



HST SINGLE CYLINDER HYDRAULIC CONE CRUSHER

TOP 1 BRAND OF CHINA'S CRUSHING
AND GRINDING INDUSTRY



PRODUCT PRESENTATION

With the social development, in mining stone industry, people not only demand high for the production capacity of crushers, but also attach an increasing importance to energy utilization, product size, maintenance and adjustment cost, service and other requirements. HST single-cylinder hydraulic cone crusher is designed to meet these requirements. It combines mechanical, hydraulic, electrical, automation, intelligent control technology into one set, having a number of unmatched advantages compared to traditional crushers. It widely applies to the secondary crushing, fine crushing and extra fine crushing.



Three **Innovative Technologies** highlight the value of Liming Brand

1. The combination of reasonable eccentricity, chamber type and motion parameters improve working efficiency enormously.
2. Laminated crushing cavity type is optimized to greatly improve product size.
3. New intelligent automatic control system makes the maintenance and adjustment of crushing process more convenient and accurate.

Purpose and Application Scope

HST single cylinder hydraulic cone crusher is applicable to medium-size crushing and fine crushing in such industries as metal and non-metallic ores, cement, sand making, metallurgical, etc. Besides, it is most suitable for crushing all kinds of ores and rocks like iron ore, non-ferrous metal ores, granite, limestone, quartzite, sandstone, cobble, etc.

It adapts to the environment temperature ranging from 25 degrees below zero to 40 Celsius degrees.

