

/ Z E N I T H I N T H E W O R L D /



**HPT**  
圆锥式破碎机  
Cone Crusher

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# HPT系列多缸液压圆锥破碎机

## HPT Series Multiple Cylinder Hydraulic Cone Crushers

### 产品简介 / *Introduction*

上海西芝HPT系列多缸液压圆锥破碎机以优异的现场表现和良好的客户反馈成为中国多缸液压圆锥破碎机的领先者。HPT应用了世界最前沿的破碎机设计技术，破碎效率更高，操作更方便，更重要的是能够全面高效地解决人们普遍关心的产量、产品粒形、细粒级含量、生产维护成本以及适用性范围等方面的问题。

ZENITH HPT series multiple cylinder hydraulic cone crushers are the pacemaker in China's multiple cylinder hydraulic cone crushers for the excellent operating performance and positive customer feedback. It incorporates the latest global crushing technologies with high efficiency and easy operation. Moreover, the HPT series multiple cylinder hydraulic cone crushers can efficiently fulfill all your crushing demands, such as: large capacities, first-class cubicity, high percentage of fine end products, low operating and maintenance cost, full process adaptability, etc.

### 广泛应用 / *Wide Application*

作为新一代高效圆锥破碎机，上海西芝HPT系列多缸液压圆锥破碎机广泛应用于采矿、水泥、砂石、冶金等行业。从黑色金属矿到有色金属矿，从石灰石到玄武岩，适用于各种金属和非金属矿石的中碎、中细碎和细碎作业，尤其是在细碎和超细碎作业中表现更为卓越。

As a new generation of high efficient cone crushers, HPT series multiple cylinder hydraulic cone crushers are widely applied in mining, cement, sand, stone, metallurgical and other industries. From metal ore to nonmetal ore, from ferrous metal ore to nonferrous metal ore, from limestone to basalt, HPT series multiple cylinder hydraulic cone crushers can provide excellent performance in secondary, tertiary and quaternary crushing application, especially in tertiary and quaternary crushing process.





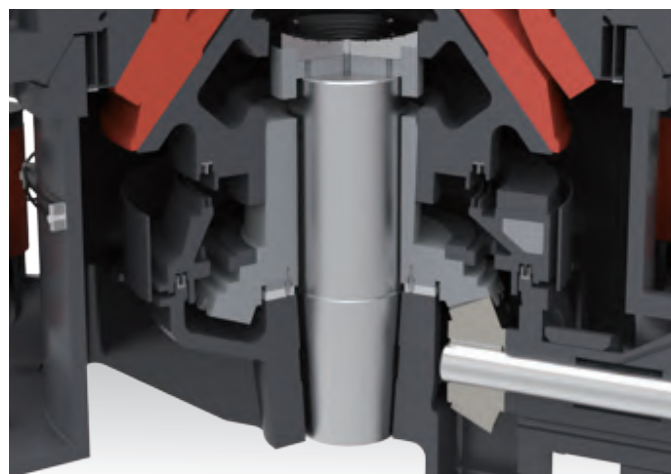
## 性能特点 / *Product Features*

### 结构优化,效率高

#### *Optimized Structure for Higher Production Efficiency*

HPT采用独特的主轴固定，偏心套绕主轴旋转的结构，加之优化的传动部件和内部结构设计，设备承载能力强，装机功率大，体积小，效率高，噪音低。

The unique structure with a fixed main shaft and an eccentric bushing rotating around the shaft, the optimized transmission parts and internal structure design allow bigger bearing capacity, higher installed power, smaller floor space and lower noise.



### 全液压调节,方便可靠

#### *Full Hydraulic Control for More Convenience and Reliability*

HPT使用全液压操控，设备从保险清腔到调整及锁紧全部采用液压操作，工作更稳定可靠操作更方便，减少了停机时间，同时还可以实现全自动化操作。

The whole operating system adopts full hydraulic control. From safety, cavity clearing to adjustment and locking, hydraulic manipulation guarantees the stability, convenience and reliability of the operation, greatly reducing the downtime. Full-automatic operation is achieved at the same time, lowering the labor costs.



