

# 益民干燥 YIMIN DRYING

**CHANGZHOU YIMIN DRYING EQUIPMENT CO.,LTD** 

## **ABOUT US**

Founded in 1992, Changzhou Yimin Drying Equipment is one of the largest manufacturers of drying machines in China. Our sophisticated production facility is located in Jiaoxi Industrial Park in Changzhou, often referred to as the birthplace of the drying equipment industry. We employ more than 160 hardworking people in our 50,000 square meter factory where we produce dry-ing machines, granulating machines, mixing machines and grinding machines that are widely used in pharmaceutical, food, chemical and cosmetics applications.

Our company's founder Mr. Fan Yimin has been integral in the development and production of our drying equipment. He helped bring together a talented staff for the research, design and production of our outstanding products. Currently, Yimin is a key manufacturing enterprise within the Chinese drying industry and we have been named as an "Advanced Quality Management Company of Jiangsu Province" and hold a number of national patents. Yimin holds a number of national patents. Yimin holds a AAA corporate credit rating as well as a CE certificate and ISO 9001 international quality system certificate.

Yimin's production process goes much further than our modern production workshop and equipment. We also operate a highly sophisticated testing facility to ensure the quality of our drying machines. We have 10 series of drying equipment with over 300 specific types of machines. Our products are sold nationwide in China and we export to the US,Japan,Russia and Taiwan among other countries.

All customers are welcome to visit us at our facilities in order to get to know more about our company and our products.





## WORKSHOP AND PROCESSING EQUIPMENTS









**Numerical Control Cutting Machine** 



**Polishing Machine** 



**Polishing Machine** 



**Boring Lathe** 



Plate Shearing and Bending Machine

## **CERTIFICATES OF PATENT**









Famous Trademark of Changzhou



Famous Company of Jiangsu





Private Science and Technology of Jiangsu



## **TYPICAL USERS**







## **PRODUCTS CATALOG**

### DRYERS SERIES

- 01 CT / CT-C Series Hot Air Circulation Oven Dryer.
- 03 YZG Round Shape and FZG Square Shape Vacuum Dryer
- 05 SZG Series Biconical Revolving Vacuum Dryer
- 08 ZB Series Harrow Vacuum Dryer
- 09 FG Series Vertical Type Fluid Bed Dryer
- 10 GFG Series Batch Type Fluid Bed Dryer.
- 11 BLGZ Series Closed-loop Circuit Fluid Bed Dryer
- 13 XF series Box Shape Continuous Fluid Bed Dryer
- 15 ZLG Series Vibration Fluid Bed Dryer
- 17 DW Series Belt Dryer
- 19 XSG Series Spin Flash Dryer.
- 21 QG,JG Series Air stream Dryer
- 23 ZLPG Series Spray Dryer for Extract.
- 25 LPG Series Centrifugal Spray Dryer.
- 28 Microencapsulation Granulator
- 29 YPG Series Pressure Granulation Spray Dryer
- 31 HG Series Roller Scraper Dryer
- 32 HZG Series Rotary Drum Dryer
- 34 PLG Series Continuous Plate Dryer
- 38 KJG Series Hollow Blade Dryer

### GRANULATORS SERIES

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- 40 FL Series One-step Fluid Bed Granulator
- 42 FLP Series Granulation Fluid Bed Coater
- 44 GHL Series High Speed wet Mixing and Granulating Machine
- 46 PGL-B Series Spray Drying Granulator
- 47 GK Series Dry Type Granulator

- 48 GZL Series Rolling Granulator
- 50 JZL Series Rotary Screw Granulator/Extruder
- 51 SE Series Screw Extruding Pelletier
- 52 QZL Series Ball Granulator/ spheroidizing Machine
- 53 YK Series Sway Granulator KZL Series High Speed Grinding Granulator



### 54 SYH Series Multi Direction Mixer

- 55 EYH Series Two Dimensional Movement Mixer
- 56 VH Series V Type High Efficiency Mixer
- 57 VI Series forced–Mixing Mixer SZH Series Biconical Rotary Mixer
- 58 DSH Series Conical Screw Mixer
- 59 WLDH Series Horizontal Ribbon Mixer
- 60 CH Series Slot Shape Wet Mixer
- 60 GHJ Series High Speed Mixer

### GRINDERS AND SERIES

- 61 B/B-X Series Universal Grinder
- 61 PSJ Series Crusher
- 61 CSJ Series Primary Crusher
- 62 WFJ Series Super Fine Pulverizing Machine
- 63 ZS Series Round Shape Vibrating Sieve FS Series Square Shape Vibrating Sieve

### **CT / CT-C Series Hot Air Circulation Oven Dryer**





### Features

Most of hot air circling inside the oven. High thermal efficiency. Saving energy source.Enhanced ventilation and adjustable air divider plate inside the oven. Raw materials can be dried evenly.The heat source can be steam, hot water, electricity ,heat-conducting oil or hot air from furnace.Low noise and stable operation. Automatical temperature control.Convenient installation and maintenance. Widely applications .Almost suitable for all kinds of raw materials.

### Application

It is suitable for heating and solidification, drying and dehydration of raw materials in pharmaceutical industry, chemical industry, foodstuff industry, agricultural and sideline products, aquatic products, light industry, heavy industry and so on. The raw materials can be medicine of raw materials, Chinese traditional medicine, and tablet of drink, immersed electuary, powder, granule, packing bottle, pigment, dyestuff, dehydration vegetable, dried fruit and melons, banger, plastic resin, electric elements, drying varnish and so on.



### **Technical Parameters**

Model	Drying area	Capacity (kg/batch)	Fan power (kw)	Steam consumption ( kg/h )	Radiation area ( m2 )	Electrical heater pow- er(kw)	Overall dimen- sion L,W,H( mm )	Door	Trolley	Tray	weight (kg )
CT-C-O	7.1	60	0.45	10	10	6	1200 × 1000 × 1750	1	1	24	820
CT-C-1	14.1	120	0.45	18	20	15	2300 × 1200 × 2000	2	2	48	1580
CT-C-1A	14.1	120	0.45	18	20	15	1200 × 2200 × 2000	1	2	48	1580
CT-C-2	28.3	240	0.45×2	36	40	30	2300 × 2200 × 2000	2	4	96	1800
CT-C-2A	28.3	240	0.45×2	36	40	30	4460 × 1200 × 2290	4	4	96	1880
CT-C-3	42.4	360	0.45×3	54	80	45	3430×2200×2000	3	6	144	2100
CT-C-3A	42.4	360	0.45×3	54	80	45	2300 × 3200 × 2000	2	6	144	2210
CT-C-4	56.5	480	0.45×4	72	100	60	4460×2200×2290	4	8	192	2800

 $\bullet$  Information above for standard drying oven with Steam radiator or electrical heater, drying temperature 50~140 $^\circ$ C .

• Power above for axial flow fan (Default hot-air circulating fan).Centrifugal fan for optional.

• Outer cover of the oven made of carbon steel or stainless steel. Inner shell aluminum alloy or stainless steel.

• Tray without holes or with holes for optional. Dehumidify fan for optional.

Model including A is special trolley layout for the site with floor area limits.









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### **CT / CT-C Series Hot Air Circulation Oven Dryer**

### Sturcture Drawing for Oven Dyer



#### Main technical parameters and relevant explanation

1. The heat source can be steam, electricity, heat-conducting oil or steam + electricity.

2. Temperature of operation: 50–140  $^\circ\!\!C$  for steam. Maximum temperature will be 150  $^\circ\!\!C$  .

3.50-350℃ for electricity or heat-conducting oil.

Automatic and computer control systems for customer selection.

4. The normal pressure of steam will be 0.2-0.8 MPa(2-8kg/cm2).

5.If have special requirement, please indicate it in order.

6. The price of non-standard oven shall be discussed additionally.

7.Standard drying tray: 640LX460WX45H(mm). 8.Standard trolley:950LX710X1510,12 layers,2 pc of trays for each layer. For other kind of trays or trolleys,to be discussed.

### **Optional parts**



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### Description

Vacuum dry is to let the raw material to be dried at vacuum condition heating and drying. It uses vacuum pump to damp and make the working chamber form vacuum status. Therefore the dry speed of raw material is quickened and the energy is saved greatly.

Vacuum dry is divided into static and dynamic drier. Model FZG round vacuum drier or Model YZG square vacuum drier belongs to static drier. Model SZG double cone rotating vacuum drier belongs to dynamic drier. When raw material is dried in static drier, raw material is in static state and its shape can not be destroyed. Before drying, it can carry out the treatment of disinfection. When raw material is dried in dynamic drier, raw material is turned over ceaselessly. So it can be dried better and more uniformly.

In the state of vacuum, the boiling point of raw material will be dropped. Therefore it is suitable for drying raw material that is unstable or thermal sensitive. The vacuum drier is very airtight. So it is also suitable for drying raw material that contains strong irritative and toxic gases and the solvent needs to recovery.





### Application

It is suitable for drying heat sensitive raw material of pharmaceutical industry, chemical industry, foodstuff industry, chemical industry, Chinese traditional medicine industry, etc.

#### Features

Higher drying speed at lower temperature and the heat energy can be used fully.
 Dry at low temperature or drying of heat sensitive raw material.

3.Dry raw materials that contain solvent and the solvent needs to recover.

4.Before drying, it can carry out disinfectant treatment. during drying, any impurity can not enter in it.

5. The dryer belongs to static vacuum one, the shape and volume of raw materials can not be damaged.



Patent of utility model



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### Instruction to Ordering

1.When order, please choose suitable vacuum drier In accordance with the physical property. When order, please choose suitable vacuum drier in accordance with the physical property, primary moisture and final moisture of raw material to be dried and factors such as temperature, vacuum, drying amount and time and so on. Vacuum drier with same model has four heating ways, i.e. steam, hot water, heat conduction oil and electric heat. For example, in order to increase the output of product, the drying layer can be increased suitably. Please tell our factory in time.

2. The auxiliary parts of vacuum drying system indicated in User's Manual can be supplied and installed by our factory. Please indicate them when order. If having special requirements, our factory can also design, manufacture and install as request.

3. For the equipment, our factory will carry out guarantee of repair, replacement and refund of substandard products. All subassembly can be supplied in a long time. Please put your mind at rest.





### **Technical Parameters**

Model	YZG-600	YZG-800	YZG-1000	YZG-1400	FZG-10	FZG-15	FZG-20
Size of baking tray (mm)	310×600×45	520×410×45	520×410×45	460×640×45	460×640×45	460×640×45	460×640×45
Quantity of baking trays	4	4	12	32	20	32	48
Work pressure inside the pipe of baking support ( MPa )	≤ 0.784 )	≤ 0.784	≤ 0.784	≤ 0.784	≤ 0.784	≤ 0.784	≤ 0.784
operation temperature of baking support ( ${\mathbb C}$ )	35-150	35-150	35-150	35-150	35-150	35-150	35-150
vacuum degree inside the chamber when operation idle(MPa )	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Under −0.1Mpa and 110℃ ,water evaporation rate (kg/m2 · hr)	7.2	7.2	7.2	7.2	7.2	7.2	7.2
vacuum pump with condens- er pump	2X-15A -2KW	2X-30A-3KW	2X-30A-3KW	2X-70A- 5.5KW	2X-70A- 5.5KW	2X-70A- 5.5KW	2X-90A- 7.5KW
vacuum pump without con- denser	SZ-0.5-1.5kW	SZ-1-2.2KW	SZ-1-2.2KW	SZ-2-4KW	SZ-2-4KW	SZ-2-4KW	SZ-2-5.5KW
Weight of drying chamber ( kg )	250	600	800	1400	1400	2100	3200
Inter size of chamber ( mm )	ф 600×976	<b>q</b> 800 × 1247	φ 1000 × 1527	ф 1400×2054	1500 × 1060 × 1220	1500×1400×1220	1500 × 1800x1220
Outer size of chamber(mm)	1135×810×102	1700×1045×1335	1693×1190×150	2386×1675×1920	1924×1720x1513	1513×1924x2060	1924×2500x1513

SZ water ring vacuum pump can be used together with mechanical pressure increasing pump in order to increase vacuum.

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### Structure drawing



### **Principle of Working**

Model SZG double cone rotating vacuum drier has double cone rotating tank. Under the state of vacuum inside the tank, pass steam or hot water into its jacket for heating. The hot amount can contact with the damp raw material through its inner wall. The vaporized steam when the damp raw material absorbed heat can be pumped out through vacuum exhaust pipe. Because its inner of tank is in the state of vacuum and the raw material is turned over all the time caused by the rotating of tank, the dry speed of raw material is quickened and dry efficiency is raised too and the purpose of uniform dry can be raised.

### **Features**

Mixing and drying at the same time. Compensator equipped for optional is used for solvent recover. Advanced in design, simple in inner structure, easy for clean, able to discharge all raw material, convenient in operation, lowing labor intensity and improving work environment. Meanwhile raw material is rotating accompanying with the rotating of container, the wall of container cannot accumulate raw material. Therefore its coefficient of thermal transmission is high and quick

drying speed. Saving energy source. Uniformly drying and finished product with good quantity Widely used for materials drying in pharmaceutical industry, chemical industry, foodstuff industry, dyestuff industry and so on. It is in conformity with the requirements of "GMP". Since the container runs continuously, the heating surface of the matter is always changed; There is no any pollution because of indirect heating. Thermal efficiency is high, over two times higher than that of normal drying over



Patent of utility model

#### Scope of application

This equipment is mainly used for drying following matters in medicine, chemical and food industries:

Matters which cannot resist high temperature;

Matters which are easily oxidized;

Matters with crystals which should not be retrieved;

Matters with the residual volatile material which should be destroyed; Matters with the discharged steam in drying which should be retrieved; Strong irritant and poisonous matters



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### SZG Series Biconical Revolving Vacuum Dryer

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inverted valve

flow chart for hot water heater,no solvent recovery

flow chart for hot water heater, with solvent recovery.



