QuadTech: Color Control System with AccuCam
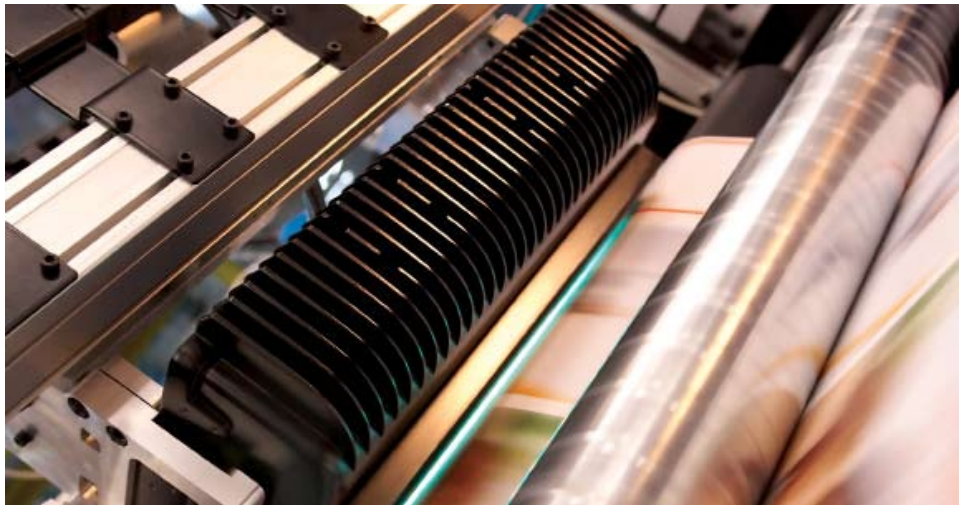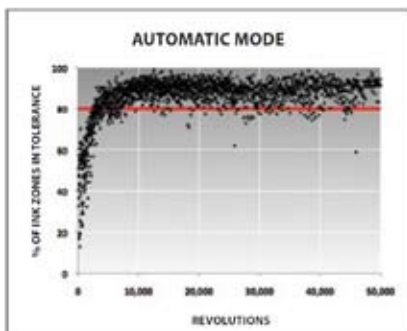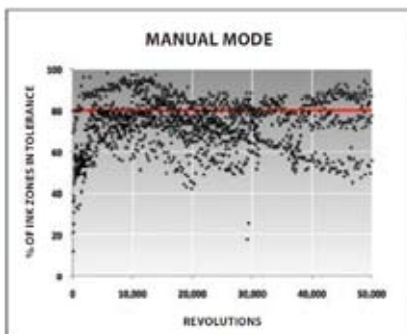
The QuadTech Newspaper Color Control System with AccuCam is at the same time a web inspection system.

The image-based colour control system provides full control from production start to finish by automatically controlling the ink keys and the ink fountain roller. No control element is used for colour measurement in the printed image.

In order to obtain a high degree of precision in determining the colour gamut, the Colour Control System with AccuCam works with a propietary 6-channel spectral sensor that divides the spectrum into six areas. AccuCam also uses the patented QuadTech technology for L*a*b*-based colour control. Greg Wuenstel, AccuCam Product Manager, says: "The AccuCam sensor measures the printed web and calculates the L*a*b* values for the entire printed image. The printed image is then compared with the L*a*b* values obtained from the prepress file as target values. The system calculates the necessary adjustments that must be carried out to the individual ink key zones." Once the desired colour setting has been achieved, it will be maintained throughout the production run. According to the manufacturer, the fact that the entire printed image is taken into account and not just individual image areas means that high degrees of precision and consistency are obtained.

The AccuCam colour control system is image-based, i.e. there is no need to include control marks or disturbing colour measurement patches in the page. QuadTech gives as 18 m/sec the maximum web speed at which the system can be used.

Real time information for the operator

The operator control station, described as very user-friendly by Greg Wuenstel, is equipped with a flat touch screen and graphical user interface. "The printer simply starts the job at the user interface and the system begins colour control automatically – from press start-up – and maintains colour stability throughout the production run. Target values and tolerances for each ink key zone are shown in real time on the screen." Manual corrections to the target value settings can be carried out at the touch screen. The measurement can also

A comparison between manual colour control (top) and automatic colour control with the QuadTech Colour Control-System (bottom) shows how quickly consistent quality can be achieved in the automatic mode.

be used for later reports. Any unusual occurrences at individual ink key zones are read-out for error disgnosis purposes.

