



FILLING FOOD – CONSIDER IT BAGGED!



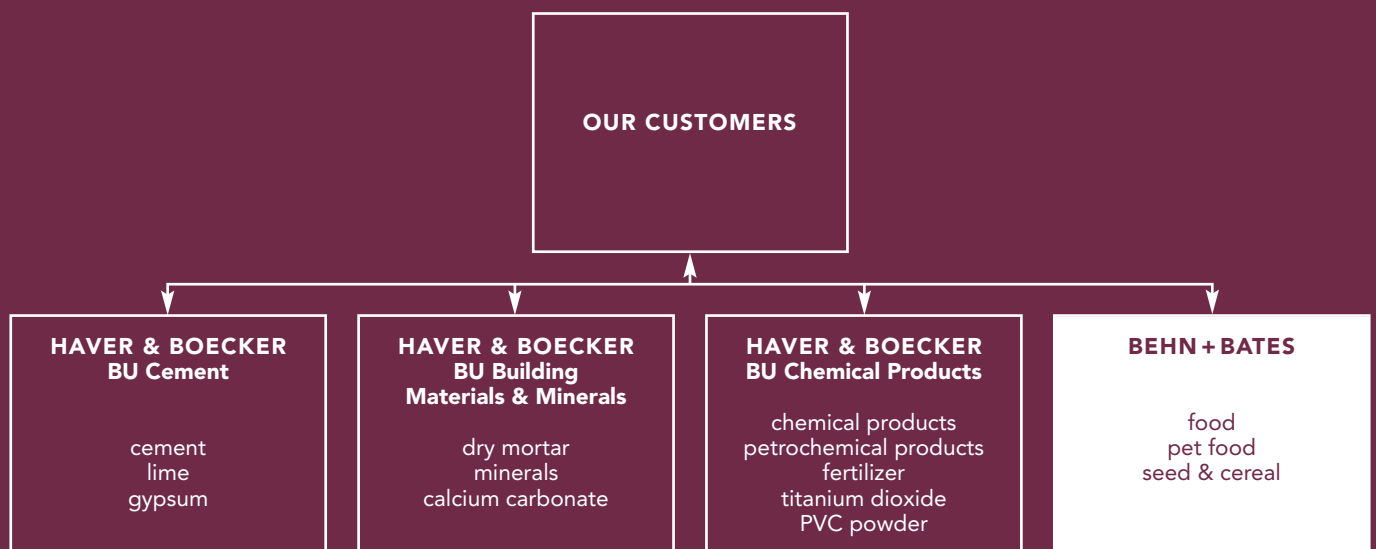
THE BEHN + BATES RANGE OF ACTIVITIES

OUR PASSION: OPTIMUM BAG FILLING

Founded in Krefeld/Germany in 1933 BEHN + BATES rapidly became known for robust and high quality bag filling machines. In the early stages the focus was on all industries filling their products into bags. However, since being taken over in 1994 by HAVER & BOECKER, Oelde/Germany, one of the leading packing machine manufacturers, we have specialised in the food and pet food industries from the end of the 90s.

Today BEHN + BATES is an independently working company with 40 highly motivated employees in the world-wide active HAVER® Group and can offer you the advantages of high flexibility as well as the inventiveness and the experience of an international company.

With customers in more than 60 countries around the globe we have developed a variety of packaging solutions. We have designed, built and supplied the required bagging technology and successfully put it into operation in close cooperation with the end users. Leading groups of food and pet food companies trust in our technology, as do small factories. We have the bagging solution for each product, for each type of bag and for manual or fully automatic operations.





Presence around the globe

Our representatives and service network, located in more than 60 countries, are readily available to support your installation. They consist of HAVER & BOECKER subsidiaries as well as independent agencies, all of which are highly trained. They know the specialities of food and pet food packaging and are able to advise and fully support you from the first project idea up to the ready-to-use bagging installation and subsequent regular maintenance.



OUR FOCUS: FOOD AND PET FOOD

Whatever we do, we always look for the best solution, taking into account your individual requests. Whatever you need for your specific food or pet food packaging project – we bring your visions to reality.

Modern standards such as GMP and HACCP are not foreign words to us but terms used in our daily work. Together with our customers we regularly develop price-optimised packaging solutions, taking into account the most recent regulations of the food and pet food filling industry as well as the experience our experts have gained in their daily business and evaluated information about modern trends and developments in the packaging market.

Innovative ideas can be realised by our creative team within very short times. In just a few years we have become one of the leading manufacturers, concentrating our entire know-how and range of valve and open-mouth bag filling machines exclusively in the food and pet food industries.

