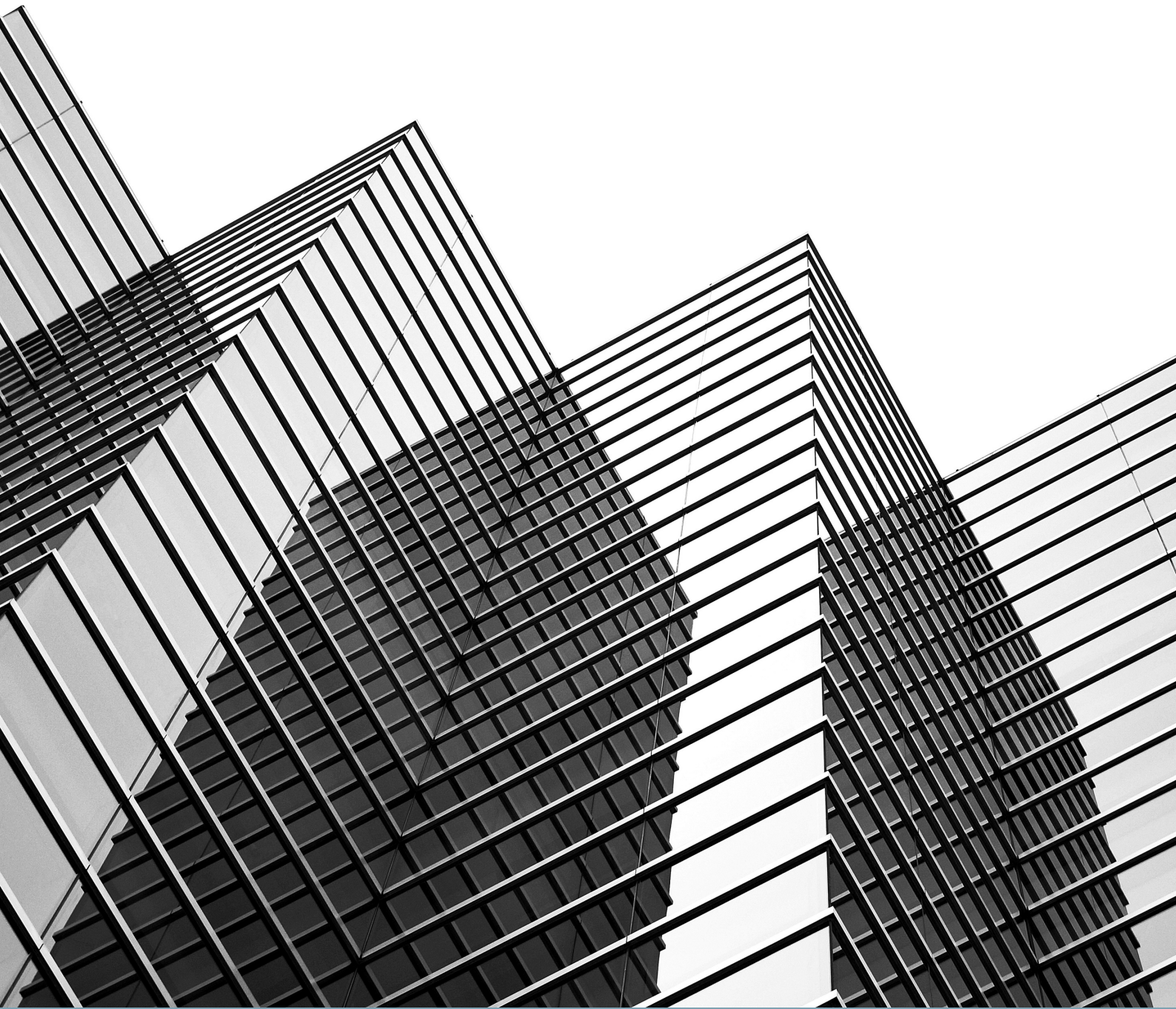


PHOENIX SPECTRUM TRADING LIMITED



STRETCH WRAP
AND
MACHINERY SUPPLY

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INTRODUCTION

PHOENIX SPECTRUM TRADING LTD

PHOENIX SPECTRUM Trading Limited (PSTL) has been on the forefront of Semi - Automatic, Fully Automatic Stretch Wrapping Technology & Stretch Film consumables, in New Zealand.

