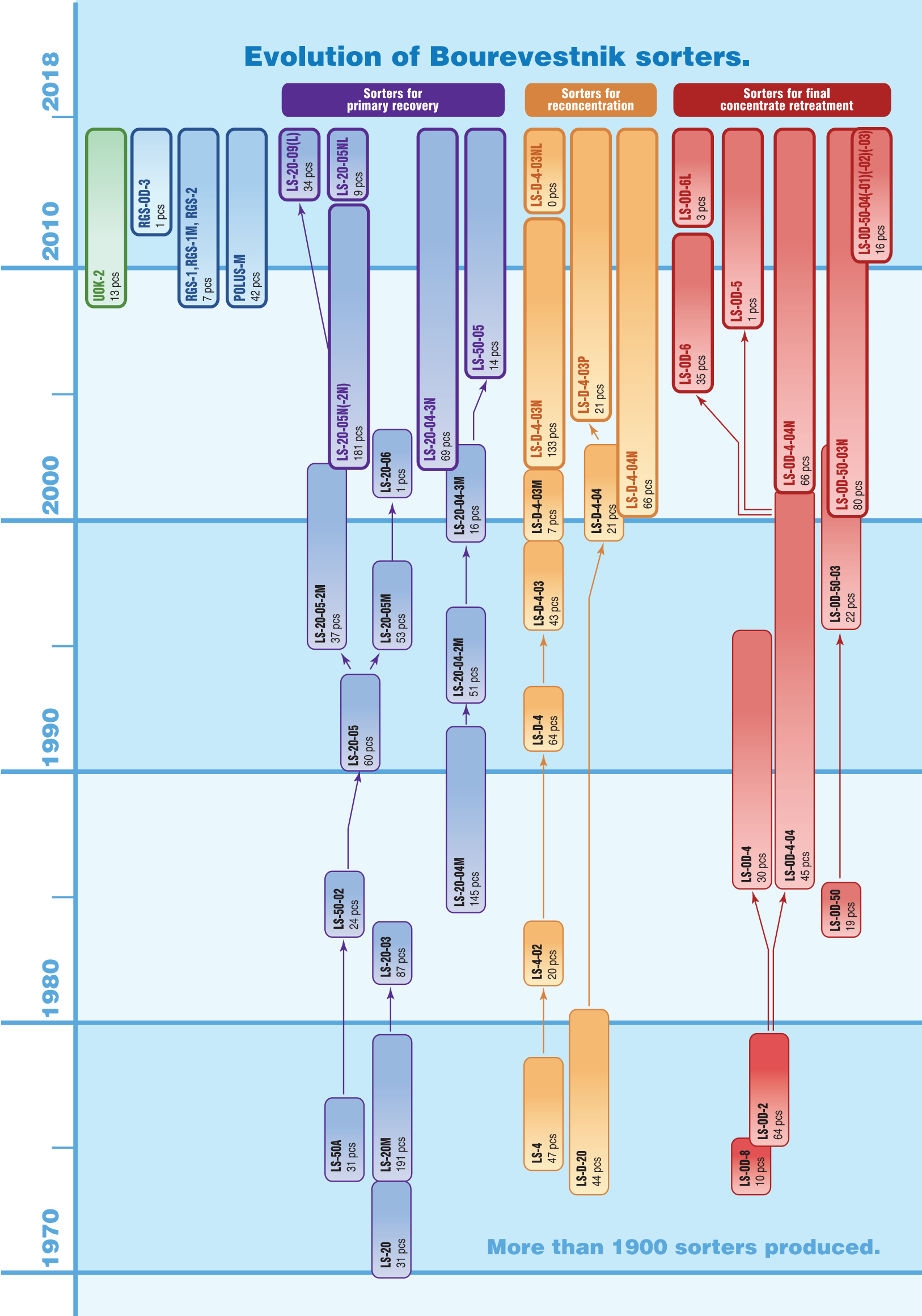


Equipment for the Diamond Mining Industry

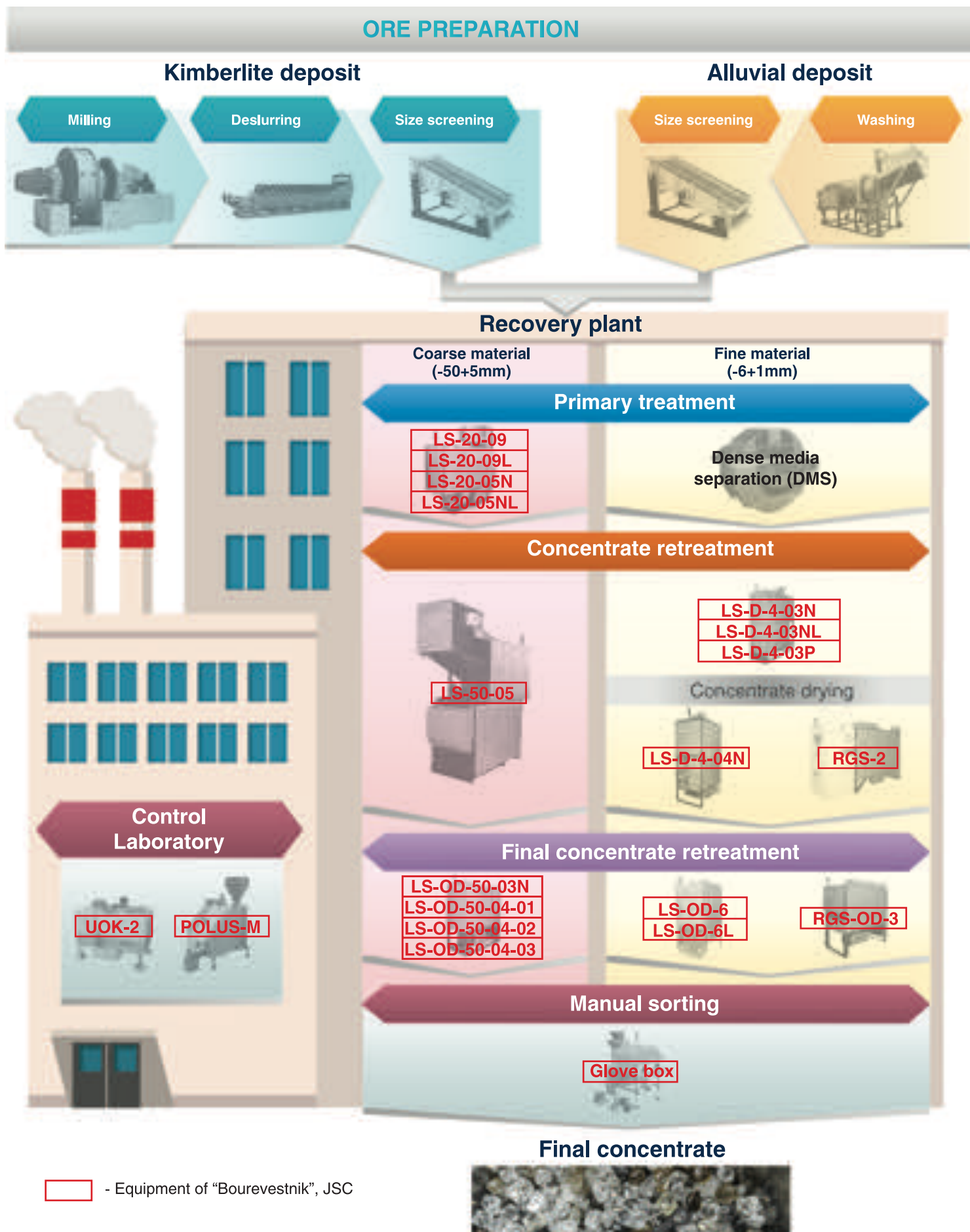




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Process diagram of diamond recovery



X-ray luminescence sorters for diamond recovery



Sorting equipment is widely applied in diamond production industry by making use of sensor-based sorting methods of diamond-bearing ore. X-ray Luminescence Sorters have mostly found use in a wide range of diamond recovery solutions.

Functional principle of X-ray Luminescence Sorters is based on diamonds physical property to luminesce under X-ray irradiation which is inherently different to the gangue minerals present.

Benefits of X-ray Luminescence Sorters at a glance:

- high recovery;
- effective concentration;
- low operational costs;
- low environmental impact.



“Bourevestnik”, JSC has a great experience and tradition in the area of design and manufacture of X-ray Luminescence Sorters, starting from supply of the world’s first X-ray sorter LS-20 for diamond production industry, back to 1969.

Since then, it has been supplied more than 1900 sorters, where 800 of them are in operation.

