



LOAD STABILITY  
EXPERTS

WE'RE NOT YOUR AVERAGE  
PACKAGING SUPPLIER.

**WE'RE YOUR SPECIALIST  
LOAD STABILITY PARTNER.**

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## OUR STORY

# 4 DECADES OF PACKAGING

We've come a long way since our Chairman, Garth Christie, founded the business in 1979. Evolving from a local packaging supplier into a leader in the provision of packaging consultancy services, solutions and machinery to some of the world's most recognised brands.

Today, we work with all kinds of clients including blue chip retail companies, large manufacturers with multiple distribution centres and e-commerce businesses.



I can't believe we can go a whole shift without any film breakages to stop production!

WAREHOUSE MANAGER - PET FOOD MANUFACTURER

# COMMITTED TO IMPROVING BUSINESS PERFORMANCE

At Hazel 4D, we provide innovative products that help you save time, money and the planet, but we also understand that the packaging process isn't simply about the supply of materials. That's why we work with you to gain a true understanding of your company's needs and make recommendations on how to improve your business processes, and the consumables used, to bring you genuine long-term solutions for your business.

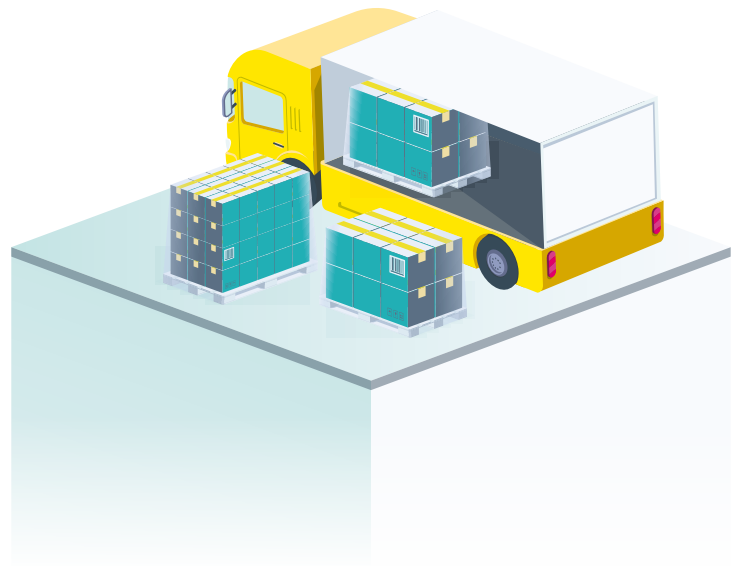
**We call our extra level of service and understanding:**

DELIVERING THE 4<sup>TH</sup> DIMENSION

# IMPROVING TRANSPORT AND LOGISTICS SAFETY

The European Safe Logistics Association (EUMOS) recognises our strong commitment to increasing transport and logistics safety. They've certified that we've demonstrated sustainable efforts towards the EU objectives to achieve zero fatalities on the road by 2050.

We're recognised as experts in helping customers improve their pallet load stability in order to comply with the global legislations around cargo transport safety and pallet load securing. Our consultants are specially trained to support our customers in achieving this and much more.



# WHY IS HAVING STABLE PALLETS IMPORTANT?

**Wrapping your pallet loads safely and securely is essential to prevent potential accidents, product losses, hefty fines for delivery non-conformance and the unnecessary expense of reworking. This reduces the chances of having the additional expense and hassle of reworking products.**

Pallets need to be able to cope with any accelerations or decelerations without losing their structure or rigidity.

The EU legislation introduced in 2018 put the responsibility for securing cargo safely on everybody from the producer of the pallet load to the driver.

An important part of pallet securing is making sure you use a high quality stretch film that's applied properly and consistently using the correct machine settings or by using a consistent quality stretch that's applied properly and effectively.

**STUDIES HAVE SHOWN THAT 4%  
OF ALL TRANSPORTED GOODS ARE  
DAMAGED IN TRANSIT\***

\*Source: Ku Leuven University, Belgium



# LOAD STABILITY CONSULTATIONS

Our Intelligent Load Stability system really performs because it's tailored to meet the needs of every customer and their operations perfectly. That's why working in partnership is so vital to our success and the difference we make to our customers.



