



## Mixer tank operation and maintenance manual

### 一、 Structure and working principle

The high-efficiency stirring system is a combination of a high-efficiency agitator and Reactor / mixing tank. The high-efficiency agitator is composed of the motor, the cycloid gearbox reducer or helical gear reducer, the stirring shaft and a stirring blade. After power is supplied to the motor, the motor drives the stirring shaft and the stirring blade to rotate; The high-efficiency stirrer rotates to promote the water flow in the reaction tank to fully combine and react the reagent and water in the reaction tank, shortening the mixing time of the reagent and water, and greatly improving the efficiency of the use of the reagent.

### 二、 Characteristics of mixing tank&agitator system

#### 1.High speed ratio and high efficiency

Single-stage transmission, reduction ratio can achieve 1:87 , and the efficiency is more than 90%. If multi-stage transmission is used, the reduction ratio is greater.

#### 2.compact structure and small size

Because of the principle of planetary transmission, the input shaft and output shaft are on the same concentric line, which makes the model as small as possible.

#### 3.Smooth motion and low noise

Cycloidal pinion teeth have a large number of meshing teeth, a large overlap coefficient and a mechanism of machine balance, which limits vibration and noise to a minimum

#### 4.Reliable and long life

Because the main parts are made of high-carbon chromium steel material, hardened to obtain high strength, and part of the transmission contact uses rolling friction, so it has a long service life.

#### 5.Reasonable design and convenient maintenance

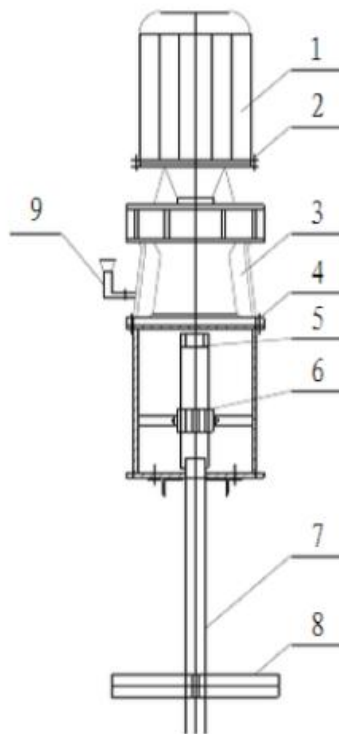
Easy to disassemble and install, the minimum number of parts and simple lubrication make the cycloid gear reducer deeply trusted by users. Its vertical dosing mixer adopts the principle of cycloid gear and planetary transmission. It is a domestic transmission tool with large button pitch, high transmission efficiency, high power, long life, low price, and never refuel. It is an environmentally friendly dosing The supporting products of the device, the preset metering pump and mixer installation positions of the dosing box are not completely applicable to all brands and models of metering pumps and mixers. The specific installation needs to be adjusted by the customer according to the actual situation.



