MINE

Mineral processing is a major division in the science of Extractive Metallurgy. Extractive metallurgy has been defined as the science and art of extracting metals from their ores, refining them and preparing them for use.

In mineral processing, a number of unit operations are required to prepare and classify ores before the valuable constituents can be separated or concentrated and then forwarded on for use or further treatment. The field of mineral processing has also been given other titles such as mineral dressing, ore dressing, mineral extraction, mineral beneficiation, and mineral engineering. These terms are often used interchangeably.

Finding new mineral reserves is critical. Locating, extracting and processing these natural resources is a multiyear process that involves complex scientific, environmental and social planning.

HİRA's mission is to product useful device to sustainable mining business and environmental stewardship.

CONTENTS

CORE CUTTING MACHINE

Core Cutting Machine is mainly used to cut rock, concrete and core specimens of various sizes and to obtain two half cylinders from core specimens.

Made of 5 mm sheet metal.

Cutting capacity up to Ø 110 mm and 1200 mm length.

Movement is given by means of a gear motor to Core Cutting motor.

The Core Cutting Machine has a water cooling system which prevents the heating of the cutting stone.

The forward and backward speeds of the movement which has given by the gear motor can be adjusted separately. The forward and backward distances can be adjusted with switches.

The motion motor which moves the Core Cutting motor by means of forward and backward reducer is 0.55 kW.

The Core Cutting motor has an IP 55 protection class, with a power of 5.5 kW and a rotation speed of 4000 rpm.

It has a long-lasting electric pump with cooler.

HR-M1200

In the reducer which is used to reduce the motor output cycle by means of gears by passing through certain steps, rate of the input/output cycle is 7.5.

The Core Cutting Machine do not make cutting head oscillating movement.

There is shield apparatus to prevent scattering of particles.

There is a V bedding system on the purpose of to obtain a half cylinder that up to 1200 mm to cut the core. The V bedding system has a specimen rest support and precautions have been taken to prevent the specimen from slipping during cutting of the specimen.

It is painted with electrostatic dye to resistant the scratch.

Thermic magnetic switch for motor protection is available.

The Core Cutting Machine has 4 feets with a height of 90 cm.

It can circulate its own water thanks to the water tank and water pump to be installed on the Concrete Cutting Machine.

The Concrete Cutting Machine is equipped with Quintet three-phase industrial type male plugs with grounded and 3 phase, neutral, earth connection.

The Concrete Cutting Machine is supplied with the wrench and equipment for removing and installing the Core Cutting Blade.

Technical Specifications:

Product Code	Product Name	Dimensions (cm)	Power Supply
HR-M1200	Concrete Cutting Machine	170x60x130	380 V, 50-60 Hz, 3 ph

Spare Parts & Accessories:

Product Code	Product Name	Dimensions (mm)
HR-M1200/1	Core Cutting Blade	350

MANUEL CORE CUTTING MACHINE

Manuel Core Cutting Machine is mainly used to cut rock, concrete and core specimens of various sizes and to obtain two half cylinders from core specimens.

The Manuel Core Cutting Machine has a water-cooling system which prevents the heating of the cutting stone. The Manuel Core Cutting motor has an IP 55 protection class.

It has a long-lasting electric pump with cooler. The Manuel Core Cutting Machine do not make cutting head oscillating movement.

There is shield apparatus to prevent scattering of particles. It is painted with electrostatic dye to resistant the scratch.

It can circulate its own water thanks to the water tank and water pump to be installed on the Concrete Cutting Machine.

The Manuel Concrete Cutting Machine is supplied with the wrench and equipment for removing and installing the Core Cutting Blade.

HR-M1250

Technical Specifications:

Product Code	HR-M1250	HR-M1300	HR-M1300/220	HR-M1305	HR-M1305/220
Product Name	Manuel Core Cutting Machine				
Blade Diameter (cm)	35	30		30	
Cutting Depth (cm)	10,5	9,5		9,5	
Cutting Length (cm)	180	90		120	
Engine Power	4 hp - 380 V	3 hp - 380 V	3 hp - 220 V	3 hp - 380 V	3 hp - 220 V
Water Pump Power	0.37 hp - 220 V	0.37 hp - 220 V		0.37 hp - 220 V	
Blade Speed (rpm)	2800	2800		2800	
Water Tank Capacity (lt)	220	75		90	
Weight (kg)	190	170		180	
Dimension (cm)	240x70x140	135x60x125		165x70x125	

Spare Parts & Accessories:

Product Code	Product Name	Dimensions (mm)
HR-M1250/1	Core Cutting Blade	350
HR-M1300/1	Core Cutting Blade	300
HR-M1305/1	Core Cutting Blade	300

ROLLING MILL

The Rolling mill is used to change the physical properties of the mines by using rollers that compress as they pass through the mines.

