



UPGRADE

**UNWINDING FILM
SYSTEM WITH
SERVO-DRIVEN
SHRINK-WRAPPER**



FILM UNWINDING AND STRETCHING

The upgrade consists of the replacement of the film unwinding system with a new equipped with servo-driven.

The system is completely electronic: starting from the reel diameter, by two sensors that communicate with PLC, it calculates the length for each turn giving only the necessary film to wrap the packs. In this way the reel tension is constant, avoiding tears or stretching.



Object	Standard version	Upgrade with brushless
Film unwinding	Unwinding film reel directly from cutting knife.	Managed by PLC, it delivers only the proper quantity of film necessary for each wrapping cycle.
Film stretching	By mechanical cam + proportional valve who drives a pneumo-hydraulic brake.	Managed by PLC, the film tension is always constant, avoiding tears, stretching or missing cuts caused by a reduces tension of the film.

TECHNICAL FEATURES

Brushless drivers implemented directly in the machine's cabinet.

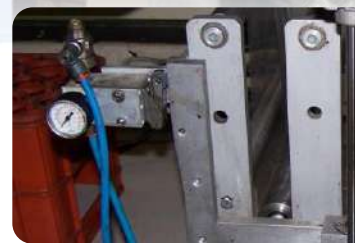
Reel's hydraulic brake system replaced by brushless system

Reel's hydraulic brake system pilot replaced by position transducer.

BEFORE

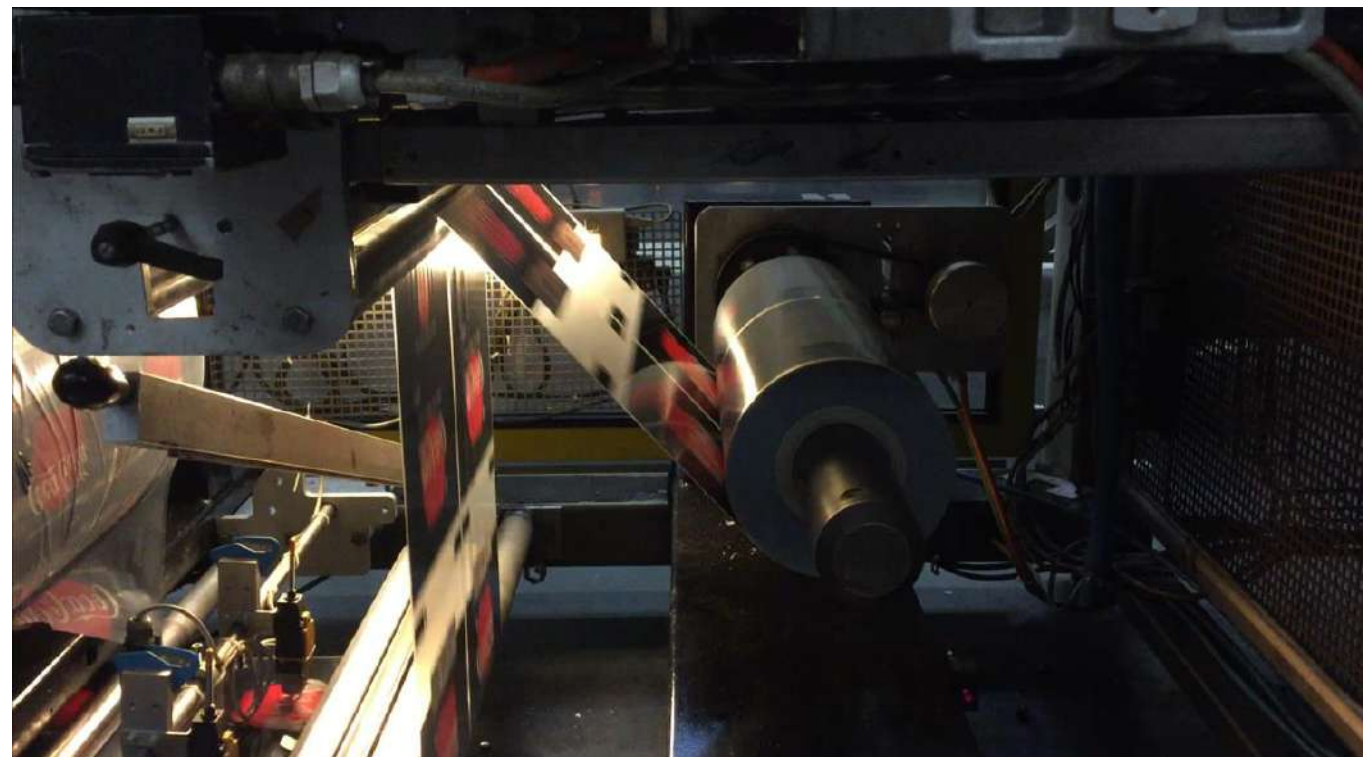


AFTER



ADVANTAGES

- The system allows for reducing the film thickness, granting a considerable cost-saving on the material (see the table).
- The system solves the problems caused by the inconstant film unwinding.
- The system solves the problems of film tensioning due to the change in the reel circumference.
- Available for single, double, and triple lane shrink wrappers of several brands and models.
- The system is equipped, for double and triple lanes, with the electronic centering film device that detects the lateral shifts of film, compensating them immediately.



