

MASCHINENFABRIK MÖLLERS

HSA-Vario

Automatic Transverse Stretch Hooder

möllers
MACHINES • PLANTS • SYSTEMS

möllers
NORTH AMERICA

GREIF-VELOX
packaging solutions

Logobos
liquid filling

LIBRAWERK
Maschinenfabrik GmbH

NATRONAG



**Best Quality in
Stretch Hood Technology**



Stretch Technology for Greatest Demands

Securing pallets with stretch film technology is proven – and experiences a new degree of precision with the Möllers Group. Over 40 years' experience in load securing technology creates the decisive leap forward in technology, quality and performance for Möllers machinery.

The Automatic Transverse Stretch Hooder (HSA-Vario) supports the use of standard to ultra-stretch films. It sets benchmarks in universal usability: Products in paper and plastic bags, FIBCs, cans, barrels, trays as well as cardboard and box packaging are packed securely employing a third less in film volume.

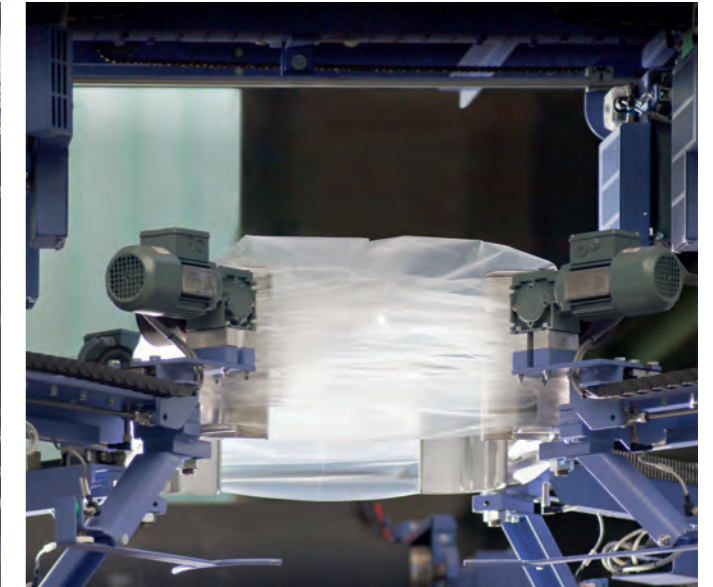
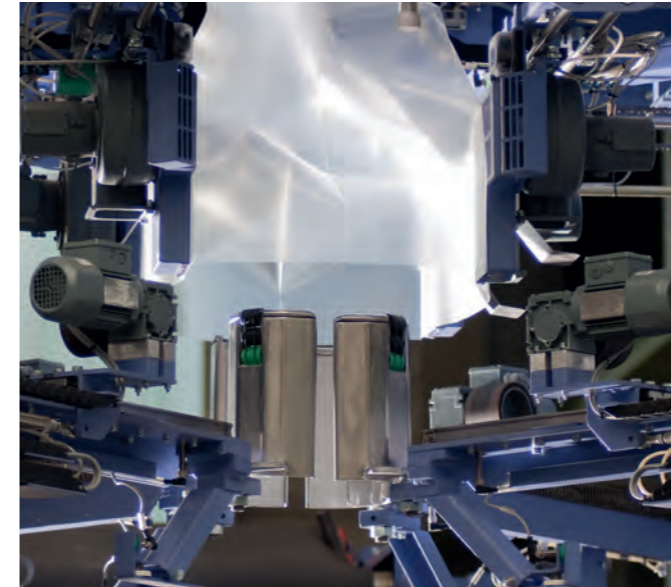
The decisive link between high quality machinery engineering and professional controlling technology speaks for employing a machine or a complete line from Möllers.

Economic efficiency is our aspiration: With a throughput of up to 250 pallets per hour and up to 30 per cent less film consumption whilst maintaining load security, the HSA plays in the first league.

Important advantages for an efficient production chain.



01. Film Feed & Film Opening | Standard, High-Expander or Ultra-Stretch film: The HSA-Vario is a real multi-talent when it comes to securing products of all types for transport.



02. Simple Film Intake | Always the right amount yet saving up to 30 per cent: Tightly interlocked stretch fingers pick up the film safely and reliably.

