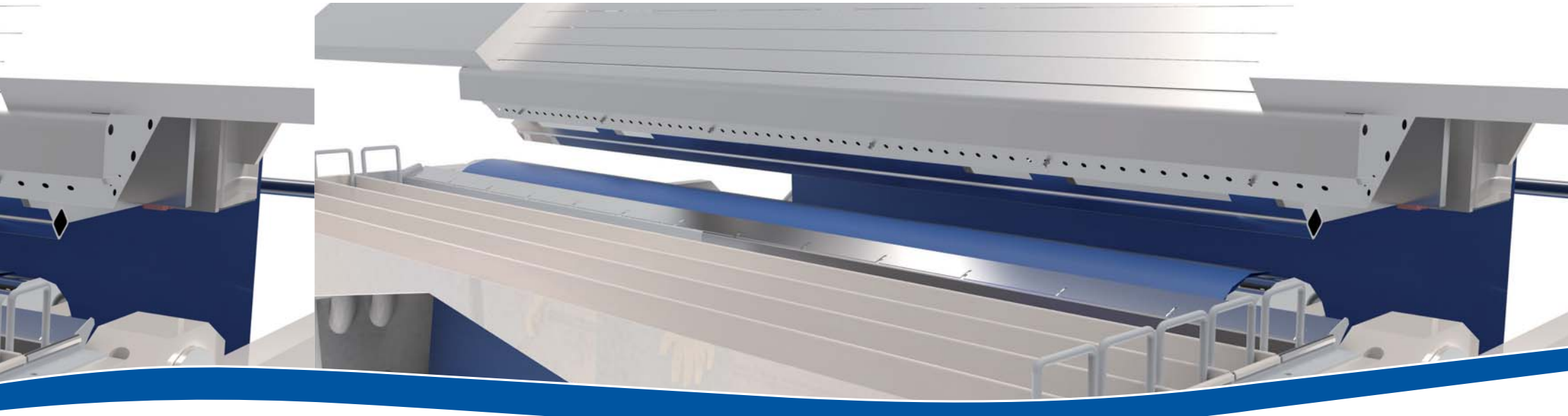


Curtain, Bead and Slot Die Coater

Applications

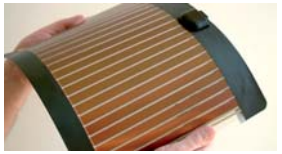
Clear-on-clear labels


Photo papers


Thermal papers

Adhesive labels


Printed electronics


Flexible photovoltaics

Pre-dosed coatings with

CURTAIN, BEAD UND SLOT DIE COATER

Pre-dosed coatings

KROENERT offers slot die coaters for media coating in contactless or contact processes. Requirements in terms of the media (e. g. aqueous or solvent based, 100 % system), substrate, production speed and the final product determine the choice of process and die.

SWC (Single Wet Curtain) and MWC (Multi Wet Curtain) as well as Bead and Slot Die Coating are coating processes of the highest quality, in which one or multiple layers are applied simultaneously.

In these coating methods, high precision slot die coaters are installed at variable distances of less than one millimeter (bead) or several centimeters (curtain) above a horizontally-moving material web. The pre-dosed coating compound falls freely from the slot, leading to an unstructured, closed, and very even contour coat on the substrate.

The slot die process can also be used for contour coating, with the slot die in the 8 or 9 o'clock position to a precision roller. The slot die gap and setting angle can be adapted to the requirements. For coating of 100 % solvent-free systems, such as hotmelts, rotating bar dies, positioned against a rubber roller, can be used.

KROENERT
The Coating Machinery Experts

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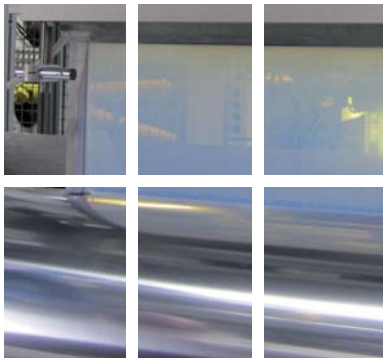
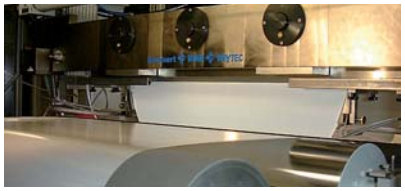


Features of the Coating Technique

The advantages of single slot curtain coating can be further expanded through multiple slot curtain coating.

The advantages of the single slot technique (SWC, Bead and Slot Die Coating)

- Contactless coating (no contact with substrate web)
- Wide range of coating speeds (0,1 - 1.200 m/min)
- Covers a broad range of viscosities
- No compound circulation and recirculation
- Contour coats with application weight tolerances of ≤1 % are possible
- Low wear, low maintenance
- Abrasion-resistant slot die bodies
- Short cleaning cycles
- Precision adjustment of slot die
- Low compound content in slot die



SWC (Single Wet Curtain) Coating Station

Additional features of the multiple slot coating technique (MWC) as slot or slide die

- Only one coating station and one dryer for multiple functional coatings
- More compact coating lines – reduced investment costs and reduced footprint
- Greater range of application weights through opening and closing of slots
- Improved adhesion between layers
- Reduced raw material costs

The specific requirements of contactless and pre-dosed coating demand close coordination between chemistry and mechanical engineering. Our Technology Center is available for test runs.

Numerous patents, amongst others for aqueous adhesives (process patent), side guides to eliminate thickening at the edges, suction units at the edges and variable coating width settings for multiple slot techniques as well as a vacuum box to remove laminar air, demonstrate our competence and provide users with the necessary security.

Use of pre-dosed coatings

with water and solvent-based coating compounds as well as 100 % systems.

Single Slot Technique (SWC)

- Water-based adhesive applications at ≤1.200 m/min
- Inkjet papers ≤ 800 m/min
- Thermal coatings ≤ 1.000 m/min
- CB/CF coatings ≤ 1.000 m/min
- Pigmented coating for papers
- Decorative papers
- Solvent-based coating compounds

Single Slot Technique (Bead Coater)

- Nano Coatings
- Printed Electronics
- Organic Photovoltaics (OPV)
- OLEDs

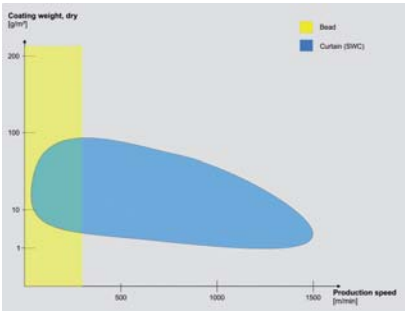
MWC (Multi Wet Curtain) Slide Die Coating Station

Single Slot Technique (Slot Die Coater)

- Adhesive tapes and labels

Multiple Slot Technique (MWC)

- Photo papers
- Digital imaging papers
- Inkjet papers
- Adhesive tapes and labels
- Pharmaceuticals
- Medical diagnostic products
- Decorative papers



Coating Windows SWC and Bead Coating

Technical Data

Working width	100 - 3.300 mm
Working speed	Determined for individual products by testing, experience with acrylate adhesives (SWC): 60 g/m² wet at 100 m/min or 6 g/m² wet at 1.000 m/min

Viscosities

SWC/MWC	100 - 300 mPas
Bead	5 - 10.000 mPas

Surface tension

SWC/MWC	< 30 mN/m
Bead	30 - 50 mN/m

Coating weight, wet	min. 1 g/m² * max. 500 g/m²

* depending on product and speed