1

## WE DISCOVER

- First, we really get to know your operations, challenges and opportunities to improve.
- One of our experts will test your current system, looking into materials and every machine used, efficiency of material use and time taken to prepare each pallet, and stretch and stability achieved.
- We'll also want to know about any challenges you face, or particular areas you're keen to optimise or improve.

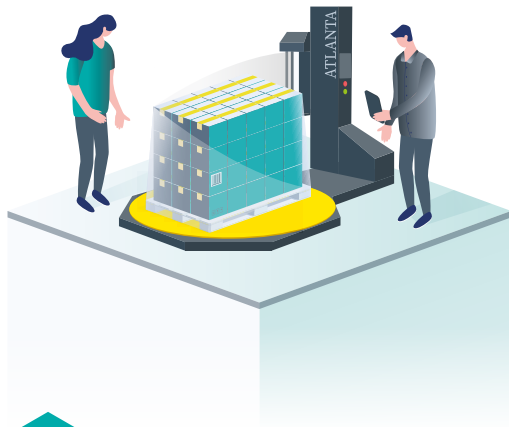


2

## WE RECOMMEND

- Our discovery phase will lead to a full report and a fully-costed recommendation designed specifically for you.
- These recommendations will not only address your specific concerns or challenges, but also identify opportunities to reduce costs, minimise resources and materials used, optimise safety, speed and stability to deliver the ultimate in pallet wrapping performance.





3

## WE OPTIMISE

- Once you're happy with our recommendations, we'll get to work developing and setting up your new system.
- We spend time on ensuring that set-up is perfect, fully tested and only handed over to you when we're happy it's performing as it should.
- Your staff will be fully trained to continue making best use of the system, and comprehensive training and reference materials will be left with you.
- We'll keep in touch, so you have access to our experts with any queries or questions as the new system beds in.



4

## WE SUPPORT

- An optimised system requires regular auditing, so this is part of the service.
- We'll ensure that you're able to continue meeting targets, making genuine savings on resources, materials and costs, optimising safety and stability, and will make sure that the system is performing at its best.
- We'll always be happy to discuss new and emerging challenges or ambitions – we like to think we can find a way!



As a driver, there's nothing worse than loads shifting when out on the road, even in instances requiring harsh breaking I've found that Hazel 4D's Intelligent Load stability solutions ensure that pallets wrapped using their approach stay rock solid. Meaning customers receive their goods in pristine condition every time.

**DRIVER - EXPECT DISTRIBUTION LTD**

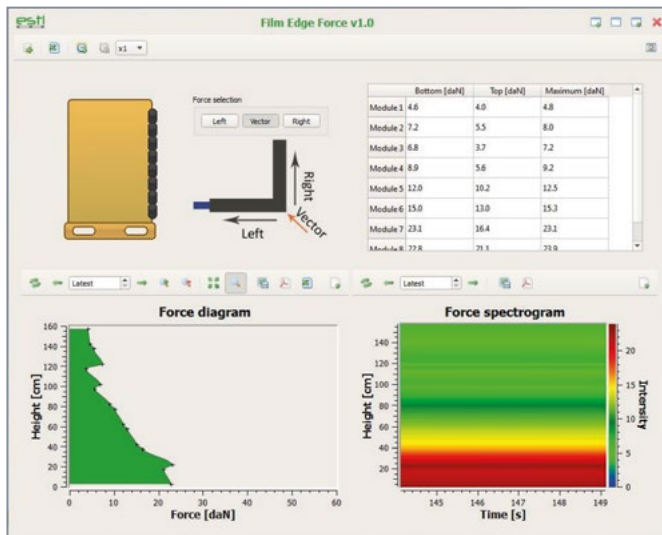
# CRUSHING VS CONTAINMENT

## FEF 200 PALLET TESTING DEVICE

The FEF 200 is a state-of-the-art measuring device made up of load cells that can be attached to the edges of a pallet load before wrapping it with stretch film.

Once the pallet wrapping cycle is started, the device accurately measures the forces the stretch film places on the secondary packaging and the edges of the pallet load.

The scientific results can expose any instabilities and weaknesses in the wrapping cycle, as well as areas of overwrapping.



We use the results to help you choose the correct machine settings, improve your pallet stability and prevent corner crushing. By containing the pallet load correctly, we can prevent packaging deformation and stop your products becoming unsaleable.

The data provides a benchmark that we can monitor machine performance against and ensure all your pallet wrappers are set up to perform in the same way.

