

Coatema Smartcoater

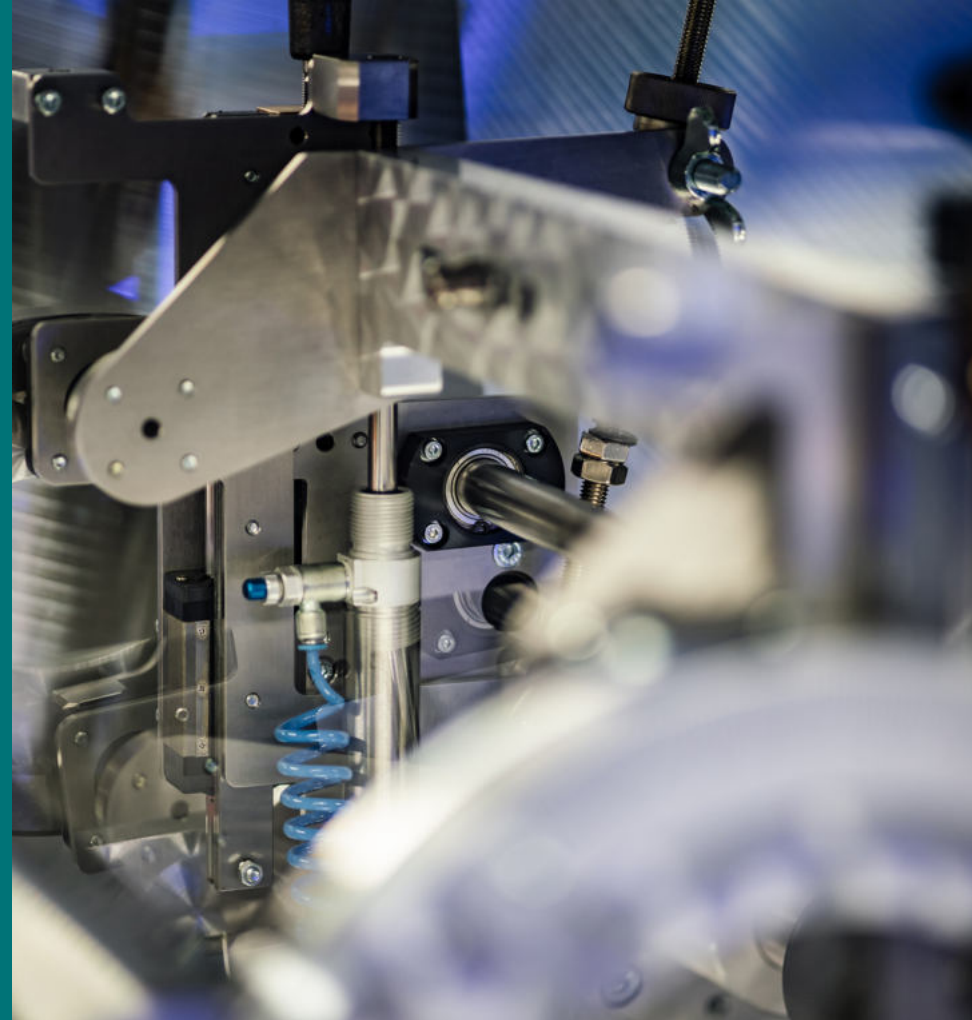
Coatema

03/05/2023

MEMBER OF ATH

Agenda

1. Introduction
2. Coatema Smartcoater
3. Overview on the unit
4. Application systems
5. Drying, curing & crosslinking
6. Options & specifications
7. Summary

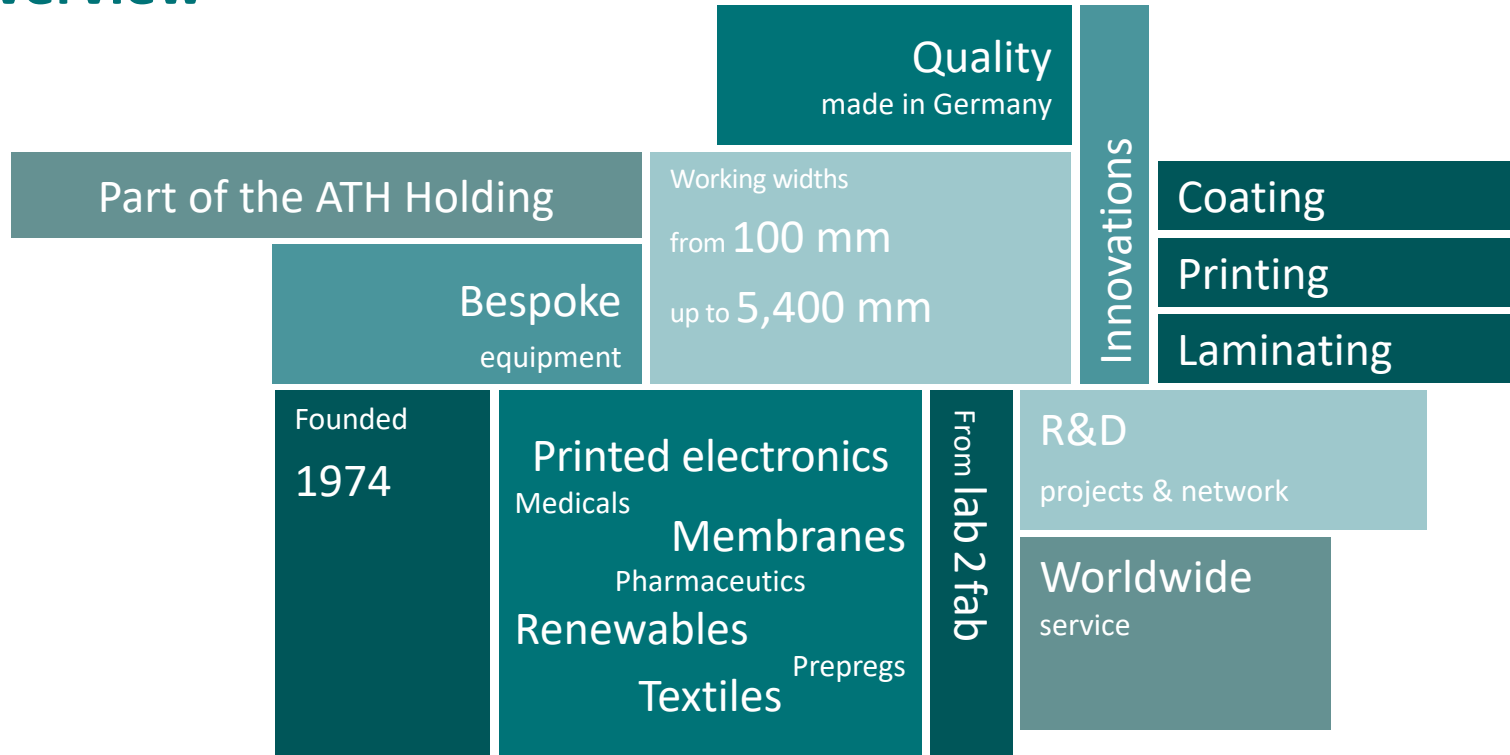


1.