### 三、 Selection method of mixing system

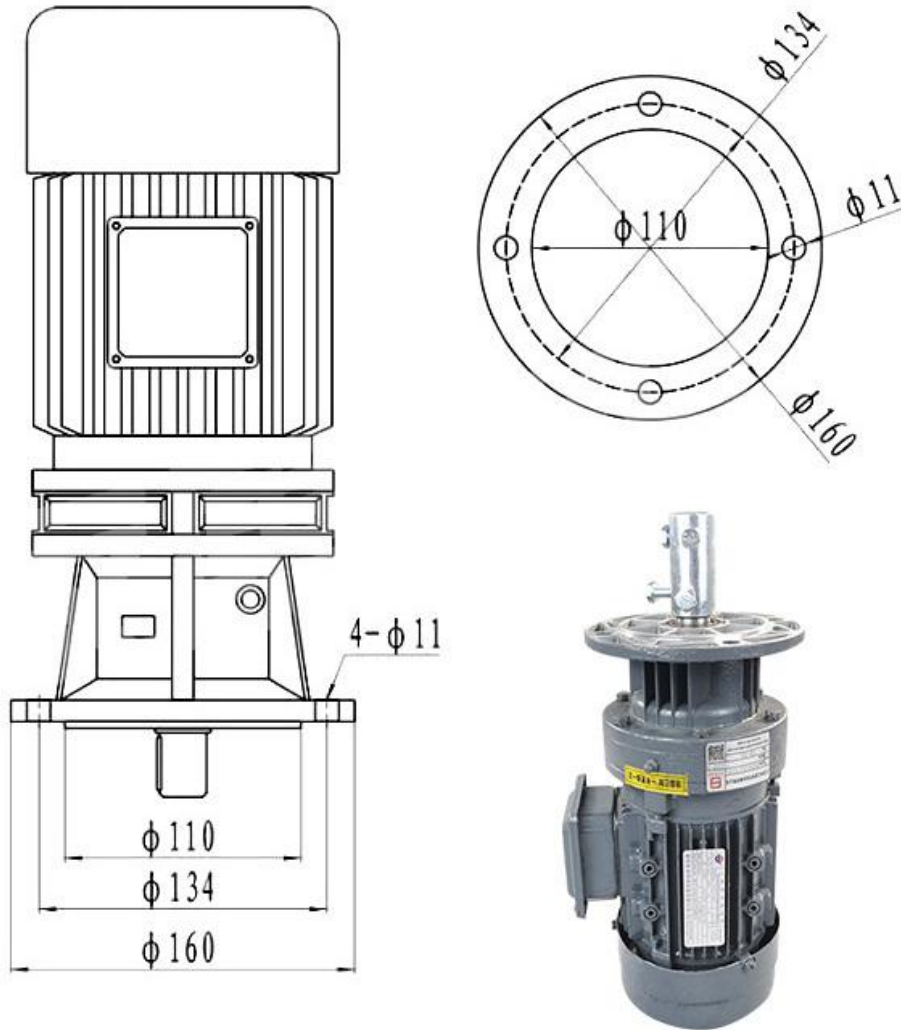
Agitator is a widely used device, which combines mechanical devices such as fluid mechanics, heat transfer, mass transfer and chemical reaction. Since the dosing mixer is a device of mechanical energy, it is directly related to product quality and energy consumption. Therefore, the selection method of dosing mixer is very important. According to many years of research on dosing mixers and field experience, we will elaborate from the aspects of mixer classification, form, use conditions, scope of use, energy distribution of the mixing process and selection of applications, in order to facilitate a wide range of users.

#### ① Size

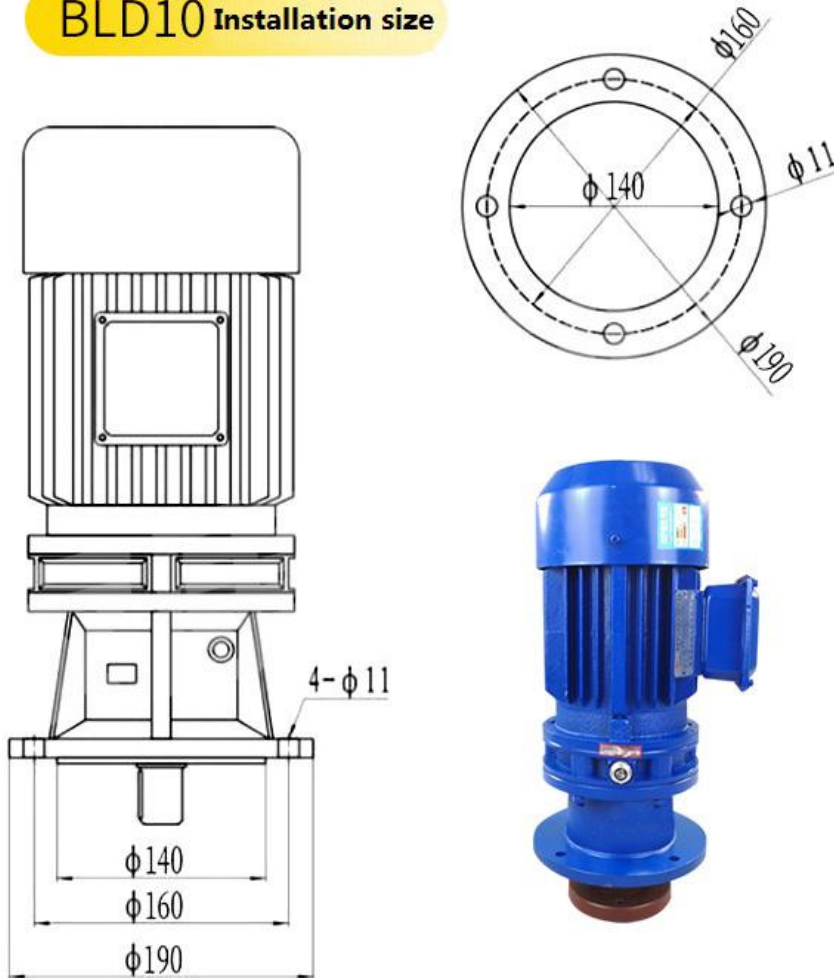


- 1.Motor**
- 2.Connecting flange bolts**
- 3.Cycloidal / helical gearbox**
- 4.Connecting flange bolts**
- 5. Connect the wheels**
- 6.Intermediate bearing**
- 7. Stirring shaft**
- 8. Stirring blade**
- 9.Fuel cup, oil hole**