AccuCam is based on the integrated QuadTech ICON platform that allows the operators to supervise multiple press controls from one control desk. ICON, with the new QuadTech Proactive Care technology, also allows remote error diagnosis and detection of problems already at an early stage.

### Special features of the system and advantages for the user

AccuCam includes the following special features:
- Proprietary QuadTech 6-channel sensor
- Combination of density control and web inspection,
- OptiGuard, a device that works with blown air, keeps the lens free from contaminants and reduces cleaning frequency
- Detects toning and other quality shortcomings as well as wrongly mounted plates
- Integration into the ICON platform

QuadTech emphasises the following as important advantages of the system for the user:
- Minimum operating workload
- Intuitive, simple operation requires little instruction
- Increased productivity by web inspection and error detection
- Saves ink and lowers waste
- Guarantees consistently high quality
- Reduces special ad discounts due to complaints
- Eliminates subjective colour control.

AccuCam is a joint development of QuadTech and Newsprinters in Knowsley, England.

Function chart of the QuadTech colour control with web inspection
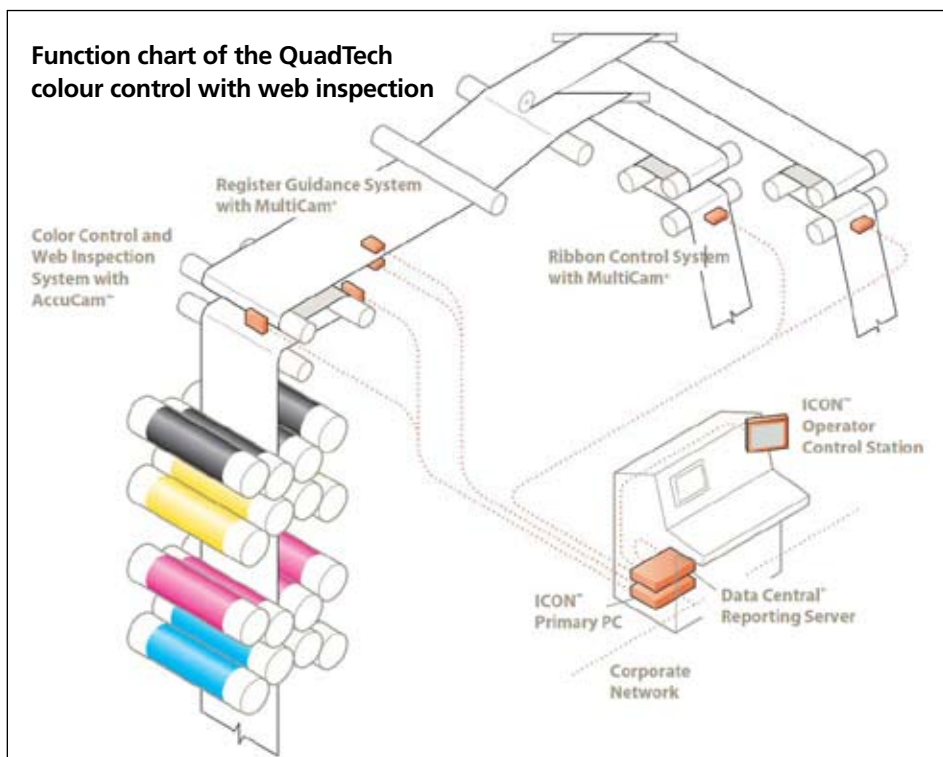
> ## In brief

- **System name:**
Color Control and Web Inspection System with AccuCam

- **Manufacturer:**
QuadTech, www.quadtechworld.com

- **Measuring device:**
special 6-channel spectral sensor

- **Measuring position:**
Image-based measurement without marks or colour strips

- **Function:**
The spectral sensor evaluates the entire printed web. Colour control is carried out based on calculated L*a*b* values that are compared with the target values obtained from teh prepress file. The system also controls the ink fountain roller automatically.

- **Colour reference:**
L*a*b* target values from high-resolution prepress data are used for purposes of comparison.