

# PALLET STRETCH WRAPPER SELECTION

## *Answering the following questions:*

- ✓ Why Purchase A Stretch Film Machine?
- ✓ What Are The Differences Between Models?
- ✓ Questions To Qualify The Correct Machine?
- ✓ Machine Options For Consideration?
- ✓ Cost Justification!

### **Why Purchase A Stretch Film Machine?**

The primary function of a Pallet Stretch Wrap Machine is to apply stretch film around a pallet to provide support for the products so that they do not tip, spill, or otherwise become damaged during transportation or storage.

There are several benefits of using a stretch film machine over wrapping a pallet by hand:

- ✓ Provides professional looking, quality packaging with secure and consistent wrapping
- ✓ Increases wrapping speed over hand wrapping with lower labor and material costs
- ✓ Improves employee safety with decreased fatigue, bending and tripping
- ✓ Decreases damage in transport and protects from obvious pilferage
- ✓ Operator can perform other tasks while pallet is wrapping

After a review of your current costs, you can examine the savings and benefits of a stretch wrapper. Most companies can realize a fast return on investment even if they wrap only 10 or 15 pallets a day!

### **Description of the Different Models**

Stretch wrap machines are used in distribution centers, manufacturing companies, fulfillment operations, printing operations or companies that are moving or shipping products on pallets. Stretch wrappers are available in different styles and levels of automation. Even the simplest stretch wrap machine is an improvement over the inconsistent, unsafe, and labor intensive method of hand wrapping.

Automated stretch wrappers are divided into two main categories: Rotary Turntables and Rotary Arms. Rotary turntables have a rotating platform where the pallet load is placed. As the table rotates, the stretch film is carried up and down a tower on a film carriage. Rotary turntables are available in either a Low Profile or High Profile configuration. With Rotary arms, the pallet is placed on the floor and the arm rotates around the load, dispensing the film as the arm circles around the pallet load.

Stretch wrap machines are available as Manual, Semi-automatic, and Fully automatic (operatorless) wrappers. Manual machines are completely operator controlled. The operator attaches the film to the load and manually controls the release of the film and the up & down movement of the film carriage. Semi-Automatic stretch wrappers require an operator to attach the film to the pallet load, but the machine programming then proceeds with wrapping the pallet automatically. Fully Automatic wrappers require no operator control. Everything from attachment of the film to the load, to the wrapping and final film cutting is automated. An operator is required to transfer the loads on and off of the table or the pallets can be fed automatically into the wrapper from a conveyor system.

Any one of these styles performs the function of wrapping pallets with stretch film. However, there are specific benefits for each given model:

**Low Profile Turntable** - This type of machine has the turntable very low to the ground, usually 3" - 4" from the floor to the turntable. This enables a ramp to be placed against any one of the three sides of the base frame allowing you to load the pallet on the turntable with a pallet jack, electric walkie jack or forklift truck. If you are using an electric power walkie, a heavy-duty ramp and ramp extension will be required. This is due to the heavier weight and the longer forks on the electric walkie trucks. The opposing sides (without the ramp) can be loaded/unloaded with a forklift truck at any time without interfering with the hand truck ramp. Low profile machines can also be set into a pit in the floor to provide floor level access to the turntable without the use of a ramp.



**High Profile Turntable** - The high profile machine has a raised turntable, usually 11" - 12" from the floor to the turntable, and can only be loaded with a forklift truck! There is no possibility of loading a high profile machine with a pallet jack. The high profile machine can be interfaced with a pallet conveyor line to feed pallets directly onto the wrapping machine turntable.



**Rotary Arm Machines** – The rotary arm machine is designed to wrap pallets directly on the floor. The arm rotates around the pallet, so the pallet does not move. You eliminate the need to push a load up a ramp by hand to place it in position for wrapping. This system is very effective for loads that are either very heavy, or light and unstable, or irregularly shaped loads.



There are also specific benefits for the three levels of automation available. Increasing levels of automation provide for faster turnover and less labor required for the wrapping process:

**Manual** – The manual wrapper requires an operator to be present and active during the entire wrapping process. The operator attaches the film to the pallet, activates the powered turntable and manually moves the counterbalanced film dispensing carriage up and down to cover the entire pallet load with stretch film. This is the least expensive machine but requires the most labor. It does provide a tighter and more consistent wrap than is possible by hand wrapping. The manual machine can also eliminate most of the ergonomic problems of bending, dizziness and tripping common with hand wrap operations.