# MADE TO GO THE EXTRA MILE

## EXTREMUS STRETCH FILM

**Ultra strong nano film for up to 400% stretch and unbeatable stability.**

High quality raw materials and the latest nanotechnology make Extremus the unbeatable film it is. When optimised, Extremus can stretch up to 400%, delivering the ultimate in strength and stability. And because it's puncture and tear resistant, it's still quick and efficient to use. Here's how it changes the game:



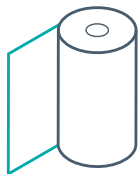
### OUTSTANDING HOLDING FORCE

Extremus stretch film is produced from a unique blend of polymers using the latest nanotechnology for outstanding holding force and reduced movement.



### SAFE, STABLE PALLETS

Consistent strength and stability means safer pallet transit, little or no damage to products, quicker unloading, easier handling for customers and safer storage.



### ULTRA STRONG APPLICATION AND UP TO 400% STRETCH

Ultra strong nano film means you use less without compromising on the stability and safety of each load.



### MINIMAL WASTE & COST

This significantly reduces the volume of plastic used, lowers your plastic waste and PRN's, and allows you to forget other protective packaging too.



### CONSISTENT MATERIAL BLEND & HIGH PUNCTURE RESISTANCE

This puncture-resistant load holding nano stretch machine film is manufactured using state-of-the-art nanotechnology with up to 67 layers.



### FASTER WRAPPING

So you can keep up your wrap-speed without worrying about punctures and line stoppage



## WE OFFER AN EXTENSIVE RANGE OF STRETCH FILM OPTIONS TO SUIT EVERY APPLICATION

Whether you want the lowest film consumption possible, the highest holding force or have the most difficult load to wrap, we have the answer.



### EXTREMUS SERIES 55



- High performance 67 layer Nano film
- Available in 10 micron
- Up to 300% stretch capability

### EXTREMUS SERIES 44



- High-performance 33 layer Nano films
- Available in 12, 15, 17 and 20 micron thickness
- Up to 400% stretch capability

### EXTREMUS SERIES 22



- Quick lock-up films for improved load stability when using core brake wrappers and for hand wrap applications
- Available in 8, 10 and 12 micron thickness

### EXTREMUS SERIES 11



- Highly cost-effective pre-stretched film for lightweight applications



### EXTREMUS ECO RECYCLED FILMS



#### Plastic tax exempt

- Extremus Eco 17 machine film 51% recycled content
- Extremus Eco Nano machine film with 30% recycled content. Available in 12 and 15 micron.

# ATLANTA STRETCH PALLET WRAPPING MACHINES

Built to deliver ultimate performance, stretch and speed.

We're exclusive UK distributors of Atlanta's smart, adaptable machines. We chose Atlanta because they consistently deliver savings, stability and total peace of mind to your pallet-wrapping process.



Built to optimise materials performance, minimise waste and streamline your pallet-wrapping efficiency, a range of models and ways to buy or lease mean there's something for all wrapping needs.





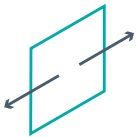
## PRECISION PROGRAMME CONTROLS

You can create your own programmes, use a whole range of pre-programmed settings and when in use, lock them, so you get the same perfect wrap consistently across a load – it makes getting up and running faster and delivers better results.



## EASY INSTALLATION FOR FAST SET UP

Installation is plug and play, so it's a simple set up – once we've optimised your film and wrap, trained you and tested the system, you're ready to go, faster and stronger than ever before.



## PATENTED PRE-STRETCH ROLLERS

Atlanta's unique pre stretch rollers ensure you get the most out of your film. They require low maintenance to ensure consistent film performance and they can deliver up to 400% stretch from Extremus films.



## ERGONOMIC OPTIONS

Loose tail ends are a hazard, and give your customers work to do. Ergonomic controls allow you to pack tight and neat, with no tail ends, for an easy load, unload and store.



Hazel 4D have successfully achieved a much safer pallet with less than a quarter of the weight of film.

DISTRIBUTION MANAGER

**ATLANTA**  
S T R E T C H



# MARATHON MOBILE PALLET WRAPPER

MOBILE STRETCH WRAPPER THAT  
REPLACES MANUAL PALLET  
WRAPPING AT AN AFFORDABLE PRICE

The Marathon can wrap pallets of any shape, size and weight without using electricity and is ideal for warehouses with little space or low volume pallet wrapping requirements.