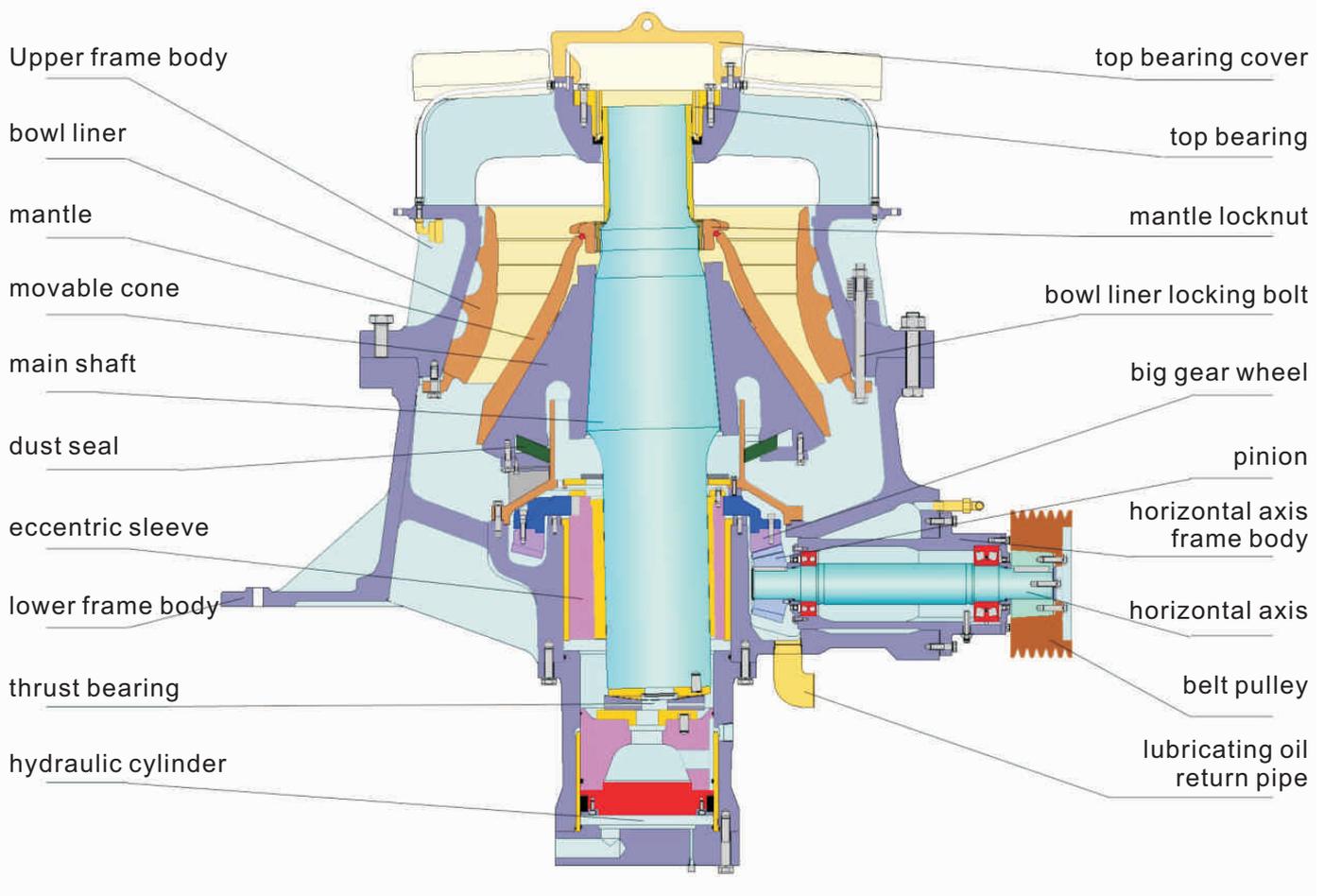
STRUCTURE FEATURES



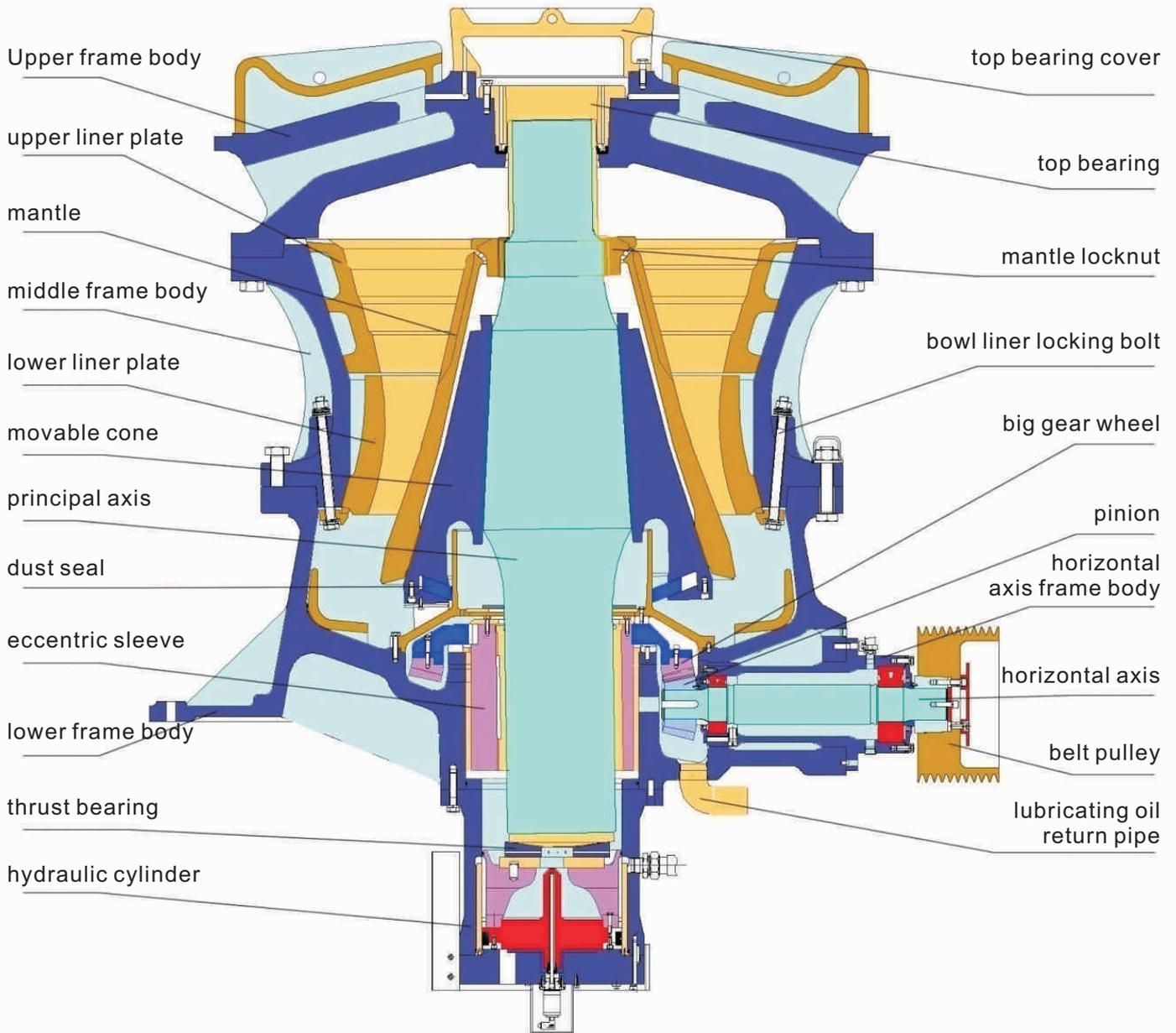
The working principle of HST single cylinder hydraulic cone crusher

