

# Vertical Roller Mill

[Vertical roller mill](#) is one advanced mill, adopting top technology domestic and abroad, and based on many years' mill experiences. It can crush, dry, grind, and classify the materials. vertical roller milling machine can be widely used in such industries as cement, power, metallurgy, chemical industry, non-metallic mineral. [Vertical Roller Mill](#) is used to grind granular and powdered materials into powder with required fineness.



## 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 they are 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.

## Advanced Features:

### 1. Low Investment Cost

This mill itself 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 it will reduce a large number of investment costs.

### 2. Low Operation Cost

(1) High efficiency: roller compacted materials directly onto the grinding disc, so power consumption is low. Compared with ball mill, it saves energy consumption by 30% ~ 40%.

(2) Less wear and tear: As the roller is not in direct contact with the disc, and material of the roller and liner is high quality, so life lime is long.

### 3. High Drying Ability

As the hot air inside contacts directly with the material, drying ability is higher, and it saves energy. By regulating the air temperature, it can meet requirements with diffirent humidity.

### 4. Simple and reliable operation

(1) It is equipped with automatic control systems, so remote control makes it easy to operate.

(2) It is equipped with one device,which prevents the roller from contacting with the liner directly, and avoids the destructive impact and severe vibration.

### 5. the stability of product quality

As the material stays in the mill for a short time, it is easy to detect and control the product particle size and chemical composition, to reduce duplication of milling, stable product quality.

### 6. Maintenance convenience

By reparinging fuel tank, rotating the arm, it is fast to replace the roller sleeve, and liner, and reduce the downtime loss.

### 7. Environmental protection

It is with small vibration, low noise, and the overall sealing. The system works under negative pressure, so there is no dust going out. It meets the requirements of the state Environmental Protection.

### Technical Data:

Model	LM130K	LM150K	LM170K	LM190K	LM220K	LM240K
Medium diameter(mm)	1300	1500	1700	1900	2200	2400
capacity(t/h)	10~30	13~40	18~57	23~72	36~114	41~128

Finished size	μm	170~45	170~45	170~45	170~45	170~45	170~45
	Item	80~325	80~325	80~325	80~325	80~325	80~325
Humidity of the finished		≤1%	≤1%	≤1%	≤1%	≤1%	≤1%
Max feeding size(mm)		<38	<40	<42	<45	<50	<55
Best Humidity of Raw material		<4%	<4%	<4%	<4%	<4%	<4%
Drying Humidity amount of Raw material		<15%	<15%	<15%	<15%	<15%	<15%
Air Inlet Temperature(°C)		<350	<350	<350	<350	<350	<350
Air outlet Temperature(°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(mm)	Lengthmm	3500	4200	4700	8500	10200	11700
	Widthmm	3400	3900	4500	5600	6700	7700
	Hightmm	5800	7100	8300	8800	10600	12200
Weight(t)		48	75	90	100	125	160

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

**Contact Us:**

Address: South Jinqiao Area, Pudong New Area, Shanghai, China.

Tel: 86-21-51860270

Email: [sbm@shibang-group.com](mailto:sbm@shibang-group.com)

Web: <http://www.shibang-group.com>