

100% sealed packaging of nonwoven rolls

- while reducing film and energy consumption

*Tentoma is ancient Greek for stretching!
We stretch PE-film packaging material
to enable film savings and better packaging quality...
and we stretch ourselves for our customer.*



Here with you...



Dominik Görtz
Tentoma Sales Germany

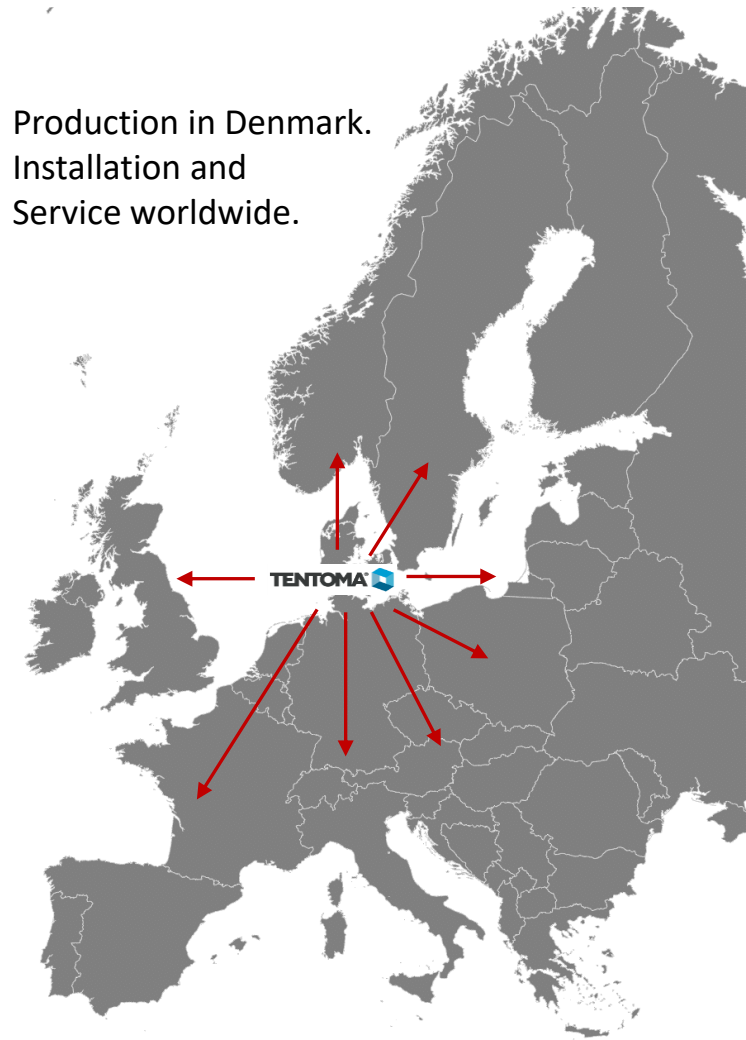
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Develop and produce
RoRo StretchPack®
packaging solutions

(horizontal stretch hood packaging)

Production in Denmark.
Installation and
Service worldwide.



Selected reference within nonwoven rolls

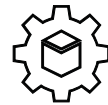


Today we will show you, how RoRo StretchPack® support you to...



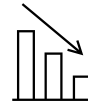
Seal and protect your products

- Six-sided sealed packaging (option four or five sided)
- 100% dust and waterproof
- Improved load stability
- Smooth and uniform packaging
- Optimal for print and branding



Automate your packaging

- 100% automatic packaging
- Full integration in production line
- High production capacity with high uptime
- Handles large load sizes



Reduce your packaging cost

- Reduction in your film cost
- No cost for manual handling
- No energy cost for heat shrink system
- Low maintenance cost



Support your sustainability

- Up to 60 % reduction in film consumption
- Eliminate energy consumption for heat shrink system
- Improves working environment
- Supports UN's Sustainable Development Goals



Challenges in packaging of rolls

Challenges in conventional packaging



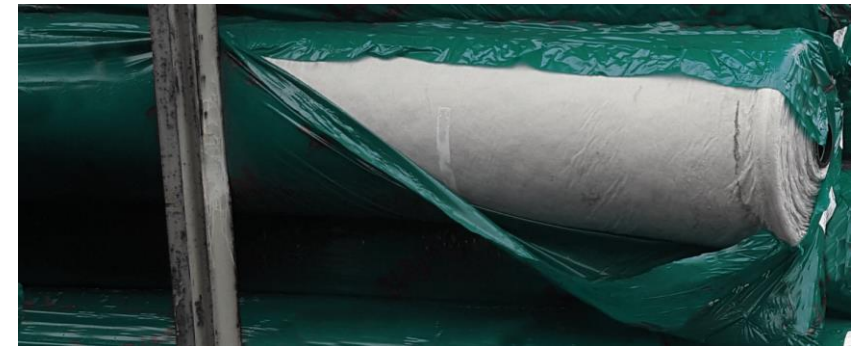
The roll end has opened during transport

Opening along the length of the roll. Prone to break during handling

No 100% sealed – closed with tape or similar. Risk of penetration of dirt and water.