Flat, without grooves. The speed is adjustable. It can work with Forward-Back-Stop commands.

Technical Specifications:

Product Code	HR-M7500
Roller Diameter	50 mm
Flat Area	60 mm
Maximum sheet thickness	6 mm
Total roller width	130 mm
Max. Speed	20 rpm
Dimensions (cm)	80x40x60 cm
Weight (kg)	80
Power Supply	220 V, 50-60 Hz, 1 ph

HR-M7500

ROTARY SAMPLE DIVIDER

A perfect and comparable analysis is closely related to the correct sampling. Based on that, rotary sample divider is designed for sampling, dustless separation and reduction of large quantities of powder or granular bulk materials.

This machine is used in various area such as materials Portland cement clinker, chemicals, construction materials, fertilizers, fillers, flours, grains, metal powders, minerals, nut, sand, seeds, soil, dust washing etc. in areas of agriculture, biology, chemical, plastic, building materials, engineering, electronic, environment, recycling, food, geology, metallurgy, glass, ceramic.

The added material is divided equally into the buckets which rotating in a "circle" motion.

Sample buckets are made of 304 quality stainless steel with a sheet thickness of 2 ± 0,1 mm and are made up of 8 divisions, each with 10 lt chambers or 12 divisions, each with 2,5 lt chambers in triangular prism shape. Depending on demand, production can be done in special dimensions.

The feeding chamber is made of 304 quality stainless steel, and the other parts are made of electrostatic powder paint on steel.

HR-M8100

HR-M8150

Sample buckets have handles to easy and safe carrying.

Feeding speed and quantity are adjustable steplessly with the help of magnetic vibration system.

Sample feeding system is vibratory.

Dividing speed of sample buckets can be adjusted between 0 and 60 rpm steplessly with electronic speed control panel and can be viewed via digital screen on the device during the test.

Technical Specifications:

Product Code	HR-M8000	HR-M8100	HR-M8050	HR-M8150
Product Name	Rotary Sample Divider		Rotary Sample Divider with Lever	
Material Feed Size	0-50 mm	0-20 mm	0-50 mm	0-20 mm
Rotation Speed	0-60 rpm		0-60 rpm	
Capacity	80 lt	30 lt	80 lt	30 lt
Electrical Unit	220 V, 50-60 Hz, 1 ph		220 V, 50-60 Hz, 1 ph	
Dimensions (cm)	110x170x185	74x125x120	160x170x200	125x125x135
Weight (kg)	380	140	540	300

The sample buckets can be rotated with the rotation adjusted drive motor.

The sample buckets are attached to each other with removable, made of steel suitable material with edge of the buckets to avoid the material coming from the feeder during the sample flow to the gap between sample buckets.

Sample feeding Speed can be adjusted steplessly by vibration coil and electronic system.

Rotary table control and vibration control panel is easy to use.

Rotary Sample Divider can be manufactured with wheels as optional and Wheeled models have a stabiliser safety system on the wheel.

Rotary Sample Divider can be manufactured with Lever for Feeder part and with Electromagnetic Feeder as optional.

SMALL ROTARY SAMPLE DIVIDER

Small Rotary Sample Divider has 8 pieces 250ml graduated bottles.

The Divider can divide 0-6 mm grain size material to 8 pieces equivalent samples up to 4 lt automatically.

Can be prepared samples which equiponderate with ± % 1 sensitivity on the 250 ml graduated bottles.

Small Rotary Sample Divider is equipped with 5 lt stainless steel feeding chamber and magnetic vibrating feeder.

HR-M8250
with
HR-M8250/1

Technical Specifications:

Product Code	Product Name	Power Supply
HR-M8250	Small Rotary Sample Divider	380 V, 50-60 Hz, 3 ph

Spare Parts & Accessories:

Product Code	Product Name	Capacity (ml)
HR-M8250/1	Graduated bottles	250

ROTATING SAMPLE DIVIDER

Rotating Sample Divider can divide 25 kg of sample at one time.

The division rate of the divider from 2% to 50% can be adjusted.

The fed sample is collected in two separate containers as the desired sample and the remaining sample after the division process.

Sample division amount is 25 kg/minute.

The maximum feed grain size of the sample is 10 mm.

The sample feeding speed can be adjusted with the vibrating feeder control system.

