

Innovative
engineering for..EXCELLENCE...

PELICAN

**EXTRUSION LAMINATING
MACHINE**

FOR FLEXIBLE PACKAGING

300 mpm



Innovative
engineering for..EXCELLENCE...

HIGH EFFICIENT
Longer Dryer

UNIQUE
service
SUPPORT

STANDARD TECHNICAL SPECIFICATION

• Maximum web width	1300 and 1400 mm
• Chill roller diameter	600 mm
• Maximum mechanical speed	300 m/min
• Web tension range	60 to 400 N
• Standard drying hood length	5.0 / 6.0 mtr
• Maximum reel diameter for U/W & R/W	1000 mm
• Coating web width adjustable range	700-1400 mm
• Coating thickness range	08-30 µm



WHY EXTRUSION LAMINATION

Converters who want to enhance and upscale lamination quality and increase productivity at low conversion cost.

A step towards producing more sustainable plastic products and not only lighten the environmental footprint but also by producing recyclable and upcycle goods reduces the load on the waste management.

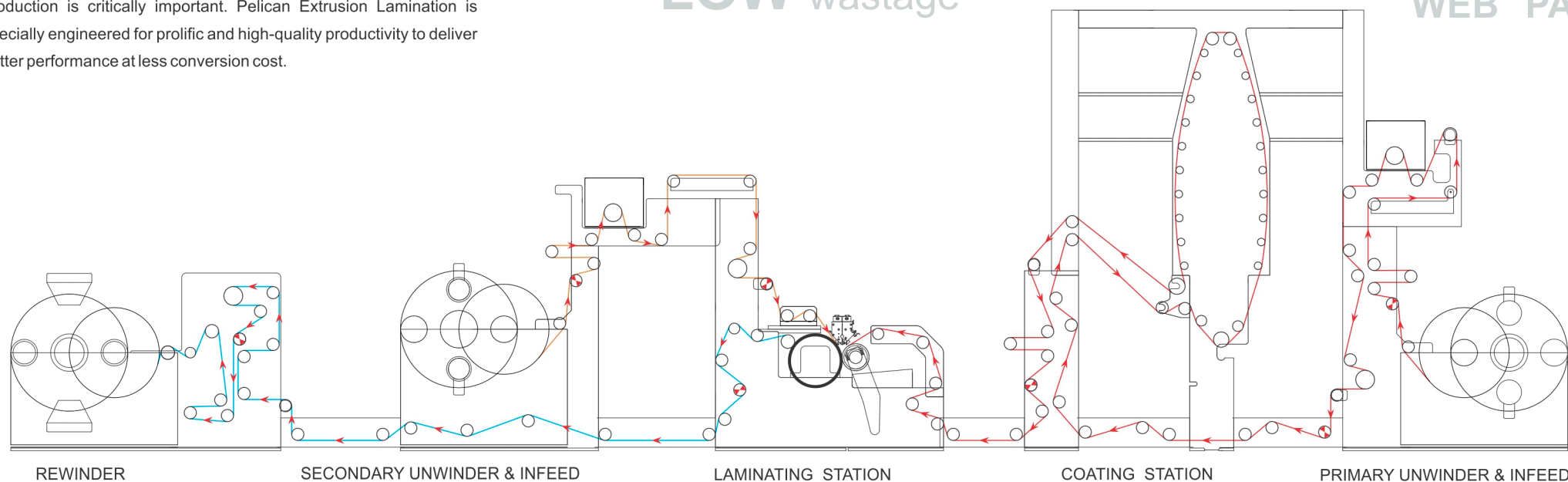
THE MACHINE

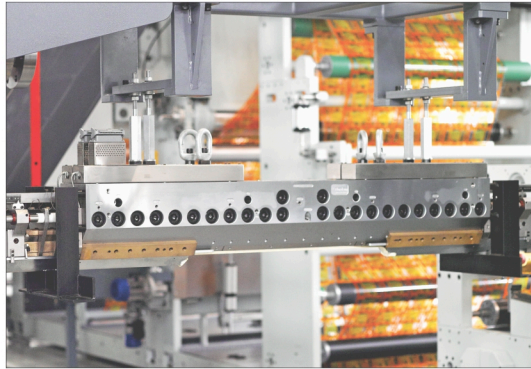
The flexible packaging market is thriving and innovating the products. Pelican's machines provide the solution where innovation and efficient production is critically important. Pelican Extrusion Lamination is specially engineered for prolific and high-quality productivity to deliver better performance at less conversion cost.