Extra packaging processes to cover the ends



Sealing along the length of the rolls are prone to break during handling and transportation



Orbital wrapping

Weakness in orbital wrapping

- Not 100% sealed
- Leaves ends open – to cover ends will require extra processes
- Multiple film layers to cover the full roll – film consumption
- Nice branding is not possible
- Film is sticky and can be difficult to remove for end-user
- Risk of tailing (unwinding e.g., during transport)
- Risk that the stretch film breaks during packaging
- Small film rolls => Frequent film roll changing

Open ends require extra processes for full protection



Not fully sealed protection

Multiple film layers

Weakness in manual packaging

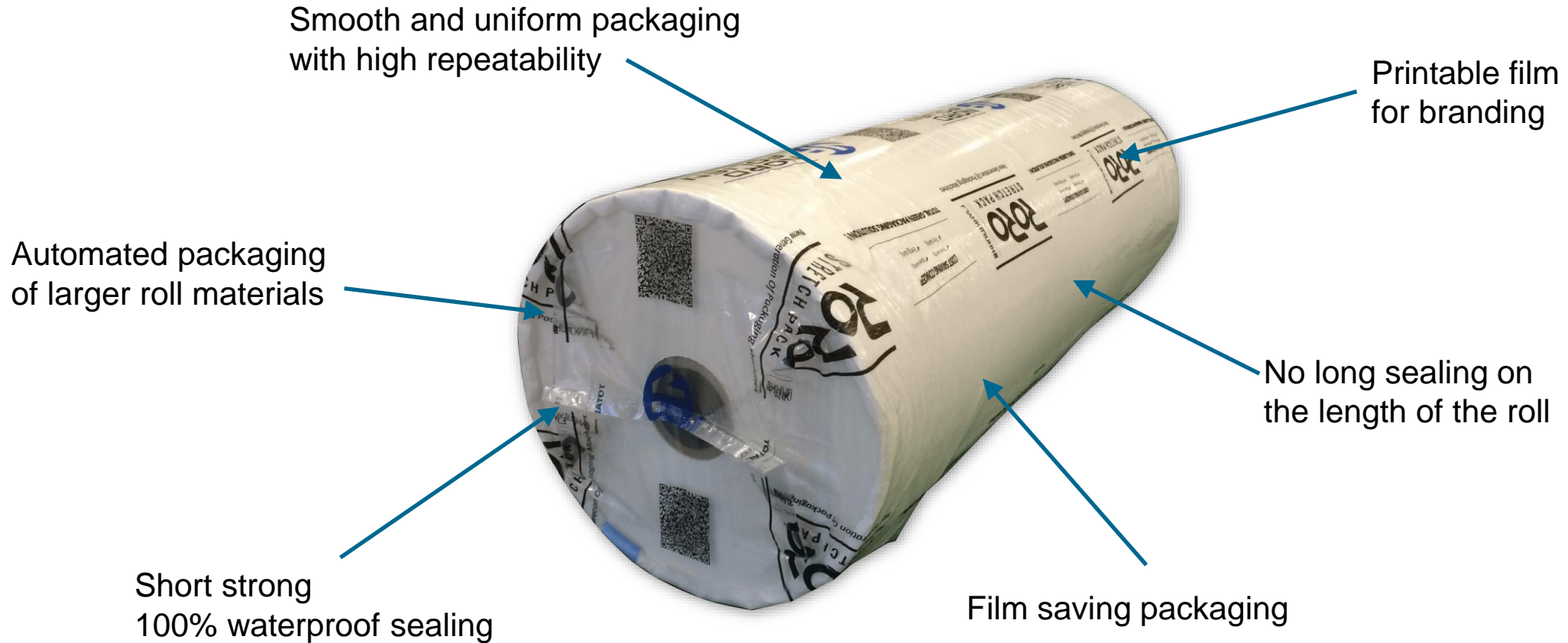
- Output limitations
- Complexity in scaling up and down
- Ergonomic problems
- Packaging uniformity / Quality
- High costs in non-core-process (labor & material)
- Re-packaging risk (non-controllable process)
- Difficulty to obtain manpower