### **Technical Parameters**

Model	SZG100	SZG350	SZG500	SZG-7500	SZG1000	SZG1500	SZG2000	SZG3500	SZG5000			
Volume (litre)	100L	350L	500L	750	1000L	1500L	2000L	3500	5000			
Charging volume (L)	50	175	250	375	500	750	1000	1750	2500			
Loading weight(kg)	40	120	200	300	400	600	800	1000	1800			
Heating area(m2)	1.16	1.5	2	2.63	3.5	4.61	5.58	7.5	13.8			
Rotating speed(rpm)		3~13										
Motor power	0.75	1.1	1.5	2.2	3	4	5.5	7.5	15			
Rotating height	1750	2100	2250	2490	2800	2940	2990	3490	4200			
Desigh pressure insider the	tank:	-0.1~0.15N	lpa									
Desigh pressure inside the jacket: ≤ 0.3Mpr												
Total weight (Kg)	650	900	1200	1450	1970	2280	2500	2700	2900			

Notes :

1. The above-mentioned parameters are calculated based on material density 0.6g./cm3.if for reference only.

热水 water

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2. For raw material, if its volume has great change before and after dry, then its filling coefficient may be increased or decreased suitably.

3. Speed adjusting motor of 0~6rpm for optional according to user's requirement. The following aspects should be point when order If certificate for pressure vessel is requirement, please point out. If glass lining for interior surface is requirement, please point out. If the material is explosive, or flammable, the calculation should be made according to trial result.1. If material has larger specific weight, it shall be noted upon placing the order.

### Instructions to ordering

1. Its heating has three ways I.e. steam, hot water, heat conduction oil;

2. When order, please indicate the temperature of raw material to be undertaken or the operation temperature of drier in order to choose or provide suitable heat source for you.

3. When dry viscous raw material, our factory will design special stirring device in the chamber.

4. The auxiliary parts of vacuum drying system can be supplied and installed by our factory. Please indicate them when order;

5. If having special requirements, our factory can also design, manufacture and install as request;

6. The cost of complete equipment should be increased in accordance with the needs.

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### **DZG Series Single Cone Vacuum Dryer**





### Specifications

- (1).Cone-Shape Mixing Dryer
- (2). The structure is simple, easy to clean
- (3).Convenient in discharging, conforms to the GMP

#### Features

1. Mixing and drying complete in one vessel, improve productive efficiency.

2. Being adapted jacket for heating, decrease energy consumption.

3. Being adapted vacuum drying, could keep heat and mass transfer, especially suit for thermal sensitive material.

4. The structure is simple, easy to clean, convenient in discharging, conforms to the GMP standard.

5. Provides many kinds of agitation form match, may carry on the mass production.

6. It could carry on cooling, sterilization operation





### **Technical Parameter**

Type/specification	50	100	200	500	1000	1500	2000	3000
Volume(L)	50	100	200	500	1000	1500	2000	3000
Max work volume(L)	35	70	140	350	700	1000	1400	2100
Max. inner diameter (Ømm)	500	620	800	1100	1350	1550	1700	1950
Stirring motor power(kw)	1.1	1.5	2.2	4	5.5	7.5	15	18.5~22
Water evaporation(kg/h)	3~6	4~7	5~9	9~15	16~25	20~35	25~45	35~60
Overall dimension	100X650X1580	1200X800X2100	1300X950X2600	1600X1200X3400	2000X1500X4850	2200X1800X5500	2500X2000X6250	3000X2800X6800



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### Features

Being adapted the big area heating way, its heat conducting area large and its heat efficiency is high. Being installed stirring in the machine, it makes raw material in cylinder form the state of continuous circle inside the cylinder, so the uniformity to be heated of raw material is raised greatly. Being installed stirring in the machine, pulpiness, paste raw materials can be dried easy

### Working Principle

It is an innovation horizontal batch-type vacuum dryer, The moisture of wet material will be evaporated by heat transmission. The stirrer with squeegee will remove material on hot surface and move in the container to form cycle flow. The evaporated moisture will be pumped out by vacuum pump.



### **Technical Parameters**

### Application

The following raw materials from pharmaceutical industry, foodstuff industry, chemical industry and so on can be dried. Suitable for pulpiness, paste-like mixture or powder raw materials. Thermal sensitive raw materials having the requirement to dry at lower temperature. Raw materials that are easy to oxidize or explode and have strong irritative or toxic. Raw materials that need to recover solvent.



Item	ZB-500	ZB-750	ZB-1000	ZB-1500	ZB-2000	ZB-3000	ZB-5000					
Working volume( L)	me(L) 300		600	900	1200	1800	3000					
inner cylinder size \$\overline{4}600 \times 1500\$ \$\overline{4}\$		<b>ф</b> 800 х 1500	<b>ф</b> 800 <b>x</b> 2000	ф1000 x 2000	ф1000 x 2600	<b>ф</b> 1200 <b>x</b> 2600	<b>ф</b> 1400 <b>x</b> 3400					
Power	4	5.5	5.5	7.5	11	18.5	22					
Stirring speed	5~	25	5~1	12	5							
pressure of jacket	≤ 0.3											
Inner Pressure		-0.09~-0.096										

Note: The evaporated amount of water its related to the characteristics of raw materials and the drying temperature .Data above only for reference. we have the right to change but not notice, pardon!

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### **FG Series Vertical Type Fluid Bed Dryer**



### Application

This machine is mainly used for drying of powder or granules in pharmaceutical, foodstuff, chemical industries and so on.

### Features

Fluidizing drying, quick heat transfer.

Operation in hermetic closure and negative pressure, no dust nuisance No dead corner, easy to clean, no cross contamination. Mixing blade or negative pressure feeding system for optional to meet some special requirements. Use antistatic filter material, processing is safe.

Compares to GFG type, it has bigger fluidizing space.





### **Technical Parameters**

	ltem	unit					Model				
	lion		3	5	30	60	120	200	300	500	
container	volume	liter	12	22	100	220	420	670	1000	1500	
container	diameter	mm	300	400	700	1000	1200	1400	1600	1800	
capability	min	kg/batch	1.5	4	15	30	80	100	150	250	
Capability	max	Kg/batch	4.5	6	45	90	160	300	450	750	
fan power		kw	3	4	7.5	11	18.5	22	30	45	
steam consumption		kg/h	15	23	70	141	211	282	366	451	
Compressed-air consumption		m³/min	0.3	0.3	0.3	0.6	0.6	0.9	1.1	1.6	
temp	oerature	Ĉ	adjustable at the range from room temperature to 120°C								
work	king time	min		deci	ded in accord	dance with th	e properties	of raw mate	erials		
colle	ect rate	%				≥ 9	99				
r	noise	dB(A)						<	75		
Height of main machine		mm	2100	2300	2500	3000	3300	3800	4000	4400	

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### **GFG Series Batch Type Fluid Bed Dryer**

### Application

 Use screw to extrude and vibrate granule and granulate granule with the method of humidity, high speed and mixing;
 Suitable for drying humidity block or powder raw materials in

fields such as pharmaceutical, foodstuff, feed stuff, chemical industries and so on.

3. The raw material that large in granule and small in block and having adhesive property;

4. Suitable for raw materials, its volume will be changed when dry, such as giant arum, polyacrylamide, etc.



### **Principle of working**

After being purified and heated, air is introduced from the bottom of induced-draft fan and passed through the screen plate of batch hopper. In drying chamber, the state of fluidzation is formed through stirring and the effect of negative pressure. The moisture is evaporated and removed rapidly and the raw material is dried quickly.

### Features

1. This fluid-bed is round structure. So it avoid died corner.

2. In the bed there is stirrer. It avoid agglomeration of damp material and forming channel flow during drying.

3. The bag filter at top is made from anti-static special fiber. The operation is safe.

4. Discharged by turning over. It is quick, and fully.

5. Operated at sealed negative pressure and designed by GMP 6. The machine can also be designed to feeding and discharge automatically in accordance with requirements.

7. Quick drying speed, uniform temperature. In general, the drying time each batch is about 20  $\sim$  30 minutes.



### Technical Parameters

Item		Unit				Spec	cification				
Feeding capacity		kg / batch	60	100	120	150	200	300	500	≥ 800	
Power of	fan	kw	11	15	18.5	22	22	30	37		
Stirring power		kw	0.55	1.1	1.1	1.1	1.1	1.1	1.5		
Stirring sp	eed	rpm		11							
consumption o	of steam	kg/h	141	170	170	240	282	366	451	By URS	
working ti	ime	min		15-40(Decided according to raw material							
Height of main	Square	mm	2750	2850	2850	2900	3100	3300	3650		
machine	Round	mm	2700	2900	2900	2900	3100	3600	3850		

All datas are for reference only. According to the features of material, our factory has the right change but not notice, pardon!

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### **BLGZ Series Closed-loop Circuit Fluid Bed Dryer**



#### Applications

Mainly used for solvent recover and drying of material with solvent.

For drying of material with solvent from Sway Granulator and high-speed mixing granulator. For drying of wet granules and powder granules with solvent in food stuff, chemical industry, pharmaceutical industry and so on.

For drying of large granules, small blocks and Low-viscosity material.

### Working principle

Take nitrogen as medium for heat transfer, to realize solvent recovery and drying of material with solvent, with features of safety, high efficiency, Low energy consumption and so on. Air under the circulation function of fan(both blower fan and suction fan),after heated by steam radiator and filtrated by HEPA filter, entry into fluid bed dryer to dry the material. At the meantime, under the continuous stirring of stirring system inside the dryer, hot air and raw Material exchange their heat fully. After solvent (alcohol, acetone, methanol and so on) steamed out, fine powder together with circulating gas come out, fine powder caught by nitrogen blowback system. Waste-heat air after filtrated by filter entry into compensator, solvent is cooled to dew point and separated from air, so solvent recycled. Separated air is



fed into air heater by fan, go round and begin again like this..Until all solvent is steamed out, separate and recovered. After drying, products are discharged from the bottom of the dryer, net plate for material is flexible reverse turning bed and controlled by cylinder. After all products discharged, fan can clean the air filter inside the dryer.

#### Advantages and features

1.High efficiency. This machine is fully enclosed structure, no dead corner, both air exhaust system and air in system takes high-temperature and high-efficiency filter. The whole system has 3 levels of dust catcher, with high-efficiency dust catcher, easy to discharge and clean. After drying finished, because of blowback system, dust elimination is more thoroughgoing, reducing cleaning frequency, which can reduce labor intensity and avoid pollution of different products, Low viscosity, meeting GMP standards.

This machine can work continuously and steady in a long term, high degree of automation. It not only can dry, cool solvent, but also can cool raw material, drying efficiency is higher than other dryer, 4 to 5 times drying speed. And, the finished products have good quantity, which can create bigger product value for the user.

According to the user's requirement, vacuum feeder, vacuum discharger for optional, to enhance automatization degree.

2. Safety. Because of flammable and combustible dangerous of organic solvent, this machine take Safety technologys including on-line Oxygen checking, explosion-proof, Explosion venting and so on. Through intelligentized control technology, to monitor Oxygen residues/Pressure balance in the system and automatic modulation control. When air(oxygen) content exceed 0.5%(v/v),oxygen checking device open the Replenishing valve to supply fresh nitrogen by control system, to recovery the oxygen residues to a safety value(closed-circuit system is designed into positive pressure,oxygen entry into circulation system by material feeding). When air pressure inside the system exceed setted value(air pressure balance is setted into 0.02mpa),explosion venting device will automatically open decompression Pneumatic valve to exhaust some air by intelligentized control .The explosion-proof and explosion venting system is another safety technology of this machine, that is when certain electrical equipment or key device damaged, the system will be automatically opened, power cutted off and pipe valve closed, there is no probability of solvent reacting with oxygen, which avoid fire damagesor explosion during machine working to make sure safety production.

3. Saving energy. This machine is full closed system. Hot air through net board blow up the material. Hot air contact with material fully. The process of heat transfer is enhanced. At a Few air condition, a high air moisture can be got, so Only Micro positive pressure during working, needed air quantity is small. Fan power of this machine is smaller and less noise. At the meantime,

Hot air with solvent after drying is separated by condensator. The recoveryed solvent can be reused. So saving energy and production cost. Also, Low dew point nitrogen is sent to air heater for cyclic utilization by fan. Compared with common dryer, thermal efficiency enhanced, power consumption reduced, so heat consumption and production cost saved.

4.Environmental protection. This machine recovery the solvent from raw material during drying process based on solving the problem hard drying and Heavy pollution. At the meantime, zero exhaust avoid environmental pollution because of waste gas.



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### **Technical Parameters**

	Model		60	120	150	200	300	40	0	500	
Iten	ı	Unit	60	120	150	200	300	4(	10	500	
Container of raw material Dia.		Mm	Φ900	Φ1000	Φ1100	Φ1400	Φ1600	Φ1	800	Φ2000	
Production capacity	Min	kg/batch	40	70	90	120	150	25	55	355	
	Max	kg/batch	65	135	170	250	355	48	30	580	
Steam consumption		kg/batch	130	210	240	280	360	50	00	600	
Nitrogen consumption		m3/min	0.6	0.6	0.9	0.9	1.1	1.	.6	2.0	
Power of fan k		kw	11	18.5	22	30	37	4	5	55	
Solvent reco centa		%	≥ 95								
Temper	ature	°C	room temperature to 140 $^\circ$ ,Adjustable according to material features								
Product	ratio	%	>99								
Final mo	isture	%	~0.2								
Nois	е	db(A)				≤	75				
	Overall dimensions (LxW)		6852X3740	7266X3803	7340X3910	7550X4330	8420X4620	9870X5520	10600	×5600	
Height	H1	mm	4800	5500	5750	5750	6540	6540	66	00	
Lieght	H2	mm	4000	4100	4200	4420	4620	4700	50	50	

### Flow chart drawing



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### Description

It consists of air filter, heater, fluidized-bed main machine, feeder, cyclone separator, bag filter, high-pressure centrifuge fan and operation platform. Because the properties of raw materials different, when equip the dust removing equipment, we should consider practical needs. We can select cyclone separator and cloth bag duster at the same time or one of them. generally speaking, select cyclone separator only for raw material that is large in specific gravity but cloth bag filter for powder or small granules that is light in specific gravity. Meanwhile air feeding device and belt conveyor for selection.

