

We understand bulk!

WE CAN!

Filling big bags without operator intervention



Industry:

- Food
- Building material
- Chemistry



Process:

fully Automation
of the big bag filling

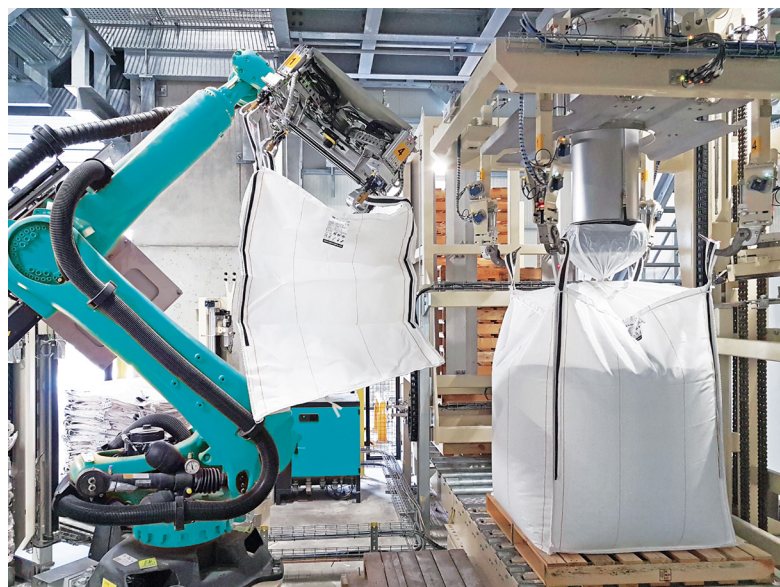


Key data:

- 90 seconds Cycle time
- big bags up to 1.500 kg
- different big bag dimensions



Fully automatic EMDE big bag filling system



Robot with new big bag ready for handover to the filling station

Fully automatically operated big bag Filling station

The fully automatic EMDE big bag filling system works e.g. with a pre-weighing system, which is equipped with a weighing hopper. The interaction of this pre-weighing system and the fast actuators of the machine and the robot enable us to achieve a cycle time of 90 seconds per big bag. That means every 90 seconds a filled, calibrated and tightly closed big bag leaves the conveyor roller of the filling system, including a product label with information about the lot number, weight and other product-specific data.

The powerful camera system recognizes the position and orientation of the empty big bag within a part of a second and provides the robot with the necessary coordinates to pick it up. The robot purposefully positions the self-developed gripping system onto the empty big bag so that it can be picked up safely. Different sensors detect and monitor the position of the big bag in the robot gripper and, in the event of a fault, ensure that a faulty big bag is thrown away reliably and a new cycle starts again.

With the help of the dynamically controlled, electrical linear axes of the robot gripper, the big bag is then transferred to the load hook into the filling station. As a result, the big bag, as if hung in by the operator, hangs on four automatic pneumatic load hooks, which have also been used in the EMDE standard big bag filling systems for years. The remaining process steps are analogous to manual big bag filling. Only the automatic closing system of the big bags makes a difference. Using a clip-closing apparatus, as it is often used in a smaller scale in the sausage industry, the big bag gets tightly closed.

Product features

- Connection and monitoring via MES system
- Reliable automatic operation also in industrial environment
- Dust-tight filling nozzle docking via inflation grip
- Clip closure system for full automated closing of the big bags
- Applications e.g. in the fields of hazardous materials and for systems in multi-shift operation
- Transport system for pallets, and Integration of further periphery components such as floor pads, Label printer etc. possible
- Robot controlled placing and Hanging the four big bags - loops in the load hooks
- hanging filling and thus full expansion of the big bags possible

EMDE Group

We offer you an extensive program for mechanical conveying of bulk materials. All components are designed by our experienced sales staff in terms of process engineering and are offered specially tailored to the application. The coordination of the components and processes connected in series is an important prerequisite for the function of the overall system.

We offer you this complete solution from one source!

The quality of the conveyor systems and the reliability of the overall system is ensured by the in-house production of all components.

EMDE Automation GmbH
Koppelheck | 56377 Nassau

Tel.: +49 (0) 26 04 - 97 03 - 0

info@emde.de | www.emde.de

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