

The compact machine for laboratory, research and development as well as production

LabCo

For more than 100 years Maschinenfabrik Max Kroenert have been leaders in the construction of customised coating and laminating machinery for web widths of up to 3,300 mm.

The universal and extremely versatile LabCo series complements the Kroenert product range. The series can be used to coat all materials which can be processed from roll to roll and with a web width of up to 500 mm.

LabCo, which can meet production benchmarks, is ideally suited to laboratory, research and development as well as micro production operations.

Applications:

LabCo's modular design allows a wide variety of applications, including:

- Lacquering
- Electrode coating (for batteries)
- Photo-voltaic cells
- Fuel cells
- Technical textiles (membranes, filters)
- Pharmaceuticals and medicine
- Flexible packaging
- Adhesive tape and labels



Coating Processes

Different coating processes are needed for the variety of applications. LabCo's universal coating system makes simple and quick changes in coating processes readily achievable.

A selection of systems with the following features is available:

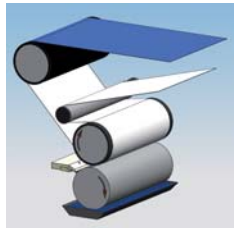
- Gravure rollers
- Smooth rollers
- Comma bars
- Die/Curtain coaters

Coating media

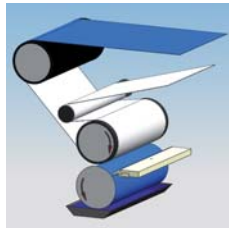
The production of exact and repeatable coatings can be achieved with all systems. The results can be applied, without restriction, to production lines. At the same time, it is immaterial whether the medium being processed is aqueous or solvent based. Amongst others, it can be used for:

- Pressure-sensitive adhesives
- Lacquers and primers
- Dispersions for paints and barriers
- Solid-state suspensions
- 100% Systems for chemical, thermal and radiation cross-linking

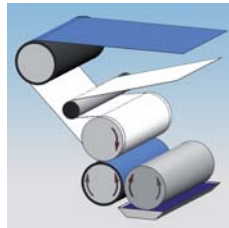
Coating with gravure rollers



Reverse

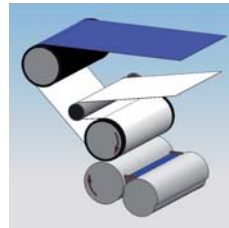


Forward

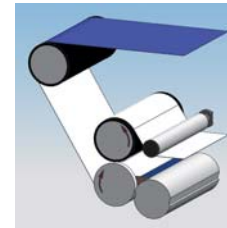


Indirect

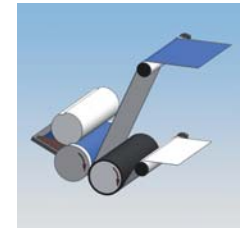
Coating with comma bar



Indirect

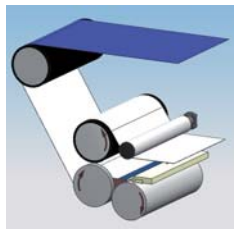


Direct

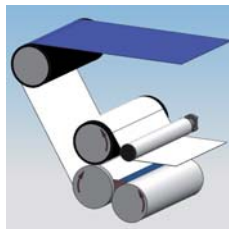


Indirect reverse

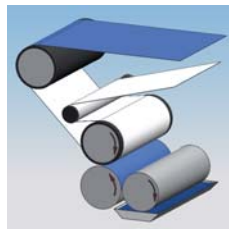
Coating with smooth rollers



Direct reverse

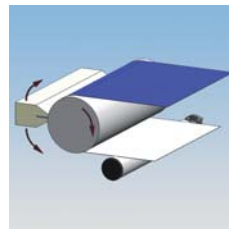


Direct forward

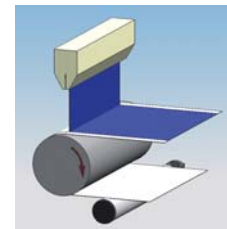


Indirect forward

Die/Curtain coaters



Die coating



Curtain coating

Even the basic version of a LabCo creates confidence. Outstanding features include:

- Compact, solid design with self-contained drive unit at the rear
- Unwinders and rewinders in user-friendly cantilever design
- Controlled brakes/winder drives
- Coating head with individualized roller settings
- Repeatable precision adjustments for coating rollers

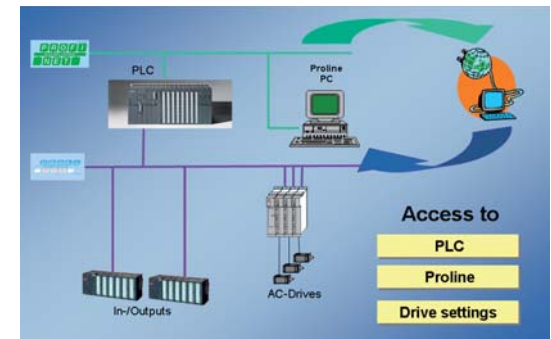


- Adjustable tension control between coating head and dryer
- High-performance air floatation dryer in 2 m sectional design
- Good accessibility
- All nozzles with quick-release fasteners for installation and removal of different nozzle types
- Cooling of web before rewinding
- Individual Sinamics drives



- SPS machine control and PC supported control and visualization system
- Touch panel screen to display status and machine parameter presets

The machine is delivered completely pre-assembled as well as installed and commissioned from a single source.



LabCo Options

A variety of optional add-ons can enhance the standard LabCo configuration.

- Pre-treatment stations and web cleaning systems
- Clean room complying with GMP and FDA requirements
- Laminate unwinding and laminating station (Wet/Dry laminating)
- **Coating station:**
 - Pattern coating for strip and intermittent operation
 - Meyer bar metering
 - Rotary screen printing
 - Impregnation
- **Dryer:**
 - Variable nozzle configuration (Contec, shutter, impingement nozzles)
 - Integration of IR and UV radiators
 - Heating systems (alternatively electric, gas, steam, thermal oil heating etc.)
- Machine control with integrated recipe management
- Complete fresh and exhaust air installation

Technical data

Web width	200 - 500 mm
Speed	0.1 - 100 m/min
Substrates:	
Papers	20 - 200 g/m ²
Aluminium, Copper	8 - 30 µm
PE, PP, PET, PA etc	15 - 100 µm
Fleece, fabrics, non-woven	10 - 100 g/m ²
Roll diameter	up to 400 mm
Core diameter	3", alternatively 6"
Coating weights	0.5 - 2,000 g/m ²
Viscosity range	50 - 5,000 mPas (20 °C, 100 [l/sec])
Ø Coating rollers	200 mm, mounted on both sides
Ø Guide rollers	80 mm, cantilever mounted
Circulating air	max. 28 m/sec, frequency controlled up to 2,700 m ³ /h per section
Machine dimensions	1.5 x 2.5 m (w x h)*
SPS	Siemens S 7 - 315
Drives	Sinamics individual drives
Sound pressure	max. 80 dB(A), EN 13023
Specifications (mech. and elec.)	acc. to EC Machinery Directive and EN 60 204

*Machine length depends on the length of the dryer selected

Possible applications



Reflective foils



Solar cells



Blister packaging



Lithium batteries



UV protective films



Printed circuits



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