It does not matter whether you fill

- cocoa powder
- starch & derivatives
- sugar, dextrose, maltodextrin & sorbitol
- flour, baking ingredients & premixes
- soybean products, rice & grain
- pet food & seed

we have the solution.

Tread new paths – with us – because you profit from our experience.



Our product range for valve bags:

- manually operated or fully automatic inline filling machine with 1 to 3 filling spouts
- ultrasound sealing station
- automatic valve bag applicator FRONTLINE®
- Plug 'n Pack design INTEGRA FD with dust-tight housing
- ROTOSEAL® system with 3 to 10 filling spouts for high-output applications



Cocoa powder



Flour & baking ingredients



Starch & derivatives



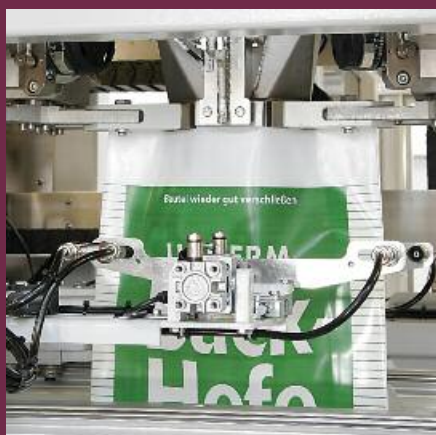
Soybean products, rice & grain



Sugar & derivatives



Pet food & seed



Our product range for open-mouth bags:

- manually operated filling machine BOH
- fully automatic filling system TOPLINE® with gross and net weigher
- fully automatic filling system ORBIS® – Rotating bagging system for the high-output powder filling
- FFS – automatic form-fill-seal machine for endless gusseted film
- filling station for big bags

HIGHLY PRODUCTIVE: THE VALVE BAG FILLING TECHNOLOGY

The optimum project planning in our company begins upon receipt of your enquiry. We analyse your product and your bags in the highly modern R&D Centre of our parent company to propose and select the right filling technology for your valve or open-mouth bag. The right filling technology is the perfect combination of product, packing material and machine. Your product is the task – we have the solution.

A lot of food and pet food producers choose the valve bag due to its easy handling. High outputs, good weighing accuracies and compact bag shapes with high advertising impact are achieved with the filling system specifically chosen for your project. We supply:

- pneumatic packers
- impeller packers
- auger packers
- gravity packers

The variety of products processed by your company plays a decisive role in making the right choice – whether they are floury, powdery, gritty or granulated.

The output per filling spout amounts to up to 300 bags per hour depending on the type of machine, the composition of product and the type of bag.

The packing machine is a main part of your value added chain. Being supplied specifically for your product and your conditions, it provides considerable and lasting advantages:

- maximisation of profit due to clean and weight-accurate product processing
- maximisation of benefit due to improved product protection and protection against humidity
- reduced cost due to a clean packing environment and reduced clean work
- high advertising impact due to optimally filled bags that can be efficiently processed by your customers

