



# DAVIS › STANDARD®

Where your ideas take shape.

## Advance Program

## Cast Film, Extrusion Coating & Lamination Facility

### Overview

Consider the possibilities. Let our Cast Film, Extrusion Coating & Lamination Facility assist you to:

**Develop** new products before you go to the expense of trials on your production equipment.

**Explore** new processes and markets.

**Consider** new equipment designs that will drive flexibility and efficiency into your operations

**Gain** early entry into a market by scaling up with our equipment

**Reduce** your switching costs as you look for lower cost resins

### Features

These are a few of the many products capable of being tested in our Cast Film & Extrusion Coating Laboratory:

- Cast Polypropylene Films
- Stretch Wrap
- Packaging Films
- Flexible Packaging
- Board Coating
- Fluoropolymer Films

# Cast Film, Extrusion Coating & Lamination Facility

## Our Cast Film & Extrusion Coating Laboratory offers the following equipment for your testing needs:

- Maximum Cast Film Width: 54" Finished (1372 mm)
- Maximum Extrusion Coating Width: 50" Finished (1270 mm)
- Extruder "A": 3.5" Diameter (89 mm), 30:1 L/D with 150 HP Eurothem DC Drive
- Extruder "B": 3.5" Diameter (89 mm), 30:1 L/D with 150 HP Eurotherm DC Drive
- Extruder "C": 2.0" Diameter (51 mm), 17:1 L/D with 25 HP Hydraulic DC Drive
- Conair Automatic Hopper Loaders: Three Dustbeater Hopper Loaders are available. Maximum rate is 500 pounds/hr (227 kg/hr)
- Resin Blending: BC off line tumble blender
- Drying Capabilities: 2 Conair units 800 lbs. and 4000 lbs. capacity (363 kg and 1814 kg)
- Feed Screws: A variety of high performance feed screws for both extrusion coating and cast film. These include single flighted, two-stage single flighted and dual flighted screws as well as barrier type screws. Mixing sections include, but are not limited to, Maddox, twisted spiral, pins or blister ring. Many screws have removable tips for interchanging or removing mixing sections.
- Valved Adapter: on each 3.5" extruder head (89 mm).
- Feed Pipe: Connections from three extruders to feedblock or a dedicated pipe from extruder A directly to the die.
- Cloeren 5-layer Dual Plane Co-Extrusion Feedblock: Offers up to five-layer structures with up to three distinct polymers. These include AAAAA, BBBBB, AAAAC, AAABB, AACCB, ABCBA, ABBBC, and BAAAC.
- EDI 60" Autoflex H-40 Cast Film Contour Die: Die deckles down to 20" (508 mm)
- Cloeren 48" and 60" EBR Extrusion Coating Dies: Dies deckle down to 24" and 32" respectively (210 mm and 813 mm).
- BC Model 300XL 60" Coathanger Die: Die deckles down to 20" (508 mm)
- Jyohoku 47" Die: Die deckles down to 12" (305 mm)
- Casting Section/ Extrusion Coater/ Laminator: Two Chill Rolls; 18" dia x 60" wide (457 mm x 1524 mm), double-shell, spiral-fluted, 60 rms matte finish and 2 rms high gloss. Stripper roll and Plate-out roll for cast film. Web paths for extrusion coating and laminating. Single-position auxiliary air brake unwind mounted to extrusion coater frame.
- Multiple Nip Rolls: Extrusion coating lamination nip, silicone, rubber, Teflon, large diameter single nip roll or small nip roll with back up pressure roll.
- Cooling System: 300 gpm chill roll recirculation loop capable of holding less than 3°F (-16°C) variation across the chill roll face under full load conditions at temperatures between 55°F to 180°F (13°C to 82°C). Trane microprocessor controlled 60 ton chiller. In-line 15 kw temperature controlled heater for fast start-ups on above room temperature processes.
- Air Knife: Features 60" slot width (1524 mm)
- Vacuum Box: Features 60" width (1524 mm)
- Enercon Treater: 15 kw bare roll treater and 2 kw Ozone generator
- Integrator™ Process Control System: Offers distributive line control. Displays include temperature control, line conditions, winder conditions, historical trending, diagnostics, and more. Features PLC Interface, Drive Interface, Miscellaneous I/O and printer.
- NDC Gauge: Thickness Measuring Gauge with Automatic Profile Control, IR and Beta heads.
- Robotic Winder/ Roll Changer: Offers 1200 lb. max. roll capacity. 72" (1829 mm) max. demonstration width from single position unwind only or 54" (1372 mm) through entire extrusion line. 3" and 6" (76 mm and 152mm) auto air inflated core shafts. Stationary, Static, Enveloper, and Bump & Cut automatic transfer systems. Three models of winding, including Center with taper, Center/Surface tension, and Center/Surface Draw. Light nip and firm nip programmable lay-on roll loading systems. In-line slitting down to 2" (51 mm) widths, with or without bleed trims.
- Auxiliary Unwinds: For extrusion coating and lamination, 24" max diameter, air brake tension control, 3" & 6" (76 mm and 152 mm) core chucks, 1000 lb. (454 kg) roll weight. Mounted directly to extrusion coater.
- Primary Unwind: 3" & 6" (76 mm and 152 mm) core shafts, air brake tension control 10 - 150 lbs. (4.5-68 kg), 72" (1829 mm) maximum roll diameter, 5000 lb. (2268 kg) roll weight, 600 FPM (183 MPM) into extrusion process or 1200 FPM (366 MPM) directly into winder.

## Line Specifications

### Unwind, Single Position:

Core Size: 3" or 6" I.D. (76.2 mm or 152.4 mm)  
 Roll Diameter: 60" maximum (1524 mm)  
 Roll Face: 72" maximum (1828.8 mm)  
 Roll Weight: 5000 lb. maximum (2268 kg)

### Winder/Robotic Scrapless

Core Size: 3" or 6" I.D. (76.2 mm or 152.4 mm)  
 Roll Diameter: 24" (609.6 mm)  
 Roll Weight: 1200 lb. maximum (544.3 kg)  
 1200 lbs./hr. maximum (544.3 kg)

### Operating Speed Range

15 to 600 fpm (4.6 to 182.9 mpm)

### Machine Roll Face

60" into extrusion system (1524 mm)  
 72" unwind to winder only (1828.8 mm)

### Die Slot

12-60 range with deckles (304.8 - 1524 mm)

### Film Gauge

0.5 mil to 20 mil possible - 0.5 to 8 mil typical

### Tension Range

8 lb. to 140 lb. tension and draw controlled (3.6 kg to 63.5 kg)

### Extrusion Thruput

1200 lbs./hr. maximum (544.3 kg/hr)