



# Vertical Grinding Mill

Reach new height with KEFID

- Save 30%-40% energy
- Comprehensive functional integration
- The feeding size reach 40-100mm
- High dring ability





As China's largest crushing plant, mill equipments and beneficiation plants production base, kefid has exported large quantities and high-end mobile crushing plant and milling equipments to Russia, Kazakhstan, Indonesia, Ecuador, South Africa, Nigeria, Turkey more than 100 countries and regions and have solved about thousands of and beneficiation projects all over the world, which has made tremendous contributions to the local construction, mining industry and developments.

VM series Vertical Grinding Mill is a kind of large scale powder mill which is designed specially to solve the problems of low capacity and high consumption of industry mills. With a decade of research of mills, vertical grinding mill is designed and manufactured based on our advanced design idea, in combination with the european technology and the market demand. VM Vertical Roller Mill adopts reliable structure and reasonable process flow, integrated with drying, milling, classifier, elevator. Especially, it can fully meet the requirement of clients of the high production of powder, and its main technical and economic indicator reaches the international level.



## VM series Vertical Grinding Mill is the first choice for non-metal ores grinding

**1. Low operating costs.** Combine the crushing, grinding, drying, classifier and elevator, the system of vertical mill is simple and occupation area is about 50% of ball mill system. It can be installed outside, so it will reduce a large number of investment cost; Compared with ball mill, vertical mill can save energy consumption 30%-40%; Little Wear: The roller and lining plate are made of premium material to have long service life.



**2. Low investment cost.** The system of vertical mill is simple and occupation area is about 50% of ball mill system. It can be installed outside, so it will reduce a large number of investment cost;



**3. Simple and reliable operation.** Automatic control system is equipped, so the remote control makes it easy to operate. It is equipped with one device, which prevents the roller from contacting with the liner directly, and avoids the destructive impact and severe vibration;

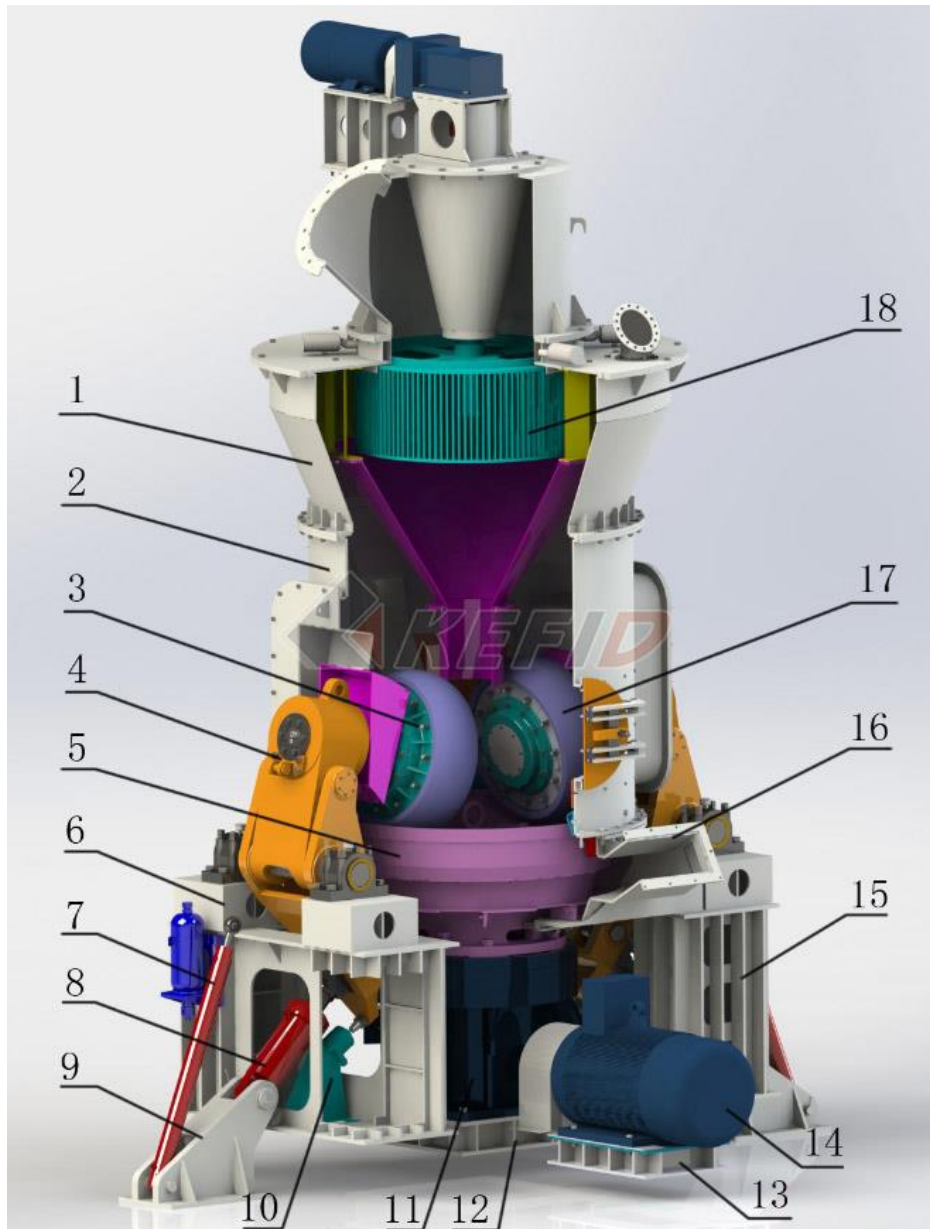
**4. High drying ability.** As the hot air inside contacts directly with the material, drying ability is higher, and it saves energy. By regulating the air temperature, it can meet requirements with different humidity;

