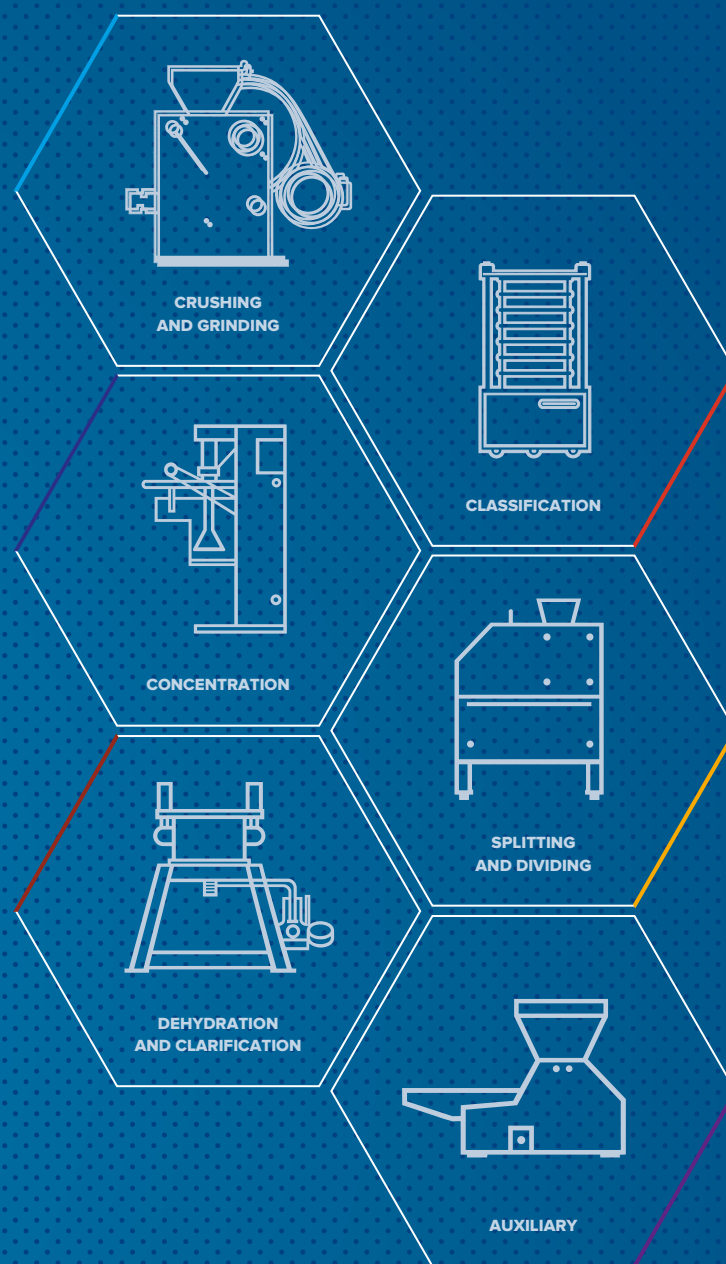




100 YEARS
OF INNOVATIONS

LABORATORY EQUIPMENT



MORE THAN
150 TYPES
OF EQUIPMENT



IN-HOUSE
ENGINEERING
DEPARTMENT



CONDUCTING TESTS
ON CUSTOMER-
PROVIDED MATERIALS



SUPPLY OF SPARE
PARTS AND MATERIALS

THE ESSENTIALS
FOR YOUR LABORATORIES

Saint-Petersburg



EN.MTSPB.COM

LEGEND



Mining industry



Gold mining industry



Metallurgical industry



Powder metallurgy



Construction materials industry



Solid waste recycling



Agriculture



Chemical and pharmaceutical industry



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THE ESSENTIALS OR YOUR LABORATORIES

Research and Engineering Corporation "Mekhanobr-Tekhnika"

develops, produces and supplies laboratory equipment for crushing, grinding, and size classification of solid materials, magnetic, electromagnetic, electric separation, flotation and gravity concentration of mineral and technogenic raw materials, as well as equipment for adjustable feed of loose materials and separation of samples of dry products and pulps.

OUR ADVANTAGES

→ DESIGNING EQUIPMENT

to meet individual
customer requirements

→ CONDUCTING RESEARCH

on customer-provided
materials

→ SUPPLYING CONSUMABLES AND SPARE PARTS

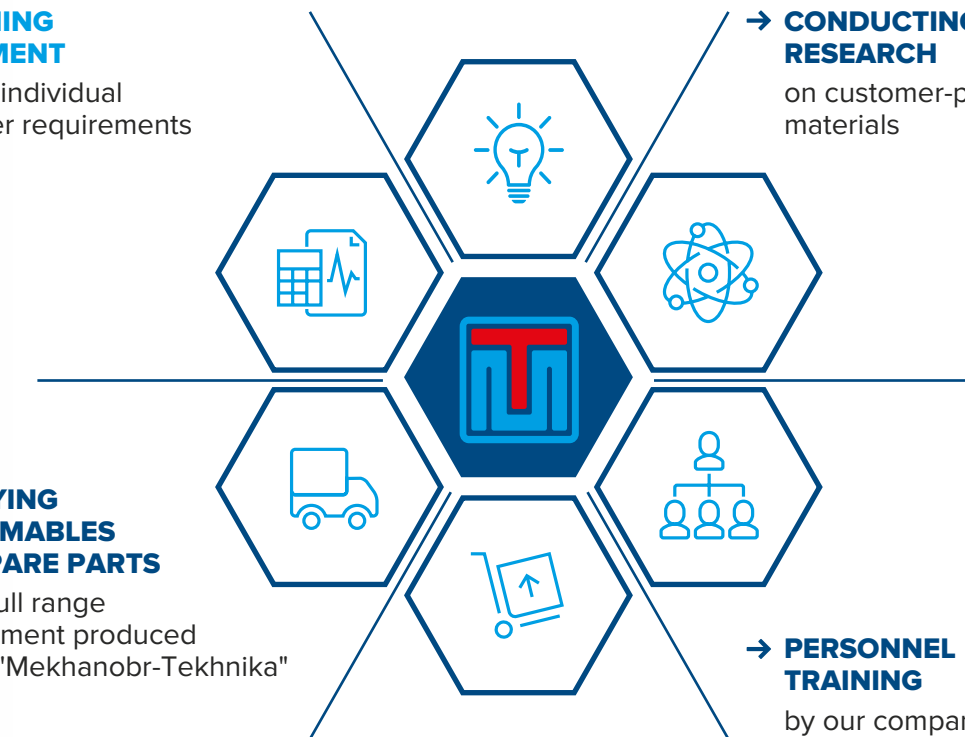
for the full range
of equipment produced
by REC "Mekhanobr-Tekhnika"

→ PERSONNEL TRAINING

by our company's specialists;
supervision of the installation,
starting up and commissioning
of the equipment if needed

→ DELIVERING MANUFACTURED EQUIPMENT

to the warehouse
or to the customer's door
throughout Russian Federation,
CIS countries and far abroad





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REC "MEKHA NOBR-TEKHNIKA" reserves the right to change the technical characteristics of the equipment





1. CRUSHING AND GRINDING EQUIPMENT

A full range of laboratory machines applying vibrating, crushing, grinding and impact forces as well as their combinations for disintegration of crude ores and other solid materials.





JAW CRUSHERS

Jaw crushers are designed for crushing solid brittle materials of medium and low strength. A jaw crusher is a universal machine working with various materials for primary rock processing, construction stone and crushed stone production, slag processing in metallurgy, and, naturally, for sample preparation for analytical studies in laboratories.

Jaw crushers by REC “Mekhanobr-Tekhnika” are classified as double-toggle jaw crushers. The operating principle of a jaw crusher is based on compression of material by working surfaces (jaws).

Crusher capacity and crushed product particle size depend on the discharge opening size and processed material properties.

FEATURES

- high crushing efficiency
- convenient material loading
- easy adjustment of discharge opening size
- protection from ingress of non-crushable extraneous objects
- high reliability and easy operation
- compatibility with other equipment for uniform controllable feed (stand and electric vibrating feeder PE-1) and simultaneous crushing and sample splitting (ADD unit).

RECOMMENDED SET OF SPARE PARTS

- set of jaw plates
- set of cheek plates
- set of bearings
- shear pin / toggle plate
- set of belts.



JC 60×60 (JC 6S)



EXAMPLES OF MATERIALS

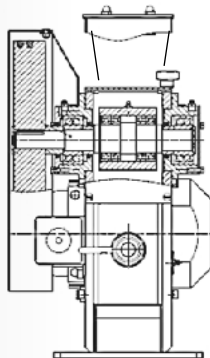
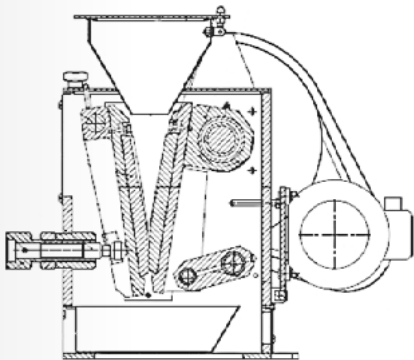
Rocks, slags, granite, ceramics, ores, feldspar, quartz, corundum, chamotte, limestone, gravel, coal, coke, graphite, silicon, bauxite, concrete, dolomite, salts, silicate, agglomerate, cement clinker, glass, construction materials waste, ferroalloys, etc.

TECHNICAL SPECIFICATIONS	JC 60×60 (JC 6S)	JC 60×100M (JC 6M)	JC 80×150	JC 100×200M (JC 10M)	JC 120×200	JC 150×250M (JC 15M)	JCS 180×250
Feed opening, mm	60×60	60×100	70×145	100×200	120×200	160×250	180×250
Feed size, mm	50	50	60	90	110	130	170
Discharge opening, mm	1–15	1–15	1–17	2–15	2–25	2–40	5–30
Capacity, kg/h, up to*	40	150	300	400	1 000	2 500	5 000
Crushed product particle size with closed side setting no less than 50%, mm	1	2	4	5	5	4	10
Drive power, kW	0,55	1,1	1,5	2,2	3	5,5	7,5
 Overall dimensions, mm:							
length	672	675	700	800	1 490	1 130	1 800
width	282	330	430	520	600	585	775
height	526	570	560	630	910	900	1 295
 Mass, kg	89	132	162	293	510	490	1 400

* Capacity depends on the discharge opening size and processed material properties

ADDITIONAL GOODS

- operating console
- stand with a discharge vessel
- stand and electric vibrating feeder PE-1
- laboratory scoop.



ON A STAND WITH A FEEDER PE-1



JC 60×100M (JC 6M)



JC 100×200M (JC 10M)



JC 150×250M (JC 15M)





HAMMER CRUSHERS

Designed for comminution of brittle and low abrasive, as well as fibrous materials, industrial and domestic waste, agriculture raw materials, etc.

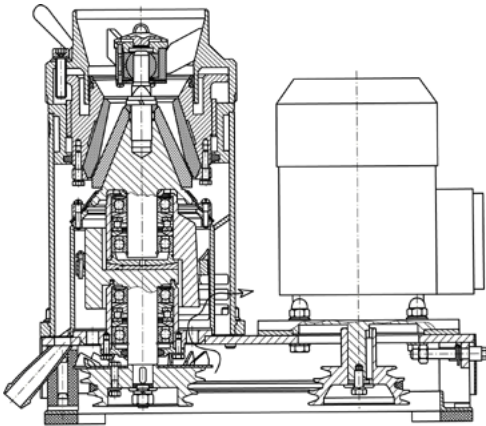
FEATURES

Accurate feed dosing is required for hammer crushers to avoid imbalance of the working rotor.
The unit may be additionally equipped with fans for evacuation of the dust fraction and a cyclone.

