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Product Brochure



BROKEN SERIES

Jaw crusher

XPC

Heavy-duty jaw crusher for hard materials: iron ore, granite, basalt. High-strength alloy steel, optimized cavity, low energy consumption, long lifespan.

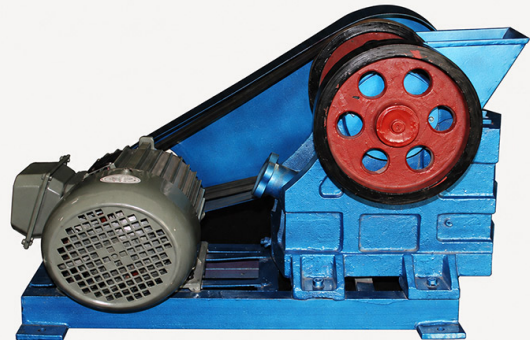
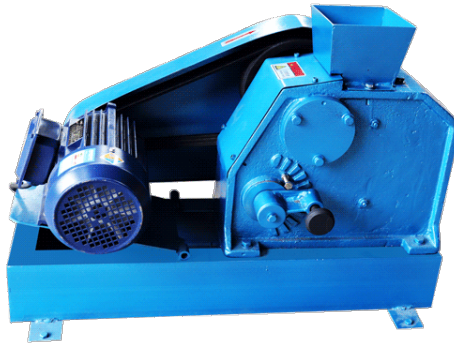
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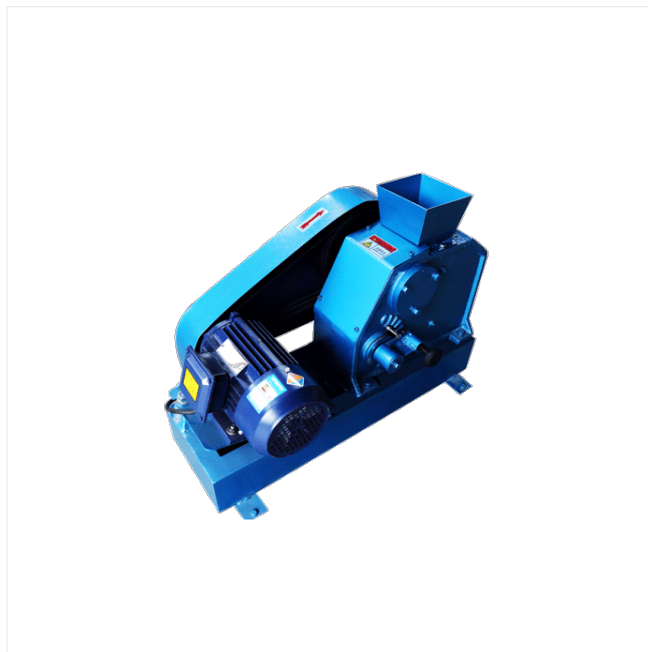
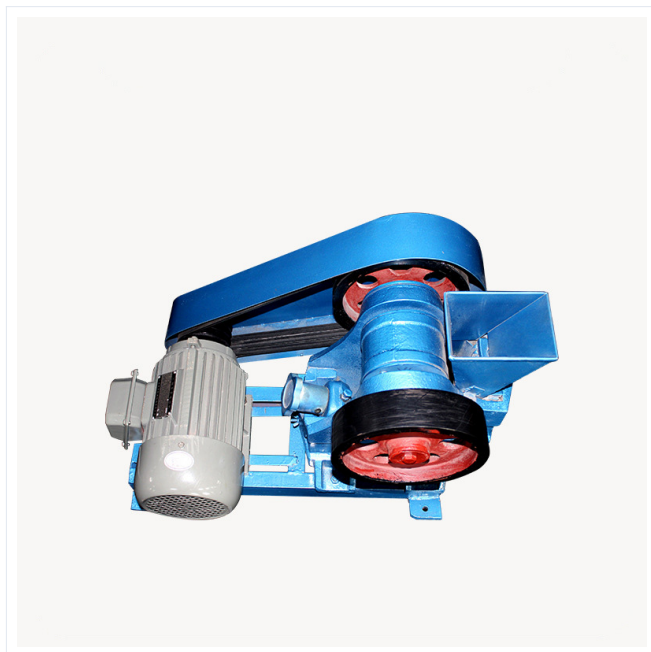
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Product Overview

Heavy-duty jaw crusher for hard materials: iron ore, granite, basalt. High-strength alloy steel, optimized cavity, low energy consumption, long lifespan.