With the exclusive focus on Stretch Wrapping & Load Containment Technology, **PSTL** product line does not over complicate the solution by including non-related packaging components.

This experience & tradition allow PSTL to maintain a high-quality service by continuously out classing its competition with focused product development & strategically engineered line of continuous improvements.

Phoenix Spectrum Trading also undertakes provision of service & maintenance of all makes of both Semi & Fully Automatic Stretch Wrapping Machines.

As an Importer, and the exclusive Australasian representative for **PHOENIX Wrappers ULC Corp Inc Canada**, **PSTL** can provide any New Zealand & Australasian based business with technical support, premium quality products, and the best price guarantee.





LLDPE STRETCH FILMS

Stretch films are made from Linear Low-Density Polyethylene resins. Since its introduction in the early 70's, stretch film has become the most important method of unitising product loads for transport.

KEY FEATURES

There are many key features for this including:

- The uniform & relatively high holding force that stretch film applies to a load
- The protection from dust & damage it provides versus other unitising methods.
- The clear optics that allows for customers & shippers the ability to identify the product while also keeping it clean.
- It is the most economical method of unitising.
- Stretch Wrapping offers a wide range of options & other unitising features.

STRETCH WRAP FILM

Stretch Film Manufacturing Methods

There are two basic manufacturing methods to create stretch film. They are:

BLOWN FILM

Blown film is created by forcing molten resin through a circular die, thus creating a tube which is blown some 10 meters high. The bubble is then flattened & cut into strips so that when rolled, it produces rolls of flat film. Blown film is generally, labelled as a "tough, hazy, & noisy natured stretch film." It is best suited for more "industrial" type applications.

CAST FILM

This film is created by sending molten resin through a large extruder which forces a thin layer of film over a large drum, which is then cooled. The resulting cooled layer of plastic is then cut & rolled into rolls of stretch film. Today, most stretch films are nano, multiple layers (co-extrusions) of film. Each layer has a specific purpose or performance associated feature.

The market is roughly 90% Cast film & only 10% Blown film with the majority of the blown film catered for manual (hand) stretch wrap.

Cling (inside cling or outside cling OR two-sided cling differential)

Cling is a bonding agent added to stretch film to increase the adhesive quality of the film. This is desirable to allow the layers of stretch film applied to bond to the previous layers effectively, creating a single wall of stretch film. Depending on the desired effect, the bonding agent is applied to one (or occasionally both) sides. It is most commonly applied using co-extrusion, where the bonding agent is a layer that is co-extruded during the manufacturing process.

Stretch Film Application Cling

There are also 2 basic methods of applying stretch film to the load. Manual Hand Roll Stretch film that are usually lighter & shorter than Machine rolls, allowing ease of use.

Hand Wrap Stretch Film

Hand wrap stretch films require an Operator to attach the film to the load & then proceed to unwind the stretch film as he circles around the load. The Operator must also apply the required tension to the film to ensure proper containment & unitisation of the load. As the Operator manipulates the stretch film rolls, the size & weight must be limited for ease of use. As such, hand wrap are typically shorter in width & length to limit the weight. This method is typically used only in low volume applications. Stretch Wrapping Machines are the preferred method in high volume applications, where speed & consistency of wrapping is needed.

Machine Wrap Stretch Film

Machine stretch wrap film used in conjunction with a Stretch Wrapping Machine applies stretch film to the load. This is done by using required parameters set by the Operator. Wrap parameters are set on the stretch wrapper to vary the amount of film at the desired points of the load to provide optimum load retention. These uniformed stretch wrap parameters ensure the load is wrapped the same manner consistently.

