

# Vertical Mill





## Overview

LM series vertical mill is the newest grinding machine of vertical mill professional manufacturer-SBM, which is designed specially to solve the problems of low capacity and high consumption of traditional industry mills. With a decade of years' research of mills, our vertical mill is designed and manufactured based on advanced design idea, and integrates the advanced international technology and years of mill-producing experience. LM series vertical mill adopts reliable structure and reasonable process flow; it is ideal equipment that integrated with drying, milling, classifier, and elevator. Especially, this vertical mill can fully meets the requirement of clients in the high production of powder and its main technical and economy indicator reaches the international level.

## Application

LM series vertical mill can be widely used in cement making, power, metallurgy, chemical and nonmetalliferous ore industries. This series vertical grinding mill used to grind lumpy, granular and powdery materials to the required size.

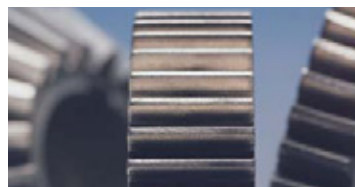


# Main Features & Benefits

LM Series vertical mill is an advanced grinding machine, which integrated with drying , milling ,grading and transporting . It is the high standard mill which can meet the high capacity of powder producing request. LM vertical grinding mill is widely used in cement , powder station ,metallurgy ,chemical and non-metal industry .

1. LM series vertical mill can crush, dry, grinding, classifying, so the system is simple, and occupation area is about 50% of ball mill system. In addition, it can be installed outside, so LM vertical mill will reduce a large number of investment costs.
2. Roller of this series vertical mill compacted materials directly onto the grinding disc, so power consumption is low.
3. As the hot air inside contacts directly with the material, drying ability is higher, and it saves energy. By regulating the air temperature, this series vertical grinding mill can meet requirements with different humidity.
4. LM series vertical mill is equipped with automatic control systems, so remote control makes it easy to operate.
5. When the material stays in the mill for a short time, vertical mill is easy to detect and control the product particle size and chemical composition, to reduce duplication of milling, stable product quality.
6. In addition to the above advantages, our vertical roller mill also has the following advantages: maintenance convenience, environmental protection and so on.





## Operation & Maintenance

1. During the application of the MXB coarse powder mill from the professional manufacturer of grinding mill SBM, some personnel shall be arranged to take responsibility of management. The operators must be qualified with the required technical knowledge. Before the installation of this grinding mill, the persons related to the operation should receive technical training and fully understand the operating principle, performance and regulations of the MXB coarse powder mill.

2. In order to guarantee the MXB coarse powder mill in a normal working state, a Safety Operation System for the Maintenance of the equipment must be established. Only in this way can this grinding mill be guaranteed to have a long-term and safe operation. Meanwhile, it is necessary to have the required repairing tools, lubricant and grease, spare parts and accessories.

3. After some period of running, the MXB coarse powder mill should receive an examination and repairing. The components vulnerable to worn out, such as grinding roller, grinding ring, relieving tool etc. should be repaired or replaced. Before and after the operation, a careful examination should be carried out for the connecting screws, bolts and nuts on the grinding rollers so as to find whether they are loose or sufficiently lubricated.

4. When their application time surpassing about 500 hours, all the rolling bearings in the roller sleeves must be cleaned, and the damaged parts should be replaced. The oiling tool can be either a manual oiling pump or grease gun.



# Technical Data

## Vertical Mineral Mill Model and Technical Data

Model		LM130K	LM150K	LM170K	LM190K	LM220K	LM240K
Rotate Median Diameter (mm)		1300	1500	1700	1900	2200	2400
Capacity ( t/h)		10~30	13~40	18~57	23~72	36~114	41~128
Product Size	mm	170~45	170~45	170~45	170~45	170~45	170~45
	mesh	80~325	80~325	80~325	80~325	80~325	80~325
Moisture		≤1%	≤1%	≤1%	≤1%	≤1%	≤1%
Max Feeding Size ( mm)		<38	<40	<42	<45	<50	<55
Moisture of Feeding Material		<4%	<4%	<4%	<4%	<4%	<4%
Moisture Should Be Dry		<15%	<15%	<15%	<15%	<15%	<15%
Temperature of Inlet ( C )		<350	<350	<350	<350	<350	<350
Temperature of Outlet ( C )		70~95	70~95	70~95	70~95	70~95	70~95
Power of Main Motor(kW)		185~220	250~280	355~400	450~500	710~800	800~900
Overall Dimension	Length(mm)	3500	4200	4700	8500	10200	11700
	Height (mm)	3400	3900	4500	5600	6700	7700
	Weight (t)	5800	7100	8300	8800	10600	12200
Weight (t)		48	75	90	100	125	160

Note: This specification is just reference, any changes are subject to the LM Vertical Mill products.



