

Q2 - Pre-stretch vs Conventional Stretch

Conventional

Non pre-stretch film dispensers typically use *hand-wrap*, *machine wrap*, or *pre-stretched* films and can stretch the film off the roll up to an absolute maximum of 150% of the film's original length (although this level can rarely be accomplished without pulling the load off the table or damaging the product). It **emulates the application of common hand wrap by an operator**. This type of stretching provides only "**post-stretch**" because all of the stretching of the film occurs outside of the film dispenser.

Some applications call for the application of a "wrap" that is not stretchable, and this type of conventional film dispenser is preferred. An example of this is the application of "netting" used in the fresh produce food industry where air flow through the product load is important to negate condensation while preserving load integrity.



Pre-stretch



Most pallet wrapper models (regardless of manufacturer) are equipped with a **pre-stretch film dispenser**. Also known as a "**powered pre-stretch film carriage**", a pre-stretch film dispenser pulls the specially formulated "machine wrap" off of the roll and stretches it within the film carriage itself using two rollers (powered by a motor) that are running at different speeds. This effectively takes 1 foot off the roll and turns it into 3 feet coming out of the carriage. This feature of stretching the film in the carriage, instead of after it, is the root of the name "pre-stretch" (vs. "post-stretch").

The differential in these roller speeds is expressed as "**pre-stretch level**". In the above example of 1 foot becoming 3 feet, the pre-stretch level is 200%. Some film carriages are geared to increase this level up to ~300%, albeit at this level specially formulated films may be required. Most film carriages on new wrappers today are geared between 200% to 250%.

With a pre-stretch film dispenser, the "post-stretch" is still available, and is controlled by the operator using a control. It can be as tight or as loose as is necessary.

The **primary advantage** of pre-stretch is the **film savings** it provides. The conventional industry wisdom is, that in comparison to hand wrapping, **when wrapping between 25 to 35 loads per day, a machine with pre-stretch can pay for itself in film savings alone in approximately two (2) years**. If you are using hand wrap now, you could look at your current "hand wrap" film costs and expect that these costs would likely be reduced by 30% to 50%, with a pre-stretch wrapper.



The **secondary advantage** of pre-stretch is **better load containment**. Simply, a **better wrapped load!** This comes from the fact that the film has elastic properties. Even though the film has been stretched to 3+ times it's original length and applied to the load, **over time it contracts** a little, so that as the wrapped load sits there in the next few hours to a couple of days, the wrap slowly tightens on the load, **securing it even better than it was when originally wrapped!** Some users have a machine with pre-stretch, even though they do not have high production volumes, simply because the combination of the consistency of a machine wrapped load (vs hand wrapping by operators), with improved load retention (provided by pre-stretch) addresses their issues of loads falling apart in shipment.

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