

## *Fluid Bed Dryer FBD*



**Drying:** The high drying efficiency is because the powder or granules are fluidized in the drying chamber and the container is using a turbo blower, the hot air passed through the powder or granules from bottom to the top of drying chamber to remove the humidity.

**Granulation:** Spray atomized binder or active ingredients on the suspension powder by spray guns to form the uniformity granules.

### **Function:**

1. Drying: The better time saving of YENCHEN's FBD to dry powder or granules is 10-20 times faster than the conventional oven.
2. Granulation: The better fluidity and solubility of the granules after spraying the binder or active ingredients from the top to the fluidized powder.

### **Description of the process:**

Super Mixer and Granulator → Fluid Bed Dryer and Granulator → Cone Mill → Tumbling Mixer

### **Optional Devices are available:**

1. Explosion proof system (when organic solvent is used)
  - 2 Bar pressure resistant design; Suitable for the room is on the top floor (Safety relief duct towards up)
  - 2 Bar pressure resistant design; Suitable for the room beside outdoor (Safety relief duct towards back)

- 10 bar pressure resistant design; No safety relief duct
  - Safety relief duct: An organic solvent is not used
2. WIP or CIP system
  3. Dehumidifier device
  4. Dust collector system (Dry or Wet type)
  5. High accuracy air volume / pressure measuring device
  6. Powder leakage detector
  7. Suction device (Or connect with YENCHEN's Super Mixer and Granulator)
  8. Vacuum discharge (Closed type)
  9. Lifting and tilting device

### Model Choosing:

Single Shaking type of FBDG: For this model cannot add bottom spray or side spray.  
For bottom spray or side spray please choose YENCHEN's Double Shaking type of FBDD.

### Feature:

1. Follow the regulations of cGMP, PIC/S GMP, FDA
2. High drying efficiency: The normal granules drying time is about 30-45 minutes/batch, FBD is 10-20 times faster than the conventional oven
3. Top spray atomizing: Fast spray granulation time and uniformity
4. Mixing, granulation and drying are in one machine: Save space and time
5. The integrated drying chamber has a strong strength and easy to clean
6. One of the features of Fluid Bed Dryer - the bag filter movement is designed by an auto pneumatic operation
7. The inlet air is filtered by a final filter to secure the cleanness of the inlet air
8. The bag filter is made of a static electricity conductivity cloth to discharge static electricity
9. Touch Screen Interface control system: All the parameters can be memorable, multilevel of passwords can be set, connect to the diagrams printing are optional available
10. An optional dehumidifier can be installed for the thermosensitive product like pro-biotic
11. Customized equipments to connect with other equipments like Super Mixer, Cone Mill, or Lifting Device, etc.

### Spetification

Model	Working Capacity	Volume of Container	Fan Motor	Air Flow	Heating Volume	Steam Consumption	Room Dimension
	Kgs/Batch	L	Kw	cmm	Kcal/Hr	Kg/Hr	cm
YC-FBD-2	0.5~1.5	7	2.2	6	8500	7~9Kw	250x300x250
YC-FBD-8	3~5	20	3.75	12	17000	15~20Kw	300x300x250
YC-FBD-15	10~15	52	5.5	16	23000	42	350x350x250
YC-FBD-30	20~30	114	7.5	30	40000	80	350x400x280
YC-FBD-60	45~60	212	11	50	65000	135	400x450x300
YC-FBD-100	75~100	335	18.5	65	95000	180	450x450x350
YC-FBD-150	100~150	496	18.5	75	105000	210	450x500x400
YC-FBD-200	150~200	650	22.5	100	150000	300	500x500x450
YC-FBD-300	200~300	970	37.5	130	200000	390	500x600x500
YC-FBD-500	400~500	1600	45	160	230000	450	650x700x600

\* Specifications subject to change without notice.

## **Applications**

1. Pharmaceutical: For pharmaceutical, biopharmaceutical, and Chinese medicine's granulation or drying.
2. Food: Instant food, instant juice powder, seasoning, food additive, lactic acid bacteria's granulation or drying
3. Chemical: Synthesis raw material, and pigment granulation or drying