LS-20-05N

Primary treatment

-20+5 mm

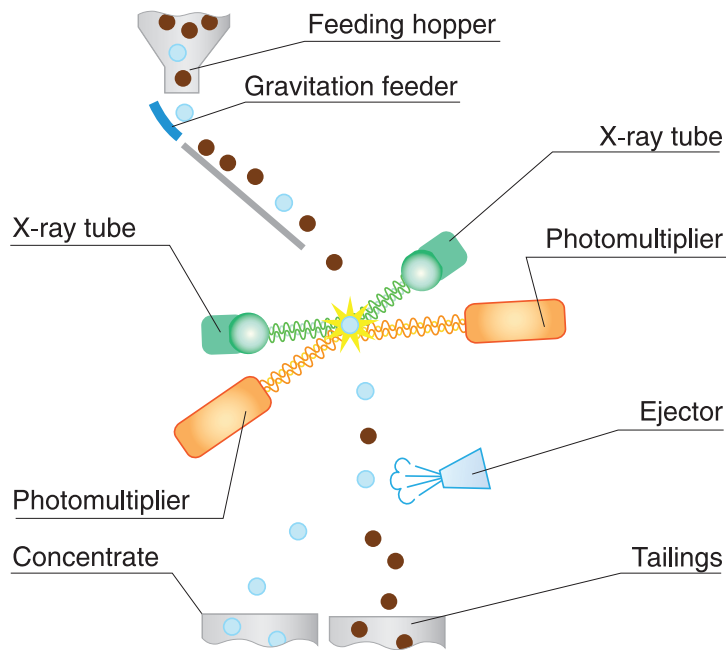
Legacy
product

X-ray luminescence sorter LS-20-05N is a diamond recovery machine designed for treatment of WET material with size range -20+5 mm.

Main specification		
Size fraction, mm	-20+10	-10+5
Throughput, t/h	45	25
Yield per one ejection, kg	1	0.5
Recovery rate, %	98	
Type of material	wet	

Material feeding and detection system	
Material feed	Gravitation feeder
Flow	1
X-ray tube	2
Photomultiplier	6

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	6
Technical water consumption, not more than, l/min	30
Cooling water consumption, not less than, l/min	6
Consumption of	per 1 ejection, l
compressed air	nominal productivity, l/min
	0.48
	30



	Dimensions, mm	Weight, kg
Sorting machine	2300x845x2300	1400
Automatic control rack	760x555x1750	230

LS-20-05NL

Primary treatment

-20+5 mm

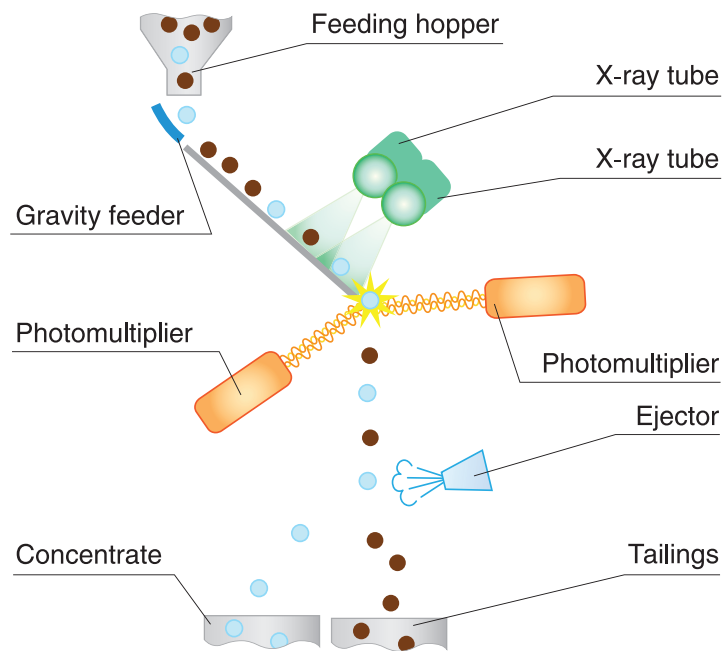
New product

X-ray luminescence sorter LS-20-05NL is a diamond recovery machine designed for treatment of WET material with size range -20+5 mm.

Main specification		
Size fraction, mm	-20+10	-10+5
Throughput, t/h	45	25
Yield per one ejection, kg	1.5	1.0
Recovery rate, %	98.5	
Type of material	wet	

Material feeding and detection system	
Material feed	Gravitation feeder
Flow	1
X-ray tube	2
Photomultiplier	8

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	6
Technical water consumption, not more than, l/min	30
Cooling water consumption, not less than, l/min	6
Consumption of	per 1 ejection, l
compressed air	nominal productivity, l/min
	0.48
	30



	Dimensions, mm	Weight, kg
Sorting machine	2300x845x2300	1400
Automatic control rack	760x555x1750	230

LS-20-09

Primary treatment

-50+5 mm

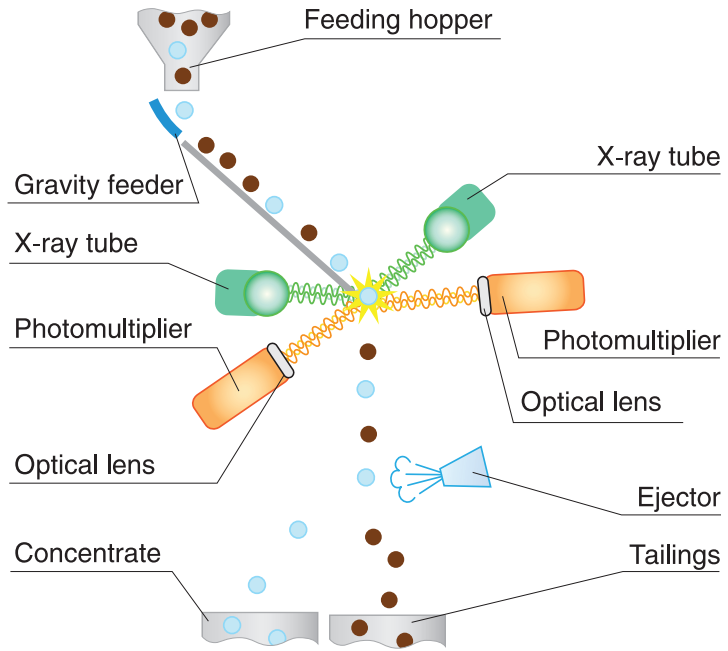
Legacy product

X-ray luminescence sorter LS-20-09 is a diamond recovery machine designed for the treatment of WET material with the size range -50+5 mm.

Main specification			
Size fraction, mm	-50+20	-20+10	-10+5
Throughput, t/h	100	60	30
Yield per one ejection, kg	1	0.65	0.4
Recovery rate, %	98.5		
Type of material	wet		

Material feeding and detection system	
Material feed	Gravitation feeder
Flow	1
X-ray tube	2
Photomultiplier	8

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	6
Technical water consumption, not more than, l/min	30
Cooling water consumption, not less than, l/min	6
Consumption of compressed air	per 1 ejection, l
	nominal productivity, l/min
	1.15
	30



	Dimensions, mm	Weight, kg
Sorting machine	2300x845x2300	1100
Automatic control rack	760x555x1750	230

LS-20-09L

Primary treatment

-50+10 mm

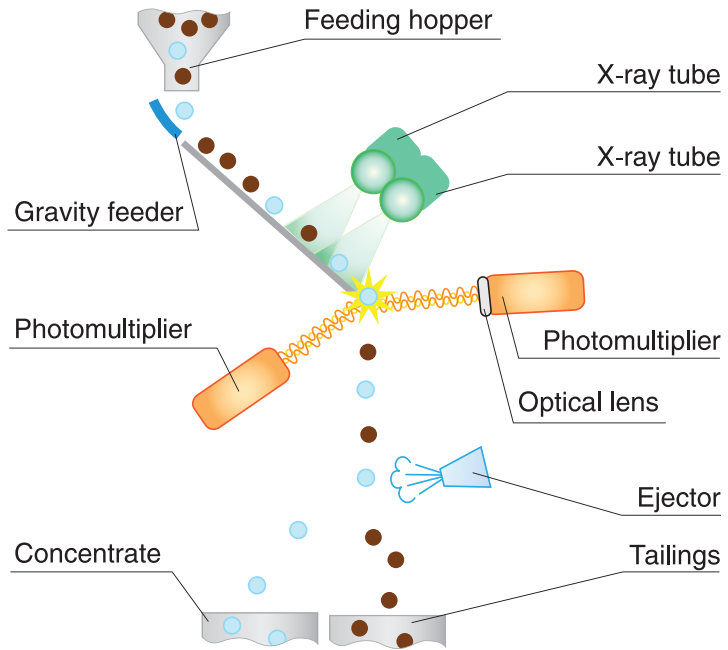
New product

X-ray luminescence sorter LS-20-09L is a diamond recovery machine designed for treatment of WET material with size range -50+10 mm.

