

Fluid Bed Dryer, Granulator, Coater FBDD - B/G



Top Spray Granulation: Spray atomized binder or active ingredients on the fluidized to form the uniformity granules.

Bottom Spray Coating: The concept of Bottom Spray Coating is also known as Air Suspension Coating, is to separate pellets or granules from one another in an air stream and spray a coating binder onto the pellets or granules while they are suspended. When the hot air passes through the bottom screen of a container and draft tube (Wuster insert), it will generate the siphon principle. The granules will fall down and will be sucked into the draft tube (Wuster insert) again, while the bottom spray gun will spray towards top to achieve coating purpose.

Side Spray Powder Coating/Film Coating: The Side Spray is better for coating with high firm content. The cores (seeds) are placed on the turntable and hot air is blown upward between the turntable and the granulation area. The coating solution is sprayed on the rolling cores through the pump and spray gun. The process involves simultaneous coating and drying of the cores, the repeated actions achieve the desired coating thickness or granule size. Powder Coating is achieved by charging powder and spray binder at the same time.

Functions:

1. Drying: Wet powder or granules drying
2. Top Spray: Spray binder on powder for granulation
3. Bottom Spray: Pellet Suspension Coating or Film Coating, Enteric Coating
4. Side Spray: Pellet Powder Coating, Suspension Coating or Film Coating, Enteric Coating
5. (Aqueous or organic solvent are applicable)

Suitable for:

Granulation/Drying

Pellet (Controlled-Release Coating): Film Coating, Enteric Coating and Powder Coating

Optional devices are available:

1. Double Shaking type of FBDD, basic machine with drying system is available to add on:
 - 1.1. Top Spray Granulation: Provide powder granulation function
 - 1.2. Bottom Spray Coating: For Pellets Film Coating or Enteric Coating functions
 - 1.3. Side Spray Coating: For Powder Coating granulation, Pellets Film Coating or Enteric Coating
2. Explosion Proof System (when organic solvent is used):
 - 2.1. 2 Bar pressure resistant design: Suitable for one floor plant or the room is on the top floor (Safety relief duct towards up)
 - 2.2. 2 Bar pressure resistant design: Suitable for the room beside outdoor (Safety relief duct towards back)
 - 2.3. 10 Bar pressure resistant design: No safety relief duct
 - 2.4. Safety relief duct: An organic solvent is not used
3. WIP or CIP system
4. Dehumidifier device
5. Dust collector system
6. High accuracy air volume/pressure measuring device
7. Powder leakage detector
8. Suction device (Or connect with YENCHEN's Super Mixer and Granulator)
9. Vacuum discharge (Closed type)
10. Lifting and tilting device

Features:

1. Follow the regulations of cGMP, PIC/S GMP, FDA
2. Multi-purposes: One machine can perform multiple functions, Drying, Granulation, Powder Coating, Pellet Film Coating, Pellet Enteric Coating
3. High drying efficiency: YENCHEN's FBDD is 10 ~ 20 times faster than conventional drying oven
4. Temperature control can be controlled from room temperature to 100°C, low temperature drying at 35-40°C and an optional dehumidifier can be installed for thermo-sensitive product like probiotic
5. The inlet air is filtered by a final-filter to secure the cleanness of the inlet air
6. 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
7. Two sets of valves are interacting automatically to suspend the granules continuously

Applications:

1. Top Spray:
 1. Pharmaceutical: For medicines, biopharmaceutical, and Chinese medicine's granulation or drying
 2. Food: Instant food, juice powder, seasoning, food additive, lactic acid bacteria's granulation or drying
2. Bottom & Side Spray: Medicines and healthy food for a controlled release of active ingredients