

Solutions for Tape & Label Applications

Premier™ Slot Coating Equipment for Adhesive Coating

Ensure superior performance when you partner with the field's leader in precision slot die equipment and specialists with extensive industry experience.

Benefits

- **Improve tack and release property** with the unmatched performance, reliability, and repeatability of a custom designed Premier slot die and positioner
- **Increase production rates** with pre-metered slot die and positive displacement pump technology, allowing for precise fluid application with higher solids content
- **Shorten time required for product changeovers and clean-up** with a slot die designed for a larger process window, allowing for use of a higher variety of fluids at multiple widths and coat weights
- **Improve end product yields** with a manifold designed to uniformly distribute the coating fluid, based on the fluid's rheology
- **Ease of Use** design requires minimal operator adjustment to obtain repeatable results
- **Reduce contamination and emission of volatiles** with closed loop system

Nordson offers converters slot die coating systems that deliver a precise, uniform flow to the web at a constant rate.

Premier Fixed Lip Slot Dies are custom designed for a wide range of fluids, including solvent and water-based coating, UV curable, adhesives, and many more.

At our dedicated facility, experienced technicians use state-of-the-art equipment to custom design and manufacture slot die equipment. The result is uniform coat weight distribution and coating thickness.

No matter what your coating needs are – from laboratory devices to production systems for tape and label applications – custom-designed Premier slot coating equipment will increase your production efficiency and provide significant cost savings.



The Nordson Solution

- **Premier Fixed Lip Slot Die**
 - Coat Weight Uniformity: $\pm 1-2\%$
 - Adjustable gap and coating width with precision shims
 - Body lip offset for optional shear at substrate interface
- **Premier Die Positioner**
 - Position Repeatability: $\pm 1.25\mu$
 - Backing Roll TIR: 2.54μ
 - Easily integrated into new or existing production lines
- **Premier Fluid Delivery System**
 - Delivers consistent, non-pulsing fluid for uniform coatings
 - Sanitary connections have no threads to collect residue
 - In-line T-valves offer an easy way to flush system clean
- **Vacuum Chamber and Regenerative Blower**
 - Increases the process window, delivering best results under various conditions



Solutions for Tape & Label Applications

Premier™ Slot Coating Equipment for Adhesive Coating

Case Study: Roll Coating to Slot Coating

Application: Label		
Parameters	Original Method	New Process
Coating Process	Roll Coater	Fixed Slot Die
Base Web Material	Paper	Paper
Base Web Coating	Silicone	Silicon
Coating Width (mm)	1500mm	1500mm
Percentage of Solids	54%	54%
Coat Weight (gsm) - Wet	37.0gsm	37.0gsm
Tolerance (gsm) ±%	4%	2%
Line Speed (m/min)	130m/min	260m/min
First Pass Yield Percentage	87.0%	90.0%

Key Considerations

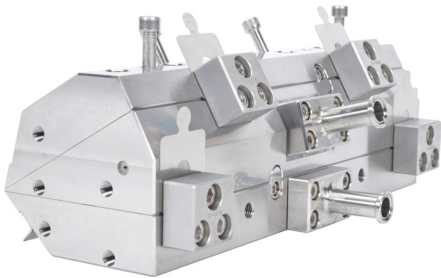
- Supplying a bubble-free fluid delivery system
- Reducing time required for product changeovers
- Availability of after-the-sale support for operator training

Key Success Factors

- **Premier system coated a wider range of products**
 - Thickness Range: 10 to 200 microns
 - Viscosity Range: 20 cps to 3,000 cps
 - Coating Width: 6.35mm (0.25") to 4,750mm (187")
- **Premier system improved end product yield**
 - Minimized downtime for product changeovers
 - Increased line speeds during production
 - Reduced defects in final product



Premier Fixed Lip Single Slot Die, Die Positioner, and Fluid Delivery System



Premier Fixed Lip Dual Slot Die

Potential Annual Cost Savings

Cost Comparison (USD)			
Parameters	Daily	Monthly	Annually
Fluid Material Cost	\$0.00	\$0.00	\$0.00
Web Material Cost	-\$800.00	-\$25,000.00	-\$301,000.00
Final Coating Yield Loss	-\$800.00	-\$22,000.00	-\$265,500.00
Labor Costs per Meter	-\$1,500.00	-\$46,500.00	-\$559,000.00
Total Potential Savings	\$3,100.00	\$93,500.00	\$1,125,500.00