



## **OML BF SERIES**

Open-mouth bottom-up  
filling lines

## Open-mouth bagging systems with bottom-up filling technology



The **Chronos BTH OML BF SERIES** of open mouth bagging machines represent a new era in automatic high speed bagging for powders and granules. Designed specifically for the **food, chemical and pharmaceutical industries**, the **OML BF** features the patented Chronos BTH dust reduced, **Bottom-up Filling Technology**, which guarantees high accuracies during the filling process. At the start of the filling process an empty bag is automatically placed on the filling spout, The filling spout moves to the filling position then moves progressively down the bag during the filling cycle. This controlled process, which maintains a minimum distance between the filling point of the vertical screw and the product in the bag, significantly minimises dust emission and reduces product aeration. The vertical screw is frequency/servo control driven, allowing all powdery products to be filled hygienically, accurately and quickly.

The series features two variants: cost-effective design including bag transport with **open bag-top** transport (OML-1025 | 2050 BF) and bag transport with **closed bag-top** (OML 1030 | 2060 | 3090 BF and OML<sup>H</sup> BF).

### Applications

The state-of-the-art **OML BF** and **OML<sup>H</sup> BF SERIES** bagging systems, which are ideal for bagging both powders and granules, have been specifically designed for hygienic bagging and packaging applications in the Dairy, Bakery, Baby Food and other Food related industries. The system is also suitable for the Pharmaceutical and Chemical Industry.

Further features are quick and simple cleaning, fast change-over times and minimised dust emission. The **OML BF** is, depending upon variant, available in different bagging speed capacities ranging from **250** up to **900** bags per hour.

A key advantage of the **OML BF** range is its cost-effective, modular design, offering the capability of 1, 2 or 3 fill heads per line with corresponding bagging speeds of up to **250, 300, 500, 600** or **900** bags per hour. Depending on customers' current and future requirements, lines can be built with redundant fill head frames for simple cost effective future upgrading.

The bag spouts of the OML | OML<sup>H</sup> BF models are designed for a wide range of bag sizes. The systems feature an integrated touch control panel with on-screen graphic guidance for simple operation. All described systems are supplied with our gross weighing systems for precise filling results.





# OML-1025 | 2050 BF

Cost-effective bottom-up fillers with open bag-top transport



## OML-1025 BF SERIES

Single spout, up to 250 bags per hour

## OML-2050 BF SERIES

Double spout, up to 500 bags per hour

The **OML-1025 BF SERIES** and **OML-2050 BF SERIES** are compact, fully automatic packaging systems designed for bagging all types of powders and granules into open-mouth bags. The model line is a cost-effective bagging system and features **open bag-top transportation** of the filled bag.

The series combines effective bagging technology with an easy to clean configuration. Depending upon the system layout and the material being packed, the

**OML-1025 BF SERIES** can reach outputs of up to **250** bags per hour and the **OML-2050 BF SERIES** up to **500** bags per hour.

The optimised construction and compact design of this series allows for simple installation in restricted spaces. Chronos BTH offers customised system configurations based on your individual site requirements and specific operational needs.

## Features and benefits

- Compact robust design
- User-friendly touch control panel with integrated graphic user interface
- High accuracy
- Bottom-up filling via a frequency controlled vertical dosing screw for minimised dust emission
- Stainless steel, hygienically welded product contact parts

- Automatic height adjustment on out-feed conveyor
- Excellent machine accessibility, allowing cleaning and maintenance to be carried out quickly and effectively
- Robust and reliable field proven technology for high system availability

## Functionality

The bag magazine is designed as standard to hold two piles of empty bags. The number of bags depends on the bag type and size. The bag magazine can be easily adjusted to accommodate different bag dimensions. After the last bag in a pile has been removed, a photocell detects that the pile needs replenishing. Suction cups on the automatic bag placer pick up the individual bags from the bag magazine. Each bag is opened prior to the bag placer putting it on the spout. When the bag is positioned onto the spout, it is raised up and the filling process starts.

