NEWS LECTEDARY TO JANUARY 7, 2023

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NEW

Five Layers Cast Film Lamination Line with C-Type Calendar Type LCCR-1000-C with 60 mm Single-Screw Extruder



(4 from substrate and 1 from extruder)

The line is equipped with the C-type chill roll stack having a roll width of 1000 mm which is fed by the 60 mm extruder and a 700 mm wide coat hanger die. The lamination substrates of PI film and carbon fiber sheet are fed from four unwinders, of which one is located on top of the large steel platform. The other 3 unwinders are located at the rear and front of the chill roll stack.

Producing a super strong laminate which possibly can be used for bulletproof applications



#### LABTECH ENGINEERING CO., LTD.

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#### Cast Film Lamination Line with C-type Chill Rolling Stack Calendars Type LCCR-1000-C



#### C-Type Rolling Stack

Developed by us featuring larger contacts to the laminates enabling better heat conductivity and higher line speeds.

- Featuring: 3 rolls with 1000 mm width
  - Front and middle roll with Ø 400 mm
  - Rear roll with Ø 250 mm
  - Hydraulically adjustable nip gaps





- Maximum temperature of 300°C
- · Each roll equipped with an oil tempering unit



# Upper Unwinder

- 1 unit unwinder located above the platform
- Automatic tensioning system
- Vertical infrared (IR) heater



#### **Rear Unwinder**

 1 - unit economy unwinder located at the rear of roll stack

#### Front Unwinders

- 1 unit economy unwinder positioned at the front of the roll stack
- 1 unit unwinder with automatic tensioning system located above the economy unwinder
- Horizontal infrared (IR) heater

## **Single Screw Extruder**



- 60 mm Single Screw Extruder with 30 L/D
- Maximum screw speed of 140 RPM with 50 kW vector motor drive
- High-heat version with maximum temperature of up to 450°C
- Hopper feeder with sight glass has 80 L capacity
- Equipped with hydraulic screen changer, pressure transducer and melt sensor
- Closed-loop extruder control system for constant resin flow

#### Hydraulic Screen Changer

- Allows continuous filtration of the extruded melt without fluctuation of extrusion pressure
- Hydraulic piston will insert the new screen and at the same time push out the old screen



## Flat Coat Hanger Die Type LFD-700/450C

- Die width of 700 mm with adjustable lips of 0.3 to 2 mm
- Has 5 heating die zones with a maximum temperature of up to 450°C
- Equipped with a vacuum box with blower, a static edge-pinner and a 90-degree angled adaptor





## Edge-Cutter with Cassettes for Edge-Trims and Wind-Up Station



- Edge-cutter equipped with rotary knives and holder enclosed in a safety cover
- · Includes an edge trim cassette wind-up system
- · Pneumatic lay-on rubber rollers
- Air shaft winder driven by servo motor
- Can wind a maximum film diameter of 500 mm



## **Central Control Panel**

- Computerized controller panel base station with 10.4-inch touchscreen
  and high capacity PLC
- Buttons to adjust roll stack position
- Controls and monitors all processing parameters of the whole line



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Technical Data for Lamination Line with C-Type Rolling Stack Calendars Type LCCR-1000-C

Roll Width Max. Film Width (un-trimmed) Max Die Width Roll Diameters, all 3 rolls Wind-Up Take-Off Speed 1000 mm 900 mm 1000 mm 400/400/250 mm 0.5 - 40 m/min

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## Technical Data for Single-Screw Extruder Type LE60-30

Screw Diameter	60 mm
Screw L/D Ratio	30
Vector Motor Drive Power	50 kW
Screw Speed Range	0 - 140 RPM
Number of Heating Zones on the Barrel	4
Total Heating Power	30 kW



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