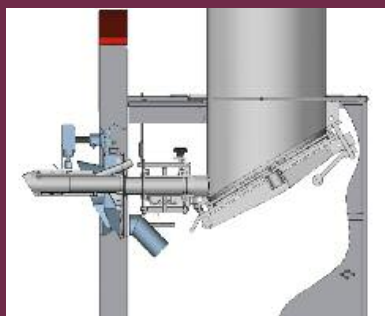
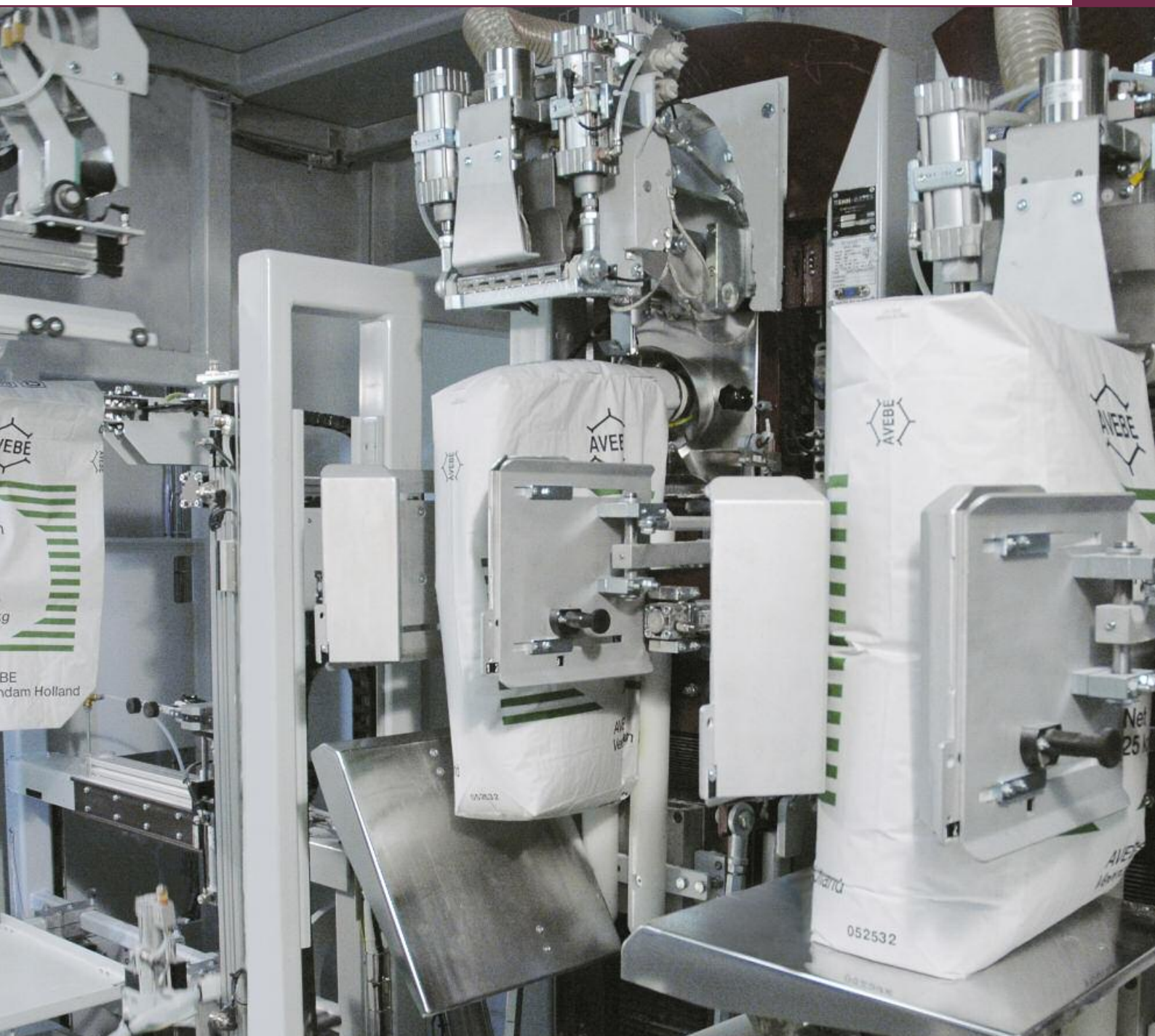
The exact analysis of the product and its characteristics as well as the used materials is one of the basic preconditions for all processes in the bulk goods handling industry.

Our practice-orientated tests lead to economic packaging solutions and facilitate the collection of process-relevant product data.

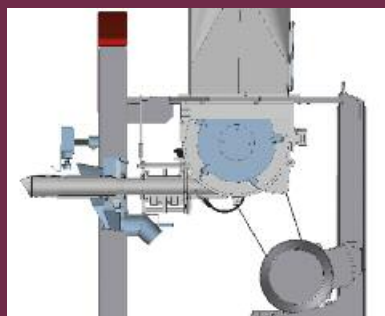


We analyse your product:

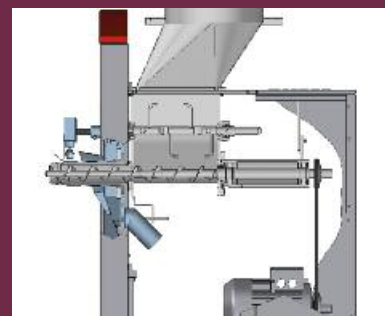
bulk density, free-flowing properties, humidity, tamped volume, flowability, angle of repose



Air filling principle
floury, powdery and
gritty products



Impeller filling principle
fine powdered and
fine-grained products



Auger filling principle
flaky and gritty products

CUSTOMISED: THE AUTOMATIC VALVE BAG FILLING

Each packing machine manufacturer is confronted with the special challenge of supplying you with a customised solution allowing you to either automatically apply and seal the bag or to attain higher outputs on request.