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### Application

Through continuously improvement over 30 years, it has widely applied in the field of pharmaceutical, chemicals, foodstuff, processing grain etc. For example, the dehumidification and drying of and granular materials such as bulk pharmaceuticals, granular patent medicines, preparations, feed, plastic resin etc. The granular diameter shall be within the range from 0.1 to 6mm and the best is 0.5 to 3mm







图样说明 Drawing explaintion

符号 Symbol	说明 Illustration
V	过滤器 Air filter
×	球阀 Ball valve
×	针阀 Needle valve
1	截止阀 Stop valve
Xa	电磁阀 Magnetic valve
R	控制球阀 Control ball valve
K	止回阀 Check valve
$\odot$	风机 Fan
NWW1	风箱 Air box
8	旋转阀 Rotary valve
ø	蝶阀 Butterfly valve
M	电机 motor
۲	藏水器 Steam trap
B	温度传感器 Temparature sensor
PI	压力指示 Pressure indicate
(II)	温度指示 Temperature indicate

1. 振动给料器 Vibrating feeder	2. 星型给料阀 Star shape feeding valve	3. 沸腾床 Fluid bed
4. 出料阀 Discharge valve	5. 旋风分离器 Cyclone separator	6. 排风总管 Exhaust pipe
7. 控制柜 Control cabinet		



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### Working principle

Clean&hot air enters into fluidization bed through distribution of valve plate. Wet material fed from feeder will be formed a fluidization state by hot air(jumping with the bed like boiling water), so it is called fluidizing dryer. Because of the wide contact between hot air and materials, the drying time is very short. air enters from one end of bed, through "boiling" several minutes, and then comes out automatically from the other end. The dryer is also applicable for thermal sensitive material as a result of very short drying time and lowe temperature of material proper.

#### Installation explanation

Fluidizing bed, cyclone separator and bag filter should be placed on the flat concrete ground, and no foundation screws needed. The fan with under frame and foundation screws may be installed indoor or outdoor. The plan can be adjusted slightly in accordance with the practical conditions.

No air should leak in air pipe system to be free from the influence on drying efficiency.

#### **Technical Parameters**

Model	XF0.25-2 (XF20)	XF0.25-3 (XF30)	XF0.25-6	XF0.3-2	XF0.3-4	XF0.3-6	XF0.3-8	XF0.3-10	XF0.4-4	XF0.4-6
Area of bed layer ( m2 )	0.5	1.0	1.5	0.6	1.2	1.8	2.4	3.0	1.6	2.4
Drying capacity ( kgh2o/h )	20-25	30-45	52-75	-30	42-60	63-90	84-120	105-150	56-80	84-120
Power of fan ( kw )	7.5	15	22	7.5	15	22	30	30	30	37
Temperature of air in ( ${}^{\circ}\!\!\!{}^{\circ}$ )	120-140	120-140	120-140	120-140	120-140	120-140	120-140	120-140	120-140	120-140
Tem. of raw material ( $\ensuremath{\mathbb{C}}$ )	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60
Overall dimensions (main frame)L×W×H ( m )	2×0.6×3.35	4×0.6×3.35	6×0.6×3.35	2×0.70×3.4	4×0.7×3.4	6×0.7×3.4	8×0.7×3.4	10×0.7×3.4	4×1×3.58	6×1×3.58
Occupied area (m2)	25	35	40	25	38	45	56	70	18	56

Model	XF0.5-4 (XF50)	XF0.5-6	XF0.5-8	XF0.5-10	XF0.5-12	XF0.5-14	XF0.5-16	XF0.5-18
Area of bed layer ( m2 )	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Drying capacity ( kgh2o/h )	70-100	105-150	140-200	175-250	210-300	245-350	280-400	315-450
Power of fan ( kw )	30	44	60	90	111	148	169	197
Temperature of air in ( °C )	120-140	120-140	120-140	120-140	120-140	120-140	120-140	120-140
Tem. of raw material ( ℃ )	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60
Overall dimensions (main frame)L × W × H ( m )	4×1.2×4.1	6×1.2×4.1	8×1.2×4.1	10×1.2×4.1	12×1.2×4.1	12×1.2×4.1	16×1.2×4.1	18×1.2×4.1
Occupied area (m2)	50	70	82	100	140	180	225	268

NOTE: The drying capacity is measured on the basis of the primary and final moisture contents of 20% and 5% respectively of drying plum crystal and air intake temperature at 130  $^{\circ}$ C.drying capacity for other material will be based on the practical drying condition.

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### **ZLG Series Vibration Fluidized Bed Drier**

#### **Principle of work**

Raw material is fed into the machine from the inlet and moves forward continuously along with the level of fluidized-bed under the action of vibration. The hot air passes through fluidized-bed and carries out hot heat exchange with damp raw material. Then the damp air is exhausted out through cyclone separator and duster and the dry raw material is discharged through discharge outlet.

#### Application

1.Pharmaceutical and chemical industries: all kinds of press tablet and granule, boric acid, borax, dihydroxybenzene, malic acid, maleic acid and so on. 2.Foodstuff and construction material industries: less, mono sodium glutamate, edible sugar, edible salt, mine residue, bean, seeds and so on.

3.It can also used for raw materials to add up damp or cooling and so on.



ISO9001:2008

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### Features

1. Evenly heating. Compared with ordinary drier, the energy can be saved about 30%.

4. steam radiator

2. The vibration is created by motor. It is stable in operation and convenient in maintenance, low noise and long life 3. The fluidized state is stable and no dead angle and phenomenon of broken out.

4. The layer thickness and moving speed and the amplitude are adjustable through continuos variable speed.

5. It is small for damaging the surface of raw material. for easy-broken materials.

6.No cross pollution between raw material and air because of fully closed structure. The environment clean.

### flow chart for vibrating fluid bed dryer

### structure drawing for vibrating fluid bed dryer



material feeder
 air filter



cyclone
 suction fan



7. air cooling fan

8. air filter

### Technical parameters

N 4I - I		-initial-the-sector (%)			Vibration	Vibration motor	
Model	Area of fluidized-bed (m2)	air inlet temperature (℃)	Air outlet Temperature (℃)	Vapor Capacity ( kg/h )	Model	Power(kw)	
ZLG3×0.30	0.9	70-140	40-70	20-35	ZDS31-6	0.8×2	
ZLG4.5×0.30	1.35	70-140	40-70	35-50	ZDS31-6	0.8×2	
ZLG4.5×0.45	2.025	70-140	40-70	50-70	ZDS32-6	1.1×2	
ZLG4.5×0.60	2.7	70-140	40-70	70-90	ZDS32-6	1.1×2	
ZLG6×0.45	2.7	70-140	40-70	80-100	ZDS41-6	1.5×2	
ZLG6×0.60	3.6	70-140	40-70	100-130	ZDS41-6	1.5×2	
ZLG6×0.75	4.5	70-140	40-70	120-140	ZDS42-6	2.2×2	
ZLG6×0.9	5.4	70-140	40-70	140-170	ZDS42-6	2.2×2	
ZLG7.5×6.0	4.5	70-140	40-70	130-150	ZDS42-6	2.2×2	
ZLG7.5×0.75	5.625	70-140	40-70	150-180	ZDS51-6	3.0×2	
ZLG7.5×0.9	6.75	70-140	40-70	160-210	ZDS51-6	3.0×2	
ZLG7.5×1.2	9	70-140	40-70	200-260	ZDS51-6	3.0×2	



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### Part of drying sample(for reference only)

Material name	Material shape	Initial moisture (%)	Final moisture (%)	Unit Input capacity ( kg/ m2.h )
citric acid	granule	2.5	0.5	200
MSG	powder	5	0.3	200
Flow amine	granule	3.01	0.28	700
Borax	granule	4.1	0.3	900
Premier acid	acicular crystalloid	9.25	0.15	180
hank stretching	granule	6.5	0.2	500
cellulose ( CMC )	cotton-shaped	35	3.6	80
NPK	globularity	24.4	5.5	280
silica pigment;	paste	78.6	11.8	100
oxalic acid	granule	6.2	0.1	700
Plastic Granules	granule	3.7	0.01	300
prepared slices of chinese crude drugs	tablet	58	4	40
potassium permanganate	granule	3.7	0.15	500
aspirin	powder	3.1	0.1	600
calcium magnesium fertilizer	powder	11.1	0.35	400
Soybean meal	tablet	16.8	12.5	1000
bentonite	powder	20.5	0.5	500
soybean	shot structure	12.2	10.9	1200
active floridin	powder	43.7	17.9	180
maize germs	granule	55	5	50
halves of a bean	tablet	18.9	13	1100
match	strip	46.9	8	100
tea leaf	strip	15	7.4	300
ethyl alcohol	granule	74	8.2	50
Tobacco Stem	filiform	30	14	200
bait	strip	28	6.9	150
pearl powder	powder	9.1	0	450
washing powder	powder	10	1.75	300
catalytic agent	granule	25.5	2.3	100-300
refined salt	granule	1.85	0	2400
polyethylene	powder	21	0.06	120
PVC	powder	12.8	0.29	150
starch	powder	43.4	13.2	90
chicken essence	granule	5-7	0.5	190
ammonium chloride	granule	4-6.7	0.5	500-600

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### **DW Series Belt Dryer**

ISO9001:2008

### メ YIGAN ®

### Descriptions

The raw material can be spread on the conveyer belt through suitable auxiliary mechanism such as distributor, vibrating belt, pulverizer or granulator. The conveyor passes one channel or several channels consisting of heating unit.. Each heating unit is equipped with air heating and circle system. Each channel has one or several damp exhaust system. When the conveyor passes it, hot air passes through raw material from up to low or from low to up. In this way, it makes raw material dry uniformity.

### **Applications**

The belt drier is an usual continuous dryer. being widely used for chemical industry, foodstuff industry, pharmaceutical industry, construction material industry, electronics industry and so on. Particularly, it is suitable to dry the raw materials of sheet, strip or granule that are good in air permeability. For the paste substance of filter cakes, it is better to dry them first to make them become granule or strip through granulator.







A the circle fan has high-pressure level B the circle fan has larger air amount C the form for air out is spraying flow Effective dry length,(M) Effective dry length,(M) Quantity of layer at drying section

### **Technical parameters**

Model		DW-1.2-8B	DW-1.2-10B	DW-1.6-8B	DW-1.6-10B	DW-2-8B	DW-2-10B
Quantity of unit		4	5	4	5	4	5
Width of belt(m)			1.2	1	.6	2	
Length of dry section	(m)	8	10	8	10	8	10
Thickness of raw material spre	eading(mm)			10-8	0		
Operation temperature	(°C)			50 ~ 1	40		
Steam pressure ( Mp	ba)			0.2 ~	0.8		
Steam consumption ( )	kg/h )	120-300	150-375	150-375	170-470	180-500	225-600
Dry time ( h )		0.2-1.2	0.25-1.5	0.2-1.2	0.25-1.5	0.2-1.2	0.25-1.5
Dry capacity ( kg wate	er/h )	60-160	80-220	75-220	95-250	100-260	120-300
Quantity of fan		5	6	5	6	5	6
Total equipped power insi	de ( kw )	13.6	15.8	13.6	15.8	14.7	16.9
Total equipped power	( kw )	11.4	13.6	11.4	13.6	19.7	23.7
	A(m)	1.2	1.2	1.6	1.6	2.0	2.0
Overall dimensions	A1 (m)	1.95	1.95	2.35	2.35	2.75	2.75
Overall ulmensions	B(m)	8.0	10.0	8.0	10.0	10.0	10.0
	B1	9.5	11.5	9.5	11.5	9.5	11.5

Note: The parameters above mentioned is for reference only. The dry strength is concerned with many factors such as properties of raw material, operation temperature



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### **Technical parameters**

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Moc	del	DW3-1.2-8B	DW3-1.2-10B	DW3-1.6-8B	DW3-1.6-10B	DW3-2-8B	DW3-2-10B		
Quantity	of unit	8	10	8	10	8	10		
Width of	belt(m)	1	.2	1.	6	2	2		
Length of dry s	section ( m )	24	30	24	30	24	30		
Thickness of raw mate	rial spreading( mm )			10-8	0				
Operation temp	erature (°C)			50 ~ 1	40				
Steam pressu	ure ( Mpa )		0.2 ~ 0.8						
Steam consum	ption ( kg/h )	240-550	300-750	300-750	340-950	350-1000	400-1200		
Dry time	e(h)	0.2-1.2	0.25-1.5	0.2-1.2	0.25-1.5	0.2-1.2	0.25-1.5		
Dry Strength ( k	g .H2o/m2.h )	6~30							
Total equipped	power ( kw )	21.7	26.1	21.7	27.2	29.2	35.2		
	A ( m )	1.2	1.2	1.6	1.6	2.0	2.0		
Overall dimensions	A1(m)	2.1	2.1	2.8	2.8	3.2	3.2		
	B(m)	8.0	10.0	8.0	10.0	8.0	10.0		
	B1	12.5	14.5	12.5	14.5	12.5	14.5		

Note: The parameters above mentioned is for reference only. The dry strength is concerned with many factors such as properties of raw material, operation temperature

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### **DW Series Belt Dryer**

### **XSG Series Spin Flash Dryer**





### Descriptions

The revolving flash vaporization dryer is a new and high-efficiency drying equipment which is researched and developed for the sake of overcoming the low-efficiency and high energy-consuming of static drying. In its design, we have developed advantages and reduced shortcomings of common dryers, to realize the target of the consuming and high efficiency drying..

