



**ECO
SPECTRUM**

PRODUCTION OF INCINERATORS | ENGINEERING

CATALOG OF INSINERATORS



ONLINE CATALOG

Sk Skolkovo
Участник Resident

 European Conformity
(CE)

 Enterprise
Attestation

 ISO
Certificate



ABOUT COMPANY



OWN PRODUCTION

«Eco-Spectrum» LLC has its OWN PRODUCTION, the company develops and manufactures waste disposal and neutralization equipment, and carries out turnkey projects by implementing automated complexes for thermal neutralization and waste disposal, equipped with gas cleaning and heat recovery systems. Our own production facilities and the expertise of employees allows our customers to receive a modern product that meets all the requirements of environmental legislation.

INDUSTRY LEADER IN RESEARCH, TECHNOLOGY AND INNOVATION

The production of “Eco-Spectrum” LLC is based on research, technology and innovations, the company is constantly improving and introducing unique solutions that improve the operating, performance and quality specifications of the equipment.

INDUSTRY LEADER

The company holds a leading position in the production of industrial equipment for waste neutralization and disposal with the generation of heat and electricity, and according to the Federal Service of State Statistics it has been awarded with multiple “Industry Leader” certificates among manufacturers of industrial equipment.

Patents

No. 2735825 «Incinerator»;

No. 203231 «Rotary incinerator».

INSINERATORS SERIES: VOLKAN®, HURIKAN® AND HURIKAN® ROTARY

CONSTRUCTION

The incinerators manufactured by “Eco-Spectrum” are made for thermal waste utilization. Various series and models of equipment are applied depending on the type, aggregative state and morphological composition of waste. The units are designed to work 24/7 in any climatic conditions ranged from -60 °C to +45 °C, it's appropriate to portable, modular and stationary models. The unique technology of combined lining provides high temperatures in the incinerator chambers that makes it possible to ensure rapid disposal of waste and afterburning of flue gases. These Incinerators can be used for the disposal of more than 4,700 types of waste, hazard class: III, IV, and V.

MAIN UNITS: THE INCINERATOR HAS A TWO-CHAMBER STRUCTURE.

The combustion chamber is made using a unique monolithic concrete lining. The walls of the casing on the inside have anchored type stainless steel with compensation coatings and frequent spacing to ensure reliable fastening of the concrete lining, excluding cracking as a result of various thermal expansions of materials.

The afterburn chamber is made for afterburning combustion products and high-quality neutralization of flue gases. An additional layer of high-temperature composite coatings of the afterburn chamber's linings provides their additional protection against thermal and chemical effects.

The Installation's structure

The installation's units are sand-blasted, after that it is prepared for applying the primer, and then painted with high-temperature resistant paints and enamels. This technology provides high resistance to corrosion and increases the durability of the equipment as a whole. Welded seams are made by highly qualified experts and meet all the requirements of the National Standard Agency.

Control panel and fuel supply system

The PLC-based control panel provides control automation and monitoring of combustion processes. All electrical cables and fuel supply system are installed in cable channels, fine filters and a deaerator are installed, a built-in archiver and remote connection through a local mobile operator allows you to control operations remotely.



VOLKAN® 150

SPECIFICATIONS:

The volume of main chamber	0,34 m ³
Volume of gas afterburning chamber	0,4 m ³
Burning rate up to	40 kg/hour
Dimensions (LxWxH)	1,4 x 0,92 x 3,1 m
Loading Window (LxW)	0,64 x 0,5 m
Weight	1,2 tons

Fuel type: diesel/gas/fuel oil/waste oil



VOLKAN® 750

SPECIFICATIONS:

The volume of main chamber	1,3 m ³
Volume of gas afterburning chamber	1,08 m ³
Burning rate up to	75 kg/hour
Dimensions (LxWxH)	2,5 x 2,7 x 2,4 m
Loading Window (LxW)	2,1 x 0,9 m
Weight	4 tons

Fuel type: diesel/gas/fuel oil/waste oil



VOLKAN® 200

SPECIFICATIONS:

The volume of main chamber	0,62 m ³
Volume of gas afterburning chamber	0,75 m ³
Burning rate up to	40 kg/hour
Dimensions (LxWxH)	2,2 x 1,2 x 3,1 m
Loading Window (LxW)	0,75 x 0,75 m
Weight	2,1 tons

Fuel type: diesel/gas/fuel oil/waste oil



VOLKAN® 1000

SPECIFICATIONS:

The volume of main chamber	1,85 m ³
Volume of gas afterburning chamber	1,08 m ³
Burning rate up to	75 kg/hour
Dimensions (LxWxH)	4,5 x 3,1 x 2,1 m
Loading Window (LxW)	2,2 x 0,9 m
Weight	3,8 tons

Fuel type: diesel/gas/fuel oil/waste oil



VOLKAN® 500

SPECIFICATIONS:

The volume of main chamber	0,92 m ³
Volume of gas afterburning chamber	1,08 m ³
Burning rate up to	50 kg/hour
Dimensions (LxWxH)	2,5 x 2,1 x 2,4 m
Loading Window (LxW)	1,5 x 0,9 m
Weight	3,4 tons

Fuel type: diesel/gas/fuel oil/waste oil



VOLKAN® 1500

SPECIFICATIONS:

The volume of main chamber	4,15 m ³
Volume of gas afterburning chamber	2,8 m ³
Burning rate up to	150 kg/hour
Dimensions (LxWxH)	8,5 x 2,4 x 2,1 m
Loading Window (LxW)	3,1 x 1,6 m
Weight	7,6 tons

Fuel type: diesel/gas/fuel oil/waste oil



VOLKAN® 1750

SPECIFICATIONS:

The volume of main chamber	3,71 m³
Volume of gas afterburning chamber	2,8 m³
Burning rate up to	150 kg/hour
Dimensions (LxWxH)	4,6 x 3,5 x 2,2 m
Loading Window (LxW)	2,2 x 1,8 m
Weight	6 tons

Fuel type: diesel/gas/fuel oil/waste oil



VOLKAN® 2000

SPECIFICATIONS:

The volume of main chamber	3,7 m³
Volume of gas afterburning chamber	3,9 m³
Burning rate up to	150 kg/hour
Dimensions (LxWxH)	4,4 x 3,7 x 3,6 m
Loading Window (LxW)	1,28 x 1 m (LxW)
Weight	6,9 tons

Fuel type: diesel/gas/fuel oil/waste oil

- The VOLKAN series incinerators are ideal for the disposal of varied daily minor waste. All units of the VOLKAN series are equipped with a gas afterburning chamber designed to keep the gas for at least 2 seconds at high temperature to achieve the required ecological concentrations.
- Optional list of units: gas cleaning system, waste supply unit, heat recuperator.
- Implication of concrete lining allows for high operating temperatures and increases the efficiency of detoxification, while the use of heat-insulating materials with a unique fastening technology as part of the lining extends the service life of the equipment.
- The control panel is on the outside of unit's casing, that makes operation process convenient.
- The State Ecological Expertise certified conformance of application of VOLKAN series installations all over the Russian Federation at the national level.



