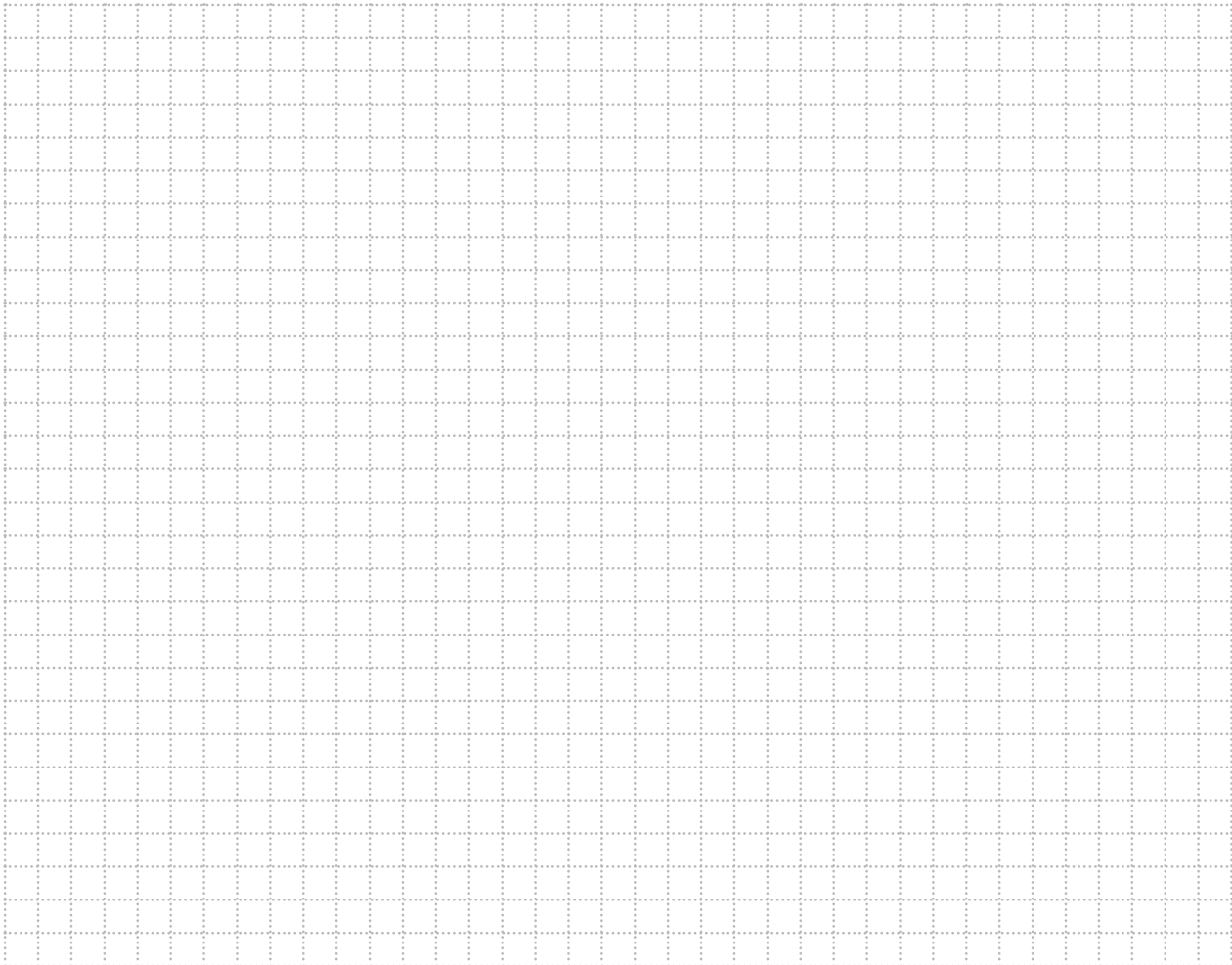
# CUSTOMERS ECO-SPECTRUM

 МИРАТОРП ДОМОДЕДОВО  
МОСКОВСКИЙ АЭРОПОРТ NOV'S VIN АГРОКОМПЛЕКС  
НАТУРАЛЬНЫЕ ПРОДУКТЫ ЮВАНИ БАИМСКАЯ  
ГОРНОДОБЫВАЮЩАЯ КОМПАНИЯ СТК  
ПОЛИМЕРНЫЕ ТРУБОПРОВОДНЫЕ СИСТЕМЫ  
ПОЗИТИВНЫЕ ВИТАМИНЫ  
Мегapolis НефтеСтройСервис Лтд  
Товарищество с ограниченной ответственностью СОЮЗГАЗТЕХНОЛОГИЯ  
НАУЧНО-ПРОИЗВОДСТВЕННОЕ ПРЕДПРИЯТИЕ РУССКАЯ СВИНИНА Краснодар  
международный аэропорт Чистый город БАШНЕФТЬ ТАЛИНА РОЗНИЧНАЯ СЕТЬ  
МАГНИТ НОВАТЭК IGS  
ГРУППА КОМПАНИЙ ЯМАЛ СПГ ВЕЛЕССТРОЙ РОСНЕФТЬ АГЕНТСТВО  
РГЧТНАЯ  
БЕЗОПАСНОСТЬ

About the company  
Eco-Spectrum

# FOR NOTES





Eco-Spectrum also produces equipment for waste sorting and industrial hot water boilers.



Industrial Hot  
Water Boilers



Incinerators  
VOLKAN and  
HURIKAN series



Gas Cleaning  
Systems



## COMPANY HEADQUARTERS

Eco-Spectrum LLC, Demusa M.N. str. 52,  
Krasnodar, Krasnodarsky region,  
Russian Federation.

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[www.eco-spectrum.com](http://www.eco-spectrum.com)