SAFETY
on board

LOW wastage

SHORTER
WEB PATH





FLAT DIE

Adjustable internal deckle blade for bead reduction

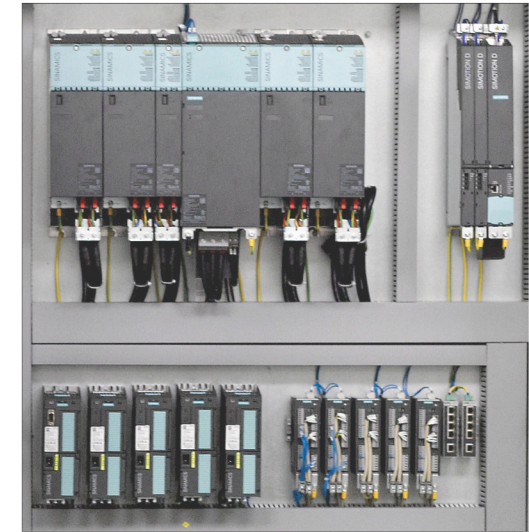
Multi-manifold or single cavity coextrusion die

Dual deckle, internal with external backup offering additional sealing protection

With dual deckle system, it allows convenient width adjustment, while reducing the size of the edge bead. Thus, offering minimal overcoat, which reduces wastage and material cost

Ready access for replacing seals and adjusting die air gap

HIGH EFFICIENCY
LOW ENERGY
CONSUMPTION



BIMETALLIC SCREW BARRELS

Bimetallic screw barrels

Nickle rich iron boron alloy Corrosion resistance Bimetallic Screw Barrel

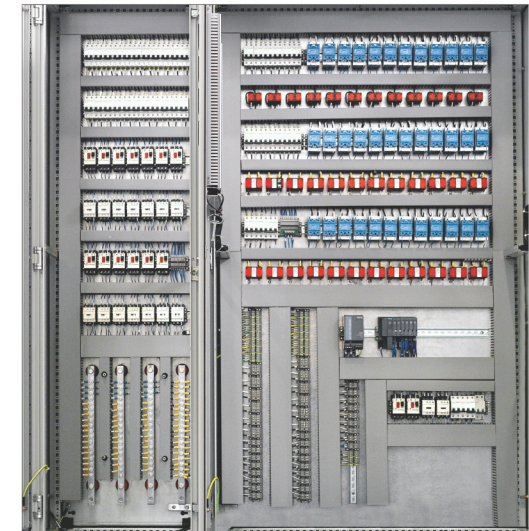
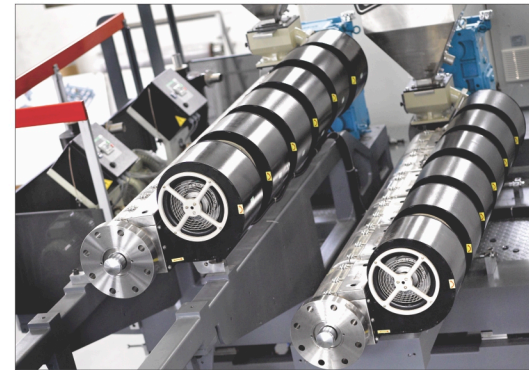
Barrier screws for excellent homogeneous melt quality.

Process capabilities for LDPE, PP, EVA, EAA, SURLYN etc.

Hydraulic screen changer with melt pressure gauges before and after screen changer (optional)

Heavy duty carriage with motorized lifting of extruders. Linear sensors on XY movement for die position and main control cabinet mounted on carriage