HURIKAN® 70

SPECIFICATIONS:

The volume of main chamber	0,9 - 0,7 m ³
Volume of gas afterburning chamber	1,15 m ³
Burning rate up to	70 kg/hour
Dimensions (LxWxH)	2,4 x 1,7 x 2,2 m
Loading Window (LxW)	1,3 x 0,9 m
Weight	3 tons

Fuel type: diesel/gas/fuel oil/waste oil



HURIKAN® 150

SPECIFICATIONS:

The volume of main chamber	1,1 - 0,8 m ³
Volume of gas afterburning chamber	2,15 m ³
Burning rate up to	150 kg/hour
Dimensions (LxWxH)	2,9 x 2 x 2,2 m
Loading Window (LxW)	1,6 x 0,9 m
Weight	3,6 tons

Fuel type: diesel/gas/fuel oil/waste oil



HURIKAN® 200

SPECIFICATIONS:

The volume of main chamber	3,5 - 2,6 m ³
Volume of gas afterburning chamber	2,68 m ³
Burning rate up to	200 kg/hour
Dimensions (LxWxH)	3,5 x 2,4 x 2,5 m
Loading Window (LxW)	1,8 x 1,3 m
Weight	6 tons

Fuel type: diesel/gas/fuel oil/waste oil

- HURIKAN series incinerators with high-performance and round-the-clock operation are ideal for the disposal and neutralization of MSW, including bulky waste, biological, medical, agricultural, industrial waste, ship waste, oil processing and production enterprises waste, expired medicines, confiscated goods, archives, etc. The list of State Environmental Expert Review wastes includes more than 4000 types of Federal Classificatory Catalog of Wastes.





HURIKAN® 300

SPECIFICATIONS:

The volume of main chamber	4,38 - 3,55 m ³
Volume of gas afterburning chamber	5,22 m ³
Burning rate up to	300 kg/hour
Dimensions (LxWxH)	6 x 2,4 x 2,85 m
Loading Window (LxW)	1,3 x 1,87 m
Weight	11,5 tons

Fuel type: diesel/gas/fuel oil/waste oil



HURIKAN® 500

SPECIFICATIONS:

The volume of main chamber	6,5 - 5,34 m ³
Volume of gas afterburning chamber	7,5 m ³
Burning rate up to	500 kg/hour
Dimensions (LxWxH)	6 x 2,4 x 2,5 m
Loading Window (LxW)	1,95 x 1,87 m
Weight	16,5 tons

Fuel type: diesel/gas/fuel oil/waste oil



HURIKAN® 1000

SPECIFICATIONS:

The volume of main chamber	15 - 11,5 m ³
Volume of gas afterburning chamber	13,8 m ³
Burning rate up to	1000 kg/hour
Dimensions (LxWxH)	12 x 2,4 x 2,85 m
Loading Window (LxW)	3,88 x 1,87 m
Weight	22 tons

Fuel type: diesel/gas/fuel oil/waste oil

- The use of concrete lining and insulating materials with a unique fastening technology allows for high performance.
- Optional complete set with gas cleaning system, waste supply unit, heat recuperator.
- Optional climatic modifications from -60°C to +45°C.
- Portable operation in field conditions and outdoors.
- Management and control automation of operation processes.
- Warning system - SMS notifications in case of accidents and emergencies.
- Remote control and data backup.
- PLC engineering according to various waste specifications.
- Hearth bar elements manufactured using a proprietary technology ensure continual high performance 24/7.



Patent №2735825
for the invention of «Incinerator»

SERIES HURIKAN® ROTARY



HURIKAN® 200 R

SPECIFICATIONS:

The volume of main chamber	1,9 m ³
Volume of gas afterburning chamber	2,3 m ³
Burning rate up to	200 kg/hour
Dimensions (LxWxH)	7,2 x 3,8 x 7,5 m
Loading Window (LxW)	nominal-rated
Weight	15 tons
Fuel type: diesel/gas/fuel oil/waste oil	



HURIKAN® 400 R

SPECIFICATIONS:

The volume of main chamber	4,09 m ³
Volume of gas afterburning chamber	4,14 m ³
Burning rate up to	400 kg/hour
Dimensions (LxWxH)	10 x 2,4 x 7 m
Loading Window (LxW)	nominal-rated
Weight	20 tons
Fuel type: diesel/gas/fuel oil/waste oil	



HURIKAN® 1000 R

SPECIFICATIONS:

The volume of main chamber	8 m ³
Volume of gas afterburning chamber	14,8 m ³
Burning rate up to	1000 kg/hour
Dimensions (LxWxH)	12 x 2,4 x 10 m
Loading Window (LxW)	nominal-rated
Weight	40 tons
Fuel type: diesel/gas/fuel oil/waste oil	



HURIKAN® 2000 R

SPECIFICATIONS:

The volume of main chamber	15 m ³
Volume of gas afterburning chamber	24 m ³
Burning rate up to	2000 kg/hour
Dimensions (LxWxH)	10 x 2,54 x 2,54 m
Loading Window (LxW)	nominal-rated
Weight	50 tons
Fuel type: diesel/gas/fuel oil/waste oil	



HURIKAN® 5000 R

SPECIFICATIONS:

The volume of main chamber	36 m ³
Volume of gas afterburning chamber	25 m ³
Burning rate up to	5000 kg/hour
Dimensions (LxWxH)	20 x 2,55 x 11 m
Loading Window (LxW)	nominal-rated
Weight	95 tons
Fuel type: diesel/gas/fuel oil/waste oil	

CATALOG OF
INSINERATORS



Perfect solution for round-the-clock operation in MSW process cycle after sorting (“tailings”), on granular waste, contaminated soils containing oil products, medical waste, industrial, wood and other high-calorie waste. Processing of paste-like and liquid waste is also available.