03. Hood Formation | In one process step the tubular film is reefed, welded and separated from the tube in a suitable length: a hood is thus formed.

Transverse Stretch Hood – the Decisive Steps

Economic efficiency, speed and precision: The advantages are at your fingertips and are the result of six decisive steps of Stretch Hood Technology.

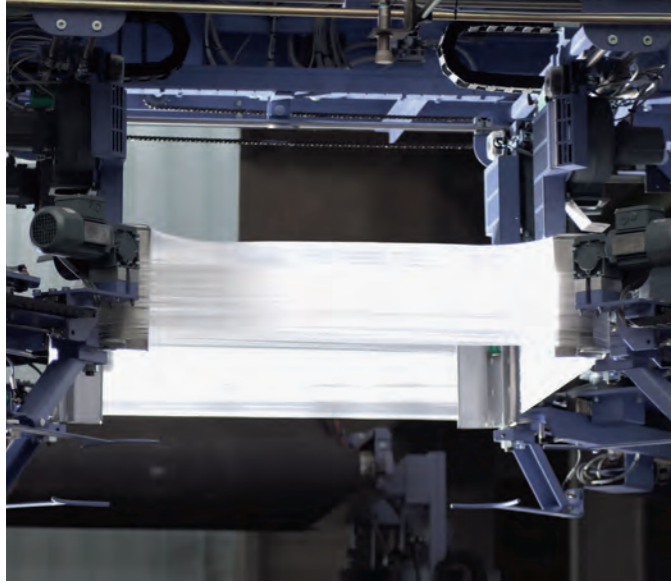
When using stretch hood technology, films of all types and quality come into play. Through the multitude of uses the HSA-Vario creates important options which make it universally useable. In doing so, Möllers Stretch Hood Technology offers significant advantages for a tight bond

between packed load and pallet.

The hood for pallet security is formed from an endless side-gusseted tubular film. The exact length is notified via an automatic height sensor. An impulse weld with even pressure welds the film. After separation from the tube the hood is formed. Suction pads open the side-gusseted tubular film in the head of the machine. The stretch fingers enter the opened hood. The nesting of the stretch fingers permits

Function

06. Film Finish | A clean film completion under the load ensures a perfect bond, optionally by pallet underwrap or high-bay-rack-stretch.



04. Film Stretch | With strength to the desired width: Stretching the film, fitted to the pallet format.



05. Film Fitting | Good bonding all round in just seconds: Reset forces for secure load connection with the pallet.

take-up of smallest dimensioned films. Pallets of various formats are thus packed securely and economically. An additional diagonal adjustment of the stretch arms allows individual, automatic fitting to different pallet loads. Without losing any time the machine draws the film over the goods and pallet to the desired completion in just a few seconds. Even tension distribution over the entire surface and greatest possible distribution of the film reset forces make Möllers one of the worldwide leaders in this area.

The Transverse Stretch Hood Technology developed by the Möllers Group provides two options for film completion: Pallets can be understretched for particularly secure load robustness or be prepared for high-bay-rack storage. The result is a sight worth seeing: Perfectly secured pallet loads with an appropriate appearance for the transport of your goods.

