Davis-Standard Is “The Global Advantage”

Davis-Standard is recognized globally as the leader in high-performance converting and extrusion systems. But our capabilities go far beyond our equipment. They extend to our professional training experts, laboratory personnel, design engineers, and hands-on field engineers who work with you every step of the way. Your success is our success.
dsX flex-pack™
Extrusion Coating Line
Helping You Profit From The Flexible Packaging Market.

These are exciting times. The global market for flexible packaging continues to grow and the number of applications is expanding every day. The dsX flex-pack™ Extruder from Davis-Standard is specifically engineered to help you capture more of this profitable business. It provides the essential capabilities you require to satisfy your customers’ most demanding needs.

Delivering High-Value Performance At A Competitive Price.

The truth is, you cannot make money just by being busy. You have to ensure efficiency in every aspect of your business. Davis-Standard can help. Our dsX flex-pack™ is engineered and optimized for the competitive flexible market where expedient, reliable production is critically important. And it is competitively priced for a fast return on investment.

The dsX flex-pack™ is ideal for every customer situation.

- Converters – doing extrusion lamination looking to upgrade their low-speed, low-quality capacity
- High-quality printing companies – looking to enhance their lamination processes
- Multinational companies (and their suppliers) – looking to expand into high-growth markets
- Start-up companies – who want to partner with a supplier like Davis-Standard to lead them through the process
**Built To Give You More Capability – And A Competitive Advantage.**

We Engineered every aspect of the dsX flex-pack™ extrusion coating line to give you a competitive advantage – building in differentiated, high-value performance features that provide you more capability to win more profitable business. Our next generation product is more reliable than competitive products, which translates into greater uptime and higher profits for you. It can be up-and-running in your facility in as little as six months – giving you a head start on the competition.

And because it is backed by Davis-Standard, the recognized leader in extrusion coating, the dsX flex-pack™ is a safer investment than the alternatives.

**dsX flex-pack™ Key Benefits**

- Reduced variability and better end product quality – helps you produce consistent high quality and distinguish your flexible packaging products from the competition
- Greater uptime and productivity – allows you to more reliably and predictably meet market demands
- Less waste and lower overall costs – permits you to continuously optimize production efficiencies and make more money on every job
- Wider range of applications – enables you to attract more customers and new business opportunities
**Design Advantages**

**FLEXIBLE PACKAGING UNWINDER**
- Phantom axis turret allows for lower loading position while maintaining 1000mm roll capacity
- Spindles are driven by a motor and pulley system without a gearbox to minimize maintenance with quiet operation
- Drives, controls and touchscreen are in one panel
- Two-directional splicing carriage; short stroke knife assemblies for controlled tail length
- Long stroke friction-free dancer controls tension and filters out the motion of the turret and carriage during splice sequence
- Electromechanical edge guide
- Side shift motion via linear bearings for accurate tracking and long life

**CORONA TREATERS**
- Combined treater and pull roll for tension isolation
- Self-contained system with power supply and exhaust blower mounted directly on the station
- High voltage, high frequency power supply delivers power to ceramic electrodes
- Watt density controlled proportional to line speed

**EXTRUSION LAMINATOR**
- 3-roller design; chill roller, 180mm nip roll and 300mm water cooled back-up roller
- Linear pneumatic nip design for maximum flexibility
- Multiple chill roller diameter options to match extruder outputs
- Spreader roller and skew roller provided at laminator entry
- Pneumatically actuated stripper roller with adjustable stops
- Motorized Teflon tape system prevents overcoat from sticking to the chill roller
- Gearbox/motor supported from laminator frame

