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JB Series Spices Hammer Mill



Working Principal

It makes use of the high-speed relative movement of the movable fluted disc and the fixed disc to crush the materials through the comprehensive effect of striking and friction of the fluted disc. The crushed material flows into the cyclone separator by the gravitation of blower and rotating centrifugal force, then discharges through gate blower, dust come into the pulse dust-evacuator box, filtrated and recycled by the filter cylinder.

Main Usage

This machine is applied in such trades as pharmaceutical, chemical, foodstuff, etc.

It is made up of crusher, cyclone separator, pulse dust-evacuator box and blower. It can crush spice and oily material, whose oil content is less than 25%, and it is also suitable for Chinese herb with high fiber content. The crushing size is controlled by screen, and continuous production can be achieved under normal temperature.

It can crush Chili, pepper, black pepper, white pepper, green pepper, cinnamon, cumin, bandits, Dahongpao pepper, cinnamon, nutmeg, cardamom, red yeast rice, red pepper, garlic, star anise, cloves, Amomum Tsaoko, geraniol, turmeric, ginger, fennel, anise, angelica and other material with high content of oil or fiber. Besides, the material can be fed into the machine directly without coarse crushing. It has the features of big capacity, not changing the color, maintaining the physicochemical characteristics of the material.

Application

Grain and Condiments:

Crushing sugar, rice, soybeans (for flour production), spices, dried chili peppers, etc.

Food Ingredients:

Processing tubers, dried fruits and vegetables, etc., to provide raw materials with suitable particle sizes for subsequent extraction or further processing.

By-product Utilization:

Crushing food processing by-products such as soybean meal, rice bran, fruit pomace, etc., for use in animal feed or the extraction of valuable components.



Advantages of Each Component

1. Grinding parts

High crushing efficiency and strong adaptability: The high-speed rotating hammers effectively crush various granular and lumpy raw materials (such as corn, soybean meal, etc.). Particle size adjustment is convenient, and it offers wide adaptability to the moisture and fiber content of the raw materials.

Simple structure and easy maintenance: The main working components (hammers, screens) are easy to replace and maintain.

Relatively low cost: It is the most widely used universal crushing equipment.

2. Cyclone dust collector

Core of gas-solid separation: Utilizing the centrifugal force principle, it effectively separates and collects most of the coarser materials mixed in the airflow after crushing.

No moving parts, reliable operation: With no moving components itself, its failure rate is extremely low, and maintenance costs are almost zero.

Pre-treatment to reduce downstream pressure: It can separate approximately 80%–95% of the materials, significantly reducing the load on the subsequent pulse dust collector, making it a crucial primary recovery device.

3. Dust removal device

Efficient and precise filtration: As a secondary recovery device, it filters out extremely fine dust in the airflow (typically at the micron level), with a separation efficiency of up to 99.9% or higher.

Automatic cleaning: It employs compressed air pulse-jet technology for automatic dust removal, ensuring continuous and efficient operation of the filter bags and stable system airflow pressure.

Environmentally compliant: It ensures that the dust content in the final exhaust gas is far below national environmental standards, making it a key equipment for achieving clean production.



Technical Parameters

Model	Main Structural Dimensions(mm)							Capacity	Input Particle Size	Output Particle Size	Machine weight	Speed	Total power
	L1	L2	H1	H2	H3	H4	W	Kg/H	mm	mesh	Kg	Rpm/min	KW
JB-350	5100	6380	2900	1100	650	400	1660	80-300	<100*20	10-60	1200	3200	23.25
JB-450	5430	7055	3125	1230	650	400	1780	100-500	<100*20	10-60	1600	2900	30.25
JB-550	5560	7220	3125	1235	650	400	1935	150-700	<100*20	10-60	2100	2350	41.75
JB-650	6575	8570	4100	1330	650	400	2200	200-1100	<100*20	10-60	2800	2000	60.75
JB-850	6500	8500	3350	1200	650	400	1800	300-1500	<100*20	10-60	3600	1500	74.25



If you want to send inquiry about our powder grinding machine , could you please tell me?

