



# Paint Protection Film

Best-in-class technology for  
optically clear paint protection film

## Liquid Coating Systems



# About Davis-Standard



## Who We Are

Davis-Standard is a global leader in the design, development and manufacture of extrusion and converting technology. Our systems encompass over 10 product lines to support manufacturing applications and customers in a wide variety of industries, including automotive, building & construction, consumer products, medical, and packaging.

With more than 1,400 employees worldwide and a network of independent sales agents and suppliers in nearly every country, Davis-Standard is committed to engineering systems for you that are cost-effective, environmentally friendly, and offer a high return on investment. The company has manufacturing and technical facilities in the United States, Canada, China, Germany, Finland, Switzerland and the United Kingdom.

## Our Purpose

We exist to help you produce products that improve everyday life. Though we are removed from final production of your end products, we are central to the manufacturing of many of the world's essential, or even life-altering, products. Many of these products would not exist without us. Like you, we take that responsibility seriously.

## Our Promise

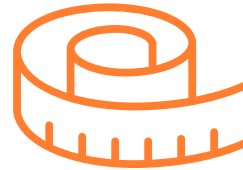
We optimize our customers' productivity and profitability by providing the best total solution (product + support). We serve our customers from a unique perspective. While our competition generally focuses on machine technology, we focus on providing the best total solution. That means, we supply the best combination of product and support services to help customers achieve their business goals.

# Davis-Standard Offers

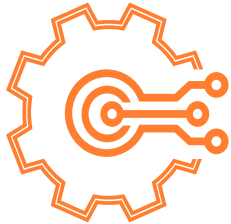
Proven equipment technology used by market leaders for the fastest payback due to increased productivity



Experience



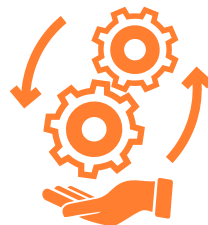
Tailored Design



Technology



Global Support



Total Solutions

**Let us tell you how...**









## Process & Application Experience

- Adapt & design to customer's formulation
  - Equipment design to match technical & business needs
- 
- |                     |                       |
|---------------------|-----------------------|
| - Continuous winder | - Laminator           |
| - Web handling      | - Controls & drives   |
| - Quick change      | - Ancillary equipment |
| - Coater            |                       |