### 液压润滑一体化，设备控制自动化

#### *Integrated Hydraulic Lubrication System*

HPT配备了一体式的液压润滑系统和集中的自动化智能控制系统，节省了液压润滑投入成本的同时，实时监测设备运行状态，保障了设备的安全稳定运行，设备操作更省心省力。

HPT series multiple cylinder hydraulic cone crushers are equipped with integrated hydraulic lubrication system and centralized automatic control system, decreasing the input cost of hydraulic lubrication. And the two systems can monitor the operating state in real time, ensuring that the equipment can run safely and stably.

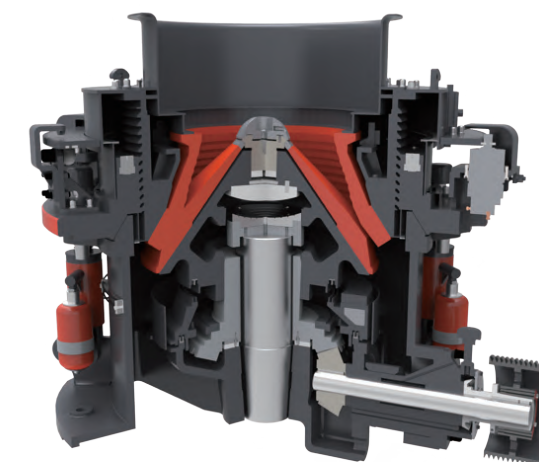


### 层压破碎,出料粒形好

#### *Inter-particle Crushing for Better Product Quality*

HPT利用层压破碎原理对物料进行破碎，通过对设备和腔型进行优化，提高了层压破碎效率，破碎效率高，易损件磨损低，成品粒型呈立方体，细粒级含量高，提升了成品质量，降低了设备和整个系统的生产成本。

The optimized structure and cavity, adapting interparticle crushing principle, ensure high performance of the crushers. It improves the interparticle crushing efficiency and decreases the wear of wear-resistant parts. And the quality of final products is highly improved as the product shape is cube sized and the content of fine product is high. The unique design lowers the operation cost of the equipment and the whole operation system.



### 一机多用 腔型转换灵活

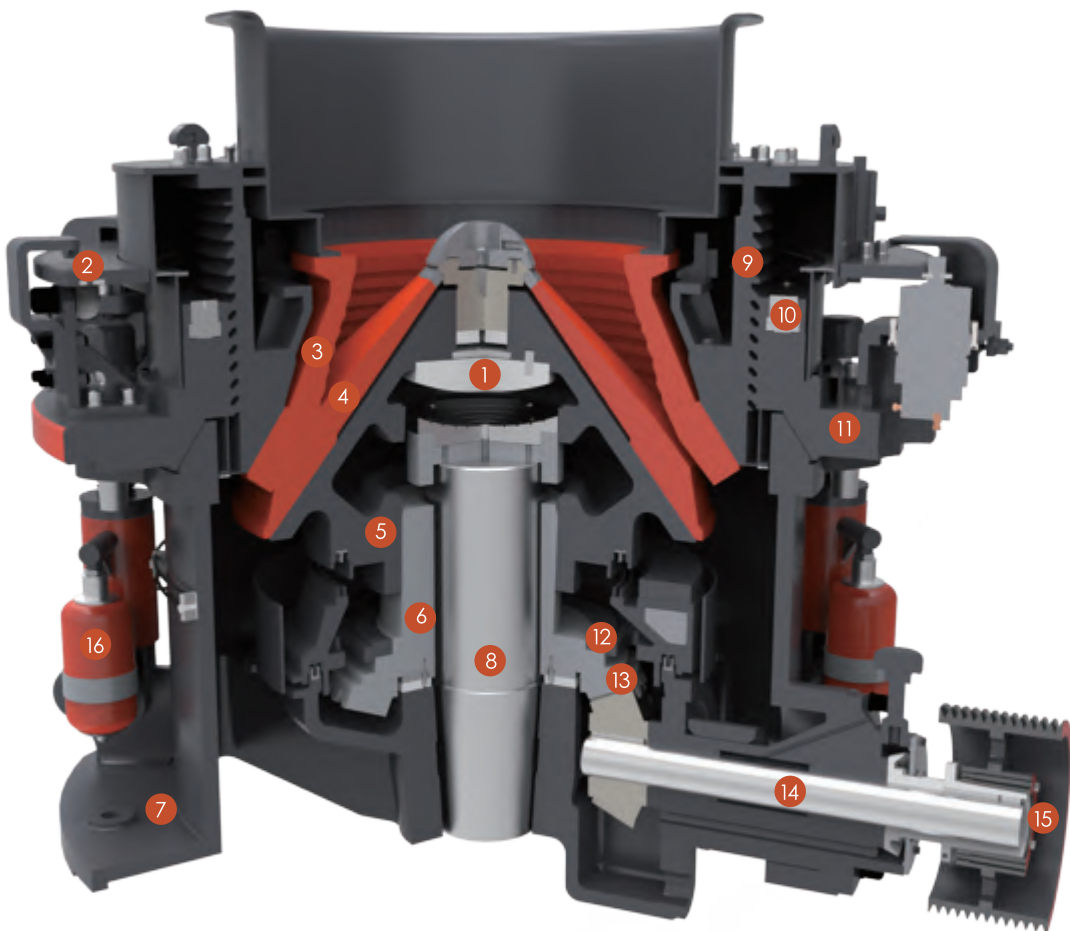
#### *Flexible Cavity Conversion and Wide Application*