#### **Principle of work**

Hot air, from the bottom of drier, enters drying chamber with stirring and crushing device at a suitable atomizing speed. It exerts strong shearing, blowing, floating and rotating effect to raw material. Therefore raw material is granulated through centrifuge, shearing, impacting and friction effect. It strengths the process of heat exchange. At the bottom of drier, the large and damp granules are crushed under the action of stirrer. While, granules that are small in particle and containing less moisture will be lifted accompanied with revolving air stream. During that period, it is dried further. Because the two phases gas and solid of flows in rotating, the inertia of solid phase is more than that of gas and the relative velocity between solid and gas phases is large, it strengthens the process of heat exchange. Therefore, the equipment has big drying capacity.

### Features

There are many kinds of feeding equipment for choosing, and feeding is continue and static.

At the bottom of dryer, where is high temperature area, heat sensitive raw material will not contact with heat surface directly, therefore it solves the carbonized and changed color problems of heat sensitivity raw material.

There are air pressure equipment and shaft cooling equipment, so longer life.

There is special equipment for sharing wind, and raising the amount of hot air.

There are rotational flow pieces inside the drying chamber. It is used to control the moisture and granules of raw material.

Because gas speed at circle inside the drying chamber is high and the staying time of raw material is short, high efficiency and quick speed can be realized.







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### XSG Series Spin Flash Dryer



blower fan air heater main body feeder lock valve cyclone bag filter suction fan silencer

Note:heat resource can be oil,gas,coal furance

### Technical parameters

Model	XSG-2	XSG-4	XSG-6	XSG-8	XSG-10	XSG-12	XSG-16	XSG-20
ID of main machine ( mm )	200	400	600	800	1000	1200	1600	2000
Air amount ( m3/h )	350-500	1150-2000	2450-4500	4450-7550	7000-12500	10000-18000	18000-30500	50000-78000
Evaporated moisture ( kg/h )	12-17	40-70	80-150	150-250	230-420	300-600	600-1000	1000-1500
Max equipped power (kw )	10	20	40	65	85	105	150	230
Max height ( m )	4.0	4.8	5.8	6.4	7.1	7.8	8.5	10.1
Occupied area (m2)	15	20	28	35	40	52	80	150

Note: all details above for reference only. Because of material features, the parameters vary. we have the right to change but not notice, pardon!





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### **QG,JG Series Air stream Dryer**





#### Description

QG is equipped with fan that has the function of dispersing. So it is suitable for heat sensitive raw material specially.

JG, reinforce type. Suitable for raw materials that contains high moisture and paste state and other material that can't be dried with basic model.

#### Features

1.Large dry strength and save equipment investment: the treating amount of air stream drier is the largest.

2.High automatic and the quality of product is good: the raw material to be dried is inside the pipe. The dry time is short (only0.5-2seconds). So that the automatic can be realized. The raw material don't contact with outside. So few pollution and final product in good quality.

3. The equipment will be supplied completely and the heat source can be chosen freely.

4. The basic type consists of filter, heater, feeder, drying pipe, fan and cyclone separator. Customer can install duster and other auxiliary equipment accordance to practical condition.

5.For heating way, Air stream drier has wide suitability. Stream, electricity and air-heated furnace for optional. Meanwhile, heat resource depends on the temperature of raw material to be resisted(or temperature of hot air). If  $\leq 150^\circ\!\!C$ , choose steam to heat. If  $\leq 200^\circ\!\!C$ , electricity or steam plus electric as supplement or (heat conduction);  $\leq 300^\circ\!\!C$ , coal air-heated furnace. If  $\leq 600^\circ\!\!C$ , oil air-heated furnace.



#### Work principle

The damp raw material through conveyer and heated fresh air enter into the drier at the same time. The area mixed fully. Because the area of heat exchange is large, the purpose of evaporation and dry can be realized in a short time, the dried finished product is discharged from cyclone separator. Small parts of power dust can be recovered and used through cyclone separator or bag duster. Model QG air stream drier is operated at negative pressure. The raw material does not pass through fan. Model QG air stream drier is operated at positive pressure. The raw material passes through fan with the effect of crushing. Model JG air stream drier is a reinforced type it integrates flash dry and air stream dry in the one body and is also a newest style drier designed and manufactured by us as customer request.







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### QG,JG Series Air stream Dryer



### **Technical parameters**

Model	Moisture to be evaporated kg/h	Equipped power kw	Area of install m2	High m
QG/JG50	50	7/10	16	14/9
QG/JG100	100	13/20	26	14/11
QG/JG200*	200	21/31	35	15/11
QG/JG250	250	24/32	51	15/12
QG/JG500	500	43/54	78	18/12
QG/JG1000*	1000	100/135	105	18/15
QG/JG1500*	1500	150/175	200	20/16

Note: marked with" \*" has two grades for drying.2.its power and area to be occupied are calculated based on steam heating. data above only for reference, we have the right to change but not

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### **ZLPG Series Spray Dryer For Extract**

ISO9001:2008



### Working principle

This equipment is an application of centrifuge atomizing technique for special raw materials. It is an apparatus using high-speed centrifuge atomizer to make raw material distributed in fog that contacts with hot air fully and finish the drying momentarily and form powder product.

The special drier for immersed ointment of traditional Chinese medicine is used to solve immersed ointment of traditional Chinese medicine and extracted liquid of plant. It selves the conditions existed in original LPG highspeed atomizing dryer. In view of this, according to the properties and process requirements of immersed ointment of traditional Chinese medicine, our factory researched and designed the special drier for immersed ointment of traditional Chinese medicine and won two items of China patent.

#### **Features**

1.Being adapted three grade air purification, the inlet air reaches the requirement of one hundred thousand grade;

2.Being adapted wall cooling device, the temperature of inner wall will be 80~C,Even if raw material is stayed on the wall, it can not carbonize;

3.its whole volume is 3.5 times of standard LPG high-speed atomizing dryer;

4.Being adapted quick washing device, it is can meet the requirements of production for variety products;

5, Being adapted quick washing device, there is no powder dust out, It is conformity with the requirement of GMP;

6.Being adapted air sweeping device, the clean effect is satisfied;

7. Equipped two sets of atomizer and adapted frequency control;

8.Adapted PLC control and display and adapted frequency control;

9.Equipped with washing device;

10.Adapt the seal method to transport dry air



our spray dryer at Shandong



our spray dryer at Neimenggu



Neimenggu

Ningxia Site



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**ZLPG Series Spray Dryer For Extract** 

### Sketch of flow chart



1.Feed bin
2.water tank
3.feed pump
4.air filter
5.fan
6.air heater
7.atomizer
8.drying chamber
9.cyclone separator
10.damp duster
11.sweep device(optional)
12.refrigeration
dehumidify machine

### **Technical parameters**

			1	1				1		
Туре		5	10	25	50	80	100	150	200	300
Evaporation rate( kg/h)		5	10	25	50	80	100	150	200	300
Input capacity per hour (kg/h)		6-7	12-14	25-34	50-68	80-108	100-135	150-203	200-270	300-406
Solid content of raw material(%)		18-25								
Moisture of finished product	3-5									
Electrical power(kw)		36	45	63	99	132	153	204	246	330
Heating fuel	steam plus electricity									
collecting way and its efficie	two-grad cyclone or grade cyclone duster and one-grade damp duster ≥ 95%									
automatic control		indicator of temperature of hot air and humidity of air exhaust								
temperature of air in ( ${}^{\circ}\!\!\!{}^{\circ}$ )		150-200								
temperature of air out (°C	80-100									
overall dimensions (mm)	L	5000	5500	7000	8000	9800	11000	12200	14100	15000
	W	3000	3500	4000	5000	5700	6200	7000	7800	9000
	н	4500	4600	5200	6500	7600	8100	9000	9850	11100

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### LPG Series High Speed centrifugal Spray Drier



### **Principle of work**

Filtered air is transferred into hot air by passing through the heater, and goes into the hot air distributor on the top of the dryer, then goes into the drying room evenly,. At the same time, liquid materials are sent to the centrifugal atomizer on the top of dryer by the screw pump with stepless speed regulator, atomized into tiny droplets which will contact hot air, then dried into dry product within shortest time. The finished products will be discharged from the bottom of the drying tower and from Cyclone separator. Waste air is exhausted by Induced draft fan.

### **Features**

1.Fast drying speed. Liquid material after atomization will increase its surface area largely and can be evaporated its moisture 95%~98% instantly in the hot air flow so as to finish drying within 5 to 15 seconds. It is specially suitable for drying of heat sensitive raw materials.

2. Dried products have even granule, good flow ability and solubility, high purity and good quality

3. Suitable and stable operation, easy adjustment and control as well as automation

4. Simplifying process of production, superior and sanitary operation environment, and flying dust can be avoided during the drying process



#### Flow chart



101.Air filter 102.Blower 103.Air heater 104.Feed bin 105.Feed pump 106.Atomizer 107.Drying chamber 108.First powder catcher (cyclone) 109.Second powder catcher (cyclone or bag filter) 110.Suction fan 111.Exhaust air filter (water film scrubber)

### Spray Drying Stages

1. Atomizing: by atomizer, feed liquid is dispersed into even fog drops.

2.Contact of fog drops and hot air: through air distributor, hot air enters into drying chamber, fully mixing with fog drops and moves at a certain rule(the contact way can be co-current flow, adverse current, mixed flow)

3. Drying process: fog drops has big surface area, and appears obvious " grades" to hot air both in temperature and humidity, thus strengthen the transmission process of "plastid caloric" moisture of fog drops is evaporated very quick(within seconds to tens of seconds)



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# LPG Series High Speed centrifugal Spray Drier

#### **Technical parameters**

Specificat	ion	LPG5	LPG25	LPG50	LPG100	LPG150	LPG200-3000		
Inlet tempera	ature	≤ 350° C							
Outlet tempe	rature				80-90°C				
Evaporating rat	e (kg/h)	5	25	50	100	150	200-3000		
Rotating spee	d(rpm)	25000	22000	21500	18000	18000	15000		
Dia. of atomizing	tray(mm)	50	120	120	120	150	180-340		
Heat sour	ce	Electricity	Electricity		Electricity+ stear	n, oil fuel, gas, d	or coal		
Electrical-heatir	ng power	9	45	60	81	99			
Dry powder	Yield				≥ 95				
	A(mm)	1000	1290	1730	2500	2800			
	B(mm)	2100	3410	4245	5300	6000			
	C(mm)	2300	4260	4645	6000	6700			
	<b>φ</b> D(mm)	1060	1800	2133	2560	2860			
	E1(mm)	1050	1200	1640	2100	2180	Decided according to		
Installation Size	E2(mm)	1050	1200	1640	2100	2180	actual condition		
For reference	F(mm)	750	1000	1250	1750	1970			
	G(mm)	530	1700	1750	1930	2080			
	H(mm)	530	1300	1800	2600	3050			
	l(mm)	530	1550	1600	1780	1960			



Australia





Ningxia







Xinjiang

#### Drying data for reference

Name of material	Moisture content of input material%	Moisture content of finished product %	Inlet temperature °C	Outlet temperature °C
Full cream milk powder	50	3	240	95
Optical brightener	50	5	350	85
Potassium chloride(kcl)	60	1	550	170
Soy sauce	60	3	200	95
Maltodextrin	30	5	300	100
Manganese bioxide	55	2.5	350	160
Barium sulfate(BaSO4)	40	1	375	110
Copper oxychloride	50	1.5	400	110
Egg	76	4	200	85
Egg white	78	8	200	85
Vitelline	58	4	200	90
Enzymes	60	5	180	100
Hydrolyzate of fish protein	60	5	300	100
Seasoning	50	5	180	95
Weedicide	50	4	250	110
Extract liquorice	55	2.5	250	95
VitamineB2	80	3-5	180	80
Sulfite	55	4	250	110
Digallic acid	80	4	200	85
Animal blood	70-80	6	220	85
Aminophenol	75-80	4	220	85
Pumpkin powder	90	5	190	85
Cobaltous sulfate	70	1	320	110
Dextrin	50	2	200	80
Soy	70	4	200	80
Garlic	60	6	180	80
MCPA- sodium salt	70	1	390	110



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# **Microencapsulation Granulator**





#### General

Microcapsules granulation techniques: also known as microcapsules, is a solid, liquid or gaseous material embedded within a sealed capsule into a solid micro-particulate product technology, this can be wrapped to protect the material so that the outside isolated from the environment, to maximize their original color, flavor, properties and biological activity, to prevent the destruction and loss of active substances.

advantages:

- 1. can reduce the incompatibility between the drug compound preparation, isolated drug reaction between components.
- 2. masking the bitter taste or odor of drugs, such as sulfa drugs.
- 3. controlled release of the drug.
- 4. reduce the toxicity of the drug.
- 5. pharmaceutical formulations prepared with microcapsules have the following advantages:

(1) controlled or sustained release of drugs. Formulated with microencapsulated powder, good liquidity, more accurate dose. Can improve drug hygroscopic hygroscopic powder easy to agglomerate.

(2) perfusion with microcapsules hollow capsules, good liquidity, loading capacity and accurate.

(3) can be directly compressed tablets using microcapsules, good compressibility. Produced particle mobility, and the amount of fill in the die is accurate, smaller tablet weight difference; tableting powder can also reduce emissions.

6. Protection of drugs, such as easy oxidation of other drugs sensitive to water vapor; the liquid or volatile drug into a stable powder.

7. more conducive to store drugs.

8. may be living cells or bioactive substances parcel.

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### **YPG Series Pressure Granulation Spray Dryer**





#### Description

YPG Series Drier can finish drying and granulating at the same time. The needed granules with certain size and ratio can be got in accordance with requirements for process to adjust pressure, flow, and size of atomizing hole.