Stretch Film Formulation (getting the right mix)

Like any formulation whether it be for a cake, pie crust or stretch film, certain ingredients are added to the formula for specific reasons. In the case of stretch film, certain resins & additives are added to provide puncture resistance, strength, adhesion, anti-static & resistance to ultra violet rays properties. **The science of stretch film is ever evolving as technology allows us to test these boundaries.** It is critical to ensure that you are buying the right stretch film blend for your specific application.

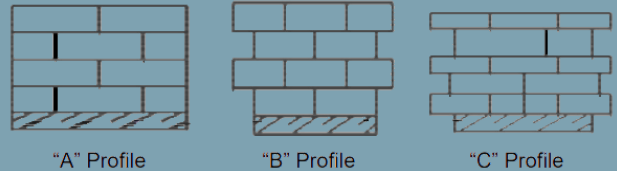
Understanding what is needed to get the required features you need out of your stretch film is very important, therefore creating your own requirements is a good way to start.

Stretch Film Performance Variables

Here are a few things to consider when determining the stretch film requirement of an application. Narrowing these variables down allows you to properly select the type, size & gauge of stretch film that will best suit the load to be wrapped.

PALLET LOAD CONFIGURATION

Stretch film & machinery vendors have broken pallet loads into 3 distinct classes, A, B or C:



“A” Profile : These loads are typically cubed with no protrusions & relatively clean. These are the easiest loads to wrap.

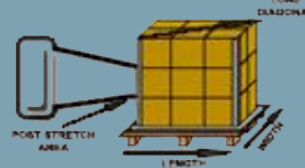
“B” Profile : These pallets may have an object protruding or do not have clean vertical sides, rather irregular sides. The puncture hazard may require a better performance film.

“C” Profile : These pallets have a very irregular load with many corners, sharp edges, or protrusions & are difficult to wrap. A higher performance stretch film will be required to handle this type of difficult load

STRETCH CONSISTENCY

Stretching using tension or a Friction Brake (Post Stretch) does not provide uniform stretch & is unable to be constant in its performance day after day. This can lead to intermittent load crushing & failures. Pre-Stretch is more controllable than post stretch, as it is typically more desirable to maximize pre stretch & minimize post (brake) stretch. Proper pre-stretching of the film is required to change stretch film properties to create the Film Force, Film Strength and most importantly Film Economies required to hold your product together during shipping.

This drag or friction between the load & the film can be produced manually (or mechanically using a wrapping machine). The mechanical roller on a stretch - wrapping machine provides a resistive force that reduces film feed rate while being applied to the load. The resulting drag creates an increase in tension between the load & film roll.



What Is Film Force & Film Feed?

Film Force is the tension imposed over characteristics of the film, over the films resistance attempt to return to its original state while being stretched. Basically, this means taking full advantage on the properties of the film - (an "Elastic Band" is a good analogy) A Low film force inhibits the film from returning to its original state. Increasing this force, will aggravate the film to stretch to high film return force. By reducing the film feed (or the length of film being fed) in comparison to what the load demands increases the film force which causes the film to stretch between the load & the film. Film feed is the ability to provide the exact amount of film required to wrap a load while keeping the tension on the film constant. As the film is applied over the load - the supply of film shall vary to the demand of the load. Controlling this constantly varying demand is critical for a proper operation. Without this, the stretch film cannot perform the task required.

What Is Pre-Stretch?

The film threads past two rollers (Primary & Secondary) in which, the secondary rollers' rotational speed is faster than the primary, thus stretching the film between the two. Pre-Stretch is the process that allows stretch film to be "stretched before" (pre) being applied to a load.



What is Post Stretch / Brake Roller Stretch?

Post Stretch is directly proportional to the amount of film force applied. It is the stretch in the film created by the film tension against the load being wrapped. By applying Brake (Friction) force over the film roll from easily being fed / released - provides elongation of the film. Increase the film force & post stretch will increase. Increase friction / resistance & you will increase the Post Stretch.