HPT 配置了中碎和细碎腔型，仅需更换相应腔型衬板等少量零件，便可在腔型之间转换，满足中碎和细碎工艺需求，实现了一机多用。

HPT series multiple cylinder hydraulic cone crushers have multiple cavities from secondary, tertiary to quaternary, and the conversion between the cavity-type is very convenient by replacing only a few components such as the liner plate. So, it's convenient to apply to various kinds of production process requirements.

# 主要结构 / Detailed structure

# 结构特点 / Structure Features



- |   |                         |                            |                               |
|---|-------------------------|----------------------------|-------------------------------|
| 1、球轴承<br>Socket bearing                 | 5、动锥<br>Movable cone    | 9、调整环<br>Adjusting ring    | 13、小锥齿轮<br>Pinion             |
| 2、液压调整装置<br>Hydraulic adjustment device | 6、偏心套<br>Eccentric bush | 10、锁紧缸<br>Locking cylinder | 14、传动轴<br>Transmission shaft  |
| 3、轧臼壁<br>Concave                        | 7、机架<br>Main frame      | 11、支撑套<br>Supporting bush  | 15、皮带轮<br>Belt pulley         |
| 4、破碎壁<br>Mantle                         | 8、主轴<br>Main shaft      | 12、大锥齿轮<br>Big gear        | 16、保险杠<br>Protective cylinder |

## 层压破碎腔型

### Inter-particle Crushing Cavity

破碎腔型采用高效层压破碎原理，充分利用物料间作用进行破碎，提高了破碎效率，降低了易损件磨损，成品呈立方体，细粒级含量高。

By adopting efficient inter-particle crushing principle, the crushing cavity highly improves the crushing efficiency, greatly reduces the abrasion of the quick-wear parts, and finally obtains the first-class cubicity, high percentage of fine end products.

## 特殊衬板固定

### Special Liner Plate Fixation

衬板固定采用更先进的方式，固定更可靠，并且衬板安装无需填料，更换成本更低、更快捷。

Advanced fixation method makes the liner plate more reliable, and the liner plate can be installed without packing, lowering the replacement cost and simplifying the operation.

## 液压马达调整排料口

### Closed Side Setting (CSS) Adjusted by Hydraulic Motor

设备通过液压马达正反向旋转，可实现远程准确连续调节排料口大小；通过液压马达连续旋转还能实现调整环的快速拆装，减少停机时间。

The equipment can remotely, accurately and continuously adjust the closed side setting through the forward and reverse rotation of hydraulic motor. Moreover, the equipment's downtime can be greatly shortened. While the disassembling and assembling can be quickly completed through hydraulic motor's continuous rotation.

## 液压锁紧

### Hydraulic Locking

设备调整套锁紧采用内置多个小型液压缸锁紧，作用力均匀，锁紧可靠。

The equipment adopts several build-in small hydraulic cylinders to lock the adjusting sleeve, which balances the force and makes the lock more reliable.