RECOMMENDED SET OF SPARE PARTS

- a set of hammers
- a discharge grating
- depending on the diameters of the openings
- operating console
- belts / petal couplings
- bearings.

Depends on equipment size.



TECHNICAL SPECIFICATIONS	KID-100
Crushing cone base diameter, mm	100
Feed size, mm, up to	10
Capacity, kg/h, up to	30
Crushed product particle size with closed side setting no less than 50%, mm	0?3
Drive power, kW	1?5
 Overall dimensions, mm:	
length	479
width	203
height	411
 Mass, kg	62

* Capacity depends on the discharge opening size and processed material properties



KID-100



EXAMPLES OF MATERIALS

Minerals, ores, slags, ferroalloys, coal, ceramics, limestone, glass.



KID-100 WITH AN OPERATING CONSOLE

← IN CONTENTS

ROLL CRUSHER DG 200×125 M

Designed for crushing mineral raw materials with a compressive strength of up to 250 MPa while preparing samples for analytical research or as a part of semi-industrial units for crushing, for example, synthetic abrasives.

FEATURES

- An option to set the opening until it is fully closed.
- We have upgraded the classic construction of the roll crusher DG 200×125 to make the handling even smoother:
- bearings with increased loading capacity installed
- spring stroke enlarged
- support frame reinforced
- engines removed from under the housing for easier maintenance
- discharge vessel added.

RECOMMENDED SET OF SPARE PARTS

- rolls.

ADDITIONAL GOODS

- operating console
- stand and electric vibrating feeder PE-1.

TECHNICAL SPECIFICATIONS	DG 200×125 M
Roll size, mm:	
diameter	200
length	125
Feed size, mm, up to	
at max. opening setting	18
at min. opening setting	10
Discharge opening width, mm	0,5÷8
Capacity, t/h*, up to	0,8
Roll rotation rate, rpm	580
Drive power, kW	2 ×1,1
 Overall dimensions, mm:	
length	720
width	740
height	790
 Mass, kg	253

* Capacity depends on the discharge opening size and processed material properties

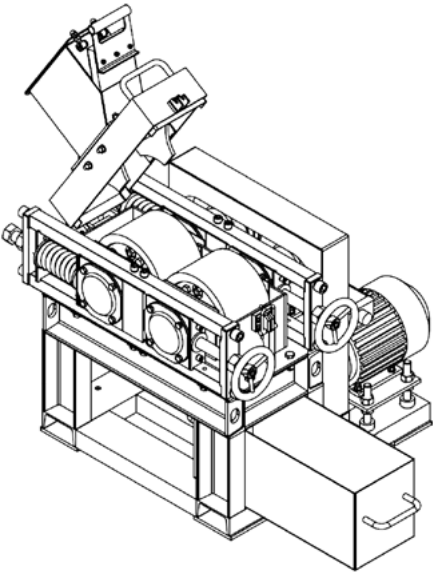


DG 200×125 M



EXAMPLES OF MATERIALS

Minerals, ores, construction materials waste, slags, brick, crushed stone, gold ore.





VIBRATING CONE CRUSHER KID-100

Operates as a crusher and as a mill; designed for crushing brittle materials of various hardness and compressive strength.

FEATURES

Laboratory crusher KID-100 accurately simulates the shape of the crushed material's size distribution curve on similar industrial machines. The material fineness can be reduced by 5-10 times. Consequently, it is sometimes possible to perform one technological operation instead of two crushing stages or crushing and grinding stages or significantly reduce the average fineness of crushed materials. Compatible with either 220 V or 380 V power supply network (depending on the operating console).

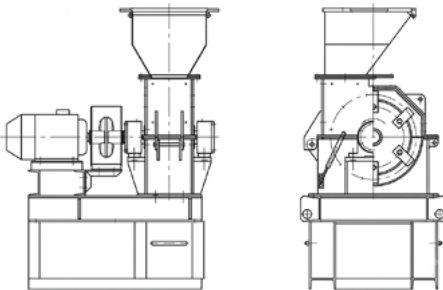
RECOMMENDED SET OF SPARE PARTS

- hammer set
- discharge grate.

ADDITIONAL GOODS

- operating console.

Depends on equipment size.



KID-100

EXAMPLES OF MATERIALS

Low-abrasive, medium-strength materials (limestone, dolomite, rock salt, etc.), coal, plastic, PET, metal shavings, wood.



MD 3x0,65



MD 3x2C

TECHNICAL SPECIFICATIONS	MD 3x0,65	MD 3x2 / MDV 3x2**	MD 3x2C* / MDV 3x2C**	MD 4x3	MD 5x2 / MDV 5x2**	MD 5x2C / MDV 5x2C**
Rotor size, mm						
diameter	300	300	300	400	500	500
length	65	200	200	300	200	200
Feed size, mm, up to	30	50	50	100	100	100
Grate cell size, mm	2,5÷10	3÷20	3÷20	3÷16	5÷50	5÷50
Drive power, kW	3	4	4	7,5	7,5; 11, 15	7,5; 11, 15
 Overall dimensions, mm:						
length	650	844 / 1 113	926 / 1 200	1 220	1 140 / 1 545	1 160 / 1 543
width	580	580	690	770	790	790
height	1 200	712	1 204	1 245	1 210	1 530
 Mass, kg	75	160 / 180	190 / 240	510	370 / 420***	430 / 470***

* Additionally complemented with a frame, a discharge vessel, a feed hopper with a cap and a slide gate

** V – with fan

*** Given mass is without electric motor

BALL MILLS

Designed for fine grinding of various ore and material samples in wet mode. REC "Mekhanobr-Tekhnika" produces and supplies laboratory ball mills with drum volume varying from 1 to 50 litres.

It is necessary to determine the grinding mode (dry or wet) and the operating mode (continuous or periodic) first to select the right equipment.

Ball mill	Dry mode	Wet mode	Periodic mode	Continuous mode
MSL-1		V	V	
MSL-7		V	V	
MSL-50N		V		V

FEATURES

Laboratory ball mills with steel plates are classic machines for solid materials disintegration.

RECOMMENDED SET OF SPARE PARTS

- balls of various types and sizes
- worm gear (worm and worm wheel).

ADDITIONAL GOODS

- operating console.

Depends on equipment size.

TECHNICAL SPECIFICATIONS	MSL-50N (48 ML)	MSL-1 (62 ML)	MSL-7 (40 ML)
Drum volume, l	50	1	7
Drum rotation rate, rpm	48–60	112	68
Feed size, mm, up to	8	3	6
Product size, mm	-0,074	-0,074	-0,074
Ball load, kg	120	1,6	15
Ball diameter, mm	20÷50	10÷20	15÷20
Drive power, kW	1,5	0,25	1,1
 Overall dimensions, mm:			
length	1300	560	740
width	830	500	640
height	1 280	1 020	1 340
 Mass, kg	560	60	155

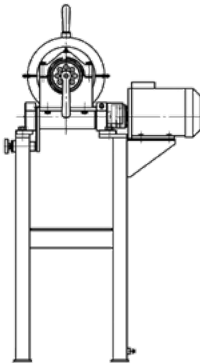
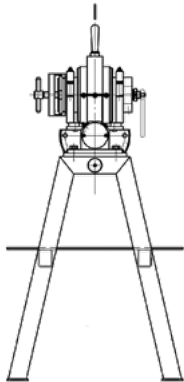
* Compatible with either 220 V or 380 V power supply network (depending on the operating console)



MSL-7

EXAMPLES OF MATERIALS

Minerals, ores, alloys, chemicals, glass, ceramics, plant parts, soil, sewage sludge, etc.



MSL-1





CANTILEVER BALL MILLS

Designed for fine grinding of various ore and non-ore material samples in dry and wet modes.

Ball mill	Dry mode	Wet mode	Periodic mode	Continuous mode
MSL-14K	V	V	V	
MSL-22K	V	V	V	
MSL-50K	V	V	V	

RECOMMENDED SET OF SPARE PARTS

- balls of various types and sizes.

ADDITIONAL GOODS

- operating console.
- Depends on equipment size.

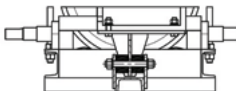
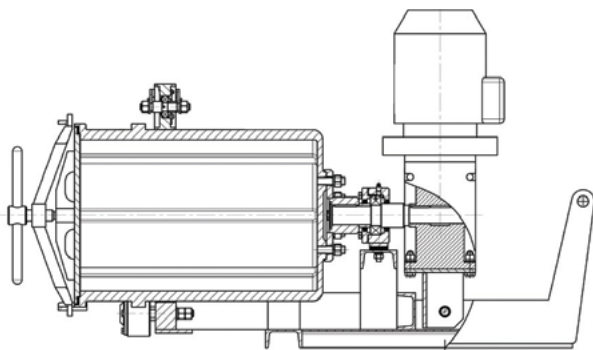


MSL-22K



EXAMPLES OF MATERIALS

Minerals, ores, alloys, chemicals, glass, ceramics, plant parts, soil, sewage sludge, etc.



TECHNICAL SPECIFICATIONS	MSL-14K**	MSL-22K* Bond Mill**	MSL-50K
Drum volume, l	14	22	50
Feed size, mm, up to	6	6	6
Drum rotation rate, rpm	71	71	56
Ball load, kg	27	50	120
Ball diameter, mm	15÷20	10÷40	10÷40
Drive power, kW	0,75	1,5	2,2
 Overall dimensions, mm:			
length	1 400	1 600	1 650
width	710	710	710
height	1 005	1 350	1 420
 Mass, kg	153	200	295

* Cantilever ball mills are designed for dry and wet grinding of mineral raw materials under standardized conditions, primarily to acquire data on the strength of raw materials during disintegration, in accordance with the internationally accepted Bond index. Bond Index defines energy expenses for obtaining new post-grinding size grade; it is used for calculating expected performance of industrial mills

** Compatible with either 220 V or 380 V power supply network (depending on the operating console)

LABORATORY ROD MILL MSL-30K

Designed for fine dry and wet grinding of various ore and non-ore material samples in periodic mode.

FEATURES

The rod mill operates in periodic mode. The drum is filled with material for grinding and rods. As the drum rotates, the material is comminuted through grinding, shear and impact forces exerted by the rods. After comminution, the product, along with the rods, is discharged into a collecting vessel, where they are separated. The rod diameter and grinding time depend on the material's properties and quantity.

RECOMMENDED SET OF SPARE PARTS

- rods.

ADDITIONAL GOODS

- operating console.

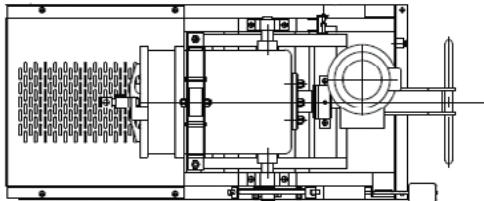
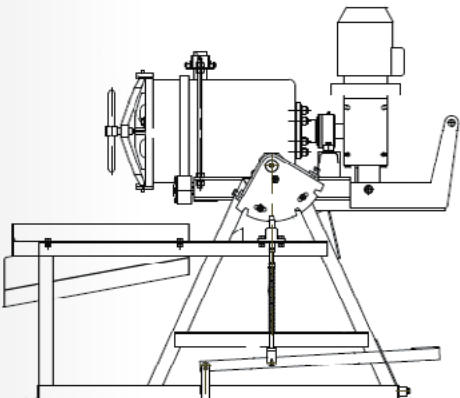


MSL-30K



EXAMPLES OF MATERIALS

Minerals, ores, alloys, chemicals, glass, ceramics, plant parts, soil, sewage sludge, etc.