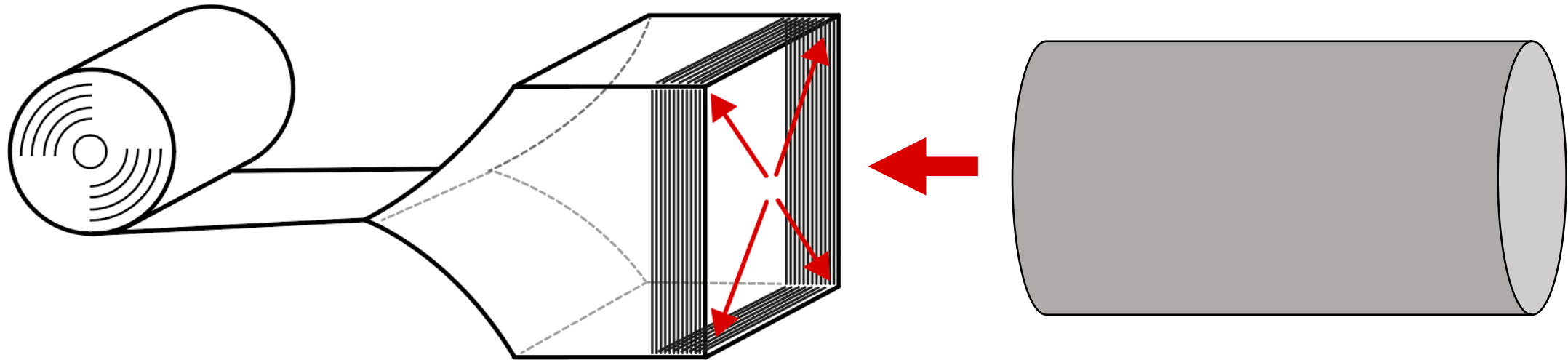
RoRo StretchPack®

The profitable alternative for roll packaging

RoRo StretchPack® - perfect for roll packaging

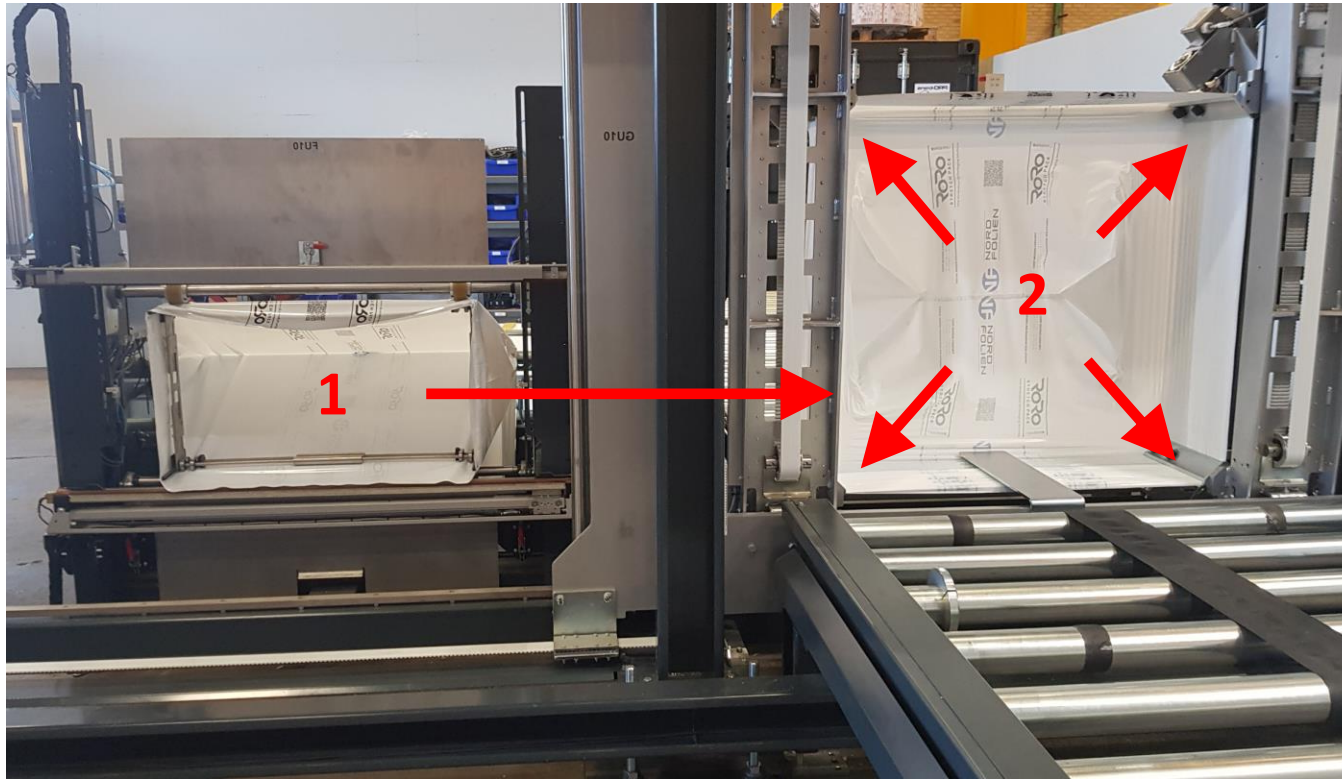


Packaging in a tubular stretch film



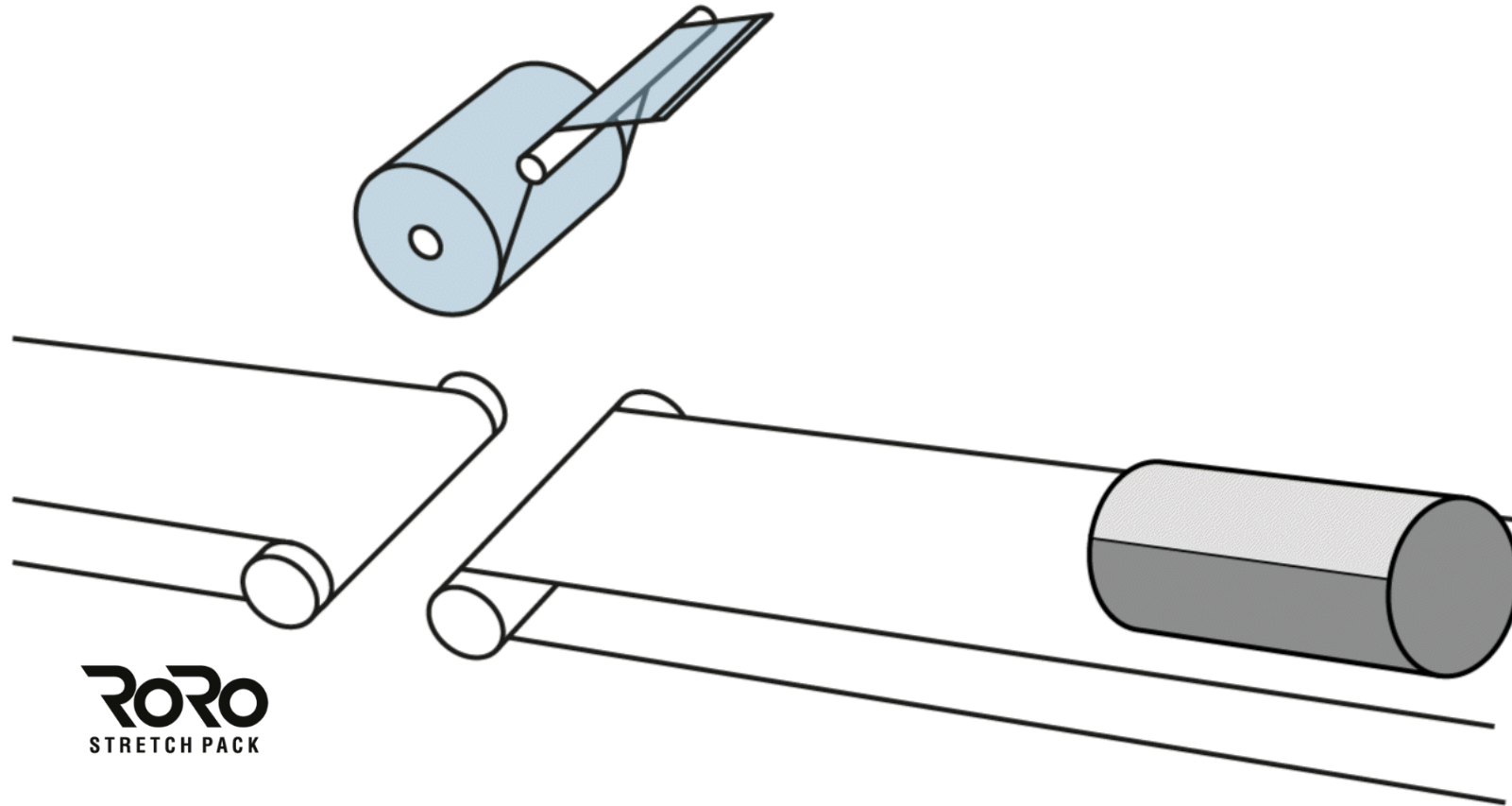
The tubular film is stretched

- Biaxial stretch using 4 gripper arms
- 600-2000 kg (1300-4400 lbs) stretch on each gripper arm
- 0-75% stretch of the film



The 4 gripper arms stretch the tubular film to fit the various product sizes.

Now the RoRo StretchPack is ready for packaging.