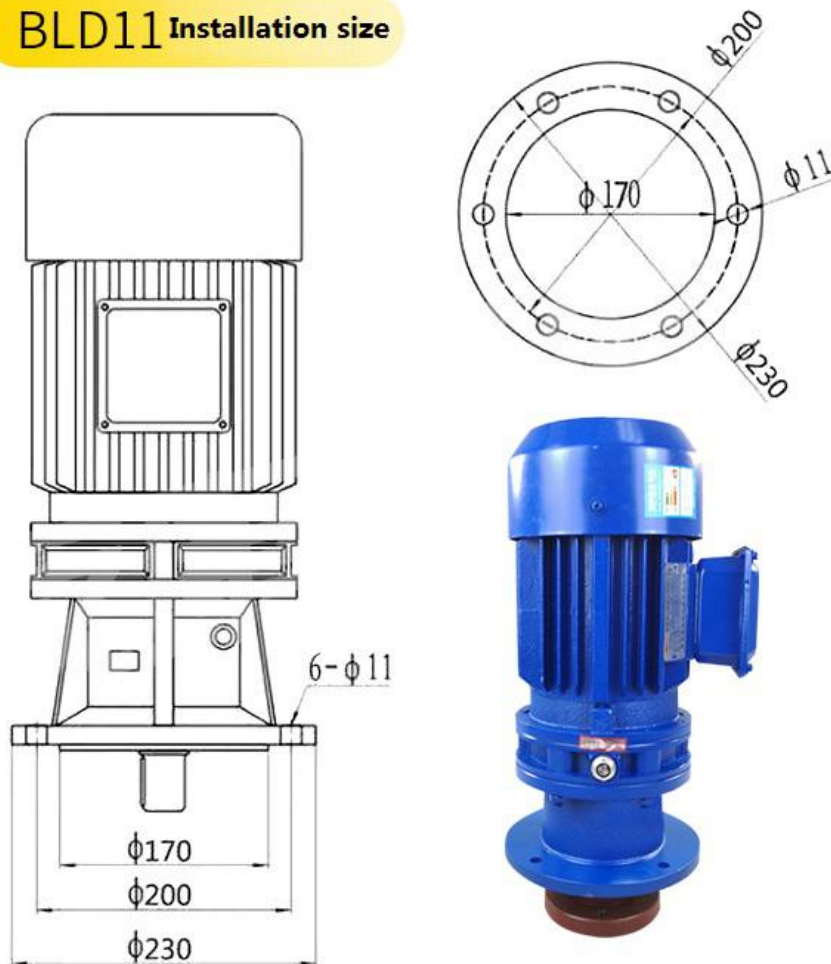
**BLD09 Installation size**



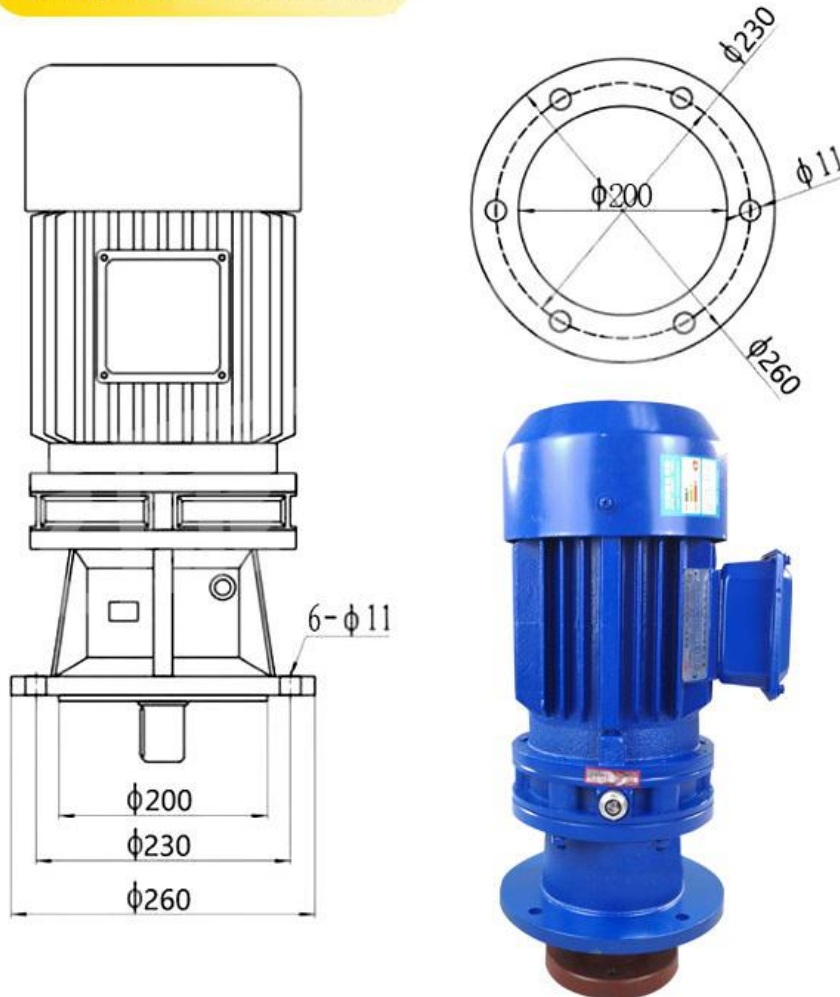
BLD10 Installation size



**BLD11 Installation size**



**BLD12 Installation size**



**四、 Operation of the mixing system**

1. Operators must have a post operation certificate or corresponding qualifications, and their responsibilities and personnel management must be strict Provisions. For those who have not operated, training should be carried out in advance, and operations can only be performed after qualified training.
2. The operator must read and become familiar with the manual before operating.
3. The operator needs to check before starting the efficient mixing system: whether the motor insulation is qualified, the motor bearings, Whether the intermediate bearing and the gearbox have been filled with oil according to regulations, whether the connecting bolts at all parts are tightened, and whether the wheels areThe connection is firm.



4. Make a trial run and inform the electrician to power the motor on.
5. Press the start button to make the mixer run normally.
6. After the high-efficiency mixing system runs normally, it needs to be inspected once every 2 hours. Check motor temperature and bearing temperature Degree is normal. If the motor temperature and bearing temperature exceed  $75^{\circ}\text{C}$ , the machine should be stopped immediately, and the cause should be found for repair. Check the transmission oil level at the same time. If there is no oil in the transmission oil cup, you should fill the oil cup at any time.

## Product details

Liquid mixer/Copper core motor/Stainless steel mixer/Light and easy to install



② 安装 (installation)