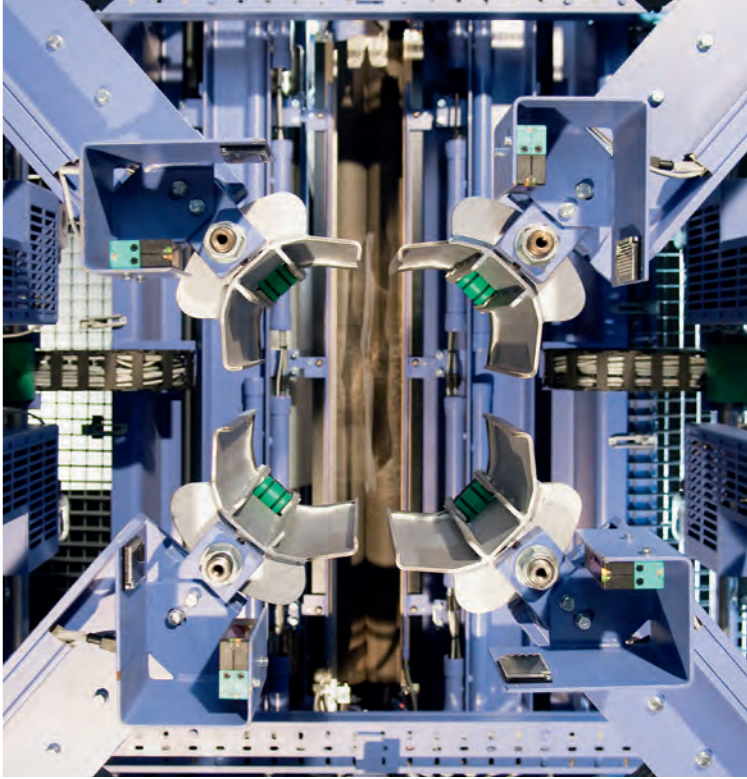




Product

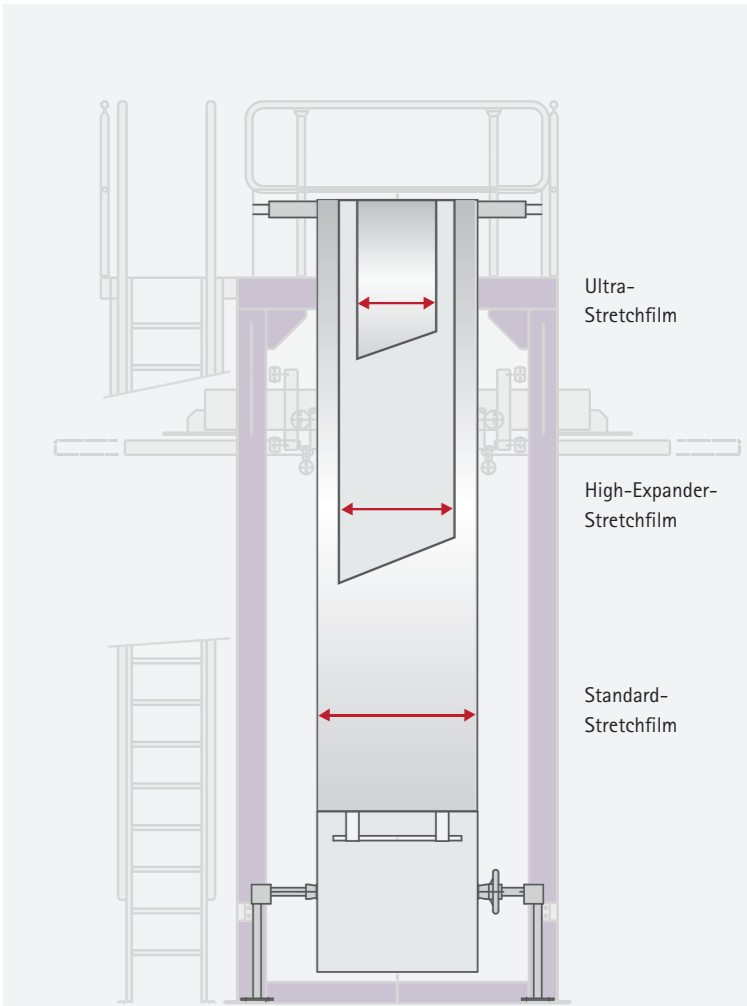
Stretch to Measure | Most varied packed goods from all sectors are packed and secured on pallets – fully automatically, without losing any time and with lowest film consumption.

Applied Technology | The diagonal adjustment of the stretch arms and the tight interlocking of the stretch fingers bring the decisive advantage on take-up and stretching of the film.



the pallet. Subsequently, the hood is stretched to the fitting width. Utilizing the optimal operating line prevents overstretching and allows even tension distribution over the entire pallet load. A contour stretch process developed by the Möllers Group also fits the film to the contours of the load.

The result is a sight worth seeing as the Transverse Stretch Hood Technology visually demonstrates further advantages: smooth side surfaces and transparent films allow a good view of the packed goods – for example to check the load. HSA-Vario can use films with greatest extensibility and also achieves the desired robustness with even thin films.