Why Pre Stretch?

Mechanically and digitally monitoring (or delaying) the dancer roller which measures the speed of film demand to the load that increases the force. As you stretch the film, the tensile strength increases as such it is significantly twice stronger. It stops further elongation & provides strength & proper holding force.

When a pre-stretched film is applied over a load, minutes later you may observe that the film has retracted, this is due to the film's elastic (memory) returning to its original properties. **It is this film memory (like an elastic band)** that differentiates stretch film from other means of unitising. This "settling in" that occurs during shipment can loosen other methods of unitising, where stretch film memory takes up the slack & continues to secure the load. Film Memory is the single most important reason for pre-stretched film!

How Is Film Pre-stretched?

Film is pre-stretched when it is elongated mechanically between the primary & secondary rollers inside the film carriage. Due to the gearing ratio, speed & diameter between these two rollers, a pre-stretch ratio is determined. As the traction of the Secondary rotates faster than the Primary roller, the film becomes elongated between them & stretches. Note: There are various pre-stretch ratio offered in the market. Verify machinery supplier claim against **actual percentage vs film neck down** over pre-stretched results.

Stretch Wrap Machine Performance:

You simply cannot ignore stretch wrap machine performance when selecting a film. There is a **"marriage"** between the stretch film & the stretch wrap equipment that decides the overall performance of

the stretch film. There is simply no value in purchasing a high-performance stretch film because of its properties, if your stretch wrap machine cannot stretch the film to the point where it extracts those value-added properties.

Either you must ensure the stretch wrap equipment is at its optimal performance to take advantage of the high-end stretch film or you should match the stretch film to the existing performance of the stretch wrap equipment.

FILM ECONOMIES

The cost on stretch film is reduced drastically compared to wrapping a load with film that has not been pre-stretched; furthermore, more than 80% of stretch wrap equipment we have tested are performing below acceptable levels, resulting in tens of thousands of dollars in wasted stretch film.

IT ONLY TAKES A FEW MINUTES TO VERIFY

Although there are applications where low pre-stretch levels may have some benefit, the vast majority of applications should have a minimum of 200% (1 = 3) pre-stretch. By simply wrapping a load & verifying it's holding force and as well as weighing the stretch film used against the number of revolutions, we can determine the level of stretch provided versus cost incurred. Although this test is fairly-accurate, the result will allow you to quickly determine if a problem exists on your current film supply or your stretch wrapper.



Helping You Find The Best Solution for Your Unique Wrapping Need



PHOENIX STRETCH WRAPPING MACHINERY

A Tradition of Quality:

For over three decades, PHOENIX Wrappers has had only one goal; to secure and protect our customers products & pallet loads. PHOENIX machines are built solely in Laval, Quebec, Canada.

We are one of the very few companies, who until today, have meticulously purpose built every automatic stretch wrapping machine to suit a customers unique & diverse requirements.

Most companies these days try to force a model that is already in their range to have the customer adapt to an existing design.

PHOENIX SPECTRUM TRADING LIMITED

MACHINES THAT YOU CAN DEPEND ON

We build excellent built to last, reliable machines. Having earned the reputation in the industry as "Built Like A Tank". Whether it is fertilisers, sand, chemicals, bags, bottles, cans, pails, cardboard or products that need to breathe, PHOENIX has provided a solution. Extra heavy duty components are deployed in our designs to assure that these systems work at peak efficiency with minimal down time **day in day out, year after year.**

LONGEST WARRANTY IN THE INDUSTRY

Phoenix offers the longest warranty in the Industry - **5 years.**

PHOENIX patented PRE-STRETCH SYSTEM

The super safe, easy load -No Thread Power Pre-Stretch film carriage with pinch rollers is standard equipment. This safely prevents operator injury during loading & makes film changing extremely convenient & simple. Our P.U compound rollers carry a lifetime warranty. MATERIAL SAVINGS - Patented 245% (1 = 3.5) pre-stretch system as standard.