## 整体铸造机架

### *Integral Casting Frame*

设备采用了整体铸造机架，整体结构进一步优化，强度更大，能有效保护设备在工作过程中机架和高速旋转的平衡圈不被磨损。

Integral casting frame is adopted and the overall structure is further optimized with higher intensity. Thus, the frame and the high-speed rotating balance ring can be effectively protected from wearing in the working process.

## 液压保险和清腔

### *Hydraulic Safety and Clearing*

设备保险系统由多个大型保险缸和蓄能器组成，保险缸正向拉紧时为设备提供破碎力，同时还能起过载保护和过铁释放的作用，反向可实现清腔功能，大大减少停机时间。

The safety system is made up by several large hydraulic protective cylinders and accumulators. Hydraulic protective cylinders not only provide the crushing force, overload protection and iron release when it is strained, but also clear the cavity when it is released, which shortens the downtime greatly.

## 多重密封保护装置

### *Multiple Seal Protection*

在T-U型密封基础上增加球面浮动密封，配合正压防尘系统，密封更可靠，有效防止灰尘污染润滑油，延长润滑油和设备零部件的使用寿命。

Spherical floating seal, increased on the base of T - U seal, together with positive pressure dust control system make the seal more reliable, effectively preventing dust from polluting the lubricating oil and prolonging the service life of lubricants and equipment parts.

## 固定式主轴

### *Fixed Principal Axis*

设备采用固定式主轴，偏心套绕主轴旋转的结构，设备承载能力大大增加，结构更加紧凑，体积小，效率高。

By adopting the unique structure of eccentric bushing rotating around the fixed principle axis, the bearing capacity is greatly enhanced with a higher crushing efficiency and the structure is more compact with a smaller floor space.

## 螺旋伞齿轮传动

### *Transmission by Spiral Bevel Gear*

传动系统采用螺旋伞齿轮传动，承载能力强，传动平稳，噪音小。

By using spiral bevel gear, the drive system ensures a greater compressive capacity, a stable transmission process and lower noise.

## 一体式液压润滑系统

### *Integrated Hydraulic and Lubrication System*

液压润滑系统采用一体式结构设计，在保证设备可靠润滑和液压需求的前提下，结构更加紧凑，减少了液压和润滑油用量，安装空间更小。

On the premise of reliable lubrication and hydraulic requirements, the integrated design of hydraulic and lubrication system saves not only the use of hydraulic and lubricating oil but also the installation space with a compact structure.