HST single cylinder hydraulic cone crusher mainly comprises upper frame body, middle frame body(second crushing type), lower frame body, movable cone, eccentric sleeve, transmission part, hydraulic cylinder and other components. The horizontal shaft driven by the motor makes eccentric sleeve rotating via the gear, then the eccentric sleeve drives the movable cone do circular swing to realize continuous stone extrusion. Hydraulic cylinder, which is located at the bottom of the movable cone, will make the movable cone move up and down to adjust the size of discharging opening, thereby adjusting the product shape. When something that cannot be crushed enters into the crushing cavity, such as metal, the hydraulic cylinder will automatically make the movable cone fall, discharge the metal, then come back. In this way, the crusher is well protected.

Structure chart of HST fine crushing type



Structure chart of HST medium-size crushing type





PERFORMANCE ADVANTAGE

1. Greater production capacity and higher efficiency

The combination of reasonable eccentricity, chamber type and motion parameters improve production capacity and working efficiency enormously.

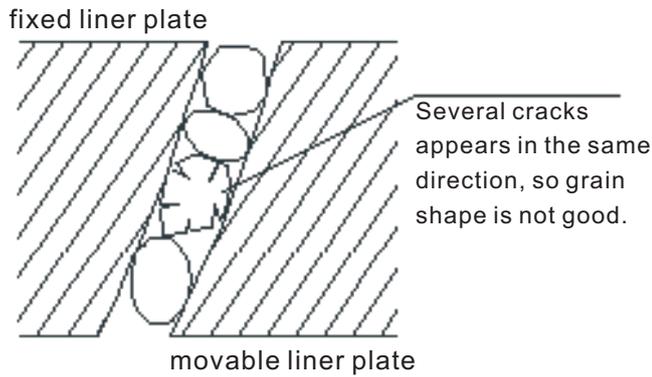
The following is performance comparison between HST single cylinder hydraulic cone crusher and traditional single cylinder hydraulic cone crusher:

Model	big end diameter of movable cone (mm)	Max Feeding Size (mm)	Adjustable Range of Discharging Opening (mm)	processing capacity (t/h)	products smaller than discharging opening	Electric Motor Power (kW)	Weight (t)
PYY-B0913	900	130	15-40	40-100	45%	≤75	10
HST160/H1	910	185	13-38	65-200	82%	≤160	9.5

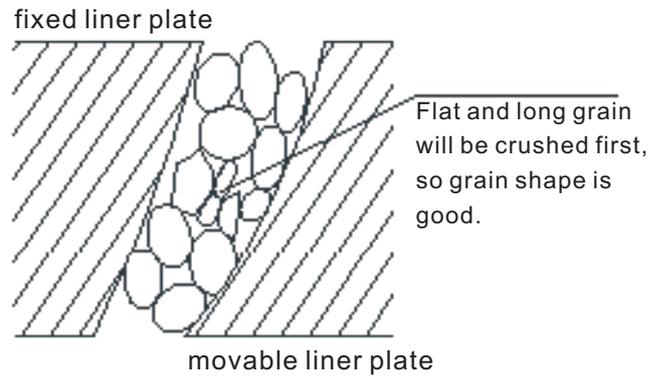
As is shown above, compared with other cone crushers of the same size and specification, HST single-cylinder hydraulic cone crusher can input more power and provide greater crushing ratio and through capacity due to optimized strength design.