It's a safe, ergonomic alternative to wrapping pallets by hand as you can stand up straight and walk forwards when wrapping pallets, reducing the strain on your back. It's also much easier to properly wrap the bottom of pallets.



**Use anywhere in the warehouse**



**Reduced risk of back strain**



**No electrical supply needed**



**Maintenance-free**





# SFERA EASY TOUCH ROBOT WRAPPER

## SELF-PROPELLED ROBOT POWER PRE-STRETCH PALLET WRAPPER THAT CAN BE USED ANYWHERE IN THE WAREHOUSE

The SFERA Easy Touch can be moved to your goods rather than the goods moving to the wrapping machine. Due to its intelligent guiding wheel system it is possible to wrap almost anything. The compact machine size means it can be used in height restricted areas or warehouses where space is limited. It can be stored out of the way when not in use and even fits neatly into racking. Once charged, it doesn't need to be plugged in and can be easily transported between sites in a van.



**6 customisable programmes with password protection**

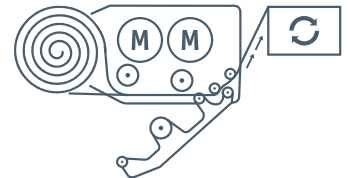


**11-inch touch pad control panel**



**Maintenance-free battery**

**Advanced PS system can stretch film up to 400%**



SFERA with mast also available



# MYTHO EASY PALLET WRAPPER

## ADVANCED POWER PRE-STRETCH TURNTABLE STRETCH WRAPPER

Ideal for high-volume pallet wrapping and securing heavy, unstable or awkwardly shaped loads, this advanced pallet wrapper is capable of stretching film up to 400% on application, helping you optimise the stability of your pallets.

It's designed to be easy to use and has simplified programme controls.



### The Mytho Easy also comes in a low profile version.

The 25mm low profile turntable makes it easier to push pallets onto the turntable using a pallet truck.

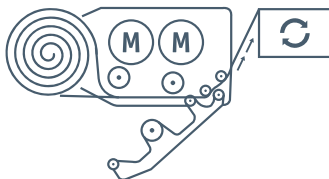


6 customisable programmes  
with password protection



11-inch touch  
pad control panel

Advanced PS system can  
stretch film up to 400%



# SYNTHEX PALLET WRAPPER

## POWER PRE-STRETCH TURNTABLE STRETCH WRAPPER

The Synthex pallet wrapper has been designed to reduce your cost of ownership.

It has a motorised pre-stretch system that stretches your film up to 300% on application and customisable programmes to make wrapping your pallets even quicker.



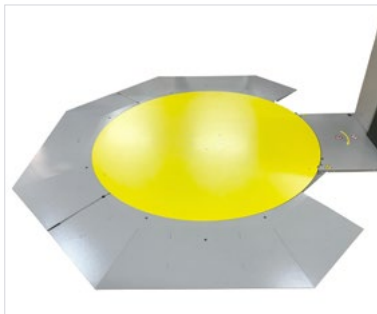
**The Synthex also comes in a low profile version with a 25mm turntable.**



**6 customisable programmes with password protection**



**11-inch touch pad control panel**



**Fitted with an easy to load geared OPS head**



# EVA PALLET WRAPPER

## SIMPLE AND EASY TO USE CORE BRAKE TURNTABLE STRETCH WRAPPER

Advanced wrapping programme, with adjustable features, this core brake pallet wrapper is perfect for operations looking for a no-fuss, reliable pallet wrapping machine to stretch wrap a small number of pallets a week.

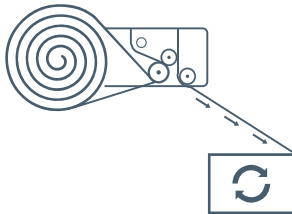


**1 customisable programme  
with password protection**



**Easy to use touch pad control panel**

**Manually adjustable mechanical  
brake on return roller**



# LYBRA ROTATING ARM PALLET WRAPPER

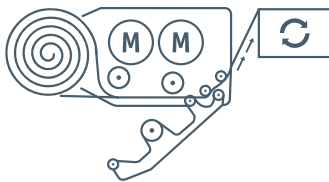
## ROBUST, RELIABLE POWER PRE-STRETCH PALLET WRAPPER

Ideal for use in a PPT environment, or where loads are very unstable this rotating arm machine can wrap pallets of any weight and stretch film up to 400% on application.

