

FOCUS INNOVATION

SOLUTIONS FOR PAPER STRETCH

With automatic paper stretch compensation and remote fan-out control, Heidelberg offers not just one but two solutions to reliably correct register errors caused by paper stretch. Choosing the right solution depends first and foremost on the job structure and sheet format used.

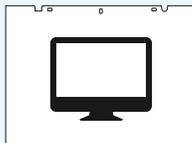
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aper stretches under roller pressure due to absorption of the ink/dampening solution emulsion. In large formats, this may exceed 0.039 inches (1 mm). This leads to illegible text and color shifts as a result of register inaccuracies, but also costs a great deal of time and money if it involves stopping the press either to adjust the printing plates mechanically or replace them with newly imaged plates. The automatic paper stretch compensation and remote fan-out control solutions from Heidelberg show that economical alternatives are also possible.

Software with “stretch prediction”

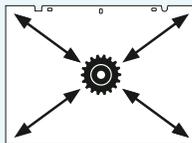
Automatic paper stretch compensation is a new software solution that precalculates paper stretching and adjusts imaging data before printing. Stopping the press or imaging a second plate set is not required. Predicting paper stretch is based on calibrating the paper using defined and documented job parameters. To do this, at least two test forms need to be proof-printed – one with high ink coverage and one with low. The software calculates how much the register deviates at a particular measuring point and saves the results in a characteristic curve along with data on the coloring, dampening settings, printing sequence and consumables used.

The next time printing is performed under comparable production conditions, the program can use the calibration to precalculate stretching. “The software compensates for the stretch effect in the background, which means the printer doesn’t need to intervene,” says Andreas Gembe, head of Pre-



AUTOMATIC PAPER STRETCH COMPENSATION

Based on a single paper calibration, the software solution can reliably predict the expected stretch for all subsequent comparable jobs and adjust the imaging data automatically before printing. The solution is ideal for series-produced print jobs and repeat orders. Manual adjustments can be made on the fly.



REMOTE FAN-OUT CONTROL

With this remote-controlled mechanical solution, register deviations can be corrected effortlessly from the control station during the production run. The corrections are made by eight direct drives in each plate cylinder that move the printing plate by up to +/- 0.011 inches (0.3 mm) laterally and 0.023 inches (0.6 mm) in circumferential direction. Remote fan-out control is available as an option for the Speedmaster XL 145 and XL 162.

press Services. If conditions change, such as humidity or blankets, the accuracy of the prediction can be optimized on the fly. The workflow-independent software works most efficiently for repeat jobs using the same materials.

Ever greater precision

Prediction alone is often not enough, particularly in large formats. In this case, the best option to compensate for paper stretch for frequent job changes in large formats is remote fan-out control. With this solution, which is available as an option for the Speedmaster XL 145 and XL 162, users can easily compress and stretch the rear edge of the printing plate on the fly from the control station. The corrections are then made by eight individually operating digital direct drives in the printing plate cylinder. They adjust the four clamping segments at the rear edge of the plate laterally or circumferentially. The printing plate can therefore be moved by up to +/- 0.011 inches (0.3 mm) laterally and 0.023 inches (0.6 mm) in circumferential direction.

“Remote fan-out control enables full compensation for every stretch effect, both when using thin substrates and for unstable grades of card. The solution operates on the fly, thus cutting setup time and waste,” says Stefan Stillger, Product Management XL 145/162, summing up the key benefits. ■



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