



VSI5X SERIES VERTICAL SHAFT IMPACT CRUSHER

TOP 1 BRAND OF CHINA'S CRUSHING
AND GRINDING INDUSTRY





Product Introduction

Based on advanced technology from Europe and America, combined with experience of decades and patented design, VSI5X series vertical shaft impact crusher is our newest sand-making equipment. Available for different crushing modes, with unique rotor structure, bearings of worldwide famous brands, rhombic impact plate, high abrasion and heat proof material, VSI5X series vertical shaft impact crusher is second to none in different aspects such as efficiency, particle shape and usage life. Combined with professional crushing technology and mechanics and available to crush and shape materials of all rigidity, VSI5X series vertical shaft impact crusher is a necessary equipment in the production line for gravel aggregate and is widely approved by both the field and the customers.

Four Innovative Technologies Show Obvious Advantageous Performance

1. Optimal emission opening and curved-shape design of rotor riser reduce the flow resistance of the material, thus to increase the throughput and lower maintenance cost;
2. Newest optimized deep chamber rotor increases the throughput by about 30%;
3. Exchangeable upper/lower guarding plate improve the material utilization and lengthen the usage life by over 48%;
4. Combined hammer head design: Only need to change the worn-out part of the hammer head. This lowers the usage cost by more than 30%. Additional hammer head avoids the damage of riser after the main hammer head is worn out.

Two Patented Designs Highlight the **Value of Liming Brand**

1. First company to use oil lubrication, advanced and reliable oil lubrication system with doubled pump

Double pumped is equipped to guarantee the oil supply and stop the machine when there is no flow and pressure, making sure the low temperature and steady functioning of main bearing and lengthening the usage life; Oil lubrication system reduces the friction of the bearings and increases the rotating speed to reach a higher efficiency.

2. Vertical annular bearing with oil lubrication and oil leak proof design without oil seal

① Unique design of lower seal cartridge lowers the possibility of oil leak;

Patent Number: ZL201220356788.6

② Air breather equalizes the working pressure of lubrication chamber and avoids oil leak once and for all.

Patent Number: ZL201220008310.4



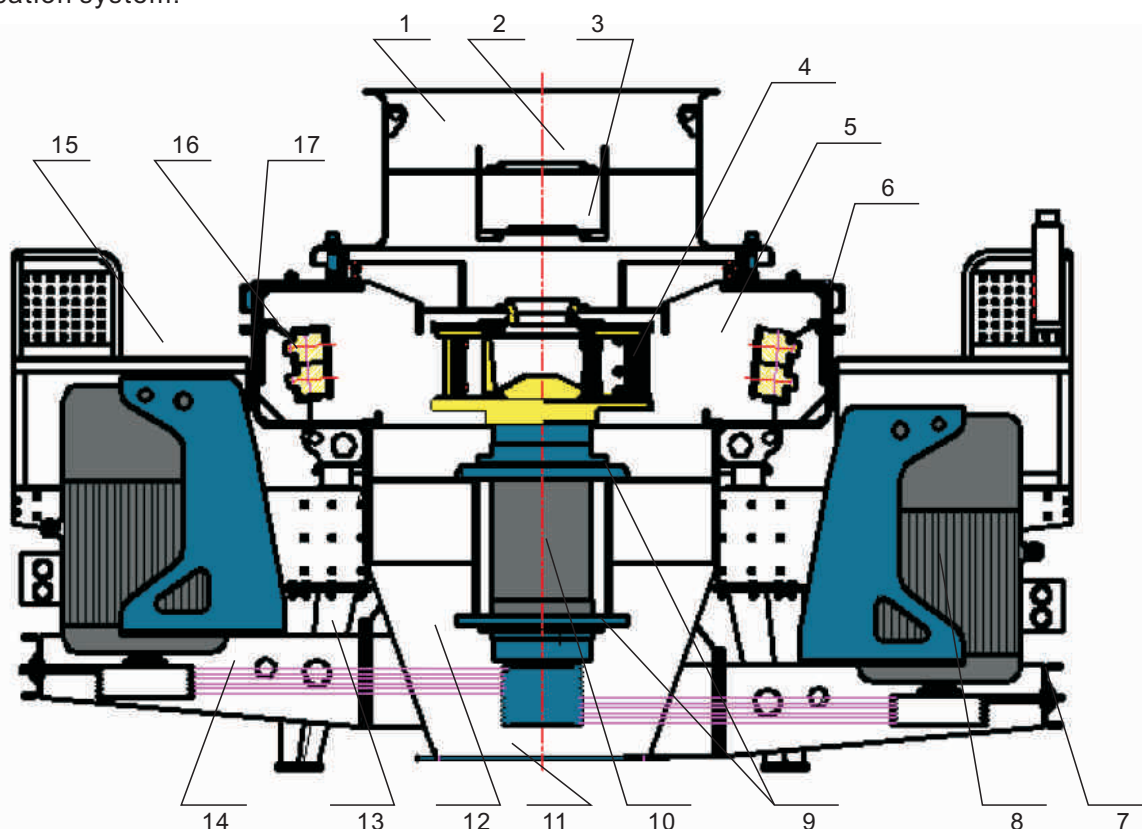
Application and the range of application