Ceramic heater with insulation jacket



LAMINATING UNIT

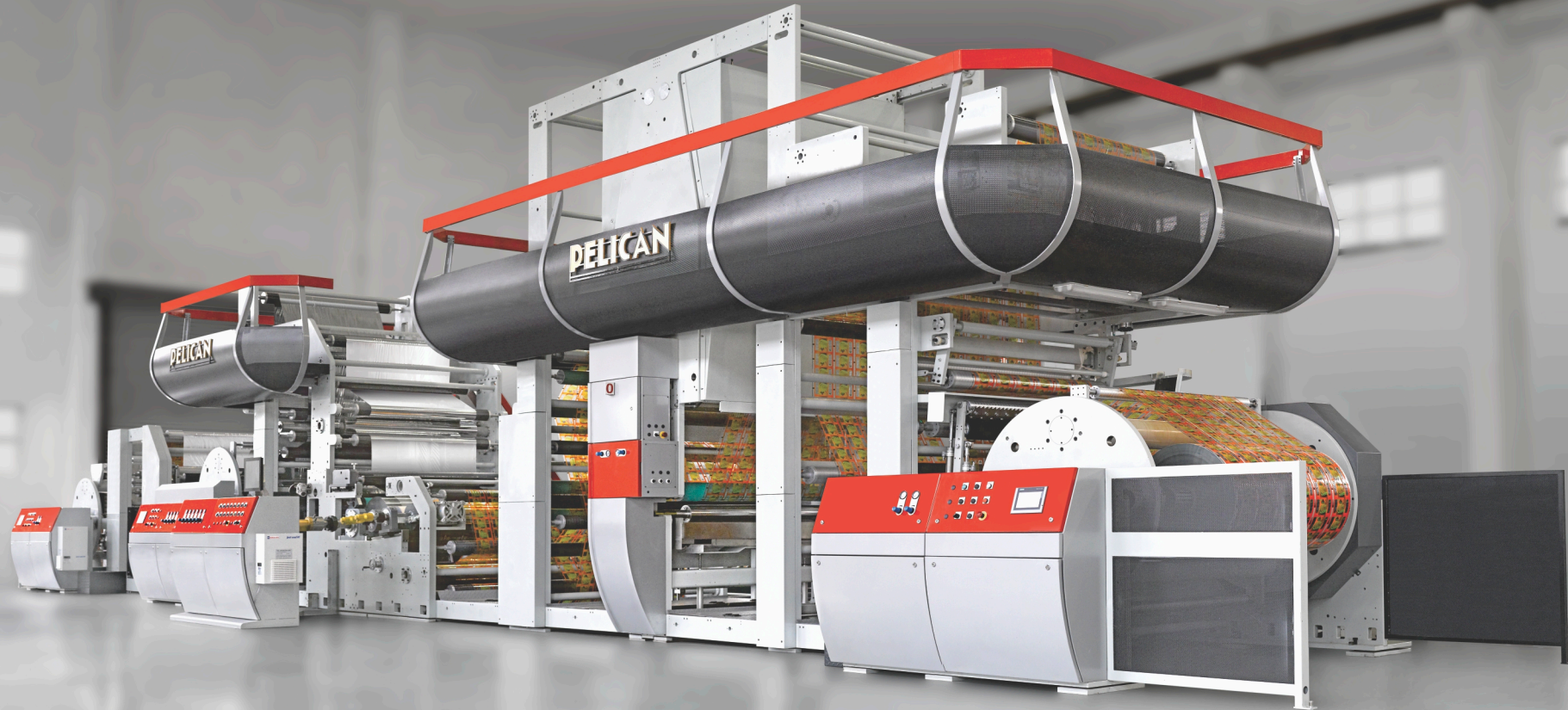
600mm dia chilled roller with mirror finish hard chrome plated, internal with spiral design for water cooling system

Pneumatically operated silicon rubber covered roller nipping by steel backup roller

Trimming device (Circular knives / Razor blades)

Strip roller with rubber covered to achieve the fine strip effect from the surface of the cooling roller

LOW energy
CONSUMPTION



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FOR FLEXIBLE PACKAGING





UNWIND GROUP (PRIMARY AND SANDWICH)

Two Turret type Unwinder with flying splice.

Both unwinder systems are mainly composed of push button initiated motorized rotating disc, pneumatically loaded automatic splicing arm, rubber covered pasting roller and cutting blade assembly etc.

Pneumatically expanded shafts and safety chucks to hold the reels.

Unwind Web Handling Control using latest generation AC servo technology. Both the systems are mainly composed of AC servo motors and drives, pneumatically loaded low friction dancing roller assembly and load cell for tension feed-back and actual tension display.

Web break detection detected by taking tension feedback from load cell.

Electro-electric Edge Guiding System

IN-FEED WEB HANDLING CONTROL

The system provides precise tension control of the web before entering to the coating station and isolates the coating unit from tension disturbance of the unwinding zone.

CONTROL SYSTEM

Primary Unwinder, Primary infeed, Anchor coating unit, Laminating unit, Sandwich Unwinder, Sandwich infeed, Out-feed and Rewinder are individually driven by servo motors-drives and controlled & supervised by the high performance advance technology motion controller having its own intelligent software.

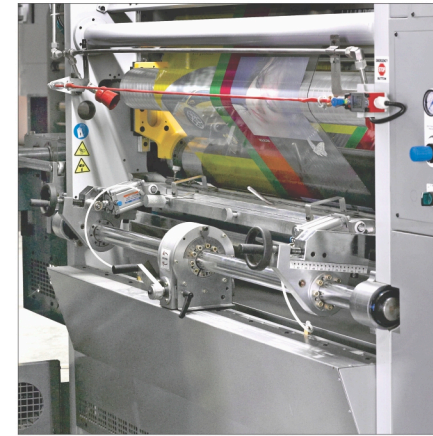
Common DC bus to enable energy efficient power sharing between various drive stations Servo technology for excellent dynamic response. Profinet communication network.

