

2in1 Series

Type PHS – Palletizer with Integrated Automatic Transverse Stretch Hooder

MÖLLERS PACKAGING TECHNOLOGY GmbH





Palletizing with Maximum Precision

A large industrial pallet wrapped in white stretch hood material. A blue motor is attached to the side of the pallet. In the foreground, there is a complex arrangement of cables and connectors, including green and blue cables, and a blue electrical box. The background shows a factory or warehouse setting with various equipment and structures.

**Transverse Stretch Hood Technology
for Optimal Load Security**

Palletizing & Stretching: Innovation by Combination

Palletizing Technology of highest quality combined with our extremely efficient Transverse Stretch Hood Technology – the concept of the 2 in 1 Series.

Using a minimum of space, Möllers combines two well-established and 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 has developed a two-component system that meets the highest demands: The floor-leveled automatic palletizer stacks packaged goods stably and securely onto any desired pallet format. Finalizing the palletizing process, the integrated Automatic Transverse Stretch Hooder efficiently secures the stacked loads applying only a minimum of film.

Future-oriented Concept

Palletizing and load securing in the same single spot requiring just one single control system while profiting from low energy consumption, without requiring any further conveying technology – a concept with foresight.



Function



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



02. Gentle Bag Formation | Layers of packed goods are gently positioned according to the individually specified layer pattern.

The Road to Secure Loads – The Essential Steps

Combining the best features of two worlds: It simply requires very few completely automated steps and the PHS palletizes packaged goods and secures the load – ready for dispatch.

Packaged goods of all sorts are no problem for the PHS: the new generation of machines in the field of palletizing- and

load securing technology. Bags, cans, boxes or barrels – the PHS brings packaged goods into the most efficient position for the subsequent stacking on pallets of all sizes. The PHS fully automatically forms customer-specified packing patterns. By applying an even surface pressure the PHS gently levels the packaged goods. This ensures that the layers are stacked in an even and stable matter.

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



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.

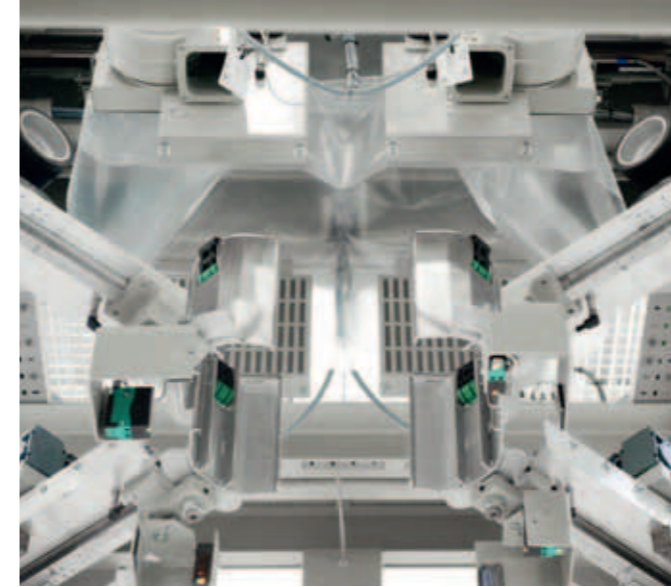


06. Layer Pressing | The layer is leveled by surface pressure.

Layer formation and customized positioning of the packaged goods are crucial strengths of this new system. Having the low infeed at eye-level, the complete work 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, then an evenly distributed surface pressure is applied. Layer for layer, a stable stack is formed, creating the ideal basis for the Transverse Stretch Hood Technology to then secure the load.

07. Film Feed & Film Opening | Four suction pads open the side-gusseted tubular film.



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



09. Hood Formation | Reeving of the size-adjusted hood.

Securely Packed for Transport and Storage

Now, one of the most unique advantages of the PHS comes into action: Without further transport, the palletized, unsecured stack is encased with stretch film. The goods are positioned absolutely stably onto the loaded pallet, while the stretch film secures them for further transport, handling

