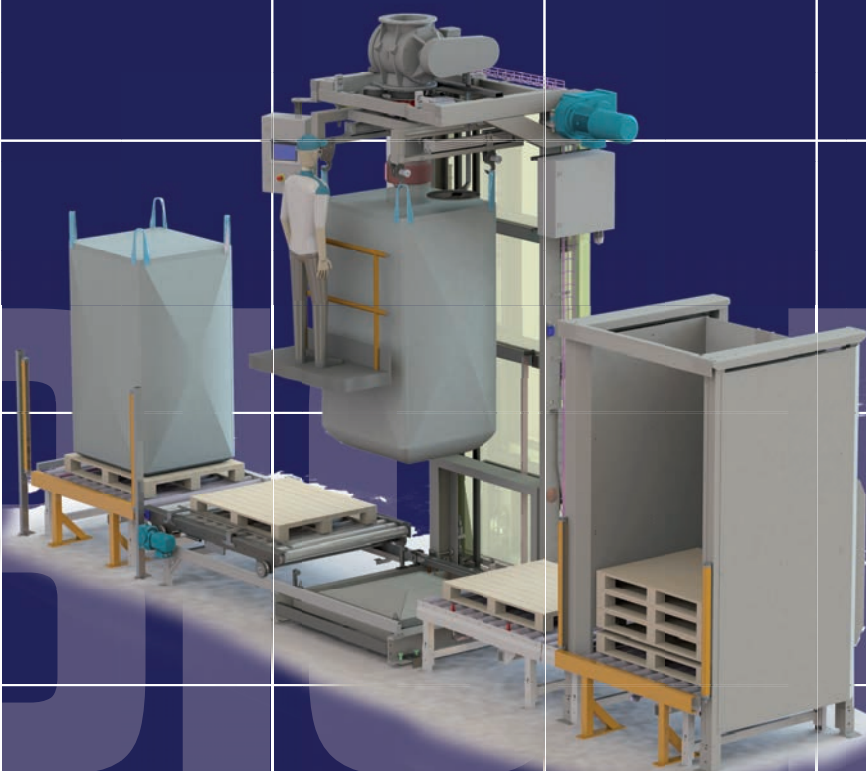


BIG-BAG

FILLING SYSTEMS

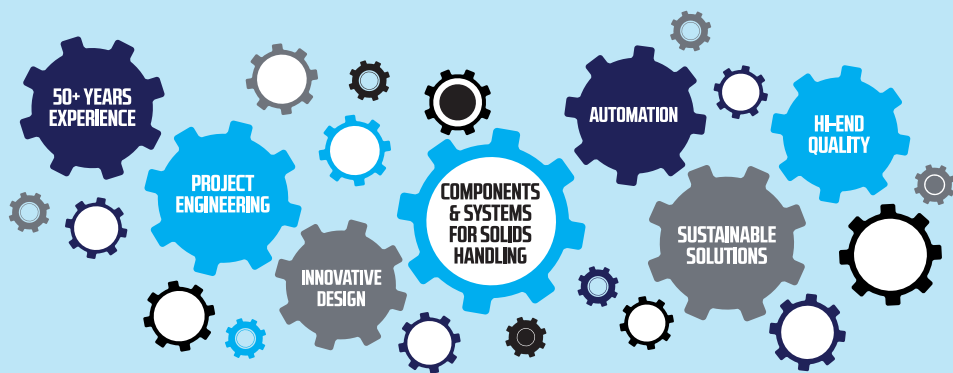


WHO WE ARE

TBMA are specialists in the design and supply of components and systems for bulk solids handling. Our extensive range of high-quality processing equipment is suitable for handling powders and granules with proven reliability in practice in a variety of processing industries.

The highly qualified and experienced TBMA staff are well able to translate your requirements into the right execution and application of our components. We also offer the design and execution of complete projects, thus providing you with an efficient, reliable and sustainable solution for your process.

Solutions beyond bulk handling



• BIG-BAG FILLING SYSTEMS

BIG-BAG FILLING SYSTEMS

Transport and delivery of raw materials are increasingly being carried out using FIBC's (Flexible Intermediate Bulk Container), also known as big-bags. For the efficient filling and accurate weighing of these bags, we offer sophisticated systems to optimally utilise the benefits of these bags.