HURIKAN incinerators related to Rotary series developed by Eco-Spectrum LLC have high-strength fire-proof concrete linings, high performance and long service life.

- All models of the HURIKAN rotary series can be equipped additionally with accessory equipment to enhance operation.
- Scrubber system based on TYPHOON with a wet scrubbing circulating system ensures gas cleaning according to required standards.
- Russian Consumer Protection Agency Certification of waste treatment for more than 4,000 wastes according to Federal Classificatory Catalog of Wastes.



Patent No. 203231 for Invention of
“Rotary Incinerator”

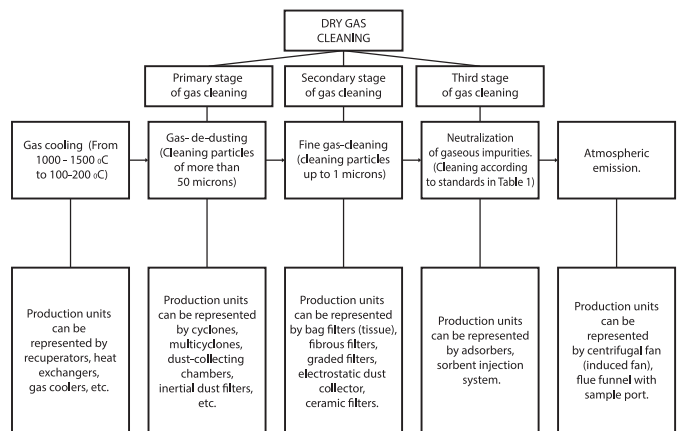
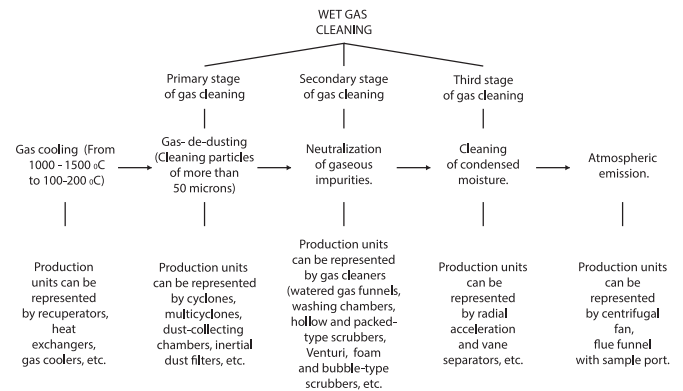
Specification may vary at project design stage and have no impact on the quality of the finished equipment.

GAS CLEANING SYSTEM

While taking an active part in the implementation of environmentally friendly methods of waste disposal, "Eco-Spectrum" has developed and repeatedly implemented projects with the introduction of «wet» and «dry» flue gas cleaning systems, and their combinations.

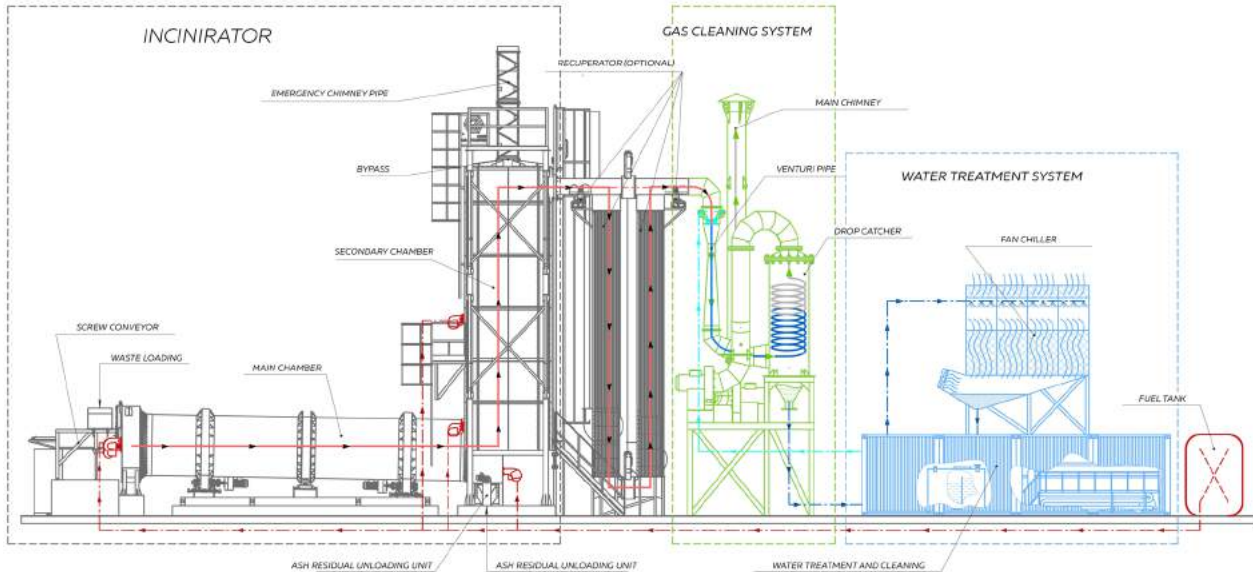
The "wet" gas cleaning system neutralizes substances by the adsorption method, provides shock cooling of flue gases (quenching), avoiding the recombination temperature of dioxins and furans, and the exception of outfalls is ensured by a closed cycle system of water treatment.

The dry gas cleaning system ensures the smooth process management of cooling and cleaning flue gases, and reduces the carbon footprint.