# Case Study - Typical Paint Protection Film Coating Line

## Liquid Coating Systems - Paint Protection Film

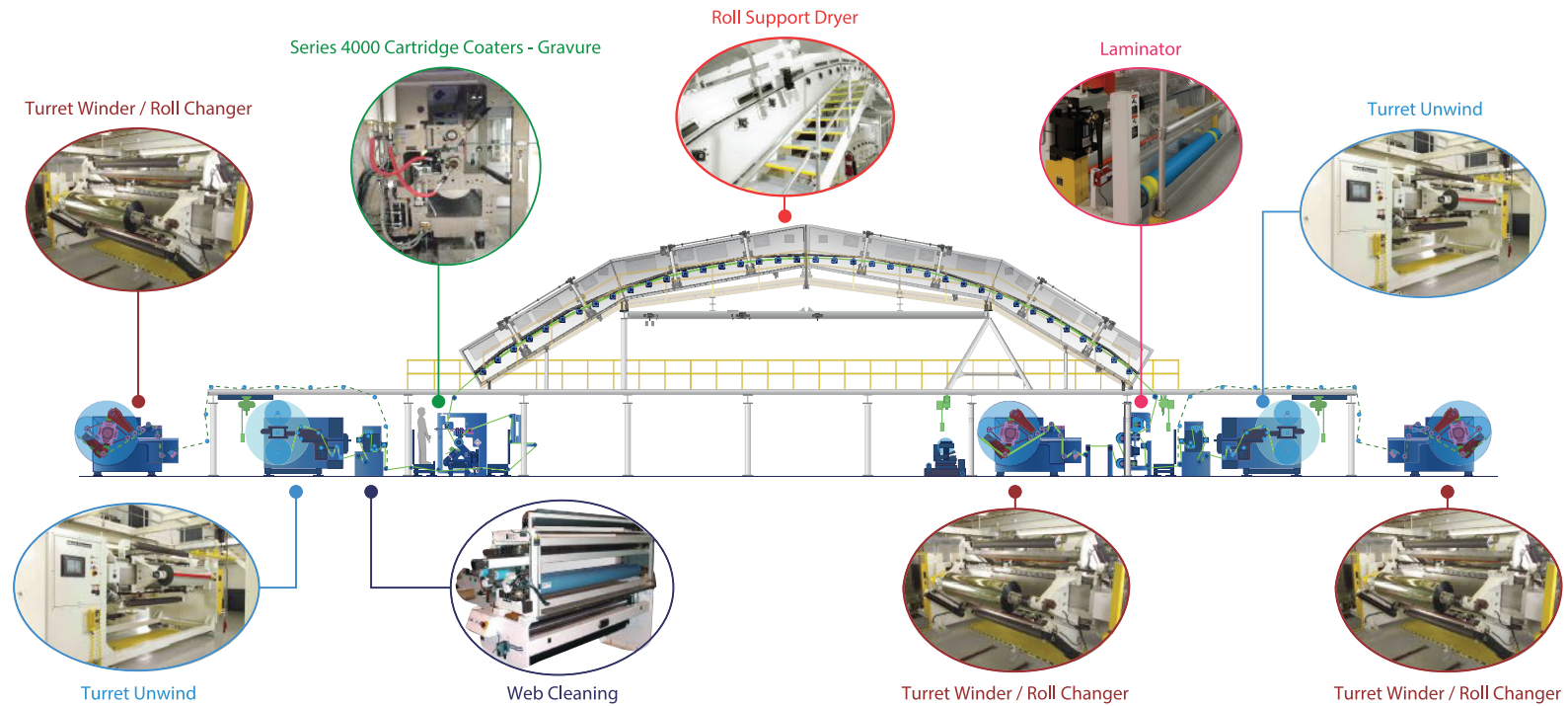
### Paint Protection Film Line

- Tailored design to address diverse structures and business needs
- Technology for optical clarity and reduced waste
- Regional after-sales support / service centers

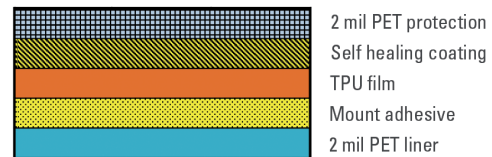


- Line speed - up to 50 mpm (164 fpm)
- Width - up to 2286 mm (90 inch)
- Cartridge coater
- Roll support dryer
- Stripper winders

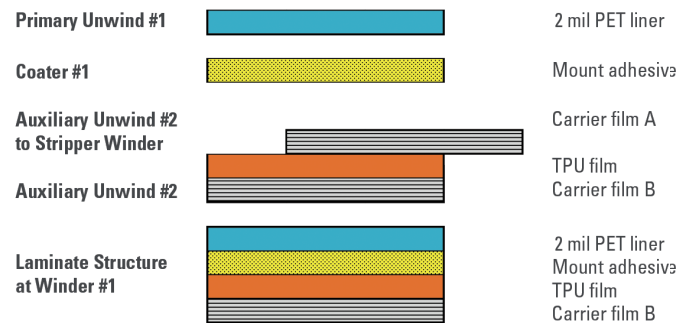
|                       | Coat Weights | % Solids  | Viscosity |
|-----------------------|--------------|-----------|-----------|
| PS Adhesive           | 30 to 35 gsm | 20 to 30% | < 550 cps |
| Self-Healing Adhesive | 15 to 25 gsm | 35 to 40% | < 50 cps  |



