basICColor®

basICColor pressSETUP - Print workflow set up in record time!

The Wiesendanger Medien GmbH printing plant is one of the top addresses in Upper Bavaria when it comes to printing, print finishing and refining offset printing products. Through continual growth and a willingness to invest in the latest technologies the Wiesendanger Medien GmbH achieves a technical advantage that is to the benefit for its customers. Environmental sustainability and climate protrection is also a key factor for the Wiesendanger management.

In the middle of 2014 the printing plant invested in a new, ultra-modern UV-offset printing press type Heidelberg Cx 102-5xL UV. At the time of installation, it was the only press of this type in Germany.

The advantage of this technology is that in addition to conventional offset papers also critical media like papers with bad drying properties or even (plastic) foils can be printed. This enables Wiesendanger Medien GmbH to process an unmatched variety of printable media on just one press and succeed the printing quality of a conventional offset press at the same time. Another crucial advantage of the UV-press: the printed sheets leave the press in a dry state and can be processed immediately - a great saver of (drying) turn-around time and space for interim storage.

The task

Highest precision is the basic requirement for operating this new UV-printing press. The ink/water balance for example, works within much tighter tolerances compared to conventional offset printing.

Not to forget the continuous development of UV-inks, blankets and printable media that result in quality improvements. The Wiesendanger Medien GmbH likes to make use of these developments which require a steady optimization of the printing conditions. The thus achieved quality increase is to the benefit for the customers also.

Looking for a solution to meet these requirements the basICColor GmbH was found. Not only could basICColor supply the needed products but also offer expert advice and active support for the integration into the workflow.

Customer quote:

"After changing from the conventional to the UV offset printing and the therefore improved color rendering on uncoated papers as well as enlarging our portfolio of different papers and foils, we had to look for a solution to achieve the best possible color rendering easy and fast in all areas of application."

We then came across the basICColor GmbH. Their user-friendly and high-performance software applications ensure the color accuracy throughout the production. This enables us to produce high quality print products on various materials.

basICColor pressSETUP

basICColor pressSETUP is a solution that enables to completely setup a printing press in

a unprecedented short time with minimal material consumption and loss of production. By slipping in a SINGLE print job into the production run it is possible to set up the workflow to a new press, a new ink or different stock. It is thereby irrelevant whether ISO- or PSO compliant or for a better quality house-standard shall be printed.

The implementation

At first the whole workflow was analyzed and

recorded by basICColor. After linearizing the CtP image setter the pressSETUP-test form was printed on coated and uncoated stock. Due to the intelligent design of the pressSETUP-test form - contrary to the conventional procedure for determining inking zones - all ink keys are set to the same value over the width of the sheet.

The printed sheets were then measured with the high-end spectrodensitometer Konica Minolta FD-7. The measurement- and quality control software basICColor catch QC shows the optimal chromaticity coordinates already whilst measuring for any standard - in case of the coated stock PSO Coated v3 the ISO 12647-2:2013 and for the uncoated stock the optimal print contrast (normal inking).

From that the solid color densities for the print-run arise on the pressSETUP test form. The curves for the tone value increase, based on the determined densities were measured on the same pressSETUP test form. Then the tone value correction curves were created with basICColor calibrate and loaded directly into the imagesetter RIP.

This completed the calibration of the printing press for printing on coated stock meeting PSO Coated v3.

Larger Color Space

UV printing can achieve a much larger color space on uncoated paper than PSO Uncoated v3 (FOGRA52). Therefore a profiling test form with the determined normal inking was printed in a second print run. For profile creation 10 sheets were taken from the small run. These were measured with basICColor catch and the autoscan-spectrodensitometer Konica Minolta FD-9 in less than half an hour – record time for measuring more than 16.000 patches!

The measurement data was smoothed and averaged to compensate for fluctuations.

With the use of the optimized data an ICC profile was created with basICColor DeviL for UV printing on uncoated paper.

Low ink consumption

To print print-data, that is supplied in an existing standard like ISOcoated_v2 for example, on a press that is set for the new standard, it is necessary to convert the data.

ICC-DeviceLink profiles were created with basICColor DeviL and handed over to the color server basICColor gHOST.

An interesting fact is, that the profiles were created with a maximum area coverage of just 260% and a strong GCR (=Grey Component Replacement). This stabilizes the print process, saves ink and therefore reduces costs and favors the fast UV-drying of the prints.

