

Filtration Group application example – Air filtration (FE)

Filtration Group dedusting unit SFR 09 for frozen goods



Factory Equipment

Initial situation

Our customer is a young and dynamic company that has developed into one of the world's leading specialists in the field of freeze-drying. The company offers an extensive portfolio of high-quality freeze-dried products for industrial applications, such as breakfast cereals and muesli bars. During freeze-drying, selected freshly harvested and frozen raw materials are gently extracted from the water, bound as ice using complex technology, while the cell structure of the original product is retained. After the freeze-drying process, the product is again mixed and refined to customer specifications. This process produces dust that must be extracted. The dust produced during filling into the collecting container, at the transfer points from conveyor belt to conveyor belt, and after the mixing drum is extracted by the **FG SFR-09 006 DN-130 S1S S1SO dedusting unit**.



Challenge

Freeze-drying works according to the principle of sublimation: selected, freshly harvested raw materials are gently extracted from the water bound as ice after freezing. The freeze-dried product is fed into a mixing drum on the ground floor by a collecting container on the first floor via a downpipe. There, the product is mixed and subsequently fed to the packaging by various conveyor belts. The dust gets stuck together during transport. By feeding in filter aids, the dust becomes free-flowing again. When filling into the collecting container, at the transfer points and after mixing drum, very fine dust is produced with must be extracted.

Technical specifications

- Volume flow rate: 5,000 m³/h
- Operating temperature: 20 °C
- Cleaning with FG cleaning unit RLK
- Filter elements: 6 x 852 032 Ti 08-12
- Filter material: Ti 08, electrically conductive polyester fleece
- Freezing dust with filter aid free-flowing

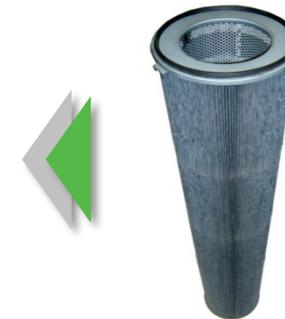
Solution statement

- Filtration Group has chosen a **dedusting unit SFR-09 006 DN-130 S1S S1SO** in round design for this type of application
- **Conical filter elements** were used
- The filter elements are equipped with **an aluminium-coated polyester fleece** and guarantee effective surface filtration
- The filter material is **electrically conductive**
- Effective and gentle cleaning of the filter elements and protection of the filter material from sticking by the use of **HI 26 filter aid**, which is fed to the system by the **FG dosing unit SDG-100**



Customer value

- The Filtration Group dedusting unit supplied, prevents product deposits in the production hall and thus contributes to the protection of employees. This significantly reduces the cleaning effort of the machines
- The filter material used achieves a very high separation efficiency in the fine dust range
- Longer filter element service life due to the use of HI 26 filter aid
- Optimum flow conditions in the filter chamber through the use of conical filter elements



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