RoRo
STRETCH PACK



Examples of packagings



“Eye-to-wall” packaging



Examples of packagings



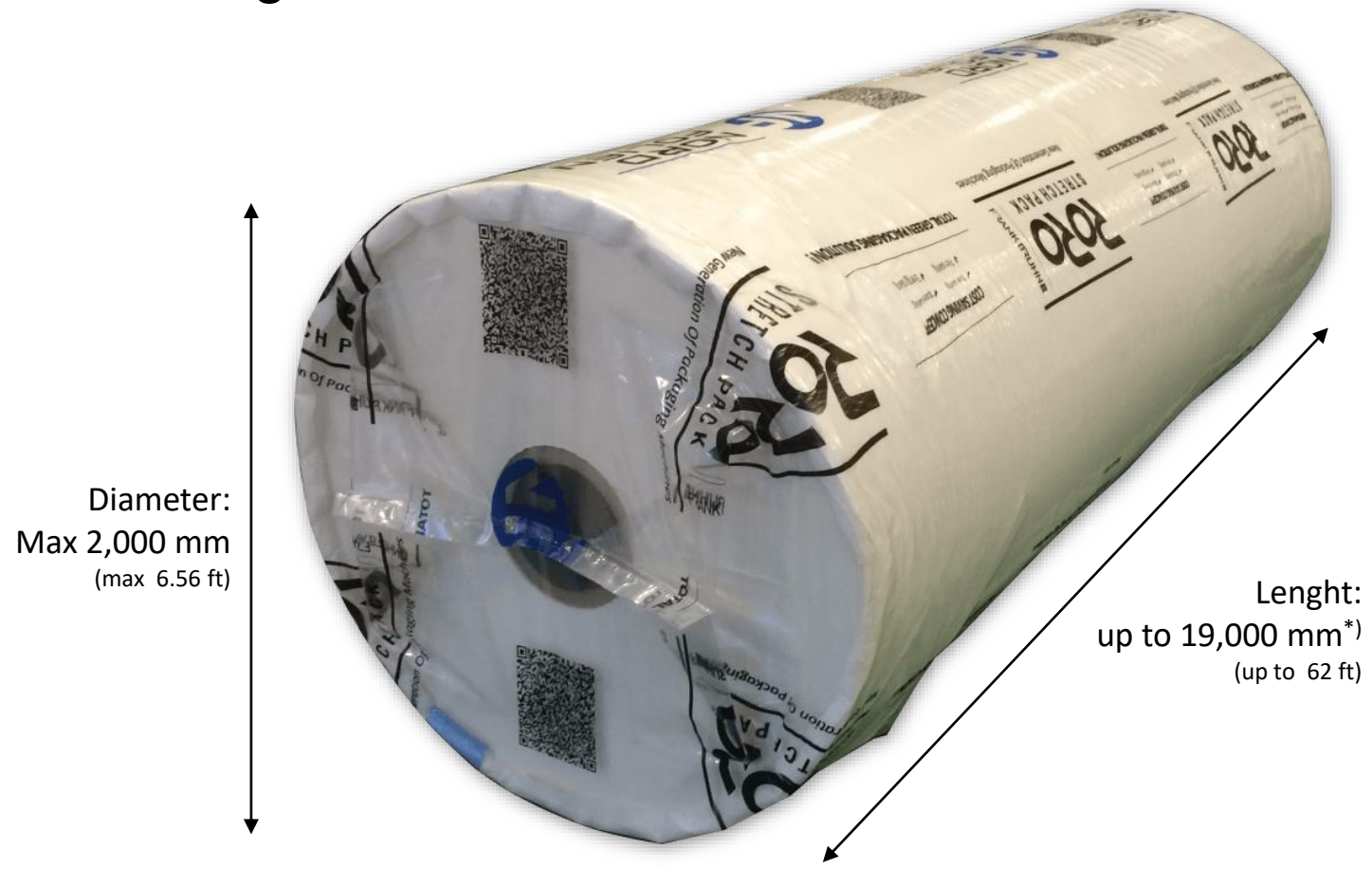
“Eye-to-sky” packaging



Packaging quality and benefits

Horizontal stretch-hood packaging

Also suitable for large size roll



*) Depending on final packaging requirements

100% sealed – for outdoor storage



Full product protection

- 100% Water resistant
- 100% Dust resistant
- 100% Contamination resistant

Strong film

- High puncture resistance
- High tear resistance



Strong sealing

- Liquid state – 180 degrees
- Controlled cooling ensure a strong sealing

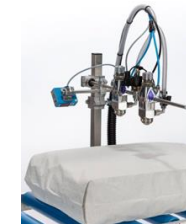


Easy to stack and handle



Horizontal stretch hood film is a low friction film (COF < 0,2) compared with stretch wrap film and other (hard) film types.

Low friction between the products means no sticking between products. This makes handling easier (gliding) and you do not risk to damage the packaging because it stick to each other.



If increased friction is a requirement this is also an option.

[H. Rand GmbH](#) offers tailor-made system solutions for increased friction.

Suitable for print and branding

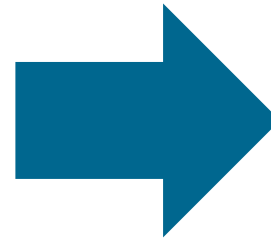


186 gr.
(6.35 oz)



6% film savings
incl. full
waterproof sealing

175 gr.
(6.17 oz)



Orbital wrapping



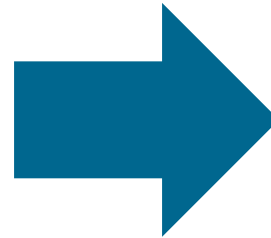
RoRo StretchPack®



Heat shrink packaging

Ø: 330 mm (13 inches) L: 2.000 mm (78.74 inches)
From 335 g (11.8 oz) to 170 g (6 oz) = 165 g (5.8 oz) savings = **49%**

Using a 50 microns (1.97 mil) film with 15% stretch



RoRo StretchPack®

Why does RoRo StretchPack® save film?

