

# VSI SERIES VERTICAL SHAFT IMPACT CRUSHER

TOP 1 BRAND OF CHINA'S CRUSHING  
AND GRINDING INDUSTRY



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0371-679\_3311



## Product Presentation

VSI series vertical shaft impact crusher is the newest sand making equipment of the third generation, the result of the newest design by German leading expert according to the working conditions of China. It inherited the innovative method from impact crushers and is made with advanced theory of selective crushing and cleavage crushing that allows the equipment to put enough kinetic energy directly onto the material, and change the kinetic energy into crushing energy through the impact. The material ruptures along its natural texture and cleavage plane, which optimizes the particle shape and lowers the cost, making the material satisfy the demand of building, highway, railway, water resource and hydropower engineering better. It is stable and reliable with a low failure rate and high market share and has a good reputation from many customers.

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

### **1. Multiple Feeding Modes for Multiple Purposes**

VSI series vertical shaft impact crusher by Liming Heavy Industry features annular cascade feeding system and alterable lining plates, which is with a patented protection. Completely centre feeding mode and center with cascade feeding mode can switch conveniently, as well as between-material crushing mode and between-material-and-liner crushing mode. Multiple modes for different purpose of crushing and reshaping meet the different demand of the customer.

### **2. Vertical Annular Bearing with Oil Lubrication and leakproof Design without Oil Seal**

Oil lubricating system with double oil pump supplying complementarily to ensure the bearing stay in best condition keeps the main bearing system running well and lengthens the usage life of the equipment.

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

Patent Number: ZL201220356788.6

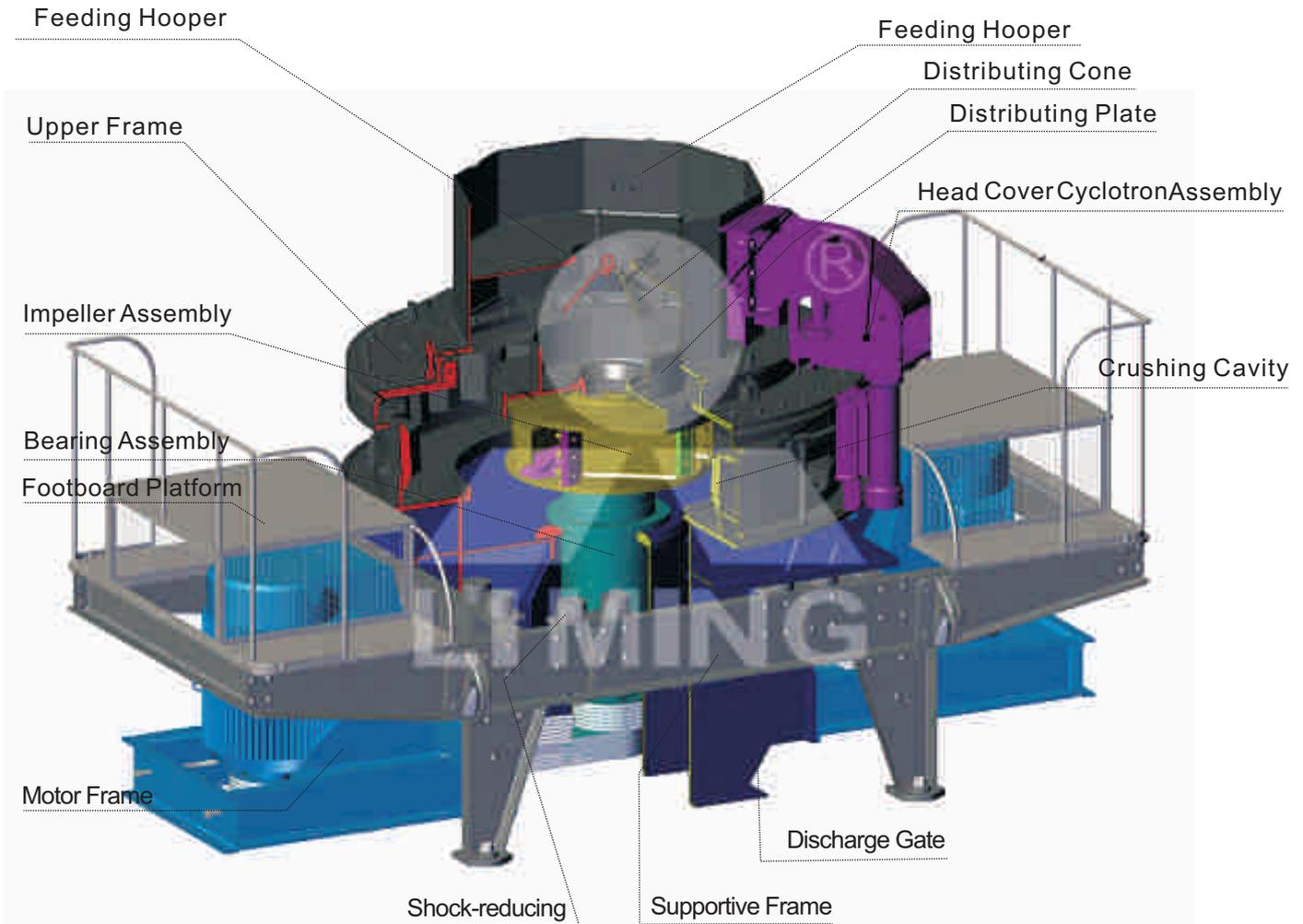
2.) Air breather equalizes the working pressure of lubrication chamber and avoids oil leak once and for all.