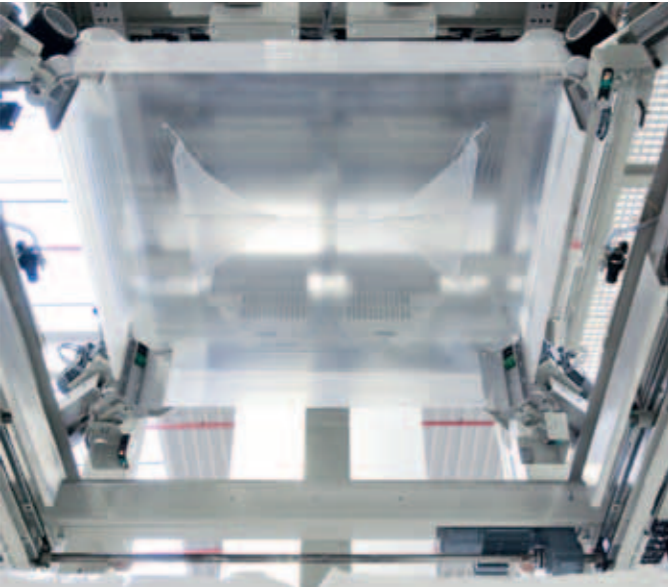
and storage. The PHS is able to operate with all commercially available film strengths from standard to ultra stretch. The side-gusseted tubular film is fed into the machine from above, spread apart by four suction pads in order for the stretching fingers to position themselves. The tight interlocking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

Function

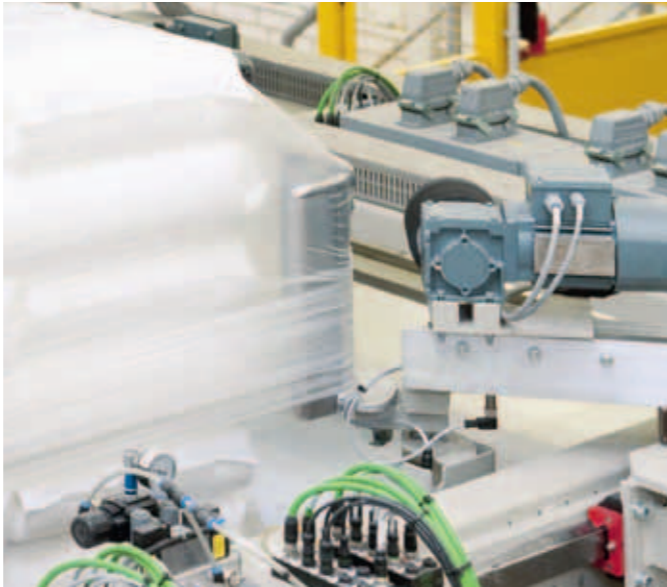
maximum precision, without requiring any further mechanical systems. Pallets of all formats can be secured with stretch film without having to change the tubular film. The PHS simply stretches the film to the format of the pallet and its load. Within seconds, the load is wrapped, and the high reset forces ensure that the load is connected with the pallet in a most long-lasting and secure manner.

12. Film Finish | Underwrap or high-bay-rack-stretch.

The machine of the 2 in 1 Series provides two wrapping techniques: Upon request it either underwraps the pallet, or applies the high-bay-rack-stretch by stretching the film over the upper pallet edges in order to simplify storage in high-bay-racks.