Conclusion

The basICColor applications pressSETUP, catch QC, IM-Prove; DeviL and gHOST enable the Wiesendanger Medien GmbH to integrate new printing media ISO/PSO conform into the running print workflow in a very short period of time. The complete integration process (pressSETUP, ICC-profiling, DeviceLink-creation) is done in appx. 2 hours during running production!

Moreover, with the creation of the individual ICC- and DeviceLink profiles the color rendering was improved and also the ink consump-

tion reduced. Thus, the printing plant is now able to not only print ISO-/PSO-conform but additionally offer a premium house-standard for uncoated papers.

Printer and customer a pleased equally as the quality is improved and the costs are cut.

And finally - with the use of the basICColor workflow solutions the Wiesendanger Medien GmbH has met another one of their requirements - producing as environmental friendly as possible - a free bonus!
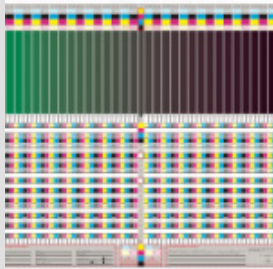
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pressSETUP test form

Print test form for setting up a printing press

With a single test form a printing press can be set optimal to new printing substrates or printing conditions:

Determine the optimum wet densities with the optimal print contrast for the machine control

alternatively: Determine the wet densities for standardized printing on color distance to characterization data
Calibration of CTP imagesetter RIPs

Set of PDF-files in 2 sizes for printing presses starting from size A3 to 70x100 in format. In-between sizes and larger formats can be set up with the next smallest test form. The pressSETUP checklist provides helpful hints and tips for correct operation.

The density of the inks is spread evenly onto the form by the color consumption, so that the printing press can run all colors with the same setting.

The fastest results are achieved effortlessly through the use of the quality control software basICColor certify which instantly displays the zone with the highest print contrast or the lowest AE reference for each ink.

With basICColor calibrate calibration curves for the imagesetter RIP are generated that are considerably more accurate than conventional imagesetter calibrations. In less than an hour a setup is done on a printing press for new material.

The pressSETUP test form is a registered design (DPMA AZ 40 2014 200 255.3)

basICColor calibrate 5

Software for quality control and calibration of printing presses and platesetters

In 2013 new international standards for offset printing have been published: ISO 12647-2:2013. Tis standard deines new solid chromaticities, new TVIs and nex spread tolerances. In order to comply with the standard, printing companies have to recalibrate platesetters and adjust their presses.

For the new printing standards Fogra51/52, but also for any other printing condition, basICColor calibrate is the easiest and fastest method for standardizing printing presses. It literally eliminates tedious spot measurements and maual entries of TVI values or correction curves into your RIP software.

basICColor calibrate shows in an instant if TVIs and solid colors are printed according to the standard. But calibrate does not only show the present state of your printing process, it provides TVI curves or alternatively correction curves in data formats that you can download directly into your platesetter RIP. You can even update and correct existing calibration curves without changing the setup of your RIP. All you need is a spectrophotometer for measuring the appropriate control wedges.

basICColor´s pressSETUP test form (optional) takes calibrating printing processes even one step further: With a pressrun of 1 – in words: ONE – you can set up your printing press and platesetter in no time!

With the basICColor catch module certify, which is a prerequisite for using calibrate, you can check compliance with the standards in your daily work.

basICColor catch 5 QC

basICColor catch QC – THE solution for color measurement and quality management

basICColor catch QC is the complete solution for all tasks of color measurement, quality control, PSO certification, quality analizing and it is the basis for ICC profile creation and optimization. basICColor catch QC is an universal and flexible ool to measure linearization-, profiling- and quality assurance targets with a variety of measuring instruments. basICColor catch QC is highly automated and can be configured for any measurement and quality control task so that one(!) mouse click is enough to start the measurement, including data storage and analysis. NEW! Access to basICColor dropRGB, basICColor CMYKick, basICColor match patch and basICColor spoTTuner with direct data transfer. NEW! basICColor statistics allows continuous monitoring of your color printing system system.

basICColor DeviL 4

High-End ICC Device Link Creation and Editing

ICC device link profiles are becoming increasingly popular – with good reason! ICC device link profiles produce higher precision color space transformations, otherwise only found in proprietary solutions. The applications which require ICC device links include high-quality proofing and special process printing workflows which exchange data between different printing processes. Device links will maintain the black channel to save ink, while recalculating the color structure.

basICColor DeviL simplifies the job of generating ICC device link profiles, including conversion between CMYK, RGB, and grayscale. The basICColor DeviL achieves highest quality conversions from RGB to CMYK separations because of dynamic color space compression. No other method approaches this optimized result.