VSI5X series vertical shaft impact crusher owns three basic functions: crushing, sand-making and shaping. Therefore, it is usually used as the crusher of the final crushing stage. Suitable to the medium and fine crushing of different kinds of hard ores and stones like iron ore, nonferrous metals ore, diamond sand, perlite and so on, VSI5X series vertical shaft impact crusher is widely applied to the artificial sand-making of river stone, gangue, the machine-made sand and re-shaping of some projects such as water conservancy and hydropower, railway and expressway construction, and municipal engineering, and the primary fine crushing of milling of ores.



Product Structure

VSI5X series vertical shaft impact crusher mainly contains of the frame, the bearing canister, the rotor, and the lubrication system.



structure chart of VSI5X series vertical shaft impact crusher

- | | | | |
|-----------------------------|------------------------------|-----------------------|------------------------------|
| 1、Feeding Hopper | 2、Protect Loop of the Hopper | 3、Distributing Plate | 4、Impeller Assembly |
| 5、Shaping and Crushing Cave | 6、Liner Plate | 7、Motor Frame | 8、Main Motor |
| 9、Oil Station Assembly | 10、Main Shaft Assembly | 11、Discharge Gate | 12、Lower Frame |
| 13、Shock Absorber | 14、Frame | 15、Footboard platform | 16、Manual Hydraulic Cylinder |
| 17、Observation Window | | | |

Working principles of VSI5X series vertical shaft impact crusher

There are two ways for the materials to enter the crusher: the center feeding and the center and ring feeding. When it is the center feeding, the materials can enter the rotor directly and then be casted out due to the eccentric power and run into the guard board then be crushed. When it is the center and ring feeding, part of the materials enter into the rotor and part of them go around the rotor. With the high-speed rolling of the rotor, the materials in the rotor rush out and run into the materials around the rotor then be crushed finally. The first crushed materials in the cave will be rebound by the guard board and go into the rotor again. Like a crushing circle, the materials will be crushed again and again until the products of required size discharged from the discharging gate.



Performance Advantages

1. Importing the key components with original packaging, improving the machine overall performance

- ①. The key components material adopts the wear-resistant and high temperature resistant materials of the important industries in the USA.
- ②. Adopting the originally imported Japanese hydraulic opening device to move the cover easily, and it reduces the downtime and saves the cost for the replacement and maintenance of the spare parts inside the machine.