## 自动化智能控制系统

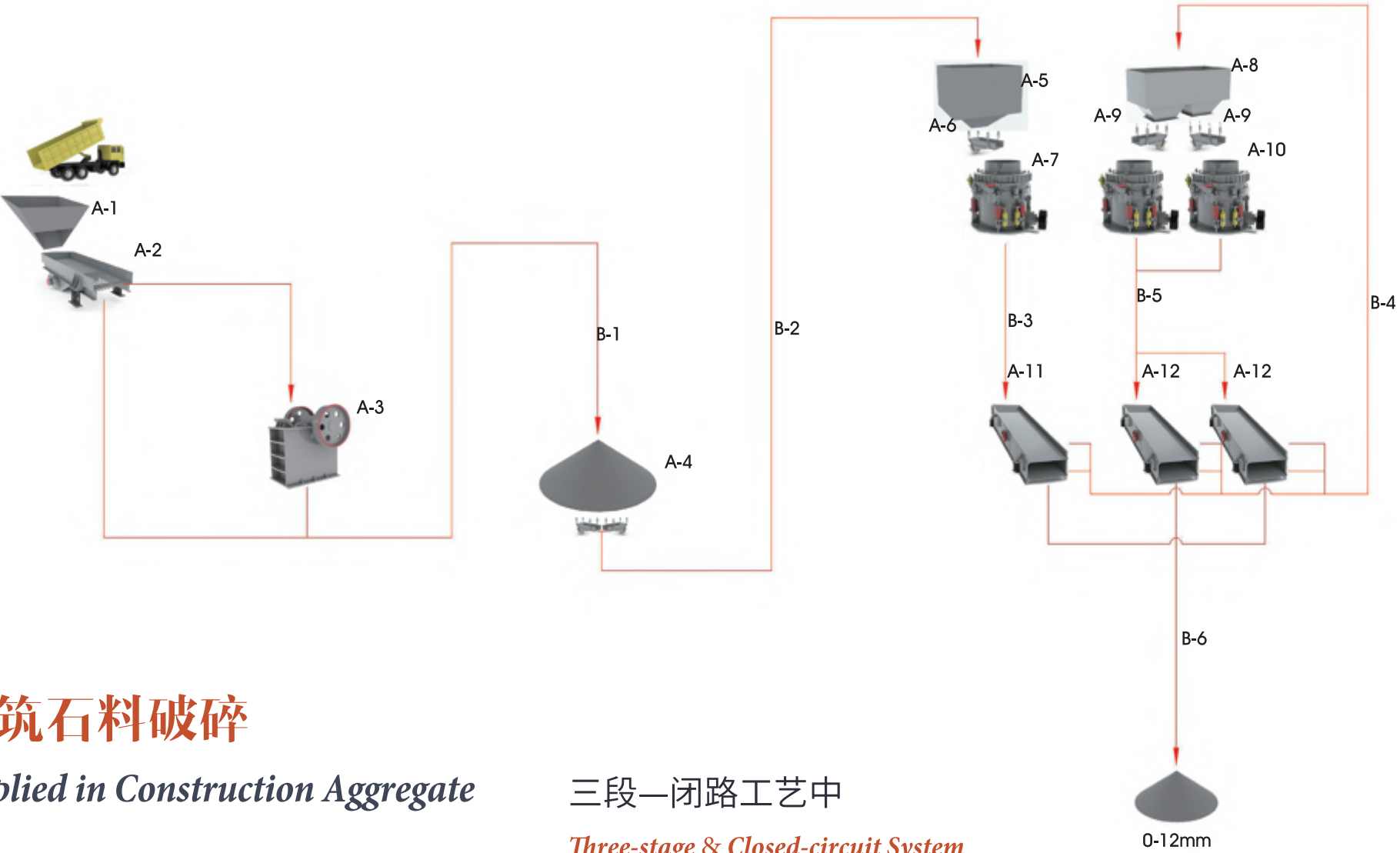
### *Automatic and Intelligent Control System*

控制系统采用液压润滑和电气的集中自动化控制可实现自动补压、多模式运行、故障保护报警和参数监测等功能，设计也更加紧凑，设备运行安全系数更高，操作更加简单方便。

Centralized automatic control of hydraulic lubrication and electric provides several functions such as pressure maintenance, multi-mode operation, breakdown protection, alarm and parameter monitoring. More compact structure, safer operation and more convenient manipulation are achieved at the same time.



应用领域 / *Application Scope*



建筑石料破碎

*Applied in Construction Aggregate*

两段—闭路工艺中

*Two-stage & Closed-circuit System*

作为中碎设备，成品率高，出料呈立方体，大大提升了生产效率。  
As a secondary crusher,HPT series multiple cylinder hydraulic cone crushers greatly improve crushing efficiency with a high capacity and a high percentage of first-class cubicity in end products.

三段—闭路工艺中

*Three-stage & Closed-circuit System*

作为中碎设备，通过量大，石料被破碎程度更大；  
作为细碎设备，成品率高，循环量小，出料呈立方体，生产效率高。  
As a secondary crusher, HPT series multiple cylinder hydraulic cone crushers promise that throughout volume can be larger and the raw material can be crushed more adequately.  
As a tertiary crusher,HPT series multiple cylinder hydraulic cone crushers ensure a high rate of end products, low circulating volume, first-class cubicity products and high product efficiency.