Introduction



Overview



Group of companies

ATH ALTONAER
TECHNOLOGIE
HOLDING



- ✓ Founded 1903
- ✓ Approx. 200 employees
- ✓ Located in Hamburg

DRY/TEC

- ✓ Founded 1995
- ✓ Approx. 50 employees
- ✓ Located in Norderstedt



- ✓ Founded 1974
- ✓ Approx. 50 employees
- ✓ Located in Dormagen

2.

Coatema Smartcoater



6-in-1 system	Hepa filter	Heated air dryer	Infrared dryer	NIR	Photonic sintering	UV LED	Lamination
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Siemens S7	Corona / Plasma	Unwinder	Edge guiding	Load cell	Rewinder	Load cell
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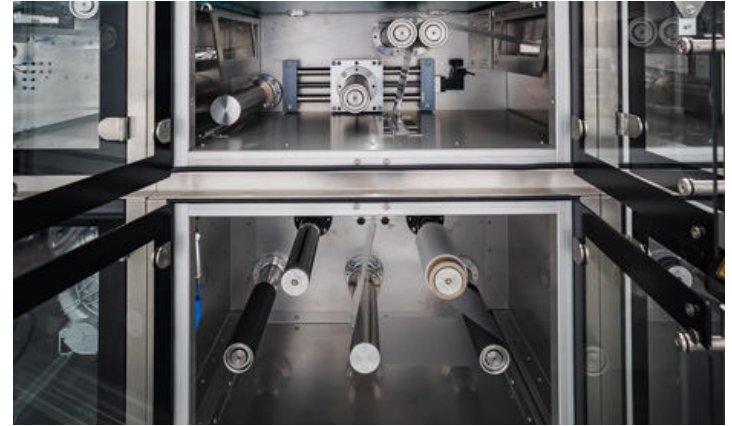
The Coatema Smartcoater



The Coatema Smartcoater



The Coatema Smartcoater



What is the Smartcoater vision

- ✓ 300 mm plattform with options as standard or custom made version
- ✓ Compact design, but all features in to support the lab2fab upscaling process
- ✓ Modular design with optimum user expieirence
- ✓ QS control and systems as an integrated approach as needed
- ✓ IOT gateway and UPC-UA data exchange options
- ✓ Standars for batteries, fuel cells, membranes, solar and nanoimprint available
- ✓ All features can be tested in the Coatema R&D center

Design and layout of processes always optimized for the customer



Membrane application



Summary of benefits of the Smartcoater



Application systems

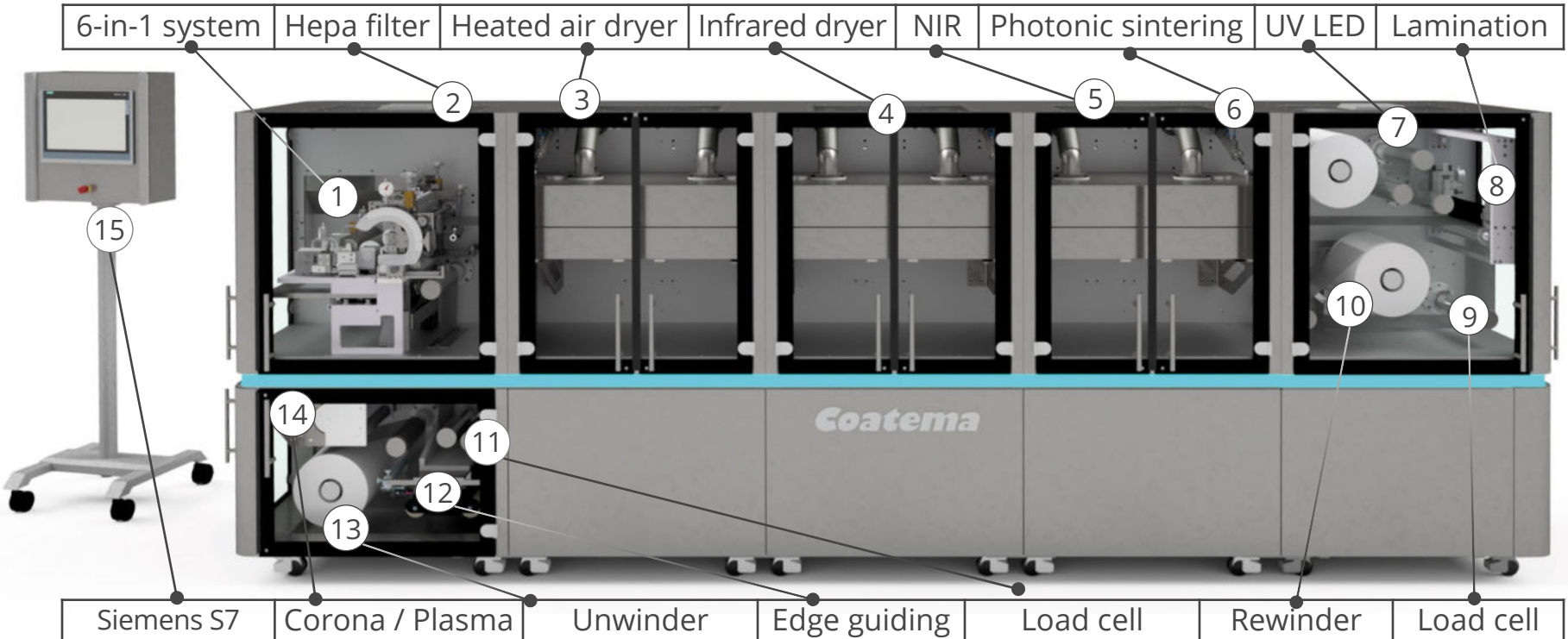
- ✓ Coating
- ✓ Printing
- ✓ Modular platform
- ✓ Over 32 technologies
- ✓ Interchangeable modules
- ✓ Inert atmosphere as option

3.