HR-M8300

Technical Specifications:

Product Code	Product Name	Power Supply
HR-M8300	Rotating Sample Divider	380 V, 50-60 Hz, 3 ph

ROLLER CRUSHER

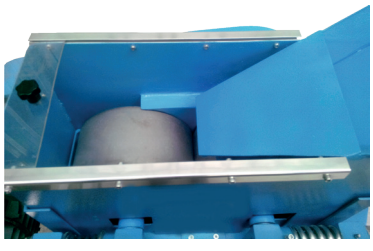
The Roller Crusher is used for the rapid, safe and efficient crushing and secondary crushing of medium-hard, hard, brittle and tough materials. It is a very useful for bulk working and pilot plant working. Application Examples: Alloys, basalt, cement clinker, ceramics, chamotte, coal, coke, construction materials, feldspar, glass and various materials.

Size of roller is 250*150 mm.

The size of the crushed parts is maximum 12 mm and the size of the crushed material is 3 - 0,2 mm, depending on the clearance between rollers. The body of the crusher is designed as steel construction.

Rolls are tapered. It is possible to adjust the roller distances by means of an arm.

The lid that covers the rollers where the material inlet hopper is also connected does not leak dust. The carrier body is completely closed and there is a collecting container inside.



The revolutions of the rolls are supplied by a reducer with appropriate strength.

The tension in the roller is absorbed by a spring system.

Capacity for 2 mm thick material is 0,3-0,5 m3.

HR-M7000

Technical Specifications:

Product Code	Product Name	Power Supply
HR-M7000	Roller Crusher	380 V, 50-60 Hz, 3 ph

BALL MILL

Ball Mill is suitable for both wet and dry milling processes.

Supplied with 22 lt capacity cylindrical tank, receiver and balls.

Thanks to the digital timer, it can be operated for the desired time.

Rotational Speed is 70 rpm.

The grinding mill is located in a sound and dust proof cabinet for CE safety standards.

The cover of the mill is 10x30 cm wide and sides are isolated by dust proof material. The device is supplied with an emergency stop button and safety on/off switch.

The balls are made of corrosion resistance steel.

Complete with Ball Set and a receiver.

HR-M2200

Technical Specifications:

Product Code	Product Name	Int. Dimensions (cm)	Ext. Dimensions (cm)	Weight (kg)	Power Supply
HR-M2200	Ball Mill	Ø 30,5 x 30,5	55x135x145	300	220 V, 50 Hz, 1 ph
HR-M2200/60Hz	Ball Mill	Ø 30,5 x 30,5	55x135x145	300	220 V, 60 Hz, 1 ph

Spare Parts & Accessories:

Product Code	Product Name	Pieces	Dimensions (mm)
HR-M2200/1	Ball Set	43	Ø 38,10
		67	Ø 31,75
		10	Ø 25,40
		71	Ø 19,05
		94	Ø 15,87

BOND GRINDING TEST MILL

The FC Bond Mill was designed by F. C. Bond for use in determining the Bond Index, a measure of grindability and power required for grinding applications. The FC Bond Mills are used in laboratories throughout the world. A copy of Fred C. Bond's Method of Crushing and Grinding for determination of the Bond Index is included with each mill. This mill can be used to calculate the grindability of all ores.

The bond mill can be used continuously (in all cycles) or in any cycle, depending on the desired grinding type. The grinding mill is located in a sound and dust proof cabinet for CE safety standards.

The cover of the mill is 10x30 cm wide and sides are isolated by dust proof material. The device is supplied with an emergency stop button and safety on/off switch.

Thanks to the digital timer, it can be operated for the desired time.

The rotation speed can adjustable up to 70 rpm via second Digital screen on the screen (Can be increased optionally).

Bond Grinding Test Mill with Power Analyzer is also available. On this model, can be seen the Power values on third Digital Screen.

The balls are made of corrosion resistance steel.

Cylindrical tank capacity is 22 lt.

Supplied with receiver and balls.

HR-M2500

Technical Specifications:

Product Code	Product Name	Int. Dimensions (cm)	Weight (kg)	Power Supply
HR-M2500	Bond Grinding Test Mill	Ø 30,5 x 30,5	350	220 V, 50-60 Hz, 1 ph
HR-M2505	Bond Grinding Test Mill with Power Analyzer	Ø 30,5 x 30,5	350	220 V, 50-60 Hz, 1 ph

HR-M2505

Spare Parts & Accessories:

Product Code	Product Name	Pieces	Dimensions (mm)
HR-M2200/1	Ball Set	43	Ø 38,10
		67	Ø 31,75
		10	Ø 25,40
		71	Ø 19,05
		94	Ø 15,87

JAW CRUSHER

Jaw crusher is used for crushing the natural rocks, ores and minerals to millimetric scale by crushing. It is a very useful for sample preparation in laboratories and industrial plants. Application Examples: alloys, basalt, cement clinker, ceramics, chamotte, coal, coke, construction materials, feldspar, glass and various materials.