金属矿石破碎

*Applied in Metallic Mineral*

三段—闭路工艺中

*Three-stage & Closed-circuit System*

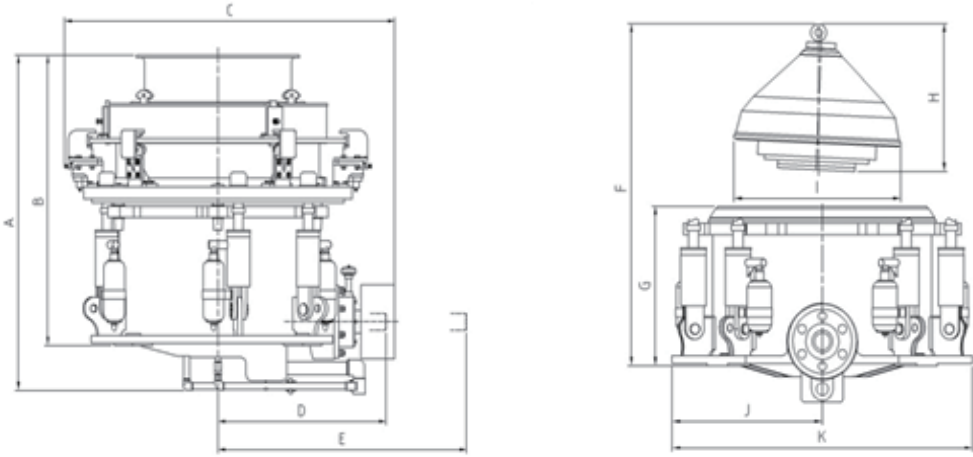
作为中碎设备经破碎物料成品含量高，减轻了细碎设备负荷；  
作为细碎设备，成品率高，循环量小，细粒级含量高，降低入磨产品整体粒度。  
As a secondary crusher,HPT series multiple cylinder hydraulic cone crushers guarantee a high rate of end products. Moreover, the load of the secondary crusher is reduced.  
As a tertiary crusher,HPT series multiple cylinder hydraulic cone crushers ensure a high rate of end products, low circulating volume and a high percentage of fine fraction. Therefore, the load of follow-up mills is greatly reduced.

序号	设备	型号
No.	Equipment	Model
A-1	料仓Hopper	LC5000×5000
A-2	振动给料机Vibrating Feeder	GZD1500×600
A-3	颚式破碎机Jaw Crusher	PE1200×1500
A-4	振动给料机Vibrating Feeder	GZG300
A-5	料仓Hopper	15m3
A-6	振动给料机Vibrating Feeder	GZG500
A-7	圆锥破Cone Crusher	HPT500
A-8	料仓Hopper	30m3
A-9	振动给料机Vibrating Feeder	GZG300
A-10	圆锥破Cone Crusher	HPT500
A-11	振动筛Vibrating Screen	2YK2460
A-12	振动筛Vibrating Screen	2YK2160
B-1	胶带输送机Belt Conveyor	B1200-8/30m
B-2	胶带输送机Belt Conveyor	B1200-10/45m
B-3	胶带输送机Belt Conveyor	B1200-34m
B-4	胶带输送机Belt Conveyor	B1200-15/40m
B-5	胶带输送机Belt Conveyor	B1200-10/34m
B-6	胶带输送机Belt Conveyor	B1200-15/30m

技术参数 / *Technical Parameters*

型号 Mode	HPT100	HPT200	HPT300	HPT400	HPT500	HPT800
最大进料尺寸 Maximum Feeding Size (mm)	140	185	230	295	330	350
排料口调整尺寸 Closed Side Setting (mm)	6-32	10-38	10-44	10-51	13-51	13-51
处理能力 Capacities (t/h)	50-140	90-250	110-440	135-630	220-790	310-1200
最大装机功率 Maximum Installed Power (kw)	90	160	250	315	400	630

外形尺寸 / *Dimensions*



尺寸 Dimensions	HPT100	HPT200	HPT300	HPT400	HPT500	HPT800
A	1583	1927	2182	2295	2977	4057
B	1290	1630	1991	2055	2580	3335
C	1705	2135	2726	2775	3447	3975
D	950	1160	1382	1645	1755	2225
E	1560	1840	2232	2470	2595	3450
F	1720	1810	2491	2530	2970	3255
G	841	950	1095	1210	1385	1673
H	786	832	965	1085	1281	1532
I	835	970	1220	1410	1574	1826
J	755	875	975	1185	1415	1750
K	1510	1750	1950	2370	2830	3500