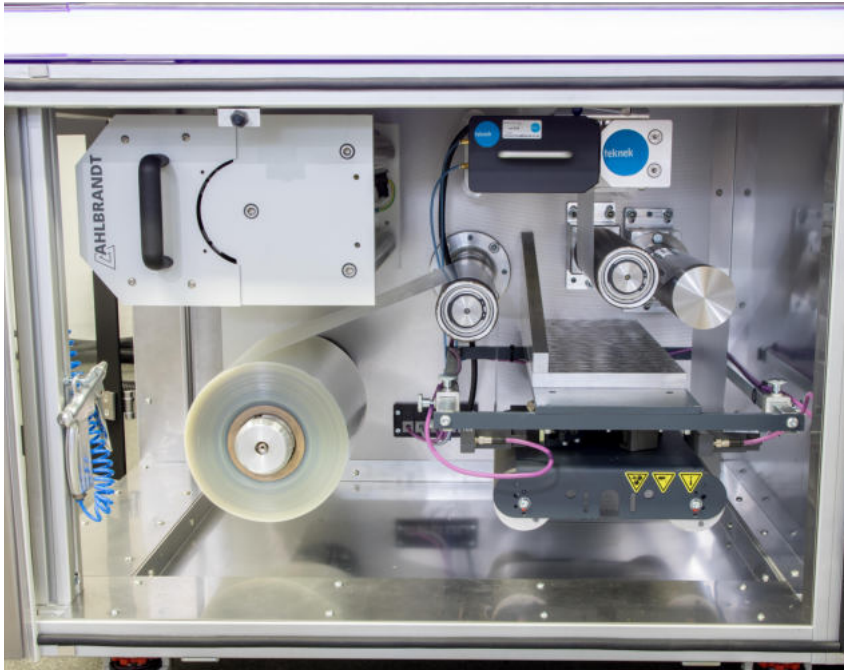
Overview of the unit



Overview of product features & options

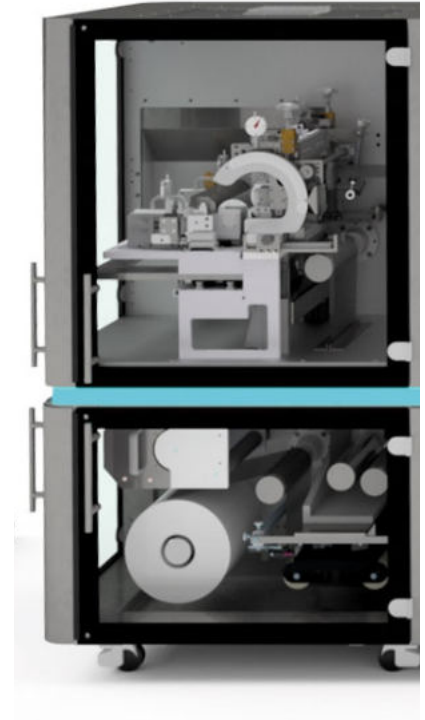


Unwinder module

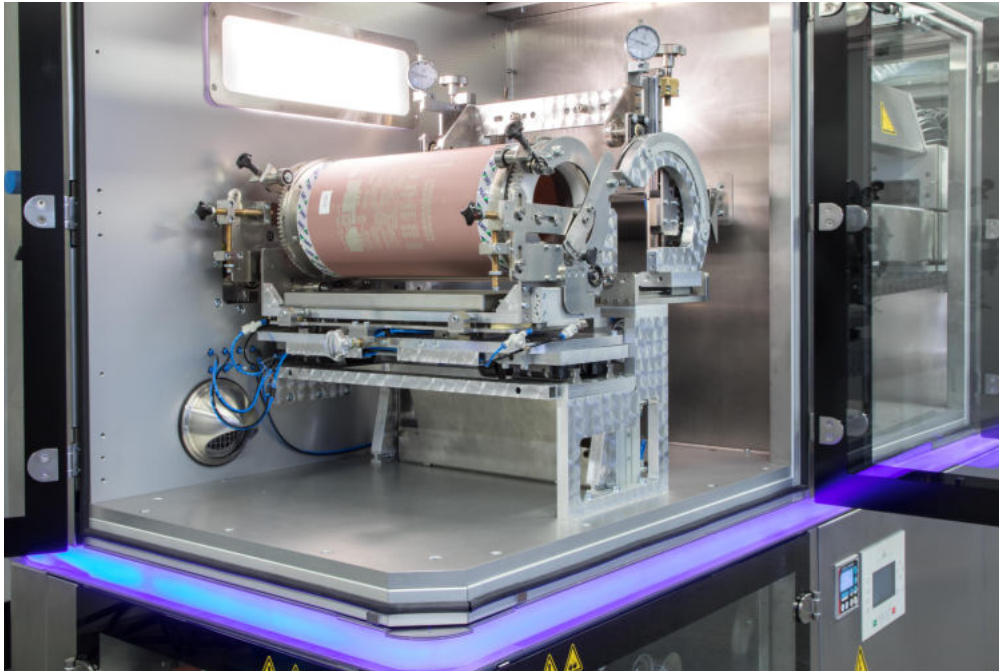


Unwinder systems

- ✓ Unwinder
- ✓ Load cell
- ✓ Edge guide
- ✓ Web cleaning
- ✓ Corona plasma
- ✓ Anti static



Application area



Application area for 6 in 1

- ✓ 6 in 1 system with slot die
- ✓ Rotary screen
- ✓ Micro roller
- ✓ Engraved roller
- ✓ Doctor blade
- ✓ Comma bar

Drying / crosslinking options



- ✓ Heated air
- ✓ IR
- ✓ NIR
- ✓ Laser
- ✓ UV

Available quality and process control systems

- ✓ Thickness
- ✓ XRF
- ✓ Optical quality control
- ✓ Coating control
- ✓ Register control
- ✓ Low tension regimes

Rewinder



Rewinder

Delamination unit

Slitting

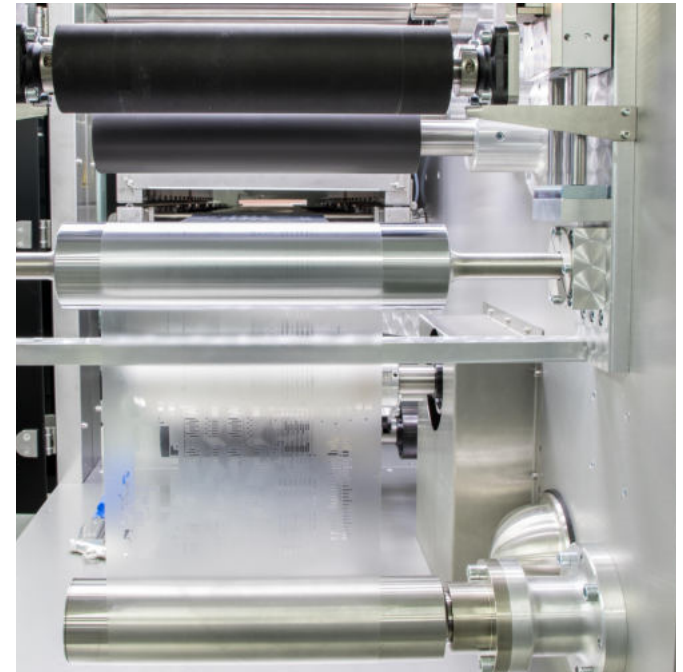
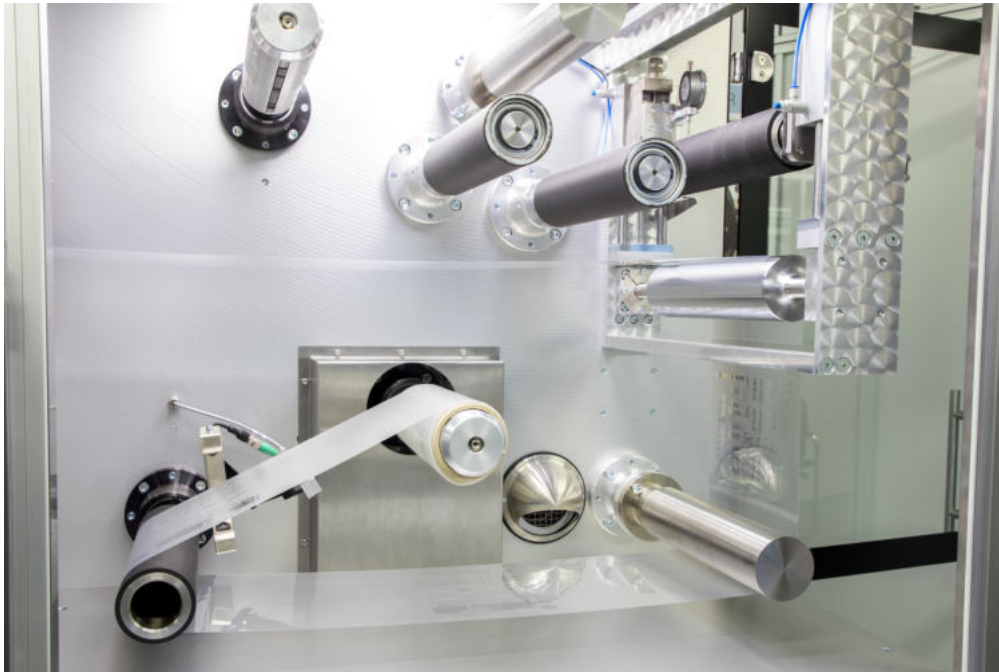
Cross cutting

