

YIFAN

CXFL Series Powder Separator



Leading crushing and screening equipment manufacturer in China

Zhengzhou YiFan Machinery Co.,Ltd(the share-holder is Shande Technology (Beijing) Co., Ltd) has its headquarter in Beijing. It is a famous manufacturer of crushing and screening equipment and provides series stone crusher and crushing equipment for customers.



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ZHENGZHOU YIFAN MACHINERY CO.,LTD

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In the production of cement industry, in order to improve the grinding system efficiency and reduce the consumption of the product, now CXFL Series Powder Separator widely adopts circle flow grinding system. And as an important part of this system-- powder concentrator, its performance influences the work efficiency of the system. So each scientific research institutions and industrial and mining enterprises focus on the research of powder concentrator. CXFL Series Powder Separator is the most advanced powder concentrator through absorbing foreign technology. It has been found that this powder separator efficiency can achieve above 85%, and it is easy for operation and stable in performance.

Features and Benefits

Compared with other powder separator, CXFL Series Powder Separator has the following features:

1. Adopting disconnectable combined type material scatters, which quickly makes the material raise up to form uniform dispersion solid material curtain for preliminary classification
2. Using wear-resisting round steel to replace the seamless steel tube, it solves the problem that after the steel pipe mill wear, material powder wearing into inside part of steel, destroying the balance of rotor cage, causing vibration, at the same time, lengthen the lifetime of rotor cage.
3. The optimization design of the rotor cage Angle, column density, rotational speed and diameter.
4. Adopting double rotor structure, through the cage rotor to form stable forced vortex, scattering and classifying the coarse material again to improve classifier classification accuracy and efficiency.
5. According to international advanced cyclone collection technology, combine the features of raw material, cyclone collector snail Angle, reduction plate and ratio of height to diameter on the computer simulation design.
6. Using adjustable-speed motor to adjust rotate speed.
7. Adopting new type wear resistant lining board in every easy-grinding parts.
8. Rotation system adopts advanced dry oil lubrication system.
9. The usage of statically indeterminate structure makes no vibration. New dust damping fan greatly enhances the equipment smoothness.



Technical Data

Working principles:

1. The grinding material goes into powder separator through the hopper, fall to the disconnectable combined type material scatters. On the one hand materials by inertial centrifugal force effect to all around and out, at the same time, influenced by propeller and tray blade produce updraft role lift up, and tray propeller blade is formed on the material boiling. Material is fine particles upward hike up, the suspended state, and thicker or heavier material was and tray blade scattered along the simulated fall, complete the first choose powder.
2. Below the tray there is a cage rotor, cage rotor together with the spindle rotation, form vortex flow, simulated the falling a rough material and material powder, the powder scattered raise up, back to cycle the wind, reclassification, coarse powder by drip device, from the inner cone discharge.
3. Above the tray there is a cage rotor, Choosing powder indoor, cage rotor grading ring near the surface of the airflow and dispersion in the flow of the material in the grading ring driving and grading ring together for high speed rotation, the grading ring forms around the uniform strong vortex flow. In the working process, the fineness of the products can be changed, improve the efficiency.
4. The cage rotor classification of fine particles after with circulation wind into the external each cyclone dust collector inside. Due to the new design of the cyclone dust collector using two diffuser structure, and in the air inlet snail Angle place adding wind deflector, inside cone added reflector screen, in the cyclone cylinder sleeve bottom additional reduction plate, so that the cyclone dust collector fluid resistance to drop considerably. Circulation wind in the wind deflector function, with higher wind speed into the cyclone collector. In the snail Angle expand part wind suddenly drops, accelerate the particle sedimentation, also improve the cyclone dust collector of the dust collection efficiency. By diffuser discharge wind directly into high efficiency dust collector, and greatly reduce the dust content in the wind circulation and reduce the product fineness.

Technical Data

Model	Speed of Rotor (r/min)	Capacity (t/h)	Motor Power (kw)	Fan Motor (kw)
CXFL-2000	190-380	20-35	11	30
CXFL-3000	150-350	30-45	15	37
CXFL-3500	130-320	45-55	18.5	55
CXFL-4000	120-280	55-75	30	90
CXFL-5000	120-280	75-100	55	132

Installation and commissioning requirements

1. equipment installation

(1)Reference alignment:

According to the process layout, and the size of the equipment to make reference alignment.

(2)fixed base:

Casting four high 150 mm concrete support, make each bearing surface level off, the elevation error is not more than 2 mm (concrete bearing surface best and 16 mm thick steel plate).

(3)Shell installation:

Housing according to the process arrangement bearing gently in support and add plate adjustable level, and then will be embedded bolt (or with embedded steel plate welding fixed). Shell flange installation level off, between flange and asbestos line (or rubber asbestos plate seal), in the work does not allow to have the air leakage phenomenon. Cover the wind plate and rotor plane clearance requirements in fifty - mm.

(4)Drive bearing installation:

Main shaft and rotor before installation to carefully check whether the shipment occurred in the process of deformation, touch bad, no problem to install. The main shaft, bearing, bearing tubing and barrel cover good connection can be together for lifting. Rotor and tray before assembly shall be settled in the internal for shipment.

2. Finish the equipment installation, the level error of the cover is controlled in every meters is not more than 2mm.

3. Test run

(1)Checking the rotating part, spindle is vertical state, rotational agile, no card hysteresis

(2)The direction of rotation is same with the wind direction of ir inlet and into the cyclone tube, no instead.

(3)Tighten all bolts

(4)After normal operation of rotation, feeding materials. First stop feeding, and then stop Spindle motor, fan, dust collector after several minutes.



Operation, maintenance and repair

1. Operation and maintenance

There are many factors to influence powder separator. In order to let the classifier in the circle flow grinding system to achieve high efficiency, yield big effect, must have certain experience by the technical workers for operation. In order to ensure the normal operation and long-term safety classifier, must pay attention to classifier for daily maintenance, use the manufacturer should formulate the conform to the actual situation of the factory operating procedures and maintenance, inspection and repair system.

2. Overhauling

Powder separator overhaul, overhaul after built-in temperature is reduced, dust settle. When it is overhauled, At the electric switch control place hang "are maintenance" signs, in order to avoid false drive hurt.

After overhaul, the original listing people should take down the signs.

Then main checking contents:

(1)Main shaft, bearing, seal cleaning and inspection.

(2)Nut of every connection.

(3)Whether Instrument is sensitive.

(4)Remove the dust of the shell, pipe.

3. The overhaul of fan, motor according to operation instruction.

matters needing attention

1. Strengthening operation management

2. This series powder separator is high efficiency, cycle load is small, but pay attention to control should not be too small, recommend the use of the circulating load in 100-200% better.

3. better sealing system, especially pay attention to fine powder and coarse powder exports, should add lock wind device, or classifier can't work normally.

4. Fineness regulation generally is adjusted by the rotor.

5. Classifier system should increase bag dust or electric dust collection system, circulate a small part of the wind into the dust collector not only can make the classifier in micro negative state operation, is not easy to take ash, and can reduce dust in the wind circulation, and to decrease the concentration of circulating air temperature. Improve the classifier in negative pressure point position, and can further improve the efficiency of choose powder.

CXFL Series Powder Separator is based on American technology, and is an ideal equipment to separate powder ($\leq 0.075\text{mm}$) from manufactured sand for dry way. It is very easy to control the powder ingredient of manufactured and meet different requirements of the clients.

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