Main specification		
Size fraction, mm	-50+20	-20+10
Throughput, t/h	100	60
Yield per one ejection, kg	1	0.65
Recovery rate, %	98.5	
Type of material	wet	

Material feeding and detection system	
Material feed	Gravitation
Flow	1
X-ray tube	2
Photomultiplier	8

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	6
Technical water consumption, not more than, l/min	30
Cooling water consumption, not less than, l/min	6
Consumption of compressed air	per 1 ejection, l
	nominal productivity, l/min
	1.15
	30



	Dimensions, mm	Weight, kg
Sorting machine	2300x940x2290	1100
Automatic control rack	760x555x1750	230

LS-50-05

Concentrate retreatment

-50+5 mm

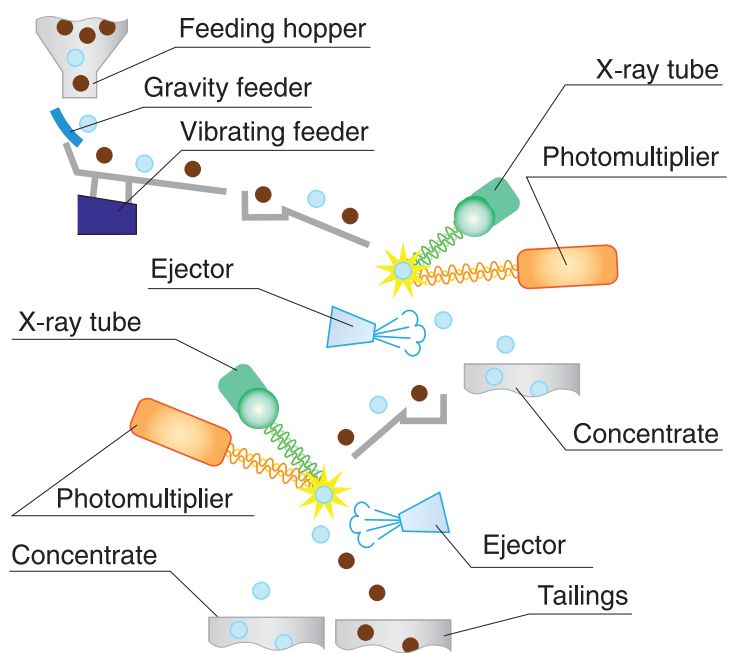
Legacy product

X-ray luminescence sorter LS-50-05 is a diamond recovery machine designed for treatment of WET material with size range -50+5 mm.

Main specification			
Size fraction, mm	-50+20	-20+10	-10+5
Throughput, t/h	30	20	9
Yield per one ejection, kg	0.7	0.3	0.1
Recovery rate, %	98.5		
Type of material	wet		

Material feeding and detection system	
Material feed	Gravitation/Vibrating feeder
Flow	1, 2, 4
X-ray tube	2
Photomultiplier	8

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	6
Technical water consumption, not more than, l/min	20
Cooling water consumption, not less than, l/min	6
Consumption of compressed air	per 1 ejection, l
	nominal productivity, l/min
	0.92
	50



	Dimensions, mm	Weight, kg
Sorting machine	2550x870x2580	1800
Automatic control rack	760x555x1750	230

LS-OD-50-03N

Final concentrate retreatment

-50+5 mm

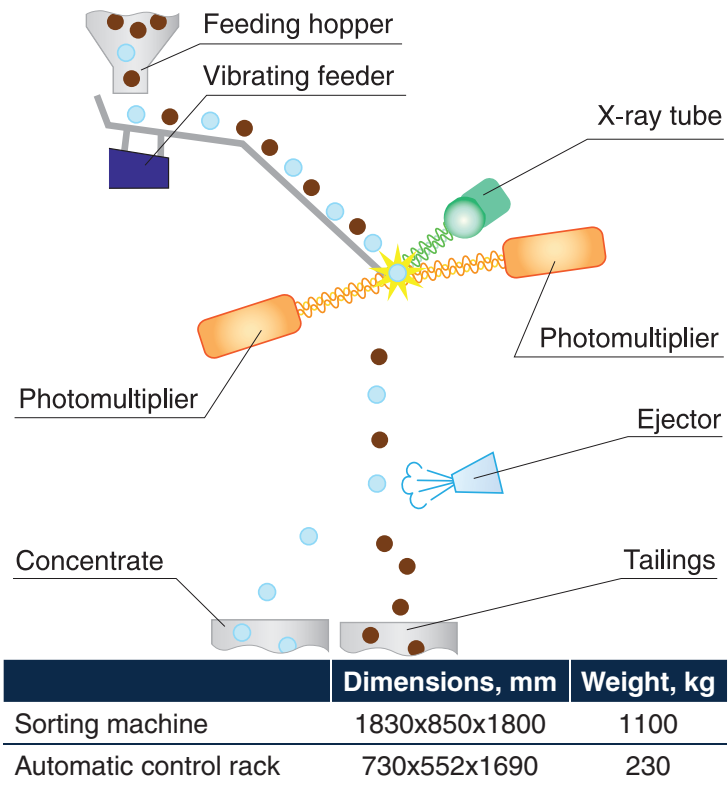
Legacy product

X-ray luminescence sorter LS-OD-50-03N is a diamond recovery machine designed for treatment of WET material with size range -50+5 mm.

Main specification			
Size fraction, mm	-50+20	-20+10	-10+5
Throughput, kg/h	2500	500	125
Yield per 10 ejections, grain	15	18	22
Recovery rate, %	99		
Type of material	wet		

Material feeding and detection system	
Material feed	Vibrating feeder
Flow	2
X-ray tube	1
Photomultiplier	2

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	4
Technical water consumption, not more than, l/min	30
Cooling water consumption, not less than, l/min	6
Consumption of	per 1 ejection, l
compressed air	nominal productivity, l/min
	50



LS-OD-50-04-01

Final concentrate retreatment

-50+10 mm

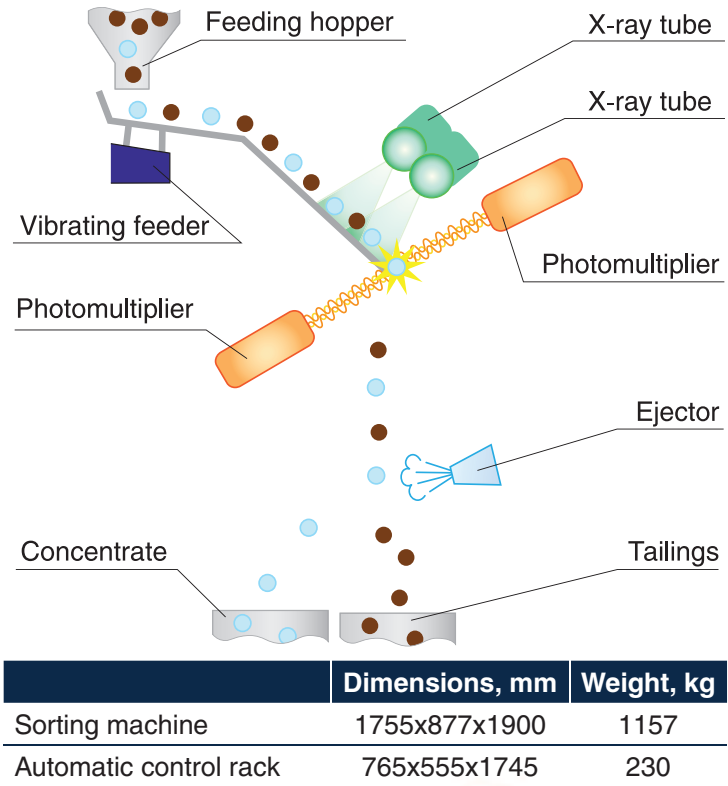
New product

X-ray luminescence sorter LS-OD-50-04-01 is a diamond recovery machine designed for treatment of WET material with size range -50+10 mm.

Main specification		
Size fraction, mm	-50+20	-20+10
Throughput, kg/h	1500	500
Yield per 10 ejections, grain	15	18
Recovery rate, %	98.5	
Type of material	wet	

Material feeding and detection system	
Material feed	Vibrating feeder
Flow	2
X-ray tube	2
Photomultiplier	4

Sorter's supply		
Power consumption, kVA (single phase, 220V/50Hz)	6	
Technical water consumption, not more than, l/min	30	
Cooling water consumption, not less than, l/min	6	
Consumption of	per 1 ejection, l	0.46
compressed air	nominal productivity, l/min	50



LS-OD-50-04-02

Final concentrate retreatment

-20+5 mm

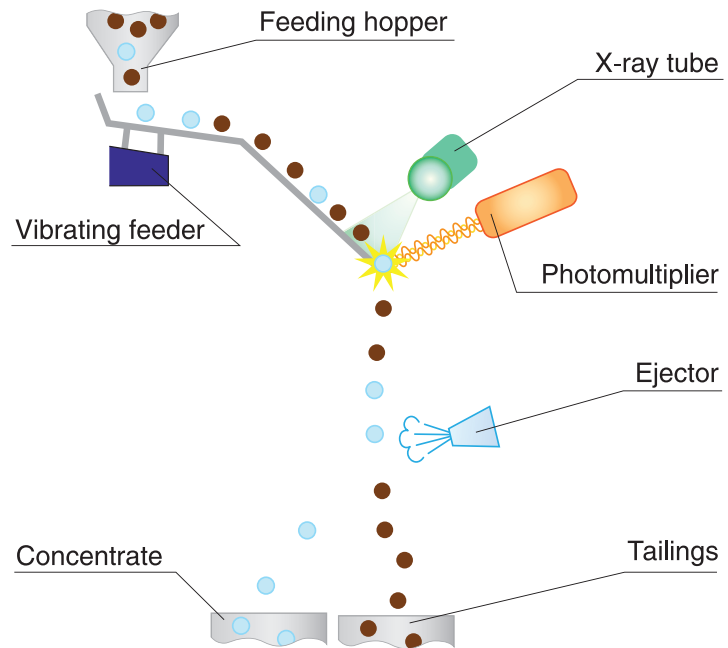
New product

X-ray luminescence sorter LS-OD-50-04-02 is a diamond recovery machine designed for treatment of WET material with size range -20+5 mm.

