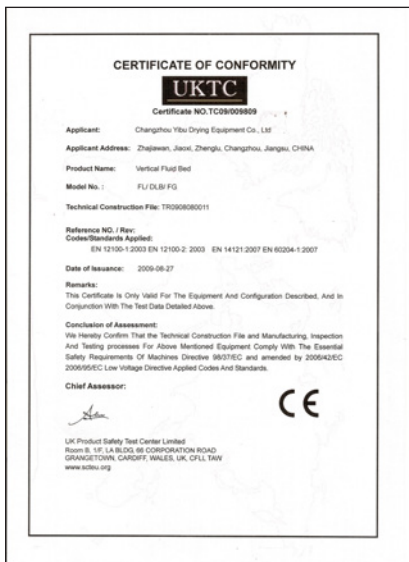


DLB Series Multi-Function Granulator & Coater

Patent: ZL 2007 1 0019618.2

GRANULATOR



Preface

- ◆ DLB Series Multi-Function Granulator & Coater is a new type solid ingredients/ material preparation equipment, which integrates granulating, coating, fluidizing and rotating granulating together. It is mainly applicable for granulating, pill making and coating in pharmaceutical, chemical, foodstuff and some other industries, such as granules to be pressed to tablets, or to be filled into capsules, granules for other Chinese and Western Medicine, solid drinks, especially controlled release capsules and granules.

Principle

- ◆ Spray coating can be performed – usually in batch processing – in all fluidized bed systems. For some coating applications, a continuous process is also available. The film material is applied as a solution, suspension or melt. Caution should be taken here to make sure no liquid bridges form during application in order to avoid undesirable agglomeration.
- ◆ When coating using a solution or a suspension, the liquid serves to transport the solids to the surface of the particles. When a melt is used for coating, in contrast, the coating material is one-hundred percent spreadable. YIBU technologies permit an optimal retention time of the particles in the coating zone. This assures outstanding coating qualities.
- ◆ Coating can be installed in the top spray, tangential spray, bottom spray or rotor process, depending from which direction the particles are being sprayed. All of these methods can be performed in a single, modern fluidized bed system. Customize for your needs.

Applications

- ◆ Mixing: For various kinds of fluidizable materials, such as powder, granules, micro-granule etc. In the effect of multi-dimensional movement (horizontal, tangent and radial direction), the mixing effect is very good.
- ◆ Granulating: Spray adhesive onto powder to produce granules with various diameters.
- ◆ Coating: Efficient for coating powder, granules and microgranules.
- ◆ Thermal Material Coating: Suitable for coating powder, granules and micro-granules with thermal wax.
- ◆ Spray Drying: Spray liquid or suspension onto powder so they should be dried.
- ◆ Cooling: This equipment might also be used for cooling powder or granules.

