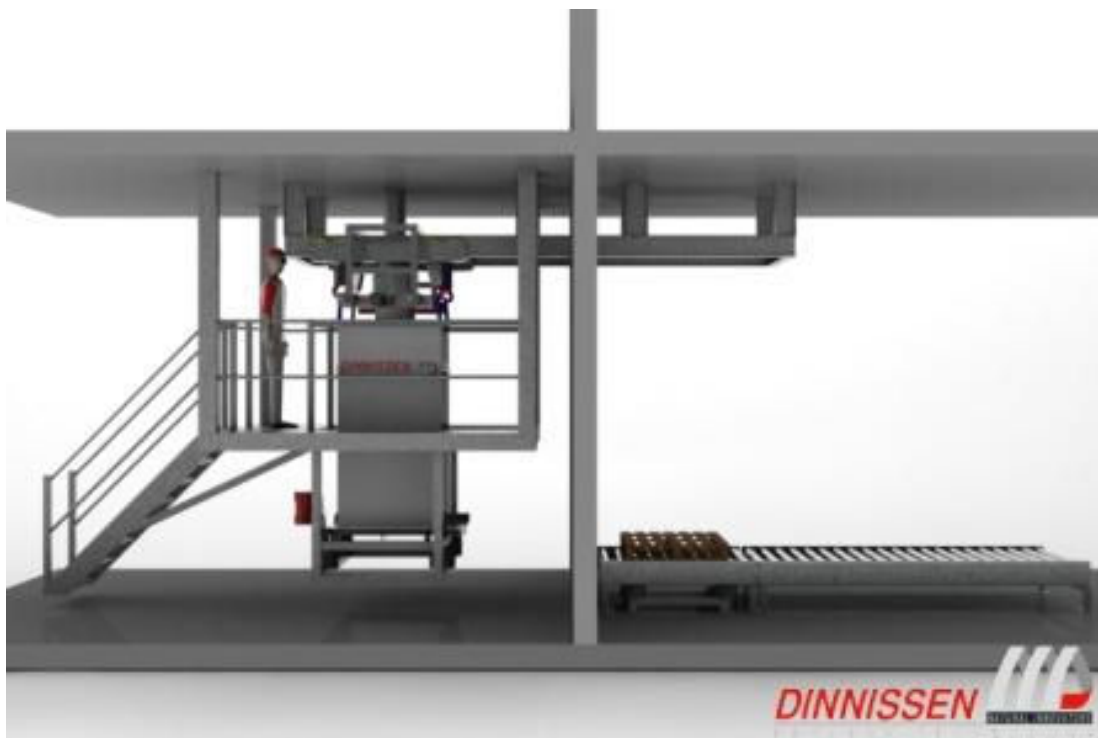


Filling bulk bags under clean-room conditions

Dinnissen Process Technology, Sevenum, the Netherlands, has developed an effective and ultra-hygienic bulk bag concept which will be displayed at Interpack (Stand D48, Hall 3). The system has been designed to ensure that contamination-prone pallets are kept out of the clean room area and to this end the bulk bags are kept suspended from a special overhead guide structure throughout the filling process, thereby ensuring minimal contact with possible contaminants. Also the fact that the bags are kept suspended makes it easier to ensure that the clean room is kept aseptically clean.

In the first step of the filling process, the bulk bag and its clean inner liner are attached to the filling head. A decontamination module is used to ensure that any dust particles are removed up to the moment the filling hose is connected. An inflatable seal prevents any particles from escaping during filling. The bulk bag is subjected to vacuum and forced into shape using nitrogen. This creates a clean and oxygen-free (<1%) environment which extends the shelf life of food products. The fact that the bag is shaped beforehand, if necessary using vibration, has the added advantage that every corner is optimally filled. To prevent any product spillage, a specially designed filling head is employed together with a valve for collecting any spilt particles and very effective particle removal by means of suction.

After automatic airtight sealing of the liner, the bag is closed and transported out of the clean room while remaining suspended. It exits via a quick-closing door equipped with a forced ventilation system. While the door is being opened and closed a laminar air current of pre-filtered, conditioned air is blown through as a speed of 0.4-0.5m/s. The total system complies with all ATEX, HACCP and GMP guidelines. Dinnissen's food industry customers include Danone, Nestlé, Royal Friesland, Campina and PepsiCo. www.dinnissen.nl



With the Dinnissen system bulk bags are at all times kept suspended above the floor of the clean room