

По вопросам продаж и поддержки обращайтесь:

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Вологда (8172)26-41-59
Воронеж (473)204-51-73
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СУШИЛКИ И УСТАНОВКИ ДЛЯ ОБРАБОТКИ ЧАСТИЦ FSD Технические характеристики



FSD Minor™ Spray Dryer

The FSD Minor™ Spray Dryer is the smallest in a series of FSD™ Spray Dryers for R&D and small-volume production. It produces a coarse, agglomerated, free-flowing and dustless powder.

With an integrated fluid bed at the bottom of the drying chamber, the FSD™ Spray Dryers combine spray and fluid bed technology into a robust process where drying and agglomeration take place in one single operation. The particle structure thus obtained is comparable to a bunch of grapes. This technology is especially well-suited for food applications, including sticky, hygroscopic, aromatic and heat-sensitive products.

he drying process

In the preliminary drying stage the concentrate is atomized by co-current nozzles placed in the drying air duct. The air enters the spray dryer vertically through the air disperser at high velocity, ensuring optimal mixing of the atomized droplets with the drying air. Evaporation is instantaneous taking place during the vertical passage down the drying chamber. In this first-stage drying, the particles will not be completely dried.

At high moisture contents, the powder will exhibit high thermo plasticity and become very sticky. However, the air flow in the FSD™ spray dryer is designed to prevent particles from sticking to the drying chamber leading them directly to the integrated static fluid bed for second-stage drying. If the carbohydrate and/or fat contents of the powder are high, cold air will be used to pre-cool the product. The integrated static fluid bed is supplied with air at a velocity sufficient for fluidizing the product and for adapting the temperature for the second stage drying. The drying air from both primary and second-stage drying leaves the chamber from the top.

Agglomerated powders are in high demand as they will frequently have improved flowability and dispersibility compared to fine powders; and, moreover, they are less dusty.

Features

For product development and production in small volumes

Multi-stage drying technology

Integrated chamber fluid bed incorporated in the chamber base

Excellent product flexibility and excellent thermal efficiencies

Drying of heat-sensitive and aromatic products

Handling of sticky and hygroscopic products in one continuous operation

The small-scale GEA FSD™ Spray Dryer is available in four sizes:

The small-scale GEA FSD™ Spray Dryer is available in four sizes:

	FSD MINOR™	Size 4.0	Size 6.3	Size 12.5
Nominal main process gas flow (kg/h)	80	400	630	1,250
Water evaporation capacity (kg/h)	0.5 - 6	5 - 25	10 - 50	20 - 90
Typical mean particle size (µm)	30-300	50-300	50-300	50-300

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