It has suitable base for stable fitting the ground. If necessary, can be screwed on the floor or wheel connections can be made to become mobile.

Material Feeding dimension is Ø 100 mm. After crushing, %75 of the all specimens become smaller to 2 mm and also lower than 2 mm. The capacity of crushing is 200 kg per hour and it is suitable for adding specimens continuously. 3 kW motor is used.

Jaw crusher consists of three main parts; Feeding Funnel, Body and Collector. All of this main parts are manufactured of metal alloy materials which are durable. All of this main parts are electrostatic painted.

The Feeding Funnel has an interior design which allows the user to put his hand inside and which prevent to rebounding the fed material by hitting to jaws. At the same time it is connected to the main body with hinge so that it can be opened easily during cleaning.

The Feeding Funnel can be locked to the body by a locking mechanism to prevent accidental opening of the crusher during the operation of the crusher. In case of manual opening of the lock, it has a safety arrangements to stop the device instantly.

The Body is designed the way that as dust will not leak out during operation. The noise emission level according to the working atmosphere is maximum 85 dB.

HR-M9000

Drive of the mechanical parts that move the crusher jaws is made by V-belt system which attached to motor and there is also a central lubrication system that is easy to maintain for all moving parts.

HR-M9000

The device has an electronic-mechanical equipment that can protect itself and stop working if wedge of the material and in such situations as overheating of the crusher during operation of the device.

The jaws can be easily removed from the place where they are mounted because the device is suitable for cleaning, maintenance or changing purposes.

Crusher material is 16-18 1,5 Chrome Manganese Steel of the Jaw Crusher. Wear Plates of the Jaw Crusher are manufactured from 450 Brinell material.

The distance between jaws can be adjusted between 0-15 mm and uninterruptedly.

Zeroing setting can be made for the distance between jaws. And also both the zero point and the distance between jaws can be easily read from the outside with an analog display. There is a Collector at the bottom of the Jaw Crusher.

Flat Jaws are optional and should be ordered separately.

HR-M9000

Spare Parts & Accessories:

Product Code	Product Name
HR-M9000/1	Spare Jaws (2 pieces)
HR-M9000/2	Flat Jaws (2 pieces)

Technical Specifications:

Product Code	Product Name	Jaws (mm)	Dimensions (cm)	Weight (kg)	Power Supply
HR-M9000	Jaw Crusher	100x100	45x90x80	250	380 V, 50-60 Hz, 3 ph

PNEUMATIC VIBRATORY DISC MILL

The Pneumatic Vibratory Disc Mill is used for the very rapid, safe and efficient grinding of medium-hard, hard, brittle and tough materials. It is a very useful for sample preparation in laboratories and industrial plants. Application Examples: Alloys, basalt, cement clinker, ceramics, coal, coke, construction materials, feldspar, glass and various materials.

Material feed size is between 0,075 - 5 mm.

The Pneumatic Vibratory Disc Mill can grind between range as 1-10 minutes depend on the type and size of specimen.

Loss of material is minimum during the pulverizing.

Grinding Jars are tightened and connected with air bellows pneumatically.

The material is placed between the jars and pulverized by vibration.

The jars are easily taken out and thus facilitating cleaning.

The complete system is taken into a sheet construction cabinet.

The device has a door safety switch and There is an Adjustable Timer.

The Pneumatic Vibratory Disc Mill stop when the door opens or the air pressure decrease, automatically.

Safety Lock, Lifter and Air Compressor should be ordered separately.

HR-M5000

GRINDING JARS

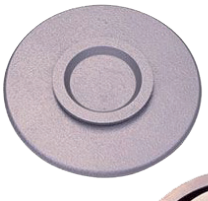
The Grinding Jars is used for the very rapid, safe and efficient grinding of medium-hard, hard, brittle and tough materials on the vibratory disc mill.

Supplied with Made of special alloy hardened steel 250 cc Grinding Jar.

50 cc and 100 cc Grinding Sets should be ordered separetely.