After the bag has been accurately filled, it is lowered onto the conveyor belt. At this stage, **the top of the bag remains open**. As soon as the transfer device has control of the bag, it is released by the spout. The

transfer device takes over the filled bag and transfers it into the closing line. The closing line is typically custom-made to suit the particular bag type and product. Several options can be supplied. For details please refer to the “Options” and “Bag closing variants” sections later in the brochure. We integrate the desired bag closing device fully into the entire system.

The operation of the machine is controlled via a Siemens touch control panel. The operator touch panel is integrated into the main control cabinet and is equipped with a user-friendly operator graphic interface for simple operation.

## Options

- Extra positions for empty bag piles
- Servo-controlled outlet opening of dosing screw
- Dust extraction directly above dosing screw outlet opening
- Product sampler
- Product de-aeration
- Removal of top air in the bags
- Bag-top stretching
- Cleaning of sealing area
- All common types of bag closing devices
- Bag turning
- Pushing off the closed bags (bag top or bottom first)

## Production rate

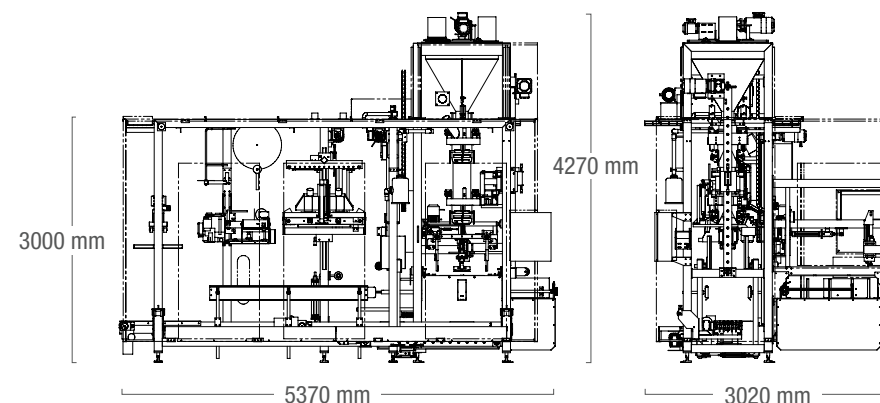
Up to **250 or 500 bags per hour\***

\* Depending on product characteristics, method of feeding, bag size, film thickness, etc.

## Technical data

<b>Bag types:</b>	Pillow bag, cross bottom bag, gusseted bag, block bottom bag, pinch top bag
<b>Bag material:</b>	Paper, paper with PE-inliner or PE-coating, PE, laminated PP
<b>Bag sizes:</b>	Width: 420-600 mm Length: 500-1000 mm (950 mm for block bottom)
<b>Weighing technology:</b>	Gross weighing
<b>Electrical requirements:</b>	3 AC / 400V / 50Hz
<b>Operating pressure:</b>	6 bar
<b>Ambient temperature:</b>	+5°C to +40°C
<b>Noise level:</b>	< 75 dB (A)

## Typical layout - OML-1025 BF



# OML-1030 | 2060 | 3090 BF

State-of-the-art bottom-up filling systems with closed bag-top transport



## OML-1030 BF SERIES

Single spout, up to 300 bags per hour

## OML-2060 BF SERIES

Double spout, up to 600 bags per hour

## OML-3090 BF SERIES

Triple spout, up to 900 bags per hour

The **OML-1030 BF**, **OML-2060 BF** and **OML-3090 BF SERIES** are compact, fully automatic packaging systems for bagging all types of powders and granules into open-mouth bags. The model line features a **controlled** and **closed bag-top transportation** of the filled bags. Depending upon the system layout and the material being packed, the OML-1030 BF can reach outputs up to **300** bags per hour, the **OML-2060 BF**, up

to **600** bags per hour and the **OML-3090 BF**, up to **900** bags per hour.

The optimised construction and compact design of this series allow for simple installation in restricted spaces. We offer customised system configurations, based on your individual site requirements and specific needs.