技术参数

*Technical Information*

型号	腔型	紧边给料口尺寸	最小排料口尺寸	最大装机功率
Model	Cavity	Maximum feeding size(mm)	Minimum discharging size(mm)	Maximum Installed Power (kw)
HPT100	C1(超粗)Extra Coarse	140	19	90
	C2(粗)Coarse	100	13	
	M(中)Medium	70	9	
	F1(细)Fine	50	9	
	F2(超细)Extra Fine	20	6	
HPT200	C2(粗)Coarse	185	19	160
	M(中)Medium	125	16	
	F1(细)Fine	95	13	
	F2(超细)Extra Fine	75	10	
HPT300	C1(超粗)Extra Coarse	230	25	250
	C2(粗)Coarse	210	19	
	M(中)Medium	150	16	
	F1(细)Fine	105	13	
	F2(超细)Extra Fine	80	10	
HPT400	C1(超粗)Extra Coarse	295	30	315
	C2(粗)Coarse	251	25	
	M(中)Medium	196	20	
	F1(细)Fine	110	13	
	F2(超细)Extra Fine	90	10	
HPT500	C1(超粗)Extra Coarse	330	38	400
	C2(粗)Coarse	290	30	
	M(中)Medium	210	22	
	F1(细)Fine	135	16	
	F2(超细)Extra Fine	95	13	
HPT800	C1(超粗)Extra Coarse	350	38	630
	C2(粗)Coarse	299	32	
	M(中)Medium	265	25	
	F1(细)Fine	220	16	
	F2(超细)Extra Fine	150	13	