Main specification		
Size fraction, mm	-20+10	-10+5
Throughput, kg/h	500	250
Yield per 10 ejections, grain	15	18
Recovery rate, %	98.5	
Type of material	wet	

Material feeding and detection system	
Material feed	Vibrating feeder
Flow	4
X-ray tube	1
Photomultiplier	4

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	6
Technical water consumption, not more than, l/min	30
Cooling water consumption, not less than, l/min	3
Consumption of	per 1 ejection, l
compressed air	nominal productivity, l/min
	80



	Dimensions, mm	Weight, kg
Sorting machine	1755x877x1900	1057
Automatic control rack	765x555x1745	230

LS-OD-50-04-03

Final concentrate retreatment

-20+5 mm

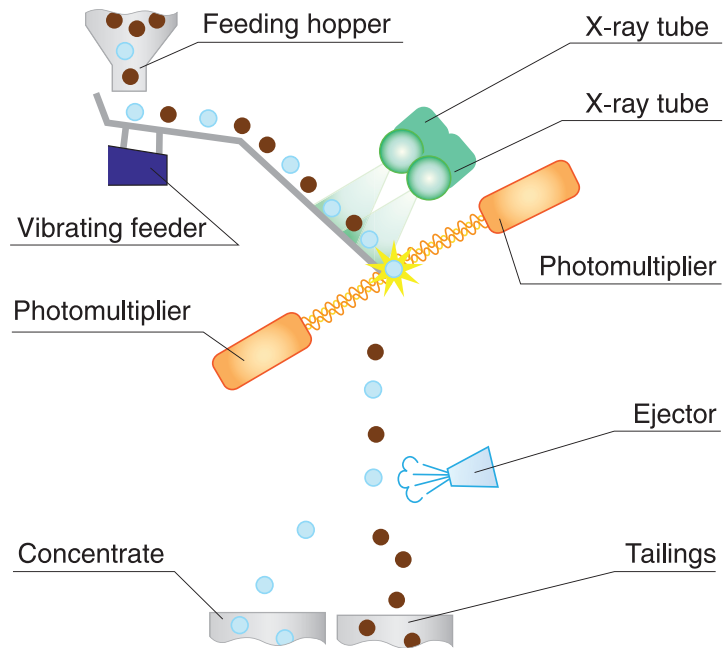
New product

X-ray luminescence sorter LS-OD-50-04-03 is a diamond recovery machine designed for treatment of WET material with size range -20+5 mm.

Main specification		
Size fraction, mm	-20+10	-10+5
Throughput, kg/h	500	250
Yield per 10 ejections, grain	15	18
Recovery rate, %	98.5	
Type of material	wet	

Material feeding and detection system	
Material feed	Vibrating feeder
Flow	4
X-ray tube	2
Photomultiplier	8

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	6
Technical water consumption, not more than, l/min	30
Cooling water consumption, not less than, l/min	6
Consumption of	per 1 ejection, l
compressed air	nominal productivity, l/min
	80



	Dimensions, mm	Weight, kg
Sorting machine	1755x877x1900	1057
Automatic control rack	765x555x1745	230

LS-D-4-03N

Concentrate
retreatment

-6+1 mm

Legacy
product

X-ray luminescence sorter LS-D-4-03N is a diamond recovery machine designed for treatment of WET material with size range -6+1 mm.

Main specification

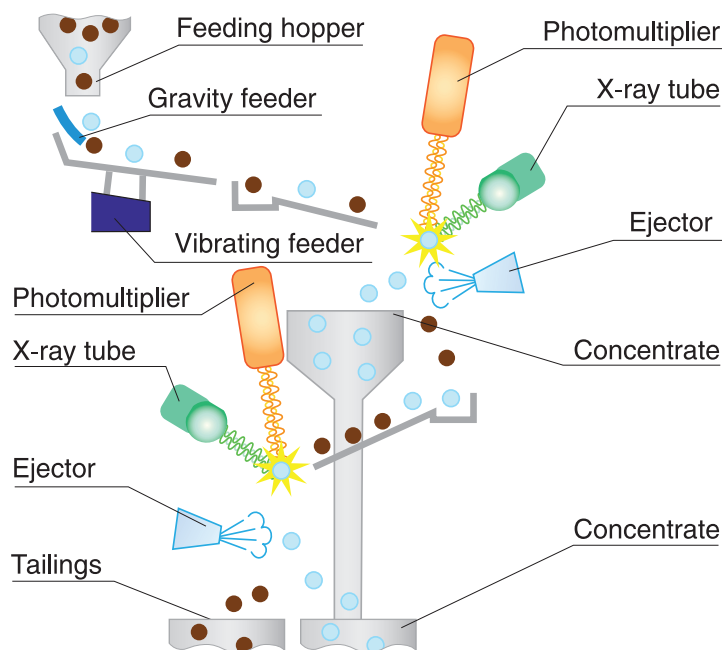
Size fraction, mm	-6+3	-3+1
Throughput, kg/h	5000	1300
Yield per one ejection, g	40	13
Recovery rate, %	98	95
Type of material	wet	

Material feeding and detection system

Material feed	Gravitation /Vibrating feeder	
Flow	4	
X-ray tube	2	
Photomultiplier	8	

Sorter's supply

Power consumption, kVA (single phase, 220V/50Hz)	5	
Technical water consumption, not more than, l/min	40	
Cooling water consumption, not less than, l/min	6	
Consumption of	per 1 ejection, l	0.7
compressed air	nominal productivity, l/min	50



	Dimensions, mm	Weight, kg
Sorting machine	2060x880x2805	1450
Automatic control rack	765x555x1745	230

LS-D-4-03NL

Concentrate
retreatment

-6+1 mm

New product

X-ray luminescence sorter LS-D-4-03NL is a diamond recovery machine designed for treatment of WET material with size range -6+1 mm.

Main specification

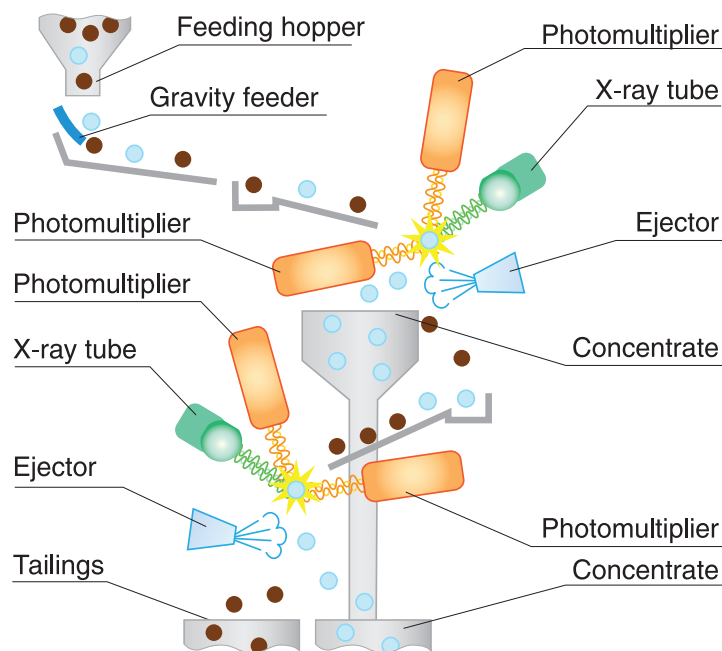
Size fraction, mm	-6+3	-3+1
Throughput, kg/h	5000	1300
Yield per one ejection, g	40	13
Recovery rate, %	98	95
Type of material	wet	

Material feeding and detection system

Material feed	Gravitation feeder	
Flow	4	
X-ray tube	2	
Photomultiplier	16	

Sorter's supply

Power consumption, kVA (single phase, 220V/50Hz)	5	
Technical water consumption, not more than, l/min	40	
Cooling water consumption, not less than, l/min	6	
Consumption of	per 1 ejection, l	0.7
compressed air	nominal productivity, l/min	50



	Dimensions, mm	Weight, kg
Sorting machine	2060x880x2805	1500
Automatic control rack	765x555x1745	230

LS-D-4-03P

Concentrate
retreatment

-6+1 mm

Legacy
product

X-ray luminescence sorter LS-D-4-03P is a diamond recovery machine designed for treatment of WET material with size range -6+1 mm.