✓ Load cell

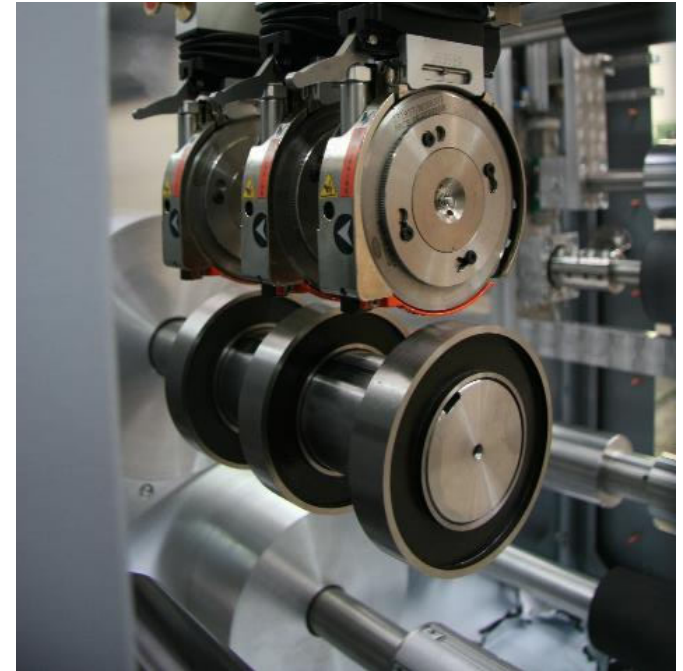
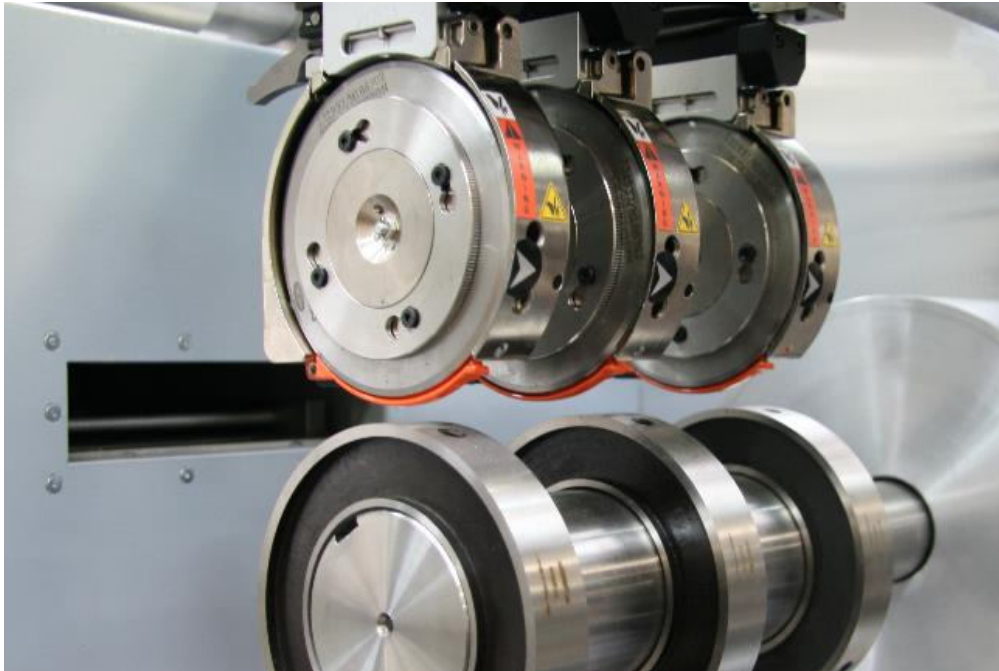
✓ EPC



Rewinder module



Cutting device as one of the options

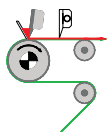


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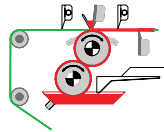
Application systems



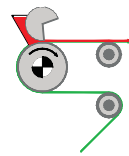
Coating systems



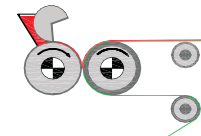
Knife system



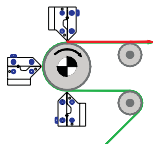
Double side coating system



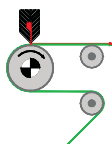
Commabar system



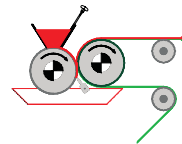
Reverse commabar system



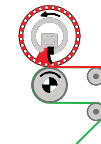
Slot die system



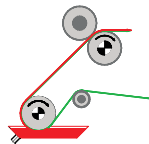
Curtain coating system



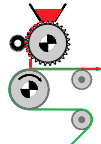
Case knife system



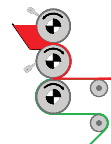
Rotary screen system



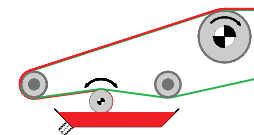
Dipping system (Foulard)