TECHNICAL SPECIFICATIONS	MSL-30K
Drum volume, l	30
Feed size, mm, up to	6
Drum rotation rate, rpm	56
Rod load, kg	80
Rod diameter, mm	10–40
Drive power, kW	2,2
 Overall dimensions, mm:	
length	1 450
width	710
height	1 400
 Mass, kg	250





BOND WORK INDEX TESTING MILL

The Bond Work Index Testing Mill is specialized laboratory equipment used in mining industry to estimate Bond Work Index. This index provides a quantitative evaluation of a material's resistance to grinding and allows for the calculation of the energy required for crushing and grinding.

The data obtained with the Bond Work Index Testing Mill helps minimize risks during the design of mining facilities, predict maintenance costs, and select the most suitable technologies for comminuting a specific ore. Thus, this machine is an essential tool in mineralogy, metallurgy, and the mining industry.

FEATURES

- suitable for determining the Bond Work Index (BWI) and Rod Mill Work Index (RWI)
- configurable with either a ball drum or a rod drum
- easy hinging of the grinding drum for convenient discharge
- simple adjustment of drum rotation speed
- discharge grate for efficient separation of grinding media (balls only)
- mobile sample receptacle for easy transport
- o-ring seal on the grinding drum to prevent material loss
- effective soundproof cover
- dry and wet grinding modes available.

RECOMMENDED SET OF SPARE PARTS

- sets of balls or rods.

ADDITIONAL GOODS

- operating console.

TECHNICAL SPECIFICATIONS	187ML
Drum volume, liters	22/44
Feed size, mm , up to	3,35/12,5
Drum rotation frequency, rpm	50 (nominal)
Range	40–80
Ball/rod load, kg	25/40
Ball/rod diameter, mm , up to	36/45
Drive power, kW	0,75
 Overall dimensions, mm , up to:	
length	1 608
width	830
height	1 260
 Mass, kg , up to	360

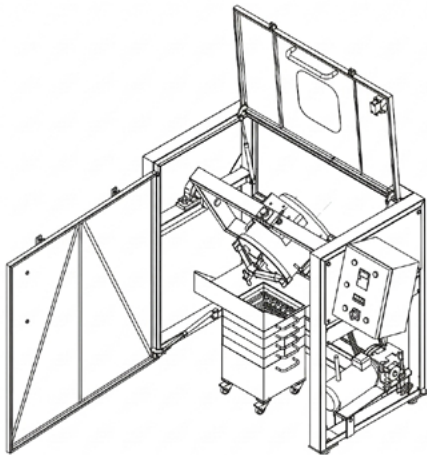


187ML



ПРИМЕРЫ МАТЕРИАЛОВ

Ores of ferrous and non-ferrous metals, phosphates, bauxites, quartz, feldspar, limestone, coal, construction materials feedstock (shale, gypsum, clay, etc.), rocks, minerals of high hardness and abrasiveness.



← IN CONTENTS

ROLLER MILL (ROLGANG)

Designed for fine wet grinding of various ore and non-ore material samples in periodic mode, using removable drums (metal or ceramic).

FEATURES

The mill can be used for mixing materials. It is a device operating in periodic mode.

An operating console with TFC allows for adjustable drum rotation frequency.

The delivery set includes the drive of a roller mill (rol-gang).

Compatible with either 220 V or 380 V power supply network (depending on the operating console).

ADDITIONAL GOODS

- operating console with TFC (thyristor frequency converter).



ROLLER MILL (ROLGANG)



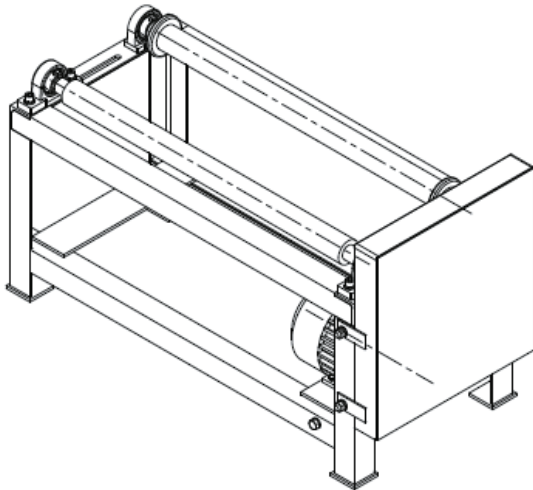
ПРИМЕРЫ МАТЕРИАЛОВ

Minerals, ores, alloys, chemicals, glass, ceramics, plant parts, soil, sewage sludge, etc.

TECHNICAL SPECIFICATIONS	ROLLER MILL (ROLGANG)
Roll length, mm	700
Roll diameter, mm	50
Roll rotation frequency, rpm (at 50 Hz)	400
Drum diameter, mm	100–325
Max. load weight, kg	45
Number of mountable drums, pcs	3*
Drive power, kW	0,37
 Overall dimensions, mm** :	
length	935
width	440
height	530
 Mass, kg	58

* Depends on the size of the drums

** Without drums





VIBRATING PULVERIZER IVS-4 (75T-DRM)

Designed for fine grinding of samples of brittle materials of various hardness and compressive strength in periodic mode.

FEATURES

The pulverizer is easy to handle and is highly efficient at fine grinding. Four cameras can be loaded at once; a large variety of grinding media (balls, rods, cylinders) can be used; the operating cameras are fully sealed. Gas media supply is supported; compatible with either 220 V or 380 V power supply network (depending on the operating console).

RECOMMENDED SET OF SPARE PARTS

- grinding set
- grinding set (tool alloy steel)
- suspensions set.

ADDITIONAL GOODS

- operating console.

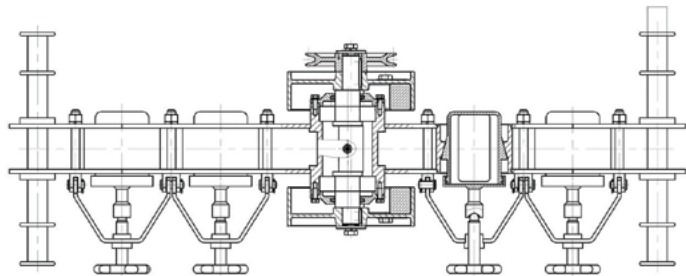


IVS-4 (75T-DRM)



EXAMPLES OF MATERIALS

Ceramics, ore, granite, feldspar, quartz, corundum, chamotte, limestone, gravel, coal, coke, graphite, slag, silicon, bauxite, concrete, dolomite, salts, silicate, agglomerate, cement clinker, glass, etc.



TECHNICAL SPECIFICATIONS	IVS-4 (75T-DRM)
Feed size, mm, up to	3
Product size, mm*	-50
Number of cups, pcs	4
Sample mass in one cup, g	50
Drive power, kW	0,6
 Overall dimensions, mm:	
length	1 230
width	570
height	1 180
 Mass, kg	145

* Depends on the pulverizing duration

VIBRATING CUP PULVERIZERS

Designed for fine grinding of brittle material samples of various hardness and compressive strength in periodic mode..

FEATURES

Reliable and easy to handle pulverizers of samples for the subsequent chemical or X-ray spectral analysis.

IVT-1 is a desktop appliance with one grinding set; it is small in size and has lower installed power.

IVT-3 has a dust- and soundproof housing, and also a time relay installed.

Compatible with either 220 V or 380 V power supply network (depending on the operating console).

RECOMMENDED SET OF SPARE PARTS

- grinding set (structural steel)
- grinding set (alloy steel)
- grinding set (tool alloy or tool die steel)
- shock absorbers set.

Depends on equipment size.



IVT-1



EXAMPLES OF MATERIALS

Ceramics, ore, granite, feldspar, quartz, corundum, chamotte, limestone, gravel, coal, coke, graphite, slag, silicon, bauxite, concrete, dolomite, salts, silicate, agglomerate, cement clinker, glass, etc.

TECHNICAL SPECIFICATIONS	IVT-1	IVT-3
Number of cups, pcs	1	3
Feed size, mm, up to	4	4
Product size (depends on the pulverizing duration), mm	-50	-50
Sample mass in one cup, g, up to	50	50
Working body oscillation amplitude, mm, (± 10%), up to	4	6
Working body oscillation frequency, Hz, no less than	23,4	23,4
Drive power, kW	0,37	1,5
 Overall dimensions, mm:		
length	570	683
width	340	624
height	420	970
 Mass, kg	52	283



IVT-3





2. CLASSIFICATION EQUIPMENT

Highly efficient laboratory and semi-industrial vibrating machines with orbital and rectilinear oscillations for sieving and size classification of loose materials.



UNBALANCED THROW SCREENS

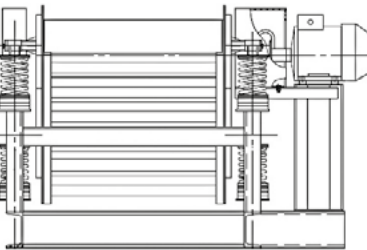
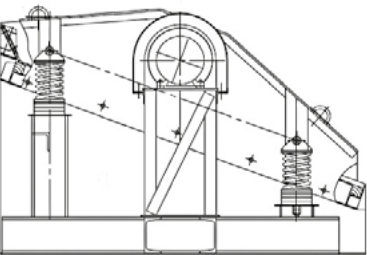
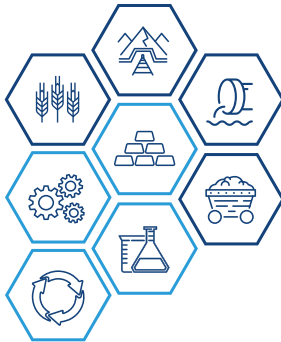
Designed for loose material classification by specified grain size fractions in continuous mode.

FEATURES

The screens are available in various structural designs and can be equipped with polyurethane or metal sieves.
Compatible with either 220 V or 380 V power supply network (depending on the operating console).



GIL 051



EXAMPLES OF MATERIALS

Ore and non-ore minerals: sand, sand-gravel mixtures, crushed stone, limestone; dry construction materials: gypsum, cement, silica sand, chalk, talc, lime, asbestos-like silica, vermiculite, polymer additives; industrial waste materials (metallurgical slags, wood); abrasive materials; food and pharmaceutical products; refractories.

TECHNICAL SPECIFICATIONS	GIL 051	GIL 052	GIL 053
Screening surface, mm	500×1 030	500×1 030	500×1 030
Feed capacity, t/h	0,02–4	0,02–5	0,02–6
Separation size, mm	0,1–15	0,1–15	0,1–15
Number of decks, pcs	1	2	3
Slope angle, deg	15–25	15–25	15–25
Oscillation amplitude, mm	3–5	3–5	3–5
Oscillation frequency, Hz	16	16	16
Drive power, kW	0,55	0,55	0,55
 Overall dimensions (at a slope angle of 20 deg), mm :			
length	1 023	1 035	1 085
width	1 060	1 060	1 060
height	676	860	900
 Mass (without sieves), kg	170	200	210

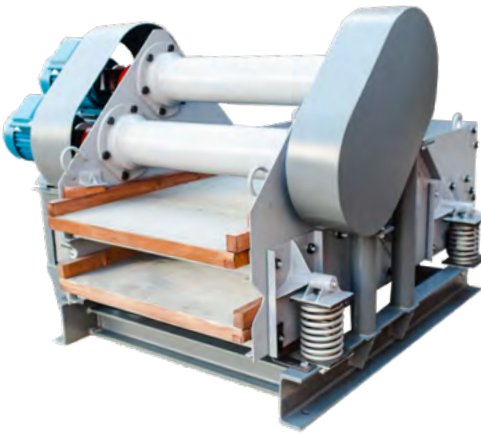
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DOUBLE-IMPACT SCREEN

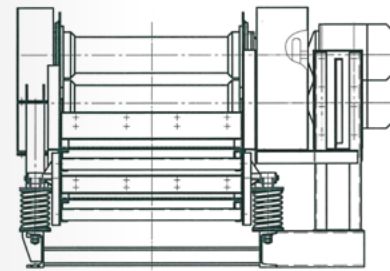
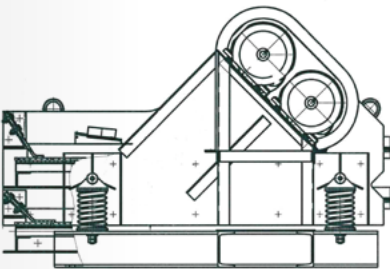
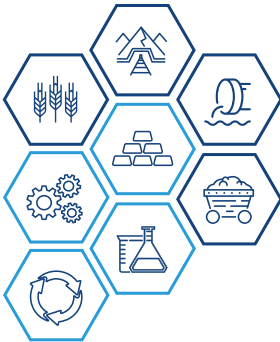
Designed for loose materials classification with bulk density up to 2.2 t/m³.