Patent Number: ZL201220008310.4

## **Purpose and Application Scope:**

The VSI 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, the vertical shaft impact crusher is widely applied to the artificial sand-making of river stone, gangue, the machine sand-making 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.





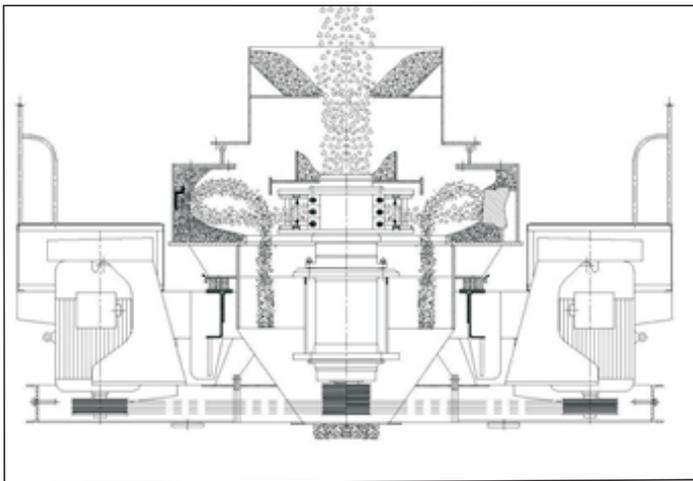
## Product Structure

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

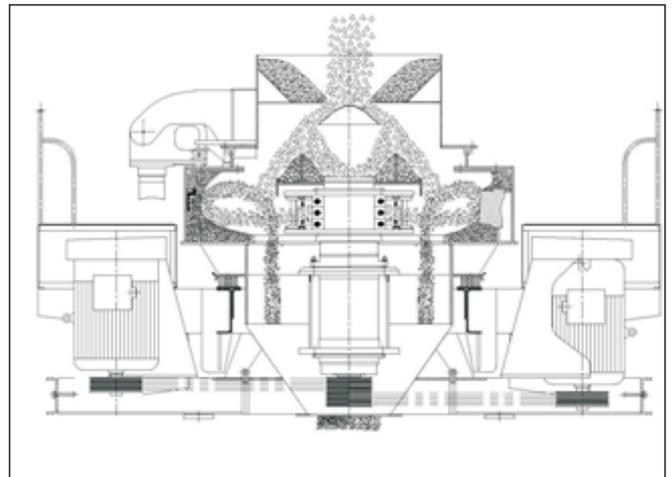
### Two ways of feeding:

The center feeding: Through the center feeding hole on the feeding hopper, the materials enter inside the impeller and immediately speeded up by the impeller, by that time the speed of the materials is about more than 10 times as quick as the acceleration of gravity, then the materials are thrown out from the impeller and run into the materials which are falling freely after the rebounding.

Then all the materials impact onto the material layer (crushing between materials) or the impact plate (crushing between materials and the liner) then be rebounded up to the top of the eddy cave and change their direction passively and fall down. The falling down materials strike with the materials thrown from the impeller and become a materials waterfall. After being stroke, rubbed and crushed for twice or more twice, the materials will be discharged from the lower discharge gate.