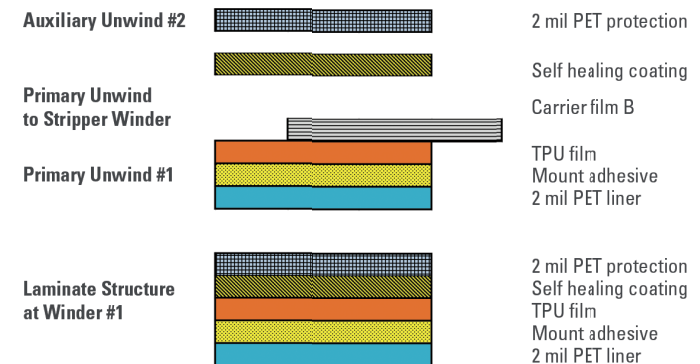
## PPF Film Structure



### First Pass



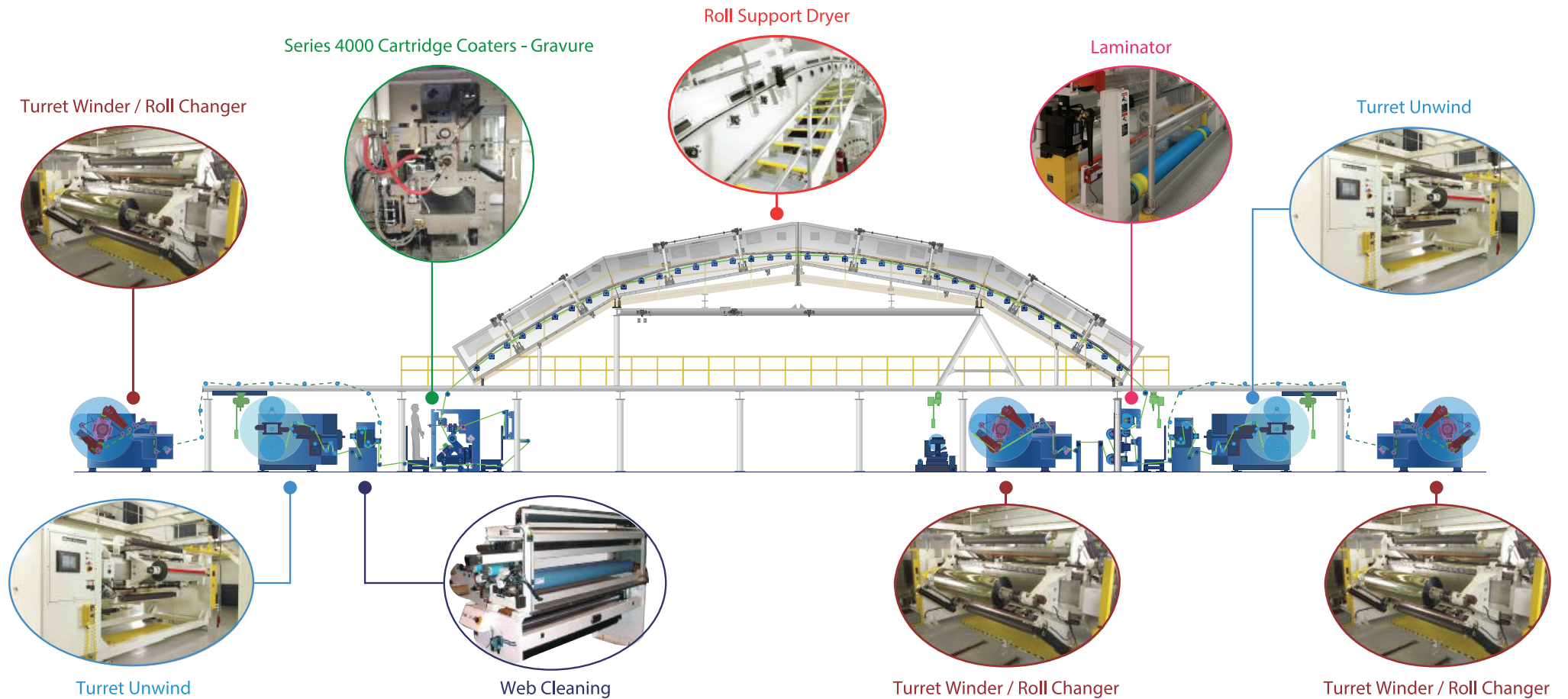
### Second Pass





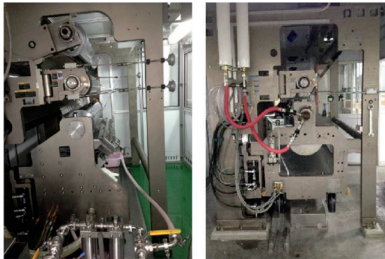


# Technology **Liquid Coating Systems - Paint Protection Film**





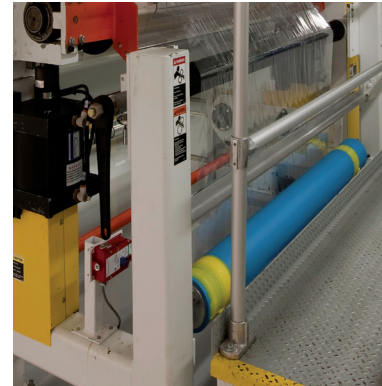
## Series 4000 cartridge coaters



### Selected Features

- Max process flexibility
- Changeover in 10 min. or less
- Easy to move cart by one person
- Additional cartridges added with no modifications or down time

## Laminator



### Selected Features

- Precision control - adjustable for heat / cool drives
- Curl control for higher productivity
- Quick change design
- Experience with TPU for optical clarity

