

Mining and Metallurgy Laboratory Equipment

Is essential for testing and analyzing materials and ores in the mining and metal extraction processes. These tools help evaluate the properties of materials, optimize extraction methods, and ensure product quality. They are used for sample preparation, material characterization, mineral processing, and metallurgical testing.

Key laboratory equipment includes crushers, grinders, mills, flotation cells, magnetic separators, and furnaces. These instruments are used for tasks such as ore analysis, particle size distribution testing, mineral composition analysis, metallurgical refining, and alloy production. Such equipment supports the development of efficient, sustainable mining and metal production methods, aiding industries in producing high-quality materials while minimizing waste.

Excellence in Every Lab

MM 0101 Ball Mill Type 1

Description: Ball Mill is suitable for grinding minerals, ores, chemicals, paints and pigments, soft and permanent magnetic material like Barium ferrite and alnico. Type of the mill can be Batch or Continuous. Grinding can be wet or dry. Material of Construction: It can be M.S., Stainless steel 304/316. Capacity will be depended on your material characteristics, moisture content, feed and product size desired. All the mills are sturdy with suitable bearings.

Size of the mill: It can be from 200 mm x 200 mm to 2000 mm x 2000 mm. HP can vary from 1 to 75 hp.

Ordering:

- MM 0101: Ball Mill Type 1



MM 0102 Ball Mill Type 2

Description: 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.

Ordering:

- MM 0102: Ball Mill Type 2



MM 0103 Jaw Crusher

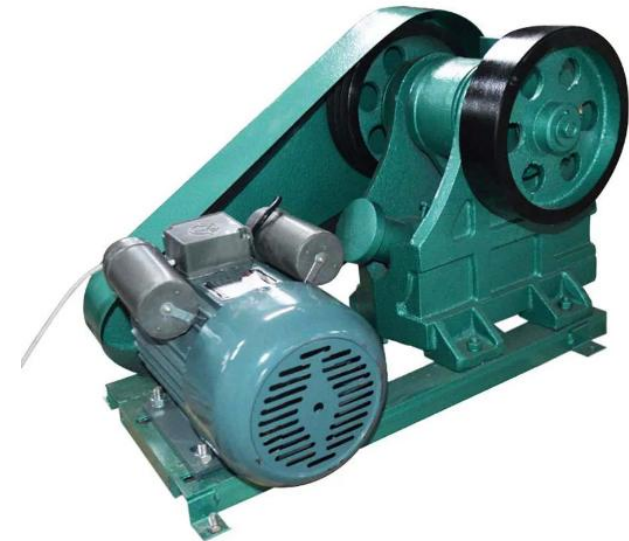
Description: Designed for fast crushing of aggregates ores, minerals, coke, coal, chemicals and similar materials. It is compact rugged construction for general laboratory small pilot plant operations.

Two jaws of manganese steel are provided in this laboratory jaw crusher. The movable jaw produces two blows for every revolution thus reducing over sizing to a minimum. A combination of forward downward strokes with a with a rocking action exerts pressure on the coarser material, yet permits the finished material to pass through the jaws. A hopper is provided at the top for feeding material. The smooth jaws ensure a uniform product easy cleaning in possible.

Size available: *3" X 5", *5"X 9", 9" X 12", 10" X 16", 12" X 20"

Ordering:

- MM 0103: Jaw Crusher



MM 0104 Planetary Ball Mill

Description: PBM is a device for the following:

- Micron and sub-micron grinding.
- Alloying.
- Mixing of solid -solid and solid- liquid to produce a truly homogenous product in a very short time.

The above machine can be used for analytical purposes, control of process parameter and scaling up. It is mostly used for expensive materials, which is available in small quantity and with no- loss in grinding process and less contamination. PBM is by far the best device to develop new parameters. In the case of grinding hard pure material this is the only option.

We can supply a PBM with the following:

- Four bowls, two bowls and a Single bowl.
- Capacity of the bowls – 500 ml, 250 ml, 150 ml and 100 ml.

Ordering:

- M 0101: Penta View LCD Digital Microscope



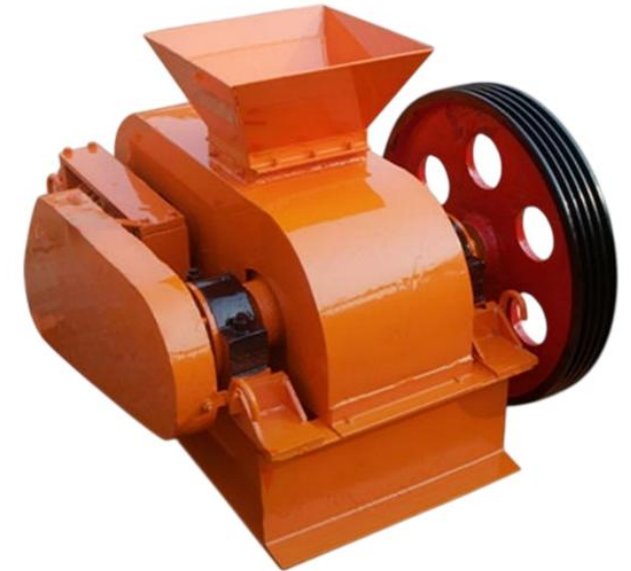
MM 0105 Roll Crusher

Description: Double roller crusher (DRC) or tooth roller crusher (TRC) This is used as a secondary crusher. Very useful when close range size of the product is desired used for crushing minerals/ores, broken glass, Ferro-alloys, (except low carbon ferro- chrome) magnetic material to deformation of steel shots. Tooth Roller crushers are used for crushing coals or any friable materials.

