## Modern packaging of milling products

# Economic solutions for the filling of valve bags made by BEHN + BATES/Germany

The increasing demands for the packing of milling products, product quality and possibility of following the product flow from the end user back to the producer dominate public discussion. Key words, such as the protection of the consumer and product safety play an important role in the milling industry not only for the consumers and the producers, but also for the suppliers of machines and equipment.



The engineering industry is faced especially with the challenge developing the right solution to suit individual customer-specific requirements – a field where the company BEHN + BATES, Münster/Germany, has gained experience for nearly 75 years now. BEHN + BATES develops sophisticated filling machines for the filling of food products into valve and open-mouth bags with filled weights of 1.5 up to 50 kg and big bags of up to 1,800 kg. Depending on the characteristics of the product to be filled, the technology that best suits the individual project requirements is chosen.

# Valve Bag Filling Technology

The filling of dusty products with a large variety of different grain sizes is a special challenge in the food industry. BEHN + BATES relies on its pneumatic and impeller filling systems that are used especially in the food industry to optimally fill all fine and coarse grain sizes. The pneumatic packer works according to the air filling principle, while the impeller packer fills the product via a product-specifically constructed impeller wheel. The BEHN + BATES packers can be operated either manually or fully automatically in combination with the FRONTLINE automatic valve bag applicator.



Automatic filling plant with FRONTLINE valve bag applicator, 3 pneumatic packers and ultrasonic valve bag sealing stations for sugar

More and more food producers request the dusttight sealing of the filled valve bags to meet modern food safety standards. BEHN + BATES uses the world-wide proven ultrasound sealing technology that is integrated in the filling machine frame and seals the valve bag directly after the filling at the filling spout. This system guarantees a clean and dust-free filling environment in combination with highest filling capacities.



Ultrasonic valve bag sealing station for the dust-tight sealing of the valve bags directly after filling



Plug 'n Pack packaging system for flour



Filling weights from 1.5 to 50 kg

The Plug 'n Pack packaging systems INTEGRA and miniseal manufactured by BEHN + BATES best suit the high requirements with regard to quality and hygienic standards, as they unify the filling, applicator and valve bag sealing technology as well as the control system, operator unit and discharge belt conveyor in one compact cabinet. The dust and noise emissions are reduced considerably. The product dust pollution is minimized what is of utmost importance due to the harmful effect on the operation personnel.

Whilst the INTEGRA fills valve bags with volumes from 10 l, the miniseal provides the optimum solution for the filling of valve bags with a volume of just 2 l (bag dimensions 250 x 180 x 70 mm).

The stationary BEHN + BATES packaging systems are designed for outputs of 100 to 750 bags per hour. For high outputs of 600 to 2,200 bags per hour rotating air or impeller filling systems, type ROTO-Packer or ROTOSEAL system, with 3 to 10 filling spouts have proven their worth. Unlike conventional linear packers, the filling spouts are mounted on a rotating silo.



Rotoseal system according to the air filling principle – can be extended from 6 to 8 spouts

#### Conclusion

Due to accurate and detailed planning of projects as well as the optimum cooperation with its customers, BEHN + BATES is able to integrate new filling lines into existing production processes to the full satisfaction of the customers.

BEHN + BATES technology daily proves its high efficiency in continuous industrial operation processes. Thanks to the gentle, hygienic and weight-accurate product filling the high requirements of the food industries are successfully fulfilled.

BEHN + BATES Filling Food – Consider It Bagged!

# **BEHN + BATES**

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