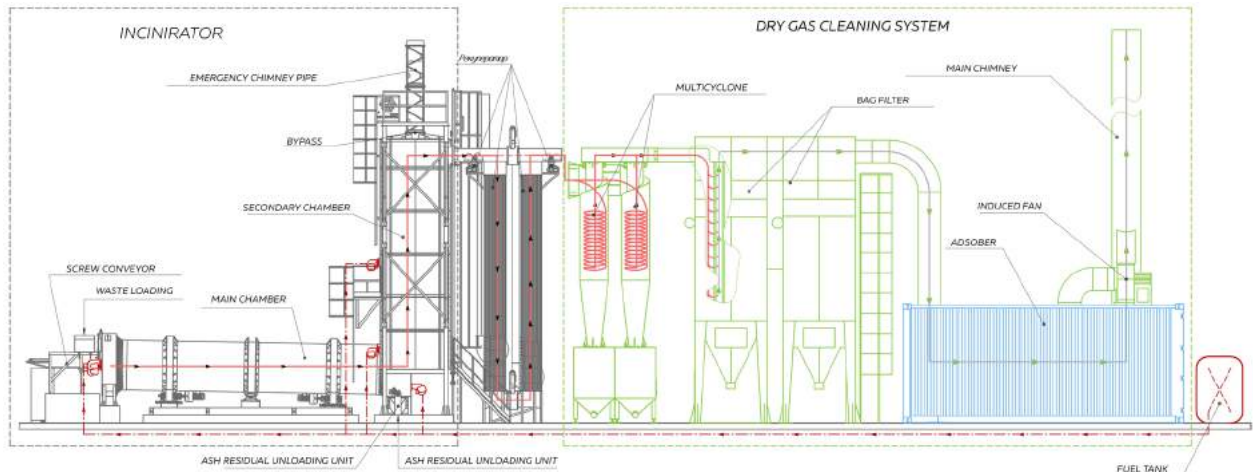


Scrubber Catalog

Schematic diagram of an incinerator with wet gas cleaning system based on a TYPHOON scrubber manufactured by "Eco-Spectrum" LLC



Schematic diagram of an incinerator with dry gas cleaning system manufactured by "Eco-Spectrum" LLC.

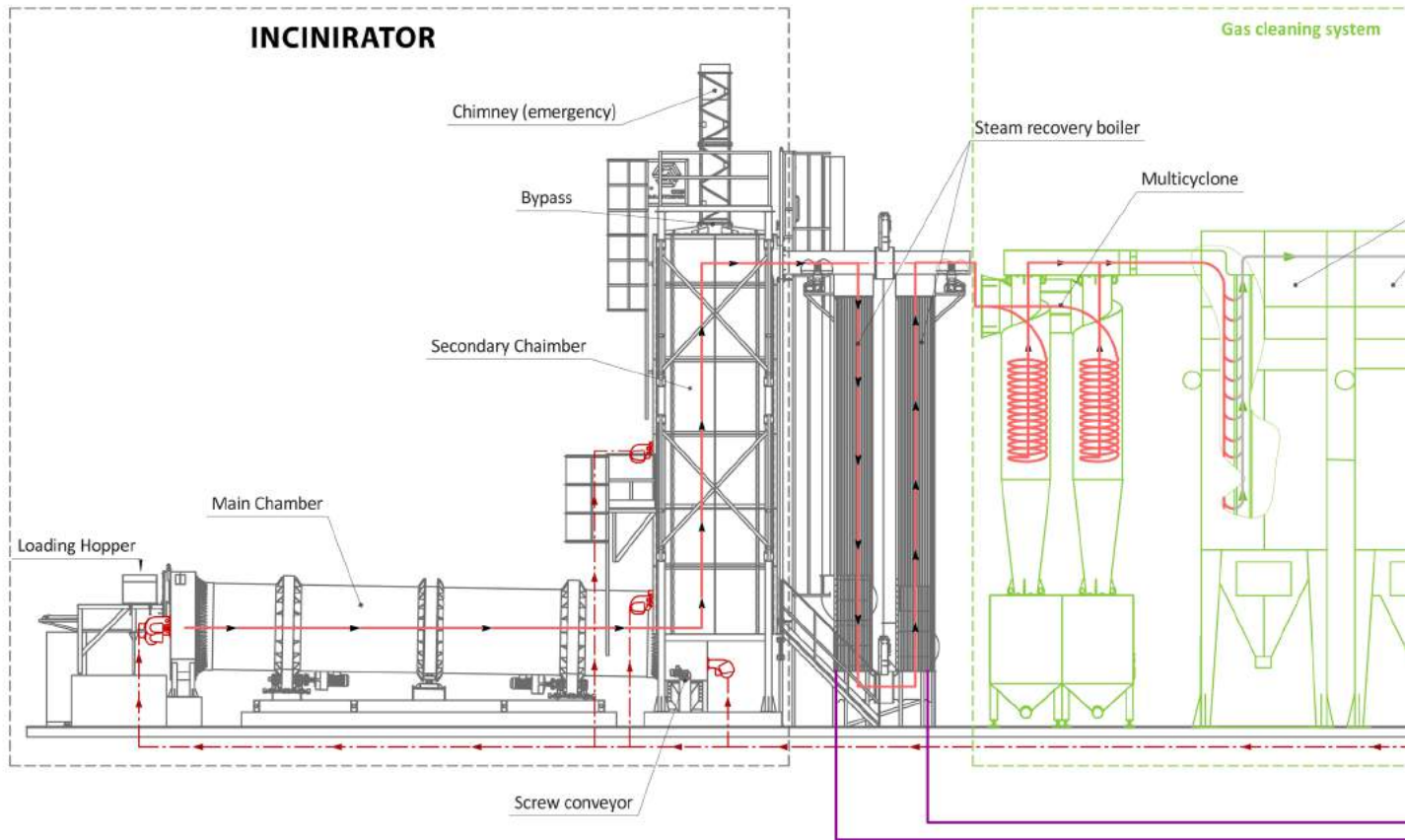


FLUE GAS RECUPERATOR

Eco-Spectrum units can be equipped with flue gas recuperators of our own production.

The use of a flue gas recuperators makes it possible to heat water with flue gases from the Installation to a temperature sufficient for heating industrial premises, that satisfies the need of an enterprise for hot water, and can also be used in technological processes.