- 1) What material you want to grind, is it dry? what is the size of feed material
- 2) What capacity you expect ? (kg/h)
- 3) What mesh or mm or micron(size) of the powder you want?
- 4) What voltage you want? For example, 380V 50hz 3p; 440V 60Hz,3p; 220V...
(We only provide 3P, because our machines are all for industrial use,not for family.)
- 5) Usually we use stainless steel 304, if you want stainless steel 316, it's OK and please tell us.



Inner picture



Dust bag



FAQ

1, Abnormal Vibration and Noise

This is the most common symptom.

Potential causes include:

- * Uneven wear or detachment of hammer pieces: Leads to destruction of the rotor's dynamic balance.
- * Bearing damage or wear: Excessive bearing clearance or lack of lubrication.
- * Bending of the rotor main shaft: Usually caused by foreign object entry or overload impact.
- * Loose connecting bolts: Loosening of foundation bolts, hammer pin fixing bolts, screen fixing bolts, etc.
- * Entry of hard foreign objects: Such as stones, metal blocks.

2, Severe Bearing Overheating

- * Poor lubrication: Insufficient, excessive, incorrect type, or deteriorated lubricant (grease/oil).
- * Improper bearing installation: Such as misalignment or improper clearance.
- * Overload operation: Prolonged operation under excessive load.
- * Seal failure: Dust ingress into the bearing interior, accelerating wear.

3, Excessive Wear of Hammer Pieces and Screens.

- * High material hardness/abrasiveness: e.g., raw materials high in quartz sand.
- * Poor material quality or improper heat treatment of hammer pieces/screens.
- * Improper feeding method: Long-term unidirectional feeding causing uneven wear on one side of the hammer pieces.
- * Screen aperture too small: Material remains in the crushing chamber too long, being repeatedly struck.
- * Mismatched air system: Insufficient airflow preventing timely discharge of qualified powder.

4, Powder Leakage from Machine Body

- * Aging or damage of sealing components (sealing strips, felt).
- * Inspection doors/access panels not tightly closed or deformed.
- * Excessive internal/external pressure differential: Often caused by excessive exhaust fan airflow or pipe blockage leading to high negative pressure, sucking fine powder out from gaps.



Cleaning and Maintenance Schedule Example

Frequency	Grinding parts	Cyclone dust collector	Dust removal device
Per Shift / Each Batch Change	Clean residual material in chamber, check for abnormal noise/current	Observe discharge valve operation, check discharge	Empty hopper, record differential pressure
Weekly	Check hammer mobility, tighten bolts	External cleaning, check seals	Check pulse valve operation, drain air receiver water
Monthly	Adjust/replace hammers, clean/replace screen, comprehensive lubrication	Internal deep dust removal, check inner wall wear	Clean air source triple unit, check all inspection door seals
Semi-Annually / Annually	Comprehensive disassembly and inspection, verify rotor balance, replace bearings	Replace discharge valve seal blades, overall seal integrity check	Offline cleaning or replacement of filter bags, comprehensive blow system inspection
Key Points for Maintenance and Cleaning	Internal material buildup, wear-prone parts, lubrication points.	Internal surfaces, discharge device, sealing points.	Filter bags, dust hopper, air system, sealing integrity.

Cleaning Methods: Prioritize "dry cleaning" (such as brushing or vacuuming). When necessary, use "wet cleaning" (wiping with a damp cloth or using specialized cleaning agents), but ensure thorough drying before reuse to prevent corrosion and material caking.



Detailed pictures of spices hammer mill



Our commitment to quality begins with design, extends through strictly managed production, and is verified by testing every single unit before it leaves our factory. This represents a complete system that spans from the initial design stage all the way to final pre-delivery inspection.

We invest in quality not only where it's visible, but also—and especially—where it's not. For example, we use thicker steel plates and higher-grade seals than standard. These details may not be highlighted in brochures, but they directly determine the equipment's reliability over a decade or more. We would rather incur higher costs during manufacturing than have our customers spend extra time and resources on repairs after purchase.



About Baoli Machinery

Our company locates at Wuxi city, very near Shanghai City and it takes 35-50 minutes to get to our city by train from Shanghai.

1, We have CE certificate, ISO, BV...etc.

2, Each year, We takes part in a lot of Expos ,for example: FIC, CPHI, API...etc

3, Our team possesses profound experience in the powder industry sector. We can provide relevant production lines for loading, crushing, mixing, sieving, conveying and so on.