The Lybra is perfect for wrapping unstable or loose loads as the rotating arm moves around the pallet to wrap it, rather than spinning the load itself.

The pallets are wrapped from floor level so there's no need for ramps to put the pallet into position, saving on floor space.

**Advanced PS system can stretch film up to 400%**



**99 customisable programmes  
with password protection**



**11-inch touch pad control panel**

# LYBRA EASY ROTATING ARM PALLET WRAPPER

## SIMPLE AND EASY TO USE CORE BRAKE PALLET WRAPPER

Ideal for use in a PPT environment, this compact rotating arm machine can wrap pallets of any weight.

The Lybra Easy is perfect for wrapping unstable or loose loads as the rotating arm moves around the pallet to wrap it, rather than spinning the load itself.

The pallets are wrapped from floor level so there's no need for ramps to put the pallet into position, saving on floor space.

The Lybra Easy has a small footprint and has been designed to reduce operating costs.



**1 customisable programmes with password protection**



**Easy to use touch pad control panel**



# OPTIONAL EXTRAS

MAKE WRAPPING YOUR PALLETS EVEN EASIER WITH THESE OPTIONAL EXTRAS:



Remote control start



Top press



Non-motorised roller conveyor



Weighing scales with printer



Automatic roping device



Manual roping device



Automatic film cutter



Film slitting devices



Badly wrapped pallets are a menace on a forklift - but getting them rewrapped slows things right down. Extremus film, properly used, puts a stop to tail ends and loads that aren't locked to their pallets - which means I can get on and do my job without worrying.

FORKLIFT DRIVER



# AUTOMATIC PALLET WRAPPERS



## MYTHO AUTO

The Mytho Auto is an automatic stand-alone turntable wrapper with a simple but robust film cut and clamp system that doesn't require additional safety fencing or lighting barriers.



## LYBRA AUTO

Available as a stand-alone or wall-mounted machine, the Lybra Auto is an automatic rotating arm wrapper with an automatic film cut and clamp system.



### Increase efficiency

No need for drivers to get off their FLT's during the wrapping process

Increase wrapping efficiency by

↑ 66%



### Increase safety

Safety fencing options available

# IN-LINE AUTOMATIC PALLET WRAPPERS

We can also work with you on integrating fully automatic pallet wrappers into your production lines. These stretch wrappers don't need operator assistance and are designed to lower costs and increase productivity.

**Ask for a Hazel 4D expert to come out to you to assess the best automatic pallet wrapper for your needs.**



Reduce manual labour



Speed up production



Increase throughput

## ATLANTA'S RANGE OF AUTOMATIC WRAPPERS INCLUDES:

### Rotating turntable machines



The Mytho A incorporates an automatic turntable wrapping machine with an automatic pallet top sheet dispenser. This clever design maximises efficiency and keeps the machine's footprint small, making it great for use in space restricted warehouses and areas with low headroom. It can wrap 35-40 pallets an hour.



The Mytho Station has a unique low-level design. The turntable can operate at under 200mm from the floor allowing low-level loading without expensive lifting equipment. It can wrap 35-40 pallets an hour.

## Rotating arm machines



Robust four post Revolution rotating arm wrappers are available in low, medium and high-speed versions. The high-speed machines can wrap up to 80 pallets an hour.



The Lybra Station has 99 storable wrapping programmes and an automatic cut and clamp unit. The rotating arm moves at a maximum speed of 12 rpm.

## Rotating ring machines



Made to reduce downtime, these rotating ring wrappers are extremely low maintenance. They can wrap over 150 pallets per hour and the ring can rotate at a speed of up to 60 rpm. They're available in single and double head configurations.



## CASE STUDY

# PLASTIC USAGE REDUCED BY 66%

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How we helped a bedding manufacturer reduce plastic usage by 66%.

This family-run firm ships around 195,000 pallets of bedding each year, but their poor film and damaged machines meant that they were wasting wrap and still not managing to eliminate rips, tears or returned pallets.

### THE PROBLEM

During a consultation and a full test of ten machines, we found that the stretch wrap being used was of poor quality, prone to ripping and tearing. In an attempt to get it working better, operators were often loading the film onto machines incorrectly, damaging the roll so that wrap was wasted. With no confidence in the wrap they were also wrapping several times, using much more film than should be needed.

This activity led to huge variances in the pre-stretching and tensioning of the film, causing unstable loads that were difficult to move safely and regularly resulted in rejected loads that had to be reworked at considerable expense.