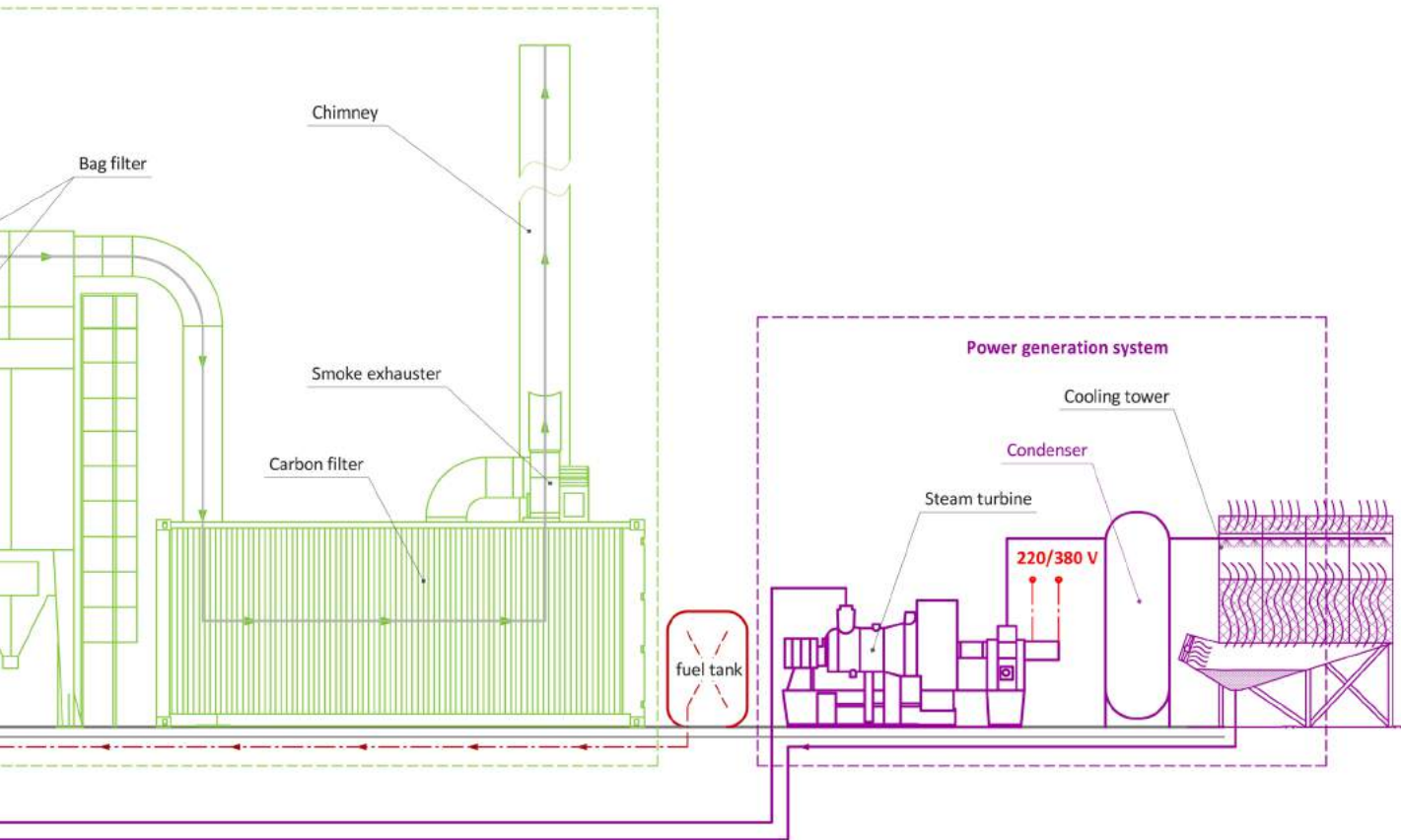
Eco-Spectrum has developed and manufactured 3 types of recuperators.



ELECTRIC ENERGY GENERATION

Eco-Spectrum units can be equipped with a Stirling engine of our own production. The use of the engine makes it possible to generate electricity, depending on the capacity of the installation, up to 600 kW. Excess electricity can be stored and accumulated in case of increased electrical load.

Steam turbines can also be used to generate electricity.



1. FULL CICLE 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.

Introduction into Service .

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

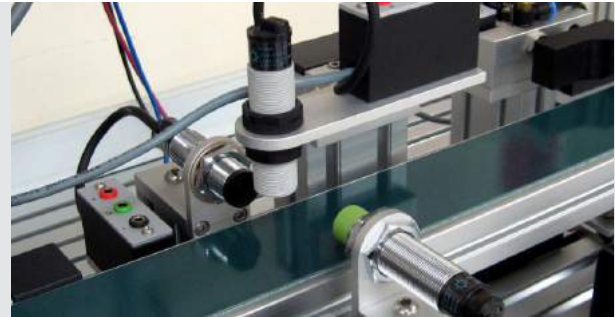
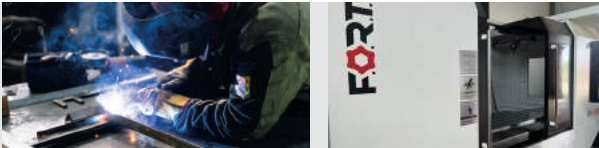


QUALITY CONTROL
**TESTING OF
MANUFACTURED
PRODUCTS (QUALITY**



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 Statics Agency.



National Certificate
"Industry Leader 2020"



Patent for invention of
"Incinerator"



Participation at online
auctions



Utilization Certificate, 2018



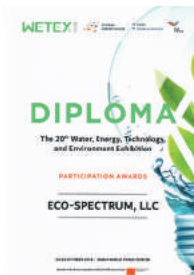
Useful Model Patent "Water-
heating gasproof boiler"



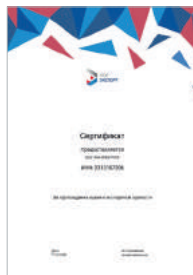
Useful Model Patent "Water-
heating gasproof three-course
boiler"



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



EUROPEAN CONFORMITY CERTIFICATE



SANITARY-EPIDEMIOLOGICAL STATEMENT



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



- | | | | | |
|---|--|--|---|--|
|  RUSSIA |  MONGOLIA |  KAZAKHSTAN |  PAKISTAN |  AZERBAIJAN |
|  ARMENIA |  DR CONGO |  TAJIKISTAN |  UZBEKISTAN | |
|  UAE |  PERU |  SAUDI ARABIA | | |