Economic advantage due to the film thickness reduction

Bottle	Format	Days	H/days	Bottles	Bundles
PET 1,5 L	3x2	260	14	50.000.000	8.333.333

Film cost comparison for 50.000.000 produced bottles/year

Film type	g/bundle	€/kg	Tot k/year	€/year	Cost saving	€/medium/bottle
LDPE 70micron	28	1,60	233.333	373.333,33		0,00747
LDPE 60micron	24	1,60	200.000	320.000,00	53.333,33	0,00640
LDPE 50micron	20	1,60	166.667	266.666,67	53.333,33	0,00533
LDPE 40micron	16	1,60	133.333	213.333,33	53.333,33	0,00427

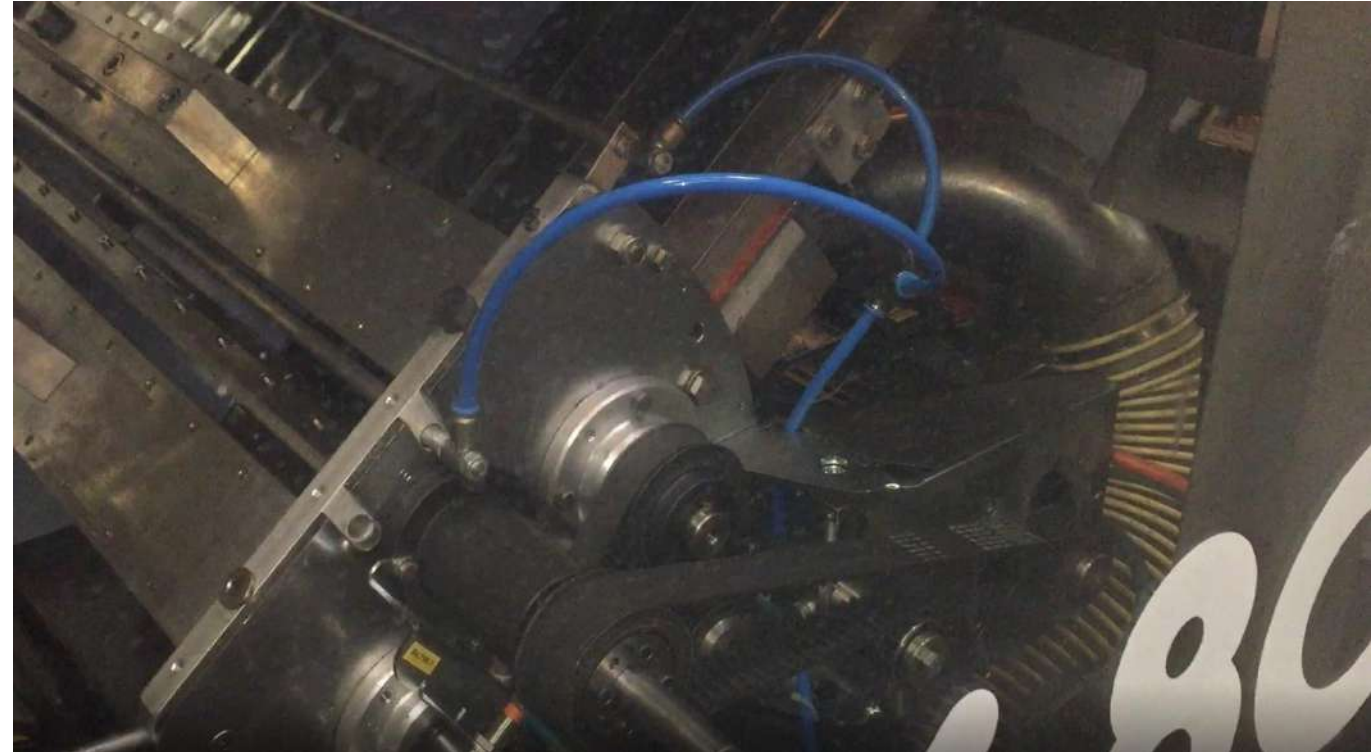
CUTTING GROUP SYSTEM WITH SERVO- DRIVEN

What is the upgrade?

- **Replacement of the film cutting system with a brushless motor** that makes the rotation of the blade independent of the film feed speed.
- **Brushless servomotor dedicated to film cutting**, guarantees greater cutting accuracy, essential for the printed film, reducing mechanical components subject to wear

ADVANTAGES

- Cutting operations are more efficient and allow you to use films with different thicknesses.
- With the elimination of electro-pneumatic components, maintenance time and costs are reduced.



Object	Standard version	Upgrade with brushless motor
Cutting knife	Susceptible to the rate of advancement of the film	Makes the movement of the knife independent of the film unwinding speed, improving film cutting quality and efficiency

THANK YOU.

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