Production-Level Modular Coating Line

Flexibility & Modularity
Flexible Design Allows for Custom Configuration & Expansion

The Modular Coating Line (MCL) is available in 300mm and 600mm configurations and serves a variety of end-use applications. A wide range of coatings including solvent, aqueous, E-Beam and UV may be processed on the MCL with the available standard options offered.

The modular design utilizes pre-engineered components. A complete line, even with the amount of customization available, can be delivered quickly at a lower cost than an equivalent machine produced from completely customized drawings, without sacrificing quality.

Flexibility of the configuration makes the MCL highly adaptable to fit the needs of all markets.

The drive can be preselected for either low-speed or high-speed web processing. Drives and controls are completely integrated, and installation costs are minimized by prewiring and piping to the greatest extent possible. Ductwork is provided to connect the heating and air-handling skids to the dryer in the predefined location.

Interchangeable Coating Modules Offer Flexibility for All Markets

Coating modules are interchangeable so the MCL can be configured for a variety of coating methods that satisfy a broad range of applications. Coating modules can be added at any time as needs change. The MCL's modular construction with integral drive and control cabinets for each component makes future reconfiguration easier and reduces field installation time and expense.

A Flex Spreader Roll is included prior to the coater to reduce web-handling problems associated with baggy edges or centers of the web.
Quick Change Coating Modules

Choose a Module. Exchange a Module.

Choose a Module
Coating modules can be configured for various coating methods using water, solvent, or hot-melt coatings. Side frames are nickel-plated solid steel.

Exchange a Module
Coating modules are mounted to a nickel-plated steel coater base with locating pins. Bolt on module removal arms allow easy exchange as a unit.
The MCL includes one rewind and two unwinds: primary and laminate.

A Cantilevered Single Roll can be unwound/wound in either direction. Closed-loop control with tension readout ensures regulated, constant winding tension. Roller bearings are located along the shaft and the adapter to facilitate roll removal. Winders include a regenerative drive, cantilevered air shaft, and full-length adapter.

The Roll Cart supports 610 mm (24") diameter rolls up to 227 Kg (500 lbs.) with 635 mm (25") maximum core lengths.

Static Elimination is effected by two single-sided, non-contact ionizing devices located at the primary unwind and rewind.

Control systems are designed and integrated by Faustel and include a Main Operator Console, Local Operator Stations, a Sectional Drive System and Programmable Logic Controller with open source code.

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The **Dry-Bond Laminator** includes a double wall chrome plated laminating roll which can be heated, and dual post lamination chill rolls. The nip with adjustable stops can achieve a maximum loading of 150 PLI (26 N/mm). A fully enclosed guard protects operators from moving parts, while removable panels allow access for maintenance.

**Flex Spreader Rolls** are provided for both incoming webs.

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The **Single-Zone, High-Efficiency Gas Heated Flotation Dryer** has a double-wall enclosure. The dryer box is constructed of aluminized steel with internal headers, includes upper impingement nozzles, lower airfoils (for web stability) and freestanding air-handling units. The three-meter dryer section has access doors with double pane web observation windows to allow easy access for web-up and cleaning.

The **Dryer exit guide** includes electro mechanical actuator, ultrasonic sensing head and guide roll.

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**Laminating Options**

- Rotary Unions and Hoses
- Hot Water Unit
- Hot Oil Unit
- Chiller
- Wet Bond Laminator

**Drying/Curing**

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**Drying Options**

- Additional Dryer Zones available in 3-meter sections.
- Electric Heat in lieu of gas burners.
- HEPA Filters
- Belt or Idler support
- Counter Flow
- Dryer Recirculation with manual lock down
- LEL Monitor for solvent-based coatings
- Stainless Steel Dryer Interior
- Cooling Zone with flotation top and bottom air
- UV Cure Unit configured for single or double-row non-inert operation or single row nitrogen inert operation
- E-Beam Curing

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Optional **Dry-Bond Laminator Module** easily attaches to 3-Roll Coater Module for quick-change laminating configurations.
Example Machine Configurations

Customizable. Affordable. Reliable.

E-Beam Line

Laminating Line with Two Dryer Zones

Battery Coating Line with Six Dryer Zones

Modular Coating Line by FAUSTEL
### Specifications

#### 300 Web & Machine Widths

- **Max Web Width**: 356 mm (14”)
- **Max Coat Width**: 300 mm (12”)
- **Min. Web Width**: 76 mm (3”)
- **Min. Roll Face**: 380 mm (15”)

#### Machine Speeds & Tensions

- **Mechanical Speed Range**: 1-20 m/min.
  - (optional 5-100- m/min; 10-200 m/min.)
- **Suggested Operating Range**: 2-20 m/min.
  - (optional 10-100 m/min; 20-200 m/min.)

#### Line Tension Range

- 2-60 lbs. (9-267 N/m)
- 0.25-2.5 PLI (44-438 N/m)

#### Web Tension Examples

<table>
<thead>
<tr>
<th>Width</th>
<th>PLI</th>
<th>N/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>152 mm (6”)</td>
<td>0.5-10.0</td>
</tr>
<tr>
<td>Film</td>
<td>300 mm (12”)</td>
<td>0.25-5.0</td>
</tr>
<tr>
<td>Non-Woven</td>
<td>457 mm (18”)</td>
<td>0.16-3.3</td>
</tr>
<tr>
<td>Foils</td>
<td>610 mm (24”)</td>
<td>0.125-2.5</td>
</tr>
</tbody>
</table>

#### Unwind/Rewind Specifications

- **Maximum Roll OD**: 610 mm (24”)
- **Maximum Roll Weight**: 227 Kg (500 lbs.)
- **Roll Mounting**: Shafted
- **Core Length(s) Nominal**: 76-635 mm (3”-25”)
- **Core ID**: 76 mm (3”) 152 mm (6”)
- **Core OD**: 89 mm (3.5”) 165 mm (6.5”)
- **Core Material**: Fiber or Plastic

### Modular Coating Line by FAUSTEL

#### MCL with Single-Zone

- **l.**: 8.9 m (29’)
- **d.**: 5.0 m (16’)
- **h.**: 3.2 m (10’)

#### MCL with Two-Zones

- **l.**: 12.5 m (41’)
- **d.**: 5.0 m (16’)
- **h.**: 3.2 m (10’)

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*Modular Coating Line by FAUSTEL*
Leading-Edge Technology
• Unwinding & Winding
• Auto-Splikers & Core Transfers
• Coating
  (Fixed Frame or Cartridge)
• Laminating
  (Wet, Dry, or Thermal Bond)
• Drying
  (Roll Support, Belt, or Air Flotation)
• Curing
  (UV, E-Beam)
• Auxiliary Systems Integration
  (In-Line Coat Weight Measurement,
  Solvent Recovery & Distillation,
  Thermal Oxidizers, Closed Loop
  Coating Delivery, Corona Treatment,
  and Web Cleaners)
• Clean & Dry Room Configurations
• Drives & Controls
• Installation & Start Up

Pre-Engineered Solutions
(TecMaster, LabMaster and MCL)
• System Options Configurable to
  your Process
• Rapid Delivery
• Economical to Install

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