Main specification

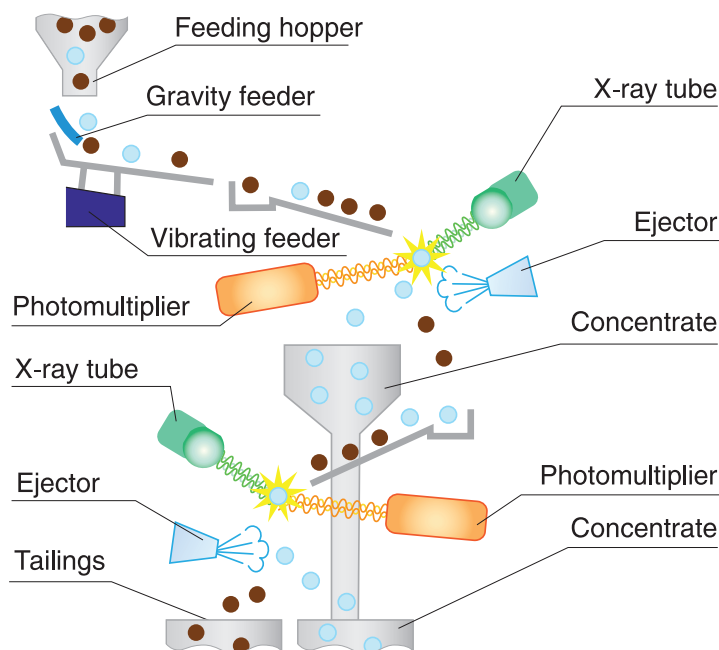
Size fraction, mm	-6+3	-3+1
Throughput, kg/h	400	170
Yield per one ejection, g	1	0.5
Recovery rate, %	99	95
Type of material	wet	

Material feeding and detection system

Material feed	Gravitation /Vibrating feeder	
Flow	4	
X-ray tube	2	
Photomultiplier	8	

Sorter's supply

Power consumption, kVA (single phase, 220V/50Hz)	4	
Technical water consumption, not more than, l/min	40	
Cooling water consumption, not less than, l/min	6	
Consumption of	per 1 ejection, l	0.16
compressed air	nominal productivity, l/min	15



	Dimensions, mm	Weight, kg
Sorting machine	1190x790x2485	700
Automatic control rack	765x555x1745	230

LS-D-4-04N

Concentrate
retreatment

-6+1 mm

Legacy
product

X-ray luminescence sorter LS-D-4-04N is a diamond recovery machine designed for treatment of DRY material with size range -6+1 mm.

Main specification

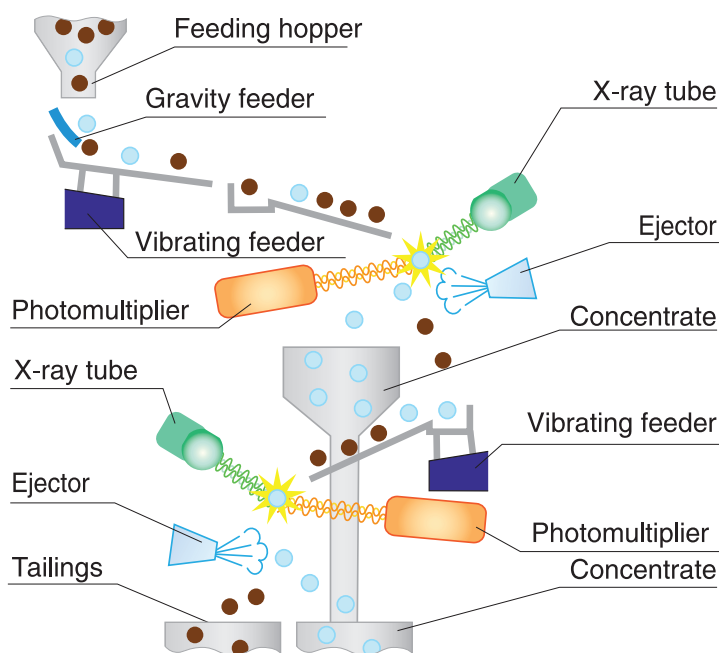
Size fraction, mm	-6+3	-3+1
Throughput, kg/h	600	300
Yield per one ejection, g	2	1
Recovery rate, %	98	
Type of material	dry	

Material feeding and detection system

Material feed	Gravitation /Vibrating feeder	
Flow	4	
X-ray tube	2	
Photomultiplier	8	

Sorter's supply

Power consumption, kVA (single phase, 220V/50Hz)	5	
Technical water consumption, not more than, l/min	-	
Cooling water consumption, not less than, l/min	6	
Consumption of	per 1 ejection, l	0.16
compressed air	nominal productivity, l/min	15



	Dimensions, mm	Weight, kg
Sorting machine	1000x670x1970	600
Automatic control rack	765x555x1745	230

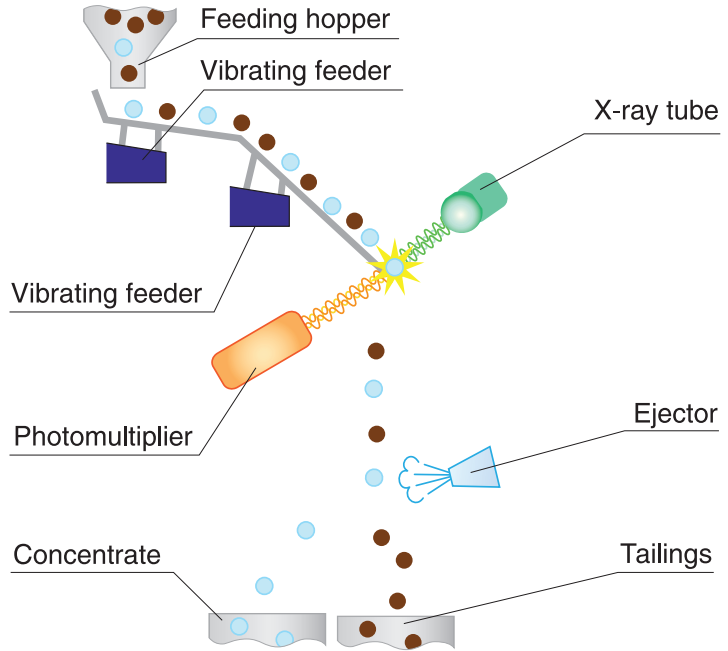
LS-OD-6	Final concentrate	-6+0.5 mm	Legacy
	retreatment		product

X-ray luminescence sorter LS-OD-6 is a diamond recovery machine designed for treatment of DRY material with size range -6+0.5 mm.

Main specification			
Size fraction, mm	-6+3	-3+1	-1+0.5
Throughput, kg/h	50	12.5	2
Yield per 10 ejections, grain	30	45	45
Recovery rate, %	98	96	90
Type of material	dry		

Material feeding and detection system	
Material feed	Vibrating feeder
Flow	4
X-ray tube	1
Photomultiplier	4

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	3
Technical water consumption, not more than, l/min	-
Cooling water consumption, not less than, l/min	3
Consumption of	per 1 ejection, l
compressed air	nominal productivity, l/min
	0.12
	120



	Dimensions, mm	Weight, kg
Sorting machine	1200x800x1700	900
Automatic control rack	765x555x1745	230

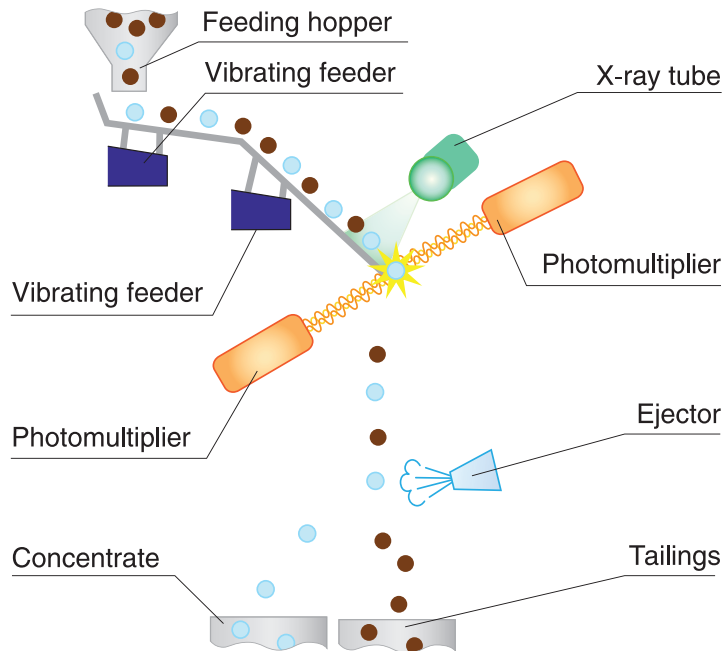
LS-OD-6L	Final concentrate	-6+0.5 mm	New product
	retreatment		

X-ray luminescence sorter LS-OD-6L is a diamond recovery machine designed for treatment of DRY material with size range -6+0.5 mm.

