

# 2in1 Series

Type PHS – Palletizer with Integrated Automatic Transverse Stretch Hooder







Palletizing with maximum precision



The image shows a close-up of industrial machinery. A large, thick stack of white, rectangular material, possibly paper or plastic sheets, is being processed. A blue electric motor with a circular grille is visible on the left side of the stack. In the foreground, there are various mechanical components, including a black control unit with many green and white cables connected to it. The background is slightly blurred, showing more of the industrial environment.

## Transverse Stretch Technology for Optimal Load Security



# Palletizing and Stretching: Innovation by Combination

**Palletizing Technology of the highest quality combined with extremely efficient Transverse Stretch Technology – the Concept of the 2in1Series.**

Within a minimum of space, MÖLLERS Group combines two well-proven (long-standing) and cutting-edge (high-end) technologies, creating a true innovation in the field of palletizing and load security.

Applying the know-how and experience of both technologies, MÖLLERS Group developed a two component machine that meets the highest demands: The floor-leveled Automatic Palletizer stacks packaged goods stably and securely to any desired pallet format. At the end of the palletizing process, the integrated Automatic Transverse Stretch Hooder secures the load with a minimum of film and high efficiency.

## **Future oriented Concept**

Palletizing and Load Securing in the same single spot with one single control system and low energy consumption, without requiring any further conveying technology – a concept with foresight.





03. Layer Palletizing | The layer is transported to the pallet and positioned on top



01. Low Bag Infeed | The low bag infeed allows to overview the work process



02. Gentle Bag Formation | Layers of packed goods are formed according to individual specifications

# The Road to a Secure Load – The Essential Steps

**Combining the best Features of two Worlds: With only a few completely automated steps, the PHS palletizes packaged goods and secures the load.**

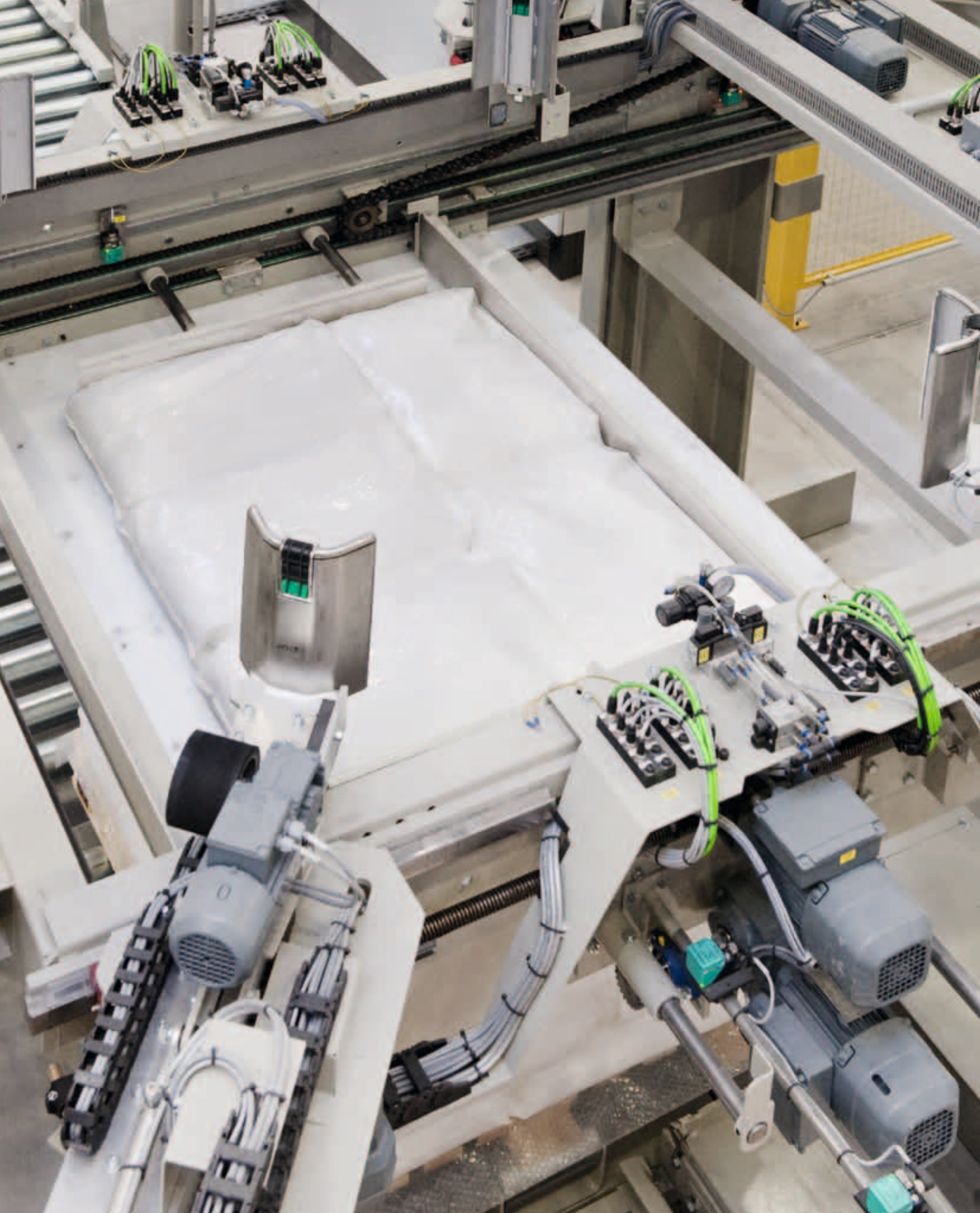
Packaged goods of all sorts are no problem for the PHS, the new generation of machines in palletizing and load securing technology. Bags, cans, cardboard containers or barrels – –