# Technical Data

## Vertical Coal Mill Model and Technical Date

Model	LM130K	LM150K	LM170K	LM190K	LM220K	LM240K	
Rotate Median Diameter (mm)	1300	1500	1700	1900	2200	2400	
Capacity ( t/h)	10~15	16~22	20~28	26~35	35~45	40~50	
Product Size ( R0.08)	<15%	<15%	<15%	<15%	<15%	<15%	
Moisture	≤1%	≤1%	≤1%	≤1%	≤1%	≤1%	
Max Feeding Size ( mm)	<38	<40	<42	<45	<50	<55	
Moisture of Feeding Material	<15%	<15%	<15%	<15%	<15%	<15%	
Temperature of Inlet ( °C)	<350	<350	<350	<350	<350	<350	
Temperature of Outlet ( °C)	70~95	70~95	70~95	70~95	70~95	70~95	
Hardgrove Grindability Index (HGI)	>55	>55	>55	>55	>55	>55	
Power of Main Motor(kW)	185	250	315	400	500	560	
Overall Dimension	Length(mm)	3500	4200	4700	8500	10200	11700
	Height (mm)	3400	3900	4500	5600	6700	7700
	Weight (t)	5800	7100	8300	8800	10600	12200
Weight (t)	46	75	94	100	122	157	

Note: This specification is just reference, any changes are subject to the LM vertical mill products.



## Working Principle

The motor drives the grinding table to turn through the speed reducer. At the same time, hot air comes into the roller mill from the air inlet. The materials fall down the centre of grinding table from the feeder. Because of the centrifugal force, the materials move to the edge of grinding table from the centre. The materials are crushed by the grinding roller when they pass the groove on the grinding table. The crushed materials continue to move to the edge of the grinding table until taken away by the airstream. Then the bigger materials fall down the grinding table and the process of crushing continues. When the materials in the airstream pass the separator on the top of the mill, the materials fall down the grinding table from the taper filler under the force of guide leaf blade. The fine powder comes out with the airstream, and is gathered by the dust catcher of the system. The powder gathered is the final product of roller mill. In the process of the contact of airstream, the materials are dried to meet the clients' need at the proper moisture. Through the adjustment of the angle between the separator and the leaf of wind's direction (not suitable to the small type of vertical mill), and also the speed of the separator rotor, it can reach the proper fineness of the materials.



# Service

Since the establishment, Shanghai Shibang Machinery Co., Ltd has regarded "All is for clients" as its service goal and has provided high-quality, high-taste, high-efficient and all-around-way service for its clients.



Service Promise: from the design process to delivery, we do every step carefully to satisfy clients to the best.

## 1. Pre-sale services

Act as a good adviser and assistant of clients; enable them to get rich and generous returns on their investments.

- ◆ Select equipment model
- ◆ Design and manufacture products according to clients' special requirement
- ◆ Train technical personnel for clients

## 2. Services during the sale

Respect clients; devote ourselves to improving the total value of clients.

- ◆ Pre-check and accept products ahead of delivery
- ◆ Help clients to draft solving plans

## 3. After-sale services

Provide considerate services to minimize clients' worries.

- ◆ Assist clients to prepare for the first construction scheme
- ◆ Install and debug the equipment
- ◆ Train the first-line operators on site
- ◆ Examine the equipment regularly
- ◆ Provide maintenance for big items
- ◆ Provide technical exchanging
- ◆ Provide perfect service
- ◆ Distribute the guarantee fittings door-to-door
- ◆ Take initiative to eliminate the troubles rapidly at site





Vertical Mill

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*Any change of technical data shall not be advised additionally.*