CUSTOMERS ECO-SPECTRUM

МИРАТОРГ

ДОМОДЕДОВО
МОСКОВСКИЙ АЭРОПОРТ

NOV'S VIN



АГРОКОМПЛЕКС
НАТУРАЛЬНЫЕ ПРОДУКТЫ ЮВАНИ

БАИМСКАЯ
ГОРНОДОБЫВАЮЩАЯ КОМПАНИЯ

СТК ПОЛИМЕРНЫЕ ТРУБОПРОВОДНЫЕ СИСТЕМЫ
ПОСКОУПЛИКОВЫЕ БИТУМЫ
МЕГАПОЛИС



НефтеСтройСервис ЛТД
Товарищество с ограниченной ответственностью

ИГТ НАУЧНО-ПРОИЗВОДСТВЕННОЕ ПРЕДПРИЯТИЕ
«СОЮЗГАЗТЕХНОЛОГИЯ»

РУССКАЯ СВИНИНА



Краснодар
международный аэропорт

Чистый город

БАШНЕФТЬ



ТАЛИНА

РОЗНИЧНАЯ СЕТЬ
МАГНИТ

НОВАТЭК

IGS ГРУППА КОМПАНИЙ

ЯМАЛ СПГ

ВЕЛЕССТРОЙ

НЕФТЬ ТЕХНИКА И СООБЩЕСТВО
РОСНЕФТЬ

агентство
РЦТНАЯ
БЕЗОПАСНОСТЬ



About the company
Eco-Spectrum

ACCOMPLISHED PROJECTS



HURIKAN 1000 – disposal of cattle stock



HURIKAN 300 - disposal of oil waste sludge



HURIKAN 1000 - furniture production waste disposal



HURIKAN 300 - disposal of railway sleepers, rubberized metal cords



HURIKAN 500 - medical waste disposal



HURIKAN 2000 - coal dust disposal



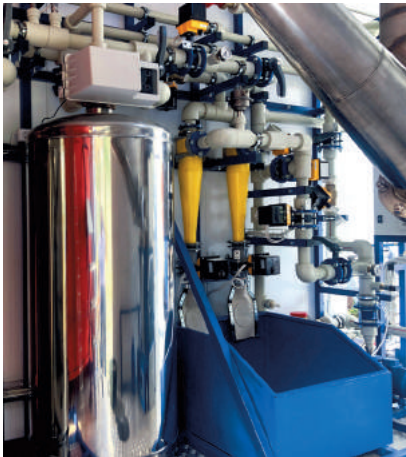
HURIKAN 1000 - disposal of waste infected with COVID-19, medical waste