1. Put the tank down and install the pad



2.fixed Mixing rod and motor



3.motor, pad, tank, 3- holes in one



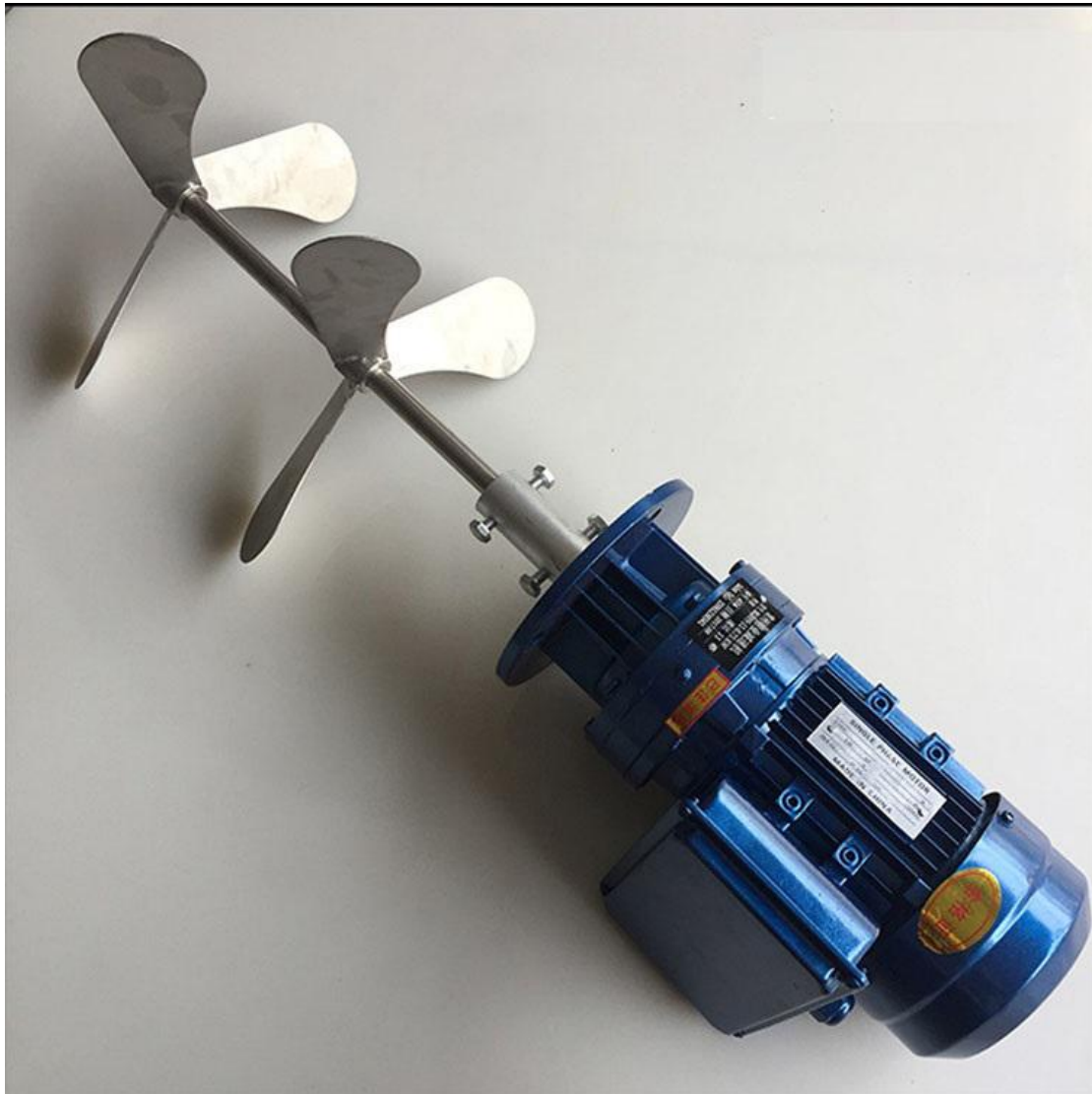
4.fixed screws

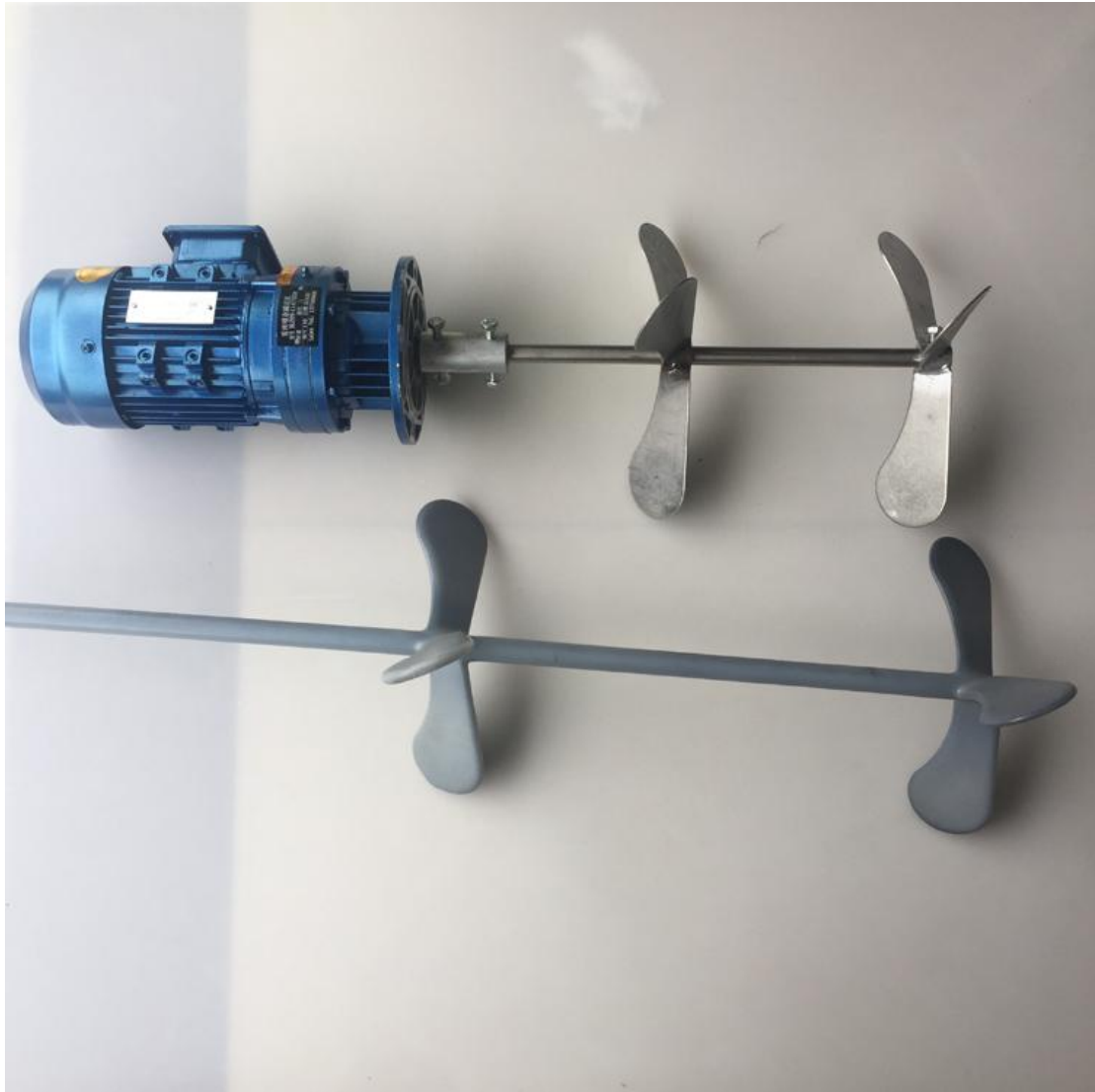






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## 五、 maintenance of the mixing system

1. Efficient stirring system requires maintenance personnel familiar with its structure and performance.

Inspection and maintenance can ensure safe long-term operation of the mixer.

2. The high-efficiency mixing system must be oiled in the motor bearings, intermediate bearings and gearbox before starting. Electricity

Machine bearings and intermediate bearings need to add 2 # calcium lithium grease, 30 # mechanical oil in the gearbox, oil level to the height of the oil cup

Central location.

3. The motor bearings and intermediate bearings are replaced once every six months (6 months). gearbox oil



If you find that there is a shortage of oil in the oil cup, add oil at any time. Every six months (6 months) of operation, all the oil in the transmission must be filled  
Pour out and replace the lubricant once.

4. Every year the gearbox is running, the lubricant in the gearbox must be poured out and the gearbox must be cleaned with a cleaning agent.  
Wash once. Also check the gears inside the gearbox for serious wear and damage.  
Replace teeth if necessary Wheel or gearbox.

5. Maintenance personnel need to regularly check the operation. Whether there is noise, over temperature or vibration over range of each bearing.

