

Sample Preparation

LMBRM BALL AND ROD MILL

High volume mill for rod and ball applications



PROFESSIONAL GRADE MILL SUITABLE FOR
RODS AND BALL DRUMS

Features and benefits

- Variable speed setting
- Modular drum with an volume from 1 to 42 litre
- Including ergonomic sample separation set consisting of outlet funnel ,screens with handle and collector
- Easy removable sample collector
- Solid acoustic noise reduction housing with safety detection to stop the motor when hood is opened
- Can be configured to meet the bond norm
- Touch screen control panel
- Emergency stop button

Description

The LMBRM Ball and rod mill can use both ball and rod drums and is a versatile grinding machine designed for mineral processing. It operates by rotating a cylindrical drum filled with either steel balls or steel rods, which crush and grind the material inside.

The choice between balls or rods depends on the material's hardness and desired particle size. ball drums are used for finer grinding, while rod drums are better for coarser material.

This type of mill is commonly used in ore preparation for mining operations, offering flexibility to switch between grinding mediums depending on the process requirements.

Operation

The mill incorporates a yoke and locking mechanism to facilitate easy access to the contents of the mill.

An appropriate ball or rod charge is provided with the mill. The motor incorporates a solid-state controller to accurately control the drum speed.

This controller has an internal overload protection and can be used to set different drum speeds. The mill can be adjusted to rotate at variable speed with the touch screen control panel. The lid incorporates a quick release locking mechanism.



closed ball and rod mill



ball and rod mill drum with lifting tool

Applications

Ball Mill drums are suitable for fine grinding in applications such as mineral processing, cement manufacturing, and fine powder production. Rod Mill drums are best for coarse grinding of ores and materials, often used in the initial stage of grinding circuits in mining. other examples are:

- Cement, cement clinker, concrete
- Coal, coke
- Minerals, ores, slags
- Soil samples, sludges
- Glass, ceramics, corundum
- Pharmaceuticals, chemicals
- Food, animal food
- Creams and emulsions
- Paint



Technical specifications

Applications	Separation of different materials, particularly minerals, by agitating a pulverized mixture of solids in liquids
Working principle	Grinder
Feed size	< 25 mm
Feed quantity	depending on drum size
End fineness	< 20 µm*
End fineness adjustment	By variable speed setting and ball / rod charge
Speed setting	10-70 rpm
Setting adjustment method	digital control panel
Drum diameter	300mm
Drum length	300mm - 600mm
Drum volume	1,6,12, 21 or 42 litre
Drum specification	standard bond ball mill: version Rounded corners, smooth wall, no lifters bond rod mill: Wave structure
Consumeable material	stainless steel or hardened steel grinding balls
Consumeable sizes	grinding balls: 0.5mm - 80mm bond ball mill: 43 x 1.45" balls, 67 x 1.17" balls, 10 x 1" balls, 71 X 0.75" balls, 94 x 0.61" balls bond rod mill: 2 x 1.75 inch diameter x 21 inch length rod 6 x 1.25 inch diameter x 21 inch length rod
Sieve grid sizes	custom, depending on grinding ball sizes used
Collector size	20 litre
Power supply	400V ± 10% ± 50/60Hz
Electrical requirements	2,2 kW
Power connection	3 phase
Dust extraction point	1
Standard	CE
Protection code	IP40
Power connection	3 phase
Weight	475kg
Dimensions (width x length x height)	741 x 1087 x 1378 mm