2. Better product shape

The crusher applies laminated crushing principle not only to improve product shape, but also to enhance crushing production and efficiency. The working principle is shown as following:



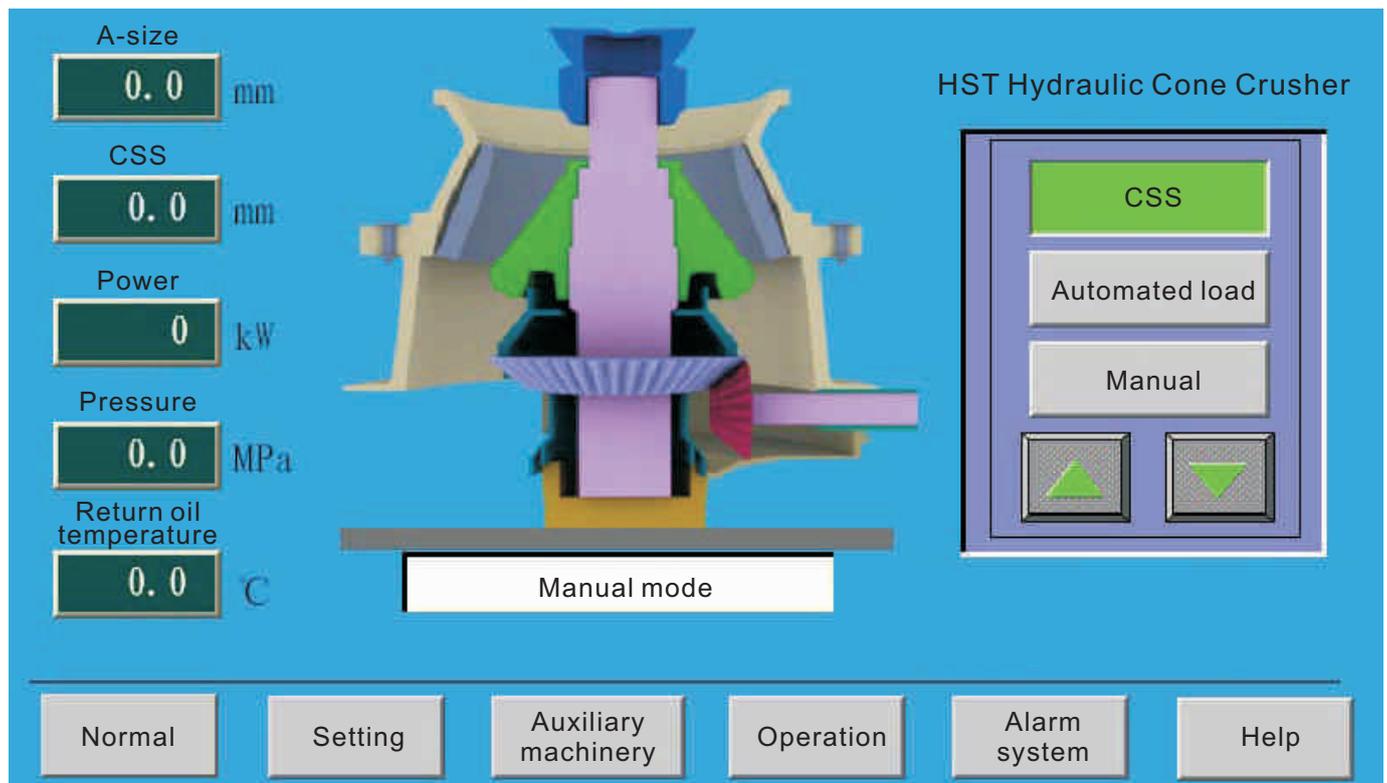
Single Grain Crushing



Laminating crushing

3. More precise control and adjustment

Automatic control system offers a variety of operating modes to continuously monitor crusher internal actual load and display various operating parameters, in this way, it is convenient for the users to know real-time crusher operation. It also improves the utilization rate of the crusher and gives full play to its optimum performance.



STRUCTURE FEATURES



Structure Features of HST Hydraulic Cone Crusher

New concept in structure design

HST single cylinder hydraulic cone crusher adopts the structure design combining original main shaft floating with hydraulic elevator control, integrating the adjustment of the discharging opening and overload protection functions into one set.

Sliding bearing applies special oil wedge design to avoid its direct frictional contact with shaft, so it enjoys higher efficiency and longer life.