### OUR SOLUTION

Our aim was to achieve a stable load, a reduction in film used and the elimination of waste, and improved efficiencies with effective machines.

We replaced three damaged machines and swapped their stretch wrap for our Extremus Stretch Film, a high-performance load holding film with a high tear resistance and up to 300% stretch. We spent time training their operators on the science behind stretch wrapping, how to load the Extremus Film correctly and its benefits for load stability. Working with their in-house engineers, we optimised the settings of the wrapping machines to increase their performance and save time and money.

State-of-the-art mobile testing system enabled us to measure the forces exerted on wrapped pallets to fix instabilities and improve the rigidity of the pallets. We continue to conduct frequent audits to check that savings and operational improvements are being maintained.

## THE DIFFERENCE IT MADE...



Annual stretch wrap spend reduced by **£93,900**



Operators can now load film correctly, eliminating damage to film



A consistent stretch on film



Less film needed to wrap each pallet



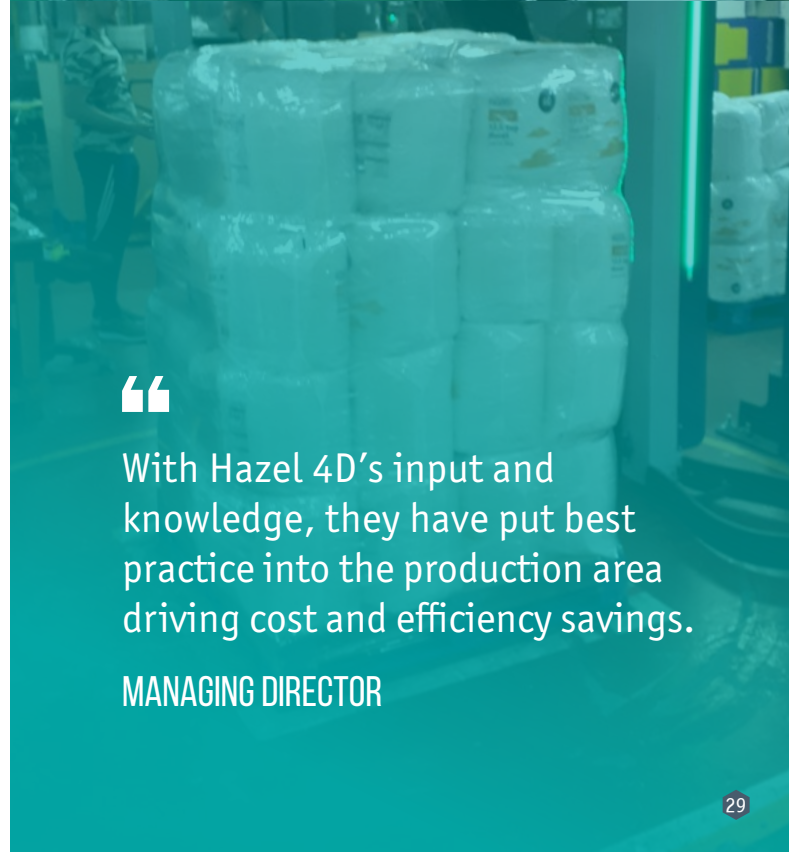
Damage at beginning of film roll eliminated



Reduced damages in transit



Pallets can now be bulk stacked safely



“

With Hazel 4D's input and knowledge, they have put best practice into the production area driving cost and efficiency savings.

MANAGING DIRECTOR

## CASE STUDY

# SAVINGS OF OVER £100,000 A YEAR ON TRANSIT PACKAGING

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A food manufacturer was incurring excessive financial and operational costs due to ineffective stretch wrapping processes.

The company was spending around £150,000 annually on stretch film, using 100 tonnes of plastic film and spending time and money repairing old machines.

### THE PROBLEM

Worn, damaged wrapping machines were causing stretch film to break and meant wrapped pallets were extremely unstable. The machines were unable to keep up with production during peak periods which resulted in bottlenecks and downtime.

Large supermarket chains were rejecting and returning damaged and leaning shipments, so warehouse operatives were spending a significant amount of time re-wrapping pallets. The frustrated operatives were loading the stretch film incorrectly in an attempt to prevent film breakages and keep the machines wrapping. Their Warehouse Manager repeatedly commented 'my guys deserve better'. The problem was costing them money, time and their reputation.