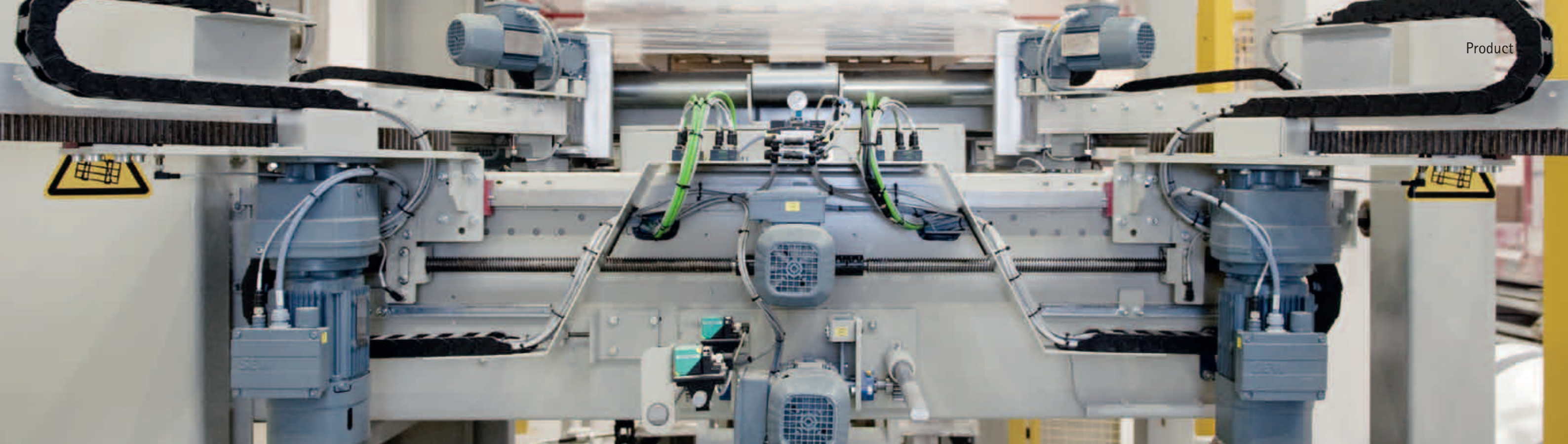


10. Film Stretch | Stretching of film according to the required pallet format.



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





PHS | High-end technology – Extensive experience in the field of 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 FIBCs and octabins or to re-secure damaged goods.

Ready for the application of tubular film of all types, for stretching including the contour stretch: The well-established Transverse Stretch Hood Technology

ensures an even distribution of pressure for the whole load. The high reset forces achieve maximum support for the packaged goods and a maximum connection with the pallet. The high transparency of the film enables quick and easy controlling of pallet contents in transit and in storage.

Comfortable operation is a further benefit. One single control panel is the key to a simple handling of the

system. On the panel, all operational processes, from the bag infeed up to the readily secured pallet can be controlled, supervised and, if necessary, interrupted. The connection to just one central communication processing unit reduces interfaces. It allows direct networking with higher systems for an optimized control of the process of production.

Future-oriented technology – also for the operating staff.

Operation

2 in 1 Series: Type PHS

- 01 | Infeed for empty pallets
- 02 | Flat film application
- 03 | Low infeed of the packaged goods
- 04 | Customized palletizing
- 05 | Load securing in the same location
- 06 | Pallets ready for transport
- 07 | Easy operation of control panel
- 08 | Separate securing including contour control and pallet alignment
(Various load carriers possible: Octabin, FIBC, etc.)

Maximum Technological Performance and Sustainability

Solutions for the long-term application:
The planning and construction of the PHS set new standards regarding sustainability.

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 also put an emphasis on economical and ecological sustainability. The Transverse Stretch Hood Technology stands out with its low film consumption 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.

