



Low-dust bag-emptying with crusher, homogenisation, powder transfer system and integrated CIP cleaning

The smooth interaction of process functions, ergonomic handling and user-friendliness is essential for reliable and efficient production processes. The design of this unique equipment combines the functions of crushing, homogenisation, powder transfer system and CIP cleaning with final drying in an optimal manner. This bag emptying is best-suited for multi-purpose applications and automated processes.



Process

The operator opens the front door, pulls the 25 kg bag horizontally from the lifted pallet lifting table to the preparation table, cuts the bag manually, and discharges the product into the storage funnel. The storage funnel has a capacity of 2-3 bags. The empty bags are stored in the waste discharge attached to the side.

Integrated suction produces an internal exhaust air stream. The dust-containing exhaust air stream is filtered through the integrated filter system and cleaned. Before the wet cleaning, the filter cartridges will be dry cleaned, and the dust is blown back into the process.

If the storage funnel is full, the front door is closed by the operator, and the production process starts automatically. Lumps are broken up, then crushed and transferred with a powder transfer system to the next process (e.g. charging the reactor).

The entire process runs automatically, and is monitored by various sensors and process-related parameters. Disruptions are displayed on the touch panel with well-defined and classifiable text.



If the production batch is finished, the operator starts the automatic cleaning and drying process by using the touch panel. The entire system is completely automatically CIP cleaned, and then dried with conditioned hot air. One CIP cleaning and drying cycle lasts, depending upon the product and degree of contamination, about 60 minutes. Follow-on manual cleaning is not necessary.

After the cleaning is completed, a new production batch can be processed.