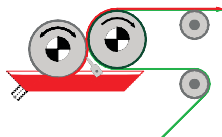
Powder scattering system



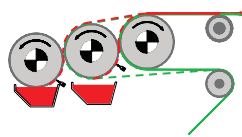
Reverse roll coating system



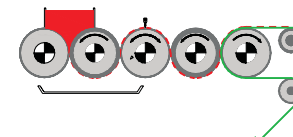
Micro roller coating system



2-roller coating system

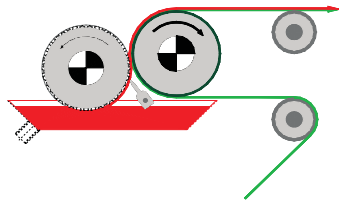


3-roller combi coating system

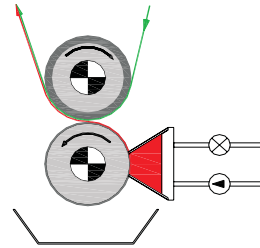


5-roller coating system

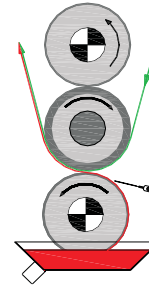
Printing systems



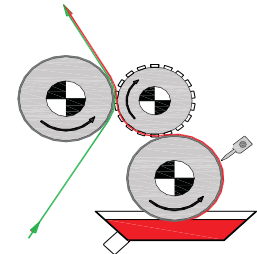
Engraved roller system



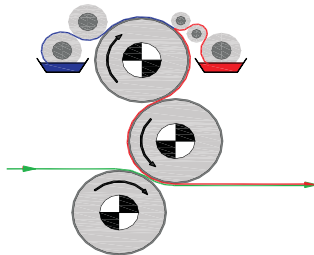
Gravure roller system



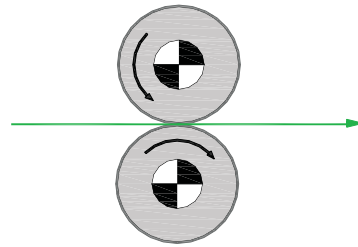
Gravure indirect system



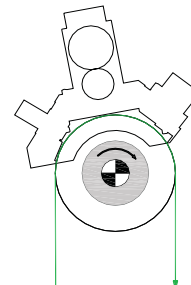
Flexography system



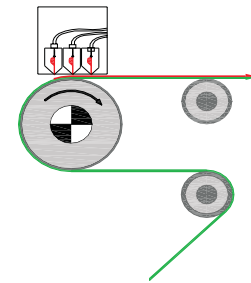
Offset lithography system



Hot embossing system

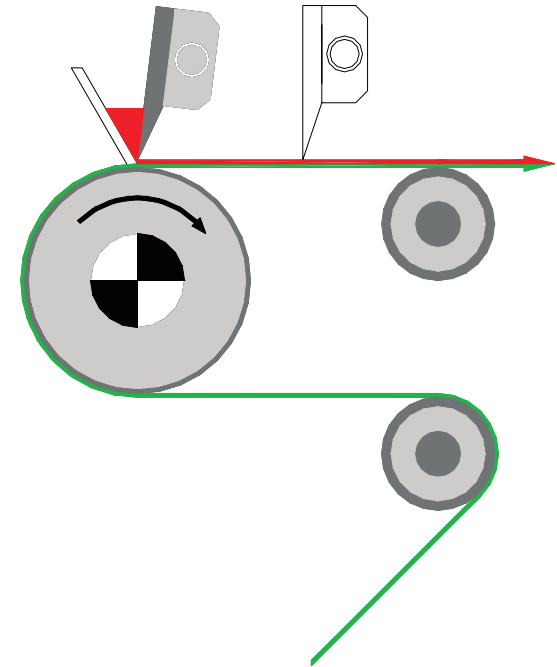
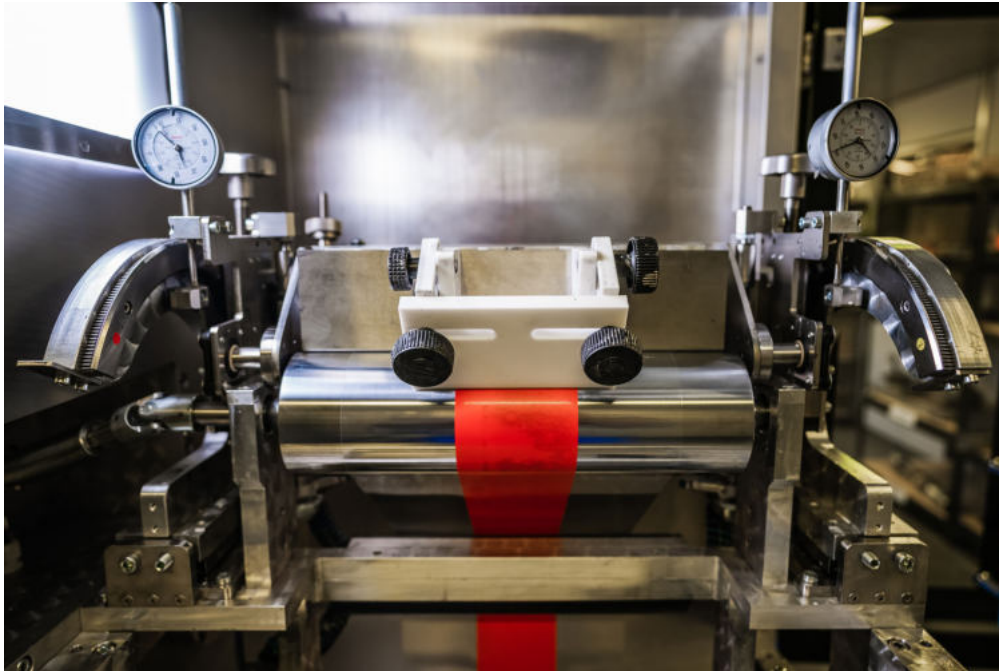