Technical Specifications:

Product Code	Product Name	Dimensions (cm)	Power Supply
HR-M5000	Pneumatic Vibratory Disc Mill	100x75x130	380 V, 50-60 Hz, 3 ph



HR-M5000/1
HR-M5000/2
HR-M5000/3

HR-M6002

Spare Parts & Accessories:

Product Code	Product Name	Size (cc)
HR-M5000/1	Grinding Jar	50
HR-M5000/2	Grinding Jar	100
HR-M5000/3	Grinding Jar	250
HR-M6005/1	Safety Lock	---
HR-M6002	Lifter	---

DISC MILL

Disc Mill is used for pulverizing the soil, rock, cement, limestone, ceramic, metal oxides etc. rigid fragile materials.

Supplied with 800 cc Standard Steel Grinding Set.

100 cc and 1000 cc Steel Grinding Set is available as an optional and should be ordered seperately.

Loss of material is minimum during the pulverizing.

The Steel Grinding Set vibrates the Grinding Jar and Pulverizing is carried out by means of a disk in the Jar.

Material feed size is <20 mm and the final fineness for % 85 of grinded material is < 0.075 mm depending on feed material and instrument configuration/settings.

Disc Mill is designed the way that as dust will not leak out during operation. The noise emission level according to the working atmosphere is maximum 85 dB.

Internal body is covered with fireproof acoustics noise insulation material and dust and dirt entry onto the machinery parts are prevented.

The cover mechanism has been designed appropriately in terms of occupational health and safety.

The Disc Mill has a locking mechanism and a cover for ve sound insulation.

There is an Adjustable Timer.

The Disc Mill stop when the door opens or the air pressure decrease, automatically.

Safety Lock, Lifter and Air Compressor should be ordered separately.

HR-M6500

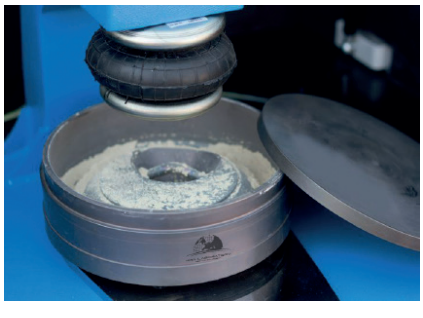
Technical Specifications:

Product Code	Product Name	Dimensions (cm)	Power Supply
HR-M6500	Disc Mill	100x75x130	380 V, 50-60 Hz, 3 ph

Spare Parts & Accessories:

Product Code	Product Name	Size (cc)
HR-M6000/1	Steel Grinding Set	100
HR-M6000/2	Steel Grinding Set	800
HR-M6000/2S	Steel Grinding Set (High Quality Tool Steel)	800
HR-M6000/3S	Steel Grinding Set (High Quality Tool Steel)	1000
HR-M6005/1	Safety Lock	---
HR-M6002	Lifter	---

HR-M6500 & HR-M6002



HR-M6000/2

HR-M6000/2

PNEUMATIC DISC MILL

Pneumatic Disc Mill is used for pulverizing the soil, rock, cement, limestone, ceramic, metal oxides etc. rigid fragile materials.

Supplied with 800 cc Standard Steel Grinding Set. 100 cc and 1000 cc Steel Grinding Set is available as an optional and should be ordered seperately. Loss of material is minimum during the pulverizing. The Steel Grinding Set vibrates the Grinding Jar and Pulverizing is carried out by means of a disk in the Jar.

With the belt pulley system, achieves three-dimensional vibration by moving the shaft.

Material feed size is <20 mm and the final fineness for % 85 of grinded material is < 0.075 mm depending on feed material and instrument configuration/settings.

The Pneumatic Disc Mill is designed the way that as dust will not leak out during operation. The noise emission level according to the working atmosphere is maximum 85 dB.

Internal body is covered with fireproof acoustics noise insulation material and dust and dirt entry onto the materials such as motor and shaft are prevented. The cover mechanism has been designed appropriately in terms of occupational health and safety.

The Pneumatic Disc Mill has a locking mechanism and a cover for ve sound insulation. There is an Adjustable Timer. The Pneumatic Disc Mill stop when the door opens or the air pressure decrease, automatically.

4 models are available.

HR-M6000

HR-M6000 has standard specifications.
The HR-M6005 is Wheeled in addition to the standard model.
The HR-M6010 is Wheeled in addition to the standard model. It has PLC Time Controlled Digital Touch Screen. Time periods at different Set values can be saved in the memory and can be selected quickly during the Test.
The HR-M6015 is Wheeled in addition to the standard model. It has PLC Time and Speed Controlled Digital Touch Screen. Time periods and Speed at different Set values can be saved in the memory and can be selected quickly during the Test.