Highly Developed Technology for Excellent Results

The Möllers Group sets high standards in the performance of its machines: best possible availability and reliability form part of the company's quality guarantee. The HSA-Vario orients itself to these values without compromise.

The Transverse Stretch Hood Technology uses the high reset forces strength of the film in order to bond the pallet and load tightly together. In order to use this optimally it

requires a machine which exactly fits the film to pallet size and loading format.

Films of all types are used with the HSA-Vario. It protects these equally from overstretching. The diagonal adjustment of the stretch arms is a quality characteristic which differentiates the HSA-Vario from other machines: The stretch arms adjust to the size and lateral configuration of

Film Quality | Films of all types are used. The advanced technology of the machine ensures their reset forces are optimally used.



Function



HSA-Vario | In combination with other plants and modules from the Möllers Group the HSA-Vario takes over many further tasks and integrates itself entirely in the production process.

Flexible Use for Goods of all Sectors

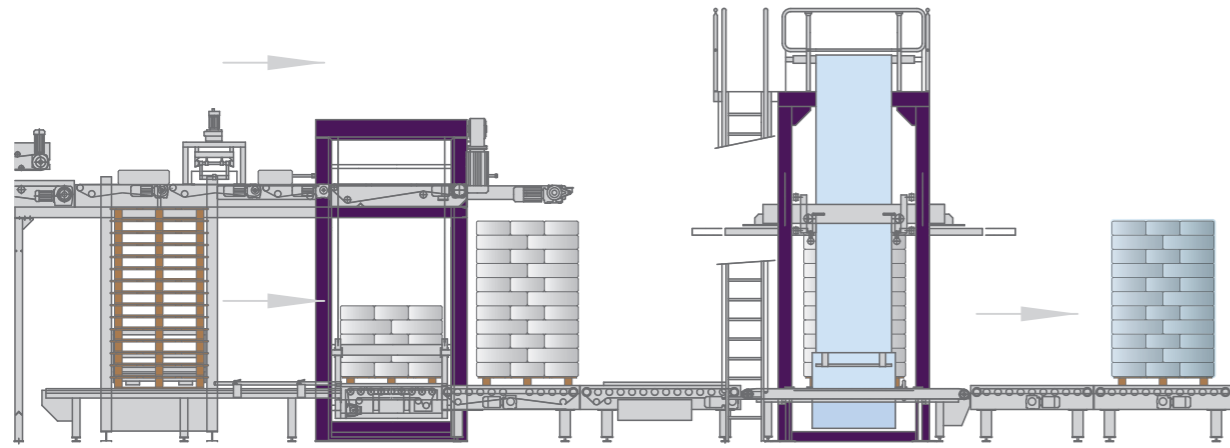
The HSA-Vario uses all advantages of Transverse Stretch Hood Technology – equally so its flexible versatility. Irrespective of whether paper or plastic bags, FIBCs, cans, barrels, trays, cardboard- and box packaging, the load is protected from five sides against external elements – irrespective of whether against inclement weather or theft. High flexibility when securing packed goods is also proven

by the HSA-Vario in all industrial sectors. Goods in the chemical and petrochemical industry are packed with stretch film, as are containers in the food- and drinks industry and products in the white goods sector or building materials. The variant HSA-Vario M is especially designed for the packaging of loads with special formats and a length of up to 3 meters. The focused further development of the stretch films