1:Special bearing with larger load capacity

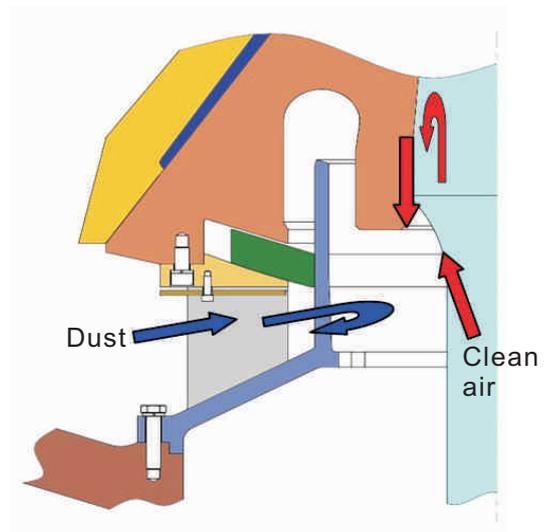
The special design of oil wedge enables the sliding bearings to convert the axial rotary motion into oil film strength, which forms a stable lubricating oil film between the bearing and axis. This oil film keeps the bearing and axis apart, and reduces the friction, heat and damage, as well as prolong the service life of bearing.

2:Reinforced frame structure with longer service life

NDT inspection adopted in key parts, combined with reinforced frame structure design, endow the machine with higher strength, higher reliability and longer service life.

3:Succinct structure with improved reliability

- a. Assisted by the hydraulic lifting system, the reloadable axis also functions as to adjust the discharging opening and to realize iron-releasing protection, all of them simplify the structure of crusher and improve the reliability of equipment operation.
- b. Positive pressure dust prevention system effectively prolongs the service life of lubricating oil and the crusher as well.
- c. Pressure margin produced by the high pressure of our unique hydraulic system improves the reliability of operation.
- d. Spiral bevel gear enables the power transmission to be stable, effective, and less noisy.
- e. All the inspection and maintenance of the crusher can be executed from the upper part conveniently.
- f. Replacement of eccentric bushing is easy and simple, so the eccentricity can be adjusted according to customer's requirements.
- g. Various crushing cavities are available in accordance with sizes of final products.
- h. Automatic control system is capable to be remote controlled.



4: Optimized station with easy maintenance

- a. Integration of the lubrication station and hydraulic station saves installation space;
- b. Easy maintenance and operation is realized by the optimized component arrangement in the station;
- c. One third of oil consumption as regular lubrication/hydraulic station need is sufficient for daily operation.