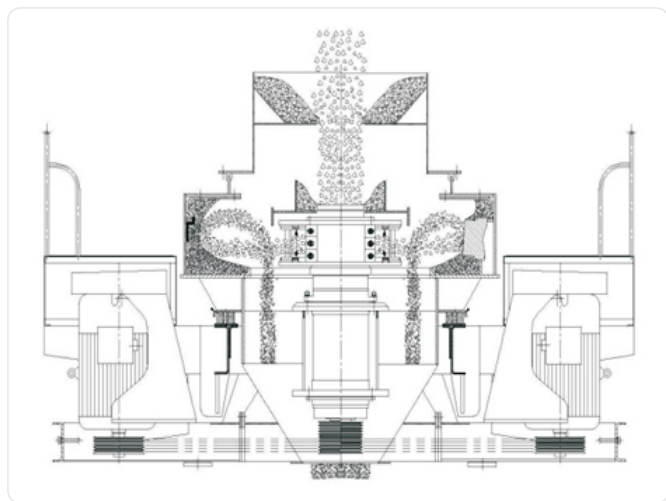
2. Adopting new technology for frame and appearance, improving the quality and appearance quality

The frame adopt new technology of hot riveting, which enhances structural strength and toughness of the device and ensure the smooth operation of the equipment; And it also adopt the sand-blasting treatment and painting process of automotive technology, thus achieving comprehensive upgrade both inherent quality and appearance quality.

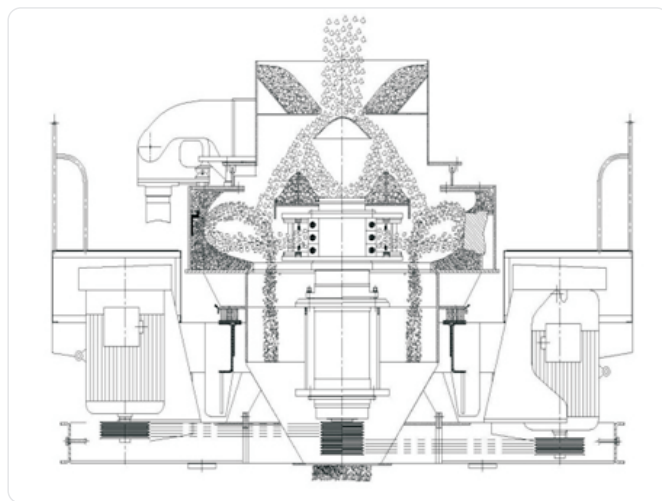
3. Multiple feeding mode conversion, Multi-purpose machine

Dual material distributing tray is easy to operate, and it can achieve the conversion of center feeding and center & ring feeding easily; Also, it can realize the two working principle conversion of “crushing between materials” and “crushing between materials and liners” to meet the requirement of crushing and reshaping stones.