the PHS brings packaged goods into the correct position for the subsequent stacking on pallets of all sizes. It fully automatically forms customer specified packing patterns. By applying an even surface pressure the PHS gently levels the packaged goods. This ensures that layers are stacked in an even and stable matter. Layer formation and customized positioning of the packaged goods are





04. Layer Formation | The packaged goods are formed and positioned length- and crosswise



05. Minimum Drop-Height | The packaged goods are positioned, dropping from a minimal height.



06. Layer Pressing | The layer is levelled by surface pressure

crucial strengths of this this new system. Having the low infeed at eye-level, the whole process can be overviewed the whole time.

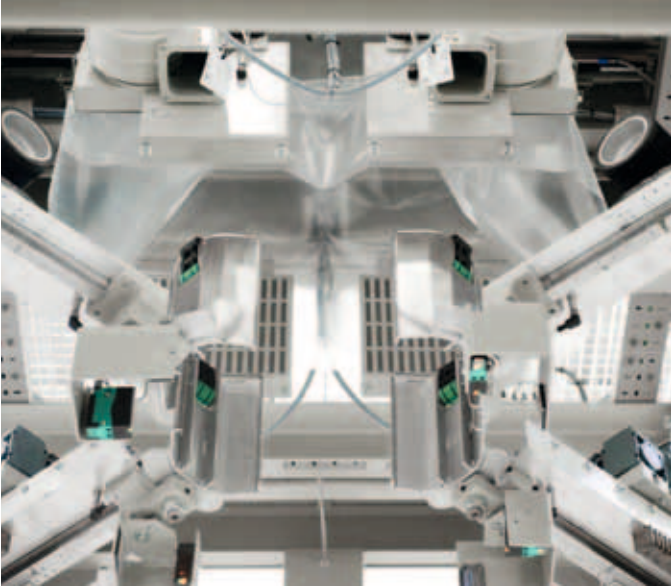
A further advantage: The pallet does not move during the stacking procedure. For the formation of a new stack the PHS takes every newly formed layer and positions it on top of the pallet. Laying down every layer from a very close

distance ensures even more security: every new layer is placed on the previous layer from a drop-height of only a few centimeters and then surface pressure is applied. Layer for layer, a stable stack is created. This is the ideal basis for the Transverse Stretch Hood Technology to secure the load.





07. Film Feed & Film Opening | Four sucking pads open the side folded tubular film



08. Simple Film Intake | Tightly interlocked stretch fingers pick up the film precisely without failure



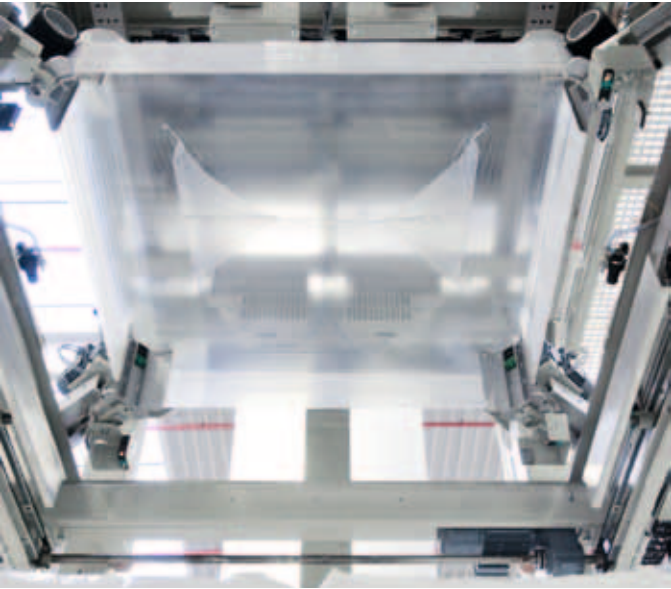
09. Hood Formation | Reefing of the size adjusted hood