HURIKAN 300 - disposal of veterinary waste



HURIKAN 400 R – waste disposal



HURIKAN 1000 R - solid waste disposal

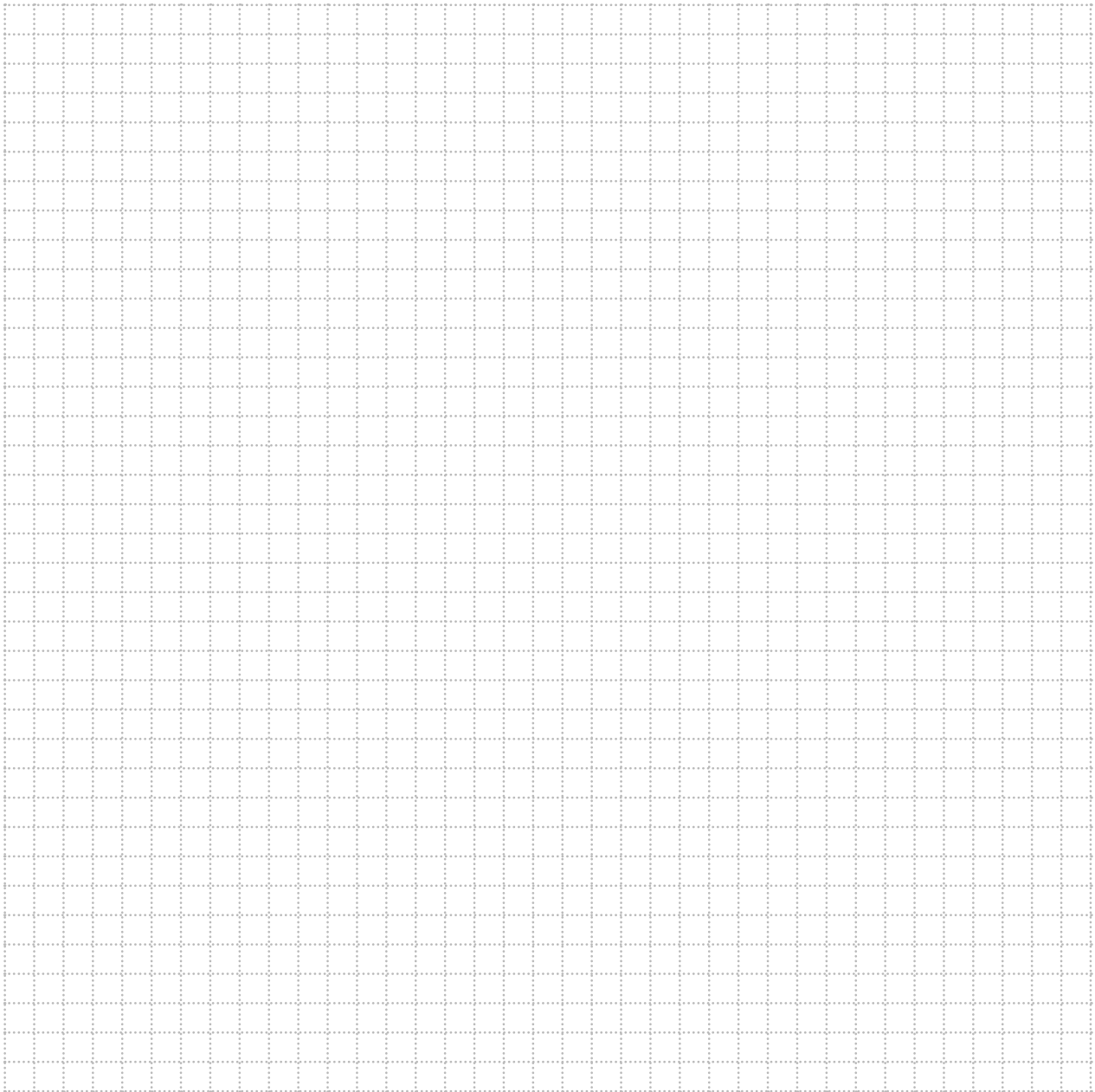


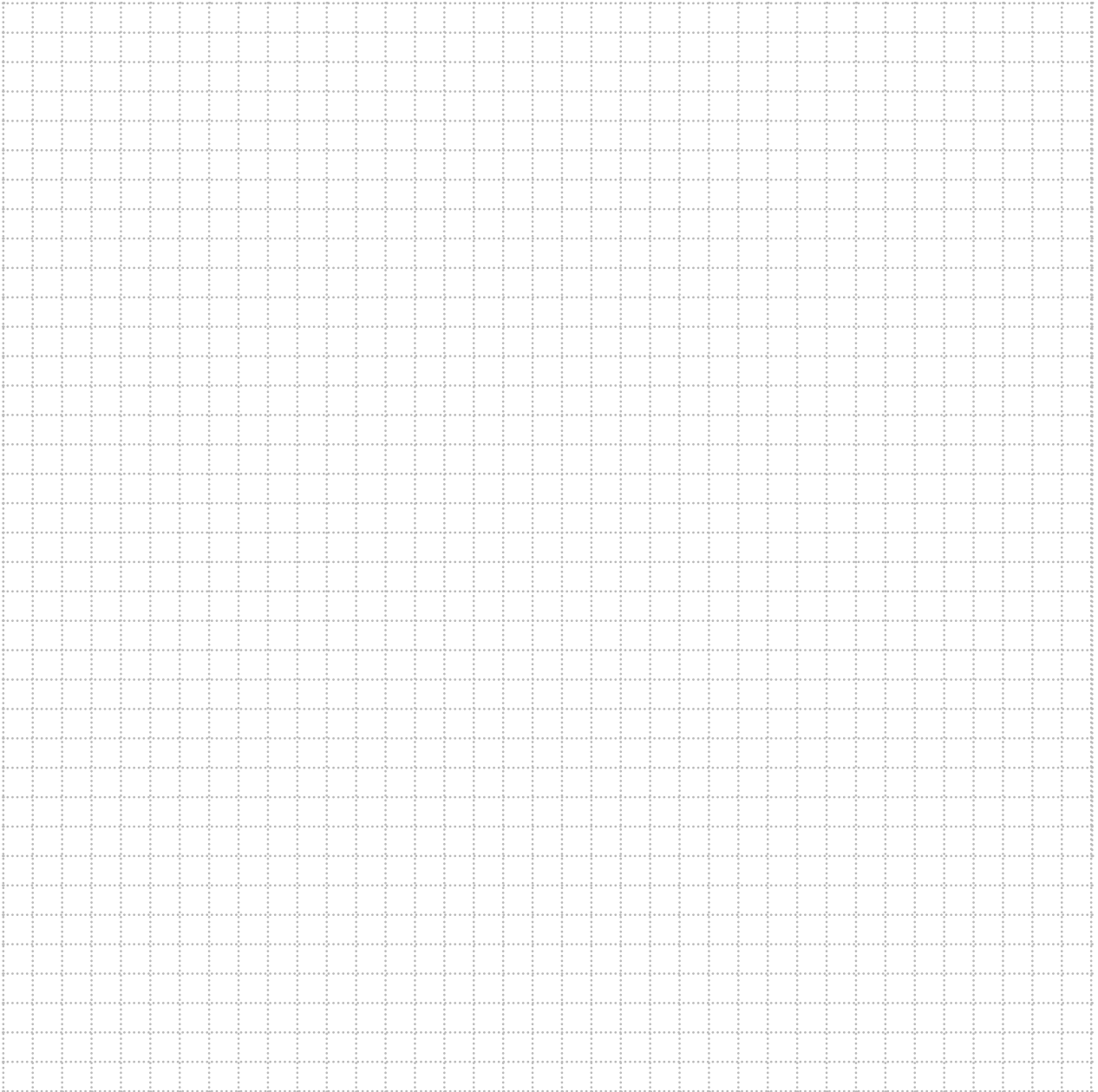
HURIKAN 1000 R - oil sludge disposal



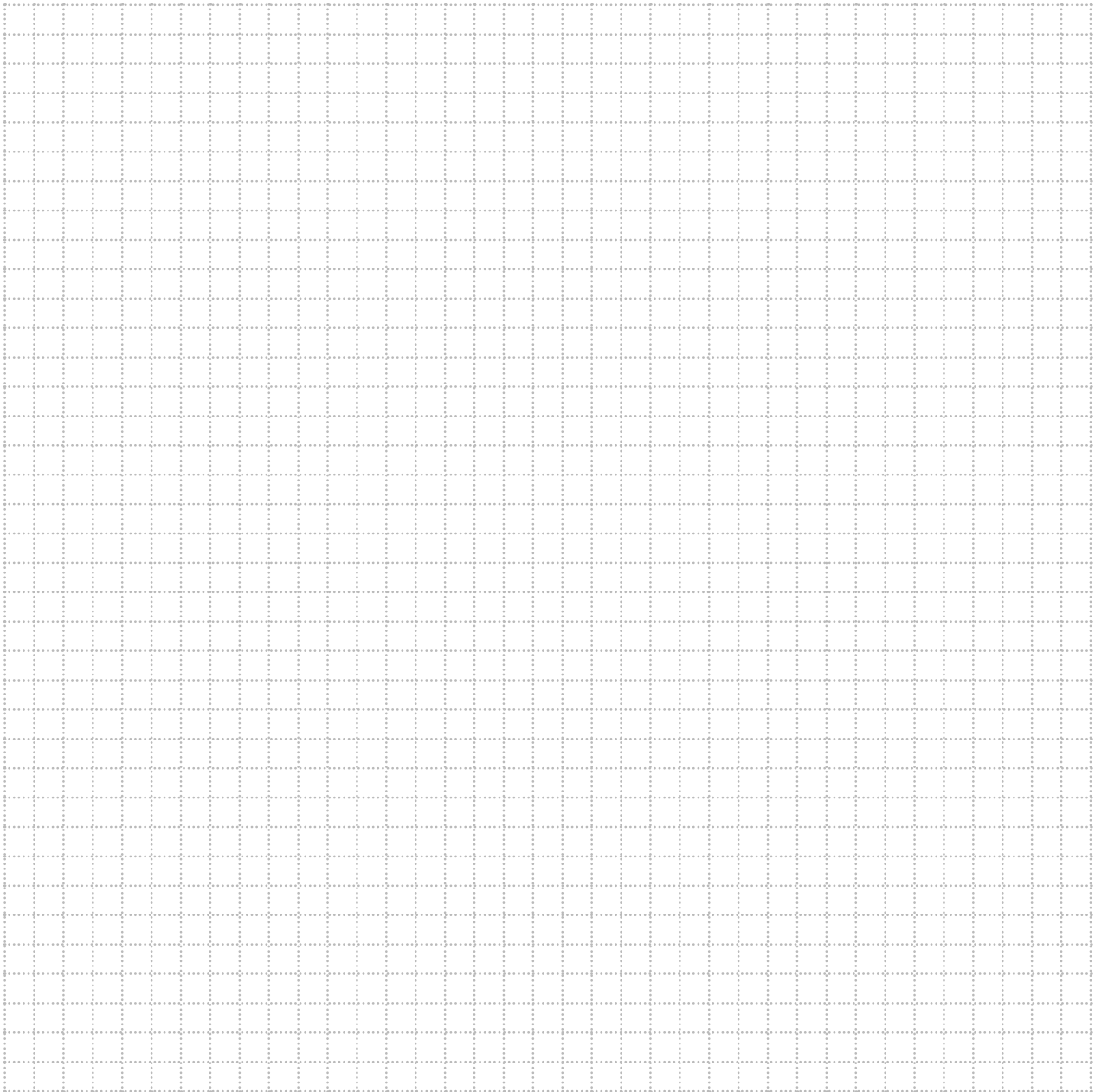
HURIKAN 1000 R - disposal of pesticide-contaminated non-recyclable containers