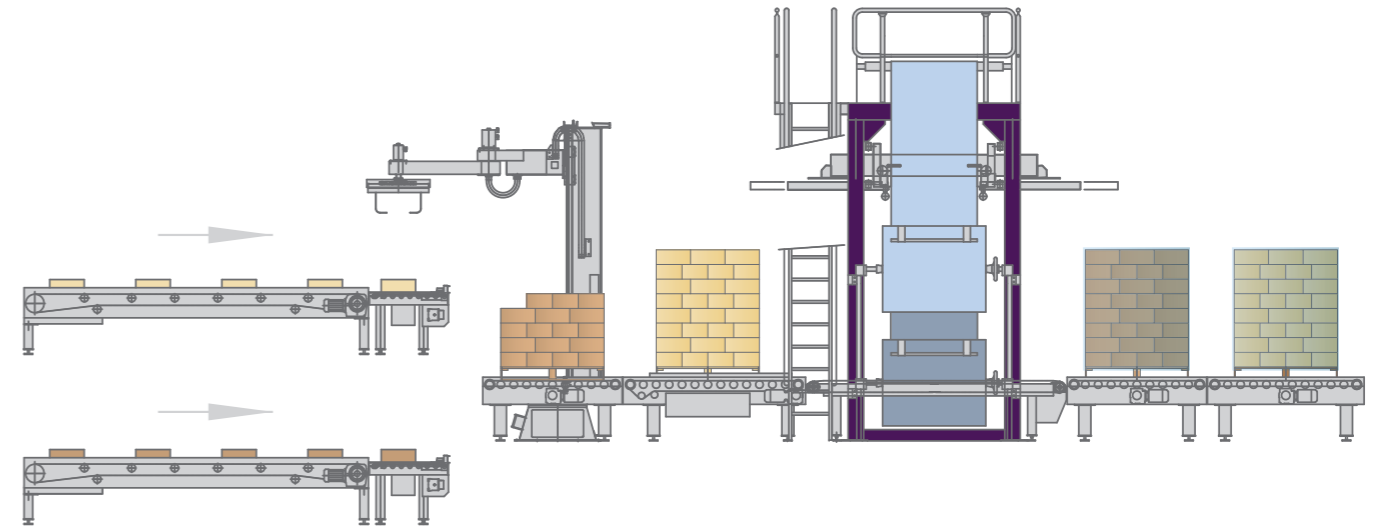
Flexible for all goods | Products in paper and plastic bags, FIBCs, cans, barrels, trays as well as cardboard- and box packaging are packed securely using a third less film.

employed and the use of innovative materials expand the possibilities for stretch hood technology. In the limelight the goal is always: Creating optimal load security for various types of goods. The established technology gives room for further innovations: the successfully proven process for palletless packages developed by Möllers Group. Loads of up to 2.45 tonnes can also be prepared for transport without

pallet. For limited space the 2 in 1 Series offers suitable application. The new line of machines combines the low-level modular palletizer with an integrated automatic transverse stretch hooder. The combination of two core technologies in one machine without additional conveying technology is pioneering.



Palletizer with HSA-Vario | The HSA-Vario adapts to the demands of the individual production process. For example in combination with a palletizer.



HSA-Vario D for two film types | A further variant of the HSA-Vario has devices at its disposal to utilize two different film types. It is suitable for films of various formats or with different options for layout or design.

Sustainable Success Right Down the Line

HSA-Vario fulfils all load security tasks with precision. Combined with further modules and machines from the Möllers Group it becomes an all-round talent for the production steps from filling to load security. For example, in conjunction with fully-automatic bagging machines and palletizers as well as in combination with a cardboard sheet applicator, a stack press or the external feed of containers further important tasks are mastered. The