FEATURES

An efficient laboratory and semi-industrial equipment for highly accurate size classification of various loose materials.
Precise dosing of the material is achieved by using the screen along with an electric vibrating feeder.
The screens may be equipped with polyurethane or metal sieves.
One deck design is available.



GIS 052



EXAMPLES OF MATERIALS

Ore and non-ore minerals: sand, sand-gravel mixtures, crushed stone, limestone; dry construction materials: gypsum, cement, silica sand, chalk, talc, lime, asbestos-like silica, vermiculite, polymer additives; industrial waste materials (metallurgical slags, wood); abrasive materials; food and pharmaceutical products; refractories.

TECHNICAL SPECIFICATIONS	GSL 052
Feed size, mm , up to	50
Separation size, mm	0,1–15
Number of decks, pcs	2
Screening surface, mm	500×1 034
Slope angle, deg	0–5
Oscillation amplitude, mm	3–5
Oscillation frequency, Hz	16
Drive motor, kW	2×0,37
 Overall dimensions (at a slope angle of 20 deg), mm :	
length	1 100
width	1 050
height	720
 Mass, kg	220

HIGH EFFICIENCY



CRUSHING AND GRINDING
EQUIPMENT
1

CLASSIFICATION
EQUIPMENT
2

CONCENTRATION
EQUIPMENT
3

SPLITTING AND DIVIDING
EQUIPMENT
4

DEHYDRATION
AND CLARIFICATION
EQUIPMENT
5

AUXILIARY EQUIPMENT
6



VIBRATORY SIEVES

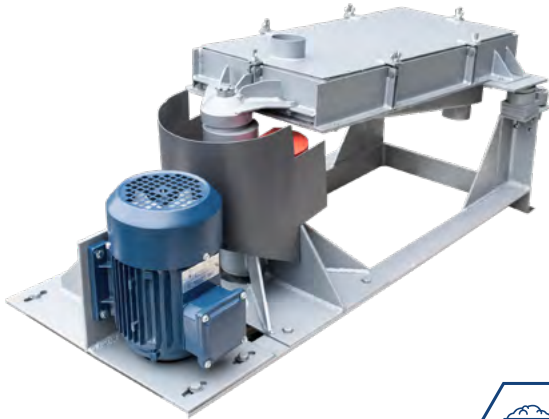
Designed for dry sieving of light and brittle materials by specified grade size fractions in continuous mode.

FEATURES

The most suitable and highly requested machines for sieving dry loose materials with relatively low bulk density. The screening process is performed by the chamber moving on an orbital path in the horizontal plane.

The use of a vibratory sieve provides a higher level of extraction of fine fractions into the undersize product and ensures efficient screening. The sealed design of the chamber prevents the formation of dust during the operation process.

Compatible with either 220 V or 380 V power supply network (depending on the operating console).

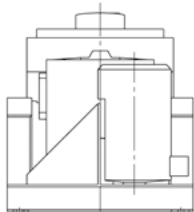
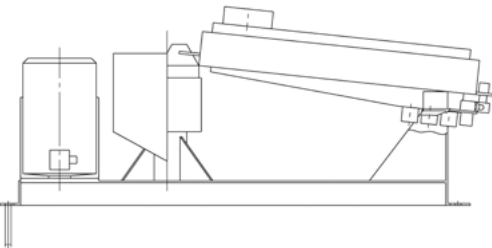


V 1



EXAMPLES OF MATERIALS

Non-ore minerals: sand, sand-gravel mixtures; dry construction materials: gypsum, cement, talc, chalk, lime, silica sand, asbestos, vermiculite; powder metallurgy products; polymeric powders; abrasive materials; food and pharmaceutical products.



TECHNICAL SPECIFICATIONS	V 1	V 1M	V 05	V 052	V 053
Feed capacity, t/h	up to 0,5	up to 0,5	0,01–2	0,01–2	0,01–2
Separation size, mm	0,1–5	0,1–5	0,1–30	0,1–30	0,1–30
Sieve dimensions, mm:					
length	520	520	1 000	1 000	1 000
width	250	250	500	500	500
Slope angle, deg	4,5–7	4,5–7	2–10	2–10	2–10
Number of decks, pcs	1	2	1	2	3
Oscillation frequency, osc./min*	300	300	300	300	300
Drive power, kW	0,37	0,37	0,55	0,55	0,55
 Overall dimensions, mm:					
length	1 030	1 030	1 820	1 820	1 820
width	380	380	720	720	720
height	380	380	454	471	503
 Mass, kg	63	65	205	210	215

* Compatible with either 220 V or 380 V power supply network (depending on the operating console).

VIBRATING TESTING SIEVES

Designed for dry sieving of loose materials by several grain size fractions in periodic mode.

FEATURES

Standardized laboratory devices for determining grain size distribution characteristics of loose materials.

Vibrating testing sieves are complemented with a timer to set the operating time.

RECOMMENDED SET OF SPARE PARTS

- laboratory sieves (p. 27)
- lids
- pans.



ASV-200



EXAMPLES OF MATERIALS

Ores, metal powders, ferroalloys, diamonds, coal, glass, ceramics, polymers, turf.

TECHNICAL SPECIFICATIONS	ASV-120	ASV-200	ASV-300	ASV-400
Number of sieves, pcs, up to	8/6	8/6	6/4	10
Sieve height, mm	38/50	38/50	50/75	50/75
Sieve diameter, mm	120	200	300	400
Net cell size in sieves, mm	0,04–5	0,04–5	0,04–5	0,04...10,0
Perforated screen hole diameter in sieves, mm	1,1–20	1,1–20	1,1–20	1,0–100
Drive power supply voltage, V	220	220	220	220/380
Drive power, kW	2×0,025	2×0,025	2×0,025	2×0,37
 Overall dimensions, mm:				
length	385	385	385	385
width	350	350	350	350
height up to	610	710	710	600
 Mass, kg	23*	23*	23*	90*

* Given mass is without sieves





SHOCK TESTING SIEVE AS-200U (RO-TAP)

Designed for sample sieving or particle size distribution testing of loose materials.

FEATURES

High efficiency of fine fractions sieving.
Used for sieving light materials, e.g. coal, as well as very fine fractions (less than 200 µm in size).
The built-in hammer can be hinged if necessary.
Compatible with either 220 V or 380 V power supply network (depending on the operating console).

RECOMMENDED SET OF SPARE PARTS

- laboratory sieves (p. 27).

ADDITIONAL GOODS

- operating console.

QUICK SIEVING



AS-200U (RO-TAP)

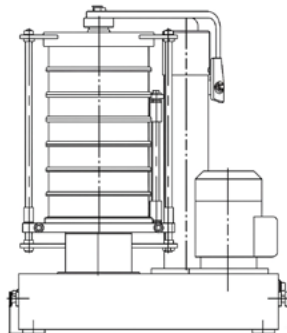
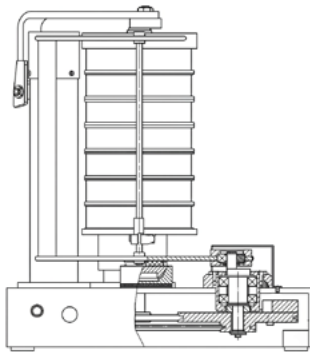


EXAMPLES OF MATERIALS

Ores, metal powders, ferroalloys, diamonds, coal, glass, ceramics, polymers, turf.

TECHNICAL SPECIFICATIONS	AS-200U (RO-TAP)
Maximum size of the sieved material, mm	8
Number of decks, pcs	1–6
Sieve diameter, mm	200
Sieve height, mm	38/50
Net cell size in sieves, mm	0,04–8
Perforated screen hole diameter in sieves, mm	2,5–8,0
Hammer blow frequency, per min	135
Number of oscillations, per min	270
Drive power, kW	0,25
 Overall dimensions, mm :	
length	600
width	600
height	670
 Mass, kg	90*

* Given mass is without sieves



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LABORATORY SIEVES

Designed for dry sieving of loose materials by several size grades in periodic mode. Sieve sets are assembled with accordance to customer requirements and are complemented with pans and lids.

STANDARDIZED SIEVE FRAME SIZES

SIEVE FRAME		SIEVING AREA DIAMETER, MM		SIEVE FRAME HEIGHT, MM
SHAPE	DIAMETER, MM	MINIMAL	MAXIMAL	
Round	120	110	120	38
	200	185	200	50
	300	275	300	75

Sieve frame material: galvanized steel; stainless steel

DESIGNATION AND SIZE PARAMETERS FOR WIRE SIEVES

SIEVE PLATE MADE OF BRASS (B), BRONZE (BR), NON-CORROSIVE NET (N)
(GOST 3826-82, GOST 6613-86, TU 14-4-16-917, TU 14-4-507-99, TU 14-4-1569-89)

Cells, mm	0,025	0,03	0,04	0,045	0,050	0,056	0,063	0,064	0,071	0,074	0,08
Material	N	N	Br, N	Br	Br	Br, N	Br, N	N	B, N	N	B, N
Cells, mm	0,09	0,094	0,1	0,125	0,14	0,16	0,2	0,25	0,315	0,355	0,4
Material	B	N	B, N	B, N	B, N	B, N	B, N	B, N	B, N	B	B, N
Cells, mm	0,45	0,5	0,56	0,63	0,7	0,8	0,9	1,0	1,2	1,25	1,4
Material	N	N	N	B, N	B, N	B, N	B, N	B, N	N	B, N	N
Cells, mm	1,6	1,8	2,0	2,2	2,5	2,8	3,0	3,2	3,5	4,0	5,0
Material	N	N	B, N	N	B, N	N	N	N	N	N	N

DESIGNATION AND SIZE PARAMETERS FOR WIRE SIEVES OF DIAMETER 400 MM AND HEIGHT 75 MM

SIEVE PLATE MADE OF BRASS (B), BRONZE (BR), NON-CORROSIVE NET (N)
(GOST 3826-82, GOST 6613-86, TU 14-4-16-917, TU 14-4-507-99, TU 14-4-1569-89)

Cells, mm	0,1	0,125	0,14	0,16	0,2	0,25	0,315	0,355	0,4	0,45	0,5
Material	B, N	B, N	B, N	B, N	B, N	B, N	B, N	B	B, N	N	B, N
Cells, mm	0,56	0,63	0,7	0,8	0,9	1,0	1,2	1,25	1,4	1,6	1,8
Material	N	B, N	B, N	B, N	B, N	B, N	N	B	N	N	N
Cells, mm	2,0	2,2	2,5	2,8	3,0	3,2	3,5	4,0	5,0		
Material	B, N	N	B, N	N	N	N	N	N	N		

DESIGNATION AND SIZE PARAMETERS FOR PERFORATED SIEVES

SIZE TYPE	VALUE
Perforated plate with round holes (galvanized steel)	
Hole diameter, mm	1; 1,1; 1,5; 2,0; 2,5; 3,0; 3,4; 4,0; 4,5; 5,0; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11; 12,0; 12,5; 13,0; 14,0; 15,0; 17,5; 20,0; 22,5; 25,0; 30,0; 40,0; 50,0; 55,0; 60,0; 70,0; 80,0; 87,5; 90,0; 100,0; 110,0; 120,0

DESIGNATION AND SIZE PARAMETERS FOR PERFORATED SIEVES

SIZE TYPE	VALUE
Perforated plate with slotted holes (galvanized steel)	
Hole diameter, mm	1,2×12; 1,4×12; 1,5×20; 1,6×20; 1,7×20; 1,8×20; 2,0×20; 2,2×20; 2,4×20; 2,6×20; 3,0×20; 3,2×25; 3,4×25; 3,6×25; 4,5×32; 5,0×32

DESIGNATION AND SIZE PARAMETERS FOR STAMPED SIEVES

SIZE TYPE	VALUE
Perforated plate with square holes (stainless steel)	
Hole diameter, mm	4,0; 5,6; 6,3; 8; 11,2; 16,0; 22,4; 31,5; 45,0; 63,0; 90,0; 126,0; 180,0



SPIRAL CLASSIFIERS

One of the oldest machines for size separation of granular materials in aqueous media. It sorts comminuted materials into two fractions, primarily within a size range of 0.05-3 mm. Spiral classifiers are also used for ore washing to remove clay contaminants; in this case, the maximum particle size of the processed material can reach up to 10-15 mm.