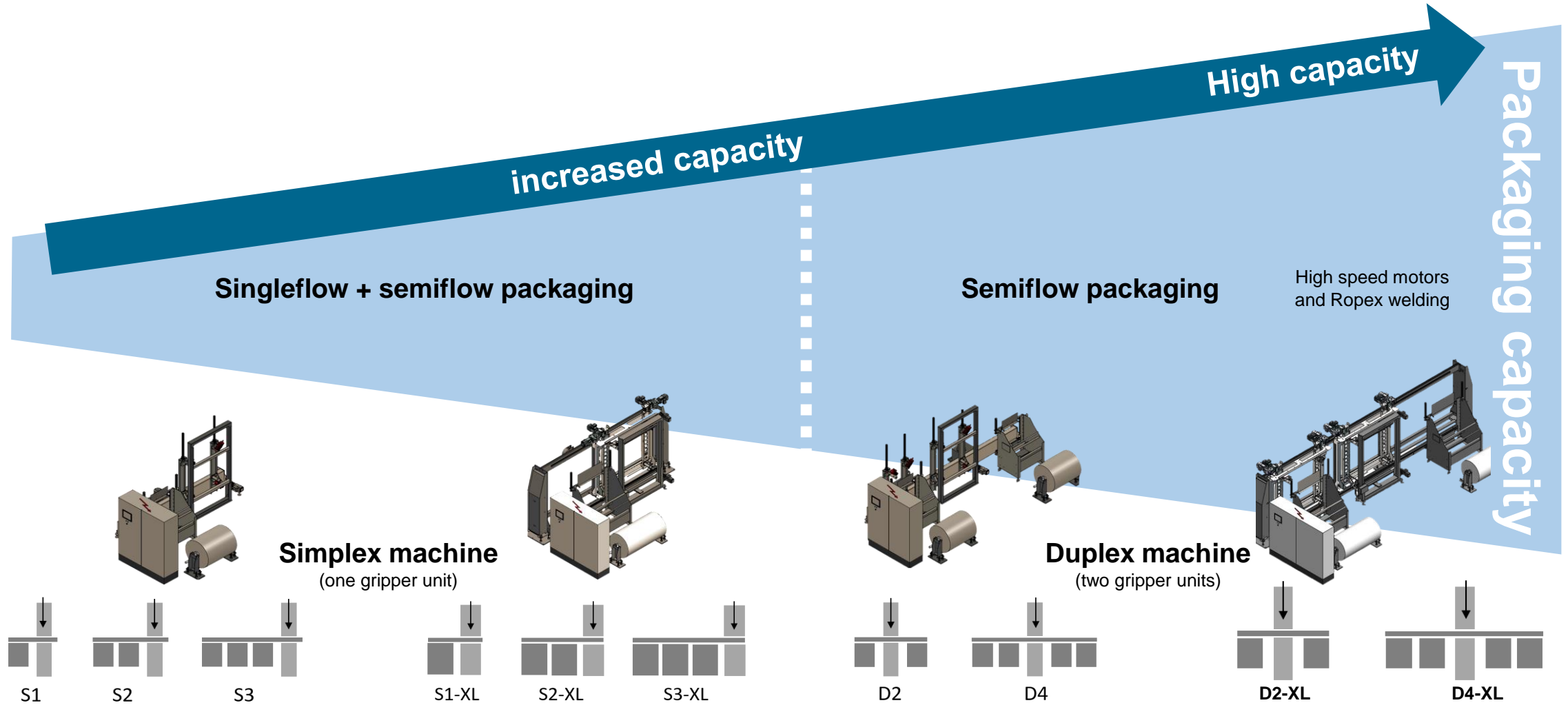
- Stretching instead of shrinking
- Single layer packaging
- Thinner film - due to stronger film type
- Full use of the film - due to the film being stretched
- Tight packaging (customizable)
- Minimum waste during packaging

From customer cases we have experienced
Up to 60% in film savings

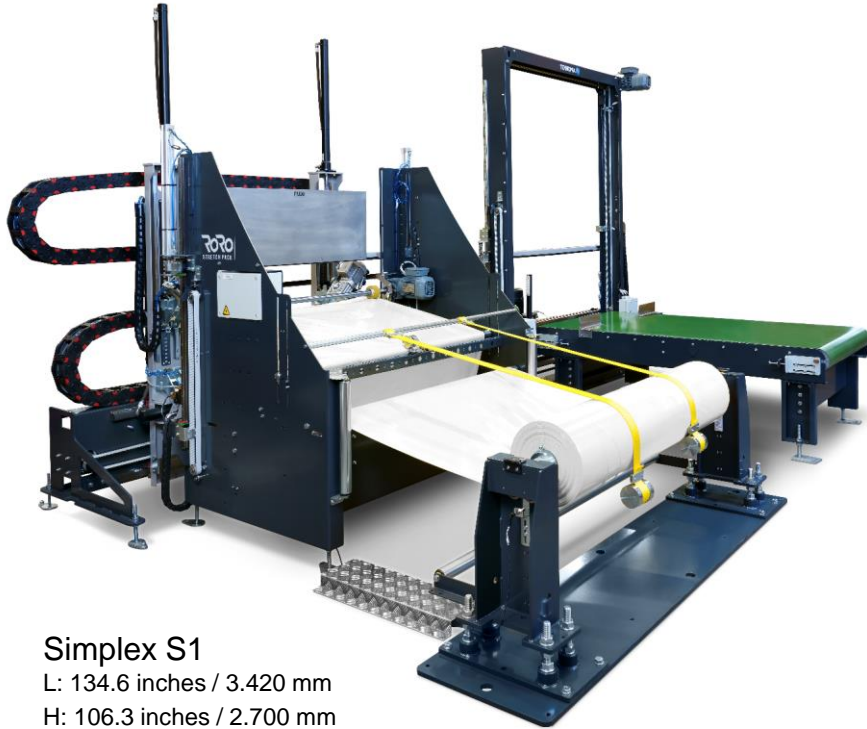


RoRo
STRETCH PACK

Machine range



RoRo StretchPack®



Simplex S1

L: 134.6 inches / 3.420 mm
H: 106.3 inches / 2.700 mm
W: 157.5 inches / 4.000 mm



Duplex D2

L: 134.6 inches / 3.420 mm
H: 106.3 inches / 2700 mm
W: 303.1 inches / 7700 mm

RoRo
STRETCH PACK



Stand alone packaging solution
for nonwoven rolls

XL S1

RoRo
STRETCH PACK

Customer case



TenCate Geosynthetics
Plant in Bezons, France

Manufacturer of geotextiles



A Solmax
Company

Previous packaging process in Bezons, France

- The roll was packed into a film which was welded along the roll side.
- The roll was having a plug inserted
- The roll passed a heat tunnel to shrink the film