Nanoimprint system

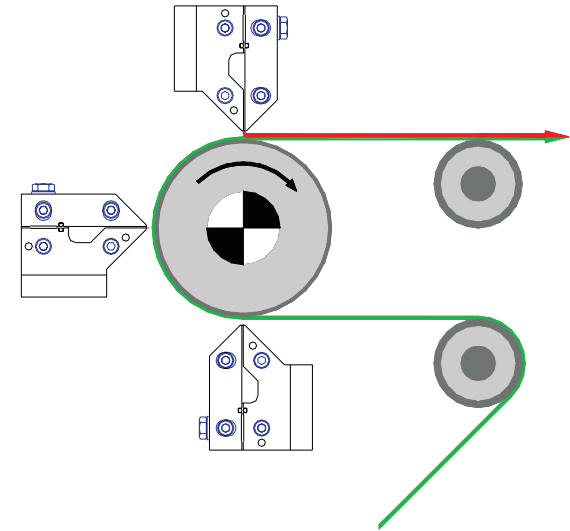


Inkjet system

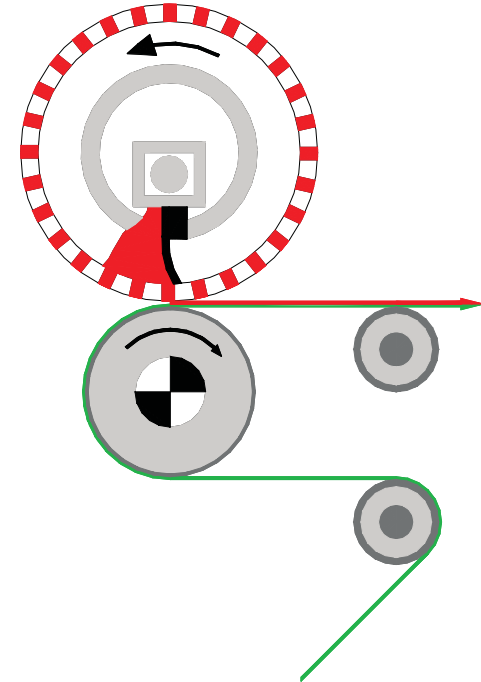
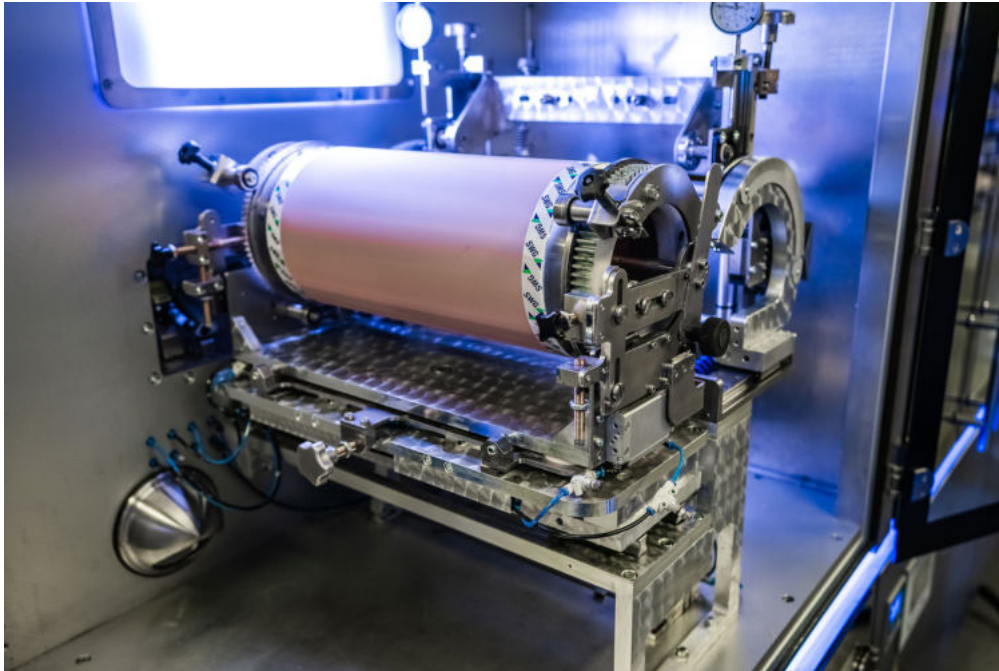
Doctor blade



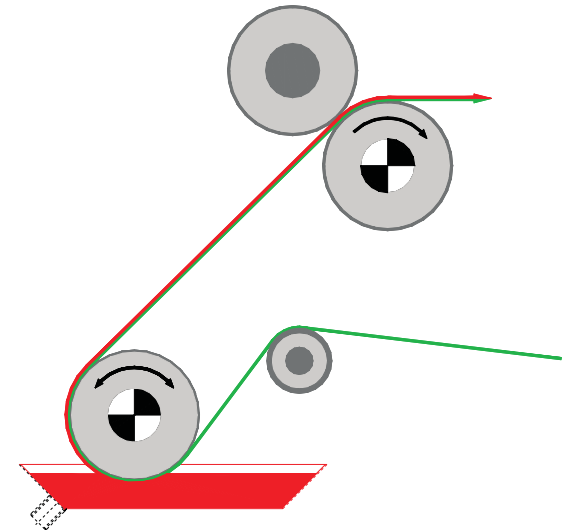
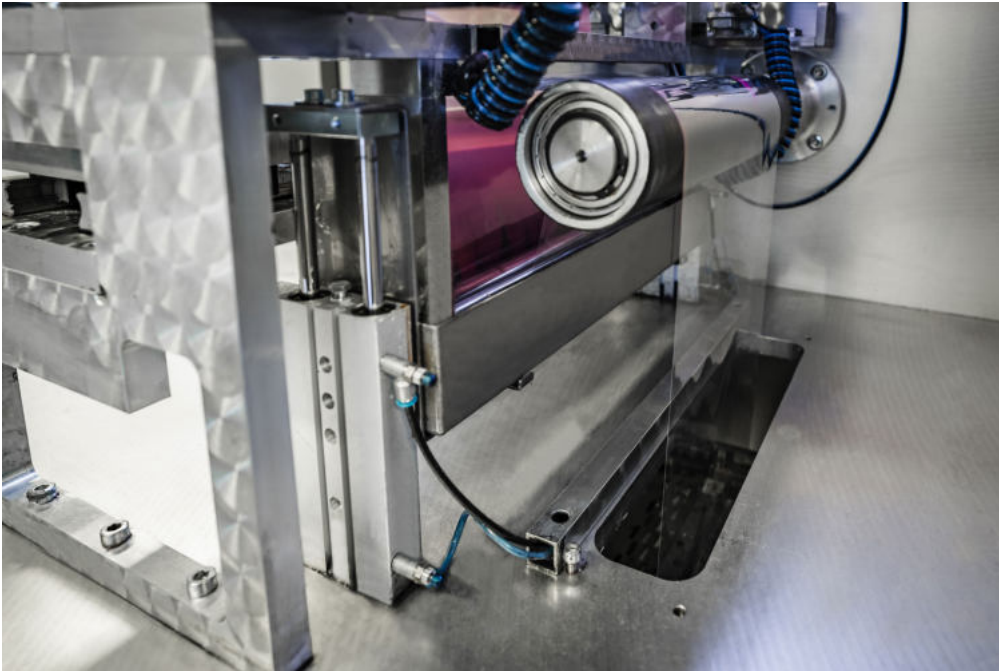
Slot die



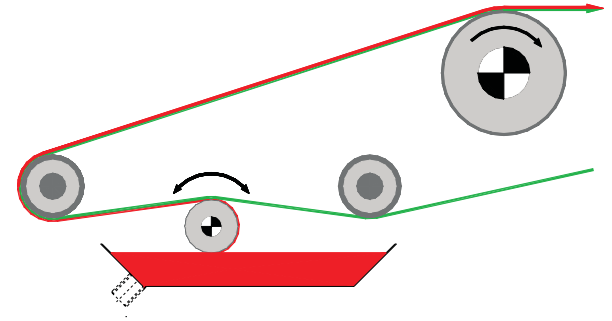
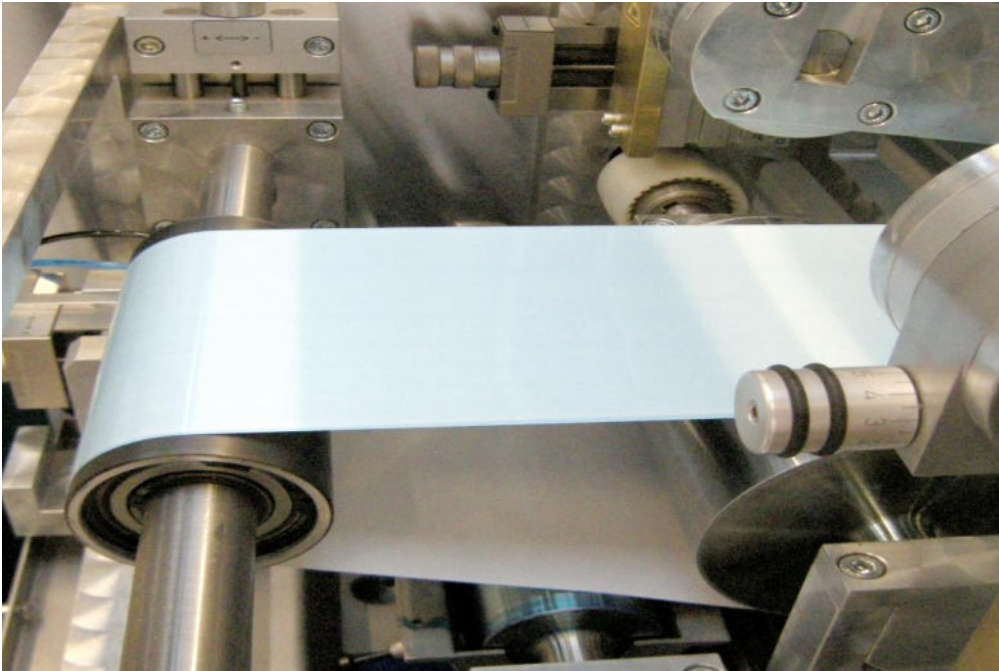
Rotary screen printing



