

FLUID BED DRYERS:



Fluid Bed Dryer is a widely used in pharmaceutical industry for highly efficient, dust free, fast, gentle & uniform, drying of granulated materials obtained from wet granulation.

Process concept :

The drying is achieved through a combination of moisture diffusion from the solid material to the heated air stream and the removal of that moisture by forced air convection. the product to be dried is transformed into low expanding fluidized bed with the aid of drying air added from below by means of specialized inlet air distributor. In this condition, the particles are isolated from one another and kept in constant motion. The high specific surface of the fluidized product helps great amounts of heat transfer.

A special effective air flow during fluidizations allows to pass through the entire surface of every single particle. FBD is manufactured for over pressure integrity using a unique sealing system for operator safety and product containment.

Fluid Bed Dryers are manufactured in various capacities and batch sizes. Batch size means the weight of wet product i. e. including moisture / solvent that can be charged in the dryer at a time. In case of very granular or crystalline material the capacity may be increased by about 15 to 20% . The capacity depends upon the material characteristic (i.e. Crystalline or amorphous), bulk density, Moisture content, hygroscopic nature etc.

We offer Fluid Bed Dryers of capacities 5 kgs to 300 Kgs.

Salient Features :

- Construction as per cGMP standards.
- All contact parts in SS S.S.S.S.316.)
- Inflatable gaskets for product container top bottom and filter housing sealing.
- Auto shaking of filter bag at settable intervals.
- Air control damper at inlet and outlet for consistent and controlled fluidization pattern
- Online sampling of product.
- Automatically controlled by pass.
- Integrated cleaning system for WIP & CIP.
- PLC based control for recipe administration and visualization.
- Vertical explosion design.
- Explosion relief vent to withstand up to 2 bar pressure
- Explosion proof and pressure shock proof design.



- 2 -

Optional features :

- Fully automatic operation through programmable logic control
- Provision of printer port
- Electric / Steam / thermic fluid heating system
- HEPA filter at inlet
- Different pressure gauge HEPA filter
- Material flow monitoring system (Broken filter bag detector)
- Inflatable tubes,
- PLC automation control,
- AC Variator for blower,
- WIP / CIP system,
- pneumatic damper on ducts,
- police filter,
- Scrubber on discharge,
- chilling coil,
- Top spray arrangement with holding tank and peristaltic pump,
- FLP construction etc.

Technical Specifications:

Models	FBD 10	FBD 30	FBD 60	FBD 120	FBD 150	FBD 200	FBD 250
Working Capacity in kgs	5-10 kgs	30 kgs	60 kgs	120 kgs	150 kgs	200 kgs	250 kgs
Prod. container volume in ltrs	35 Ltrs	110 Ltrs	215 Ltrs	400 Ltrs	495 Ltrs	660 Ltrs	810 Ltrs
Batch Capacity in kgs	5-10	30-40	60-75	120-150	150-180	200-230	250-280
Blower Motor Rating in HP	3 HP	5 HP	10 HP	15 HP	20 HP	20 HP	25 HP
Stream Consumption Kgs/Hr	95	135	165	195	195	205	215
At Pressure Kgs/cm sq.	3.5	3.5	3.5	4.5	4.5	4.5	5.5
Heating Load in KW	12	18	36	54	54	Steam	Steam
Compressed Air Pressure Kgs/cm sq.	2.5	4.5	4.5	4.5	4.5	5.5	5.5
Blower CFM	1500	2000	2500	3000	5100	6000	6000
Net Weight Kgs (Approx)	400	800	1050	1300	1500	1900	2200

Note : Images Shown here are illustrative. As the design & manufacturing of Machines are subject to improvement, the product supplied will be as per our Techno-Commercial offer.