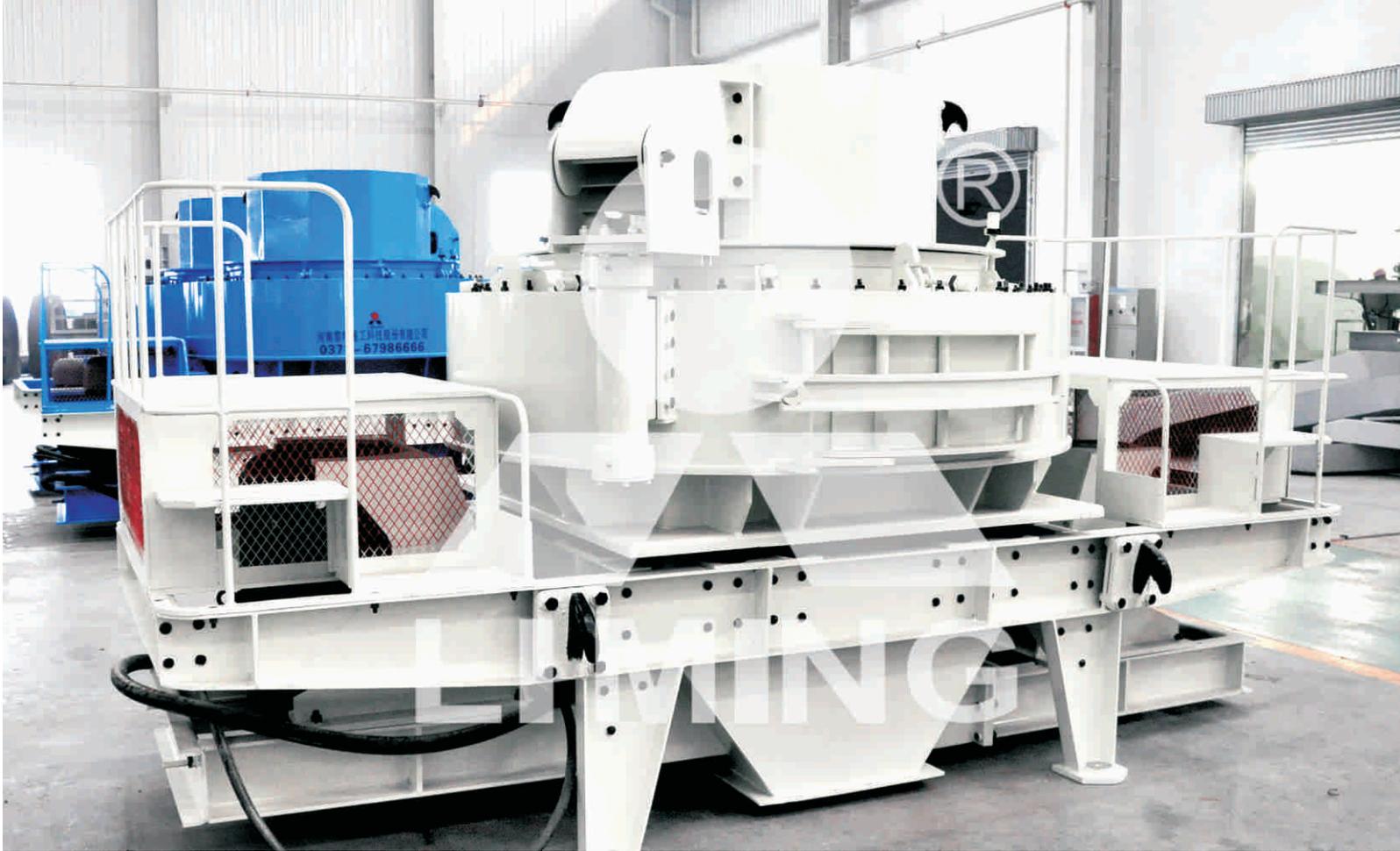
The Center Feeding



Center and Ring Feeding

### Center and Ring Feeding:

The materials fall into the feeding hopper, then fall into the crushing chamber through the feeding hole. They are divided into two parts; one enters into the high-speed rotating rotor through distribution tray and the other one falls down around the distribution tray. The materials that inside the rotor are accelerated rapidly with the speed of up to ten times acceleration of gravity, then they are casted to outside from the rotor. And first they crush with the materials that fall down from the distribution tray, then the two parts of materials strike on the material lining around the crushing chamber. They are rebound by the material lining and strike upward to the top of crushing chamber. Then the materials change the direction, moving downward and crushing with the materials that casted from the rotor. All the materials cycle like this continuously and there is a continuous materials curtain in this way. Like this, a piece of material receives two or more impact, friction and grinding crushing effect in the crushing chamber. The broken materials are discharged from the lower discharging opening.



