



SIAT Motorized Pre-Stretch Technology

Viking DM™ & Viking PW™ Film Carriages

DATASHEET

SAFE • SUSTAINABLE • SMART

SIAT pre-stretch systems ergonomic and smart design allows a safe reel loading as well as a fast and easy set-up, giving the possibility to reach pre-stretch values from 100 to over 400%, guaranteeing a huge film saving and optimization.

Viking DM™: is a carriage with two motors characterized by higher pre-stretch range (from 100 to over 400%), and with the possibility of adjusting tension and pre-stretch from the panel, making gear/gasket kits unnecessary. The Viking DM™ film Carriage is recommended for all industries, which have pallets composed of different product categories and who need to differentiate the thickness of the film according to the different areas of the pallet.

Viking PW™: is a motorized carriage with the possibility of regulating the tension from the panel, while the pre-stretch needs to be defined before or modified through Gear Kits. A wide range of additional gears is available to meet any application need ranging from 100 to 350%, going up every 25%, while 200% gears Kit is the standard. The Viking PW™ carriage is recommended for all applications that need a fix pre-stretch.

Both carriages do not require any threading of the film. In fact, the film passes in front of the rollers, with a spring roller system that guarantees perfect adhesion of the film to the rollers, with consequent reduction of the necessary film and therefore absence of the slippage phenomenon. This also guarantees a reduction of the required maintenance, thanks to the simplification of the process.

KEY FEATURES

- ✓ **Safety First** – SIAT Motorized Pre-stretch Systems incorporates several safety features as standard to protect the operator:
 - the lexan cover prevents the operator from reach the rollers with the gate closed
 - safe and fast loading
 - double latch safety gate lock
 - electrical interlock that cuts power when the carriage access door is opened
 - carriage descent obstruction plate that stops it when descending, if there is a foreign object
- ✓ **No film waste** – powered pre-stretch system & independent tension control to deliver stretch film with the maximum accuracy.
- ✓ **Increase and optimize production capacity** – protects your product by handling and transportation thanks to customized settings and simple set-up.
- ✓ **Flexibility** – fixed pre-stretch ratio easy to be changed. Adjustable film tension adjustable control panel.
- ✓ **Electronic control of the film tension** - with analogy sensor
- ✓ **Carbon footprint and total cost reduction** - pre-stretch film drastically reduces the Carbon footprint of film compared to wrapping a load with unstretched film, such as in manual wrapping. This additionally means that the amortization of the machine can reach up to 6 months.
- ✓ **Decades of experience** – our success story on pallet wrapping dates back more than 30 years. In fact, in 1988 the company launched the first pallet wrapper
- ✓ **Italian production** – we build all our machinery in Italy, using high quality components.
- ✓ **Wide range of customization options** – we can study personalized solutions.

CARRIAGES



The possibility of increasing the pre-stretch and the spring roller system gives the opportunity to significantly reduce the use of film, thus reducing the environmental impact.

DATASHEET

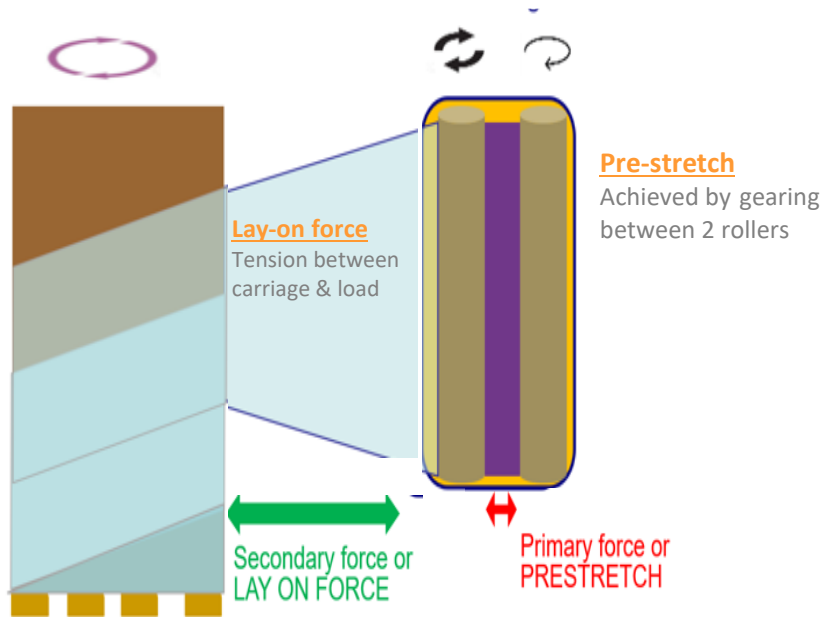
PRE-STRETCH & LAY-ON FORCE TENSION

What is pre-stretch and lay-on force tension and why are they important?