OPERATOR INTERFACE

Operator control panel mainly consists of full colored graphic touch screen operator interface facilitates ease in machine operation.

Safety of operator, machine and electronic modules are achieving by using necessary hardware protection and intelligent software routines.

Overall control strategy with increased automation is for common goal of minimum wastage level, save energy with increased productivity keeping human skill independent.



DOCTOR BLADE GROUP

Designed to ensure a straight profile of the blade resulting in lesser blade pressure, better coating quality and longer cylinder life.

The blade locking by an eccentric rod without tools.

The group allows horizontal and angular adjustment for the doctor blade position on the engraved cylinder.

Pneumatic doctoring pressure with adjustment possibility from the unit control panel.

ANCHOR COATING UNIT

Anchor coating unit mainly consists of doctor blade group, impression rubber sleeve, chemical tray system and five / six meter longer double hood drying chamber having semi flotation type dryer.

Coating station control panel mainly consists of electrical and pneumatic controls for...Emergency stop, Push button for blower/drying system, Pneumatic controls, pressure gauge and regulator for impression rubber roller and doctor blade.

DANCER AT COATING STATION

Tension control consisting of a dancing roller, pneumatically loaded by special low- friction pneumatic pistons:

Tension setting from the control panel, mounted on the coating side-frame.

The dancing roller position controls the speed of the coating unit motor.

The feed-back signal is originated from a linear potentiometer, connected to the dancing roller arm, for a more rapid and precise system response.

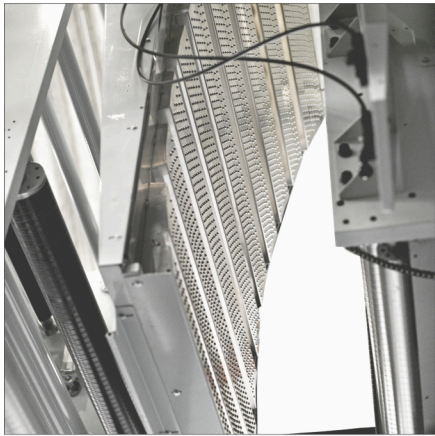
IMPRESSION RUBBER ROLL ASSEMBLY

Impression roller group with vertical stroke, mounted on sliding guides with low friction ball bushings, to allow maximum precision of the applied pressure and maximum repeatability precision for working conditions.

The coating pressure is operated by pneumatic pistons, connected to the impression roller hubs and is independently adjustable on both sides.

TRANSMISSION

In case of integrated coating cylinder locking system: connection of cylinder shaft to the motor drive is direct (True direct transmission, without using any reduction ratio components) through a manual cylinder shaft chucking mechanism.



DRYING SYSTEM

Innovative high efficient drying system: better heat and mass transfer achieved by switching from the standard nozzle to arrays of circular impinging jets "3D" holes on the printed side and "2D" holes backside, blowing on both sides of the web.

Holes shaped and distributed on stainless steel plate to guarantee the maximum energy transfer efficiency and minimize the number of idle rollers in order to avoid shaking or deforming of the web itself.

The system allows full process control for the drying operation to reduce energy consumption.

Pneumatically operated drying hood opening/closing to allow easy access for web threading and cleaning.



HIGH EFFICIENT VENTILATION MODULE

High efficient ventilation module ensuring optimum drying at minimum energy consumption. The system comprising servo controlled damper to set recycling of supplied air to the drying hood and setting of the exhaust air

VENTILATION MODULE COMPOSED OF :

Thermal oil heat exchanger with necessary controls/feedback devices to maintain set temperature

OUT-FEED SYSTEM

The system provide precise tension control of the web before entering to the rewinder and isolates the rewinder from tension disturbance of the laminating unit. The system mainly composed of AC servo motor and drive, load cell for actual tension display.



REWIND GROUP

Turret type Rewinder with linear splice.

The system mainly composed of push button initiated motorized rotating disc, pneumatically loaded automatic splicing arm, rubber covered pasting roller and cutting blade assembly etc.

Automatic splicing in both rewinding directions.

The splicing knife group is mounted on the moveable lay-on drum supporting frame.

Non driven lay-on roller to assist in the reel formation from the time of splice to the maximum reel diameter.

Pneumatically expanded shafts and safety chucks to hold the reels.

Rewind Web handling Control using latest generation AC servo technology. The system mainly composed of AC servo motor and drive, pneumatically loaded low friction dancing roller assembly and load cell for tension feed-back and actual tension display.

Tension setting from the control panel, mounted on the Rewinder side - frame.

LAY-ON ROLLER ASSEMBLY

Pneumatically operated lay on roller assembly complete with pressure gauge and regulator for control of the pressure on the rewind reel.



PELICAN

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