**GRAVURE PRIMER COATER DRYER**
- Two-roll direct gravure system
- Pneumatic actuation on linear slide for accurate roll positioning
- Integrally mounted control panel contains all electrical and pneumatic devices and has all section I/O terminations eliminating long wiring runs
- Roller removal system uses rails and single hand-wheel bolts to release rollers from bearing mountings for quick changeover
- Drive system is mounted to coater frame with slide base to adjust belt tension; no idler pulleys required
- Pneumatically positioned enclosed doctor blade feed system is supplied:
  - When retracted, the doctor blades are exposed and easy to clean or replace
  - Side seals contain the coating so that leakage is controlled
- Single zone 4.5-meter effective web length roller support dryer with integral apparatus platform for easy installation
- Access provided for cleaning
- Impingement nozzles are constructed from lightweight extruded aluminum
• Nozzles are removable and mounted to headers with quick-release fasteners
• Apparatus platform houses the supply fan, heating system, mixing plenum
• Recirculated air is combined with the make-up air in the mixing plenum
• Threading system allows operators to thread web into and out of the dryer from the floor
• Dryer control via air or web temperature

**PULL ROLL WITH NIP**
• A driven rubber covered pull roller with steel nip provides tension isolation prior to the winder
• Mechanical drive and motor integral in the base

**WINDER**
• Winder turret identical to the unwinders
• DS single direction stationary knife transfer system provided for minimum foldback at core

**EXTRUDER**
• Extruders are electrically heated/air cooled and provided with DS industry leading screw designs
• Vertical gearbox in streamlined “Z” arrangement; AC drives are used for lower maintenance and quieter operation

**DOWNSTREAM**
• DS QSE adapter combines the screen pack and valve into one unit; allows the screw to be removed without disassembly of all downstream equipment (pipes, feedblock and die)
• Stainless steel melt pipes are designed to minimize residence time
• Die provided has internal deckle system for edge bead reduction

**CARRIAGE**
• Carriage moves in 3 directions to allow for accurate positioning of die for best performance and adhesion
• Platforms and railings provided around perimeter of carriage for safety; stairs are provided for easy access

**CONTROLS**
• Siemens Drives and PLC’s are used throughout
• WinCC used for operator interface with convenient touch screen displays
• DSS computer allows for remote access to line for troubleshooting and updating over a secure internet connection
• DS APC (automatic profile control) continually adjusts the product profile for best performance. Multiple gauge sensor technologies are available
• Performance data is exportable to factory systems for SPC and other analytical management tools
Why Davis-Standard?

Excellence in engineering and construction – the dsX flex-pack™ was designed and developed by our top experts utilizing proven technology platforms. You can trust Davis-Standard.

Experienced process knowledge and applications expertise – we offer over 50 years of experience in helping converters achieve their business goals. Our large global installed base is proof.

Expedited delivery program – as little as six months from order to acceptance, enabling you to start producing before your competition.

Exceptional after-sale service and support – Davis-Standard resources are local and available 24/7 to help optimize your productivity.

Exceeding your value expectations – you get more capability and more reliability for the price.
dsX flex-pack™ Extrusion Coating Line Specifications

Web width: 775-1550mm

Primary and Secondary Unwinders
1000mm O.D., 1500kg., 20-200N/m, dual direction bump and cut splice system, edge guided, corona treater, phantom axis style shafted turret, designed for 76 and 152mm I.D. cores

Extruders in Base
Co-ex 3 ½" and 2 ½" 30:1 L/D with sliding plate manual screen changers, stainless steel melt piping, motorized adjustable XYZ base
Alternate extruder configuration possible: Mono-ex 4 ½" or 3 ½" or Co-ex 4 ½" and 2 ½" or 4 ½" and 3 ½" 30:1 L/D

Primer Coater
Direct gravure, water-based, 1.6gsm (wet) Mica A-131-X; (2.5% solids)

Primer Dryer
2.0gsm (wet) 2% Solids @300mpm

Winder
1000mm O.D., 1500kg., 30-300N/m single direction stationary knife transfer system, phantom axis style shafted turret, designed for 152mm I.D. cores

Die
Internally deckled with automatic profile control heated die bolts, 775-1750mm slot range, 10-50μ coating

Laminator
Linear actuated 3-Roll design with chilled water pumping station and edge slitters

Controls
Streamlined distributed control system for easy installation, operation and maintenance