## Features and benefits

- Compact sturdy design
- User-friendly touch panel with integrated graphical user interface
- High accuracy
- Bottom-up filling via a frequency controlled vertical dosing screw for minimised dust emission
- Stainless steel, sanitary welded product contact parts
- Automatic height adjustment on conveyor
- Good machine accessibility allowing cleaning and maintenance to be carried out quickly and effectively
- Solid and reliable field-proven technology for a high system availability

## Functionality

The function of this series is similar to the OML-1025 | 2050 BF SERIES described on page 4. The difference remains in the bag transfer; filled bag is transferred with closed bag-top into the closing device.

## Options

- Inert gas packing
- Standard bag marking systems for empty or filled bags
- All common types of bag closing devices
- Remote control panel
- Extra positions for empty bag piles
- Servo-controlled outlet opening of dosing screw
- Dust extraction directly above dosing screw outlet opening
- Product sampler
- Product de-aeration
- Removal of top air in the bags
- Cleaning of sealing area
- Bag turning
- Pushing off the closed bags (bag top or bottom first)

## Production rate

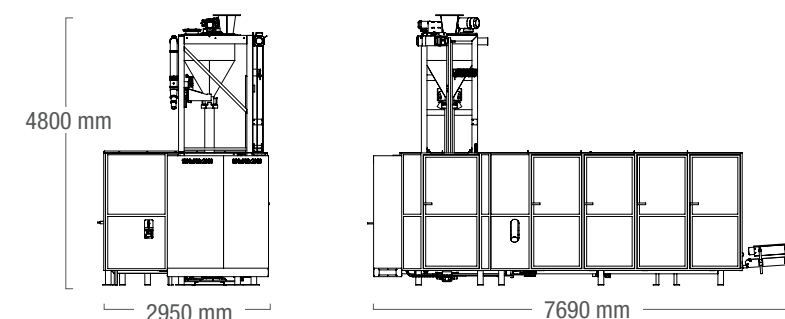
Up to **300, 600 or 900 bags per hour\***

\* Depending on product characteristics, method of feeding, bag size, film thickness, etc.

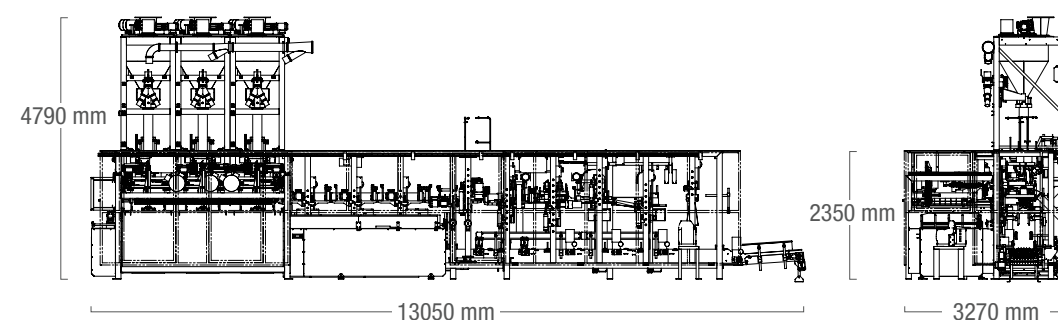
## Technical data

<b>Bag types:</b>	Pillow bag, cross bottom bag, gusseted bag, block bottom bag, pinch top bag
<b>Bag material:</b>	Paper, paper with PE-inliner or PE-coating, PE, laminated PP
<b>Bag sizes:</b>	Width: 420-600 mm Length: 500-1000 mm (950 mm for block bottom)
<b>Weighing technology:</b>	Gross weighing
<b>Electrical requirements:</b>	3 AC / 400V / 50Hz
<b>Operating pressure:</b>	6 bar
<b>Ambient temperature:</b>	+5°C to +40°C
<b>Noise level:</b>	< 75 dB (A)