## **Superior Performance**

### **1.Advanced Design, High Efficiency and Low Consumption**

The high quality material and advanced process technology improve the quality of equipment and ensure the low failure rate. The best crushing chamber material impact angle design reduces the abrasion and use-cost and improves the capacity by 30%. The excellent rotor design greatly reduces the material passing resistance and improves the throughput capacity and crushing ratio with higher efficiency and capacity, better product shape.

### **2.Brand New Technology, Quality Improvement**

The frame adopts new hot riveting technology to enhance structural strength and toughness of the device and ensure the smooth operation of the equipment. And it adopts the process of sand-blasting treatment and painting process to achieve a comprehensive upgrade both in equipment inherent quality and appearance quality.

### **3.Wear-resistant material,extend the life of the wear resistant block**

Wear resistant block adopts high quality wear-resistant material, high manganese steel impact block,upper/lower runner plate ,high chromium iron impact block and wear-resistant plate, wear-resistant alloy hammerhead, greatly enhance the service life of the wear resistant block.

### **4.Automatic detection, safe and reliable**

Equipped with strong vibration display and alarm device, if adverse operation warned, the equipment stop working, and achieve the purpose of protect the machine.



## FEATURES



### Structure Features

#### 1. Multi-usage, excellent shape of product

VSI series of sand making machine have unique feed crushing structure, and has many kinds of crushing cavity model, solved the difficult problem of multi-usage, patent circular organ feeding system and lining board transform technology, can easily implement "stone hit stone" and "stone hit iron" crushing principle of clever conversion, high efficiency and energy saving, make the size and the shape of the finished product is excellent, present cube, the needle flake content is extremely low, bulk density, reasonable gradation, adjustable fineness modulus.

## **2.Advanced design technology, improve the quality of appearance**

VSI series of sand making machine with unique rotor structure design, wear resistant material process, crushing speed optimization and is famous for its hydraulic design, is a professional fine grinding model of perfect combination of technology and machinery manufacturing technology, is a new technology, new process fully manifests, improve equipment inner quality and appearance quality.

## **3.Thin oil lubrication, extend the life of the equipment,**

Thin oil lubrication system, double oil pump complementary oil supply, remain the best state to ensure the bearing lubrication, guarantee benign operation of the main bearing system, prolong the service life of equipment.

## **4.Hydraulic device, easy to maintain**

VSI sand making machine on the basis of the original impact crusher has increased the advanced hydraulic open device, make the equipment operation more safe and convenient, when maintenance the quick-wear parts, save more time and labor.

## **5.Self-circulation system, benefits environmental protection**

Characteristic air self-circulation system, greatly reduce the exhaust air rate, the powder and the noise, which is benefits environmental protection. Besides, space left for installation of various dedusting equipments makes VIS series vertical shaft impact crusher improve its ability of environmental protection.



## SPECIFICATIONS

Model		VSI-7611	VSI-8518	VSI-9526	VSI-1140
Capacity ( tph )	Center and Ring Feeding	120-180	200-260	300-380	450-250
	Center Feeding	60-90	100-130	150-190	225-260
Max.Feed Size ( mm )	Soft material	35	40	45	50
	Hard Material	30	35	40	45
Main shaft speed(rpm)		1700-1890	1520-1690	1360-1510	1180-1310
Power KW(HP)		2×55 (75)	2×90 (125)	2×132 (175)	2×200 (270)
Dimension L x W x H ( mm )		4100X2250X2285	4140X2280X2425	4560X2450X2780	5100X2690X3200
Weight ( t )		7.8	10.3	16	25.6
Hydraulic lubrication station	Power KW(HP)	2×0.25(0.33)			
	Safety	To make sure the supply of the oil with double oil pump;stop working without oil or hydraulic pressure;temperature falls when the water cool;start the motor by heating it in winter.			
	Oil tank heater power	2Kw			
	Dimension (L×W×H) (mm)	820×520×1270			

Note:

- 1.Size and size proportion of finished product have relations with row material hardness, feed size. chemical composition, age, etc.
- 2.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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