

# INK DENSITY CONTROL FOR COMMERCIAL

## Image-width measuring and quick control algorithm

### State-of-the-art measuring methods

State-of-the-art measuring methods the InlineDensity Control (IDC) measuring system features high dynamics and resolving capacity of the cameras, LED flash illumination, short measuring cycles, and robust design (no moving parts, no wear). It is highly variable in use and allows modular adaptation to webfed and sheetfed presses. True density values are determined. Due to parallel arrangement of the cameras, the measuring strip can be covered across the full width of the paper in one measuring.

### Precise control algorithm

The high measuring frequency makes for dynamic, fast-reaction control. Process fluctuations can often be compensated for even before the tolerance limits are exceeded. The control process includes not only the zonal shift elements but also the ink fountain roller. IDC thus covers the entire ink flow, effectively controlling it via the linked actuators fountain-key opening and fountain-roller speed, virtually "like a printer". By combination with QuickStart, waste rates can be reduced to even less than the low rates achieved with InlineDensity Control and optimized ink presetting alone.

### High process integration

The new ink measuring and control system is fully integrated into the PECOM-X system. The PECOM-X PressManager provides job-specific data like zonal area coverage, type of control strip being used, or press configuration. The measured density values are combined with the press events, e.g. job changeovers, counter, printing speed, blanket wash-ups, to form a comprehensive report on the print production.

### Closed loop control for ink

High-frequency inline measuring of ink densities fully across the image width produces a real-time representation of the printing process, and provides the basis on which any process fluctuations are compensated for by an intelligent control algorithm. This ensures consistent high printing quality and low ink waste rates. The control algorithm with adaptive control amplification incorporates the knowledge and experience of design and testing experts as well as users in actual print production. The operators are relieved of ink density control and monitoring work.

## Technical specification

Densitometric measurement

45°/0° – geometry

Polarization filters

LED-Illumination (RGB)

Density range 0.00 – 2.50

Measuring patch (min. width x height): 3 mm x 2 mm

Speed range: 0,1 – 20 m/s



## Highlights

- High-resolution camera technology with long-life, stable LED flash illumination
- Image-width measuring – no moving parts, high measuring frequency
- True density measuring
- Short measuring cycle time makes for dynamic, quick control
- Inclusion of ink fountain roller in control – printer-adequate behavior
- InlineDensity Control increases the quality, productivity and effectiveness