Safety Lock, Lifter and Air Compressor should be ordered separately.

Technical Specifications:

Product Code	Product Name	Dimensions (cm)	Power Supply
HR-M6000	Pneumatic Disc Mill, Standard	100x75x130	380 V, 50-60 Hz, 3 ph
HR-M6005	Pneumatic Disc Mill, Equipped with wheels	100x75x130	380 V, 50-60 Hz, 3 ph
HR-M6010	Pneumatic Disc Mill, PLC Time Controlled	100x75x130	380 V, 50-60 Hz, 3 ph
HR-M6015	Pneumatic Disc Mill, PLC Time and Speed Controlled	100x75x130	380 V, 50-60 Hz, 3 ph

Spare Parts & Accessories:

Product Code	Product Name	Size (cc)
HR-M6000/1	Steel Grinding Set	100
HR-M6000/2	Steel Grinding Set	800
HR-M6000/2S	Steel Grinding Set (High Quality Tool Steel)	800
HR-M6000/3S	Steel Grinding Set (High Quality Tool Steel)	1000
HR-M6005/1	Safety Lock	---
HR-M6002	Lifter	---

HR-M6000/2

HR-M6000/2

HR-M6500 & HR-M6002

BALL & ROD MILL

Ball & Rod Mill is designed for grinding wet and dry products. It is used for the processing and grinding of many products called soft, hard and very hard.

The rotation speed can be adjusted. The device with a digital panel; information such as speed, working time can be entered and the device can grind at the desired micron level. It can grind wet and dry.

HR-M2300

Electric motor; 1.5 hp, 1500 rpm, V belt driven.

Samples of 500-1500 ml up to 8 millimeters can be fed to the Ball & Rod Mill and after the grinding process, the samples can be reduced to 40 microns.

Ball and Rod Mill is supplied with 2 rubber coated rollers of Ø80x800 mm, whose rotation speed can be adjusted between 0-300 rpm.

It can work with two stainless steel grinding bowls at the same time.

Ø200×200 mm, 6 lt internal volume Grinding bowl and Ø200×300 mm, 9 lt internal volume Grinding bowl made of AISI 304 material should be ordered separately upon request.

Grinding Ball Set (heat treated hardened alloy steel) and Grinding Rods (AISI 304 stainless steel) must be ordered separately upon request.

Technical Specifications:

Product Code	Product Name	Weight (kg)	Power Supply
HR-M2300	Ball & Rod Mill	230	220 V, 50-60 Hz, 1 ph

Spare Parts & Accessories:

Product Code	Product Name
HR-M2300/1	Grinding Ball Set for Ball & Rod Mill
HR-M2300/2	Grinding Rod Set Ball & Rod Mill

HR-M2300/2

BALL & ROD MILL WITH TILTING MECHANISM

Ball & Rod Mill with Tilting Mechanism is designed to meet industrial requirements for grinding coal, cement and a wide variety of ores.

Ball & Rod Mill with Tilting Mechanism, consists of Grinding bowl, 0.75 kW geared motor mounted on a high precision robust steel chassis, speed converter, suitable separation sieves and sampler. The drum is made of AISI 304 material.

The device includes a locking mechanism to allow easy access to the contents of the mill.

It is equipped with a speed controller to control the drum speed between 0-100 rpm.

The device has a digital timer that automatically stops the grinder when the grinding time is reached.

The lid has a quick-release locking mechanism.

Thanks to the locking mechanism, the cylindrical axis of the device can be brought to the position exactly parallel to the ground (Grinding position) and to the fully vertical position (Mill loading and unloading position).

HR-M2350

Grinding Ball Set (heat treated hardened chrome alloy) and Grinding Rods (AISI 304 stainless steel) must be ordered separately upon request.

Drum dimensions for Model HR-M2350 are Ø 200mm x 200 mm and 6 liter capacity.

Drum dimensions for Model HR-M2355 are Ø 250mm x 250 mm and 12 liters capacity.

Drum dimensions for Model HR-M2360 are Ø 305mm x 305 mm and 22 liters capacity.

Technical Specifications:

Product Code	Product Name	Power Supply
HR-M2350	Ball & Rod Mill with Tilting Mechanism, 6 lt	220 V, 50-60 Hz, 1 ph
HR-M2355	Ball & Rod Mill with Tilting Mechanism, 12 lt	220 V, 50-60 Hz, 1 ph
HR-M2360	Ball & Rod Mill with Tilting Mechanism, 22 lt	220 V, 50-60 Hz, 1 ph

Spare Parts & Accessories:

Product Code	Product Name
HR-M2350/1	Grinding Ball Set, for HR-M2350 & HR-M2355 & HR-M2360
HR-M2350/2	Grinding Rod Set, for HR-M2350 & HR-M2355 & HR-M2360

LARGE CAPACITY SAMPLE SPLITTER

Large Capacity Sample Splitter is used to obtain the representative samples in required quantity for the related tests from the aggregates parts which comes to laboratory.

