

Drying chamber basic requirements

1. The plant must have the possibility of working as a single and a multistage spray dryer.

Inlet air temperature in the atomizing chamber is in a range from 150°C up to 230°C.

The static vertical bed dryer (internal fluid bed) height has to be adjustable with temperature of 100°C.

Vibrated Horizontal bed dryer (external fluid bed) must contain 2 zones, one for drying (100°C) and the other one for cooling up the final product to 30°C.

2. A strong fluidization is necessary to remove anticaking agent and to guarantee the movement of particle as large as 900 µm (D50 = 400 µm).
3. It's important to have the possibility of using different residence times by changing bed heights of each zone (to adjust moisture content and temperature cooling independently).
4. The total residence time considering both beds can be from 10 up to 60 minutes.
5. The chamber must have several injections points for anticaking agent and fines (recycled from chamber, beds and sieve).
A second nozzle for the emergency cold water must be quoted and integrated.
6. The fluid beds sieve plate can be dismantled. The supplier will provide 2 sets for each fluid bed (internal & external).
The horizontal fluid bed will be cleanable with the CIP. The changeover between a single and a multistage version will be done easily.
7. The atomizer air distributor must be cleanable with the CIP. The dismantle of this part could be done to check cleaning issues.