Product Introduction

Jaw crusher is a heavy-duty crushing equipment widely used in mining, metallurgy, building materials, chemical and other industries. It is specially designed for medium and coarse crushing of high-hardness materials. Its core structure is cast from high-strength alloy steel. Combined with the optimized crushing chamber shape and power system, it can efficiently process various types of hard raw materials such as iron ore, granite, basalt, cement clinker, and meet the needs of large-scale industrial production. The equipment achieves flexible configuration through modular design and has the characteristics of high stability, low energy consumption and long life.

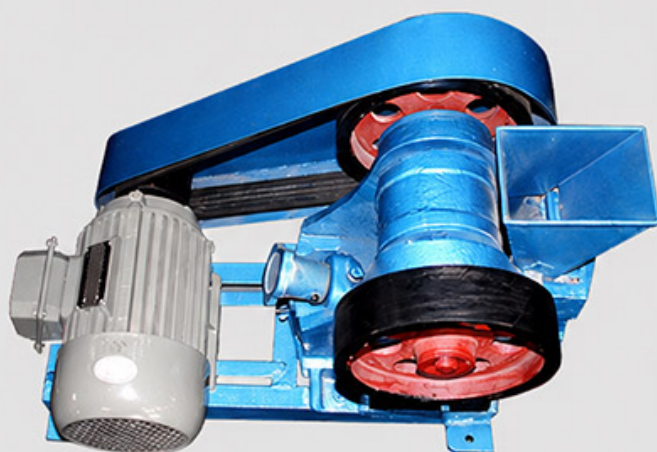
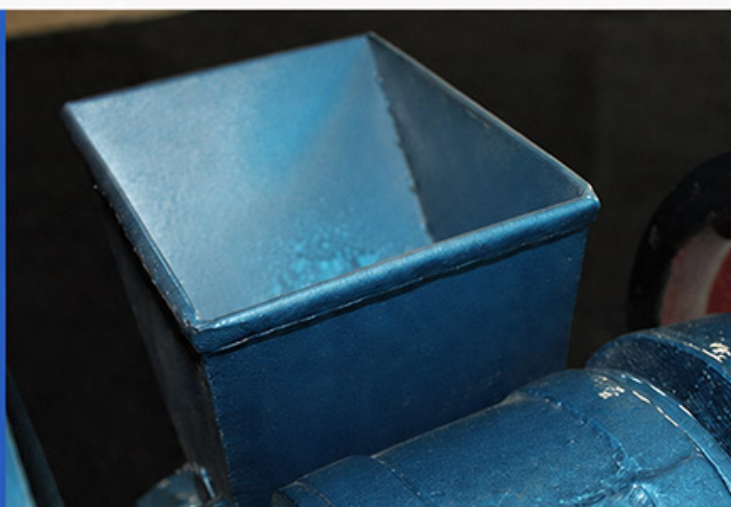


Uniform Particle Size Distribution

Particle size variation of approximately $\pm 15\%$, ensuring uniformity.

Reliable Operation

Adjustable discharge port ensures a wide adjustment range and reliable operation.



Compact Size and Easy Operation

The lubrication system is reliable, components are easy to replace, and maintenance is simple, keeping the workload low.

- **Mining field** : Used for primary crushing of metallic ores, non-metallic ores and tailings, to provide suitable particle size raw materials for subsequent ball mills, magnetic separators and other equipment.
- **Building materials industry**: Crushing cement raw materials, limestone, sandstone,

etc. to meet the strict requirements of raw material particle size in the concrete aggregate production line.