FEATURES

Spiral classifiers are beneficial due to simple design, low energy consumption and the ability to be used in closed grinding cycles without the need for pumps. The equipment is effectively employed in scaled-up continuously operating laboratory units and in experimental processing plants.

Compatible with either 220 V or 380 V power supply network (depending on the operating console).

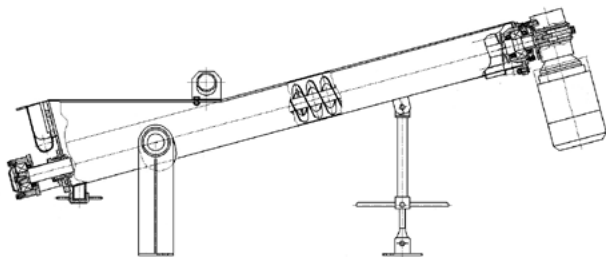


71KR



EXAMPLES OF MATERIALS

Ore pulps.



TECHNICAL SPECIFICATIONS		71KR	72KR	73KR
Spiral diameter, mm		100	150	200
Tank length, mm		1 200	1 200	1 200
Number of spiral starts		2	2	2
Spiral pitch, mm		70	110	150
Spiral rotation frequency, min ⁻¹		18–30	18–30	18–30
Tank slope, deg		10–30	10–30	10–30
Drive power, kW		0,25	0,25	0,37
Capacity at separation fineness of 0.15 mm, kg/h, no less than:				
in discharge		200	260	300
in sands		300	500	500
	Overall dimensions, mm:			
	length	1 470–1 540	1 460–1 540	1 450–1 530
	width	308	320	425
	height	540–890	580–870	615–980
	Mass, kg	52,2	57,3	90

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NOTES



3. CONCENTRATION EQUIPMENT

A full range of laboratory equipment for beneficiation tests of ore and technogenic materials for modelling industrial processes based on magnetic and electrostatic separation, flotation and gravity concentrating methods.



LABORATORY FLOTATION MACHINES

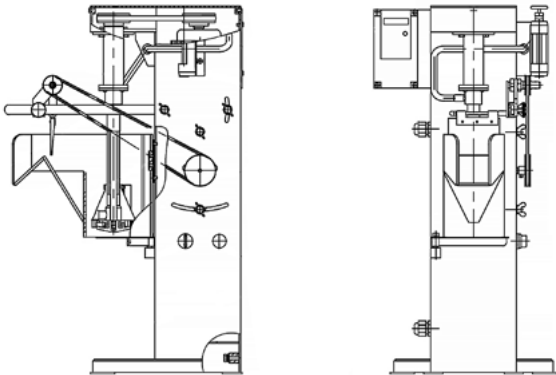
Designed for laboratory testing of mineral beneficiation using the froth flotation method on pulps with pH values of 2–12.

FEATURES

Flotation machines provide highly accurate modeling of the industrial flotation process. They are equipped with a thyristor frequency converter (TFC).

RECOMMENDED SET OF SPARE PARTS

- interchangeable chambers
- impeller unit.



FML-3



EXAMPLES OF MATERIALS

Ores of ferrous, non-ferrous, rare and precious metals, non-metallic minerals, coal.

TECHNICAL SPECIFICATIONS	FML-0,3	FML-1	FML-3	FML-8	FML-12
Active chamber volume, l (±10%)					
chamber 1	0,05	0,5	1,5	5	12
chamber 2	0,10	0,75	2	6,3	
chamber3	0,20	1	3	8	
chamber 4	0,3				
Impeller diameter, mm, up to	28	55	70	100	100
Impeller rotation frequency, sec ⁻¹	15–40	15–40	15–40	15–30	15–30
Inlet air at max. impeller rotation frequency, l/sec, no less than	0,02	0,05	0,07	0,2	0,27
Froth remover rotation frequency, sec ⁻¹	0,25	0,25	0,25	0,25	0,25
Drive power, kW	0,18	0,18	0,18	0,25	0,25
Number of chambers provided	4	3	3	by choice, 1	1
 Overall dimensions, mm:					
length	420	460	490	670	805
width	380	380	380	600	600
height	600	630	760	1 570	1 450
 Mass, kg	27	28	35	75	78

ELECTROMAGNETIC DRUM SEPARATORS FOR WET BENEFICIATION

Designed for wet magnetic beneficiation of strongly magnetic ores and materials in laboratories and industrial sites with low productive capacity.

FEATURES

Depending on the magnetic susceptibility of the material, its particle size and beneficiation conditions, the main parameters can be adjusted:

- magnetic induction
- magnetic circuit position
- gap between the drum and the tank
- section of the discharge opening insert for non-magnetic products

Tank water regime can be adjusted:

- tank pulp level
- amount of water fed to spray nozzles and their angular position.

EBM 32/20

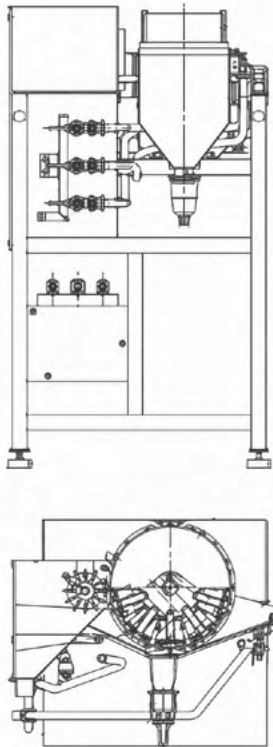


EXAMPLES OF MATERIALS

Beneficiation of magnetite, gold- and diamond-bearing ores; regeneration of ferrosilicon and magnetite heavy media and permanent magnet abrasive waste.

TECHNICAL SPECIFICATIONS	EBM 32/20	EBM 63/18
Max. solid feed capacity, kg/h	75	100
Feed size, mm, up to	0,1–3	6
Magnetic induction in the working area, T:		
in short-time mode (15 min)	0,13	up to 0,25
in long-term mode	0,07	
Diameter of the working part of the drum, mm	327	630
Drum length with flange, mm	227	180
Drum rotation frequency, rpm	30	34, 43
Nominal drum drive power, kW	0,37	0,75
Electromagnetic circuit energy consumption, kW, up to	0,7	1,1
 Overall dimensions, mm:		
length (along the drum axis)	720	565
width	750	860
height	1 220	1 236
 Mass, kg	182*	293

* Without an operating console





DRUM MAGNETIC SEPARATOR FOR WET BENEFICIATION PBM 32/20

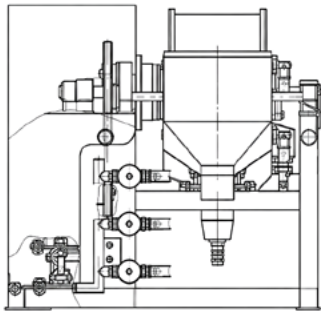
Designed for wet magnetic beneficiation of strongly magnetic ores and materials in laboratories and industrial sites with low productive capacity.

FEATURES

Separators of PBM type are equipped with NdFeB magnets, ensuring higher magnetic induction on the drum surface (no less than 0.35 T). Separators can operate in both periodic and continuous modes as a part of compact units.

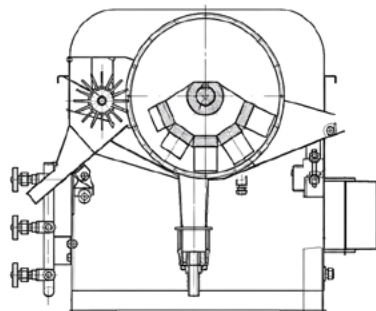
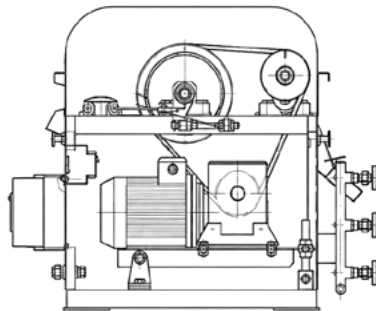


PBM 32/20



EXAMPLES OF MATERIALS

Beneficiation of magnetite, gold- and diamond-bearing ores; regeneration of ferrosilicon and magnetite heavy media and permanent magnet abrasive waste.



TECHNICAL SPECIFICATIONS	PBM 32/20
Max. solid feed capacity, kg/h	75
Feed size, mm , up to	0,1–3
Magnetic induction in the working area, T	0,35
Diameter of the working part of the drum, mm	327
Drum length with flange, mm	231
Drum rotation frequency, rpm	31,6
Rated drum drive power, kW	0,37
 Overall dimensions, mm :	
length (along the drum axis)	690
width	810
height	638
 Mass, kg	155

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DRUM MAGNETIC SEPARATORS FOR DRY BENEFICIATION

Designed for dry magnetic beneficiation of strongly magnetic ores and iron removal from various loose materials. Materials are separated into two products: magnetic and non-magnetic.

FEATURES

Notable for their simple design and high separation efficiency.

Separators of PBSC type are available in two variants:

- with FeBa magnets
- with NdFeB magnets, which ensure higher magnetic induction on the drum surface (no less than 0.35 T).

Separators can operate in both periodic and continuous modes as a part of compact units.



PBSC 40/10

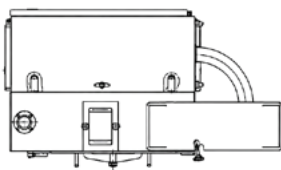
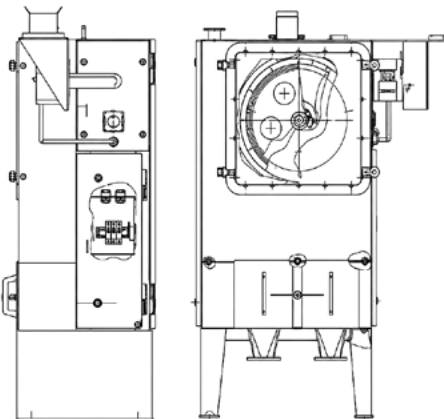


EXAMPLES OF MATERIALS

Material clarification from strongly magnetic contaminants: silica sand, glass raw materials, white fused alumina, refractories, WC-Co powders (for powder metallurgy), recycled outputs from tire, Ni-Cd battery, and related material processing; beneficiation of magnetite ores and cobalt-containing slags.