Main specification			
Size fraction, mm	-6+3	-3+1	-1+0.5
Throughput, kg/h	50	12.5	2
Yield per 10 ejections, grain	30	45	45
Recovery rate, %	98	96	90
Type of material	dry		

Material feeding and detection system	
Material feed	Vibrating feeder
Flow	4
X-ray tube	1
Photomultiplier	8

Sorter's supply	
Power consumption, kVA (single phase, 220V/50Hz)	3
Technical water consumption, not more than, l/min	-
Cooling water consumption, not less than, l/min	3
Consumption of	per 1 ejection, l
compressed air	nominal productivity, l/min
	0.12
	120



	Dimensions, mm	Weight, kg
Sorting machine	1200x800x1700	900
Automatic control rack	765x555x1745	230

POLUS-M

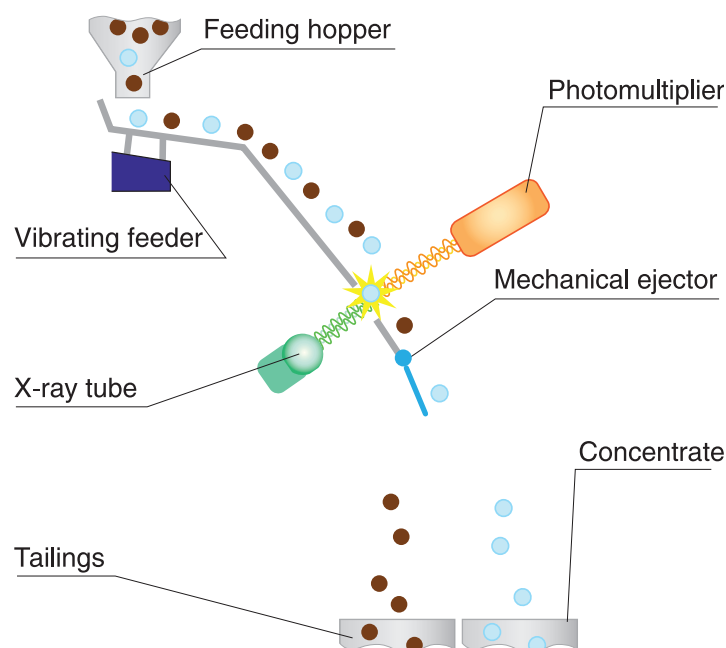
Portable sorter

-8+0.5 mm

Legacy product



POLUS-M is specially designed portable sorter for geological exploration of diamond deposits and also enrichment of dry diamond bearing concentrates in field conditions.



The sorter consists of the sorting machine and the control unit.

The registration unit and the X-ray source are placed on opposite sides of the material flow.

Access to the transport channel is through the removable doors. It allows operation in field conditions. Neither water nor compressed air are required.

Technical specifications

Size fraction, mm	– 8 + 5	– 5 + 2	– 2 + 1	-1+0,5
Throughput, kg/h	100	50	30	15
Yield per one ejection, not more than, g	2.2	1.7	1	0.5
Recovery rate, not less than %	98			
	Sorting machine		Control unit	
Overall dimensions (LxWxH), mm	635x300x590		490x440x290	
Net weight, kg (without packaging)	36.5		15	
Power consumption, VA (single phase, 220 V/50 Hz)	300			
Operating temperature range, C°	+5..+45 with the relative humidity up to 80%			

Specially designed construction of the sorter totally protects against the X-ray. Each unit is being tested for safety.

Software interface of X-ray luminescence sorters

Operation mode

Monitoring mode

Setting mode

Test mode

Software interface of POLUS-M

Operation mode

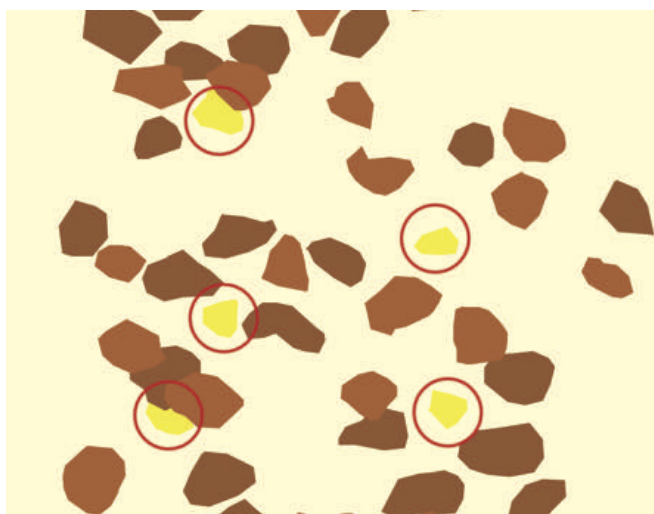
Setting mode

X-ray transmission sorters for diamond recovery



X-ray transmission (XRT) sorters, as well as luminescence sorters, are radiometric sorters used for treatment of diamond-bearing ore.

Principle of operation of X-ray transmission sorters is based on the property of the materials to absorb X-ray radiation. A diamond consisting of carbon, which is light element with atomic number 6, absorbs less X-ray radiation comparing to the ancillary minerals, which contain heavier elements such as silicon, calcium, magnesium, oxygen, iron, etc.



Example of transmission image with rock particles and diamonds (marked with the circle)

In case of X-ray transmission sorters X-ray radiation is being measured by special sensors after it passes through the particle of mineral. Depending on the intensity of the radiation passed through the particle of mineral we can make the conclusion about atomic number of elements contained in the analyzed mineral. Since a diamond consists of light element carbon, the intensity of radiation passed through it will be higher, comparing to the radiation intensity passed through the particle of ancillary mineral (in case of the same thickness of the particles).

In order to avoid the influence of different thicknesses of the particles to the measurements' result, we perform consistent measurements for two different values of X-ray radiation energies.

Currently "Bourestvestnik", JSC offers two models of X-ray transmission sorters for the enrichment of dry diamond-bearing material with size fractions -6 +1 mm:

- concentrate retreatment sorter RGS-2;
- final concentrate retreatment RGS-OD-3.

RGS-2

Concentrate
retreatmen

-6+3 mm

New product

X-ray transmission sorter RGS-2 is a diamond recovery machine designed for concentrate retreatmen of DRY material with size range -6+3 mm.

Main specification

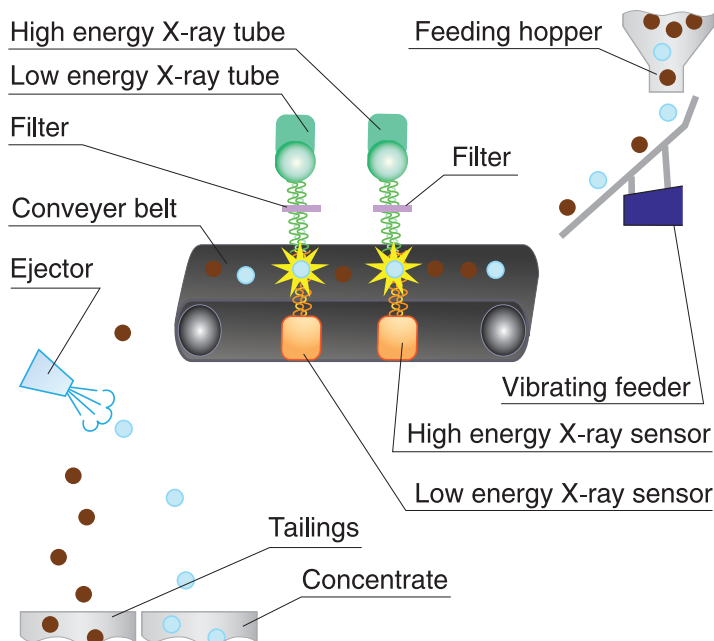
Size fraction, mm	-6+3
Throughput, kg/h	1200
Yield per one ejection, mg	750
Recovery rate, %	98
Type of material	dry

Material feeding and detection system

Material feed	Vibrating feeder
Flow	4
X-ray tube	2
Sensor	2

Sorter's supply

Power consumption, kVA (single phase, 220V/50Hz)	8
Technical water consumption, not more than, l/min	-
Cooling water consumption, not less than, l/min	12
Consumption of compressed air per 1 ejection, l	0.1



	Dimensions, mm	Weight, kg
Sorting machine	2900x970x2094	1185
Automatic control rack	1125x940x2150	290

RGS-OD-3

Final concentrate
retreatment

-3+1 mm

New product

X-ray transmission sorter RGS-OD-3 is a diamond recovery machine designed for final concentrate retreatment of DRY material with size range -3+1 mm.