## **六、 Precautions for safe use of mixing system**

1. The high-efficiency agitator needs to be installed and used correctly to ensure safe and long-term stable operation.

2. The installer should have the corresponding qualifications and personnel familiar with the installation of machinery and equipment to perform the installer.

Make.

3. The high-efficiency mixer should be installed vertically, and the deviation of verticality should not be greater than 5 degrees.

4. Efficient stirring system is strictly prohibited to stir solids and liquids with high viscosity.

5. The temperature of the motor and bearing cannot be operated under 75 ° C.

6. Motors, bearings and gearboxes cannot be operated without lubricant.

7. The agitator shaft and blade cannot operate under bending or deformation. If it is found that the shaft is bent or the blade is deformed, it should be immediately stopped for processing or replacement.

8. Efficient mixing system is strictly forbidden to enter the reaction tank during operation to avoid damage to the mixer shaft

And leaves.

9. If a person needs to enter the reaction cell for cleaning or maintenance, the motor power must be cut off and hung.

"Do not close" warning sign. When performing manual tank cleaning and maintenance operations, there must be a special person outside the reaction tank.

Protect.

10. Efficient stirring system operation-after a period of time, if there are sediments, impurities, and debris at the bottom of the reaction tank, then

It should be stopped in time and rinsed with clean water or manually cleaned to ensure the safe operation of the mixer.