## Turret unwind

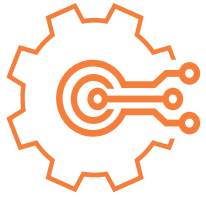


## Turret winder / Roll changer

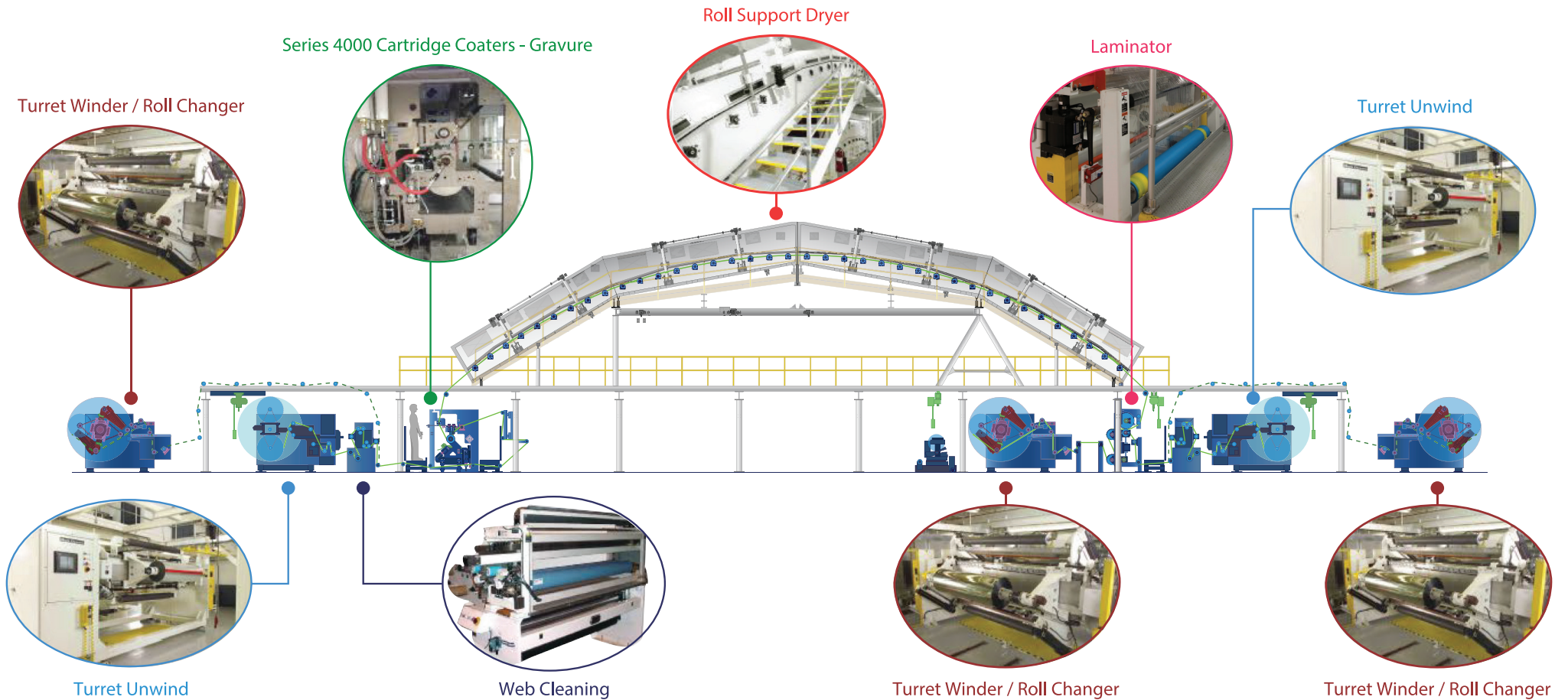


### Selected Features

- Best-in-class for reduced waste and faster payback time
- Continuous winding
- Flexibility
- Web handling



# Technology Liquid Coating Systems - Paint Protection Film







## Roll support dryer + Regenerative thermal oxidizer



### Selected Features

- Configure to substrate
- Temperature control
- Web tension control
- Regenerative thermal oxidizer for solvent extraction

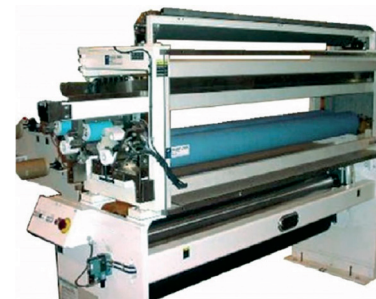
## Integrator PRO supervisory control system



### Selected Features

- Recipe capability for repeatability
- Custom controls for drives, pressures & gauging system
- Compatible with all industry analog & digital drives controls
- Historical data capture

## Web cleaner



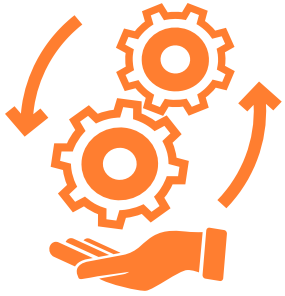
### Selected Features

- Self clean
- Contact web cleaning
- 2 sided









# We Offer a Total Solution



## Stewardship - Start to Finish

1

### PRE-SALE SUPPORT

- Tailored design based on customer technical & business needs
- Pricing, timing and delivery options presented

2

### PROJECT MANAGEMENT

- Workflow, process integration to track build & delivery time
- Frequent 2 way communication

3

### INSTALLATION & COMMISSIONING

- Davis-Standard teams are the most experienced/skilled in the industry
- Operator & maintenance training

4

### AFTERMARKET

- Low cost of total ownership
- Regional locations for quick spares & support



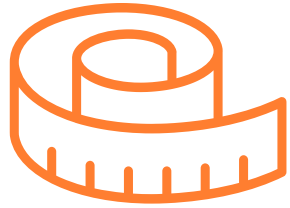
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Collaborative Partner for your Entire Line









# Tailored Solutions

Partnership to take standard offering & tailor to customer's business & technical needs

## **Innovation Starts Here**

Davis-Standard has mastered the art of working with progressive customers and industry partners to break old paradigms and develop liquid coating and converting product platforms that provide a competitive advantage.