Fully automatic packing processes can be realised by the integration of automatic bag applicators and sealing stations. We offer you different options of bag applicators. The applicator type for your project is chosen depending on whether you operate a 1-spout filling machine or a high-output installation with up to 10 filling spouts. For the dust-tight bag seal we use ultrasound sealing stations, closing the filled bag directly at the filling spout by means of cold welding tools.

Valve bag filling to perfection – that means we combine high functionality and efficiency with a clear and space-saving machine design.

Our „Plug ‘n Pack” designs INTEGRA FD and MINISEAL® provide an absolutely clean and low-noise operation. They unify the applying, filling and sealing station in a compact dust-tight housing.

For high output applications the ROTOSEAL® system with 3 – 10 filling spouts is the best solution. The filling spouts are mounted on a rotating machine frame. Therefore less space is required to reach higher packing outputs with more filling spouts. The result is high-quality bag processing at increased hourly rates of up to 2,000 bags.

The BEHN + BATES delivery programme offers an appropriate solution for all your needs.

It does not matter which option you select. Our aim is to provide an individual solution for your specific project. Therefore, a large number of packing machine accessories is available, e.g.:

- sampler
- motor-driven bag size adjustment
- automatic bag discharge
- bag vibrator
- metal detector – integrated or external
- check weigher
- bag discharge unit



Manually operated 1-spout packers with or without valve bag sealing station, output: up to 300 bags/h



Fully automatic 1- to 3-spout installations with bag applicator and sealing stations, output: up to 750 bags/h



Expandable „Plug 'n Pack" designs INTEGRA FD and MINISEAL® with 1 to 3 filling spouts, output: up to 750 bags/h



Expandable ROTOSEAL® systems with 3 – 10 filling spouts, output: up to 2,000 bags/h

INNOVATIVE: THE OPEN-MOUTH BAG FILLING TECHNOLOGY

Optimum product protection and improved storage, high advertising impact, flexible filling volumes or simple opening and re-closing of the used bags – all these are convincing features of the open-mouth bag.

However, the filling of powder requires very special sensitivity as powder can be dusty. Only the well balanced combination of low-air filling, a dust-tight filling spout and efficient de-aeration provides optimum filling results – and this is our main strength.

In early project stages you decide with your bag or foil supplier which packing material best meets your product and your marketing targets: a pre-fabricated open-mouth gusseted or flat bag made of paper, PE or/and PP or an endless gusseted film made of plastic. We then advise you with regard to the proper filling technology – decisive factors are the required output and the question as to whether the machine is to be operated manually or automatically. We can offer you the following filling systems:

- BOH
- TOPLINE®
- ORBIS®
- FFS system
- big bag filling station

We recommend our filling station BOH for the manual filling of pre-fabricated open-mouth bags.

It fills granules as reliably as powders and is perfect for applications in small companies where production volumes do not justify the installation of fully automatic packers.

For the automatic filling of pre-fabricated open-mouth bags – from the empty bag application up to the bag filling and integrated bag closing – we recommend our TOPLINE® and ORBIS® packing systems.

Their main difference is the hourly output. The TOPLINE® combined with a gross weighing system, a corresponding product dosing unit and a special dust-tight filling spout, packs powders at an hourly rate of up to 250 bags. The rotating ORBIS® processes up to 600 bags/h and is specifically designed for an efficient second product dosing, densification and de-aeration.

For filling granules the TOPLINE® is combined with a net weighing system and reaches hourly outputs of up to 1,400 bags.

Our delivery programme for pre-fabricated open-mouth flat and gusseted bags:



BOH
manually operated filling machine



TOPLINE®
fully automatic system with gross weigher for powders and net weigher for granules



ORBIS®
rotating system with 4 filling spouts especially for powders



Our delivery programme for endless gusseted films made of plastic and big bags:

Everything is possible:
Powders can be filled as well as granules. The FFS systems and the big bag filling stations made by BEHN + BATES are available in different options.



FFS system

with gross or net weigher for different ranges of capacity



Big bag filling station

TREND-SETTING: THE FFS AND BIG BAG TECHNOLOGY

Ahead of time: In the coming years an increasing number of food and pet food producers will want to fill their products into plastic bags. In order to meet these demands we can offer various machine designs differing in their output, product de-aeration and densification.

FFS system – machine technology, flexibility and productivity made to order

Each packing company is keen on keeping its packing cost as low as possible. The FFS technology meets this requirement – it forms the bag out of an endless gusseted tubular film, fills and seals it thus allowing the bag size to be adapted to fill goods even with fluctuating bulk densities.