EFFICIENT, ACCURATE AND STABLE

Thanks to the efficient filling and accurate weighing, our systems are used successfully in various types of installations worldwide. A well-designed system ensures that product loss, contamination and dust formation during filling are prevented. Regardless of the execution, our systems provide you with well-balanced, stable and straight-filled bags.

MODULAR CONCEPT

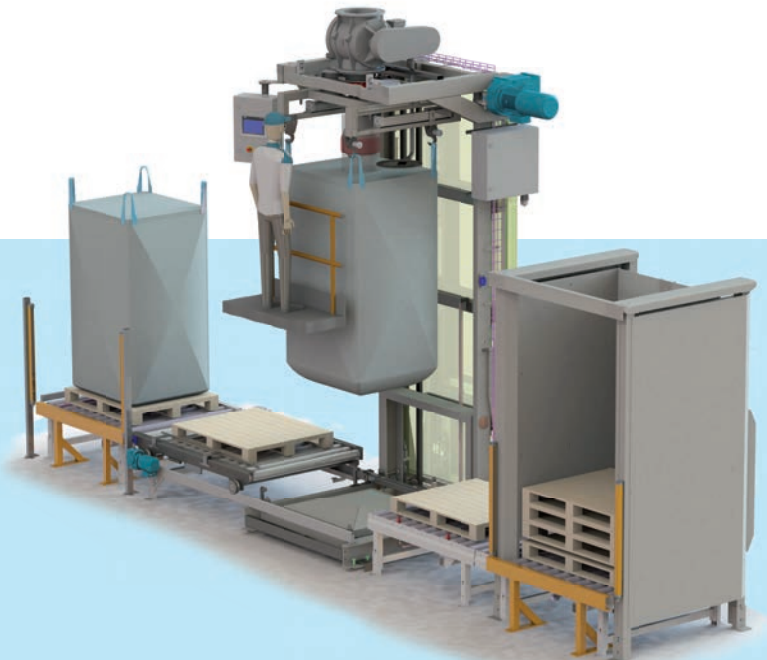
TBMA big-bag filling systems consist of a flexible, modular concept, allowing us to meet all customer-specific requirements regarding product type, bag type, capacity, working conditions and budget. From simple, economical systems to high-care clean-room applications. The basic models can be expanded with various options into a total solution for industrial applications for semi-automatic filling, weighing and further transport of big-bags.



IN BRIEF

- Suitable for big-bags from 500 to 1600 kg
- Maximum filling capacity from 10 - 20 bags per hour
- Filling capacity depending on buffer capacity above the filling unit
- Product stabilisation and compacting through vibration
- Suitable for big-bags with or without outlet spout
- Suitable for big-bags with or without inner liner
- Dust-free connection by inlet spout with inflatable bladder
- Automatic hook and suspension system (optional)
- Loading with accurate weighing (optionally stamped and certified)
- Sanitary high-care execution according to EHEDG guidelines

APPLICATIONS



● TYPE VB | ECONOMICAL SOLUTION

The VB filling machine consists of a robust steel supporting construction with four uprights, has a minimal number of moving parts and is suitable for various types of big-bags.

The stainless steel double-walled filling spout is equipped with a suction connection and vollenda clamp, ensuring efficient filling and venting. Specially shaped bag suspension hooks facilitate a simple drive-off removal of the filled big-bags.



CVB-I | OPTIMAL SOLUTION

The CVB-I heavy-duty C-shaped frame offers optimal accessibility and ergonomic operation. This very complete machine is suitable for almost every industrial big-bag filling and weighing application. The simple but smart construction allows it to be optionally moved, making it an ideal solution to service multiple silos. The system can be customized by adding e.g. a vibrating table assembly or hydraulic levelling.

The stainless steel double-walled filling spout is equipped with a suction connection and can be extended with an inflatable bladder, ensuring efficient and dust-free filling and venting. Specially shaped self-releasing hooks for a simple drive-off removal of the filled big-bags are optionally available. Alternatively, we offer an extended, complete bag suspension system, including easy hanging of the big-bags.



