

FSD™ – Fluidized Spray Dryer

- Small scale production and product development
- Special two-stage drying technology
- Integrated double chamber fluid bed incorporated in the chamber base
- Production of coarse, dustless powders
- Drying of heat sensitive and aromatic products
- Handling of sticky and hygroscopic products in a continuous operation
- Three small scale plant sizes available:
FSD-4.0, FSD-6.3, FSD-12.5



Dairy products
Food products
Chemicals
Agro chemicals
Pharmaceuticals



Fine powder recycling through double flap valve and swirl valve.



Double chamber fluid bed for post drying/agglomeration and cooling/dedusting.



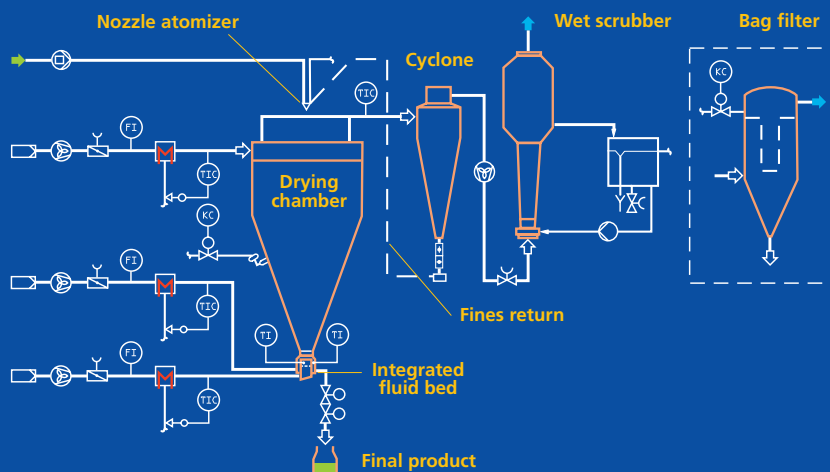
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Mode of operation

The feed is sprayed from the atomization nozzle mounted on top of the drying chamber into the drying air and down the spray chamber. The vigorous fluidization of moist powder in the fluid bed located at the chamber base, plus recycle of fines from the cyclone attachment, result in spray drying taking place in a powder-laden atmosphere.

Particles of higher moisture content can be handled in the drying chamber due to the resulting powdering effect overcoming the problems of product stickiness. Drying can be completed at lower powder and exhaust air temperatures thus improving product quality while gaining from a higher thermal efficiency. The degree of agglomeration and thus the particle size distribution can be influenced by changing the operation conditions.

- Pressure shock resistant design: 0.6 bar with integrated bursting membrane.
- Package plant – test erection prior to shipment makes installation simple with limited need for welding on site.
- Components in contact with product in stainless steel AISI 316.
- Delivered with different control concepts.
- Choice between single or double chamber fluid bed for FSD-4.0 and FSD-6.3.
- Various CIP systems available.
- Additional equipment available for operation in traditional drying mode with rotary atomizer. Easy changeover.
- Aseptic and/or closed cycle design available.
- Customized designs accepted.



Space requirements L×W×H:
Drying chamber size/cone angle:
Water evaporation capacity:

FSD-4.0
6.0×3.5×6.0 m
Ø 1200×1080 mm/40°C
10-30 kg/h

FSD-6.3
7.5×4.5×6.5 m
Ø 1600×800 mm/40°C
15-50 kg/h

FSD-12.5
9.0×3.5×7.5 m
Ø 2000×1000 mm/40°C
25-90 kg/h

Portable air unit for the double chamber fluid bed including inlet air filter, two pressure fans and two electrical heaters. Separate temperature and flow control for each fluid bed chamber.



Wet Scrubber is often preferred to a bag filter for odorous or sticky products. Compact design with integrated liquid recycling system.



Bag filter fitted with easily exchangeable filter bags. The filter medium is selected according to requirements.

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