

# R2R Printing

## *Small scale manufacturing of printed electronics*

### Introduction

Roll-to-roll material testing and small-scale manufacturing can be made with PrinLab SOM-100 machine. R2R machine includes flexo, gravure, rotary screen and hot embossing units. The R2R post-processing line can be used to dispense analytes or reagents onto printed structures, either in a flatbed or roll-to-roll process.

### Applications

- Small scale manufacturing
- Material printability testing
- Sensor activation

### Printing units on SOM-100

- **Rotary Screen:** A squeegee forces ink through a rotating mesh stencil. Ideal for thick, functional layers and high-viscosity pastes.
- **Gravure:** Ink is transferred from etched micro-cells on a metal cylinder. Best for high-speed, high-resolution mass production.
- **Flexo:** A raised relief plate acts as a rotary stamp. Provides thin, uniform coatings across a wide variety of substrates.
- **Hot Embossing:** A heated mold stamps micro-scale patterns into a softened polymer. Used to create structural features rather than printing ink.

### Post-processing line

A Cartesian robot precisely places micro-volumes of liquid onto selected sensor features.

### Technical Specifications

#### SOM-100

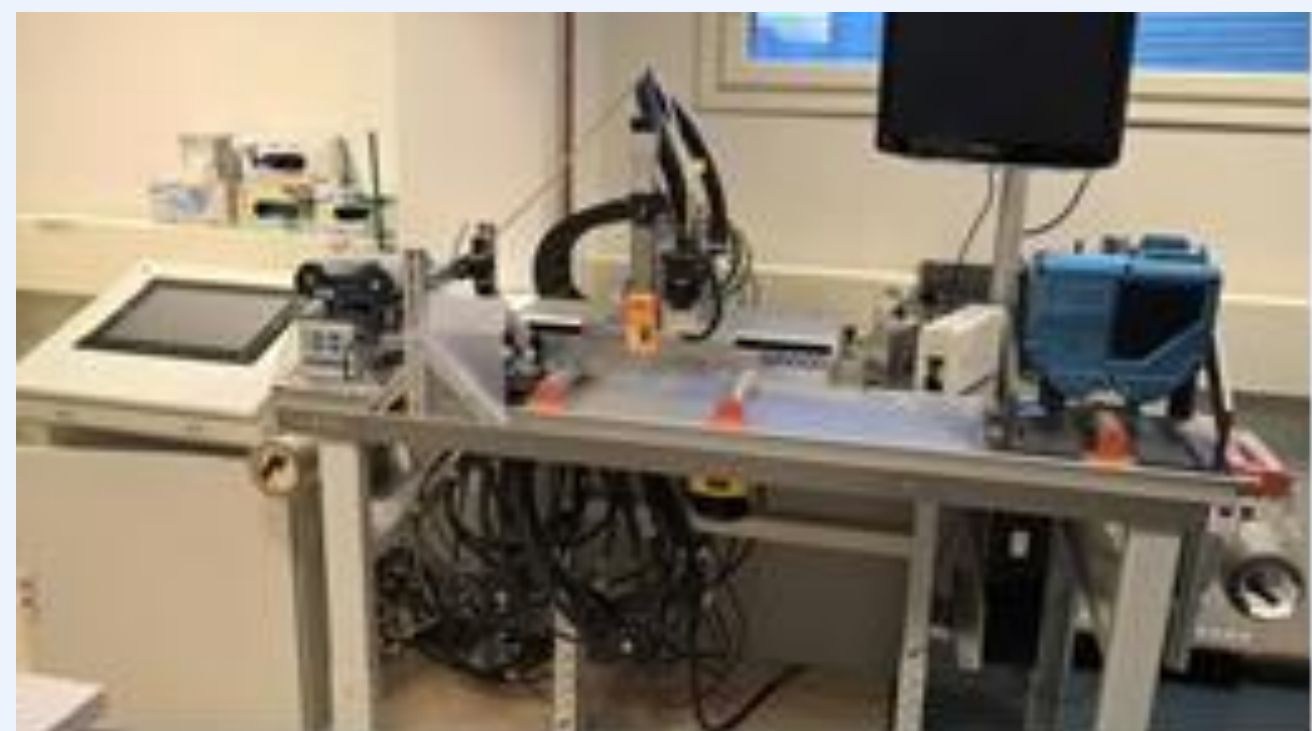
- Printing area max. 80 mm
- repeat length 409,57 mm
- Speed 0,1 – 26 (flexo 18) m/min

#### R2R post processing line

- Vacuum table 320 x 240 mm
- Automatic machine vision registration system.
- Ginolis EMB and PMB dispensing pumps from 2,5 nl to 140  $\mu$ l drop volumes
- Accuracy  $\pm$ 25 microns



*R2R printing machine SOM-100*



*R2R post processing line*