The conventional FFS systems are mainly used for granules and grains (output: up to 2,000 bags per hour).

The CYRUS® system has been developed within the HAVER® Group especially for fine-grained products with high dust portions. It is equipped with a filling spout in a special dust-tight version and reaches hourly outputs of up to 1,200 bags.

For the filling of pure powders and flours requiring a special densification and de-aeration due to their complexity, the FFS system is normally equipped with several filling spouts.

Big bag filling – fine products filled in big packages

In addition to dust-free filling, a high weighing accuracy and ease of operation are essential for optimum big bag filling. Decisive factors for the filling output and stability of the big bags are product de-aeration and densification.

Our big bag filling station (standard version) fills 10 to 15 bags, each of 500 to 1,800 kg – and up to 30 bags/h in combination with further components, such as empty pallet separator and roller conveyors.

The low-air and low-dust product filling is reached by the product-specific design of the dosing element and the choice of the right filling spout, e.g.



Auger
dosing of floury and
powdery products



Dust-tight powder spout

filling of products with high dust portions



Net weigher

dosing of granulated, grainy and lumpy products



Flap spout

filling of granulated, grainy and lumpy products

TAILOR-MADE: THE CONTROL AND THE SERVICE

BEHN + BATES stands for quality. This means for us that the design and the delivery of the necessary weighing and control technology are essential parts of our business.

In addition to ease of operation, weighing and control systems used in packing companies must meet very special requirements. They must guarantee that the bags are filled in an absolutely weight-accurate way for each product and for each bag type, with low and high-output operations.

All our filling machines are equipped with the MEC® weighing and evaluating electronics.

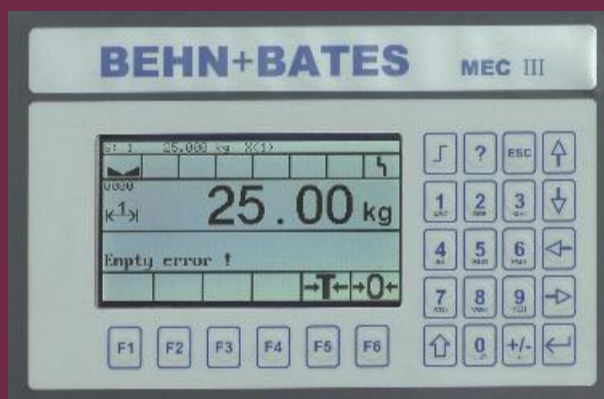
Special server and data processing systems are available for the evaluation of the complete filling process from the recording of weighing data up to the storage of complete product and batch data. All of these can be combined with the current software systems in use. The functions and adjustments of the machine are monitored by the 10.4" large infrared touch panel. The graphic-supported operator guidance helps your personnel easily see and correct any malfunctions.

Service around your filling machine: This is another component of the BEHN + BATES philosophy aiming at the successful commissioning of your packaging plant – and its successful operation over many years.

A team of well trained service technicians, who have extensive experience with our individual filling technologies in combination with different products and bags all over the world, is at your disposal to quickly put your installation into operation after delivery and offer regular maintenance to achieve continual reliability in operation.

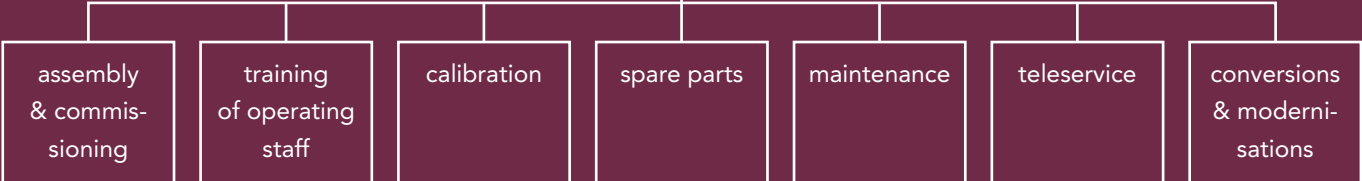
Should problems still occur, they are solved rapidly: Our large stock enables the quick delivery of spare parts. In addition, we can log into the control of the machines specially equipped for our teleservice to efficiently support you in fault analysis.

The MEC® weighing and evaluating electronics were developed within the HAVER & BOECKER company group specifically for bagging industries and they are easy to operate. The filling parameters can be retrieved quickly thanks to the 99 product sort storage, thus also assuring a smooth operation in case of product or bag changes.





BEHN + BATES
customer service



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