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# InlineRegistration Control for webfed presses

## Modern measuring technology for quick and exact color register

High level of automation thanks to modern camera technology

The compact design of this camera and the consequent low space requirement make the Smartkamera suitable for varied applications in the production process. The system is used to determine the position of measurement subjects on running paper lines (e.g. for cut register control) and may be installed after the printing unit, in the folding or reversing structure or in the folding machine. Thanks to the high measurement frequency of modern camera technology, every copy is measured at all line speeds.

Camera system as an intelligent sensor

The robust measurement technology consisting of a camera with a lens, flash lighting and a built-in processor sets new standards in reliability and availability. In addition to measurement value recording per se, complete signal preparation and signal processing is now also combined in a single housing. The performance and quality of the computer technology built in in addition to the pure camera function allow the smallest marks to be assessed on the basis of the required characteristics in real time and on the spot and the processed results to be made available. The system works fully automatically, if required also on a motorized traverse, and is incorporated into manroland's suite of machines.

Up to eight colors per web side

Special features of the InlineRegistration Control are high dynamics and depth of focus of the CCD cameras used. The system is measuring with relatively small marks – for up to eight colors per web side. The size of the marks is only 2 x 6 and 4 x 4 mm respectively, and only very little more is required as image-free area. For every web within the production the printed colors will be automatically configured depending on the production type.

Integrated operation via control console / live image on operating screen

The adjustment of the individual color registers is done directly within the web or page oriented screens of the central control console. However for online quality diagnosis of the color register and for enhanced control and diagnosis of the InlineRegistration Control a separate monitor is used. On its screen live pictures of every camera addressed and the history of the color register deviations over some hundreds of copies are available.

Compact, robust and maintenance-friendly

Obviously, the system's great depth of focus and its robust, maintenance-friendly design are favorable also for installation in the superstructure. The cameras and their positioning are of compact design (width of the measuring system less than 140 mm) and require little space. Ease of maintenance is ensured by a scratch-resistant, easy-to-clean and quick to-exchange optics cover in the camera measuring modules.

Integration into PECOM-X – all closedloop advantages concentrated

Integration of the color register system make it possible to utilize the resultant synergies, e. g.: avoidance of unnecessary data redundancy, parameterization of the system as part of presetting the components, integration into the PECOM-X PressManager functionality and evaluation options. InlineRegistration Control as part of Inline Control Systems increases the productivity and effectiveness of manroland presses.

## Highlights

- High-resolution camera technology
- Robust design and small space requirements
- Inconspicuous dot marks for six or eight colors per web side
- Full integration into the PECOM-X product family
- Short cycle time enables quick automatic control
- Diagnosis with live display via dedicated panel Integration into control console