Two feeding mode: center feeding and center & ring feeding



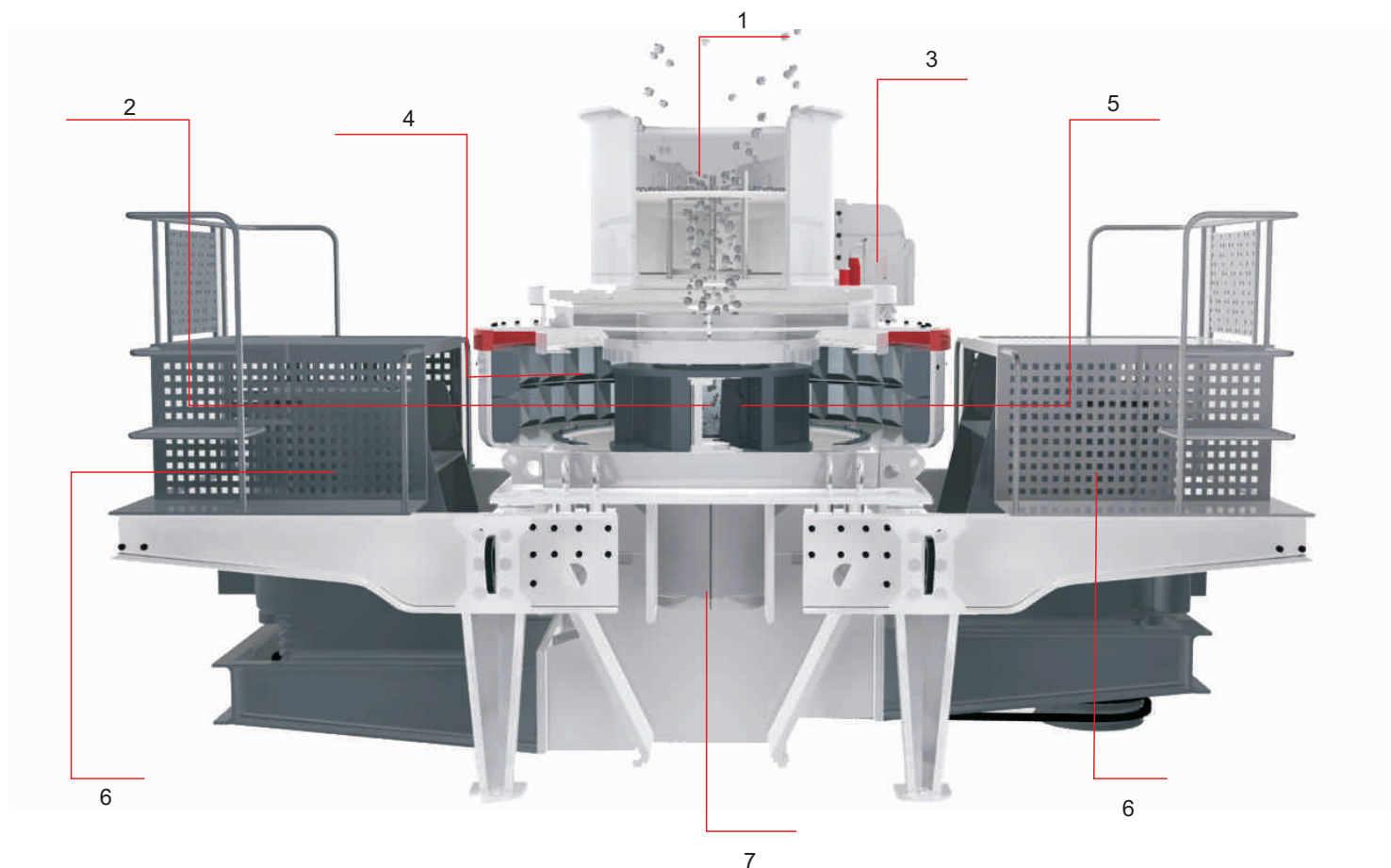
1: Center Feeding



2. Center and Ring Feeding



Structure Features



- 1、Material dispersing plate: dual purpose material dispersing plate, convenient for transition between the strike between stones and the strike between stone and iron.
- 2、Deep-chamber rotor: optimized rotor runner makes the capacity increased by 30%.
- 3、Hydraulic device: hydraulic drive cover device makes it convenient for maintenance.
- 4、Surrounding liner board: reversible surrounding liner board improves the utilization.
- 5、Rhombus impact block: reduce abrasion and protect vertical plate effectively.
- 6、IEC standard motors: F5 insulation, IP54/55 grade, IEC standard motors.
- 7、Sealing structure: special sealing structure, replacing oil seal.

Advanced technology on designs **to improve the capacity**

1. The design of optimal launch mouth and smooth curve reduces flow resistance of the materials and increases the throughout capacity greatly.
2. Surrounding plate is reversible, to improve the material's utilization and increase more than 48% of the lifespan.
3. Combined hammer design (one smaller above and one bigger below) , only need to replace the wearing part, effectively prevent damage to the vertical plate after the main hammer is worn and largely reduce the operation cost by over 30%.
4. After optimized design, the deep-chamber rotor can make the capacity increased by 30%.
5. Rhombus shape impact plate is used to prevent the damage of vertical plate, prolong the service life of wear parts, reduce the production cost for the customer.
6. Simplified structure on bearing housing makes it convenient for installing, dismounting and water proofing. Special sealing structure under main shaft makes sure no oil seal but no oil spilling.
7. Smooth transition adopted on angular parts makes it an integral whole from the appearance.