TECHNICAL SPECIFICATIONS	PBSC 30/5	PBSC 40/10
Max. feed capacity, t/h	0,5	0,5
Magnetic induction on the drum surface, T , no less than:		
base variant (NdFeB magnets)	0,35	0,35
variant 01 (BaFe magnets)	0,13	0,13
Diameter of the working part of the drum, mm	300	400
Length of the working part of the drum, mm	50	100
Drive power, kW	0,37	0,55
Drum rotation frequency, min⁻¹	0–200	0–200
Feed size, mm , up to	10	20
 Overall dimensions, mm :		
length (along the drum axis)	380	550 (580*)
width	570	960 (1 000*)
height	660	1 415 (1 720*)
 Mass, kg	80	242 (273*)

* Values with vibrating feeder are given in parentheses





ELECTROMAGNETIC ROLL SEPARATORS

Designed for dry separation of weakly magnetic ores and materials into magnetic and nonmagnetic components.

EVS 10/5 и EVS 15/5

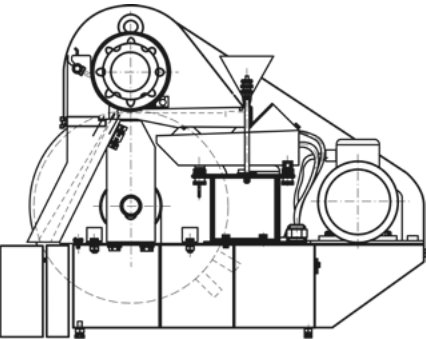
The construction features of the separators allow for their use as analyzers in laboratories in metallurgy and other industries.

EVS 28/9

EVS 28/9 electromagnetic dry roll separator is designed for dry magnetic separation of weakly magnetic ores and materials.

EVS V-28/9

EVS V-28/9 electromagnetic roll separator with top feed is designed for dry magnetic beneficiation of finely ground and non-free-flowing weakly magnetic ores and materials which cannot be effectively processed in separators with bottom feed.



EVS 10/5



EXAMPLES OF MATERIALS

Material clarification from weakly magnetic containments (abrasives, silica sand, ceramics, feldspar, foundry molding mixtures, etc.); beneficiation of various ores to obtain materials similar in composition to monomineral products (garnet, nepheline, pegmatite, wollastonite, vermiculite, etc.); refinement of rough concentrates (ilmenite, wolframite, tantalum, tin, loparite, manganese, diamond bearing, gold bearing, zircon, kyanite, rutile, niobium (pyrochlore), baddeleyite).

TECHNICAL SPECIFICATIONS	EVS 10/5	EVS 15/5	EVS 28/9	EVS B-28/9	EVM 28/9
Max. feed capacity, t/h	0,005	0,005	0,6	0,3	0,4
Feed size, mm, up to	2	2	6	0,5	4
Magnetic induction, T, no less than	1,7	1,5	1,7	1,5	1,7
Diameter of the working part of the roll, mm	100	150	280	280	280
Length of the working part of the roll, mm	50	50	90	90	90
Roll rotation frequency, rpm	70	50–300	65–250	50–150	30–100
Drive power, kW	0,18	0,55	1,5	1,5	0,75
Electromagnetic circuit energy consumption, kW, up to	0,5	0,5	0,8	0,8	0,8
 Overall dimensions, mm:					
length (along the drum axis)	540	800	850	900	880
width	340	340	1 500	1 300	1 100
height	570	620	1 850	1 850	1 520
 Mass, kg	116	140	1 200	1 100	820

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FEATURES

EVS 10/5

An ability to regulate the composition of separation products by adjusting the feeding speed of a vibrating feeder, magnetic field intensity, and tray position in the working area.

EVS 15/5

An ability to regulate the composition of separation products by adjusting the feeding speed of a vibrating feeder, magnetic field intensity, roll rotation frequency, and tray position in the working area.

Material feed into the working area of the separator can be realized in a tranquil transportation regime as well as in fluidized bed mode, which enhances the efficiency of the separation process.

EVS 28/9 and EVS V-28/9

Composition of the separation products can be modified by adjusting the magnetic field intensity, roll rotation frequency, and also by turning the tank partitions (gate valves) forming the compartments.

Tank side walls are equipped with glass windows to observe the separation process. Additional illumination is installed inside.

An orifice is installed on one of the side walls for connection with exhaust ventilation system when working with dust-forming materials.

A sampler is installed beneath the discharge orifices of the tank to collect samples of the separated material.

EVM 28/9

Designed for wet separation of weakly magnetic ores and materials into magnetic and non-magnetic components.

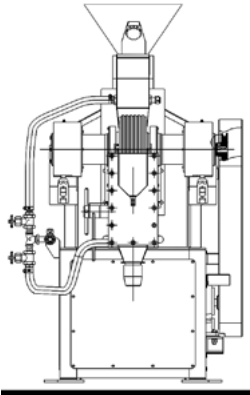
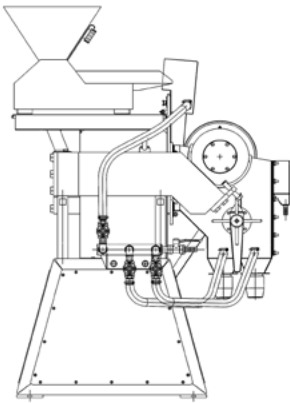
The separator is designed for laboratory and semi-industrial research on the wet processing of rough rare metal concentrates, beneficiation of oxidized iron ores, and other weakly magnetic ores and materials.

The separator is permitted to operate in regions with moderate and cold climate in enclosed spaces. Climate category is "moderately cold", Type 4 (GOST 15150-69).

FEATURES

EVM 28/9

Composition of the separation products can be modified by adjusting the magnetic field intensity in the working area, roll rotation frequency, tank water regime, and also by turning the tank partition (gate valve) forming the compartments.



EVM 28/9

EXAMPLES OF MATERIALS

Beneficiation of ores (diamond-bearing, oxidized iron, manganese, etc.); refinement of rough concentrates (ilmenite, manganese, rare metal ores, etc.).





ELECTROMAGNETIC DRUM SEPARATOR ELKOR-1

Designed for dry separation of loose materials by their electrophysical properties. Can be utilized for beneficiation and classification of mineral and technogenic raw materials.

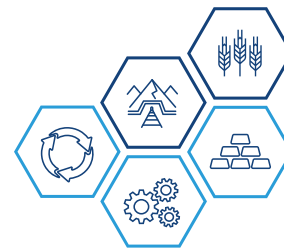
FEATURES

Concentrates of desired quality can be obtained with a high 1extraction level of the valuable component.

Electrostatic separator is notable for its low energy consumption. Separation results can be optimized by adjusting the geometry of the electrodes and the material temperature in the feeder tray.

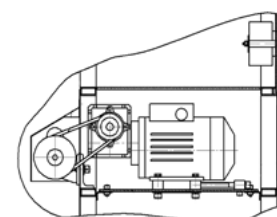
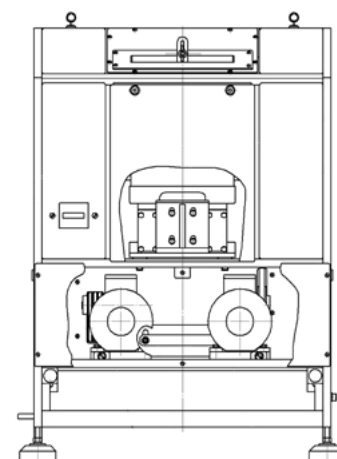


ELCOR-1



EXAMPLES OF MATERIALS

Metal concentrate extraction from secondary raw materials (scrap of electrical and radio equipment, cable products, etc.); refinement of rough concentrates of rare and precious metal ores; production of metal ore superconcentrates; regeneration of dielectric materials (plastics); purification of metal and non-metallic (quartz) powders; separation of non-metallic ore materials (feldspar, mica, wollastonite); purification of loose food products.



LOW ENERGY CONSUMPTION

← IN CONTENTS

ELECTROMAGNETIC TUBE ANALYZER (DAVIS TUBE TESTER)

Designed for wet magnetic analysis of strongly magnetic ores and magnetic separation products, as well as for determining the content of strongly magnetic fraction in various products.

FEATURES

An important feature of the machine is the visibility of the magnetic separation of the material.

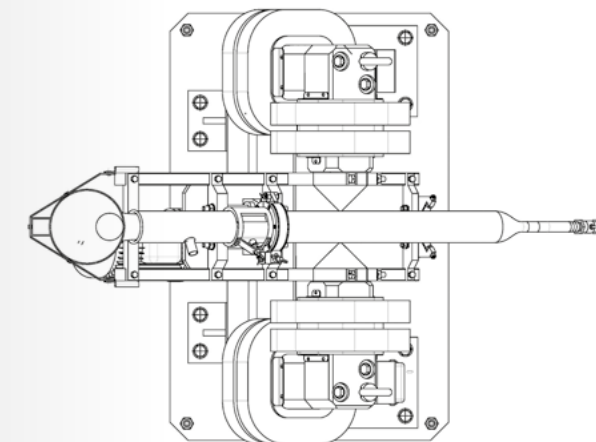


298SE



EXAMPLES OF MATERIALS

Strongly magnetic ores and products of magnetic separation.



TECHNICAL SPECIFICATIONS		298SE
Magnetic induction at the pole gap center, T, no less than		0,2*
Feed size, mm, up to		0,5
Tube diameter, mm		52
Tube stroke, mm		40
Power supply voltage, V		380
Drive power, kW		0,18
 Overall dimensions, mm:	length	990**
	width	720
	height	720**
 Mass, kg	202	

* The magnetic induction value is provided for a 5 A energizing current in the electromagnetic circuit. Operation at 6.5 A in short-time mode is also possible

** At the 30 deg. slope angle





LABORATORY DEMAGNETIZERS

Laboratory demagnetizers are designed for demagnetizing pulps containing fine and finely ground ferrosilicon or natural magnetite. Pulp demagnetizing is required to eliminate the flocculation of strongly magnetic particles, thereby enhancing the efficiency of classification, deslurrying, and filtration processes. It is also crucial for regenerating heavy ferromagnetic suspensions.

FEATURES

Demagnetizers can be applied in laboratory settings and small-scale industries.

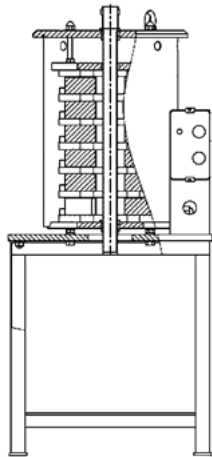
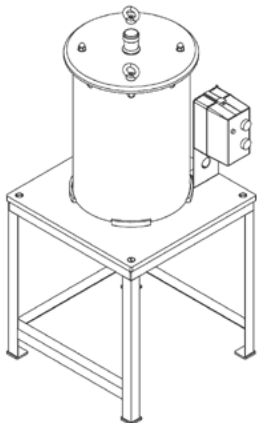


AR-30



EXAMPLES OF MATERIALS

Ores and technogenic materials containing ferromagnetic particles (e.g. magnetite, ferrosilicon, metal and ferritic powders) dispersed in liquid media.