CVB-II | OPTIMAL SOLUTION

The CVB-II stationary system is also C-frame based and offers an optimal, user-friendly operation. This system can be easily customised, e.g. by adding a vibrating/lifting table assembly, and extended to a complete filling line.

The stainless steel double-walled filling spout is equipped with a suction connection and can be extended with an inflatable bladder, ensuring efficient and dust-free filling and venting. Specially shaped automatic, self-releasing hooks are optionally available. Alternatively, we offer an extended, complete bag suspension system allowing easy hanging of the big-bags.

To create a complete filling line, the CVB-II can be optionally extended with a supply and discharge system, including a pallet dispenser, sheet dispenser, shuttle and roller conveyors for further transport of the filled big-bags.



HIGH-CARE | HYGIENIC SOLUTION

In the production of foodstuffs, for example baby food, very high hygienic requirements are imposed on components and systems. TBMA has extensive experience with the design, supply and commissioning of sanitary big-bag filling and weighing lines, aimed at preventing bacterial risks and product contamination. The installations are easily accessible, easy to clean and in accordance with the applicable EHEDG and ATEX guidelines. The high-care systems are validated for weighing and hot sealing.



Filled big-bags are sometimes being stored for a longer period of time, which creates the risk of product degradation. When using special big-bags with a gastight inner bag, TBMA can adapt the installation in order to achieve airtight multiple hot sealing of the big-bag liners. The bag is made vacuum by using a special valve in the big-bag liner and then injected with nitrogen. This way the shelf life of the product is significantly extended.

| Options | Type VB | Type CVB-I | Type CVB-II | High-care |
|---|---------|------------|-------------|-----------|
| Dust-free filling head with inflatable seal | + | + | + | + |
| Big-bag inflating for optimal filling | + | + | + | + |
| Automatic, self-releasing hooks | + | + | + | + |
| Ergonomic trombone system | + | + | + | + |
| Big-bag weighing | + | + | + | + |
| Vibration unit for compacting | + | + | + | + |
| Shuttle | - | - | + | + |
| Pallet dispenser | - | - | + | + |
| Sheet dispenser | - | - | + | + |
| Roller conveyor for full big-bag storage | + | - | + | + |
| Hot seal unit with nitrogen (N2) gassing | - | - | + | + |
| Mobile version (optional) | - | + | - | - |
| Up to two big-bags stacked on a pallet | - | + | + | + |

+ suitable | - not recommended

FILLING HEAD

The double-walled stainless steel AISI 304 filling head is used for efficient and dust-free filling and de-aeration of the big-bag. It consists of a 304 grade stainless steel filling tube. The outer jacket is complete with a 304 grade stainless steel 100mm diameter displaced air spout for connection to a dust extraction system and a rubber inflation bladder for a dust-free operation. Recommended dust extraction air flow is 450 m³/h.



BAG SUSPENSION SYSTEM

The system consists of pneumatically rotatable suspension hooks, optionally mounted on linear air cylinders (trombone system). The automatic, self-releasing hooks are fixed to a rotary actuator with an adjustable sweep angle. The linear cylinders are used to bring the rear suspension hooks to the front of the machine for easy hanging of the big-bag.



INTEGRATED WEIGHING SYSTEM

The integrated weighing system consists of a weighing frame with 3 load cells with a combined maximum capacity of 1600 kg. The load cells are equipped with floating mounting points to prevent side forces from damaging the weighing system.



VIBRATING AND LIFTING TABLE ASSEMBLY

This assembly consists of a support frame which is raised and lowered by means of a hoist. The table is manufactured from stainless steel AISI 304 and has the shape of a truncated pyramid. When in operation, the table is raised to contact the big-bag (detected by weight reduction of the big-bag) and is then vibrated.



The vibrations vent and compact the product, resulting in maximum filling and balanced loading. The table shape ensures that the corners of the big-bag are filled first and the bottom is flattened, resulting in a stable, compact and optimally filled big-bag.



PALLET DISPENSER AND SHUTTLE

Adding a pallet dispenser and shuttle to a CVB-II systems allows for automatic pallet supply beneath every big-bag. This way, the operator can substantially increase the filling pace of the system.



COMPONENTS

SYSTEMS

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