CONSISTENCY

Manually applying Stretch film will not optimise films load containment properties. PHOENIX allows the operator to preset the force to load so that each load is wrapped the **same uniformed manner.**

PHOENIX machines executes the exact same pattern for each load.

The film delivery system even stops at the top of the load for top cover application (if required) , you are free to determine the kind of wrapping requirement /pattern that would suit you by a simple push of a button.

REDUCTION IN PRODUCT DAMAGE

When hand wrapping, no two loads are wrapped alike & usually substandard.

Workers fatigue will result in varying wrapping patterns & wrapping tension, especially in high volume operations. The substandard results provide the likelihood of shipping damage & returns.

LABOUR SAVINGS

The advantages of being able to set an automatic wrapping pattern allows Operators to perform other tasks, resulting in a more efficient & effecting workers.

USER FRIENDLY

PHOENIX builds extremely "user friendly machines". **We do not over complicate things with high-tech devices / complicated controls & programming required.**

NON PROPRIETARY Parts & Support

Acknowledging the fact that our machines are supplied throughout the world, Phoenix machines are built with non proprietary parts. Machines are supported by a network of authorised distributors and regional zone directors.

SAFETY

Having an Operator doing manual wrapping bend over & walk in a circular repetition doesn't make much sense. This increases the risk of disorientation, injury & back problems.

PRODUCT RECOVERY COST

Machine wrapping reduces the risk of potential damage to your products & virtually eliminates clean up or return transportation costs. By preventing product damage, you are essentially increasing customer goodwill by guaranteeing "just In time" delivery satisfaction. Increasing good customer relationships.

SOLID WASTE REDUCTION

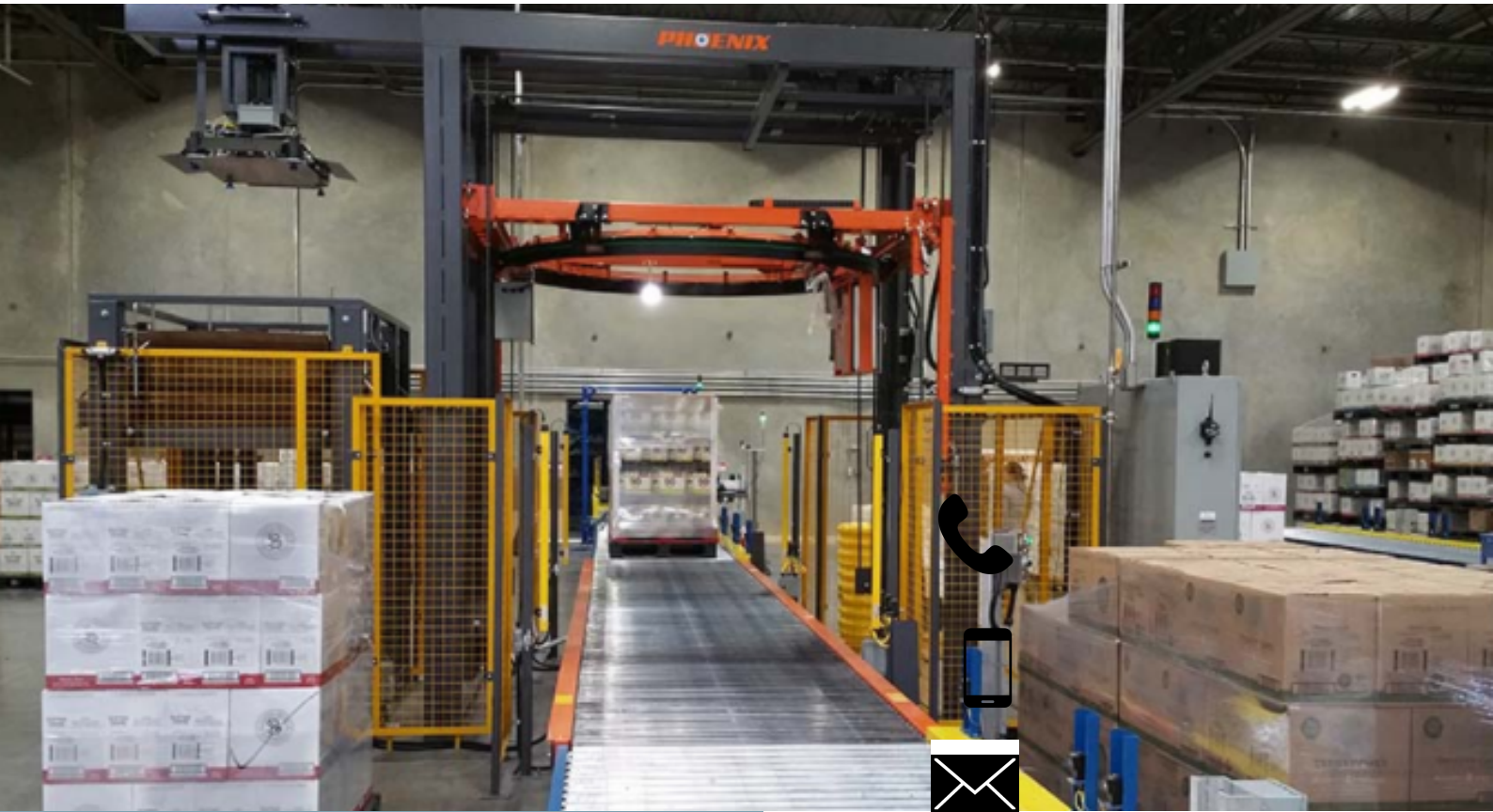
This has become an important issue as disposal costs continue to rise. Logically, using only (1/3) as much film to do the same wrapping job will reduce the end users film disposal by 60-70% respectively. Warehouse utilizing strapping have found that stretch wrapping, is less likely to entangled, cut, injure & is much safer & cheaper for disposing.