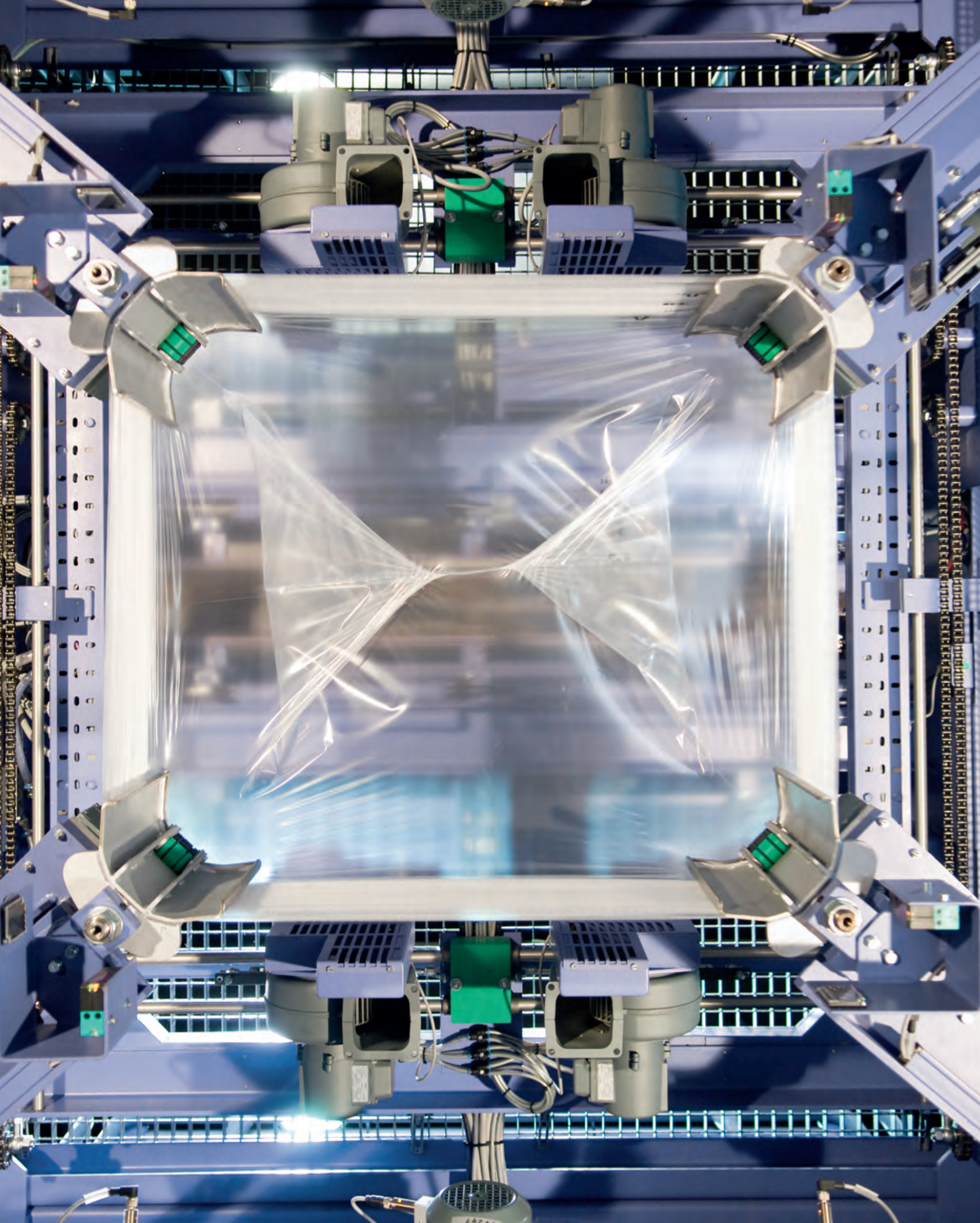
variant HSA-Vario D provides two film formats of tubular films with different options for layout or design. This way, goods of various types can be packed with automatic film change. The in-house developed controlling technology Producat® stands for reliability and transparency of the moving process. The software summarizes all HSA-Vario procedures or complete lines of filling and packing plants at a central

terminal. It gives an overview of all process steps in order processing, plant diagnosis and program maintenance to system updates. Equally, Producat® can be connected with superior systems, such as a host-computer, as well as internal networks and the internet.

When designing and building the HSA-Vario the experts at Möllers Group focused on economical and ecological

sustainability. The Transverse Stretch Hood Technology proves itself through lowest film consumption whilst maximizing surface utilization.

The short installation periods and a rapid commissioning speak for themselves: The HSA-Vario is becoming an important element in the production of modern industrial companies - quick and secure in use.



