

# **STM Vertical Mill (roller mill)**

## **Brief Introduction OF Roller Mill**

STM Vertical Mill(Roller Mill) is a new mill of high efficiency and low consumption, studied by numbers of our engineers, for solving the difficulty of high energy consumption in mill industry. It adopts new grinding principle, new structure, strong bearing materials, and absorbing lots of technical essence of mill. Therefore the performance of STM vertical mill indicators is over traditional mills greatly. Especially, it is very efficient for crushing high hardness and hardworking materials and it can work under both dry and wet condition. STM vertical mill has these characteristics: small metal worn, little dust, simple and firm structure, and easy maintenance. It is a revolutionary technical changing in mill industry. It can bring higher economic benefit to our customers and it really fulfills the desire of industrial fields --- high efficiency and low consumption. It is invented for powder making in



the new time.



### **Application Of Roller Mill:**

STM vertical mill is a widely-used new grinding equipment of high efficiency and low consumption. It is mainly used into these areas, such as building, chemical, chemical fertilizer, metallurgy, mining, nonmetal, abrasive, bearing materials, ceramic, steel, thermal power, bricks & tiles, coal industry, etc. It can chemical fertilizer, metallurgy, mining,

nonmetal, chemical fertilizer, metallurgy, chemical fertilizer, metallurgy, mining, nonmetal, abrasive, bearing materials, ceramic, steel, thermal power, bricks & tiles, coal industry, etc. It can grind lump materials into coarse powder (here coarse powder means the mixer of fineness powder, fineness sand, and medium sand.). There are thousands of materials can be grinded by our equipment, and here are some of them and they are just for you consultation. They are cement (raw meal and cement clinker), quartz, feldspar, calcite, gypsum, limestone, dolomite, graphite, fluorite, aedelforsite, phosphate ore, fused calcium magnesium phosphate, car amide, electrolytic manganese metal, ferromanganese, coal, gangue, slag, zirconium, steatite, granite, orthoclase, marble, barites, ceramics, glass, etc. All the materials whose moths hardness is under 9.5 grades can be grinded.

### **Working Principle Of Roller Mill:**

The speed reducer installed on the upper of the

main machine makes central axis rotate through shaft coupling, and roller hanger rotates with central axis, and rollers on the hanger roll around the inside of ring. The materials come into inlet from upper side of machine, and they fall down onto the dispersing materials plate, rotating with central axis in two ways, then the materials are sent into passage between rollers and rings, after they are grinded into pieces, they are discharged from the discharge lip.

### **Technical Advantages Of Roller Mill:**

STM Vertical Mill adopts new plaiting, grinding principle and scientific structure, also it absorbs numbers of preparing grinding technology.

Compared with traditional machines, such as roller mill, fine crusher, plaiting device, kinds of impact mill, etc, it has very remarkable advantages.

Really it realized higher efficiency, lower consumption and environmental protection of preparing grinding technology

1. New design and new structure. Our mill adopts

medium speed and pressure, repeated plaiting principle, and its design is unique in mill industry. The materials fall down by the force of gravity. When the materials are too hard, all the parts of rollers and ring will be worn evenly. So the capacity will not change greatly. Because of this ingenious design, when the unprintable materials, such as bolts, pig iron, etc, come into machine, they would not worn machine. Because it is unnecessary to equip with cyclone and many other pipes, small space it will take.

2. After materials are grinded by STM Vertical Mill, their physical characteristic is changed greatly and so their grind able characteristic is improved greatly. The grinded materials become irregular multiple-unit, and their inside lattice are already broken. The structure of the organization is loose, and the final sizes all have haircuts. Thus, when the materials are grinded for the second time, the machine is mainly do grinding work not crushing work, so the capacity of second grinded is improved greatly.

3. The crushing ratio of final products of STM Vertical Mill is large. So is the fineness size. When the large materials are put into STM Vertical Mill and through sculptured roller and plate, they are grinded into fineness size by rolling crush, and then they fall down into space between roller and plate, and form a material bed. Under the spring device's pressure, rollers do numbers flexible extrusion to material bed and make them become fineness, and the result is very ideal. The fineness of final products can be adjusted. Expect producing large quantity fineness which is smaller than 100 meshes, this mill also can make materials, which have large haircuts, by numbers of grinded. The max final size is below 3mm, so it is easy for second-time grinding.

4. Long service life of easy worn parts and small quantity maintain. Depending on high speed rotation, the traditional grinding equipments do forcing-crush to materials, and the connection between easy worn parts is direct. Therefore the consumption of these parts is fast and high. Also

there are large numbers of dusts. As a result, adjustment and maintenance is frequent, and speed of production is influenced. This mill's grind drove to the material bed, which located between plates and rollers, thus this avoids direct connection between roller and plate. Not only can this improve service life of easy worn parts, but also can reduce pollution to materials greatly in the grinding process.

5. This machine has these characteristics: good mechanical property, easy to handle, convenient maintain, lower consumption, lower working-cost, producing of both wet and dry materials; new design feature, simple structure, easy-installed equipment, lower cost of base equipment and good environmental protection.

Moder	Max. Input (mm)	Final Size (mm)	Capacity (t/h)	Power (kw)	Overall demission (mm)

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ZTM86	< Φ20	0~2.8	6~15	37~45	2500X1500X276 0
STM12 5	< Φ25	3-0.04 4	15-55	90-110	Φ2300×5600
STM16 5	< Φ35	3-0.04 4	30-120	185-20 0	Φ3600×8200

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