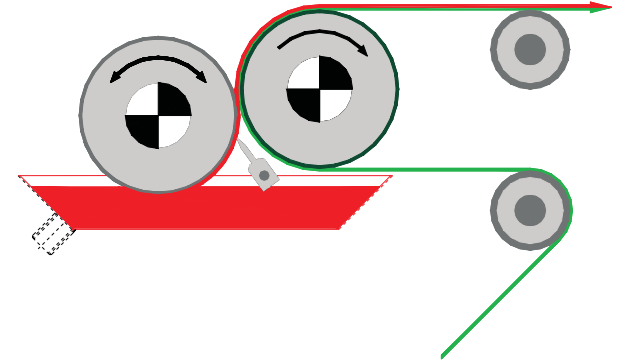
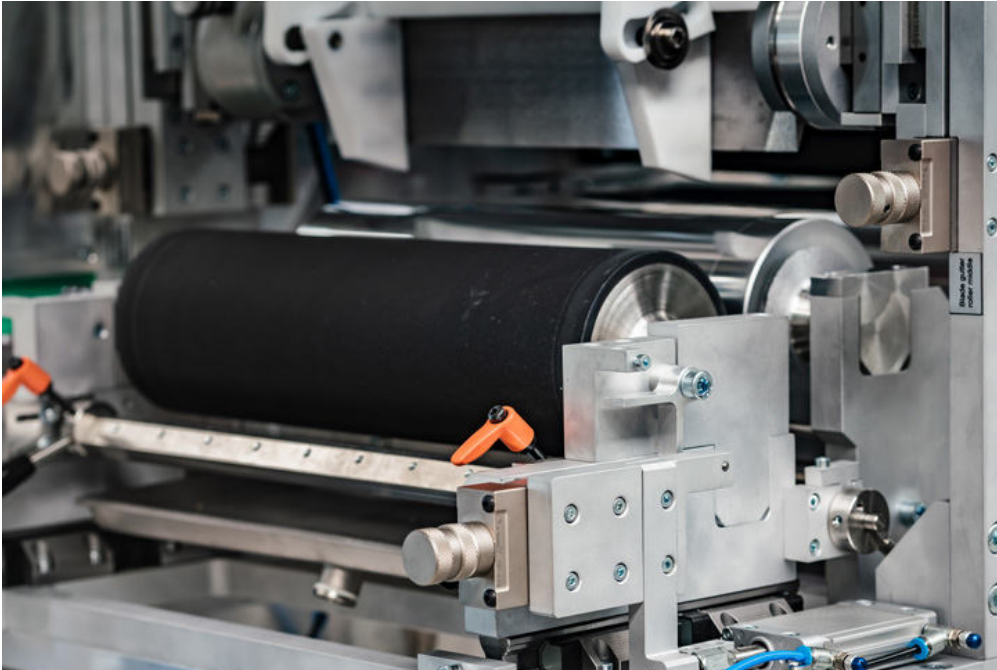
Dipping



Micro roller



Engraved roller system



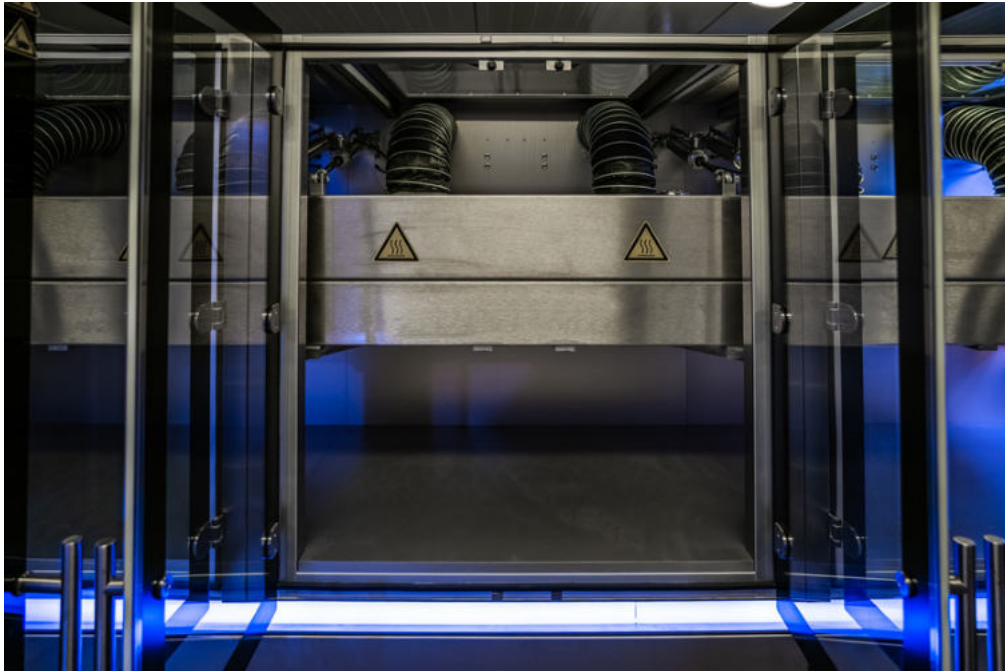
5.

Drying, curing & crosslinking



Drying, curing & crosslinking

Dryer modules



Drying, curing & crosslinking

Dryer modules

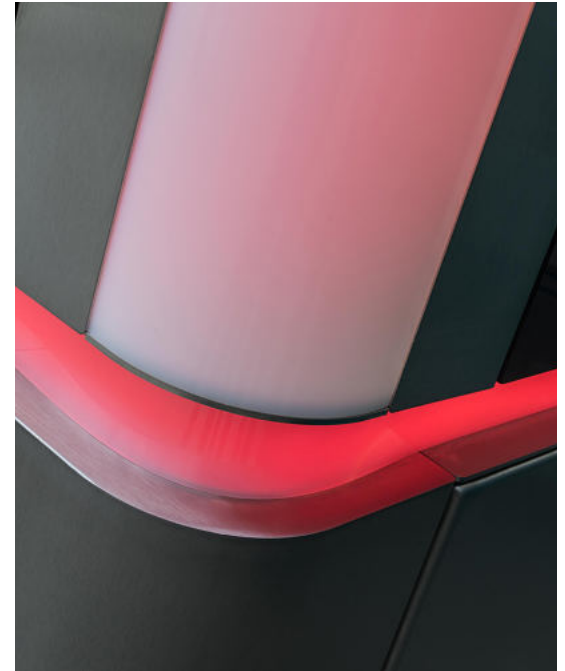


6.