**Securely Packed for Transport and Storage**

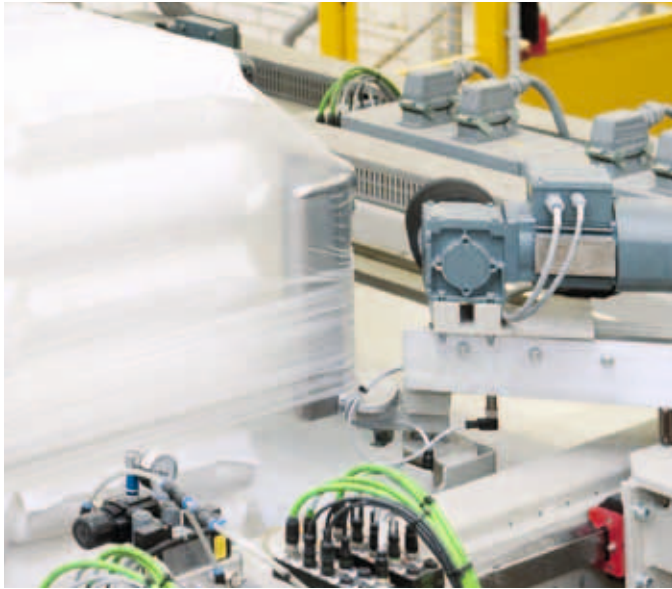
Now, the unique advantage of the PHS comes into action: Without further transport, the palletized, unsecured stack is encased with stretch film. The goods are positioned absolutely stable on the loaded pallet, while the stretch film secures them for transport and storage. The PHS is able to

operate with all commercially available film strengths from standard to ultra stretch. The side-gusseted tubular film is fed into the machine from above, spread apart by four suction pads in order for the stretching fingers to position themselves. The tight interlocking of these fingers is patented by the MÖLLERS Group and underlines the technological advance of the PHS. All film is taken in





10. Film Stretch | Stretching of film according to the pallet format



11. Film Wrapping | High reset forces for a secure load on the pallet

directly with maximum precision, without requiring any further mechanical system.

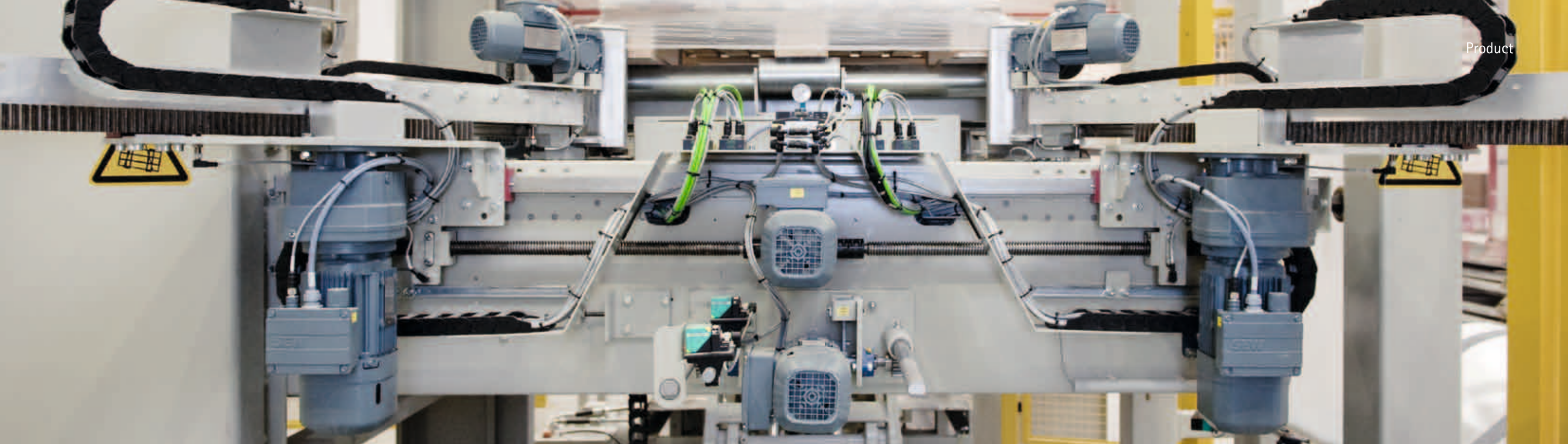
Pallets of all formats can be secured with transverse stretch film without having to change the tubular film. The PHS simply stretches the film to the format of the pallet and its load. Within seconds, the load is wrapped, and the

high reset forces ensure that the load is connected with the pallet in a most long-lasting and secure manner.

