

# The operating instruction of jaw crusher



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## I. Description

Jaw crusher is often used as primary and secondary crusher for mining, metallurgy, construction and some other industries. It takes large pieces of rock, ore, concrete, or other materials, and crush them down to smaller sizes for further processing in a ball mill or hammer crusher.

## **II.** Application

It is widely used in mining, metallurgy, building materials, road, railway, road, slag, water conservancy and chemical industries for crushing various materials with compression strength less than 350 Mpa.

## **III.** Working Principle

The motor transmits power through belt, drives the moving jaw do periodic motion to the fixed jaw surround the eccentric shaft. The movable jaw plate moves forth and back to press the materials with the fixed jaw plate together, the materials will be broken to smaller size and discharged from the outlet of jaw crusher.

## **IV. Features**

1. Symmetrical deep crushing chamber is adopted to maximize range of feed size, capacity and crushing ratio.

2. Bearing seat is designed integrally, so manufacturing difficulty is greatly reduced, and bearing life is increased.

3. Discharging size can be adjusted into any size of the adjustment range.

4. Uniform output particle size, easy operation, reliable performance, low maintenance cost.

| Model       | Inlet Dimension<br>(mm) | Max Feed Size<br>(mm) | Capacity<br>(t/h) | Output<br>Size<br>(mm) | Power<br>(kw) | Overall Dimension<br>(mm) | Weight<br>(kg) |
|-------------|-------------------------|-----------------------|-------------------|------------------------|---------------|---------------------------|----------------|
| PE150×250   | 150×250                 | 125                   | 1-3               | 10-40                  | 5.5           | 875×745×935               | 1160           |
| PE200×300   | 200×300                 | 180                   | 2-6               | 15-50                  | 7.5           | 910×750×990               | 1240           |
| PE200×350   | 200×350                 | 180                   | 3-10              | 18-60                  | 11            | 1000×870×990              | 1520           |
| PE250×400   | 250×400                 | 210                   | 5-20              | 20-80                  | 15            | 1410×1310×1386            | 2572           |
| PE400×600   | 400×600                 | 340                   | 14-36             | 40-100                 | 37            | 1700×1732×1658            | 5800           |
| PE500×750   | 500×750                 | 425                   | 30-80             | 50-120                 | 45            | 1990×1876×1821            | 9000           |
| PE600×900   | 600×900                 | 500                   | 56-192            | 75-200                 | 75            | 2792×3828×2529            | 18900          |
| PE750×1600  | 750×1600                | 630                   | 110-320           | 80-235                 | 110           | 2660×2430×2800            | 29300          |
| PE900×1200  | 900×1200                | 750                   | 180-350           | 100-250                | 110           | 5000×4471×3280            | 55000          |
| PE1200×1500 | 1200×1500               | 1020                  | 400-800           | 150-350                | 160           | 4200×3300×3500            | 101000         |
| PEX150×750  | 150×750                 | 120                   | 8-35              | 10-40                  | 15            | 1280×1610×1081            | 3350           |

### **V. Technical Parameter**

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| PEX250×750  | 250×750  | 210 | 15-45 | 15-50 | 30 | 1695×1920×1646 | 5000 |
|-------------|----------|-----|-------|-------|----|----------------|------|
| PEX250×1000 | 250×1000 | 210 | 15-50 | 20-50 | 30 | 1550×1990×1370 | 6800 |
| PEX250×1200 | 250×1200 | 210 | 20-70 | 20-60 | 45 | 1670×2190×1430 | 9000 |

## VI. Installation and Adjustment

### 1. Adjustment of discharge opening

The adjustment of the discharge opening width of this series of jaw crusher can be realized by increasing or decreasing the number of gaskets. The adjusting device is composed of an adjusting seat, a washer group, a ejector rod, and a tightening bolt.

When the discharge port needs to be adjusted, loosen the nut of the spring tensioning device, screw in the ejector rod to advance the adjustment seat, and increase or decrease the number of adjusting pads. After the adjustment, unscrew the ejector rod and tighten the corresponding nut Pay special attention to properly adjust the tension of the spring.

The tensioning spring device is used to ensure that the movable jaw, toggle plate and adjusting seat of the jaw crusher are closely combined with each other to ensure the normal operation of the crusher. When the crusher is working, the impeachment pressure should not be too large, as long as the toggle plate and the movable plate can be eliminated. The impact between the jaw and the adjustment seat is sufficient.

### 2. Installation Notes

a. Due to the large vibration force when the crusher is working, it is recommended to install the machine on a concrete foundation. In order to reduce vibration, noise and vibration absorption and prevent the impact on nearby building foundations, it is best to pad hardwood between the crusher and concrete foundation pads, rubber bands, or other cushioning materials.

b. The height, depth and area of the foundation shall be designed separately according to the soil conditions. The weight of the foundation can be approximately 5-10 times the weight of the machine, and the depth of the foundation should be greater than the depth of frozen ground. For the installation of the machine and the location of the anchor screws, refer to the basic drawings of various machines.

c. The drainage pit of the machine should be covered with a layer of metal plate and have sufficient inclination to avoid obstructing the discharge of broken materials.

d. If the user needs to install the protective cover of flywheel and sheave, the foundation width can be appropriately widened.