**Semi-Automatic** – The semi-automatic wrapper just requires the operator to attach the film to the pallet and press a button, and the pallet is then automatically wrapped to the specifications that are preset on the PLC controller. Most machines have adjustable settings for wrap up or wrap down, number of top and bottom wraps, reinforced area wrap, top cover pause, vertical carriage speed, and turntable speed. The operator is able to perform other tasks while the pallet is wrapping and returns to cut the film, readying the machine for the next cycle.

**Fully Automatic** – The fully automatic machine is designed to wrap pallets without an operator present. This is usually accomplished in two ways. The wrapping cycle can be activated with a pull cord or remote control from the forklift driver or pallet jack operator. Or, the machine can be fully integrated into a run of pallet conveyor to feed pallets, wrap them, and discharge them automatically. The machine is equipped with a film clamp and automatic cut-off mechanism. The clamp holds the film at the base of the pallet, releasing after the wrapping process begins. Then, when the wrapping process is complete, the clamp grabs the film and the film is cut from the wrapped pallet. The pallet is ready to be removed and replaced to begin the cycle again.

## Machine Options For Consideration

Here are some typical options you can consider for your Stretch Film Wrapping Equipment. Be sure to consult with a qualified sales representative for any specific application questions.

**Pre-Stretch Film Carriage:** Pre-stretches the film from 50% to 300% before it is applied to your load. You achieve a tighter wrap using less film. Film savings are significant compared to manual wrapping.

**Ramp:** Used to load product on a low profile machine with a hand pallet jack truck.

**Ramp Extension:** Required with longer electric power jacks and extended fork length.

**Scale Package:** Increased through-put is possible with a scale integrated into the stretch wrapper.

**Dual Turntable:** This option provides two turntables, using a common tower and film carriage. This allows you to wrap one load while unloading/loading product on the other turntable, dramatically increasing speed and efficiency during peak periods.

**Auto Film Cutter:** Cuts the film automatically after your load has finished wrapping.

**Increased Tower Height:** Enables wrapping of higher than standard pallets.

**Base Extension:** If you are wrapping a very large pallet, then a base extension is required to move the turntable further away from the mast and carriage. This larger radius prevents the load from hitting the film carriage tower. The rotary arm machine is an alternative solution.

**30" Film Carriage:** This option changes the standard film roll post from 20" to 30", allowing you to use 30" film for wrapping as well as 20" film. The 30" film is used to increase the production speeds or provide additional wrap coverage.

**Top Platen:** Top platens are used to hold cartons or other products together while the pallet is rotating.

## **Cost Justification for Purchasing a Pallet Stretch Wrapper**

An approximation of your current hand wrapping costs is given by the following formula:

$$\mathbf{PD \times WT \times HR \times 4 = \text{Yearly LABOR Cost for Manual Wrapping}}$$

PD = # of Pallets wrapped per Day.

WT = Wrapping Time (in minutes) for a single hand wrapped pallet.

HR = Hourly Rate of worker wrapping by hand (be sure to include benefits & overhead costs)

An approximation of film savings using a wrapping machine with a pre-stretch film delivery system:

$$\mathbf{YP \times .65 = \text{Yearly Savings of machine wrapped over hand wrapping}}$$

(YP = Yearly Purchases of hand wrap film)

## **Information Required to Choose the Correct Machine**

These questions are critical for any supplier in determining the most appropriate machine for your application: *Low Profile, High Profile or Rotary Arm; Manual, Semi or Fully Automatic.*

What is the current method of wrapping pallets? *None / by Hand / by Machine*

How many pallets do you wrap? *per Hour / per Day / per Week*

What are the pallet dimensions? *Length x Width x Height / Range / Most Common*

What are the pallet weights? *Min / Max / Most Common*

What is the load description? *Stable / Unstable / Regular Shape / Irregular Shape*

How do pallets get to the stretch wrap machine? *ForkLift / Pallet Jack / Electric Jack / Conveyor*

What is the environment of the machine? *Clean Dry / Dusty Dry / Damp / Wash Down*

Will the machine to be completely operator-less? *With Conveyor / Without Conveyor*

The answers to these questions will enable a packaging specialist to determine the proper machine for your application and to provide a cost justification proposal for the equipment.

For questions or help with Pallet Stretch Wrapping Machines:

**Call Preferred Equipment Resource at 800-711-8698,**

**e-mail us at: [info@prefEQ.com](mailto:info@prefEQ.com),**

**or visit our website: [www.prefEQ.com](http://www.prefEQ.com).**