**5. Fine product quality and particle uniformity.**

The materials stay in the mill for only 2-3 minutes, but 15-20 minutes in the ball mill, so the chemical elements and fineness could be quickly tested and adjusted to ensure the product quality.

**6. Convenient maintenance.** By repairing 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.



- |                               |                             |
|-------------------------------|-----------------------------|
| 1- Separator                  | 10- Limit device assembly   |
| 2- Middle frame               | 11- Main speed reducer      |
| 3- Roller assembly            | 12- Speed reducer seat      |
| 4- Transmission wall assembly | 13- Electrical machine seat |
| 5- Transmission arm           | 14- Main motor              |
| 6- Supporting seat            | 15- Frame                   |
| 7- Repairing cylinder         | 16- Low frame               |
| 8- Working cylinder           | 17- Roller shell            |
| 9- Oil cylinder assembly      | 18- Rotor                   |

# Technical Parameters of Vertical Grinding Mill

## Ore Mill:

Contents Data//Model		VM130k	VM150k	VM170k	VM190k	VM220k
Capacity(t/h)		10~28	13~38	18~48	23~68	36~105
Mainframe power(KW)		200	280	400	500	800
Overall dimension	Length (mm)	5520	6550	7170	7580	7920
	Width (mm)	2500	3070	3460	3320	4870
	Height (mm)	7060	7560	8300	8960	12280
Weight(t)			70	90	105	180

## Coal Mill:

Content parameter//Model		VM130M	VM150M	VM170M	VM190M	VM220M
Wheel Diameter(mm)		1300	1500	1700	1900	2200
Quantity of roller(piece)		2	2	2	2	2
Capacity(t/h)		10~17	16~22	20~30	26~40	35~50
Coal fineness(R0.08)		5~20%	5~20%	5~20%	5~20%	5~20%
Coal moisture		<1%	<1%	<1%	<1%	<1%
Input size D80(mm)		<10	<10	<10	<10	<10
Max.input size(mm)		<38	<40	<42	<45	<50
Input moisture		<15%	<15%	<15%	<15%	<15%
Inlet air temperature(°C)		<350	<350	<350	<350	<350
Outlet air temperature(°C)		75~95	75~95	75~95	75~95	75~95
Hardgrove index of raw coal(HGI)		>55	>55	>55	>55	>55
Mainframe power(KW)		185	250	315	400	500
Overall dimension	Length (mm)	5520	4200	4700	7580	7670
	Width (mm)	2500	3900	4500	3320	4660
	Height (mm)	7060	7100	8300	8960	11280
Weight(t)		46	68	88	100	165