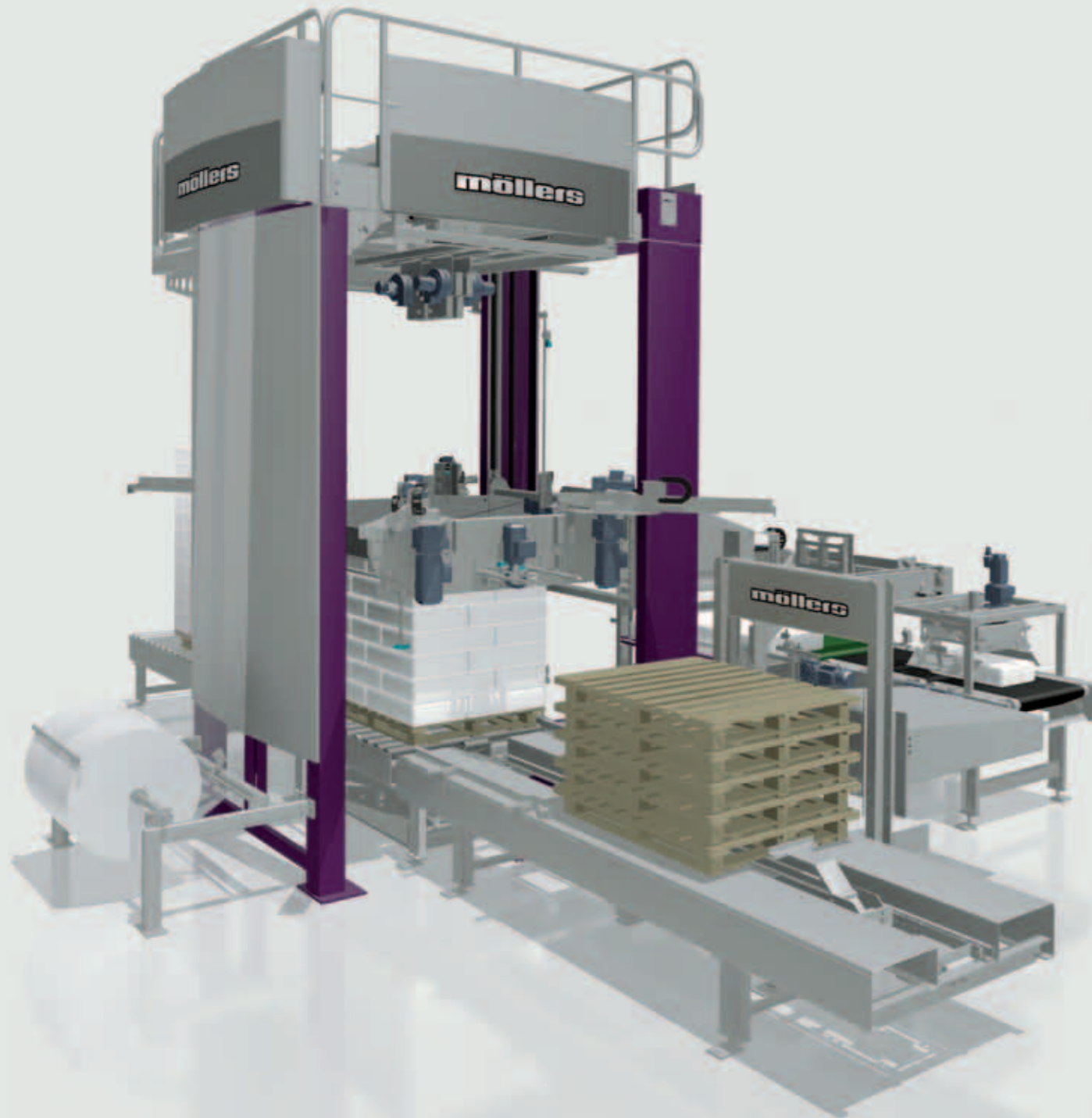
The short installation period and quick start-up speak for themselves: The PHS becomes an important element in the manufacturing of modern industrial enterprises – quickly ready for safe use.



Outstanding Qualities for Every Purpose

As a leading engineering enterprise, innovation is a signature feature of the Möllers. Choose the combination of two high-end technologies and give your goods a headstart in palletizing and load securing processes:

- Palletizing and load securing in the same location
- The whole process within a minimum of space
- The complete production process is easily accessible from start to finish
- High flexibility in processing packaged goods, pallets and film types
- Optimal operating sequence for low energy consumption
- High efficiency
- Easy operation with one single control panel
- Short installation periods and a quick start-up



2 in 1 Series: Type PHS | At one glance: The PHS offers maximum performance in a minimum format, making it an indispensable manufacturing system.

Patent:

EP 2258618

2 in 1

PHS – Type:

PHS 400 up to 400 bags/h

PHS 800 up to 800 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 Series

Type PHS – Palletizer with Integrated Automatic Transverse Stretch Hooder

möllers
PACKAGING TECHNOLOGY GMBH

Headquarters

Möllers Packaging Technology
Sudhoferweg 93 · 59269 Beckum · Germany
Fon: +49 (0) 2521 88 - 0
Fax: +49 (0) 2521 88 - 100
info@moellers.com · www.moellers.com

möllers
PACKAGING TECHNOLOGY GMBH

Machines | Plants | Systems

Sudhoferweg 93 · 59269 Beckum · Germany
Fon: +49 (0) 2521 88 - 0
Fax: +49 (0) 2521 88 - 100
info@moellers.com · www.moellers.com

Subsidiaries

Moellers Singapore Pte. Ltd.
#10-09, Golden Mile Tower, 6001 Beach Road
Singapore 199 589
Fon: +65 6298 9860 / +65 9817 6880
Fax: +65 6298 9289
moellers@singnet.com.sg