Previous packaging using heat shrink

Challenges

- Low capacity – particular on the large rolls
- Non-uniform packaging quality

Requirement

- Higher capacity with larger variance
- Improved packaging quality
- Core plug applicator
- Flat ends for labeling



New packaging solution

- RoRo StretchPack® - packaging and sealing in one operation
- Four film stand for different film sizes to cover the product range
- Automated core plug applicator – with tolerance
- Conveyor with integrated weighing system + swing conveyor

Benefits for TenCate

- Increased packaging capacity – can pack more varieties sizes
- Improved packaging quality - Smooth, tight and uniform packaging
- Only short strong sealing in the ends
- The heat shrink tunnel is removed
- Reduced film consumption (thinner film)
- Maintenance cost has been reduced
- Better safety system



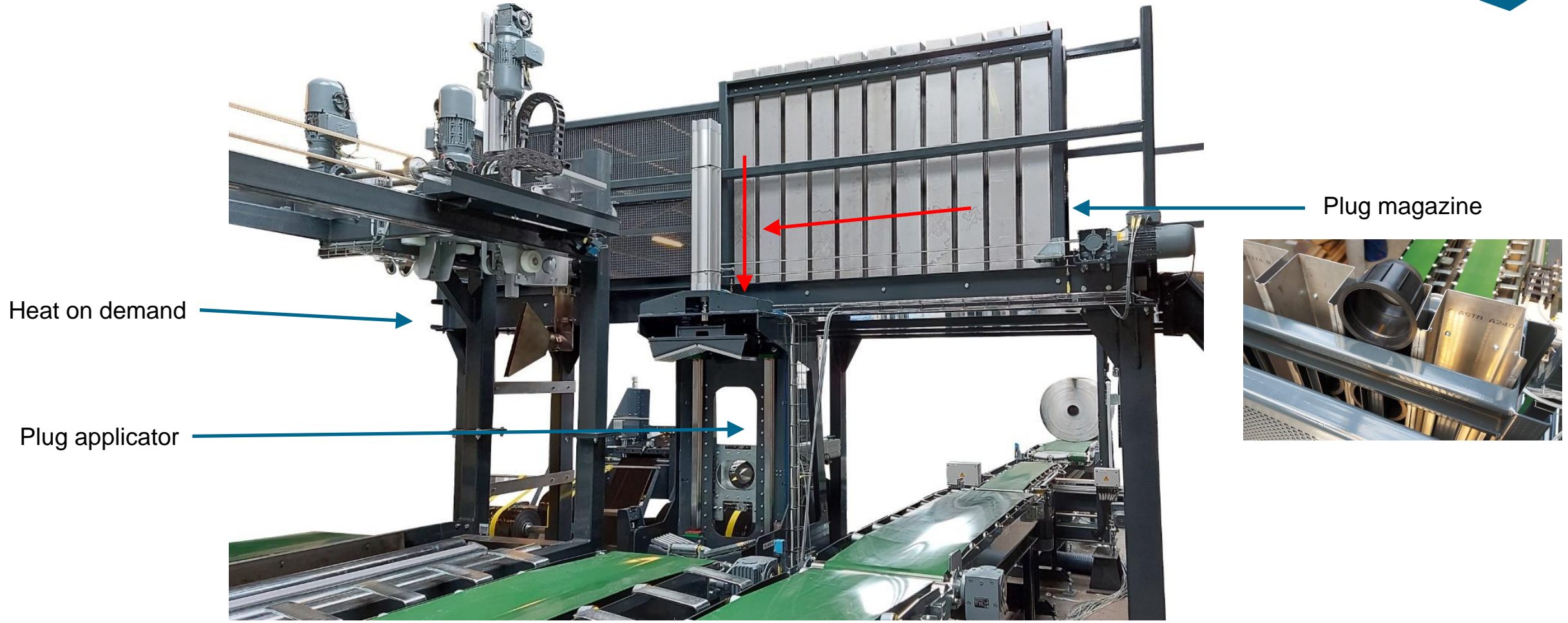
Download from
www.tentoma.com



Geotextile inline solution
Incl. plug applicator, heater and swing conveyors

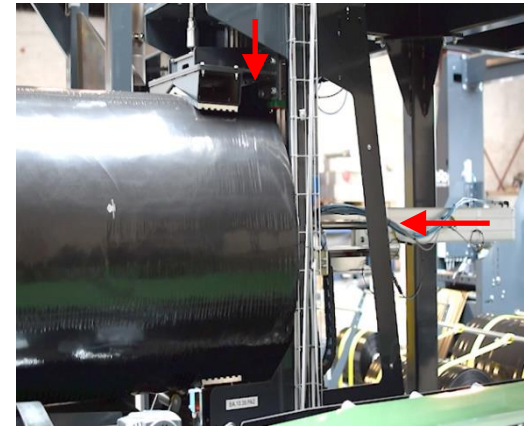
XL S2







Heat on demand



Plug applicator

Sustainability

We help you in supporting the UN Sustainable Development Goals

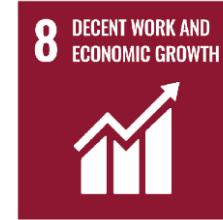




Improving energy efficiency

RoRo StretchPack® supports UN SDG 7 with these benefits:

- Low energy consumption - approx. 0.03 kWh per unit
- Energy-savings by up to 90% compared to heat shrink
- Only energy consumption when packaging
- Lower energy consumption reduces your carbon footprint



Improving production and growth

RoRo StretchPack® supports UN SDG 8 with these benefits:

- Labour-intensive manual packaging can be automated
- Remove repetitive and physically hard work
- Increase packaging capacity and remove bottlenecks in the packaging line
- Eliminate the maintenance of a hot and potentially flammable heat shrink oven
- The RoRo StretchPack® technology will lower operation and maintenance costs





Reducing carbon footprint

RoRo StretchPack® supports UN SDG 9 with these benefits:

- Your production line will be more sustainable with increased resource-use efficiency
- RoRo StretchPack® will reduce your film consumption by up to 60%
- RoRo StretchPack® will reduce your energy-consumption by up to 90%



Ensure sustainable consumption and production patterns

RoRo StretchPack® supports UN SDG 12 with these benefits:

- PE-Film can be recycled and 100% reused
- Doing more with less - Reduce PE-film consumption
- Using film type containing up to 50% recycled material is an option
- Using Biobased PE-Film is an option
- Reduction of CO₂

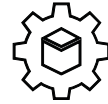


STRETCH HOOD FILM IS RECYCLABLE!



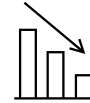
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A pleasure to meet you...



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Watch RoRo StretchPack® in operation:
www.tentoma.com/videos

TENTOMA

Geotextile roll packaging:
TenCate Geosynthetics
Bezons, France

TenCate Geosynthetics is a major manufacturer of geosynthetics. At the production facilities in Bezons near Paris, TenCate produces geotextiles in rolls, which are packed into a film for protection against dirt and moisture during distribution.

Due to the demand for higher packaging capacity and improved packaging, TenCate has installed a new RoRo StretchPack® packaging solution to replace a heat shrink packaging line. RoRo StretchPack® is a cold packaging technology using a tubular stretch hood film for horizontal packaging of no longer rolls.

Tight packaging without heat shrink
The new RoRo StretchPack® packaging line has increased the packaging capacity at the plant in Bezons. Plant manager Christophe Dupont says, "our packaging capacity has increased, and now we can pack more standard cases of our rolls". Especially on the very large rolls, TenCate has increased its packaging capacity. At the same time, the maintenance costs have been reduced.

Using a tubular stretch hood film instead of heat shrink film has given a tight and narrow packaging. Previously the packaging had a long-welded sealing along the roll side, which was prone to break during transport and handling. It is not the case anymore. The tubular stretch hood film leads to sealing along the roll side, but only a short strong sealing at each roll end.

Reductions in film consumption and in energy consumption
The tight packaging removes an excessive use of film for packaging, which TenCate previously needed to reduce to heat shrink anyway. Also, stretch film has a higher puncture resistance than shrink film, which enables reducing the film thickness without compromising the packaging quality. It has reduced the film consumption, just like the energy consumption had decreased after removing the heat shrink oven. Overall, RoRo StretchPack® has contributed to increasing the sustainability combined to the heat shrink packaging line.

The safety area has also improved. Strictly removing heat shrink has eliminated the risk of fire at the packaging line. Secondly, there is further safety for the employees as all operators immediately stop when someone enters the safety zone.

TenCate has installed a RoRo StretchPack® packaging solution to replace heat shrink packaging. Using RoRo StretchPack®, packaging and waterproof sealing is done in one horizontal process.

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TenCate case story

TENTOMA

Nonwoven roll packaging:
Fibertex Nonwovens
Chemillé, France

In Chemillé in western France, Fibertex has production facilities manufacturing nonwovens, based on needlepunch and spunlace technology.

Around 2019, Fibertex was looking for a new packaging solution for roll materials. It was important to find a solution that didn't compromise the quality of the packaging. The packaging had to be fully sealed to protect the nonwoven materials from contamination of dirt and moisture.

Packaging and sealing in one operation
Fibertex France was introduced to the RoRo StretchPack® technology through another contact. After evaluating between different solutions, Fibertex France chose an in-line packaging solution with a RoRo StretchPack® model Large SL. The machine can pack a range of rolls with diameters up to 2000 mm, and roll lengths up to 3300 mm. Packaging and sealing are done in one operation.

Jacobs Sustainable Goods Technology Director in Fibertex tells, "We were unlikely to order the equipment during the COVID period as this caused a postponement of the final installation because of travel restrictions". The packaging line was fully in operation from January 2022. He concludes, "The equipment is running correctly and successful. Tentoma is a reliable partner."

Benefits for Fibertex

- New packaging line with packaging and sealing in one operation
- 100% waterproof packaging
- Film saving one layer packaging
- One machine to cover the full product range

Fibertex has installed a RoRo StretchPack® packaging solution for nonwoven rolls.

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Fibertex case story

More information:

- Free assessment
- Test packaging
- Offer
- Technical details

Fell free to request further information

