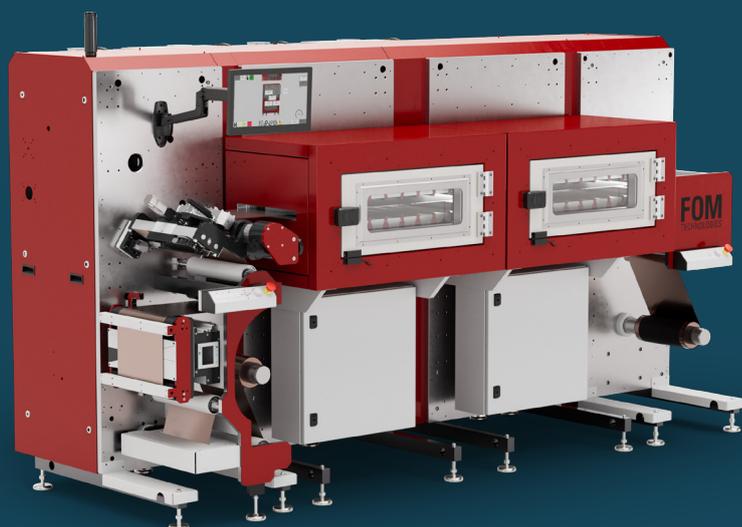


FOM compact moduloR2R



The FOM compact moduloR2R is a cost-efficient, high-throughput roll-to-roll slot-die coating system designed for pilot-scale R&D. Its modular design allows for selecting and integrating a broad range of pre- and post-coating options and metrology add-ons. This makes the compact moduloR2R ideal for slot-die coating a wide range of functional materials such as battery electrodes, fuel-cell membranes and flexible solar cells and other thin films up to 300mm in width. Furthermore, the compact moduloR2R can be expanded and adapted to future requirements as they evolve, which safeguards your investment also in the longer term.

KEY FEATURES

- Roll-to-roll slot die coater with up to 300 mm coating width
- Continuous, non-contact coating process with μm precision
- Uniform and reproducible dry film thickness from nm to μm
- Motorized slot-die head positioning ($\pm 1 \mu\text{m}$)
- Adjustable coating angle (0-90°)
- Intuitive graphical user interface
- Advanced coating software
- Local and cloud coating protocol saving
- Compact and modular design
- Multiple drying and curing options
- Bi-directional web handling and tension control
- Convenient and easy roller replacement
- Remote support and troubleshooting

MACHINE

- Model: FOM compact moduloR2R
- Dimensions:
 - Unwind module 600 x 2266 x 1963 mm (L x W x H)
 - Oven module 1000 x 2266 x 1963 mm (L x W x H)
 - Rewind module 600 x 2266 x 1963 mm (L x W x H)
- Weight: 300-800 kg per module
- Integrated PLC control system
- Intuitive HMI touch panel interface
- Motorized height and tilt adjustment of slot-die head positioning (+/- 1 µm)
- Web tension 10-150N
- Adjustable coating angle (0-90°)

Operating conditions:

- Temperature range: 0-40 °C
- Compatible with clean room, dry room and noble gas environments

MACHINE UTILITIES

Electrical power supply

- Voltage supply 3x400V+N+PE/63A for web handling system/25A per oven

Compressed air

- Compressed air requirement 2 m³/hr, 0.6 MPa (8,8 gal/min, 87psi)
- Expected Inlet airflow pr oven: 100m³/hr
- Expected exhaust airflow pr oven: 200 m³/hr
- Inlet and exhaust air connections are internal Ø100, external lip Ø112

Internet Connection

- Ethernet cable via Rj45 connector

COATING

- Coating width: 1- 300 mm
- Substrate width: Max 350 mm
- Substrate roll diameter: Max 300 mm
- Coating speed range: 0.01 - 10 m min⁻¹
- Slot-die compatibility: FOM SD 25 - FOM SD 300

DRYING

FOM flotation oven:

- Max. web width: 350 mm
- Drying length: 1000 mm
- Max. temperature: 200°C
- Airflow capacity: up to 900 m³/h
- Temperature control: PT100-based
- Options: Integrated IR drying

FOM Optima single web oven:

- Max. temperature: 200 °C
- Up to 9 m adjustable drying length
- Substrate compatibility: Flexible
- Heating element: Hot air ring heater and IR curing lamps (1000W)
- Heat transfer options: Convection (when air is supplied)
- Operated with under-pressure and extraction control

CERTIFICATIONS & STANDARDS

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

OPTIONS

Equipment:

- FOM Ionizing bar (Anti-static)
- FOM Blade coating system
- FOM Flexographic system
- FOM Comma bar system
- FOM Slitting station*
- FOM Thickness measurement*

Additional drying and curing:

- FOM Air knife system
- FOM IR system

Enclosure

- FOM Machine enclosure

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
- PP syringe
- Syringe heating up to 80 °C
- Slot-die shims and guides for adjusting coating width and pattern

**Requires extension module*