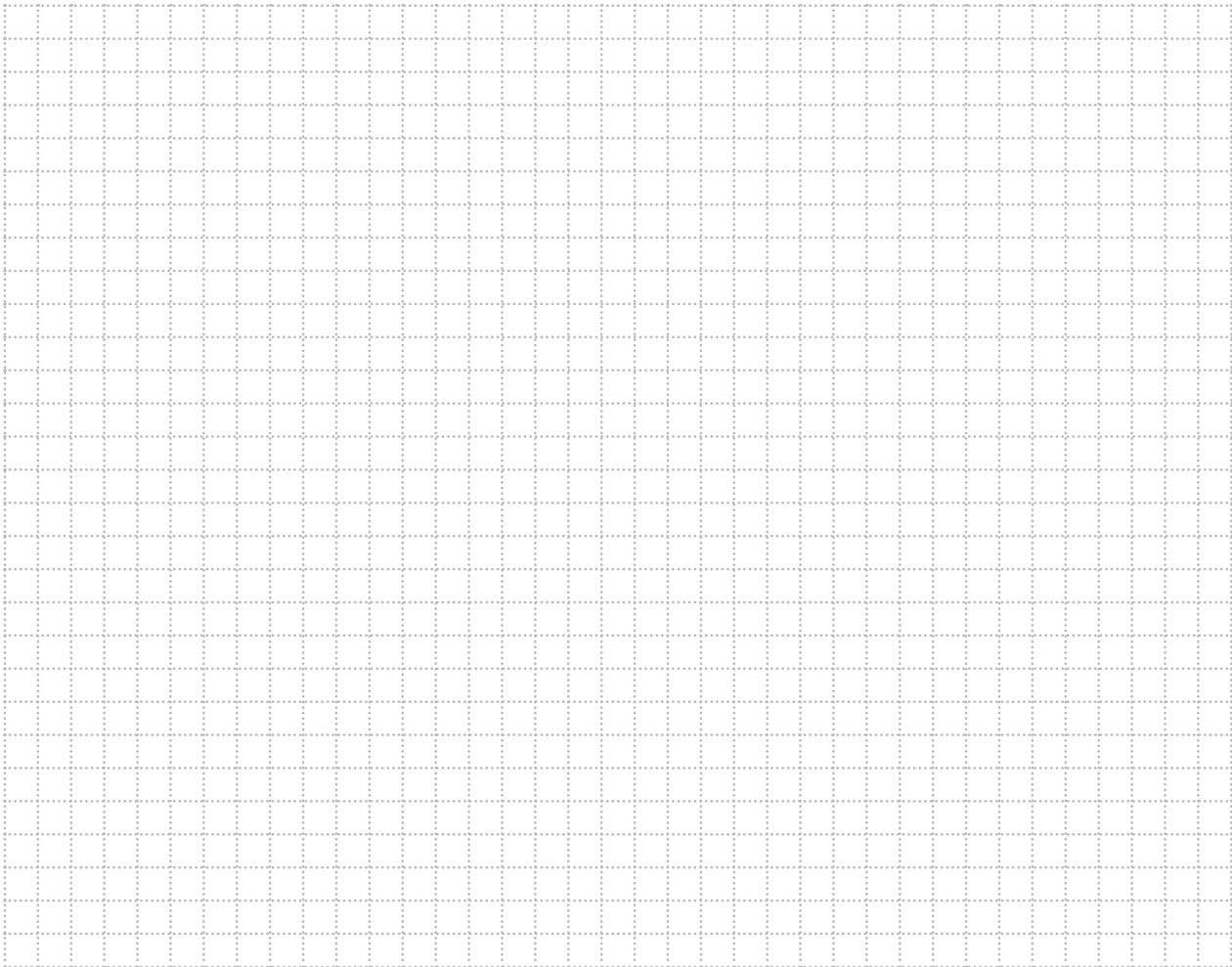
FOR NOTES





FOR NOTES





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



Waste sorting
complexes



Industrial hot
water boilers



Gas cleaning
systems



COMPANY HEADQUARTERS

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ECO SPECTRUM

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