Widths of Slots are adjustable between 12,5 mm with 100 mm.

Large Capacity Sample Splitter consist of three parts;
- Carrier,
- Splitter,
- Collecting pan

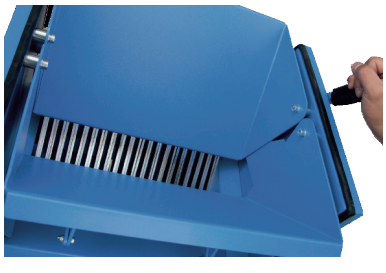
All parts are manufactured from steel and electrostatic painted.

Large Capacity Sample Splitter splits the sample to two equal volumes.

Large Capacity Sample Splitter has been designed so that no samples remain on the surfaces during operation.

Wheels are available as an option and should be ordered separately.

HR-M4000 &
HR-M4000/1



Technical Specifications:

Product Code	Product Name	Dimensions (cm)	Weight (kg)
HR-M4000	Large Capacity Sample Splitter	82x52x110	55

Spare Parts & Accessories:

Product Code	Product Name
HR-M4000/1	Wheels (4 pieces)

MAGNETIC PEN

It is designed as a pen with a pocket clip and a small magnet at the end.

There is a spring wire clip on it.

When the Pencil Magnet is held by this wire clip, rock etc. brought close to the magnet are drawn towards the magnetic minerals found in the samples.

Technical Specifications:

Product Code	Product Name
HR-M0500	Magnetic Pen

HR-M0500

PRESSURE FILTER DEVICE

The Cylinder Reservoir of Pressure Filter Device which made the filtration is manufactured from 304 stainless steel.

The Cylinder Reservoir capacity is 20 lt and the top and bottom surfaces are smooth.

The bottom part of the chamber where the filter paper is placed provides the evacuation of water and liquid by means of special grooves.

There is a cover that compress from the top of the Cylinder Reservoir of Pressure Filter Device which made the filtration. Silicone gaskets are used to provide the sealing under this cover.

There is a gauge on the top of cover, showing a pressure of at least 10 bar. At the same time there is an inlet which discharges the air in the compressor.

There is a safety valve that discharges in high pressure applications.

To transfer the air in the compressor, a pressure resistant 3 m special hose is used. The other end of this hose has an connecting apparatus for air compressor.

There is a valve through which the air can be evacuated from the cover.

At the last stage, there is a handle which can lift a little the Cylinder Reservoir to get the material that on the filter paper.

There is a valve on the underside of the device to flow the filtered liquid from the filter paper.

The device is wheeled. Wheels can be locked.

HR-M3000

Technical Specifications:

Product Code	Product Name
HR-M3000	Pressure Filter Device

GEOLOGIST HAMMER

Geological hammers are a necessity for field work. Specially forged or manufactured for breaking rock in a variety of ways.

Whether using the hammer to expose fresh rock surfaces or as a means to extract samples for further analysis, they are of chief importance to the geologist.

All geological hammers come with at least one flat face which is primarily for breaking rock where accuracy is not required or to break down larger pieces into smaller fragments.

Chisel end hammers are for cutting rock where as pointed tip hammers are for accurate delicate work or extraction of crystals or fossils.

Technical Specifications:

Product Code	Product Name
HR-M3500	Geologist Hammer, Pointed Tip
HR-M3600	Geologist Hammer, Chisel End

HR-M3500

HR-M3600

VACUUM FILTER

Vacuum Filter supplied complete with Ø 250 x 60 mm two-piece steel filter chamber and cover made of steel, 1000 ml Filter Flask (water collection container), 400x400 mm, 40 micron pore size, white filter paper (Pack of 100), 2 pieces of Ø 340 mm cloth tarpaulin filter paper pad, 2 pieces of Ø 240 mm stainless steel cloth tarpaulin pad made of woven wire screen mesh 1 mm, Dual Stage Vacuum Pump, 1,5 meter Tubing for Vacuum and Vacuum connectors.