Multitude of OPTIONS:

PHOENIX Machines come with a multitude of options, weigh scale package, top platon, film heat seal, film roping, film banding and etc designed to save you time, material handling & floor space.

The Right Machine for You:

With over **23 standard models** of semi-automatic stretch wrap machines and high speed Turntable, Rotary Arm, Rotary Ring (**up to 150 pallets/hour**). You can be rest assured that we have the right machine for your application!



PHOENIX DELIVERS

THE ABILITY TO COVER BOTH ENDS OF THE SPECTRUM

At Phoenix Spectrum Trading Limited, We are focused solely on Stretch Wrapping Equipment and Stretch Wrapping Films.

As an importer, Distributor & Zone Director of PHOENIXWrappers Corp Canada, we can provide any New Zealand or Australian based business with the best logistical & commercial solution for all your Stretch Wrapping & Pallet Load Containment requirements.

We are indeed part of a worldwide team of packaging experts who provide unparalleled approach to Customer service, automation, packaging solution, knowledge and know how on ,retrofits, upgrades, repairs supported by qualified personnel.

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Territory Map:



HIGHLIGHT OF SERVICES OFFERED BY PSTL

STORAGE & WAREHOUSE FACILITY

We currently have two administrative offices
We have 3 x 3PL sites; Auckland, Palmerston North & Christchurch.

TECHNICAL SERVICE & CUSTOMER SERVICE

Our core business is service & upkeep of Stretch Wrapping machines.
Therefore, we are not only capable of being able to supply Stretch Films; but, we are also to attend to your technical service & upkeep of your stretch wrapping equipment. We have a network of Service Technician / Representative strategically located at almost all sites,

SUPPLY & MAINTENANCE OF STRETCH WRAPPING MACHINERY

Being the exclusive representative of one of the largest stretch wrapping machine manufacturers, PHOENIX Wrappers Corp (Canada) in Asia Pacific. We can provide you with direct manufacturers pricing for such equipment.