Sizes: 8" X 4", 8" X 12", 10" X 16", 12" X 12", 20" X 20", 24" X 24"

Ordering:

- MM 0105: Roll Crusher



MM 0106 Hydro-Cyclone Separator

Description: Hydro cyclone is very important for the separation of fine material from the coarser material. Usually, hydro cyclone is a small Cylindrical conical vessel with involute, inlet and apex. This is very simple unit to handle large volume of slurry with specific size separation. In fact, it is replacing spiral classifier in the wet ball mill circuit.

Ordering:

- MM 0106: Hydro-Cyclone Separator



MM 0107 Vibrating Screen

Description: Screening is an important operation in mineral dressing for the preparation of the feed material to the next process.

Types and Sizes: We make Single, Double and Triple deck Vibrating screen with size of the deck from 600 mm, 900 mm, 1200 mm and 1500 mm width while the length varies from 1200 mm to 3000 mm.

Capacity: Capacity of the screening machine is variable depending on the following factors.

Ordering:

- • MM 0107: Vibrating Screen



MM 0108 Flotation Cell

Description: This is mainly used for beneficiation of minerals and ores. It can be used either as a batch or continuous manner. It consists of a square base cell fitted with a receding type impeller fitted on a shaft. The shaft and the impeller assembly are enclosed in a stand pipe and a hood with square shape tooth. A small pipe with a valve is provided on a stand pipe for the admission of air. The agitating assembly is mounted on two nos. bearings contained in a M.S. bearing housing. There will be provision for lifting the cells of various sizes from the bottom. The bearing housing is firmly fitted on a channel type M.S. structure. Impeller is rotated by a motor and 'V' belt pulley.

Ordering:

- MM 0108: Flotation Cell



MM 0109 Concentrating Table - Diester & Wilfley

Description: It is mainly used for removing light and fine material from the feed. Usual application is limited to -100 mesh material which cannot be handled by Jigging machine. It was found to be most effective when one material is heavy and the recovered material is very expensive.

Sizes: The above tables are manufactures in 2 sizes i.e. 6 feet x 16 feet and 3 feet x 8 feet.

Ordering:

- MM 0109: Concentrating Table - Diester & Wilfley



MM 0110 Mineral Jig

Description: We are leading manufacturer and exporter of Mineral Jig and our product is made up of good quality. This is a very simple machine works on the principle of hindered settling.

This is particularly used to remove light material from the heavy one.

It can be also used to wash clay and remove mica from the ores and minerals before being put in beneficiation circuit.

This is particularly very important before the flotation process. Flotation process is adopted to upgrade the minerals and ores. Its performance is based on the ratio of specific gravity of the materials.

The value of the ratio of the specific gravity 2.5 will give excellent separation. It consumes very low hp.

Ordering:

- MM 0110: Mineral Jig



MM 0111 Disc Pelletizer

Description: Disc Pelletizer is used to enlarge the size of the particles from their fines. The agglomerated product is sometime necessary particularly for certain reactions and also for ease of transportation. This is most applicable for making catalyst, magnetic material and also for the feed preparation before firing in the rotary furnace. The size of the pellet can be 3mm to 30mm.

Size of the Disc: From 375mm dia. to 2000 mm dia. with corresponding hp0.5 to 5 hp.

Ordering:

- MM 0111: Disc Pelletizer



MM 0112 Core Cutting Machine

Description: 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 \varnothing 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.

Ordering:

- M 0101: Penta View LCD Digital Microscope



MM 0113 Roller Crusher

Description: 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.

Ordering:

- MM 0113: Roller Crusher



MM 0114 Disc Grinder

Description: It is a one-step grinding equipment for reducing - 8mesh to -325 mesh in a very short time for quality control and lab analysis. It can be used also for very abrasive material like fussed silica. It is sturdy Equipment. The stator/ rotor is made of 10-12% Mn-steel. Dust emission prevention arrangement is also possible.

- Body: Sturdy M.S.
- Shaft: EN-8
- Stator & rotor: 10-12% Mn-steel.
- Available Product Range: 8"dia. & 12" dia.

Ordering:

- MM 0114: Disc Grinder



MM 0115 Rotary Sample Divider

Description: 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 $2 \pm 0,1$ 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.

Ordering:

- MM 0115-1: Rotary Sample Divider 80Liter/ 0-50mm
- MM 0115-2: Rotary Sample Divider 30Liter/ 0-20mm
- MM 0115-3: Rotary Sample Divider 80Liter/ 0-50mm with Lever
- MM 0115-4: Rotary Sample Divider 30Liter/ 0-20mm with Lever



MM 0116 Disc Mill

Description: 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 separately.

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.

Ordering:

- MM 0116: Disc Mill



MM 0117 Ball & Rod Mill with Tilting Mechanism

Description: 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.

Ordering:

- MM 0117-1: Ball & Rod Mill with Tilting Mechanism 6 Liter
- MM 0117-2: Ball & Rod Mill with Tilting Mechanism 12 Liter
- MM 0117-3: Ball & Rod Mill with Tilting Mechanism 22 Liter



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