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## JB Series Three-Dimensional Swing Mixing Machine



### Main Usage

This machine is widely applied for the mixing of powder material by pharmacy, chemical, and foodstuff industries, as well as for the quick and even mixing of various materials in different granules size and gravity.



## Working Principle

**Three-Dimensional Motion:** The mixing cylinder, driven by the main shaft, simultaneously performs axial, radial, and circumferential movements.

**Combined Mixing Mechanisms:** Convection, diffusion, and shear forces occur concurrently. Materials inside the container not only move translationally but are also lifted, scattered, and slid against each other.

**No Dead Zones:** This complex motion trajectory ensures the entire container space becomes an effective mixing area, preventing localized uneven blending.

**Gentle Mixing:** For fragile, crystal-sensitive, or heat-sensitive materials, the 3D mixer provides a gentle mixing environment that preserves the original characteristics of the materials.

## Specialty

With its unique three-dimension swing, parallel moving, and rolling methods, this mixer can generate a strong pulse movement to push forward and to mix the target materials continuously. The excellent mixing effects are the result of its changeable vortex movement that possesses the energy gradients inside. It also has the merits of smooth running, low noise, high loading capacity, and short mixing time as well.



## Application

### 1. Pharmaceutical Industry

This is the most critical and widely applied field for 3D mixers. Due to their non-destructive mixing, absence of dead zones, and ease of cleaning (compliant with GMP standards), they are used in:

- **Mixing APIs and Excipients:** Fully blending active pharmaceutical ingredients with various excipients (e.g., fillers, disintegrants, lubricants) before tablet or capsule production.
- **Blending Traditional Chinese Medicine Powders:** Uniformly mixing powders from multiple ground herbal medicines.
- **Ensuring Drug Content Uniformity:** Critical for drug safety and efficacy, where the high homogeneity of 3D mixers is essential.

### 2. Food Industry

- **Seasoning and Spice Blending:** Combining powdered spices, monosodium glutamate, salt, etc., to create composite seasonings.
- **Nutritional Supplement Mixing:** Uniformly blending nutrients like vitamins, minerals, and protein powders with base materials (e.g., milk powder, rice flour).
- **Additive Premixes:** Pre-mixing trace food additives (e.g., pigments, preservatives) with carriers to ensure even distribution in final products.

### 3. Chemical Industry

- **Dye and Pigment Mixing:** Ensuring uniform dispersion of pigment particles for consistent product coloration.
- **Plastic Masterbatch Mixing:** Blending colorants, additives, and base plastic particles.
- **Fine Chemicals:** Mixing catalysts, ceramic powders, metal powders, etc.

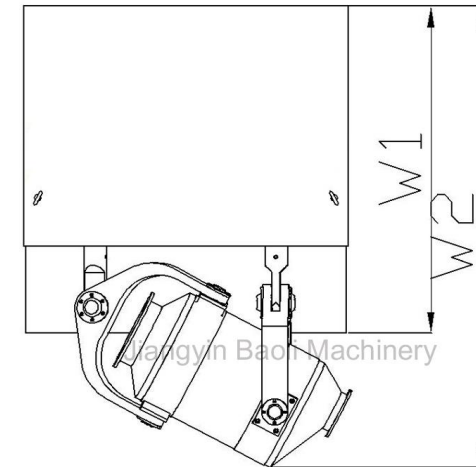
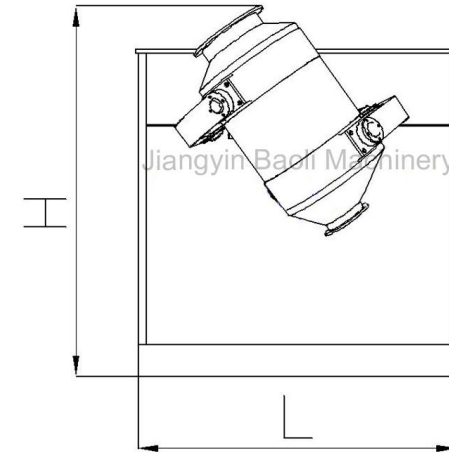
### 4. Veterinary Drug and Feed Industry

- **Veterinary Drug Premixes:** Diluting trace medications with bulk carriers to ensure accurate animal dosing.
- **Feed Additives:** Uniformly blending vitamins, amino acids, trace elements, etc., with feed carriers.



## Technical Parameters

Model	Main Structural Dimensions(mm)				Volume	Max loading	Speed	Machine weight	Total power
	L	W1	W2	H					
JB-50	1000	850	1400	1200	50	25	3-15	250	1.1
JB-100	1250	1250	1775	1600	100	50	3-12	600	2.2
JB-200	1400	1450	1800	1750	200	100	3-12	900	2.2
JB-400	1650	1600	2235	1950	400	200	3-12	1200	4
JB-600	1750	1600	2435	2160	600	300	3-12	1600	5.5
JB-800	2000	1900	2690	2550	800	400	3-12	2000	7.5
JB-1000	2100	1950	2805	2640	1000	500	3-10	2200	11
JB-1200	2200	2200	2950	2750	1200	600	3-8	2500	11
JB-1500	2250	2500	3225	2930	1500	750	3-8	2900	15



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

- (1)Do you need to mix powder to powder, particles to particles, or powder to particles?
- (2)What is the bulk density of the material?
- (3)Is there a significant difference in the specific gravity (density) of materials?
- (4)What are the particle sizes (mesh size) of the materials,if you have?
- (5)Is the material sticky or prone to clumping? Or is it thermosensitive or hygroscopic?
- (6)What is the processing capacity (batch) of each batch in kilograms or liters?



## More Pictures



Feeding port



Discharge valve



## FAQ

### 1. Is it convenient to clean the equipment?

Yes, cleaning convenience is one of our core design considerations.

- ① Quick opening structure: using quick opening clamps, etc., it can be quickly opened without tools.
- ② No dead corners design: The inner wall of the container is smooth and fluid, avoiding material residue.
- ③ Cleaning methods: Supports various methods such as dry cleaning and wet washing."

### 2. How to control dust overflow and protect the production environment?

We offer multiple options: the device can be designed as a fully enclosed structure; Equipped with an integrated bag filter or filter dust collector as an optional accessory.

### 3. Will there be heat during the crushing process? How to control the temperature?

"Mechanical crushing does indeed generate heat. For heat sensitive materials, we offer multiple cooling solutions:

- ① Built in cooling jacket: cools the grinding chamber through circulating cooling water.
- ② Airflow cooling: Use a cold air fan to cool the cavity."

### 4. What is the lifespan of easily worn components such as blades, screens, and gear rings?

The lifespan depends on the hardness and abrasion resistance of the material. For high hardness materials, we provide vulnerable parts made of advanced materials such as wear-resistant alloys and tungsten carbide to greatly extend their service life and reduce maintenance costs.

### 5. Do you provide after-sales service and technical support?

Yes, we offer after-sales support, including remote guidance, and can arrange for engineers to assist with on-site installation, commissioning, and staff training for larger projects.

### 6. How quickly can you respond when problems arise?

We provide 7x24 hour technical hotline support. For urgent issues, our engineers will first provide remote guidance through phone/video calls to resolve them. If it cannot be resolved, we will arrange engineers to go to the site as soon as possible according to the situation.

### 7. How to obtain spare parts?

We maintain inventory of commonly used spare parts and can ship them quickly. You can place an order directly through your sales representative. We provide original spare parts drawings and lists for your convenience in management.



## 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.