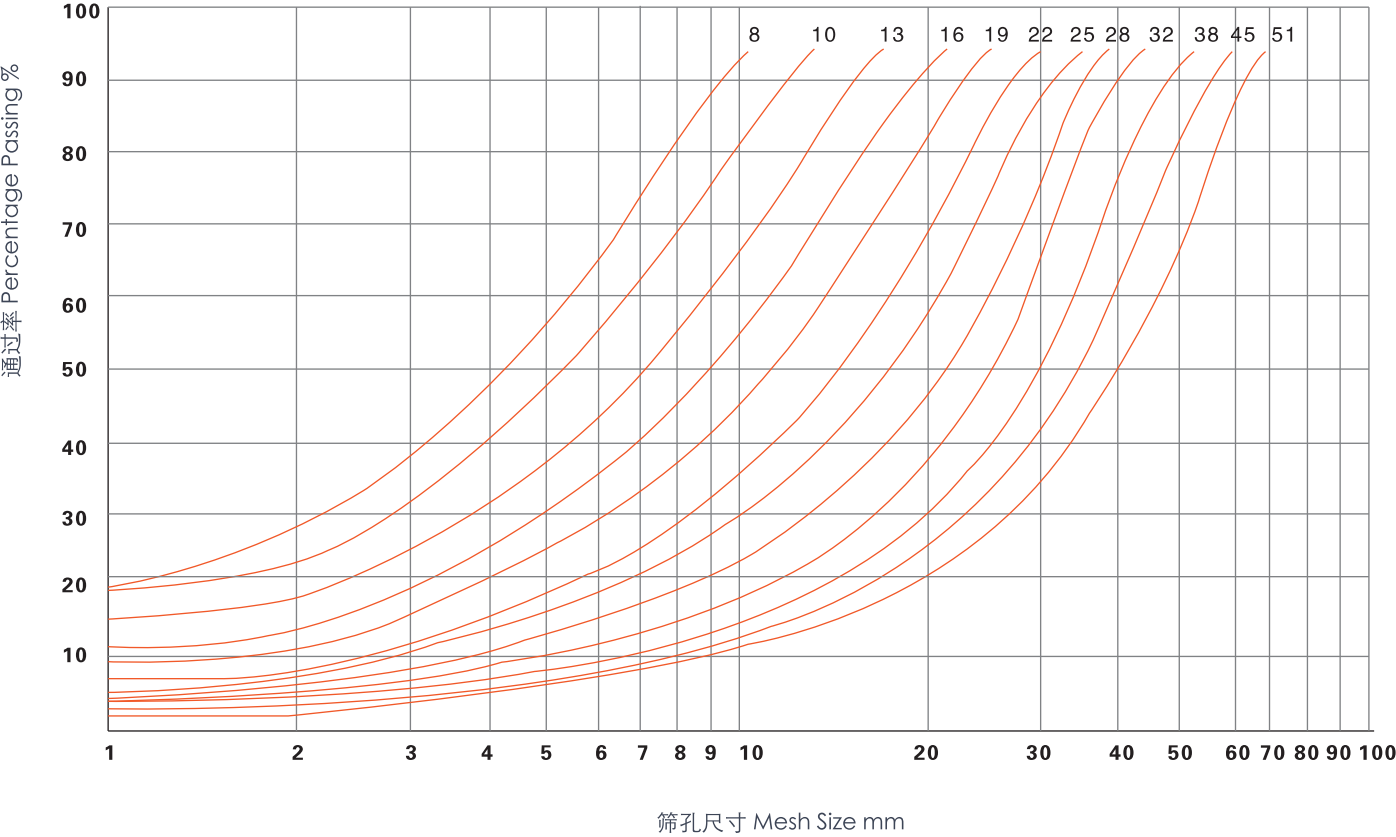
生产能力 / *Indicative Capacities*

型号	紧边排料口尺寸 (mm) Closed side setting										
Model	8	10	13	16	19	22	25	32	38	44	51
HPT100	50-60	55-70	60-80	70-90	75-95	80-100	85-110	95-140			
HPT200		90-120	115-150	135-180	145-190	155-200	165-220	185-235	200-250		
HPT300		110-140	145-185	175-220	190-240	210-260	220-280	240-320	285-380	335-440	
HPT400		135-175	180-230	215-280	245-320	265-345	285-370	310-430	345-490	390-560	445-630
HPT500			220-290	270-350	305-400	330-430	350-455	385-535	425-605	485-700	555-790
HPT800			310-425	370-500	415-545	450-600	475-730	520-800	570-950	660-1050	750-1200

粒度分布和生产能力与破碎机腔型、给料粒度、物料可碎性、泥土含量、水分含量等因素有关。

Gradation and capacities shown are closely related to crushing chamber, feeding size, material crushability, clay and moisture content, etc.

粒度分布曲线 / *Indicative Gradation Curves*



HPT系列多缸液压圆锥破碎机——全面高效地满足您的需求

*HPT Series Multiple Cylinder Hydraulic Cone Crushers*  
——*Fulfill All Your Crushing Demands with High Efficiency*

设计、生产和客户服务，共同决定我们的产品在任何中碎、细碎和超细碎作业中都能给您带来理想的生产效果：生产产量高，产品粒形好，细粒级含量高，生产维护成本低，适用性广泛。

Design, production and service endow the HPT with perfect performance in secondary, tertiary and even ultra-fine crushing process, which includes: large capacities, first-class cubicity, high percentage of fine end products, low operating and maintenance cost, full process adaptability, etc.



上海西芝——您全方位的服务与解决方案供应商

*ZENITH --- Your Supplier of Comprehensive Service and Solutions*

作为中国破碎、磨粉机械及选矿行业的领航企业，上海西芝矿山工程机械有限公司集研发、生产、销售和技术服务于一体，专业致力于向用户提供骨料生产、工业磨粉和矿物处理优质产品及全套解决方案。凭借可靠的产品质量和优质的售后服务，从业30多年来产品远销欧洲、北美、亚洲、美洲、非洲，大洋洲逾160多个国家和地区。

上海西芝愿与每一位客户和谐共进，成为您全方位的服务与解决方案供应商。

As the leading enterprise in the field of crushing, grinding and mineral beneficiation, Shanghai Zenith Company is professionally engaged in providing products and optimum solutions for aggregate production, industry pulverizing and mineral processing. During the past 30 years, by virtue of reliable products quality and faultless after-sales service, Shanghai Zenith has obtained good reputation from customers from more than 160 countries and areas around the world.

Zenith would like to join hands with each customer and provide all-round service and solutions to customers so that we can make progress together.





HPT系列圆锥式破碎机生产现场

HPT Series Cone Crushers production field





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