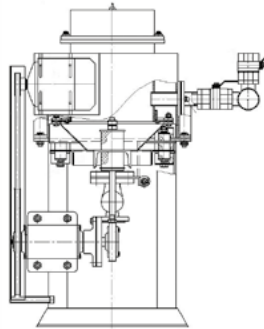
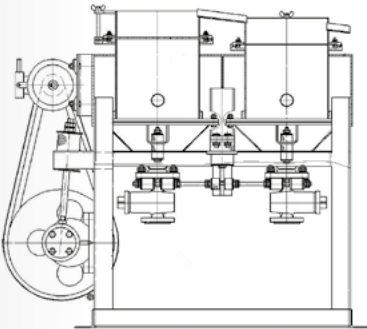
TECHNICAL SPECIFICATIONS	AR-30	AR-50	AR-75
Tube diameter, mm	30	50	75
Capacity (in pulp), m³/h, up to	up to 10	up to 25	up to 54
Max. magnetic field induction in the working area of the unit without pulp (amplitude), G, no less than	700	700	700
Rated single-phase alternating current voltage, V	220	380	380
Rated current at 50 Hz (without pulp), A	11,5	9,2±3	12±3
AC power, kW	–	3,5	4,8
 Overall dimensions, mm:			
length	460	960	1 210
width	460	330	330
height	1 020	430	430
 Mass, kg	65	73	129

JIG

Designed for jiggling minerals with particle size of up to 12 mm in both laboratory and industrial settings, in non-aggressive media.

FEATURES

The laboratory jig accurately simulates industrial jiggling processes.



52-OT



EXAMPLES OF MATERIALS

Tin, tungsten, rare metal ores, manganese and iron ores, gold-bearing raw materials.

TECHNICAL SPECIFICATIONS	52-OT
Capacity, kg/h	200
Screening area, m²	0,07
Chamber width, mm	220
Chamber length, mm	215
Number of chambers, pcs	2
Diaphragm stroke, mm	0–21
Rated drive power, kW, up to	0,25
Power supply voltage, V	380/220
Pulse number, per min	270–370
 Overall dimensions, mm:	
length	963
width	655
height	930
 Mass, kg	143





CONCENTRATING TABLE

Designed for separating minerals in aqueous media based on their specific gravity, with a particle size range from 0.04 to 3 mm. Utilized for laboratory research on beneficiation of various materials.

FEATURES

The material fans out across the table and can be divided into any number of parts. For the efficient operation of the concentrating table, it is necessary to select the loosening mode of the particle layer, which is created by suspending the material in the water flow, and the reciprocating motion of the deck.

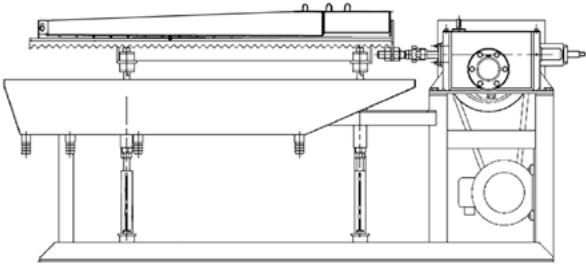


51KC



EXAMPLES OF MATERIALS

Tin, tungsten, rare metal, gold-bearing and ferrous metal ores.



TECHNICAL SPECIFICATIONS		51KC
Capacity, kg/h		50
Number of decks, pcs		1
Deck area, m²		0,4
Deck stroke frequency, min⁻¹ , within		250–450
Deck stroke, mm , max. dev. +/-		8–15
Deck tilt, deg		0–10
Rated drive power, kW		1,1
Power supply voltage, V		380
Motor speed, rpm		1 000
 Overall dimensions, mm :		
length		1 600
width		620
height		680
 Mass, kg		142

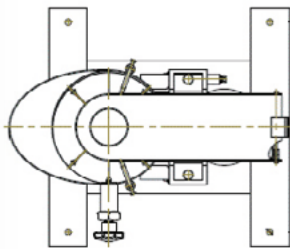
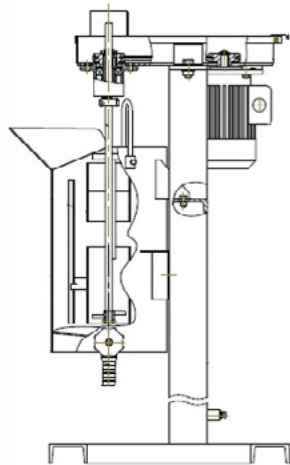
← IN CONTENTS

AGITATION VAT

Designed for agitating and conditioning pulps of finely ground ores in laboratory settings.

FEATURES

Unrivalled for their efficiency in preparing pulps for flotation tests and chemical research.



119MSH



EXAMPLES OF MATERIALS

Aqueous pulps of any finely ground ores, including ores of ferrous, non-ferrous, precious metals, as well as mining and chemical raw materials.

TECHNICAL SPECIFICATIONS		119MSH
Tank volume, l		15
Impeller diameter, mm		79
Tank diameter, mm		240
Tank operational height, mm		340
Impeller rotation frequency, rpm		300–1 500
Impeller drive power, kW		0,37
 Overall dimensions, mm :		
length		585
width		500
height		1 065
 Mass, kg		51





4. SPLITTING AND DIVIDING EQUIPMENT

Laboratory equipment for splitting and dividing samples of loose materials, allowing to obtain samples with equal mass and composition, ensuring adequacy of subsequent research and repeatability of the results of technical tests.



RIFFLE SPLITTERS

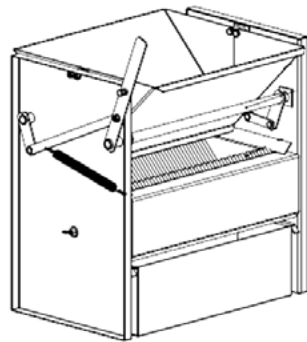
Designed for splitting samples of loose materials into parts of equal mass and composition.

FEATURES

Traditional static devices of simple design. Also known as Jones samplers, they are utilized for dividing loose materials into fractions equal in mass.



SR 10-48 (934RM)

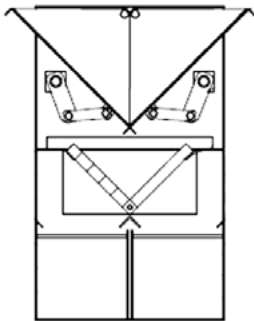


SR 5-48 (943RM)



EXAMPLES OF MATERIALS

Any dry loose materials: ferroalloys, ores, granite, soil, sand, coal, glass, metal powders, minerals, construction materials, etc.



TECHNICAL SPECIFICATIONS	SR 5-48 (943RM)	SR 5-24 (943RM-A)	SR 10-48 (934RM)
Bar width, mm	5	5	10
Number of bars, pcs	48	24	48
Total width of bar surfaces mm	240	120	480
Bowl size, l	4,5	2,25	20
Applied bar sizes, mm	5, 10, 15, 20, 30, 40	5, 10, 15	10, 20, 30, 40, 60, 80
 Overall dimensions, mm:			
length	320	200	600
width	280	280	500
height	420	420	720
 Mass, kg	14	10,5	40

UNRIVALED DOSING
ACCURACY

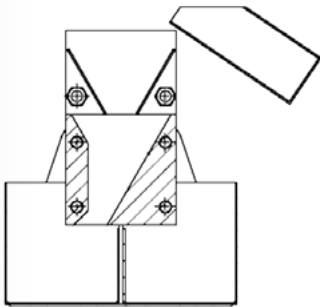
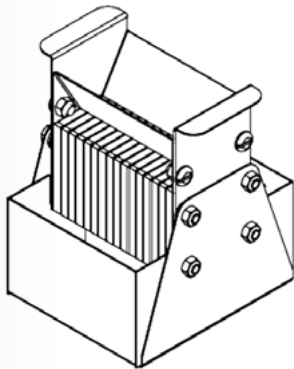
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CHUTE SPLITTERS

Designed for splitting samples of loose materials into parts of equal mass and composition.

FEATURES

- made of stainless steel for prolonged service
- provided with a convenient discharge vessel
- high accuracy of division is ensured
- accuracy is not affected by the relief of the surface where the splitter is installed.



SJ 5-16 (mini)



EXAMPLES OF MATERIALS

Any dry loose materials: ferroalloys, ores, granite, soil, sand, coal, glass, metal powders, minerals, construction materials, fertilizers, chemicals, cement clinker, etc.

TECHNICAL SPECIFICATIONS	SJ 3-14 (micro)	SJ 5-16 (mini)	SJ 5-32
Chute width, mm	3	5	5
Number of chutes, pcs	14	16	32
Parting volume, l	0,18	0,3	0,6
 Overall dimensions, mm:			
length	90	130	225
width	126	126	126
height	150	150	150
 Mass, kg	1,9	2,7	4,8



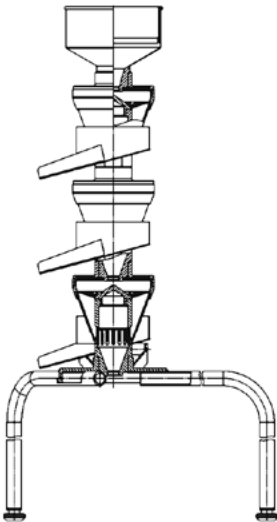


RING RIFFLE 928RM-B

Designed for collecting and reducing suspension samples with a density of up to 5 g/cm3 before assay or chemical analysis, as well as for dividing them into 1/2, 1/4, or 1/8 parts.

FEATURES

A device for highly accurate division of suspensions and pulps into small-volume fractions.



928RM-B



EXAMPLES OF MATERIALS

Pulps of ore and non-ore materials.

TECHNICAL SPECIFICATIONS		928RM-B
Feed size, mm		0–1
Number of compartments, pcs		3
Height of ring riffle stand, mm, up to		548
Width of ring riffle stand, mm, up to		500
Initial sample volume, l		10
 Overall dimensions, mm:		
length		1 030
width		500
height		500
 Mass, kg		9,4

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ROTARY SAMPLE SPLITTERS

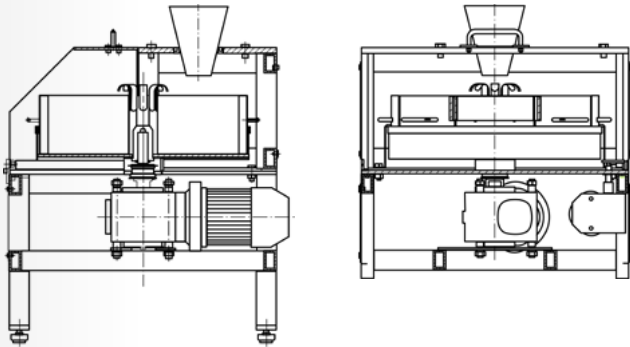
Designed for reducing geological mineral and ore samples during their preparation for analytical research.

FEATURES

Highly accurate division of samples of loose materials into fractions equal in mass and composition is provided.

To ensure uniform material feeding, it is recommended to use the splitter in conjunction with a feeder or a jaw crusher (for DPR-10 and DPR-30).

Compatible with either 220 V or 380 V power supply network (depending on the operating console).



DPR-10



EXAMPLES OF MATERIALS

Any dry loose materials: ferroalloys, ores, granite, soil, sand, coal, glass, metal powders, minerals, construction materials, etc.



DPC-100

TECHNICAL SPECIFICATIONS	DPR-10	DPR-30	DPR-30/15M	DPC-100	DPC-100A
Feed size, mm, up to	20	20	20	20	20
Total volume of receptacles, l	10	30	30	100	100
Reduction ratio	1/2...1/8	1/2...1/8	1/8	1/2...1/8	1/2...1/12
Drive power, kW	0,25	0,25	0,25	0,18	0,18
 Overall dimensions, mm:					
length	550	550	600	955	590
width	580	580	580	955	590
height	680	800	800	1 100	910
 Mass, kg	100	110	150	82	60





DIVIDING UNIT DU-10

Designed for reducing geological mineral and ore samples during their preparation for analytical research.