The machine of the 2in1Series provides two wrapping techniques: Upon request it either underwraps the pallet, or applies the high-rack-stretch by stretching the film over the pallet edges in order to simplify storage in high racks.







PHS | Cutting-edge technology – Extensive experience within mechanical engineering combined with high standard German quality manufacturing of all parts ensure the most advanced technological progress of the PHS.

## Full Flexibility within a minimum of space

**Fulfilling highest demands is no problem for the PHS. High flexibility is its greatest feature.**

The PHS offers high-end technology within a minimum of space without making any compromises. Flexible applicability comes first. It supports palletizing with and without supplementary flat film for protection against humidity as well as supplementary cardboard sheets to prevent damage to the packaged goods. The mere securing

of pallets without previous palletizing also belongs to the benefits of the PHS – for example to pack FIBC and oktabin or to re-secure damaged pallets.

Ready for the application of tubular film of all types, for stretching including the contour stretch: The well-proven stretch hood technology ensures an even distribution of pressure for the whole load. The high reset forces achieve a maximum support for the packaged goods and a maximum

connection with the pallet. The high transparency of the film enables a quick and easy controlling of pallet contents at transport and storage.

Comfortable operation is a further benefit. One main control panel is the key to a simple handling of the system. On the panel, all operational processes, from filling to finishing and securing pallets can be controlled, supervised and, if necessary, interrupted. The connection

to just one central communication processing unit reduces interfaces. It allows a direct networking with higher systems for an optimized production control. Future-oriented technology – also for the operating staff.



2in1Series: Type PHS

- 01 | Infeed for Empty Pallets
- 02 | Flat Film Support
- 03 | Low Infeed of the Packaged Goods
- 04 | Customized Palletizing
- 05 | Load Securing in the same place
- 06 | Pallets ready for Transport
- 07 | Easy Operation using Main Control Panel
- 08 | Separate Securing including Contour Control and Pallet Alignment  
(Various load carriers possible: Oktabin, FIBC, etc.)

# Maximum Technological Performance and Sustainability

**Solutions for the long-term application: The PHS sets sustainability standards in planning and construction.**

An innovation only effects progress if it is aimed at long-term use. While planning and constructing the PHS, the expert engineers of the MÖLLERS Group also put an emphasis on the economical and ecological sustainability. The Transverse Stretch Technology stands out through its low consumption of film and most efficient use of space. Combining these two technologies also increases the energy efficiency All together, this leads to ecological benefits and sustainable production processes. The PHS is up to new market demands, such as Palletless Packaging. Two additional modules allow for the implementation of this trend in packaging technology. Adding the cover sheet applicator and the turning device make the PHS a pioneering and economically sustainable investment. The short installation period and quick start-up speak for themselves: The PHS becomes an important element in the manufacturing of modern industrial enterprises – quickly ready for safe use.