Main specification

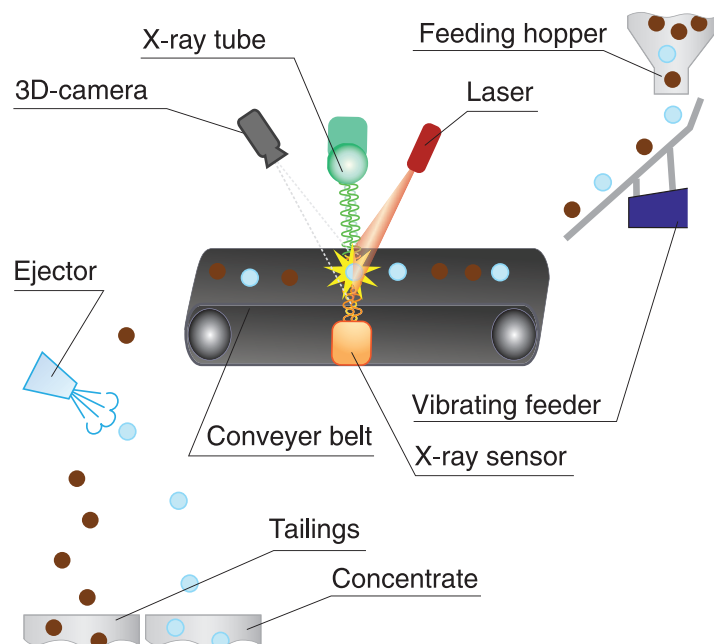
Size fraction, mm	-3+1
Throughput, kg/h	50
Yield per one ejection, mg	30
Recovery rate, %	99
Type of material	dry

Material feeding and detection system

Material feed	Vibrating feeder
Flow	1
X-ray tube	1
X-ray sensor	1
Laser sensor	1

Sorter's supply

Power consumption, kVA (single phase, 220V/50Hz)	3.5
Technical water consumption, not more than, l/min	-
Cooling water consumption, not less than, l/min	6
Consumption of compressed air per 1 ejection, l	0.01



	Dimensions, mm	Weight, kg
Sorting machine	2270x800x1750	800
Automatic control rack	1110x805x1700	340

Additional equipment for the diamond mining industry



Apart from the sorters for diamonds recovery, “Bourevestnik”, JSC designs and produces a wide range of equipment for diamond mining industry.

One of the Bourevestnik products is analyzer of minerals luminescence kinetics UOK-2, which is designed for analysis of kinetic parameters of luminescence of diamonds and associated minerals. UOK-2 allows to measure and store the data which can be used for:

- Analysis of concentrability of diamond-bearing materials in different mines and during the recovery process on the particular mine;
- Proper selection and adjustment of the settings used in the Bourevestnik sorters;
- Controlling of operation of Bourevestnik luminescence sorters.

The range of Bourevestnik glove boxes is designed for manual sorting of diamond bearing material at final treatment stages of diamond mining plants and drags.

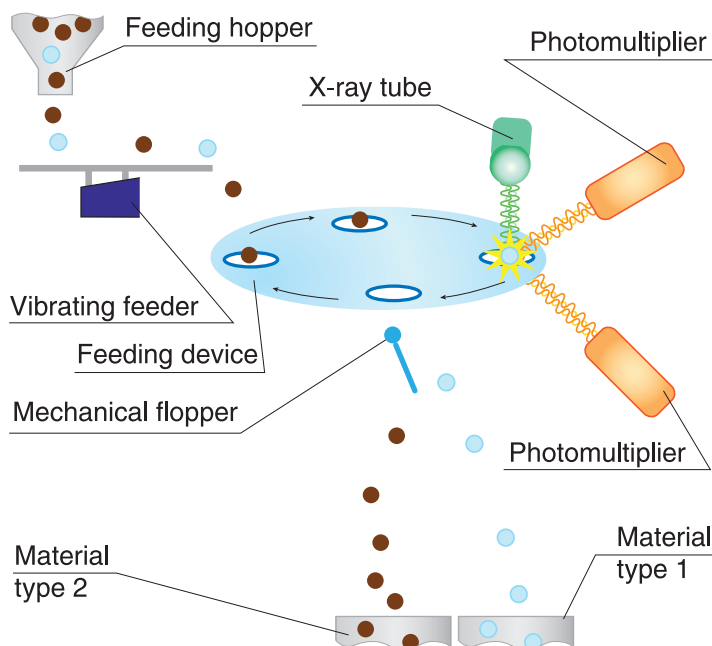
UOK-2

-20+1 mm

Legacy
product

UOK-2 is specially designed for measuring numerical kinetic parameters of luminescence of diamonds and associated minerals. Obtained data are used for calibration of the Bourevestnik sorters.

UOK-2 is based on property of diamonds to luminesce under the X-ray. Analyzer distinguishes diamonds from other associated luminescent minerals and also can measure characteristics with registration of luminescence of an object from both sides: irradiation and opposite.



Main specification

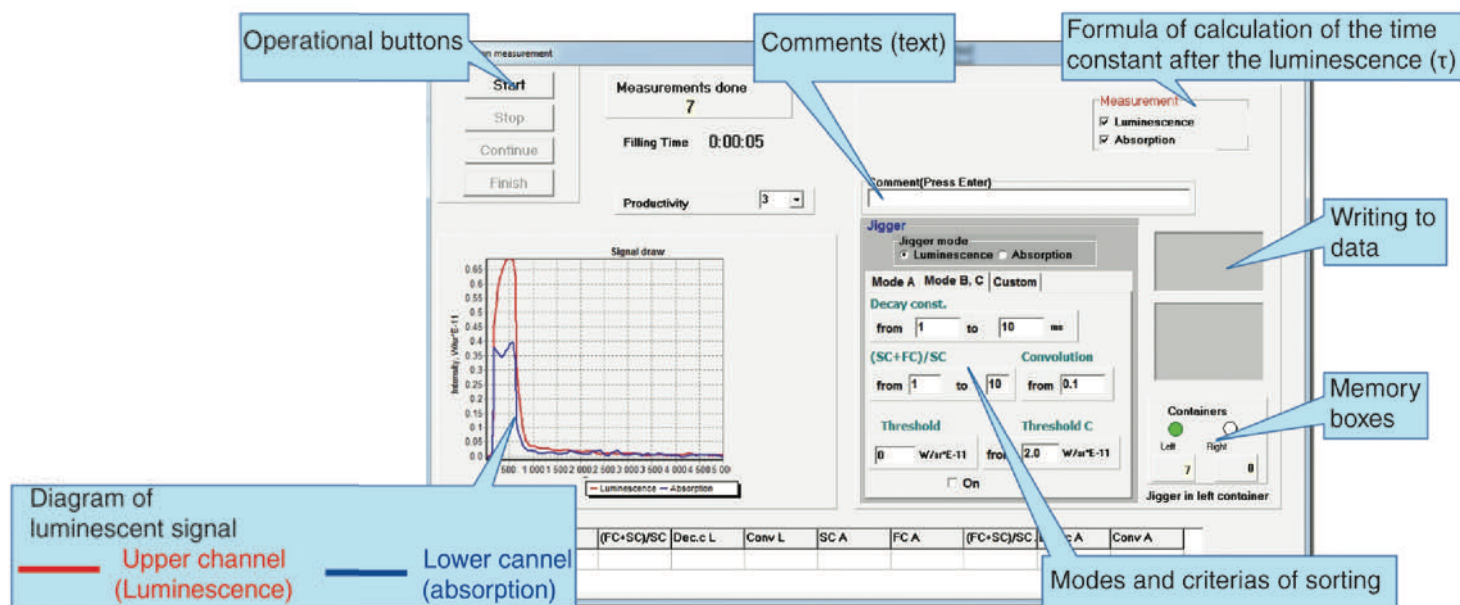
	In automatic feed mode		In manual feed mode
Size fraction, mm	-6+3	- 3 + 1	- 20
Throughput	up to 1200 samples per hour		
Sampling	by particles, measuring by 12 parameters		
Type of material	dry		

Supply

Power consumption, VA (single phase, 220 V / 50 Hz)	not more than 200
Operating temperature range	+10..+35°C with the relative humidity up to 80%

	Dimensions, mm	Weight, kg
Sorting machine	510 x 410 x 570	75
Control unit	480 x 500 x 220	30

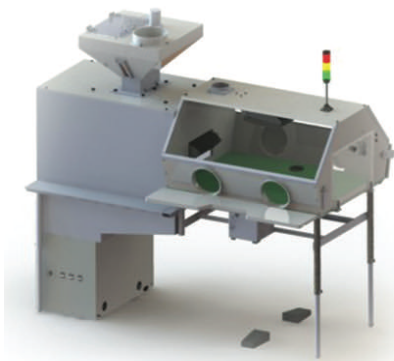
Software interface



Glove box

-50+1 mm

Legacy
product



The range of Bourevestnik glove boxes is designed for manual sorting of diamond bearing material at final treatment stages of diamond mining plants and drags.

Glove boxes are used:

- to perform manual sorting of dry and watered concentrates;
- to prevent unauthorized access to diamond-bearing raw materials;
- to guarantee safety of the final product by preventing contact with an operator.

We produce 4 versions of glove boxes which differ in dimensions, material handling gear, number of operators' positions, and fineness of raw materials.