### 3. Use and maintenance

### A. Preparations before starting

1.1 The bearing should be carefully checked for good lubrication, and there should be sufficient lubricating oil in the bearing and at the joints of the brackets.

1.2 Carefully check that all fasteners are fully tightened.

1.3 Check if the transmission belt is good. If the belt is damaged, it should be replaced in time. When there is oil on the belt or pulley, wipe it with a clean cloth.

1.4 Check whether there is ore or other debris in the crushing cavity. If there are ore or other debris, it should

be cleaned first to ensure that the machine starts without load.

1.5 It should be checked whether the jacking bolt is returned, the gasket group is tight, and the T-bolt is tightened. It must be noted that it is strictly forbidden that the jack bolts contact the adjustment seat when the crusher is working.

#### **B.** Start of the crusher

2.1 After inspection, it is proved that the condition of the machine and transmission part is normal before starting.

2.2 This series of crushers are only allowed to start under no load.

2.3 After starting, you must use a bell or other signal to advance notice.

2.4 After starting, if abnormal conditions are found, the operation should be stopped immediately. The abnormal conditions must be identified and eliminated before the crusher can be started again.

#### C. Use and maintenance of crusher

3.1 Only after the crusher is running normally can the feeding be started.

3.2 Materials to be broken should be evenly added to the crushing cavity, and side feeding or stacking feeding should be avoided to prevent unilateral overload or overload.

3.3 Under normal operating conditions, the temperature rise of the bearing should not exceed  $35^{\circ}$ C, and the maximum temperature should not exceed

If the temperature exceeds 70  $^{\circ}$ C, if the temperature exceeds 70  $^{\circ}$ C, the machine shall be shut down to find out the cause and eliminate it.

3.4 Before stopping, the feeding work should be stopped first, and the motor can be turned off after the crushed objects in the crushing chamber are completely discharged.

3.5 During crushing, if the vehicle is stopped due to the blockage of the material in the crushing chamber, the motor should be turned off immediately, and the material must be eliminated before starting again.

3.6 After one end of the tooth plate is worn, the adjustable head can be used.

#### 4. Lubrication of crusher

a. Always pay attention to and do the lubrication work on the lubrication surface in time to ensure the normal operation of the machine and extend the service life.

b. The lubricating oil used in this series of crushers can be determined according to the conditions of use of the machine, temperature and other conditions. Generally, lithium-based, nano-based, or calcium-sodium based lubricants can be used.

c. The lubricating oil added to the bearing seat has a volume of 50-70%, and it must be replaced every three months. When changing the oil, clean gasoline or kerosene should be used to carefully clean the ball bearing raceways.

d. Where the elbow is in contact with the elbow pad, the machine must be filled with lubricant before starting.

## **VII Pictures**









#### IX About us

**Jiangxi Hengchang Mining Machinery Manufacturing Co., Ltd.** is one of the leading company in mining gravity separator machine designing & manufacturing in China. Up to now, we have developed four major product lines; they are mining milling machine, mining classifying separator, mining flotation machine and the mining gravity separator.

We have three senior engineers and two junior engineers on equipment designing and mining process designing. At the same time, we kept good relationship with some mining research institute and university, such as Jiangxi University of Science and Technology, Ganzhou Nonferrous Metallurgy Research Institute, Hunan Research Institute of Nonferrous Metals, and etc., to improve our designing and production, and also provide technology support for the mining project.

With more than 30 years in mining business, we have accumulated enough experience in gold mining plant, tungsten mining plant, wolfram mining plant, tin mining plant, cassiterite mining plant, coltan mining plant, columibte mining plant, and iron ore mining plant, black/beach sand mining plant designing, manufacturing, installing, commissioning and training. We could provide the customized complete mining solution to our customer.

Our major overseas market is Africa and Southeast Asia, and our products covers 43 global countries, as more and more customers are aware of our quality products and good service, this number is growing fast.

#### Focus areas:

Mining equipment, vibrating feeder, vibrating screen, crusher, ball mill, classifying separator, leaching tank, flotation machine, gravity separator, shaking table, spiral chute, jig machine, centrifugal concentrator and other mining equipment.

## About Us Jiangxi Hengchang Mining Machinery Manufacturing Co., Ltd

Jiangxi Hengchang Mining Machinery Manufacturing Co., Ltd was established in 1985 with the registered capital of 500,000 USD. We covers an area of more than 30,000 square meters, owning more than 30 types of heavy processing equipments and with an annual sales 0f more than 8 millions. We have a professional international level engineer team and a strong R&D department, having been cooperated with domestic and oversea Scientific Research Institutes for many years. As a professional mining machinery manufacturer, we take perfectness as our goal and are willing to make our continuous efforts.



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