Operation

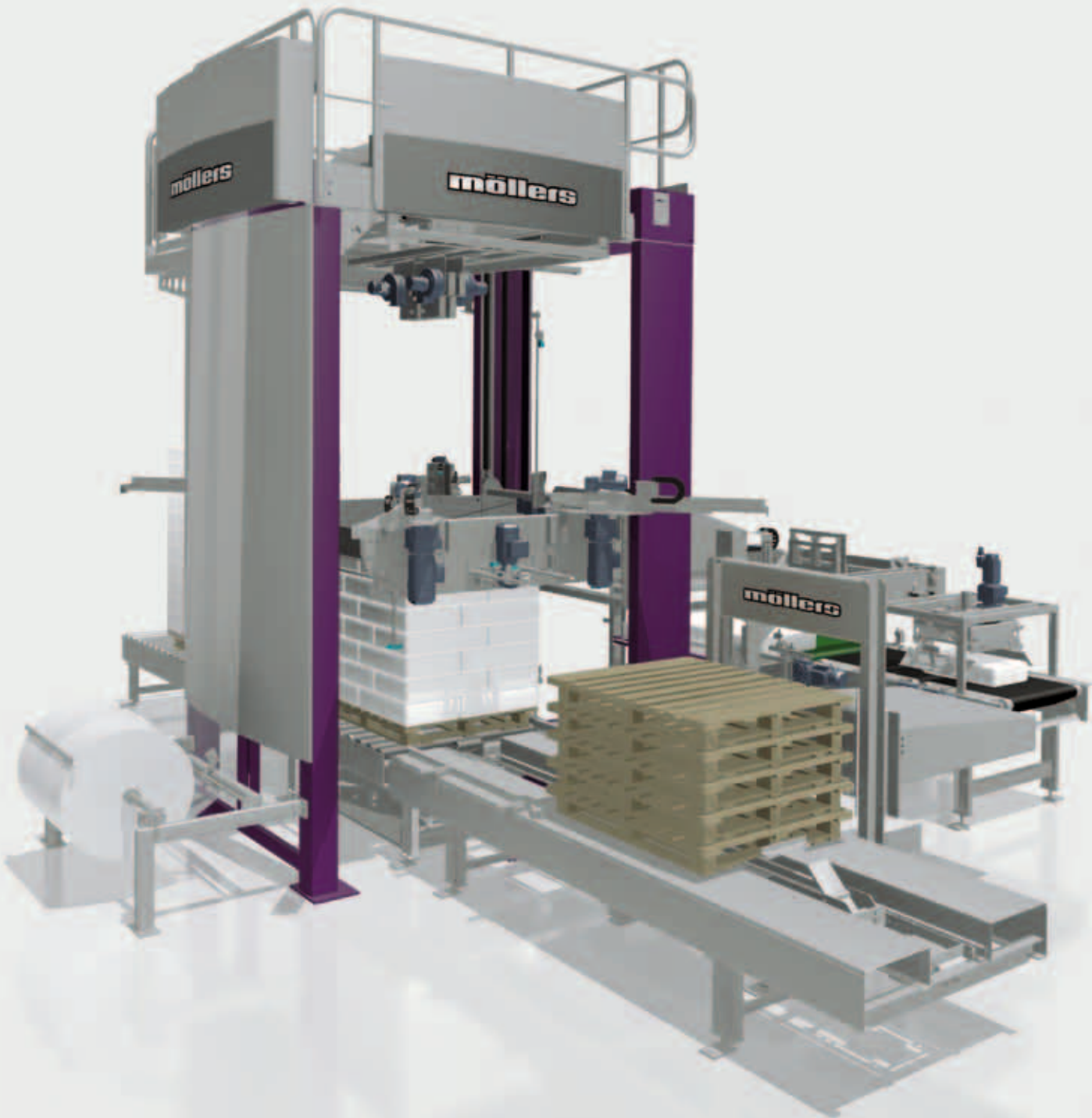


## Outstanding Qualities for Every Purpose

As a leading engineering enterprise, innovation is a trademark of the MÖLLERS Group. Choose the combination of two high-end technologies and give your goods a head start in Palletizing and Load Securing processes:

- Palletizing and Load Securing in the same place
- The whole process within a minimum of space
- The whole production process is easily assessable from beginning to end
- High flexibility for packaged goods, pallets and film types
- Optimum operating sequence for low energy consumption
- High efficiency
- Easy operation with one single control panel
- Short installation periods and a quick start-up





2in1Series: Type PHS | At one glance: The PHS offers maximum performance in a minimum format, making it an indispensable manufacturing system

# Patent Number:

DE 10 2009 024 002.0

# PHS – Type:

PHS 400	up to 400 bags/h
PHS 800	up to 800 bags/h
PHS 1200	up to 1.200 bags/h

# Technical Data:

Load width	max. 1.200 mm
Load length	max. 1.400 mm
Load height	800 – 2.600 mm
Film strength	as per customer request
Film type	PE side-gusseted tubular film



# 2in1 Serie

## MÖLLERS Group – Competence by Experience

Handling, Filling, Palletizing, Wrapping, Loading and Storing – our machines, equipment and systems set benchmarks for the manufacturing industry. For decades the MÖLLERS Group, with the combined strength of several factories on different sites throughout the world, has stood for competence and innovation in machine engineering.

With us, the customer takes centre stage: More than 600 highly qualified staff members advise and design, manufacture and install, maintain and improve for highest quality- and comprehensive service.

A global network of representatives and partners supports customers locally.

MÖLLERS Group stands for high-performance machine design and customer-oriented solutions. A multitude of patents, high innovation and a world leading position make us a crucial partner for the production processes of our clients.

Experience Technology in Top Form. Visit us.



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