	Modification			
	SM-209	SM-212	SM-219	SM-220
Number of operators' positions	2	1	2	1
Overall dimensions, not more than, mm	1105x1265x1270	1185x865x1535	1750x1101x1525	1400x855x1535
Net weight, not more than, kg	135	110	320	175
Operation surface, mm	900x660	800x530	900x660	800x600
Material handling gear	Adjustable slide damper	Adjustable slide damper	Vibrating feeder	Damper controlled by stepper motor
Fineness of raw material, mm	-25 +1	-25 +1	-25 +3	-50 +2
Possibility of integration into SCADA	No	Yes	Yes	Yes

X-ray sorters questionnaire

Request date: _____

Thank you for choosing “Bourevestnik”, JSC and your interest to our X-Ray sorters for diamonds recovery. In order to ensure selection of the optimal set of Bourevestnik sorters we kindly ask you to fill up the following questionnaire.

1. Contact Information:

Company name: _____

Contact person: _____

Contact phone number: _____

Email: _____

2. Information of the planned purchase:

Expected purchase period: _____

Purchase purpose: ☐ I'm End User ☐ Resale

Preferable delivery terms (Incoterms): _____

Preferable freight mode: ☐ Airfreight (faster, more expensive) ☐ Sea freight (slower, cheaper)

3.Do you have any experience in working with X-Ray Sorters?

☐ Produced by Bourevestnik, JSC ☐ Produced by other manufacturers ☐ Don't have any experience

If you have worked with X-Ray Sorters, produced by other manufacturers, please specify the brand:

4. Location of diamond deposit:

Country: _____ Closest city: _____ Name of the mine: _____

5.What is the type of deposits and material?

Type of deposit: ☐ Kimberlite pipe ☐ Alluvial gravels

Type of material: ☐ Run-of-mine material ☐ Retreatment of tailings ☐ Retreatment of concentrate

6. What material size fractions are you going to process?

Fraction	Max size, mm	Min size, mm	% of all fractions	Throughput, tph
Fraction 1				
Fraction 2				
Fraction 3				
Fraction 4				
Fraction 5				
Total:			100%	

	Fraction	Max size, mm	Min size, mm	% of all fractions	Throughput, tph
EXAMPLE	Fraction 1	-50	+20	40%	40 tph
	Fraction 2	-20	+10	60%	60 tph
Total:				100%	100 tph

7. Additional Information and requirements:

Analytical instruments

Multifunctional X-ray Diffractometers



X-ray diffraction is the dactyloscopy in material science, a reliable non-destructive technique of identification of crystal-line matter.

DRON-7 and DRON-8 multifunctional X-ray diffractometers are powerful tools for qualitative and quantitative phase analysis, crystal structure characterization and determination of crystal orientation.

Features:

- High reliability and easy use
- Automation of adjustment and data collection
- Support of different X-ray optical schemes and measurement techniques
- Flexible configuration and wide range of options.

Specially designed DRON-7M model is released from radiation inspection. There are no specific requirements to installation area and personnel.

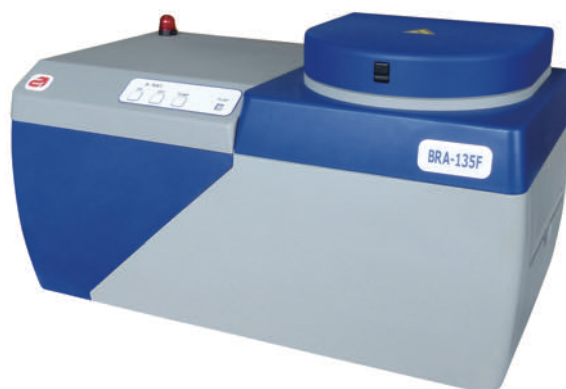
Multi-purpose X-ray Fluorescence Analyzer BRA-135F

The analyzer is intended for determination of the chemical elements in the range of ^9F to ^{92}U in solid, powdery and liquid samples.

The operation of analyzer is based on exciting the fluorescence radiation of the sample atoms by the X-ray tube radiation. Determination of elements concentration is based on the quantity of registered by high performance SDD detector photons with various energies.

The vacuumized measurement chamber provides high analytical characteristics in the range of light elements from ^9F to ^{17}Cl . Low limit-of-detection (from 10 ppm) is achieved by high aperture and optimally selected filters of X-ray optical system.

The Analyzer BRA-135F has an excellent combination of low cost-of-ownership with high analytical capabilities for detecting a wide range of elements.



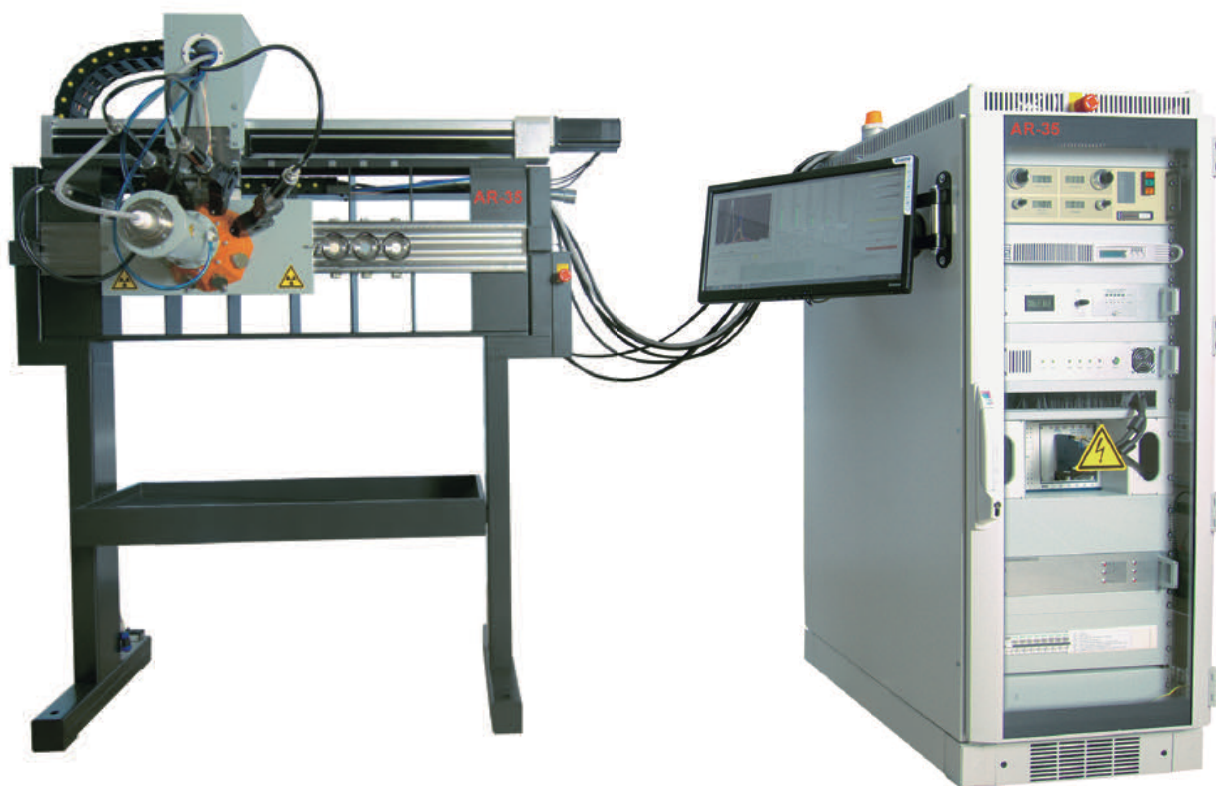
X-ray Fluorescence Sulfur Analyzers ASE-2 and ASW-2



The Energy-Dispersive (EDX) Analyzer ASE-2 and Wavelength-Dispersive (WDX) Analyzer ASW-2 are specially designed for rapid analysis of sulfur concentration in oil products. The high speed of analysis combined with low range of detection (5 ppm) and built-in printer, makes Analyzers ASE-2 and ASW-2 an optimal solution for quality assessment in express laboratories.

Analyzers ASE-2 and ASW-2 complies with the most popular international standards for sulfur measurements.

On-stream X-ray Analyzer AR-35



The Analyzer AR-35 is intended for on-stream XRF analysis of suspension and pulp-products of technological processes of ore processing. AR-35 can simultaneously determine 8 chemical elements in technological product that saves time and reduces the cost of element determination.

The AR-35 is designed to replace labor-intensive and time-consuming laboratory analysis of samples for control of technological process. The high accuracy and possibility of monitoring chemistry up to 15 fluid flows in realtime makes the analyzer AR-35 a central element in the automated control system of technological process on mining processing plants, metallurgy plants and chemical productions.

Special-purpose Wavelength-dispersive Analyzer ARF-7



The Analyzer ARF-7 is intended for high-accuracy measurement of quantities of U, Th, Au, W, Tl, As, Pb, and other elements in ores, rocks and at industrial mining.

To get the best spectral resolution, the analyzer is based on the Cauchois method.

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