- **Metallurgical industry:** Processing high-hardness alloy ores such as manganese ore and chromite to improve smelting efficiency.
- **Infrastructure projects:** Participate in stone crushing and shaping for road paving, airport runway and other projects.
- **Environmental recycling:** Crushing waste construction waste and industrial waste to achieve resource recycling.

Technical parameters

Type: Jaw Crusher

Model: XPC100×150

Application fields: mining, metallurgy, chemical industry, building materials, water conservancy

Feeding particle size: 90 (mm)

Discharge particle size: 6-38 (mm)

Production capacity: 200-180 (kg/h)

Power consumption: 2.2 (kw)

Motor power: 2.2KW

Target: Coal

Specifications: XPC100*60, XPC100*150, XPC60*100

• Material property analysis

- **hardness grade:** Select the crushing ratio based on Mohs hardness value (for example, granite hardness 7-8 requires a 4-6 level crushing ratio).
- **Moisture content:** Wet and sticky materials need to use a model with a drying system or increase the size of the discharge port to prevent clogging.

• Capacity demand matching

- Reference formula: theoretical output = feed amount × (1-crushing loss rate) × screening pass rate
- Example: If you need to process 200 tons of raw materials per hour (crushing loss rate is 15%), you need to choose a model with a nominal output of ≥ 230 tons/hour.

• Venue space restrictions

- Vertical jaw crushers are preferred for basements or small spaces, and horizontal jaw crushers are recommended for open-pit mines to reduce floor space.

• Budget and long-term costs

- Although the initial investment of high-end models is high, the life of the lining plate can reach 8,000-12,000 hours, and the comprehensive operation and maintenance cost is reduced by more than 20%.

• Environmental Compliance

- Choose a model equipped with a dust removal and noise reduction device, with a dust emission concentration of $\leq 10\text{mg/m}^3$ and a noise level of $\leq 75\text{dB(A)}$.

Working Principle

- **Feeding stage**

- The material is evenly transported to the crusher inlet through the feeder, and the gap between the jaw plates is automatically adjusted to ensure a stable fall of the material.

- **broken stage**

- The motor drives the pulley to drive the eccentric shaft to rotate at high speed, causing the movable jaw to make periodic reciprocating movements.
- The material is subjected to high-intensity extrusion, bending and impact in the V-shaped crushing cavity formed by the movable jaw and the fixed jaw, completing multi-dimensional crushing.

- **Discharging stage**

- The crushed materials are discharged through the bottom discharge port, and then enter the next process after being classified by the screening system.

- **closed loop control**

- The system monitors the discharging particle size in real time and dynamically optimizes the crushing parameters through a feedback adjustment mechanism to ensure that the product meets the target specifications.

Product Features

• Composite crushing cavity design

- The multi-stage toothed lining plate layout effectively reduces the material over-crushing rate and improves the uniformity of the finished product through the progressive extrusion and crushing of the movable jaw and the fixed jaw.
- A wear-resistant buffer layer is added to the bottom of the crushing chamber to extend the service life of key components.

• Intelligent power control system

- The hydraulic drive adjustment device achieves precise matching of the movable jaw stroke and crushing force, adapting to dynamic load changes of materials with different hardnesses.
- Equipped with vibration sensors and automatic shutdown protection mechanisms to monitor equipment operating status in real time and prevent failures.

• High efficiency and energy saving structure

- The heavy-duty eccentric shaft adopts finite element analysis and optimized design, reducing the moment of inertia by 15% and reducing energy consumption by 8%-12% compared with traditional models.
- Equipped with a variable frequency speed motor, the speed can be adjusted according to production needs to achieve a dynamic balance between energy consumption and output.

• Humanized operation and maintenance design

- All inspection openings adopt a quick-release structure, which reduces maintenance time by more than 30%.
- The standardized lubricating oil circuit system is equipped with automatic grease injection function to reduce labor maintenance costs.

Accessories & Customization

Accessories

Grinding jars, heating elements, sample holders, control modules and other matching accessories can be selected according to the product configuration.

Customization

For voltage, capacity, chamber size, process temperature or application requirements, please contact TENCAN for a suitable configuration.