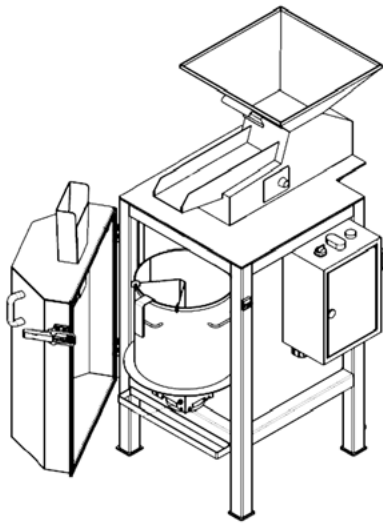
FEATURES

- various receptacles allow for collecting a wide range of samples (manufacturing in accordance with the individual customer requirements is available)
- easy handling
- dust-proof design.

The delivery set includes the PE-1 feeder.
Compatible with either 220 V or 380 V power supply network (depending on the operating console).

ADDITIONAL GOODS

- operating console.



DU-10



EXAMPLES OF MATERIALS

Any dry loose materials: ferroalloys, ores, granite, soil, sand, coal, glass, metal powders, minerals, construction materials, fertilizers, chemicals, cement clinker, etc.

TECHNICAL SPECIFICATIONS	DU-10
Feed size, mm, up to	10
Drive power, kW	0,18
Total volume of receptacles, l	10
Reduction ratio, %	5, 10, 20, 30
 Overall dimensions, mm:	
length	752
width	520
height	1 000
 Mass, kg	94

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ROTARY SAMPLE SPLITTER AVD

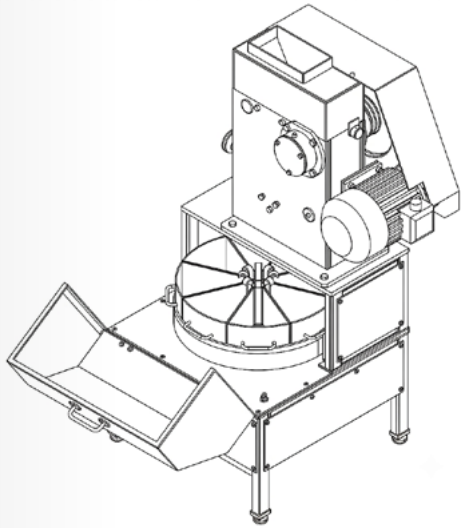
Designed for reducing geological rock and ore samples during their preparation for analytical research..

FEATURES

Highly accurate division of samples of loose materials into small fractions equal in mass and composition is ensured, provided that the initial feeding is stable.
Compatible with either 220 V or 380 V power supply network (depending on the operating console).

ADDITIONAL GOODS

- operating console.



AVD



EXAMPLES OF MATERIALS

Any dry loose materials: ferroalloys, ores, granite, soil, sand, coal, glass, metal powders, minerals, construction materials, etc.

TECHNICAL SPECIFICATIONS	AVD
Feed size, mm, up to	20
Total volume of receptacles, l	10
Reduction ratio	1/2...1/8
Drive power, kW	340
 Overall dimensions, mm:	
length	550
width	900
height	1 020
 Mass, kg	150





5. DEHYDRATION AND CLARIFICATION EQUIPMENT

The product range of REC "Mekhanobr-Tekhnika" includes laboratory thickeners for studying clarification and thickening processes, as well as highly efficient laboratory vacuum filters for dehydration of suspensions and modelling of filtration processes.



THICKENER

Designed for thickening suspensions with a density of up to 5 g/cm³ in laboratory settings.

FEATURES

Easy and convenient to handle, the device is used for thickening and clarifying pulps with or without coagulating and flocculating agents.

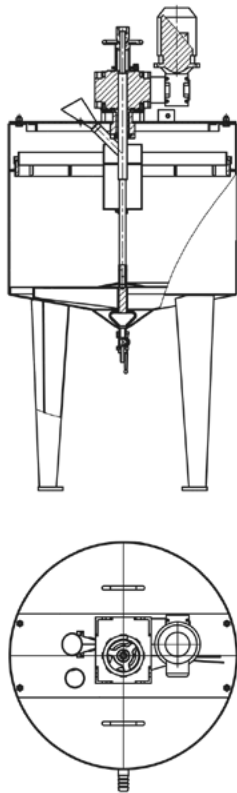
The capacity of the thickener is determined by the particle size distribution of the suspension, the initial dilution ratio, and the discharge density. The thickening ratio and the moisture content of the thickened product are determined by the material properties and can be adjusted by using different outlet nozzles installed at the bottom opening, which allow for changing the opening diameter.

Compatible with either 220 V or 380 V power supply network (depending on the operating console).



EXAMPLES OF MATERIALS

Aqueous ore pulps and ore concentrates of ferrous and non-ferrous metals, mining and chemical raw materials, coal and coal concentrates.



TECHNICAL SPECIFICATIONS		55SG
Tank diameter, mm		770
Tank height, mm		430
Drive power, kW		0,12
Rakes, rpm		0,28–1
 Overall dimensions, mm:		
length		780
width		710
height		1 500
 Mass, kg		110

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LABORATORY FILTERS

Filtration is usually used for dewatering of concentrates and intermediate beneficiation products, as well as during their hydrometallurgical processing - prior to drying and chemical analysis. Additionally, this method is applied for separation of solid and liquid phases in chemical synthesis processes.

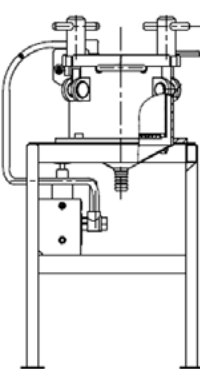
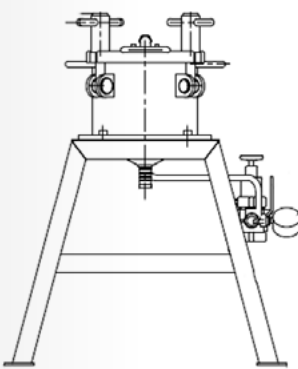
XFEATURES

- compact design requiring no vacuum equipment, which is often troublesome in operation
- wide range of filters with different capacities, allowing their use in both laboratory and pilot-scale dewatering processes
- depending on the properties of the filtered product, filter media of various densities can be used
- no special acid or alkali treatment required after testing.



EXAMPLES OF MATERIALS

Ore concentrates of ferrous and non-ferrous metals, mining and chemical raw materials; coal slimes, coal concentrates and suspensions in the chemical industry.



TECHNICAL SPECIFICATIONS	55FT	56FT	57FT	59FT
Max. air pressure, kg/cm ²	6	6	6	6
Number of replaceable filter vials, pcs	3	1	1	1
Filter vial capacity, l	0,5; 1; 2	8	4	20
 Overall dimensions, mm:				
length	560	435	695	570
width	390	675	395	440
height up to	530	804	765	1 440
 Mass, kg	26*	53	42	70

* Given mass includes the mass of the filter vial with a capacity of 2 litres





6. AUXILIARY EQUIPMENT

Laboratory equipment for uniform and adjustable feeding, as well as precise dosing of loose materials and ore pulps in the processes of disintegration and beneficiation.



ELECTRIC VIBRATING FEEDER

Used for uniform, adjustable feeding of loose materials to separators, crushers, sample splitters and screens.

FEATURES

Electric vibrating feeder is notable for its highly accurate dosing of loose materials, easy handling, and low noise pollution.

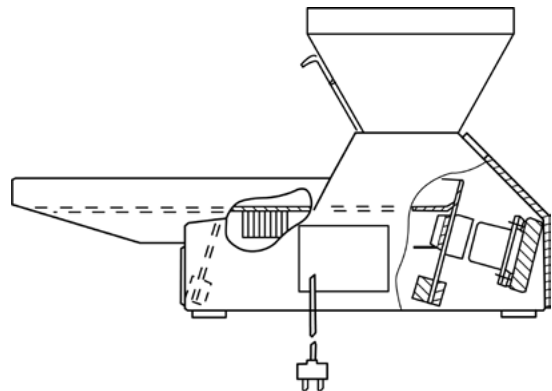


PE-1



EXAMPLES OF MATERIALS

Ore and non-ore dry loose materials: minerals, slags, refractories, granite, coal, glass, ceramics, construction materials waste, rock, concrete, brick, crushed stone, etc.



TECHNICAL SPECIFICATIONS	PE-1
Tray width (between the side walls at the bottom), mm	100±2
Tray oscillation amplitude, mm	0,2
Feed size, mm	0,5...1 000
Capacity at a feed bulk density of 1.5 to 1.7 t/m³, kg/h	50–1 000
 Overall dimensions, mm :	
length	610
width	370
height	345
 Mass, kg	32

UNRIVALED DOSING
ACCURACY

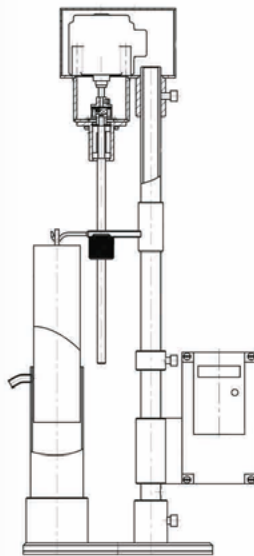
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REAGENT FEEDER

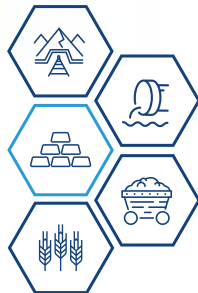
Designed for accurate dosing of liquid chemicals.

FEATURES

The reagent feeder is used for accurate dosing of flotation chemical agents during pilot-scale or scaled-up laboratory tests.



159PT



EXAMPLES OF MATERIALS

Liquid chemicals.

TECHNICAL SPECIFICATIONS	159PT
Capacity (depending on load cross-section and its immersion speed), mm³/min	200–5 000
Drive power, W	25
 Overall dimensions, mm :	
length	300
width	300
height	670
 Mass, kg	11





LABORATORY TABLES AND STANDS

Metal laboratory tables are used for placing flotation machines, jaw and cone inertia crushers, electric vibration feeders, vibrating testing sieves, sample splitters and other equipment.

FEATURES

Laboratory stands can be manufactured with a bucket or a drawer.
Any kind of laboratory stand can be produced in accordance with individual customer requirements.



LABORATORY TABLE
7×10



LABORATORY TABLE
6×12



LABORATORY TABLE
6×6



STAND FOR JC
60×100M



STAND FOR JC
100×200M

TECHNICAL SPECIFICATIONS		Laboratory table 7×10	Laboratory table 6×6	Laboratory table 6×12	Stand for JC 60×100M 601 / 602*	Stand for JC 100×200M 1 001 / 1 002**
Max. load, kg		140	250	250	150	250
	Overall dimensions, mm :					
	length (along the drum axis)	1 160	600	1 200	450	600
	width	700	600	600	350	450
	height	749	850	850	500	500
	Mass, kg	85	51	84	25	30

* 601 version with drawer / 602 version with bucket
** 1 001 version with drawer / 1 002 version with bucket
Any kind of laboratory table or stand can be produced in accordance with individual customer requirements.

UNIVERSAL ADJUSTABLE FEEDER STAND

Designed for placing the electric vibrating feeder PE-1 to load the following equipment:

- jaw crushers: JC 60×100M, JC 80×150, JC 100×200M, 2JCS 100×200, JC 120×200
- roll crusher DG 200×125M
- disk pulverizers: ID 175, ID 175M, ID 250, ID 250M
- double-impact screen GSL 052
- unbalanced throw screens: GIL 051, GIL 052, GIL 053
- vibratory sieves: V 1, V 1M, V 05, V 052, V 053
- rotary sample splitters: DPC-100, DPC-100A
- jig: 52-OT.

FEATURES

The height of the stand is adjustable.



972 RM

TECHNICAL SPECIFICATIONS		972 RM
	Overall dimensions, mm :	
	length	786
	width	500
	height	1 191
	Mass, kg	37,23





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