## Typical layout - OML-1030 BF



## Typical layout - OML-3090 BF



# OML<sup>H</sup> BF Series

Bottom-up filling systems with hygiene in mind

## OML<sup>H</sup>-1030 BF SERIES

Single spout, up to 300 bags per hour

## OML<sup>H</sup>-2060 BF SERIES

Double spout, up to 600 bags per hour

The **OML<sup>H</sup>-1030 BF SERIES** and the **OML<sup>H</sup>-2060 BF SERIES** are compact, fully automatic packaging systems designed for the **hygienic bagging** of a diverse range of products into open-mouth bags. The system, which is ideal for both powders and granules, has been specifically developed for the food and related industries but also for bagging pharmaceuticals or chemicals. The new system concept has been designed in accordance with the EHEDG\* (European Hygienic Engineering & Design Group) guidelines. Chronos BTH is an EHEDG member and has established an in-house Hygiene Task Force to develop and implement machine design guidelines specifically for the Food Industry. The dust poor, patented bottom-up filling technology guarantees high accuracies during the filling process. The machine features **closed bag-top transport**, quick and simple cleaning, fast change-over times and **minimised dust emission**.

\* The EHEDG is a professional association with the objective of promoting hygienic conditions during the processing and packaging of foodstuffs. It recommends guidelines for hygienic machine design according to national and international legislation.

## Applications

The new bagging system, which is ideal for bagging both powders and granules, has been specifically designed for hygienic bagging and packaging operations in the Dairy, Bakery, Baby Food and other Food related industries. The system is also suitable for the Pharmaceutical and Chemical Industry.



Furthermore the bagging system is available in full stainless-steel versions and is an **ATEX compliant design**. Optional inert gas packing is also available. During bag transportation the bag-top remains closed and the control area is separated from the functional bagging zone. Depending upon the system layout and the material being packed, the system can be fitted with one or two filling positions and has the capability of reaching filling speeds of up to **600** bags per hour. All processing modules have been designed with hygiene in mind. To prevent product contamination the system features a protective screen and closed bag transportation. Clear access to the floor for good cleaning. Overall the **OML<sup>H</sup> BF SERIES** provides a modern, efficient system that is both functional and hygienic.

## Features and benefits

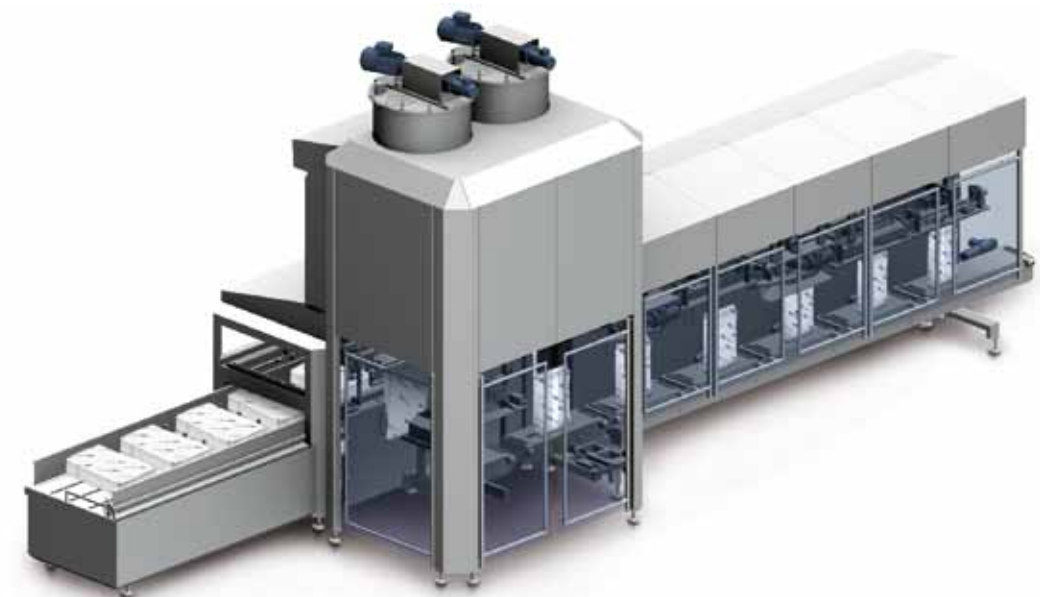
In addition to the previously mentioned highlights on page 6, the **OML<sup>H</sup> BF SERIES** features the following benefits under **hygienic aspects**:

- The bag-top remains closed during bag transportation
- There are no fasteners (e.g. bolts and nuts) in the critical product contact zones
- All product contact parts are hygienically welded
- The control area is separated from the functional bagging zone
- Individual machine processing modules are combined to form a compact integrated unit
- Zone layouts within the machine route cables to integral control centres at the rear of each module
- Ample machine access so that the cleaning can be carried out quickly and effectively

## Functionality

The **OML<sup>H</sup> BF hygienic bagging system** also uses the field-proven Chronos BTH bottom-up filling technology. The innovative machine design has a modular structure incorporating different function zones. The moving components of the machine including drives, cables and control components are separated, wherever possible, from the functional area where the bag is filled and sealed. This limits the possibility of product contamination and reduces potential dust traps. Depending on the product to be packed and the customer specifications, the different modules are combined to form a compact and integrated unit. Each processing module has an integral

power supply and controller with minimal cabling routed directly from the functional area to the rear of a module. Remote I/O technology is utilised to transmit control signals to and from the main control cabinet, thereby reducing the number of cables to an absolute minimum. Optional de-aeration probes remove air from the product in the bag, thereby reducing the volume and ensuring a stable bag. The de-aeration system consists of a vacuum pump and micro- perforated probes. The de-aeration and vibration times are adjustable via the menu. During bag transportation, the bag-top remains closed, eliminating the risk of product contamination after it is in the bag.





# OML<sup>H</sup> BF Series

Bottom-up filling systems with hygiene in mind

## Options

- Stainless steel design
- ATEX compliant design
- Inert gas packing

## Production rate

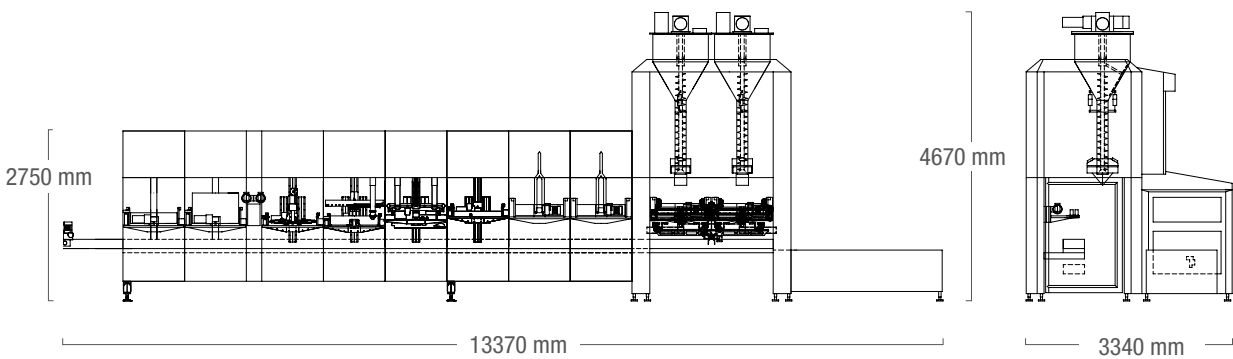
Up to **300, 600 or 900 bags per hour\***

\* Depending on product characteristics, method of feeding, bag size, film thickness, etc.

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Weighing technology:	Gross weighing
Electrical requirements:	3 AC / 400V / 50Hz
Operating pressure:	6 bar
Ambient temperature:	+5°C to +40°C
Noise level:	< 75 dB (A)

## Typical layout - OML<sup>H</sup>-2060 BF



# Bag closing variants

At Chronos BTH we fully integrate all required common bag closing devices including:

- Sewing
- Sewing with crepe tape
- Single fold-over with sewing
- Single fold-over with sewing and tape over
- Heat sealing
- Pinch top
- Double fold-over with gluing
- Double fold-over with tape over
- **NEW:** BlockTop™ closing (picture below)
- BakerMate closing
- Others upon request



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