HR-M3250

Technical Specifications:

Product Code	Product Name
HR-M3250	Vacuum Filter

Spare Parts & Accessories:

Product Code	Product Name	Dimensions (mm)	Weight (kg)
HR-M3250/1	Filter chamber and cover	Ø 250 x 60	---
HR-G0082	Filter Flask, 1000 ml	207x207x315	1
HR-M3250/2	White filter paper, (Pack of 100)	400 x 400	---
HR-M3250/3	Cloth tarpaulin filter paper pad, 2 pieces	Ø 340	---
HR-M3250/4	Woven wire Cloth tarpaulin pad, 2 pieces	Ø 240	
HR-M3250/5	Vacuum Pump, Dual Stage	335x140x250	11
HR-G0815	Tubing for Vacuum. 1,5 m	---	---
HR-M3250/6	Vacuum connectors	---	---

Technical Specifications for Dual Stage Vacuum Pump:

Product Code		HR-M3250/5
	Flow Rate	5 CFM 142 l/min
Ultimate Vacuum	Partial Pressure (Pa)	2 Pa, 0,02 mbar
	Total Pressure (micron)	15
	Power	0,37 kW
	Inlet Port (Flare)	¼" & 3/8"
	Oil Capacity	325 ml
	Dimensions (mm)	335x140x250
	Weight(kg)	11
	Power Supply	230 V, 50-60 Hz, 1 ph

PELLET PRESS

Solid, high-quality pellets are an important precondition for reliable and meaningful XRF analysis. Pellet Presses are used for preparation of pellets for spectral analyses. Can be used construction materials, metallurgy, geology, ceramics plastics, environment, recycling, chemistry, glass, etc. fields.

The Pellet Press is a compact benchtop unit with particularly simple and safe operation. With a pressure force of 20 ton it is ideally suited for the preparation of solid samples for XRF analysis. The pellets produced are of high quality and are characterized by their high degree of stability.

Maximum pressure is 20 ton. It offers precise loading with double-flow pump. Pellet Press has 4-side closed Plexiglass Covers and Aluminum Frame.

Two models are available as Manual or Digital.

On the Manual Pellet Press; the piston pressure can be read off from the clearly visible manometer scale.

On the Digital Pellet Press; the measurements are carried out very precisely thanks to the Load cell. Digital Pellet Press consists has a digital LCD screen which the load values can be read sensitively.

Pelet Mould is manufactured as Ø 40 mm from special tool-steel. Its entire surface is grinded and hardness is 60 HRC. Pelet Mould should be ordered separately.

HR-M0200

Technical Specifications:

Product Code	Product Name	Power Supply
HR-M0200	Manual Pellet Press	---
HR-M0250	Digital Pellet Press	220 V, 50-60 Hz, 1 ph

Spare Parts & Accessories:

Ürün Kodu	Product Name	Dimensions (mm)
HR-M0200/1	Pellet Mould	Ø 40

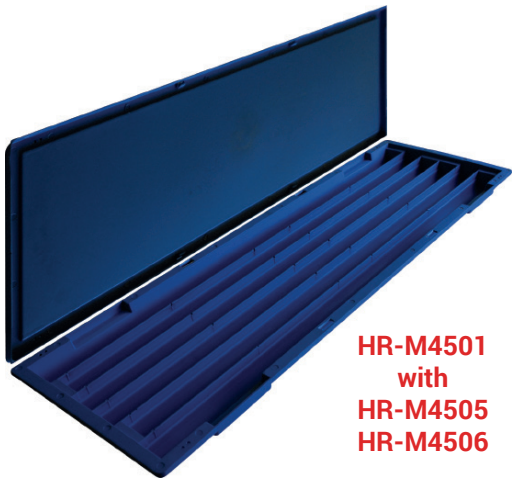
CORE BOX

Core Box is made of sturdy, yet lightweight plastic material.

Core Box provides stable stacking and can withstand the weight of several boxes full of cores stacked on its top.

A lid comes with each Core Box that is easily removed.

Provides the best protection and is easy to transport.



HR-M4501
with
HR-M4505
HR-M4506

Technical Specifications:

Product Code	Product Name	Type	Core Dia. (mm)	Capacity (m)	Dimensions (cm)	Weight (kg)
HR-M4500	Core Box	BQ	26-36	6x1	107x34x5	1,6
HR-M4501	Core Box	NQ	37-48	5x1	107x34x6	1,8
HR-M4502	Core Box	HQ	49-64	4x1	107x34x8	2
HR-M4503	Core Box	PQ	65-86	3x1	107x34x10	2,1

Spare Parts & Accessories:

Product Code	Product Name	Dimensions (cm)	Weight (kg)
HR-M4505	Lid	107x34x2	0,9
HR-M4506	Separator	---	---