Closed-loop colour control systems for newspaper presses

Manufacturer Product	What measuring instrument is used?	Where is measuring done?	How is measuring done?	Special features
3TControl [www.3tcontrol.com] **Integrated Print Automation (IPA)**	Camera-based in-line densitometer	Extremely small colour dots for each colour zone on page margin	Camera moves across the running web and targets the control dots positioned in each colour zone. The solid density is measured.	Multi-functional closed-loop system for measuring and controlling colour density, colour register, fan-out and cutting register, extendable in increments; "invisible" measuring dots ■ In use in production
EAE [www.eae.com] **Loop**	Spectral, CMYK-based measuring system (spectral sensors)	No-mark measurement in print image	Spectral measurement of the full page in the web led across a roller via traversing dual measuring head	Detection of print disturbances, possibility to correct prepress errors; measurement into the IR range; protection against soiling of the sensor ■ In use in production
Grafikontrol [www.grafikontrol.it] **Colorscan**	Spectral sensor camera with 7 channels	No-mark measurement in the print image (optional measurement in colour measuring bar)	Camera moves across the running web, several colour zones measured simultaneously (160 mm measuring width); measures optical density and L*a*b* values	Measurement of 4 to 5 colour zones at once; measuring precision of density 0.03 D ■ Test installations
Graphic Microsystems* [www.avt-inc.com] **ColorQuick N**	Spectrophotometer	Two grey measuring patches (2 mm x 4 mm) pre-colour zone	Traversing measuring head measures control patches in the running web	Add-on option: Color Manager Spectral Reporting; lens protection
Mitsubishi [www.mhi-ppm.com/e] **Diamond Eye**	Line sensor RGB and IR LED	No-mark measuring in the print image	Running web measured continually and completely using a fixed measuring bar covering the full web width	Complete recording of entire print image; controls the process from press start-up and lowers especially start-up waste ■ In use in production
Q.I. Press Controls [www.qipc.com] **Intelligent Density System (IDS)**	CCD matrix camera; LED light source; Measurement in CIELab colour values	No-mark measuring in print image (optional measurement in colour measuring bar)	Traversing CCD camera measures the values in a web running clean, taking many individual shots of relevant image areas (automatic image area selection)	Alert in case of incorrect plate positioning, printing problems, e.g. empty ink fountains; self-learning measuring methods remote maintenance and diagnosis via VPN link; softproof available ■ In use in production
QuadTech [www.quadtechworld.com] **Color Control System**	AccuCam camera system with proprietary 6-channel spectral sensor	No-mark measuring in the print image	Traversing measuring head continually scans running web; L*a*b*-based colour control	Web inspection: checks whether plates were mixed up; indicates toning and print disturbances; OptiGuard protects lens from soiling (less frequent cleaning); remote monitoring ■ In use in production
Web Printing Controls [www.wpcteam.com] **CLC Plus**	CCD sensor	Grey balance measuring bars (+ micro dots for register measurement)	Traversing sensor localises measuring patches in the running web, measures and corrects colour accordingly; register is controlled at the same time	Combines inline colour control with colour register control in one system; cleaning system for the lens system ■ In use in production

* Graphic Microsystems, Inc. (GMI) is an AVT (Advanced Vision Technology, Ltd.) company.

■ TKS [www.tks-net.co.jp] markets its inline colour control solution (CMAC) to date exclusively in Japan; no details are available at the moment.

■ Toyo Ink (Japan) is the manufacturer of a closed-loop colour control system that is in use for example at the newspaper Chunichi Shimbun in Japan.

Entries in this table are based on information supplied by the manufacturers. The table makes no claim to be exhaustive.