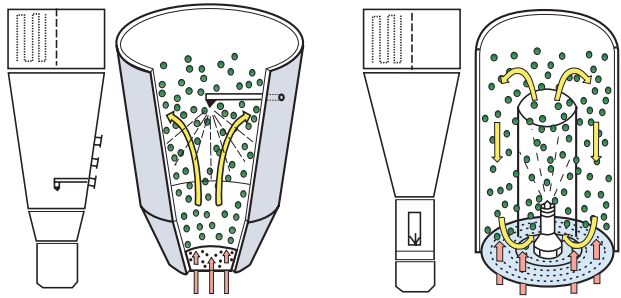


Diagram of Top Spray

Diagram of Bottom Spray

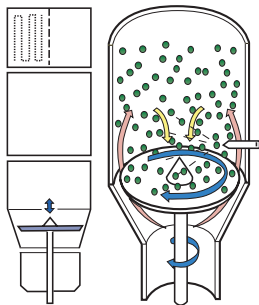


Diagram of Tangent Spray

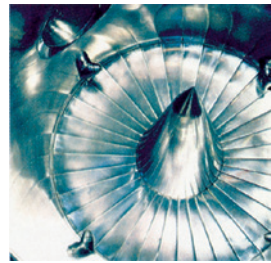
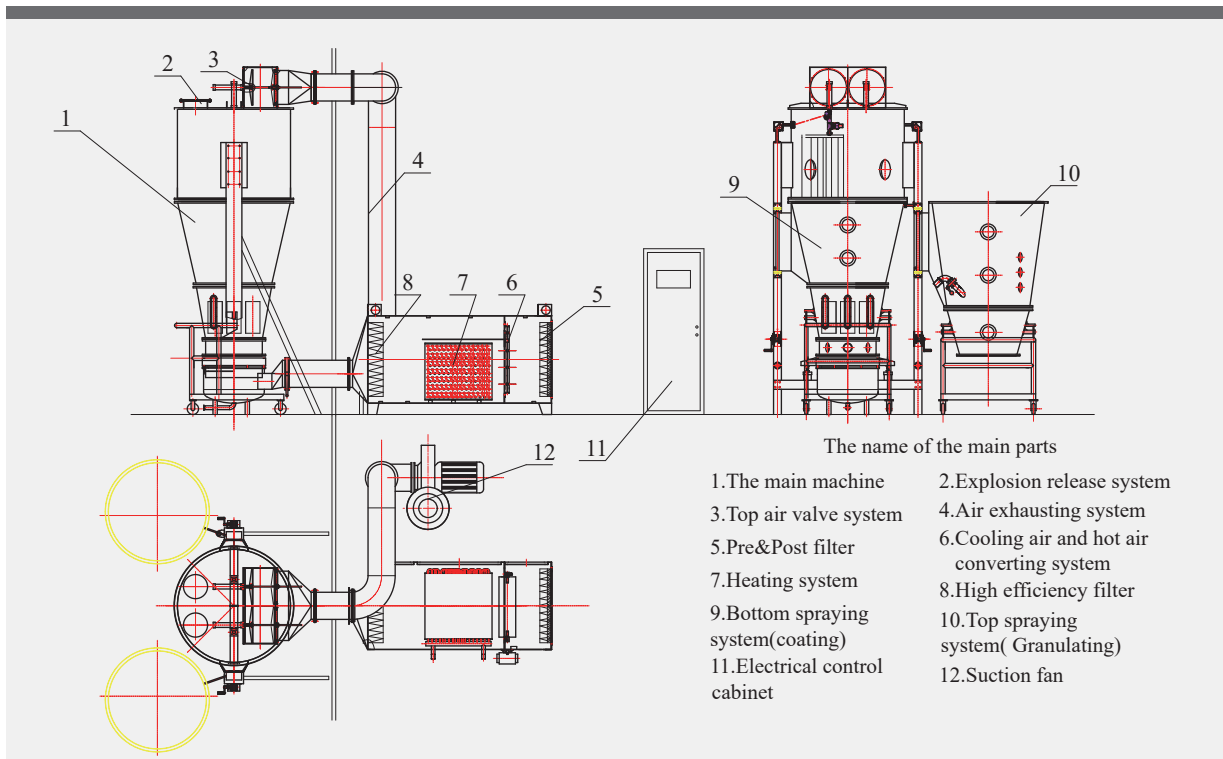


Diagram of Spinning Coater

Function

- ◆ **Tangent spray technique:** pelletizing, covering, coating
- ◆ **Top spray technique:** granulating
- ◆ **Bottom spray technique:** coating
- ◆ **Tangent spray technique:** the material in the fluid bed is pushed upward by the hot air flow, it will do regular spin rolling movement in the specially designed container with the influence of centrifuge of the rotary plate, centripetal force of material container, the air flow back and the gravity. The liquid sprayed at a tangent direction to make the material into core of pills, which are coated by powder from tangent spraying to get required tighten fine pellets.
- ◆ **Top spray technique:** the material in the fluid bed forms upward. Flowing state pushed by the hot air flow, then combined into granules gradually by the liquid sprayed from upward, and irregular granules will generate after drying.
- ◆ **Bottom spray technique:** the material is pushed upward from the bottom of the flow leading pipe by hot air flow and sprayed back, and coating liquid is sprayed from the bottom of the flow leading pipe, and coated onto the materials moving in the same direction to achieve the coating purpose.