Outstanding Characteristics for Load Security

The HSA-Vario machines stand for highest quality in machine engineering. Their strengths are played out with packed goods of all types. The high quality workmanship, excellent performance figures and optimal reliability make it the leading machine in packing of palletized goods. Decide on technological advancement in load security:

- Optimal utilization of reset forces for load security
- High flexibility for packed goods, palletizing and film types
- Up to 30 per cent less film consumption
- High energy efficiency
- Working in operating line protects against overstretching
- Transparent film for best overview of the load
- Short installation periods and rapid commissioning

Patents:

DE 197 32 298	Additional Stretch Element
EP 1 013 549	High-Expander-Stretch
EP 1 275 582	Variostretch
EP 1 275 581	Decreased Corner Transverse Stretch
EP 2 036 818	Contour Hood Stretch I
EP 20 2009 008 434.5	Contour Hood Stretch II
DE 10 2009 024 002.0	2 in 1

HSA – Type:

HSA-Vario 1	up to 50 pallets/h
HSA-Vario 2	up to 120 pallets/h
HSA-Vario S	up to 250 pallets/h
HSA-Vario D	up to 100 pallets/h
HSA-Vario M	project specified

Technical Data:

	HSA-Vario 1/2/S/D	HSA-Vario M
Load width	max. 1.200/1.400 mm	max. 1.400 mm
Load length	max. 1.400/1.800 mm	max. 3.000 mm
Load height	800 mm - 2.800 mm	800 mm - 2.800 mm
Film density	as per customer request	as per customer request
Film type	PE-side-gusseted tubular film	PE-side-gusseted tubular film



HSA-Vario at a glance | Technical precision and best performance figures characterize the HSA-Vario and make the machine one of the leading in packaging technology.

HSA-Vario

Möllers Group – Competence by Experience

Conveying, filling, palletizing, wrapping, loading and warehousing – our machines, equipment and systems set benchmarks for the manufacturing industry. For decades the Möllers Group, with the combined strength of several manufacturing plants on different sites all around the world, has stood for competence and innovation in machine engineering.

With us, the customer takes center 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 at its best. Come and visit us.



Headquarters:

Maschinenfabrik Möllers GmbH

P. O. Box 17 64 · 59247 Beckum / Germany
Sudhoferweg 93 - 97 · 59269 Beckum / Germany
Telephone: +49 (0) 2521 88 - 0 · Telefax: +49 (0) 2521 88 - 100
info@moellersgroup.com · www.moellersgroup.com

Manufacturing plants of the Möllers Group:

Mollers North America, Inc.

5215 52nd Street, SE · Grand Rapids, MI 49512
Telephone: +1 (616) 9 42 - 65 04 · Telefax: +1 (616) 9 42 - 88 25
mollersna@mollersna.com · www.mollersna.com

GREIF-VELOX Maschinenfabrik GmbH / Logdos

P. O. Box 12 11 51 · 23532 Lübeck / Germany
Kronsforder Landstraße 177 · 23560 Lübeck / Germany
Telephone: +49 (0) 451 53 03 - 0 · Telefax: +49 (0) 451 53 03 - 233
webmaster@greif-velox.de · www.greif-velox.de
logdos@logdos.de · www.logdos.de

Librawerk Maschinenfabrik GmbH

Vossenkamp 1 · 38104 Braunschweig / Germany
Telephone: +49 (0) 53 13 70 98 - 0 · Telefax: +49 (0) 53 13 70 98 - 88
info@librawerk.de · www.librawerk.de

Subsidiaries of the Möllers Group:

Russia · 000 "Möllers Intertec"

ul. Giljarowskogo, d.39, office 301-304 · Moskau 129110
Telephone: +7 (0) 495 780 97 50 · Telefax: +7 (0) 495 780 97 50
moellers-intertec@umail.ru

Singapore · Maschinenfabrik Moellers GmbH

Singapore Representative Office
#10-09, Golden Mile Tower · 6001 Beach Road · Singapore 199 589
Telephone: +65 6298 9860 · Telephone: +65 9817 6880
Telefax: +65 6298 9289
moellers@singnet.com.sg

Great Britain · Möllers (U.K.) Ltd.

Maxron House · Green Lane, Romiley Stockport · Cheshire SK6 3JQ
Telephone: +44 (0) 161 406 98 24 · Telefax: +44 (0) 161 494 59 82
info@moellers.co.uk

Czech Republic · Möllers Group Praha

Nad Rokoskou 14 · 182 00 Praha 8
Telephone: +420 28468 24 62 · Telefax: +420 28468 04 99
Mobile: +420 60235 57 77
info@jbartos.cz

Möllers Group 2011

design & concept: (freiluft design) | photo: (fotodok.) | text: (Journalistenbüro Köln)