The tower body, pipes, separator of set, which contacts raw material, are made of SUS304. Space between inner and outer shell of tower body is filled with fine glass cotton, for heat preservation. The tower body is also equipped with observation door, sight glass, lamp-house, control meters and instruments that is controlled and displayed through electric control panel.

The heat source: steam, electric, gas fuel or oil fuel(for gas or oil, it must be equipped with air heating furnace)

#### Features

 The dry speed is fast. The surface area of raw material liquid after atomized will be increased greatly, 95–98% of moisture can be evaporated at a moment. The time to finish drying is only about ten seconds to several tens seconds.So, It is suitable for drying thermal sensitivity material particularly.
 The finished products is ball granule with uniform size. Its fluidity and solubility are good. The purity of product is high and its quality is good.

3. The applied scope is wide. According to the characteristics of raw material, it can use hot air to dry and can also use cool air to granule. It has strong adaptability to raw materials.

4.Its operation is simple and stable and its control is simple and convenient and is easy to realize automatic operation.

#### Application

The applications in the fields of atomizing crystal, atomizing reflection, atomizing concentration are used often.

1.Granulating through atomizing dry: chemical industry, organic catalyst, resin, synthetic, washing powder, oils,

thiamin, dyestuff, intermediate of dyestuff, white carbon black, graphite, ammonium phosphate and so on.

a. Foodstuff: amino and similar substance, flavoring, protein, starch, diary products, extractive substance from coffee, fish powder, extractive substance from meat and so on.

b. Pharmaceutical: Chinese patent medicines, agrochemicals, antibiotics, medical drinking agent and so on.

c. Ceramics: magnesium oxide, kaoline, all kinds of metallic oxide, dolomite and so on.

2. Granulating through atomizing: all kinds of fertilizer, aluminum oxide, ceramics powder, pharmaceutical, heavy metallic super hardness steel, chemical fertilizer, washing powder, Chinese patent medicines and so on.

3. Granulating through atomizing cooling: amino fatty acid, paraffin wax, glycerate, tallow and so on.

#### **Principle of work**

the liquid raw material is fed into drying tower by high-pressure pump. It is atomized into small drops, which gather with hot air and fall off. Most part of powder materials will be collected through discharge port at the bottom. The wasted air and fine powder will be separated through cyclone. The wasted air will be exhausted through draught fan and powder will be collected by collector at the bottom of cyclone. At the outlet it can also be equipped with two grades of duster. Material receiving rate can be over 96–98%.



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#### **Technical Parameters**

Model	50	100	150	200	300	500	1000		
Evaporated amount(kg/h)	50	100	150	200	300	500	1000		
d(mm)ΦxH	1200x8900	1800x11500	2200x13500	2400x14800	2800x15400	3400x18800	4600x22500		
Power(KW)	8.5	14	22	24	30	40	82		
Inlet air temperature(°C)	300-350								
Water content(%)	<5(can reach to 0.5%)								
Yield(%)				>97					
Heating by Electricity(KW)	75	120							
Evaporation and Electricity(Mpa+KW)	0.5+54	0.6+90	0.6+108	Temperature is below 200° C,calculating in accordance with pratical situation					
Furnace(Kcal/h)	150000	300000	300000	400000 600000 1000000 1500000					

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### **HG Series Roller Scraper Dryer**

#### Scope of application

HG Series Roller Scraper Dryer is a single cylinder dryer, can be used for drying of various kinds of slurry, especially for recovery of the waste yeasts in brew house, dryers of different specifications can meet the production demand of brew house at the scale of annual 30,000 tons to 100,000 tons of beer. This machine is also suitable for the drying treatment in food, chemical and medicine, etc.

#### Mechanical structure and operating principle

GT Series Rolling Scratch Board Drier body mainly consists of dryer cylinder, frame, driving system, scraper, limited material, scraping device, leaching material device and steam-path system. In addition, it is equipped with electrical control cabinet and exhaust steam cover. This is a kind dryer that heats the material and evaporates the moisture by indirect heating of steam. Its dryer cylinder (drum) is a metallic hollow cylinder whose surface is finished and is extremely smooth, driven by the transmission device (gearwheel and pinion), the dryer cylinder rotates in axial direction and the speed can is adjust-



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able. The slurry is preheated in preheating tank, when heated to about 50°C, the slurry will be pumped to the leaching material tank at lower part of the drying cylinder, the drying cylinder submerges about 60–80mm depth, then the surface of the rotary cylinder will be coated with a layer of uniform slurry (the thickness of the film), the steam pressure in the dryer cylinder is 0.15–0.3 Mpa, the slurry is heated on the outside surface of the dryer cylinder, the moisture be exhausted by induced draft fan after evaporation. The drying will be finished when the dryer cylinder rotates one circle, the material piece on the external surface of the dry cylinder is scraped with scraping device and falls to the discharge port for collection.

#### Main characteristic and performance

The dryer cylinder in contact with the material is made of high grade cast iron subject to ground finishing, with characteristics of anticorrosion and free pollution. This machine adopts conductive heating, there' s no heat loss taken by the drying medium, so it is high heat utilization and low energy consumption, usually above 70%. It is also characterized by compact structure, less room taking and convenient cooperation and maintenance, etc. This machine is made by combining with the advantages of the Germany sample machine and in light of the actual situation in China, advanced operational performance is achieved.

#### **Technical process**

Parameter Spec.	Φ800×1600	Φ1600×2400								
Heating Source Pressure(MPa)	≤ 0.6									
Main Motor Power (kw)	3	4	4	5.5	7.5					
Heating Transmission Area(m2)	4	6.2	7.5	10.5	12					
Speed of the roller (rpm)	0.5~5									
Heating Source			Steam and Con	ducting oil						
Feeding method         top or bottom										



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#### Description

The machine is mainly used in per buring of rigid magnet oxygen pulverized powder, it is also suitable for chemical industy and agriculture. It consists of main kiln body, supporting drive set, cooling pipe, oil fuel system, electricity control, secondary air inlet set, exhaust dust set and warm-up kiln body etc. The machine has function like: an alarm for over temperature, give an alarm for over loading, auto control for working temperature, oxygen atmosphere is adjustable in the kiln, etc.

#### Feature

The mechanical degree content of rotating drier is high and its productive capacity is large .because the resistance when fluid passes through the cylinder is small, the consumption of power is low.

Have strong adoptability to raw materials.

Its operiation is stability and the cost of operation is cheap. The homogeneity of dried product is good.





#### Applications

1.For materials to dried under low temperature and large production in line.

2..Application for drying big particles, heavy particles in the field of chemical mining, metallurgical industry and so on. For example: slag of blast furnace, coal, metallic, phosphorus fertilizer, thiamin and so on.

3..For drying powder, grannle raw materials which have special requirements such as :HP vesicant, lees, precipitated calcium carbonate, active clay, magnetic powder, graphite, and residue medical and so on.

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# **HZG Model Rotary Drum Dryer**







#### heat-carrying agent

#### Hot air, stack gas



#### **Technical parameters**

		Main kilr	n body			Inlet Tem-	Outlet Tem-	Motor		
	Inner dia	ameter Length	Angle	Speed	Capacity	perature	perature		Power	Speed
Model	mm	mm	0	r/min	t/h	C	°C	Туре	KW	r/min
ZG12120	1200	12000		4.7	2-2.5			Y160M-4	11	1460
ZG15120	1500	12000		5	4-6			Y180L-6	15	970
ZG15150	1500	15000		5	5-7			Y180L-6	15	970
ZG18150	1800	15000		3.9	7-10			Y200L1-6	18.5	970
ZG20200	2000	20000	2-5	3.9	8-14	150-250	60-80	Y200L2-6	22	970
ZG22220	2200	22000		3.2	12-16			Y250M-6	37	970



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#### The principle of work

Wet materials are fed continuously to the first drying layer on the top of the dryer. They will be turned and stirred by rakes when the rake arm rotates and drop down to the outer edge of the large drying plate under earth, and will be moved inward and drop down from its central hole to the small drying plate on the next layer. Both small and large drying plates are arranged alternately so as materials can go through the whole dryer continuously. The heating media, which could be informs of saturated steam, hot water or heat conducting oil will be led into hollow drying plates from one end to the other end of the dryer. The dried materials will drop from the last layer of the drying plate to the bottom layer of the shell body, and will be moved by rakes to the discharge port. The moisture escapes from materials and will be removed from the moist discharge port on the top cover, or sucked out by the vacuum pump on the top cover for vacuum-type plate dryer. The dried materials discharged from the bottom layer can be packed directly. The drying capability can be raised up if equipped with supplementary devices such as finned heater, condenser for solvent retrieval, bag dust remover, return and mix mechanism for dried materials and drawing fan etc. Solvent in those dried paste and heat sensitive materials can be easily retrieved and thermal decomposition and reaction can be also carried out.





#### Application

- Organic chemicals
   Mineral chemicals
   Pharmaceutical and foodstuff
- 4.Feed and fertilizer

#### **Descriptions**

PLG Series Continual Plate Dryer is a kind of high effective conducting and continuous drying equipment. Its unique structure and operating principle determine that it has advantage of high heat efficiency, low energy consumption, small occupying area, simple configuration, easy operating and control as well as friendly operating environment etc. It can be widely used in drying process in the fields of chemical industry. Pharmaceuticals, agricultural chemicals, foodstuff, fodder, process of agricultural and sideline products etc, and is well received by various sectors in their practical usage. Now there are three big categories, named normal pressure, closed and vacuum styles, four sizes of 1200,1500,2200 and 3000, and three kinds of materials, namely A(carbon steel), B(stainless steel used for those all parts where materials are contacted) and C(on the basis of B to add stainless steel materials for vapor pipes, main shaft and support , and stainless steel linings for cylinder body and top cover). With drying area being from 4 to 180 square meters, now we have hundreds of models of series products and various kinds of auxiliary devices available to meet requirements of drying materials for customers.

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#### Features

#### (I) Easy regulation and control, strong adaptability

1. Regulate thickness of materials, speed of main shaft, number of rake arm, style of and sizes of rakes to make drying process be optimal.

2. Each layer of drying plate can be led thermal or cold media individually to heat of cold materials and make temperature control accurately and easily.

3. Dwelling time of materials and be accurately adjusted.

4. Single flowing direction of materials without return flowing and mixing, even drying and stable quality, no re-mixing is needed.

#### (II) Easy and simple operation

Start and stop of dryer is quite simple.

After materials are stopped feeding and conveying, they can be easily exhausted out of the dryer by rakes. Careful cleaning and observation can be carried inside the equipment through large-scale viewing window.

#### (III) Low energy consumption

Thinner layer of materials, low speed of main shaft, small power and energy needed for conveying system of materials.

Dry by conducting heat so it has high heating efficiency and low energy consumption.

#### (IV) Friendly environment, solvent can be retrieved and dust powder discharge can meet requirement.

Normal pressure style: as low speed of air flow inside the equipment and moisture being high in upper part low in lower part, dust powder could not float to the top of the equipment, so there is almost no dust powder in tail gas discharged from the most discharge port on the top.

Closed Style: equipped with solvent retrieval device that can retrieve organic solvent easily from most-carrier gas in closed circulation for those subject to burning, explosion and oxidation, and poisonous materials in order for safe operation. Especially suitable for drying of flammable, explosive and poisonous materials. Vacuum Style: if the plate dryer is operating under vacuum state, it is particularly suitable for drying of heat sensitive materials.

#### (V) Easy installation and small occupying area

1. As the dryer is in a whole to leave the factory and to be transported, it is quite easy to install and fix in the location only by hosting.

2. As drying plates are arranged by layers and installed vertically, it takes a small occuping area through drying area is larger.



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#### **Technical Parameter**

spec	diameter mm	heigh mm	area of dry m2	power Kw
1200/4		2718	3.3	1
1200/8	Ф 1850	3558	6.6	1.5
1200/12		4398	9.9	
1500/6		3022	8.0	2.2
1500/8	<b>*</b> 0400	3442	10.7	
1500/12	Φ2100	4282	16.1	
1500/16		5122	21.5	3.0
2200/6		3319	18.5	
2200/10	•	4159	30.8	4.0
2200/14	<b>\$</b> 2000	4999	43.1	5.5
2200/18	Ф2900 -	5839	55.4	7.5
2200/22		6679	67.7	11
2200/26		7519	80.0	
2500/6		3319	26.3	4
2500/10		4159	43.8	5.5
2500/14	♠ 0450	4999	61.3	7.5
2500/18	Φ3150	5839	78.8	
2500/22		6679	96.3	11
2500/24		7099	105	13
3000/8		4050	48	
3000/12		5250	72	11
3000/18	Φ3800	7050	108	13
3000/26		9450	156	4 E
3000/28		10050	168	15

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# **PLG Series Continual Plate Dryer**









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#### **Specifications**

Applicable for drying paste, particle, powder, slurry state material, perform process of drying, Drying machine Hollow Blade Dryer Hollow chock shaped blades are concentrated on the hollow shaft. Heat media flow through the blade from the hollow shaft. The heat transferring area in the effective volume is very high. The temperature range of heating media is -40 °C to 320 °C . It might be steam, or liquid state, such as steam, thermal oil etc. Indirect heating, there' s no heat carried out by air. All heat is utilized for to drying the material except the lost of heat insulation layers. The surface of chock shaped blade has self-cleaning function. The relative movements of the product particles and the chocked shaped surface might clean the material attached to the chock shaped surface, so to keep the cleanliness of heat transferring surface during working. The shell of hollow blade dryer is  $\Omega$  shape. 2 or 4 pieces of hollow stirring shaft are usually equipped in the shell. To avoid any leakage of material, there' re sealed terminal cover and top cover with the shell. The heat transferring media flow through the rotation connector, jacket' s shell and hollow stirring shaft. To ensure best transferring effect, the hollow stirring shaft adopts different interior structure in accordance with different heating media.

b on each paddle. This results in higher heat transfer rates than disc or single shaft designs.