## **Packaged Solutions**

From concept to reality, experienced engineering teams turn specific objectives into high performance manufacturing solutions. Well-equipped pilot facilities enable customers to test and prototype concepts, building a foundation of confidence.

## **Customization Is Key**

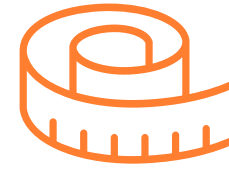
Major components of our liquid coating lines are often tailored to address specific customer needs. This can be as simple as combining existing design elements in a unique way or developing a new solution to enhance existing capabilities.

## **Technology Leadership**

By consistently reviewing technology fundamentals, Davis-Standard addresses major industry trends of industry 4.0 & productivity improvements.

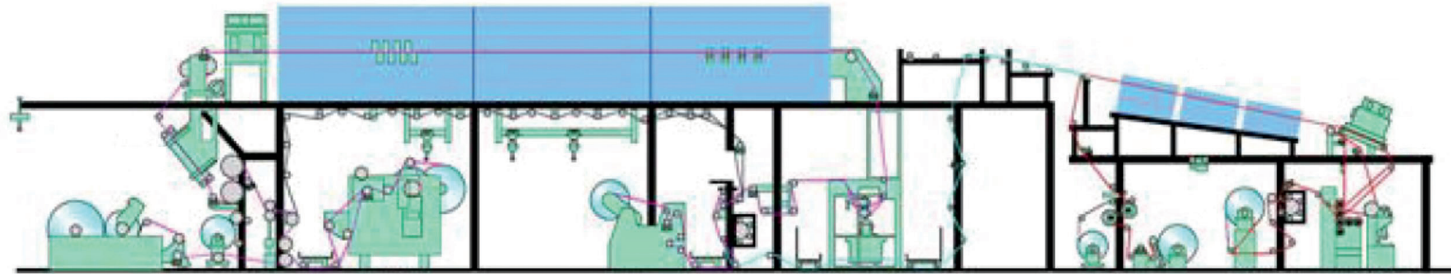






# Research and Technical Center

## Tandem Coating Capabilities

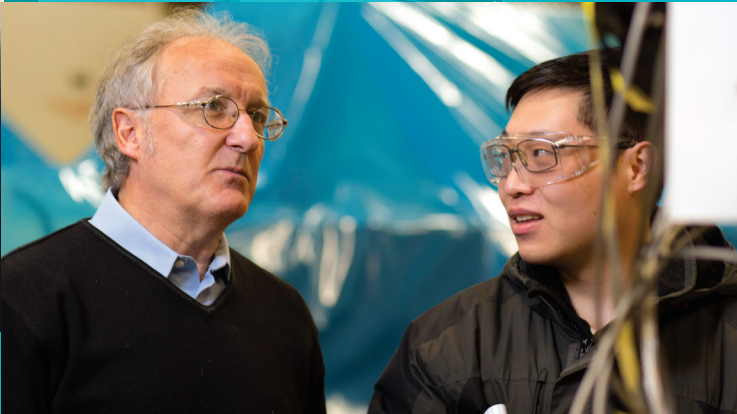


## Selected Features

- Max line speed 915 mpm or 3000 fpm
- 915 mm max web width (production lab)
- 460 mm max web width (pilot lab)
- 290° C maximum air temperature
- AC vector drives
- Aqueous and/or solvent coatings capabilities
- Scalable pilot & production lab
- Experienced personnel