Schematic of installation



Technical parameters

Spec	Top spray volume (L)	Bottom spray volume (L)	Diameter (mm)	Top spray output (kg)	Bottom spray output (kg)	Fan power (kW)	Steam pressure (Mpa)	Steam consumption (kg/h)	Compressed air expenditure (m ³ /min)	Compressed air pressure (Mpa)
DLB-0.5	46	4.2	Φ200	0.5	0.2-0.4	1.1	0.2-0.4	/		0.4-0.6
DLB-1		6.5	Φ250	1.0	0.5-0.8	2.2	0.2-0.4	/		0.4-0.6
DLB-3	11	94	Φ300	1.2-3	0.6-2	4.0	0.2-0.4	18	0.3	0.4-0.6
DLB-10	38	0	Φ500	5-10	3-6	5.5	0.2-0.4	50	0.4	0.4-0.6
DLB-30	120	125	Φ700	15-30	8-20	11	0.2-0.4	70	0.3	0.4-0.6
DLB-60	340	350	Φ1000	30-60	15-40	15	0.2-0.4	140	0.8	0.4-0.6
DLB-120	450	460	Φ1200	60-120	30-80	18.5	0.2-0.4	210	1.0	0.4-0.6
DLB-150	550	580	Φ1300	70-130	40-100	22	0.2-0.4	250	1.0	0.4-0.6
DLB-200	670	700	Φ1400	100-200	60-120	30	0.2-0.4	285	1.2	0.4-0.6
DLB-300	1000	1100	Φ1600	150-300	100-200	37	0.2-0.4	365	2.0	0.4-0.6

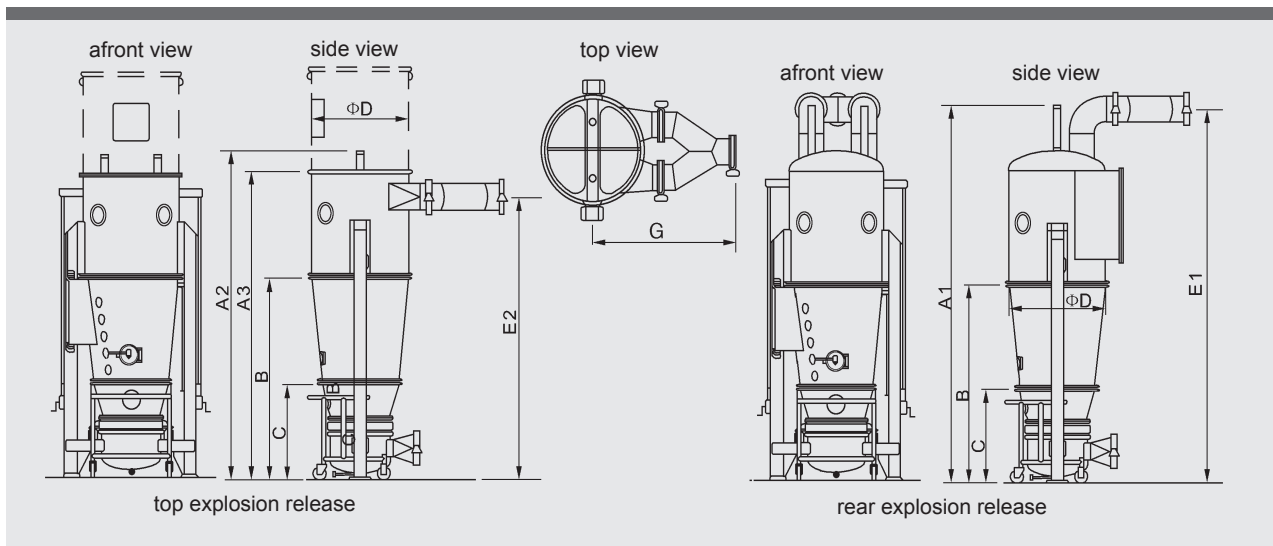
Temperature: automatically regulated from indoor temperature to 120°C
 Noise: ≤75dB (when isolating the fan)



Options

- ◆ Product charging by lifting machine.
- ◆ Product charging by vacuum transfer system
- ◆ Printer
- ◆ WIP system

Overall dimensions



Size	A1	A2	A3	B	C	ØD	E1	E2	G
5	3210	3210	2810	2140	920	500	3260	2610	740
15	4060	4060	3660	2280	970	800	4100	3410	970
30	4400	4400	4000	2520	1130	1200	4600	3750	1420
60	4800	4800	4400	2900	1180	1400	5000	4100	1620
120	5100	5100	4700	3000	1380	1500	5300	4400	1620
300	5760	5760	5490	3465	1840	1800	6500	5090	1990
500	6630	6630	6360	4145	2145	2700	7590	5960	2960