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38

### **KJG Series Hollow Paddle Dryer**



#### **Feartures**

The heat consumption of blade is low. No heat carried out by the air because of indirect heating; theres no heat insulation layer with the exterior wall of the drier. It consumes 1.2 kg of steam to evaporate 1kg of water for to drying slurry state of material. The cost of blade drier is low: The unit effictive volume has very large heat transferring surface, so the processing time is shorted, the size of the equipment becomes small. The building area and place are sharply decreased.

The range of material to be processed is wide: Heat sensitive material and materials to be processed under high temperature might be processed with differen heating media. The normal media are:steam,thermal oil,hot water and chill water. It might be continous or batch operation, widely used in many areas.

Steady operation: The material particles fully contact heat transferring surface, because of the special compressing and swell-stirring effect of the chock shaped blade. The differ

Sepc		Item No.											
Sepc	KJG3	KJG9	KJG13	KJG18	KJG29	KJG41	KJG52	KJG68	KJG81	KJG95	KJG110		
Heat tranferring area(m²)	3	9	13	18	29	41	52	68	81	95	110		
Effective volume(m³)	0.06	0.32	0.59	1.09	1.85	2.8	3.96	5.21	6.43	8.07	9.46		
Range of rotating speed(r.m.p)	15-30	10-25	10-25	10-20	10-20	10-20	10-20	10-20	5-15	5-15	5-10		
Power(kw)	2.2	4	5.5	7.5	11	15	30	45	55	75	95		
Width of vessel(mm)	306	584	762	940	1118	1296	1474	1652	1828	2032	2210		
Total width(mm)	736	841	1066	1320	1474	1676	1854	2134	1186	2438	2668		
Length of vessel(mm)	1956	2820	3048	3328	4114	4724	5258	5842	6020	6124	6122		
Total length(mm)	2972	4876	5486	5918	6808	7570	8306	9296	9678	9704	9880		
Distance of material inlet & outlet(mm)	1752	2540	2768	3048	3810	4420	4954	5384	5562	5664	5664		
Height of center(mm)	380	380	534	610	762	915	1066	1220	1220	1220	1220		
Total height(mm)	762	838	1092	1270	1524	1778	2032	2362	2464	2566	2668		
Steam inlet(inch)	3	/4		,	1			1-	1/2		2		
Water outlet(inch)							11/2						

#### **Technical Parameters**



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#### **Application**

Pharmaceutical industry: tablet, capsule, low sugar or no sugar granule of Chinese medicine.

Foodstuff: cocoa, coffee, milk powder, juice of granulates, flavoring and so on.

Other industries: pesticide, feed chemical fertilizer

Drying of powder or granules material.

Granules, protecting coat of pellet, spare color, slow release film, bowel-dissolve coating, etc

#### Features

Through powder granulating, material fluidness improved and fewer dust flying.

Through powder granulating, its solving property is improved.

Mixing, granulating and drying is completed in one step inside the machine .

Safe operation because of the antistatic cloth bag filters.

The operation personal is not damaged if explosion take place because of the releasing holes.

No dead corner. quick and convenient of loading and discharging. It can meet the GMP requirement.

#### Principle

The powder material in container (fluid bed) is in the state of annular fluidization. It is preheated and mixed with clean and heated air. At the same time, the solution of adhesive solvent is fogged and sprayed into the container. It makes some of particles become granules that contains adhesive. Being of ceaselessly dry in hot air, the moisture in the granule is evaporated and the adhesive is solidify. The process is carried out continuously. Finally it forms ideal, uniform and porous granules







40



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# **FL Series One-step Fluid Bed Granulator**

ISO9001:2008  $(\in \mathbb{P})$ 





- 1. Liquid material tank
- 2. Feed pump
- 3. Bottom hopper

Flow chart

4. Air heater

#### **Technical Parameters**

- 6. Air valve
- 7. Suction fan
- 8. Silencer
- 9. up cylinder

Model unit Item З 5 15 30 60 120 200 300 500 22 220 volume 12 45 100 420 670 1000 1500 liter container diameter mm 300 400 550 700 1000 1200 1400 1600 1800 4 80 250 min kg/batch 1.5 10 15 30 100 150 capability Kg/batch 4.5 6 20 45 90 160 300 450 750 max m³/h 1000 1200 1400 1800 3000 4500 6000 7000 8000 velocity pressure mm H2O 375 375 480 480 950 950 950 950 950 fan 4 5.5 7.5 11 18.5 45 power 3 22 30 kw 15 42 70 451 steam consumption kg/h 23 141 211 282 366 compressed air expendim³/min 0.9 0.9 0.9 0.9 1.0 1.5 1.0 1.1 1.5 ture 500 700 900 1000 1100 1500 1500 1800 2000 weight of the main body kg steam pressure Мра 0.3-0.6 adjustable at the range from room temperature to 120°C temperature °C working time decided in accordance with the properties of raw materials min collect rate % ≥ 99 noise dB(A) when do installation ,main machine is separated from fan. 1.0×0.6 1.25×0.9 1.85 × 1.4 2.2 × 1.65 2.34 × 1.7 2.8 × 2.0 3×2.25  $1.2 \times 0.7$  $1.6 \times 1.1$  $size(L \times W \times H)$ m ×2.3 ×2.5 ×2.5 ×2.1 ×З ×3.3 ×3.8 ×4.0  $\times 4$ 

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#### Description

The purified and heated air passes through the gaps of ring and enters into the container. The raw material in the container appears the state of boiling. Because of the rotating of distribution plate, the raw material undertakes the effect of gravitation itself, buoyancy of air, circular centrifugal force and friction acts circular round movements.

#### **Features**

- 1. Granulating and coating for powder material
- 2. Granulating and coating for flow immersed paste of Chinese traditional medicine
- 3.Can prepare and coat granule of 50um

4.Can prepare porous quick solving granule, multi-layerlow releasing and control releasing coating, ball granule and coating

5.Can prepare compact ball(pellet)granule and coating.

6.Dry powder, granule and mass shape material. 7.One machine with multi-function.



#### Fluid bed model for optional



Top spraying for granulating



Bottom spraying for coating



Whirl flow fluid bed



Side spraying for pellet and coating









# **FLP Series Granulation Fluid Bed Coater**



#### **Technical Parameters**

Name			FLP3	FLP5	FLP10	FLP15	FLP30	FLP60	FLP120
Dia of cc	ontainer	mm	400	600	700	800	1000	1200	1500
Productive	e capacity	kg/batch	0.75-3	1.2-5	2.5-10	3-15	7.5-30	15-60	30-120
Power	of fan	kw	3	4	5.5	7.5	7.5	11	18.5
Steam Pressure Mpa				0.4-0.6					
	Consumption	m3/min	6kw	20	35	42	60	160	240
comprossed air	Pressure	Mpa				0.6			
compressed air	Consumption	m3/min	0.3	0.4	0.6	0.6	0.9	1.1	1.5
Noise dB			The noise at fan separated place should be less than 75dB						

Model	A(mm)	B(mm)	C(mm)
1	1.95	750	1100
3	1.68	1100	580
5	2200	1200	1800
10	2500	1750	2150
15	2800	1950	2700
30	2850	2150	3000
60	3300	2300	3600
120	3500	2550	4200



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#### Application

It is suitable for pharmaceutical industry, foodstuff industry, chemical industry and so on. The granule is made from powder to damp granule in which the adhesive should be injected in it.

#### Work principle

The powder raw material and adhesive are mixed to moisture soft material through mixing oar at the bottom of the cylinder (cone) container. Then cut it to become uniform damp granule through high speed crushing oar installed at the side

#### Features

The machine adapts horizontal cylinder structure. Its structure is reasonable. Use air filled seal shaft to drive. When washing, it can be changed to water; Use fluidization to Granulate and the granule is near ball. Its flow is good; Compared the traditional process 25% of adhesive can be reduced and the drying time can be shorted;

Mixing time is 2 minutes and granulating time is 1-4 minutes. 4-5times of the traditional process.

In the same sealed container, dry mixing, humidity mixing and granulating can be finished. It is in conformity with the requirements of GMP; The whole operation has strict safe and protective measures.

#### Flow chart









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#### Drawing of layout

#### **Overall dimensions**

10





Туре	А	В	C×D	E	F
50	320	950	1250×800	970	1650
150	420	1000	1350×800	1050	1750
200	500	1100	1650×940	1450	2050
250	500	1160	1650×940	1400	2260
300	550	1200	1700 × 1000	1400	2310
400	670	1300	1860×1100	1550	2410
600	750	1500	2000 × 1230	1750	2610

#### **Technical parameters**

Name	GHL-50	GHL-150	GHL-200	GHL-250	GHL-300	GHL-400	GHL-600
Capacity(L)	50	150	200	250	300	400	600
Outpu(kg/batch)	15	50	80	100	130	200	280
Mix speed(r.p.m)	200/400	180/270	180/270	180/270	140/220	106/155	80/120
Mixer power(kw)	4/5.5	6.5/8	9/11	9/11	13/16	18.5/22	22/30
Cutting speed(r.p.m)	1500/3000						
Cutting power(kw)	1.3/1.8	2.4/3	4.5/5.5	4.5/5.5	4.5/5.5	6.5/8	9/11
Compressed air consumption	0.6	0.9	0.9	0.9	1.1	1.5	1.8



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# **PGL-B Series Spray Drying Granulator**

#### Application

Pharmaceutical industry: tablets, granules, capsules particles; low-sugar, sugar-free particles of proprietary Chinese medicines

Food products: cocoa, coffee, milk, fruit juice particles, such as seasoning Other industries: pesticides, feed, fertilizer, paint, dyes, etc

#### **Features**

1.Spray-drying / fluid granulating in one body to achieve one-step granulation liquid materials.

2.Adopting the spray process, especially suitable for micro-materials, heat-sensitive materials,. Its efficacy is 1–2 times higher than that of FL boiling Granulator. 3.The moisture of finished products can reach 0.1%. It is equipped with a powder reverting device. And the granules forming  $\geq$  95%. 0.2–2mm particles can be made.

4. The inner roller multi-fluid atomizer improved in design can process liquid extracts with a density of 1.3g/cm3 5. Fluid bed can realize fast heat transmission.

6.Seal and negative pressure operation, there is no dust.

7.Because of using anti-static material as filter, it is safe in operation;8.No dead corner so it is easy to clean and no cross-pollution;



#### **Technical parameters**



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#### Installation diagram

Control cabinet
 Infusion car
 Main body
 Heat exchanger
 Air filter
 Silencer
 Suction Fan

### **GK Series Dry Type Granulator**

ISO9001:2008



#### Applications

This is new equipment to make granules directly from the target materials with minimum crystal water, which is widely applied in the pharmacy, foodstuff industry, chemical industry, etc. It's especially suitable for the granulating of those materials that can not be done by the wet granulating method. The finished granules from this machine can be made in troches or capsules.

#### Features

new and reasonable structure, reliable and stable property, low noise, easy cleaning and maintained.

The density of dry power granule is homogeneous, Its solubility is good. The ratio of granule formed is high. Being adapted special mechanism to feed raw material to adhere roller cann't be taken place.

Because its roller is cooled through circle water, it guarantees the phenomenon of raw material to adhere roller can not be taken place.

It is not necessary to use water or ethanol as humectants and to carry out the second heating and drying. Its procedure is less and its working.





#### **Technical Parameters**

Туре	GK-80	GK-120
Production capacity(kg/h)	20-60	30-100
Fineness of granules(mm)	0.3-1.5	0.3-1.5
Power(KW)	7.15	14
Working pressure(KN)	198	198
Overall dimensions (L*W*H)(mm)	1540*1230*2325	1980*1500*2580
Weight(kg)	2300	3500



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#### Application

This kind of equipment can make the powder material become the granular solid. During the process, no additive

And mediate are added. After pelletizing, the grain size is even and bulk density increases. Meanwhile, it can control the pollution effecificy reduce the waste of power material. The design of it is scientific ,structure is compact, technological process is simple and operation is easy, it is an ideal for you to choose a pelletizing machine.

#### Working principle

Powder materials pass the vibrating material delivery bucket, after quanlity fixed by cross spiral material conveyor. Evenly enter main rolling flake material bucket, so quantity of material bucket keep constant .After powder material are precompressed by the longitudinal cone spiral in the main flake bucket, they will be sent to inlets of two curve slots. Half oblate eurve slots of rhomb slots or rhomb slots evenly separate on surface of two rollers. By way of enganing and transmission of a couple of geers, two rollers revolvein opposite direction with one speed. So materials are bitten into the slots and forced to be compressed in a twinkling. After materials being compressed and forming, the pressure on them gradually reduce, Materials drop by elasticity and gravity from the slots, enter the Broken Granulating System. There they are screened and graded according to consumer's require of particle, size. Finally you get regular particle product conforming to quality standard. Rest of screened powder can return to vibrating bucket to be used again.



#### **Features**

Without any additive, dry powder be made to particles

Particle intensity can be adjusted, Regulate the pressure of rollers to control intensity of product. Operating in cycles ,working continuously.

High product output, output of one machine can be than 2000kg/h(stocking intensity 1.5

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48



# ISO9001:2008

#### Process



#### **Technical parameters**

MODEL	GZL240	GZL360	GZL480	GZL600
Roller diameter mm	Φ 240	Φ 360	Φ 480	Φ 600
Width for use mm	80	120-150	140-200	180-250
Roller revolving speed rpm	15~32	12~30	10~25	10~25
Max forming pressure MPa	12	16	21	30
Max thickness of rolling mm	4	8	8	8
Output of rolling flake kg/h	50~400	200~1600	450~3000	1000~6000
Dia. of finshed granule mm	0.5~6	0.5~6	0.5~6	0.5~6
Output capacity kg	30~180	120~800	280~1800	600~3000
Power of main engine kw	11	30	45	75
Total power kw	20	50	80	165
Overall dimension (L × W × H mm3)	1500 × 1500 × 2800	2000 × 2000 × 4500	2500 × 2500 × 5600	3200 × 3200 × 6300
Total weight t	7	10	18	27



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#### Application

The machine is mainly suitable for pharmaceutical industry, foodstuff industry, chemical industry, solid drink industry and so on. It can make the stirred raw material granulate the needed granule. Especially, it is suitable for raw materials that have sticky adhesive.