**Evaluate Coatings for Specific Products**





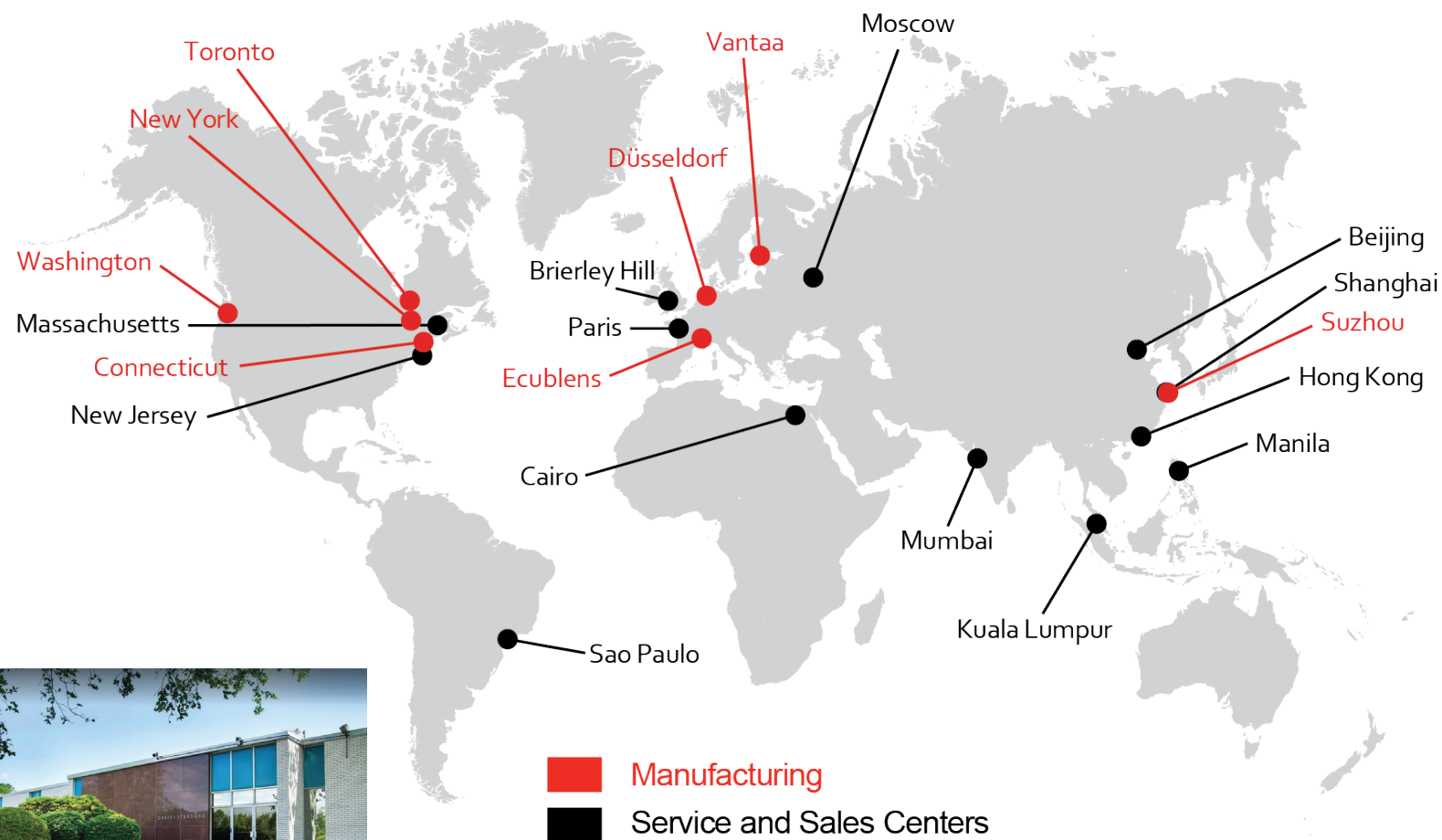




# Davis-Standard - A Global Company

Production Across Three Continents

- Quick Response Parts & Service



Pawcatuck, Connecticut, USA



Fulton, New York, USA



Suzhou, China



Erkrath/Düsseldorf, Germany

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## PUT US TO WORK FOR YOU.

We strive to do whatever it takes to ensure that you are able to produce a superior end product, at a superior profit. Contact us today to learn how we can help you succeed.



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