SPECIFICATIONS

Model		5X7615	5X8522	5X9532	5X1145
Capacity(t/h)	Center and ring feeding	150~280	240~380	350~540	500~640
	Center feeding	70~140	120~200	180~280	250~360
Maximum feed size(mm)	Soft material	35	40	45	50
	Hard material	30	35	40	45
Main shaft speed(rpm)		1700~1900	1500~1700	1300~1510	1100~1310
Power KW(HP)		2×75 (100)	2×110 (150)	2×160 (220)	2×220 (300)
Dimension (L×W×H) (mm)		4100×2330 ×2300	4140×2500 ×2700	4560×2600 ×2900	5100×2790 ×3320
Weight(t)		12.1	14.8	18.6	27.5
Power		380V, 50Hz			
Lubrication station	Power KW(HP)	2×0.25(0.33)			
	Safety	To make sure the supply of oil with double oil pump, working without oil, temperature when water cools, start the motor by heating it in the winter			
	Oil tank heater power	2Kw			
	Dimension (L×W×H) (mm)	820×520×1270			

Note: Production capacity is measured according to the determination of medium hardness of limestone. At the same time, it have relations with the material particle size, moisture, and the properties of the material, etc.

Lubrication system specification						
Oil box volume (L)	Rated pressure (Mpa)	Flow capacity (L/min)	power (kw)	Cool water consumption (m3/h)	Electrical heating voltage (V)	medium
240	0.63	8	0.31	≥1.2	220	Bearing oil 32-46#

Note: Any change of technical data shall not be advised additionally.

In order to enhance your experience of our equipment during the operation, we strongly recommend spare parts originally manufactured by LIMING Heavy Industry. These high quality spare parts are manufactured using advanced metallurgy techniques, precise machining, and perfect compatibility, ensuring the lowest malfunction operation and creating higher value for our customer.