The carriage on a pre-stretch machine is composed of the roll of film and several rollers that deliver the film during the rotation of the pallet. The film is stretched by passing through the motorized rollers which rotate at two different speeds.

SIAT carriages can stretch the film over 400% of the original length, thus reducing the amount of film needed to wrap the pallet, eliminating film waste. However, this does not affect the stability of the pallet because the film has a memory, once deposited on the pallet, it returns to the non-stretched state, allowing to increase the holding force.

The lay-on force is instead determined by the tension that exists between the carriage and the pallet. A strong tension is advisable for heavy loads that are difficult to crash, while a low tension is advisable for more delicate products such as cereal boxes or plants.



| FILM SAVINGS EXPLANATION | | |
|--------------------------|----------------------|------------------------------|
| Pre-stretch | Original Film Length | Film length after stretching |
| 0% | 1 | 1 |
| 100% | 1 | 2 meter |
| 200% | 1 | 3 meter |
| 300% | 1 | 4 meter |
| 400% | 1 | 5 meter |

ROPING SYSTEMS

Two **roping** configurations are available on the Viking DM™ and Viking PW™. Roping reduces the width of film to a narrow band improving load stability and reducing film consumption:

- Roping from top of carriage: full roping (electrical system) to fix your product to the pallet with a narrow cord. The end of the cycle is carried out with the full band.
- Roping from bottom of carriage: partial roping reducing film width to a band (pneumatic system)



Viking DM™ & Viking PW™ Film Carriages



DATASHEET

| Model | Viking DM™ | Viking PW™ |
|----------------------|--|--|
| Motors | Powered with 2 independent motors | Powered with 1 motor |
| Pre-Stretch values % | Powered with pre-stretch ratio adjustable by control panel 100-400% | Powered fixed gears pre-stretch 200% as standard (kit on range 100-350% as option) |
| Film Thickness | 8 ÷ 35 µm | |
| Film roll height | 500 mm as STANDARD – (optional possibility to manage 250 and 750 mm) | |
| Roll core diameter | 76 mm | |
| Film roll weight | 16 – 27 kg | |
| Consumption | for a load with a circumference of 4 meters, doing 15 film revolutions and applying a pre-stretch of 300%, the saving is of 75% consisting in about 45 meters* | for a load with a circumference of 4 meters, doing 15 film revolutions and applying a pre-stretch of 200%, the saving is of 67% consisting in about 40 meters* |
| Roping (option) | a. Full roping (top) b. Banding (bottom) | |

| Viking DM™ | Viking PW™ |
|--|--|
| Empirical parameters test to calculate the saving | |
| 300% Pre-Stretch | 200% Pre-Stretch |
| Stretch film: High Pre-stretch Quality µm 23 | |
| Pallet size (L x W x H): 1200 x 800 x 2.050 mm | |
| total of 15 film revolutions | |
| Circumference of load (not pallet): 4 m | |
| Film width: 500 mm | |
| Theoretical unstretched weight 550 grams | |
| Test results | |
| Film weight per pallet: 138 grams | Film weight per pallet: 184 grams |
| Saving -67% of film vs. unstretched | Saving -75% of film vs. unstretched |
| 412 grams less plastic in every pallet! | 366 grams less plastic in every pallet! |

OPTIONS & ACCESSORIES



- Photocell for dark or reflective surfaces
- Film cutting punch
- Viking DM™ & Viking PW™ carriage for film rolls with 750mm height

MORE DETAILS

Videos and further information can be found on our website or SIAT Youtube channel.



SAFE • SUSTAINABLE • SMART

SIAT.com