Options & specifications



Technical specifications



Technical specifications in detail

Coating + printing Options

- ✓ Continuous R2R coating
- ✓ Printing
- ✓ Laminating in one unit

Dimensions

- ✓ 1,260 x 850 x 1,750 mm (LxWxH), (for the shown unit)
- ✓ Working width: 100 mm / 300 mm, V: 0.1 – 10 m/min, F: 10 – 250 N
- ✓ Roller width: 350 mm

Dryer

- ✓ 1.000 mm electrical heated air dryer, 9 kW max.
- ✓ Dryer temperature: max. 235°C
- ✓ IR / NIR available
- ✓ UV LED available

Operation options

- ✓ Tension control system with load cell and Siemens S7 system

Facts

- ✓ 6-in-1 application system (knife / dip / engraved / slot die / micro roller / screen) as starter option or 32 other systems
- ✓ Unit can run backwards as option
- ✓ Unwinding and rewinding motor driven and tension controlled
- ✓ Enclosure – glove box option
- ✓ Switch cabinet
- ✓ Power: 400 V / 50 Hz / 32 A

7.

Summary



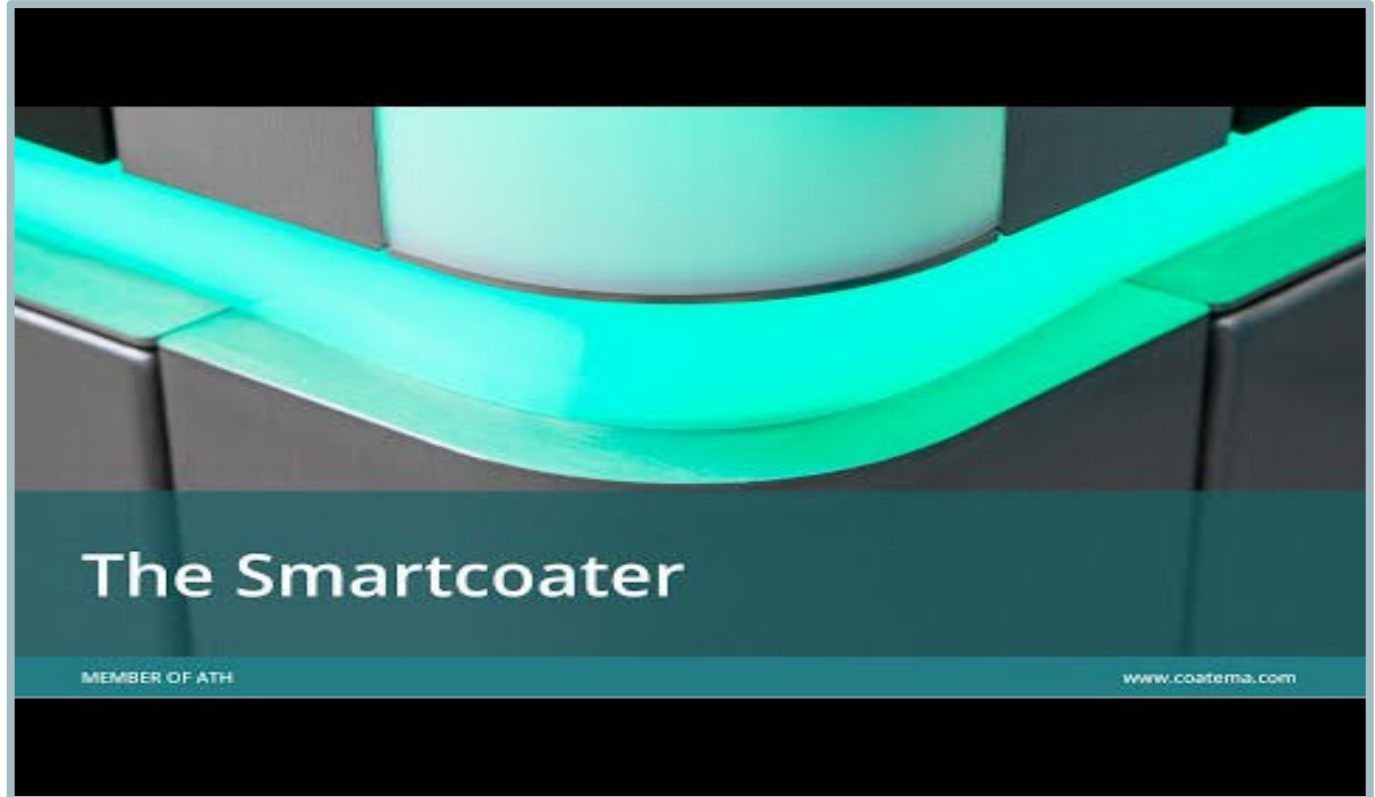
The customer benefits

- ✓ Small scale R2R unit – easy to use
- ✓ Small amount of inks being used – less trial cost
- ✓ Reproducible results – scalable R&D
- ✓ Can have the option to runs backwards – multilayer in a short time
- ✓ EEx operation on small scale
- ✓ Inert atmosphere as option

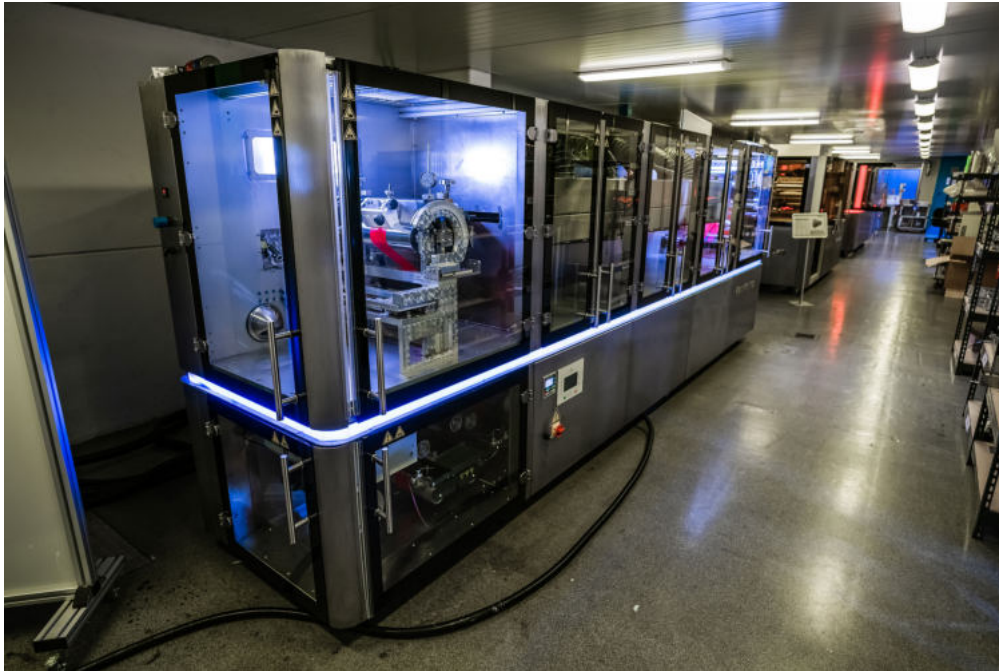
Smartcoater



Press Button to
show the video



Do not hesitate to contact us!



The Smartcoater is part of the Coatema lab and pilot line platform strategy.

Our R&D centre is worldwide the most versatile centre for coating, printing and laminating.

Anything missing?

Let us know and we will make it happen!

Sales department:
sales@coatema.de

Download brochures & presentations



Coatema

Thank you

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