Crushing Plant



Sine Liner



Spring



Toggle Plate



Guard Liner Plate



Impact Block



Wearproof Plate



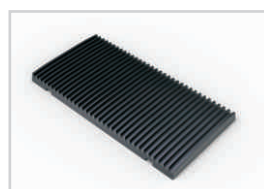
Impact Plate



Tension Rod



Feed Eye Ring



Movable Jaw Plate

Grinding Plant



Ring



Roller



Shovel Base



Shovel



Gland Arove Roller Sleeve



Roller Sleeve



Roller Shaft



Classifier Impeller



Lining Plate



Air Way Guard Plate

PRODUCT LIST

Production Line

Stone Crushing Line

Sand Making Line

Industrial Grinding Line

Grinding Plant

LM Vertical Mill

MTW European Trapezium Mill

LUM Vertical Roller Mill

TGM Trapezium Mill

T130X Superfine Grinding Mill

YGM Series Suspension Mill

HGM Series Micro Powder Mill

Coarse Powder Mill

Raymond Mill

Crushing Plant

HJ Series Jaw Crusher

European Type Jaw Crusher

European Type Impact Crusher

Impact Crusher

Jaw Crusher

HPT Hydraulic Cone Crusher

HST Hydraulic Cone Crusher

CS Series Cone Crusher

Spring Cone Crusher

Sand Making& Screening Plant

VSI5X Vertical Shaft Impact Crusher

VSI Vertical Shaft Impact Crusher

PCL Vertical Shaft Impact Crusher

YKN series vibrating screen

Vibrating Screen

Sand Washing Machine

Belt Conveyer

Vibrating Feeder

Mobile Crushing Plant

Crawler Mobile Crushing Plant

Mobile Primary Jaw Crusher

Mobile Impact Crusher

Secondary Cone Crusher

Multi-Combination Mobile Crusher

Mobile VSI Crusher

Mobile Vibrating Screen

QUALIFICATION

GOST Certificate



Grinding Plant



Crushing Plant



Mobile Crushing Plant

CE Certificate



Grinding Plant



Crushing Plant



Sand Making Plant



ISO9001:2008
Quality Management
System Certification

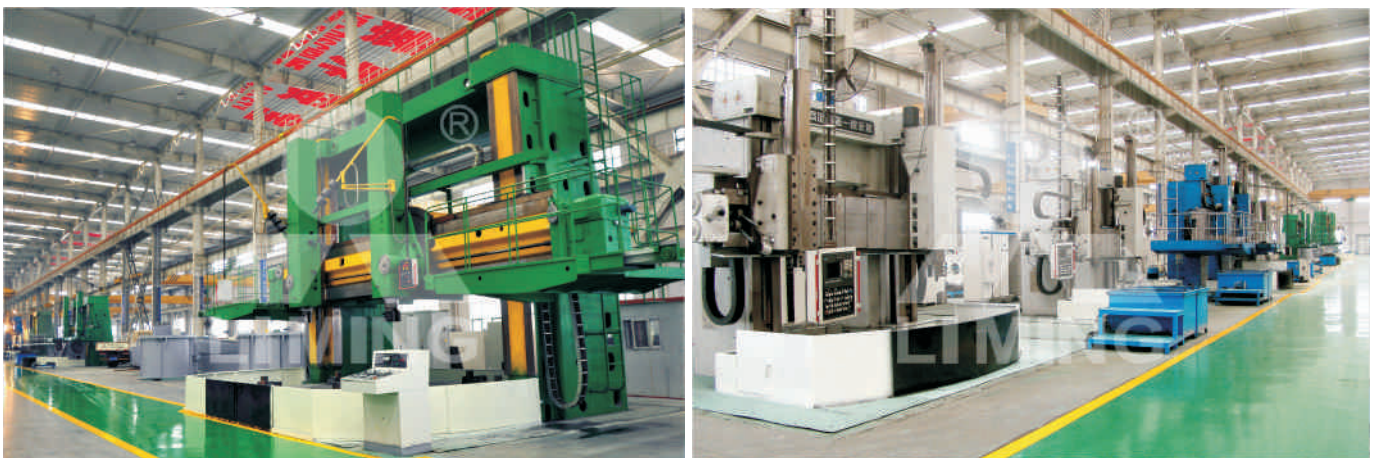
Environmental management
system certificate



Service — With me, enjoy your pleasant journey.

Liming has the most experienced team of engineers with professional knowledge and spirit of dedication. To serve the clients more conveniently, they scattered all over the world to work all year round. From the site planning to the drawing design, from the technical training to the installation and debugging, from the whole working line that values millions to the small pinion that looks insignificant, they fully understand the influence factors of actual situation on customer business, and create successful solution to improve the production efficiency and the environmental quality for customer operating agency.

WORKSHOP



ENTERPRISE PROFILE



Henan Liming Heavy Industry Science & Technology Co., Ltd. , established in 1987, is the leading enterprise of mining machinery in China.

Liming Heavy Industry is chronically committed to the research and develop of manufacturing of large infrastructure projects, such as construction, energy, transportation, etc. and provides various technical solutions and auxiliary products. "Made in Liming" is highly praised by our cooperative partners from more than 130 countries and regions overseas, such as Russia, Kazakhstan, Azerbaijan, Turkey, Kuwait, South Africa, Egypt, Vietnam, Malaysia, India, Australia, Korea, Canada and the European Union,etc. Liming is deserved to be one of the most excellent enterprises with the most industry customers and the most widely sales level service network.

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