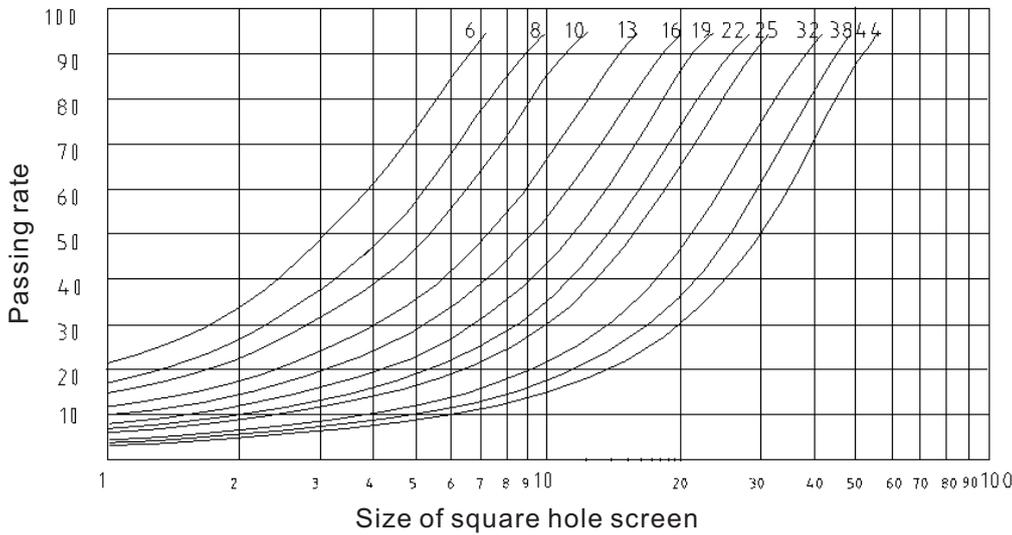
TECHNICAL PARAMETERS

Cavity parameters

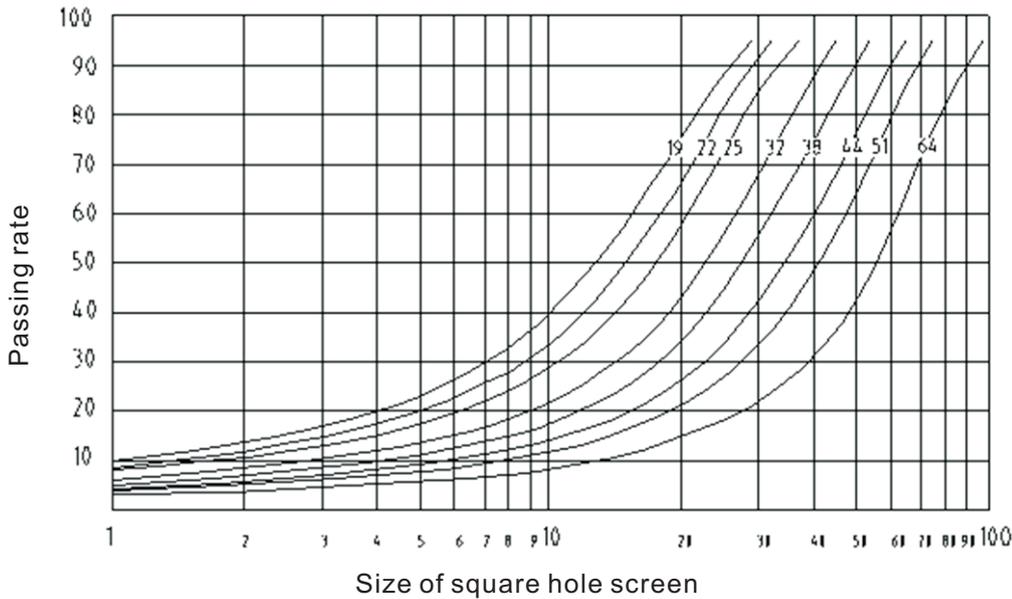
Model	Cavities	Maximum feed size(mm)	CSS min-max(mm)	Capacity (tph)	Power KW(HP)	Dimension (L×W×H)(mm)	Weight (t)
HST100	S1 Extra Coarse	240	22-38	85-170	90(125)	1535×1275×2710	9
	S2 Medium Coarse	200	19-32	70-130			
HST160	S1 Extra Coarse	360	25-54	120-345	132(175)	2045×1635×3040	15
	S2 Medium Coarse	300	22-48	105-305			
	S3 Coarse	235	19-48	90-275			
HST250	S1 Extra Coarse	450	35-54	255-605	220(300)	2675×2550×3940	23
	S2 Medium Coarse	400	29-51	215-515			
	S3 Coarse	300	25-51	190-490			
HST315	S1 Extra Coarse	560	41-76	335-1050	315(400)	3110×2945×4480	40
	S2 Medium Coarse	500	38-70	305-895			

Model	Cavities	Maximum feed size(mm)	CSS min-max(mm)	Capacity (tph)	Power KW(HP)	Dimension (L×W×H)(mm)	Weight (t)
HST100	H1 Fine	135	10-32	45-130	90(125)	1540×1280×2300	9
	H2 Medium Fine	65	8-19	35-80			
	H3 Extra Fine	38	4-16	27-60			
HST160	H1 Fine	185	13-38	66-210	132(175)	2000×1550×2600	15
	H2 Medium Fine	90	10-32	65-165			
	H3 Extra Fine	50	6-25	48-105			
HST250	H1 Fine	215	16-44	110-395	220(300)	2315×1830×2940	23
	H2 Medium Fine	110	13-38	115-340			
	H3 Extra Fine	70	8-32	90-255			
HST315	H1 Fine	275	16-51	170-665	315(400)	2740×2200×3590	40
	H2 Medium Fine	135	16-38	190-505			
	H3 Extra Fine	65	13-22	205-320			

Graph of medium-size crushing



Graph of fine crushing



Note:

1. Maximum feeding size accounts for 80% of maximum feeding opening.
2. Production capacity data in the graph is just an approximate production performance of crushers and used as a reference in preliminary selection. The actual production capacity shall be estimated according to the average data or 80% of the maximum production capacity.
3. Data in the graph is based on the through capacity of 1.6 t/m³ dry materials in open system. We assume that maximum feeding size is the maximum allowable feeding size of crushers, except those fine materials smaller than tight edge discharging size(CSS).
4. Production capacity is related to material properties, crushing ratio, eccentricity, feeding size distribution and other factors. Please consult our sales staff for final selection.

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



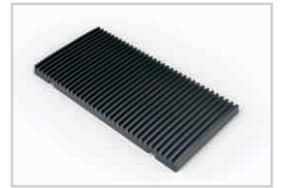
Impact Plate



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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