Premier[™] Fixed Lip Slot Dies

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

Nordson Extrusion Dies Industries' Premier Coating Division offers converters slot die coating systems that deliver a precise, uniform flow to the web at a constant rate.

PremierTM Fixed Lip Slot Dies are custom designed for a wide range of fluids, including solvent and waterbased coating, slurries, paint, hard coating, UV curable, adhesives, and many more.

At our dedicated facility, experienced technicians use state-of-the-art equipment to manufacture multi-layer slot dies to precise tolerances after precision grinding and hand lapping. The result is a die that is not only flat and straight, but also has an exceptionally uniform slot gap.

No matter what your coating needs are – from laboratory devices to production systems for adhesives, magnetic media, paint, solar, glass coating and more – a custom-designed PremierTM Fixed Lip Slot Die will increase your production efficiency and provide significant cost savings.

Benefits of Slot Die Technology

- Reduce contamination and emission of volatiles with closed loop system
- Improve end product yields with a manifold designed to uniformly distribute the coating fluid, based on the fluid's rheology
- 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 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
- Easy to use design requires minimal operator adjustment
- Prevent costly damage to the die and coating roll with a die designed to allow the offset adjustment to be independent of body shim thickness
- Utilize a multi-layer design to lower production costs by coating up to 3 layers in one pass

Single layer slot die featuring an optional hand-operated die opener.





The offset blocks, where the offset shims are inserted, on a multi-layer die are designed on the same plane so the lip face alignment is independent of body shim thickness.

Features

- Manufactured from aircraft quality 15-5 PH stainless steel for highest dimensional stability
- Adjustable gap and coating width with precision stainless steel or plastic shims
- Body lip offset for optional shear at substrate coating interface
- Locking hinges for safe and easy changeovers, reducing potential damage to the die or lip faces
- Quick-clamp sanitary adaptor fluid inlet
- Optional features include cored holes for liquid temperature control and die cavity plugs to increase flexibility of die without sacrificing performance
- Optional die body material includes titanium, aluminum, or special alloys, based on customer request
- Designs available to accommodate stripe and patch (intermittent) coating



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Range of Capabilities

- Die Flatness: Standard flatness is 2.54µm (0.0001"), with capability of manufacturing to 0.5µm (0.00002")
- Coating Weight Accuracy: $\pm 1-2\%$ •
- Coating Thickness: .1µm (0.000039") to 2,300µm (0.091")
- Die Coating Widths: 6.35mm (0.25") to 4,750mm (187") •
- Coating Speeds: 152mm/minute (6.0in/minute) to 914mpm • (3,000fpm)
- Fluid Viscosity: 1-175,000cps
- Maximum Operating Temperature: 82°C (180°F)

*Above specifications subject to fluid rheology, fluid delivery system, and ancillary equipment.

Exceptional Die Flatness - Critical to Your Success



Ensuring flatness is a critical part of our manufacturing process, leading to a more consistently finished end product. This results in material and production cost savings for our customers.



μm	А	В	С	D	E
LOW	-0.334819	-0.554183	-0.219364	-0.069273	-0.037523
HIGH	0.115455	0.000000	0.496456	0.935184	0.871684
DIFF	0.450274	0.554183	0.715820	1.004457	0.909206

FLATNESS INSPECTION REPORT



Results from a Typical Flatness Inspection of a Fixed Lip Slot Die

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