## Slag Mill:

Content Date//Model		VM130N	VM150N	VM170N	VM190N	VM220N
Wheel Diameter(mm)		1300	1500	1700	1900	2200
Quantity of roller (number)		2	2	2	2	2
Capacity(t/h)		5~14	7~20	9~27	12~30	18~55
Output fineness	Micron	170~45	170~45	170~45	170~45	170~45
	Mesh	80~325	80~325	80~325	80~325	80~325
Product moisture		≤1%	≤1%	≤1%	≤1%	≤1%
Input size D80(mm)		<10	<10	<10	<10	<10
Max.input size(mm)		<38	<40	<42	<45	<50
Input moisture(no need to dry)		<4%	<4%	<4%	<4%	<4%
Input moisture(need to dry)		4~15%	4~15%	4~15%	4~15%	4~15%
Inlet air temperature(°C)		<350	<350	<350	<350	<350
Outlet air temperature(°C)		70~95	70~95	70~95	70~95	70~95
Mainframe power(KW)		200	280	400	500	900
Overall dimension	Length(mm)	5520	6550	7170	7580	7920
	Width(mm)	2500	3070	3460	3320	4870
	Height(mm)	7060	7560	8300	8960	12280
Weight(t)		49	72	94	110	170

**Note:** Any change of VM Vertical Mill technical data shall not be advised additionally.

## The analysis of large-scale grinding plant



### Kefid 30tph quartz Grinding Plant in India



**Raw material:** quartz

**Input size:** <42 mm

**Output size:** 150-200 mesh

**Capacity:** 30t/h (three sets)

**Equipment:** 3 sets LM170K vertical mill

### Kefid 10-12tph silica sand Grinding Plant in Indonesia



**Raw Material:** silica sand

**Output size:** 325 mesh

**Capacity:** 10-12 t/h Application: fiberglass

**Quantity:** 2 sets LM130N



## The Strength of Kefid

Kefid Machinery is a leading and pioneering enterprise with the most advanced international level in R&D, manufacturing and selling of large-scale crushing & screening plants and beneficiation plants. Located in a historic city and transportation hub in central China-Zhengzhou, covering 140 thousand square meters, Kefid has Shangjie and High-tech zone two production bases. Shangjie Zone which covers 80,000 square meters has three heavy-duty and modern integrated assembling workshops--occupying 50,000 square meters; High-tech zone has 22 floors R&D Management laboratory building with 26,000 square meters, comprehensive equipments exhibition hall with 5,100 square meters, heavy-duty and modern integrated assembling workshop with 10,000 square meters, and also has the industry's most advanced machining workshop 20,000 square meters, and hundred sets of advanced large-scale vertical lathe, fixed lathe, planner, boring lathe, grinder and milling machines.





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**Tel:** 0086-371-67999255

**Email:** Sales@kefid.com

## SPARE PARTS

### Grinding Plant



Ring



Roller



Shovel Base



Hinged support



Classifier Impeller

### Crushing Plant



Weights for movable



Fixed jaw plate



Movable jaw plate



Lining board



wedge

### Sand-making Equipment



Circum Guard plate



Impact Plate



Impact Block



Hammer



wearproof Plate

# PRODUCT LIST

## Stationary Crushers

JC Series Jaw Crusher  
Jaw Crusher  
C6X Series Jaw Crusher  
Primary Impact Crusher  
CI5X Series Impact Crusher  
Impact Crusher  
CS Cone Crusher  
Spring Cone Crusher  
HPT Cone Crusher  
Deep Rotor VSI Crusher  
B Series VSI Crusher  
VSI6S vertical shaft impact crusher

## VU System Equipment

Dry Sand Making System  
Dry-Mixed Mortar Sand Making Equipment  
Concrete-Use Sand Making Equipment

## Grinding Mills

Ultra Fine Vertical Grinding Mill  
VM - Vertical Grinding Mill  
European Tech. Grinding Mill  
Micro Powder Mill  
Raymond Mill  
Ball Mill

## Washing & Screening

F5X Heavy Vibrating Feeder  
Screw Sand Washing Machine  
Wheel Sand Washing Machine  
Vibrating Feeder  
Belt Conveyor

## K series mobile plants

Primary mobile crushing plant  
Mobile Secondary Crushing & Screening Plant  
Independent Operating Combined Mobile Station  
Fine crushing and screening mobile station  
Fine crushing & washing mobile station  
Three combinations mobile crushing plant  
Four combinations mobile crushing plant

## Crawler Mobile Crusher

## Ore Beneficiation

Jaw Crusher  
HPT Cone Crusher  
Ball Mill  
Rotary Kiln  
Flotation Machine  
High Gradient Magnetic Separator

**Address:** National HI-TECH Industry Development Zone.Zhengzhou,China.

**Tel :** 0086-371-67999255(24 Hour) / 67988500

**Fax:** 0086-371-67998980

**Zip code:** 450001

**Email:** sales@kefid.com

**Web:** <http://www.kefid.com>