Granules by JZL





Granules after drying by vibrating fluid bed dryer

#### Features

All parts contacted with raw material in this machine are made of stainless steel. Its appearance is beauty and its structure is reasonable. Its efficiency is high and the granule is beauty. Its discharge is automatic. Therefore it can avoid damaged condition caused manual. It is suitable for in line production too.

#### **Technical Parameters**

Extension knife size	Grain making diameter	Weight	Motor power	Productivity	Overall dimension
mm	mm	kg	kw	kg/h	mm
250	1-3	350	3	80-200	700×540×1400
300	1-3	480	4	100-300	800×650×1400

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### **SE Series Screw Extruding Pelletier**



#### Working principle

SE series of screw type extruding pelleter include single-screw type and doublescrew-type. Two models of front and side for material to be extruded out. Wet material or material with low melting point (general means < 50) after being kneaded and mixed shall be extruded out from mould plate at the head of the plant due to being conveyed and pressed by screws, and then be dried or cooled to form end products of particles so as to complete the course of changing material from powder to particle. The shape of grain is cylindrical. The diameter of end grain can be chosen and controlled by means of changing the diameter of holes in the mould plate: for side type is 0.7–2.0mm,for front type is 1.5–12mm. The rate of end product is equal to or more than 95%.



#### Application

The plant is widely applied to material needs granulating such as Rubber auxiliar, Food Additive, Plastic Auxiliary, Catalyzer, Agrochemicals, Dye, Pigment, daily chemicals, medicine etc.

#### Features

As the powder material is kept in wet state during the whole process of granulation, The working condition is greatly promoted. Flying of dust is generally reduced to over 90% of that used to be.

Some phenomenon that well influent application such as curdling, framing, pulsing etc can be averted by means of granulation. As the stacking specific gravity can be increased generally, space for transporting, storing, packing can be effectively saved. As for products composed of muti-component or mixed distributed, the segregation of each component can be avoided though granulation so as to guarantee the quality of compound products.

#### Main technical parameters

SET Double-screw extruding pelleter			SES Single-screw extruding pelleter		
Туре	Screw dia.(mm)	Driving powder (kw)	Туре	Screw dia.(mm)	Driving powder (kw)
SET-60	60	3.7	SES-100	100	7.5
SET-100	100	7.5	SES-120	120	15
SET-140	140	15	SES-160	160	22
SET-180	180	30	SES-180	180	30



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#### **Application**

This machine makes damp granule into beautiful pellet by setting rotating centrifugal disk, blower, and pneumatic nozzle. Feed damp granule into rotating centrifugal disk, start fan then start rotating centrifugal disk. It can make the damp granule undertaken the action of air floating force in ring gap, rotating centrifugal strength and gravity itself, appear circle rope-turning movement and become high-degree ball shape pellet.



#### **Principle**

This machine makes damp granule into beautiful pellet by setting rotating centrifugal disk, blower, and pneumatic nozzle. Feed damp granule into rotating centrifugal disk, start fan then start rotating centrifugal disk. It can make the damp granule in float and circle by the air from gap, rotating centrifugal strength and itself gravity, appear circle rope-turning movement and become high-degree ball shape pellet.



- 1.Blower controlled by inverter, pelleting fast and product beautiful
- 2.Rotor dish use double speed motor, made the product nice
- 3. Material moved in the airtight container, with no dust out, working safely





#### **Technical Parameters**

Specification	230	400	500	700	1000	1300
Power (Kw)	0.75	2.2	3	3.7	5.5	7.5
Capacity ( kg/h )	2.5-4	5-8	8-16	40-80	70-150	100-300

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# **YK Series Swaying Granulator**



#### **Application and features**

This machine is mainly composed of pendulum roller, main body, transmission system, and tightening device of sieve. Under the action of clockwise and counter-clockwise rotating of roller, damp powder mixture will be forced to pass through sieve and then become granules. Model C is a heavy type and suitable for materials with big viscosity.

This machine is mainly suitable for pharmaceutical industry, chemical industry and foodstuff industry to make granules with different specifications. After drying, they are pressed into different kinds of shaped products. It can also be used for crush block raw material.



#### **Technical Parameters**

Model	YK-160B	YK-160C(heavy type)
Capacity(kg/batch)	100~200	150-300
Motor power(kw)	3	4
Roller rotating speed (rpm)	65	65
Pendulum Angle	360	360.
Diameter of roller(mm)	160	160
Overall dimensions(mm, L-W-H)	1150-680-1150	1260-750-1150
Weight(kg)	300	450

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### **KZL Series High Speed Grinding Granulator**

#### Applications

Dry and damp granule will be uniformity and finishing. Crushing and finishing granule of mass material. Granulating for damp material. Crush thermal sensitive material. **Features** 

When operation, it will less heat and the powder dust is less. The sieve of stator is made of stainless steel plate. It is not easy to damage. The gap between crushing blade and sieve can be adjusted.

Can treat material that has adhering property or is gum state, or heat and damp.

#### **Technical Parameters**

specification	100	180	300
Capacity (kg/h)	20-150	100-150	200-500
Power (kw )	0.75	1.5	3
rotating speed (rpm)	180-1400	175-1400	200-1400

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# **SYH Series Multi Direction Mixer**



#### Application

This machine is suitable for many industries such as pharmaceutical industry, chemical industry, metallurgy industry, foodstuff industry, architecture industry and institutes. It can mix powders and granules having good fluidity and make the mixed raw materials reach the best mixing state.

#### **Features**

Because the mixing drum has multidirectional motion, which makes raw materials inside the drum have many cross-mixing points, the mixing effect is good. Its degree of uniformity may be over 99.9%. its max coefficient of loading may be 0.9 (that of an ordinary mixer is  $0.4 \sim 0.6$ ). fast mixing speed and high efficiency The design of its mixing drum is unique. Its inner wall is polished finely. No dead corner, no pollution to raw material, convenient to discharge, easy to clean and so on.

#### Working Princple

During the period of operation, because the mixing drum has multi-directional motions, it speeds up the fluid and diffused effect of raw material. Meanwhile it avoids the phenomenon of segregation and accumulation caused by centrifugal effect in ordinary mixers. So, It can guarantee better mixing effect.







#### **TechnicalParameters**

Model	SYH50	SYH100	SYH200	SYH400	SYH600	SYH800	SYH1000	SYH1500
Volumeofmixingdrum ( L )	50	100	200	400	600	800	1000	1500
Maxloadingvolume (L)	40	80	150	300	450	600	750	1200
Maxloadingweight ( kg )	25	80	150	200	300	400	500	750
Revolution of main shaft ( r/min )					0~8			
Powerofmotor ( kw )	1.5	2.2	3	4	5.5	7.5	7.5	11
Overalldimensions ( mm )	600 × 1000	1200×1800	1300 × 1600	1500×2200	1850×2500	1900×2400	1950 × 2500	2600×2500
Overaliumensions (mm)	× 1000	× 1500	× 1500	× 1500	× 1650	×2100	×2400	×2350
Weight ( kg )	300	500	800	1200	1500	2000	2500	3500

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### **EYH Series Two Dimensional Movement Mixer**

ISO9001:2008



#### **Principle of work**

It mainly consists of three big parts namely, rotating cylinder, swinging rack and frame. The rotating cylinder lies on the swinging rack, supported by four wheels are driven by rotating power system to made the cylinder rotate. The swinging rack is driven by a set of crankshaft swinging bar which is mounted on the frame and the swinging rack is supported on the frame. The inner tank contain a group of fixed plates. It also mix the material together with tank rotating. Mixing during clockwise rotation of the mixing tank and discharging when counterclockwise rotation



#### Features

Its rotating cylinder can make two motions at the same time. One is the rotation of the cylinder and the other is swinging of the cylinder along the swinging rack. Material to be mixed will be mixed from left to right and vice versa when the cylinder is swinging. As a result of these two motions and the mixing of inner plate, materials can be mixed fully in a short time.

#### **Technical Parameters**

Model	Barrel Loading vol- capaci- Weight ume(L) ty(L) (kg/batch)		Times ofSwing & Rotation (r/min)	Totalmo- torpower (Kw)	OveralldimensionsX×Y× Z×Z1 (mm)	Total weight(kg)	Barrel weight(kg)	
EYH300	300	150	75	30	1.15	900 × 1350 × 1550 × 1400	340	60
EYH600	600	300	150	23.6	3	1170 × 1640 × 2050 × 1910	1150	140
EYH800	800	400	200	19.8	3	1320×950×2150×2000	1600	200
EYH1000	1000	500	250	19.8	3	1360 × 2040 × 2300 × 2170	1700	240
EYH1500	1500	750	375	16.2	4.4	1580 × 2400 × 2550 × 2330	2000	320
EYH2000	2000	1000	500	16.2	7.4	1740 × 2600 × 2770 × 2550	2600	430
EYH3000	3000	1500	750	13.8	11	1800 × 2900 × 2950 × 2800	3500	620
EYH4000	4000	2000	1000	12.8	13	1970 × 3300 × 3300 × 2950	4100	700
EYH6000	6000	3000	1500	11.2	18.5	2300 × 2900 × 3800 × 3100	6100	1100
EYH8000	8000	4000	2000	10.4	22	2540 × 4100 × 4050 × 3650	7900	1450
EYH10000	10000	5000	2500	9	30	2900 × 4500 × 4400 × 4020	9500	1650
EYH12000	12000	7200	3600	7	30	3050 × 4850 × 4460 × 4090	10000	1800
EYH-15000	15000	9000	4500	6	50	3100 × 5600 × 4700 × 4200	11000	2000
EYH-20000	20000	12000	6000	6	60	3600 × 6100 × 5000 × 4500	12000	2500

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#### **Description**

This machine is suitable for mixing two or more dry and powder or granule raw materials from pharmaceutical industry, chemical industry, foodstuff industry and so on.

The structure of this machine is unique. Its mixing efficiency is high and no dead corner. It is made of stainless steel. Its inner and outer wall is processed



through polishing. Its appearance is beauty. Its mixing is uniform. Its scope of application is wide. The forced stirrer can also be equipped in order to meet the requirements of raw materials that contain fine powder, cake and certain moisture as request.





Matterial hopper
 Feed pipe
 Mixer
 Discharging hopper
 Vacuum gauge
 Airpurification tan
 Vacuum pu

#### **Technical Parameters**

Model	0.18	0.3	0.5	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0
Product capacity (kg/h)	72	120	200	400	600	80	1000	1200	1600	2000	2400
Model of vacuum pump	W2	W2	W2	W3	W3	W3	W3	W4	W4	W4	W4
Time of raw material fed in (min)	3-5	3-5	4-6	6-9	6-10	8-13	8-15	8-12	10-15	15-20	18-25
Mixing time (min)	4-8	6-10	6-10	6-10	6-10	6-10	6-10	8-12	8-12	8-12	8-12
To tal volume (m3)	0.18	0.3	0.5	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0
Speed of stirring (rpm)	12	12	12	12	12	12	12	10	10	10	10
Power of motor (kw)	1.1	1.1	2.2	4	4	5	7.5	7.5	1	15	18.5
Rotating height (mm)	1580	1760	2400	2840	3010	3240	3680	3700	4350	4800	5300
Weight (kg)	280	320	550	950	1020	1600	2040	2300	2800	3250	3850

Note:all loading coefficient is usually 0.4~0.6.The capacity listed above is based on loading coefficient 0.5 and specific gravity of raw material 0.8g/cm3

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# **VI Series forced-Mixing Mixer**

**Description** 

This machine can mix fine powder, caked or two more powder raw material ,raw material containing certain moisture. particularly it can also mix raw material that needs to add small amount of additive and satisfied mixing result is also needed.

#### **Technical Parameters**

Туре	capacity (kg/ batch)	Total volume (m3)	Mixing time (min)	Power (kw)	Rotating speed(r/m in)	Stirring speed(r/min)	Overall dimension(mm)	Weight (kg)
VI 180	60	0.18	2-5	1.1/2.2	12	300	1730-700-1580	320
VI 300	80	0.3	4-10	1.1/2.2	12	300	1730-700-1580	360
VI 500	130	0.5	1-10	1.1/2.2	12	300	2660-1250-2400	600
VI 1000	240	1	6-10	3/2.2	12	300	3220-1500-2840	1000



ISO9001:2008

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# **SZH Series Biconical Mixer**

#### Application

It is suitable for mixing the powder and grain state material in the pharmacy, chemical food, building material and other industries.

#### **Features**

1. Through the vacuum conveyor for the machine, send the powder or grain state materials into the double-taper container, or send the materials into the container manually.

2.As the container rotates continuously, the materials moves complexly in the container so as to get the uniform mixing.

#### **Technical Parameters**

Туре	500	1000	1500	2000	2500	3000	4000
Totalvolume(m3)	500	1000	1.5	2.0	2.5	3.0	4.0
capacity(kg/batch)	100	200	300	400	500	600	800
Mixing time(min)	6-10	6-10	6-10	6-10	6-10	6-10	6-10
Speed(rpm)	12	12	12	12	12	7.8	7.8
Power(kw)	2.2	4	4	7.5	7.5	7.5	11
Dim(mm)	1910 × 800 × 1 940	2765 × 1500 × 2370	2960 × 15 00 × 2480	3160×19 00×3500	3386 × 19 00 × 3560	4450×220 0×3600	4750×250 0×3680
Rotation height(mm)	1950	2460	2540	3590	3650	3700	3730
Weight(kg)	550	810	980	1500	2150	2500	3200

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#### **Applications**

This machine is a new style mixing equipment with high efficiency and accuracy. Particularly, it is suitable for raw materials which have large difference in specific gravity and large ratio of formulation.