Being a mid sized company, we are able to provide you with the necessary attention and personalised service.

We also provide “on call” or “preventive maintenance” service schedules to service any existing stretch wrapping equipment. A detailed report will be provided at every inspection carried out on each wrapping machine. We will also provide a periodic service & site visits to all your sites.



Back up & Emergency Stock

We carry a good inventory and sufficient stock of films at strategic locations to support you.

FILM supply & Specification:

Cast Film Technology

Cast Film performs better in all conditions (especially in cold environment) as apposed to Blown Film. The micron on the Cast Films are consistent and provide longer length.

USFDA Food Grade

The Cast films that we supply are **USFDA Food Grade approved.**

New Generation

Thinner High-Performance Cast Films

LLDPE stretch Films have evolved over the years. **The new generation thinner / Multi layer Nano / High performance films are manufactured in state of the art manufacturing facilities.** These new thinner high-performance films are multi (67 layer film) are capable to higher stretch levels while maintaining excellent clarity, greater puncture resistance, excellent memory retention & holding force.

Not only these multi layered films are stronger, they also offer the advantage of **with folded-edges** (WFE).

This feature provides greater strength, reinforcement & retention to the loads when wrapped. The WFE also prevents damage & film wastage on edges roll edge.

The WFE12mu can effectively perform as good as the 23/ 20/ 17/ 15 & 12mu standard hand roll films.

As a result, the effective cost per roll (that is up to 2 x longer in length), is easier for your Operators to handle & maneuver during a manual wrapping process.

The WFE is currently being used vastly throughout the country, replacing most other conventional & pre-stretch film rolls.

There is an added sustainable advantage to the environment when we effectively use less film.

Training Resources On Machine Wrapping & Hand Wrapping

This is where our expertise would be most beneficial for you.

We will be your main point of contact to personally attend, resolve and rectify these issues effectively.

We will be able to address almost all your concerns & reservation on films, technical service & questions, wrapping concepts and provide necessary training, solutions & guidelines.

TERMS

PRICING

Our pricing is subject to NZD - FOREX & ISIS
Pricing is subject to ISIS Resin Index
Any variations are to customers account

PRICE NOTICE

A 3 week (21 days) advance notice will be issued on any variations of film pricing pricing indicated.

PAYMENT

20th of the Month Following

CANCELLATION POLICY: STOCK STATUS (CONTRACT SUPPLY)

As we are required to import and cater for specific film grade & specification solely for certain sites in New Zealand.

A minimum of 8 weeks (2 months) written notice for cancellations is required.

DELIVERY SCHEDULE

We maintain an optimal level of inventory and will be able to supply immediately upon confirmation.





ENVIRONMENTAL AND SUSTAINABILITY



SOLID WASTE REDUCTION

Combined with the PHOENIX Wrappers high efficiency patented pre-stretch film delivery system and high performance multi layer films. You will not only save money, but will eventually be using less stretch film with every load stretch wrapped.

Film waste has become an important issue as disposal costs continue to rise. Logically, using only (1/3) as much film to do the same wrapping job will reduce the end users film disposal by 60-70% respectively.

Phoenix Spectrum Trading Limited has developed the first and only program to collect & recycle used stretch films. We have partnered with **Aotearoa NZ Made Ltd**, a respected manufacturer and supplier of commercial film products.

Together we have formed an alliance to collect, recycle and reprocess used stretch film from most sites that we supply films that **divert them to NZ landfills**.

These used stretch films are brought back to the main plant in central North Island and put through a system of reprocessing films to granules and eventual products that make recycle material.

The end products of these recycled films are rubbish bags, bin liners, builders underlay and damp-proof film - while at the same time promoting New Zealand made products.

*Depending on the volume of used stretch film to be collected, a bundling/ compressor unit may be required at a site where this can be collected for recycling.