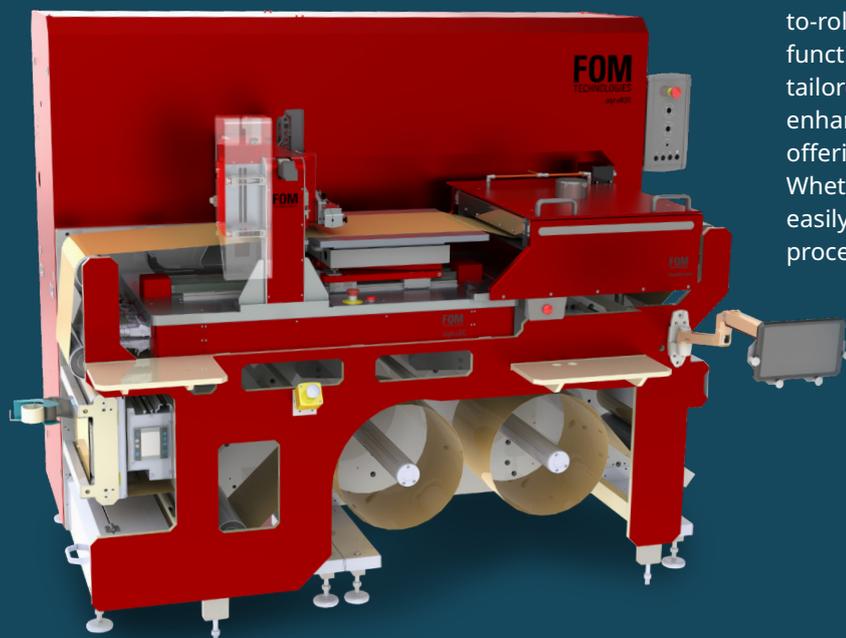


FOM alphaR2R



The FOM alphaR2R represents a cutting-edge research and production sheet-to-sheet coating machine equipped with seamless roll-to-roll capability. This system redefines control, functionality, and versatility. FOM alphaR2R is tailored to eliminate experimental errors and enhance usability with flexible and rigid substrates, offering unmatched precision and reproducibility. Whether in academia or industry, this machine easily empowers lab-scale research and production processes.

KEY FEATURES

- Sheet-based & roll-to-roll slot die coater
- Coating within μm precision
- Uniform dry film thickness from nm to μm
- Microporous vacuum substrate holder with heating
- Automated coating via intuitive GUI
- Remote access from PC or tablet
- Coating protocol saving locally and in cloud
- Continuous, non-contact coating process
- Quick action buttons for frequent tasks
- Integrated pump with SW controlled wet film thickness
- Designed for rigid and flexible substrates
- Two directional wind and unwind capability
- Full web and tension via servo-controlled system
- Convenient and easy roller replacement
- Excellent layer uniformity and repeatability
- Alignment of multiple layers
- Remote support and troubleshooting

MACHINE

- Model: FOM alphaR2R
- Dimensions: 2400 x 1550 x 1820 mm (L x W x H)
- Weight: 1450 kg
- Substrate holder dimensions: 520 mm x 500 mm
- Substrate holder heating: Up to 200 °C
- Substrate roller width: 400 mm
- Substrate width: max 350 mm
- Microporous vacuum dimensions: 305 mm x 305 mm
- Microporous vacuum on the sheet-coated area
- Web guide: Automatic
- 3-inch pneumatic mandrels
- Advanced coating automation software
- Cloud-compatible protocol saving
- Integrated syringe pump from 1 ml to 300 ml
- Integrated PLC control system
- Fully motorized x-y-z positioning (1 µm precision)

MACHINE UTILITIES

Electrical power supply

- 3-phase voltage: 3 X 400V + N + PE (V)
- Voltage frequency: 50 & 60 (Hz)
- Maximum current: 63 (A)

Compressed air

- Compressed air information: Spec list 5-7 bar. Clean and dry, non-lubricated. ISO 8573-1:2010 Class 1.2.3 or better
- Connection and tubing type: To be fitted to Ø8 mm Festo push-fit connection

Internet Connection

- Ethernet cable via Rj45 connector

CERTIFICATIONS & STANDARDS

- Machine standard: EN 60204-1 and ISO 13849-1 (CE)
- 2006 / 42 / EC Annex II B

COATING

- Coating width: 1 mm to 500 mm (for sheet coater), 350 mm (for roll coater)
- Coating length: 470 mm (rigid substrate)
- Coating speed: 0.01 up to 5.0 m/min
- Substrate: Rigid / Flexible
- Substrate roll width: Max 350 mm
- Substrate roll diameter: Max 400 mm
- Slot-die head heating: Up to 80 °C
- Slot-die compatibility: FOM SD 25 - FOM SD 500

OVEN

Specifications:

- Maximum curing area: ≤ 520 x 500 mm²
- Substrate compatibility: Rigid and flexible
- Max temperature: 200 °C
- Heating element: Mica aluminum plate
- Heat transfer options: Radiation and convection (when gas is supplied)
- Radiation / hot air: from the top
- Dimensions of FOM alphaSC machine with oven (L x W x H) 760 mm x 1820 mm x 690 mm
- Oven weight 80 kg
- Air consumption of compressed air:
 - 1 bar: 100 l./min.
 - 2 bars: 120 l./min.
 - 3 bars: 150 l./min.

Options:

- Different types of air blowers that create different air patterns are available.

Oven key features:

- Compatible with both rigid and flexible substrates.
- Efficient in drying and curing a wide variety of solution-processed materials.
- It offers a scaled-down version of an industrial-scale oven module.
- Precise and easy temperature control
- Easy air pressure, temperature, and diffusion control.
- Designed and dimensioned for convenient use within a glovebox environment.

OPTIONS

Equipment:

- FOM Ionizing bar (Anti-static)
- FOM Blade coating system
- FOM Flexographic system

Additional drying:

- FOM Air knife system
- FOM IR system

Pumps, syringes, and consumables:

- Continuous pumps – High viscosity pump
- Continuous pumps – Standard viscosity pump
- Syringe pump - Standard viscosity
- Syringe pump - High viscosity
- Stainless steel syringe
- Glass syringe
- PPTT syringe
- Syringe heating up to 80 °C
- Slot-die shims and guides for adjusting coating width and pattern