It is widel suitable for pharmaceutical industry, chemical industry, feedstuff industry to mix all kinds of raw materials.

#### **Features**

1. The rotation and revolution of machine is finished through a set of motor and cycloidal needle wheel reducer.

2.Being adapted twoscrews to carry out stirring asymmetrically, it makes the stirring scope of raw material wide

and the mixing is uniform better and quickly.

3.All parts that can be contacted with raw material in this machine are made of stainless steel.





#### **Technical Parameters**

Model	capacity (k/time)	Total Volume (M3)	Loadingco- efficient	Bulk- density	Rawmaterial- size(mesh)	Power (kw)	Mixing- time (min)	Dimensions (mm)	Weight (kg)
DSH - 0.2	95	0.2	0.6	0.8	20 250	2.2	6 10	<b>ф</b> 890×1850	600
DSH - 0.5	190	0.5	0.6	0.8	20 250	2.2	6 10	<b>φ</b> 1160×2250	800
DSH - 1	380	1	0.6	0.8	20 250	4	8 10	<b>ф</b> 1450×2700	1200
DSH - 2	720	2	0.6	0.8	20 250	5.5	8 10	<b>Φ</b> 1850×3450	1800
DSH - 4	1400	4	0.6	0.8	20 250	11	8 10	<b>ф</b> 2260×4210	2500
DSH - 5	2400	5	0.6	0.8	20 250	15	8 10	<b>ф</b> 2578×4566	3400
DSH - 6	2880	6	0.6	0.8	20 250	18.5	8 10	<b>ф</b> 2710×4782	3550
DSH - 8	3840	8	0.6	0.8	20 250	18.5	8 10	<b>ф</b> 2950×5392	3700
DSH - 10	4800	10	0.6	~ 0.8	20 250	22	8 10	<b>ф</b> 3168×5735	3950

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58

### **WLDH Series horizontal Ribbon Mixer**

#### Applications

The ribbon mixer is generally used in the mixing of viscous or adhesive powder material, or the mixing of powder which needs to add liquid, and paste material. Meanwhile, because it is difficult to clean viscous material, the material is suitable for the mixing case where the output is large and there is no need of displacing material variety frequently.

#### **Principle of work**

This machine is composed of container, screw stirring paddles and transitional parts; the screw paddle are generally made into 1 layer or 3 layers, the outer screw converge is the material to the centre from two sides, and

the inner layer of screw conveys the material to the two sides from the centre, so as to from convection mixing, the cubage can be made into rotundity, so the jacket can be played in reaction and drying.

And the materials is thrown and sprinkled by the rotating flying cutter at a high speed when it flows through the flying cutter, thus the material is mixed evenly in a shorter time.

#### Features

1.large mixing capacity..small occupied area

2. High efficient, fast speed of mixing.

3.when mixing material viscous or adhesive powder material, it may be hard to clean. So, it is more suitable for no need of displacing material variety frequenty.

#### Technical Parametes

Model	Volumem3	InputcapacityL/batch	Totalpowder(kw)	Weight (kg)	Overalldimension(mm)
WLDH-0.1	0.1	30-50	3	300	1190×740×770
WLDH-0.3	0.3	100-150	4	500	2030 × 630 × 980
WLDH-0.5	0.5	200-300	7.5	900	2320×730×1130
WLDH-1	1	400-600	11	1400	2800×920×1320
WLDH-1.5	1.5	600-900	11	1900	3180×1020×1550
WLDH-2	2	800-1200	15	2500	3310×1120×1640
WLDH-3	3	1200-1800	18.5	3100	3750 × 1290 × 1820
WLDH-4	4	1600-2400	30	3600	4220 × 1400 × 1990
WLDH-6	6	2400-3600	37	5300	4700×1610×2260
WLDH-8	8	3200-4800	45	6800	4420×2150×2470
WLDH-10	10	4000-6000	55	8900	



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# **CH Series Slot Shape Wet Mixer**



#### Description

CH Series mixer is widely suitable for mixing powder or damp material and make primary and auxiliary raw material can be mixed uniformly.

All parts that can be contacted with raw material are made of stainless steel. The gap between oar-blade and drum body is small. When mixing, there is no dead corner. At both ends of stirring shaft, it is installed seal device. Therefore it can prevent from raw material leaking out. It is wide used for pharmaceutical industry, chemical industry, foodstuff industry and so on.



#### **Technical Parameters**

Model	Total volume(L)	Capacity(kg/batch)	Stirring speed (r/min)	Mix power(kw)	Discharge Power(kw)	Overall dimen- sions(mm)
150	150	30	24	3	0.55	1360×540×1100
200	200	40	24	4	0.55	1460×600×1200
300	300	60	24	4	1.5	1900×750×1300
500	500	120	20	5.5	2.2	2150×860×1560
750	750	150	19	7.5	2.2	2300×1260×800
1000	1000	270	19	7.5	3	2500×1300×860
1500	1500	400	14	11	3	2600×1400×940
2000	2000	550	12	11	4	3000×1500×1160
2500	2500	630	12	15	4	3500 × 1620 × 1250
3000	3000	750	10	18.5	5.5	3800×1780×1150





# **GHJ Series High Speed Mixer**

#### Work principle

GHJ Vertical High Speed Mixer consists of the feeding blades at bottom and high speed crushing blades. The blades at bottom make the material raise along the wall of mixing tank continuously and the high speed crushing blades crush the material. It makes the material circulating as vortex shape, and mixed uniformly in a short time.



#### Technicalparameters

Name	Workingvolume(L)	Totalpower	weight	Overalldimension
GHL-350	350	13.2 600		1500x1090x1200
GHL-600	600	17.2	900	1500×1090×1300

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Description

 B-X grinder consists of feed port, grinding chamber, final powder collector chamber and ESC dust collector. It solves the problem, i.e. the dust is flying during the period of crushing raw material.
 Full machine made of stainless steel and are in conformity with requirements of GMP.

#### **Technical Parameters**

Model	20B-X/20B	30B-X/30B	40B-X/40B	50B-X/50B
Capacity (kg/h)	60-150	100-300	160-800	500-1500
revolution of spindle (r/min)	4500	3800	3400	3400
Size of fed material (mm)	6	10	12	12
Size of Grinded material (mesh)	60-120	60-120	60-120	60-120
Size of Grinding Motor (kw)	4	5.5	11	11
Power of Dust-catching Motor (kw)	1.5	1.5	1.5	1.5
Overall Dimensions (L x W x H) (mm)	1100×600×1650	1200×650×1650	1350 × 700 × 1700	1550 × 800 × 1800
	550×600×1650	600×650×1650	850 × 700 × 1700	100×800×1800

Notes: the output listed in table will be different with different raw material, for reference only. We have the right to change but not notice, pardon!

# **PSJ Series Hammer Type Crusher**

#### Principle of Structure and Its Function

The crushing is realized through the shearing action between rows of knives and grind on the double shaft. It makes filtering cake raw material caused by damp to crush. The crushing size can be adjusted through control revolution of double shafts. This machine is suitable for crushing incompact and raw material. It provides the first procedure to dry and crush raw material.

#### **Technical Parameters**

Specification	Power (kw)	Speed of shaft (r.p.m)	Output(kg/h)	Weight(kg)
PSJ-500	1.5	20-600(adjustable)	200-500	500

Notes: the output listed in the table will be different with different raw material, for reference only.

# **CSJ Series Primary Crusher**

#### Application

It is used in pharmacy, chemistry, metallurgy, and food and constructure industry. It can be used for processing the hard crushing materials, such ad plastics, brass wires, and Chinese herbal medicine and rubber, etc. Besides, it can be used as auxiliary equipment for micro pulverizer and super-micro pulverizer.

#### **Technical Parameters**

Туре	CSJ-250	CSJ-500
Feed particle size	≤ 100	≤ 100
Material particle size	0.5~20	0.5~20
Spindle Speed	940	1000
Power	4	11
Yield	50~300	80~800
Size	860×650×1020	1120×1060×1050





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# **WFJ Series Super Fine Pulverizing Machine**



#### **Description**

It consists of three parts i.e main machine, auxiliary machine and control system. Compact and reasonable structure, using air to chose and no sieve or screen. Grading mechanism inside ,crushing and grading is finished at the same time. Negative-pressure feeding make heat created by grinding work exhaust rapidly, so also suitable for thermal sensitive material. wide application, continuous productive process and finished granules size can be adjusted, suitable for materials such as chemicals, foodstuff ,medicines, cosmetic, dyestuff, resin, shell materials and so on.

#### Working prinpcle

Material in hopper is pushed toward to grinding chamber by screw feeder(speed is adjustable) and the function of negative pressure, suffering cutting and impact from grinding knife, and high-frequency vibration created by air flow. Grinded material comes into grading wheel under the function of Up air flow. Powder is effected by aerodynamic and centrifugal force generated from rotate on of grading wheel. When aerodynamic smaller than centrifugal force, powder larger than grading size is throw into taper sleeve, back to grinding chamber, and continues to be grinded. Eligible powder come to collecting duct and discharged from auxiliary machine.



#### **Technical Parameter**

Model	WFJ-15	WFJ-18	WFJ-36
Capacity(kg/h)	10-200	20-450	60-1000
Size of raw material to be fed(mm)	<10	<12	<15
Size of raw material to be discharged(mesh)	80-320	80-450	80-450
Total power(kw)	13.7	19.07	38.5
Rotating speed(r/min)	4500	4480	4000
Overall dimension(LXWXH)mm	5410X1660X2500	5500X1800X3100	9000X2200X4000

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# **ZS Series Round Shape Vibrating Sieve**





#### Applications

1. This machine is a high-effective sieving equipment used widely in china now. It adapts the principle of vibration to realize the sieving of plenty of raw materials. ZS vibration sieve is suitable for in-line production. It is an ideal device for granules that has uneven size continuously.

2.It is widely used for metallurgy industry, chemical industry, pharmaceutical industry, grain industry and so on.

#### **Technical Parameters**

Model	Production	n capacity(kg/h)	Mesh	Power	Rotation speed	Overall dimension	Weight	
ZS-365	6	0-500	12-200	0.55	1380	540×540×1060	100	
ZS-515	100-1300		12-200	0.75	1370	710×710×1290	180	
ZS-650	18	0-2000	12-200	1.50	1370	880×880×1350	250	
Sieven normal diameter		800mm		1000mm		1500mm		
Output	Output ( kg/h ) 250-350		00	300-4000		350-4500	350-4500	
Quantity of sh	antity of shif out ( mesh ) 5-325			5-325		5-325		
Vibration frequency		1500HZ		1500HZ		1500HZ		
Power ( kw ) 1.5			1.5		2			
Overall dimensions ( mm ) 900 × 900 ×		1200	110	0 × 1100 × 1200	1600 × 1600 × 1	1200		



# **FS Series Square Shape Vibrating Sieve**

#### Descriptions

FS series square sieve is new sieving equipment researched, developed and manufactured by our factory in 1999.Because of its unique characteristics, i.e. high effective, saving energy, low noise and so on, customers love it deeply. It is widely suitable for sieving raw material continuously in pharmaceutical industry, chemical industry,foodstuff industry and so on.1-4 layers of sieve can be installed in accordance with the requirements of customers.



#### **Technical parameters**

Туре	Power(kw)	Layers	Sieved Mesh	Overall dimension (mm)	Weight (kg)	Capacity(kg/h)
FS0.6X1.5	0.4	1-4	6-120	1500 × 700 × 700	550	150-1500
FS0.6X2.0	0.4	1-4	6-120	2100 × 750 × 780	650	160-2000

Notes: The capacity is for reference only because of the difference of material features and mesh size



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#### **WARNING:**

In this handbook, all equipments Without our company officially allowance, are strictly prohibited carrying on production in the flammable explosive environment or producing flammable explosive products In this handbook, for related content, our company have the right to change but no notice.



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# **YIMIN DRYING**

	Feedback Form of Customers for Mo	del Selection
Please	I the form in detail so that our company can provide best recom	mended model
_		
	/:Contact person	
	Tel:	Fax
Email_	Date	
1 01-1	- A second state in the second state	
	e of raw material to be dried	
	powder Powder Granule Block Flake	
	cake Mushy Paste Liquid	
	ary moisture of raw material $\%$ , Final moisture of finished	·
	ng point°C,Max withstand Temp. of raw material°C, E	Bulk density of raw material
3. Ma	ingredient of liquid	
4. Exi	ed form of moisture: Surface water Crystal water	
5. Fin	ness of finished productMesh, Bulk specific gravity of damp	product
Bul	specific gravity of finished product	
6. Rel	ive other characteristics of raw materials.	
Vis	sity Thermal sensitive Softening point Transition po	pint Causticity(PH value)
Peo	liar smell Inflammability Explosion hazard Elec	stric static
Ga	permeability Constipate Comminuted of crystal or gran	nule
7. Red	irements of capacity: Damp productkg/hour or dried finis	shed productkg/hour.
8. Wh	her the granule can be damaged Yes 🔄 No	
9. The	original dry method of raw material of dry method of similar prod	ucts
10. Red	irements of drying method: Continuous drying Drying i	n batch
11. Hea	source to be supplied Electricity Steam Hot water	Heat conduction oil
	Gas fuel furnace 🗌 Coal fuel furnace 🗌	Oil fuel furnace
12. Red	ired material for manufacturing equipment when selection	
13. Red	irements of environmental protection and requirement of yield	
 14. Fiel	to be installed	
	r requirements	

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