### OUR SOLUTION

We audited their current machinery, testing for correct setup and each machine's ability to stretch film and apply it in the most efficient manner. We then measured the amount of film used to wrap each pallet, the performance of the film, its strength and the amount wasted due to quality and poor machine set-up. Finally, we monitored the standard of pallet wrapping and listened to machine operators talk through the process and the practical difficulties faced when preparing pallets for transit.

We recommended making the switch to Extremus film and new state of the art turntable pallet wrappers, which when optimised could deliver up to 300% stretch. We created two bespoke wrapping programmes to suit their needs, whilst using the minimum volume of stretch film. Due to the combination of film and equipment used, the ROI on the new machines was less than 7 months. Careful training and ongoing contact as part of the maintenance contract with the team at Hazel 4D meant that the operations team was confident in using the system, and that savings were realised on an ongoing basis and the team could call Hazel 4D with any issues.

## THE DIFFERENCE IT MADE...



Huge, ongoing cost savings  
excess of **£100,000 a year**



Reduced plastic waste by **65%**



Production downtime reduced



Improved stability of pallets



No film breakages



Increased number of pallets  
wrapped per day



Reduced need for roll changeovers



“

Not a single pallet has been  
returned from our customers.  
Why didn't we do this years ago!

DISTRIBUTION MANAGER

## CASE STUDY

# ATLANTA POWER PRE-STRETCH PALLET WRAPPING MACHINES - A COMPARISON WITH THE COMPETITION

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We recently had the opportunity to inspect and service the pallet wrapping machines at a customer's sites in 2 locations across the UK. The results of the inspections were very interesting.

### SITE 1

The first site was fitted with a leading manufacturer's machines, contemporary and well-known machines which had been set up to run the Extremus 44 MFNANO12 12 mu Nano technology film from Hazel 4D. On initial setup, the machines were demonstrated to be running at 290% stretch on pallet. The resulting cost savings per pallet wrapped were huge compared to the company's previous old pallet wrappers which were providing little or no stretch on the film at all. The new machines paid for themselves in just a few months, with the customer also seeing huge reductions in the amount of plastic used and a significant increase in the load stability of the pallets, resulting in a very happy customer.

Fast forward 18 months and the picture is not quite as rosy. On inspection of the machines, it was found that they were operating at 230% stretch on pallet – a whopping 20.7% decrease in performance – resulting in a higher cost per pallet wrapped and a compromised load stability due to the film not being fully optimised. On investigation, the cause of the issue was found to be the pre stretch rollers which were either damaged or badly worn on all of the machines, and we were left with no option but to replace the rollers on all machines at significant cost to the customer to bring the machines back to their previous performance levels of 290% stretch.

### DAMAGED ROLLERS ON THE MACHINE:





## SITE 2

The second site had been kitted out at more or less the same time, but with Atlanta Mytho PS machines. The machines had been set up to run the same film as the first site, and with the same pre-stretch settings. 2 of the machines had wrapped over 100,000 pallet each in the 18 month period – an impressive achievement. At the inspection, despite the machines having worked at least as hard, they were found to be continuing to deliver the full 290% stretch just as they had when they were new.



## SO, WHY SUCH A DIFFERENCE?



“The secret is in the rollers and the design of the pre stretch system, the unique design of the pre-stretch roller trio is a winning combination that ensures consistently high stretch levels”, explains our technical sales manager Kevin Oliver, “on the competitors machines, the rollers are coated with a black rubber which wears quite quickly, In addition they require cleaning on a regular basis to ensure that the machine continues to perform, this is a common situation in the market place. In some instances, often due to operator misuse, the film can get tangled in the rollers and this is when the rollers get damaged as operators use knives to cut away the film.

On the Mytho however” Kevin continues, “the roller is manufactured from an innovative and patented rubber compound which is virtually indestructible and does not require the regular cleaning that other pallet wrapper rollers need. This, combined with the superior build quality and the ability to completely lock down the machine so that operators can’t make any adjustments to the settings, means that once an Atlanta machine is set up it will run without any deterioration in performance between services”



Not a single pallet has been returned since we started using the Extremus film. Why didn't we do this years ago?

LOGISTICS MANAGER - SNACK MANUFACTURER

# HAZEL 4D LOAD STABILITY CONSULTATIONS

PROTECTING THE PLANET, PEOPLE & YOUR PROFITS



## Book your consultation today

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