

Prinect Color Toolbox

HEIDELBERG

Tools for perfect color management • The new software suite from Heidelberg® for secure and reliable color calibration is made up of three applications:

- Profile Tool
- Calibration Tool
- Quality Monitor

Profile Tool

Prinect® Color Toolbox with its three modules guarantees high color reliability. This means: consistently high quality and predictable results. Quality Monitor supplies quality data about the printing process, e.g. by a long-time analysis showing deviations from a defined process standard. Calibration Tool generates a new process calibration for the print process or adapts or modifies existing calibrations based on measured values from Quality Monitor. Profile Tool generates ICC profiles for CMYK printing and multicolor printing to extend the color space, as well as proofing profiles.

Reliable supplier of ICC profiles • Profile Tool creates ICC profiles for print processes, proofers, color printers and color photocopiers. It is the professional tool for interactively creating ICC profiles for either general print standards or individual requirements.

Profile Tool has been designed to create profiles that deliver excellent color separations. The user can freely adjust the build-up of black with UCR or GCR for printing and proof profiles, and flexibly select where black is used. It is also possible to finely adjust shadow detail and color saturation in the printing profiles. Gray reproduction can be maintained as neutral. This leads to visibly clearer results in particular when printing on colored papers.



Heidelberger Druckmaschinen AG

Kurfuersten-Anlage 52-60
69115 Heidelberg • Germany
Phone +49 6221 92-00
Fax +49 6221 92-6999
www.heidelberg.com

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Rapid profile adjustment • There are times when the printer may not want to set up a new profile from scratch and it is often sufficient to merely adjust an existing profile. Prinect® uses Mini Spots® for this purpose. These are small measuring elements, which are printed during normal production. Building on an existing profile and the measuring data of the Mini Spots means that a profile adjustment can be calculated within a short space of time and is then already available for the next set of plates.

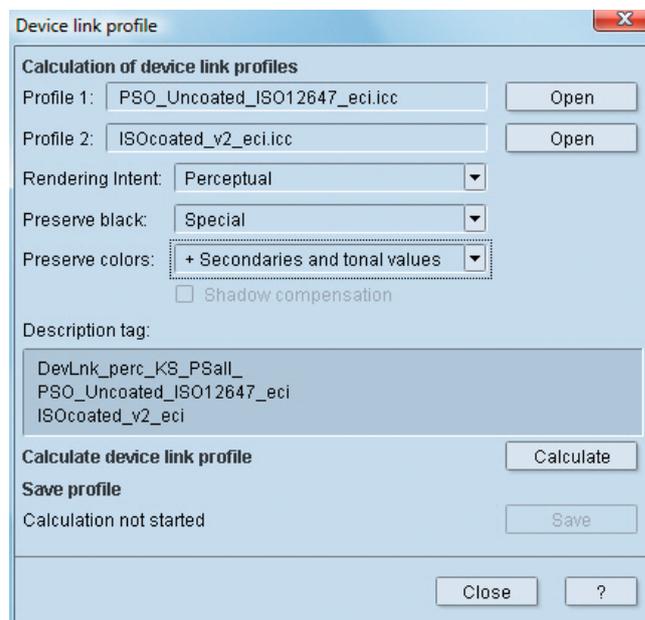
Any equipment-related fluctuations in the measurement data can be identified and smoothed out by activating profile smoothing. This makes Profile Tool the ideal tool for creating generic profiles to describe a print standard.

ICC output profiles for the proof • The creation of profiles for the proof is optimized to achieve the best possible color adjustment. The iterative proof correction makes it possible to achieve a level of accuracy in the profile, which reduces the average color deviation of the proof from the print to an absolute minimum. An integrated color calculator converts spot colors to the CMYK values of the proofer. This means that the expanded color space of the proofer is fully utilized. PANTONE® and HKS color tables are included in the software package.

Color measurement and correction • Profile Tool measures true spectral values in the color patches. All the desired values such as Lab, XYZ, CMYK or density can easily be calculated from these values. The application has therefore a wide variety of uses for values that have already been measured. Measuring devices interpret optical brighteners in papers as a blue color cast. This naturally leads to errors in the profile calculation, which are spectrally corrected by Profile Tool.

Calibration and profiling from one proof run

Normally a test form for creating an ICC profile can only be printed if a process calibration has been carried out beforehand. Together with the calibration data from Calibration Tool, Profile Tool can also calculate excellent profiles from the measuring data of an uncalibrated print. This means it is no longer necessary to repeatedly print and measure test forms, which is difficult and time-consuming. This saves not only time and materials, it also helps to control color management quickly and reliably throughout the entire print process.



Profile Tool creates extremely sophisticated device link profiles for use in the Prinect workflow.

DeviceLink Profiles • In many cases it is necessary to coordinate the print customer's documents directly with the print shop production environment. Profile Tool has the necessary functions for this. They include UCR/GCR functions for using less colored ink, while achieving the same color perception. This stabilizes gray balance and therefore avoids color fluctuations. In addition, the maximum inking of every object can be limited, which means color settings on the press can be managed more easily and quickly. Fine-tuning is generally carried out with DeviceLink profiles. Profile Tool creates extremely sophisticated DeviceLink profiles for use in the Prinect workflow. There is no need to buy an expensive additional solution for this purpose, as all the necessary functions are already integrated into the profile. This enables high quality process conversions to be carried out from one CMYK print process to another.

Separation of up to seven colors • Using the optional Multi Color Extension, color separations for 5, 6 and 7-color printing can be produced. The inks for this can be selected in the color space in any sequence that makes sense in colorimetric terms. This means that frequently used color models such as Hexachrome® or HiFi Color are supported to the same extent as customer-specific models.

Profile Tool generates sophisticated device link profiles to be used within the Prinect workflow.

Saving ink and improving print characteristics

Using DeviceLink profiles, CMYK print data can be converted to reduce the amount of ink required. “Expensive” colors C, M and Y are replaced by the less expensive color black (K) without any visible loss of quality or color deviations. Besides saving on ink, there are additional advantages for print characteristics and finishing. As this process uses less ink, the time required for drying the printed sheet is also reduced.

Calibration Tool

Central management of all calibration data

Calibration Tool enables the creation and central management of all calibration data for the linearization and process calibration of CtP platesetters and direct imaging presses. The tool supports both the linearization of platesetters and the calibration of the overall process, right up to printing. As many spot colors as desired can be set up in one data set for process calibration with the help of Calibration Tool. This means a data set can contain either all the process colors or it can be set up for each single separation.

A central data pool • In a company with several platesetters, the curves for each output device can easily be classified and managed. If several platesetters of the same type and using the same materials are in operation, Calibration Tool can be used to organize a central data pool. The right curves for each job can be input into the RIP stations from this data pool – paving the way to consistent quality at every station.

Easy use of calibration curves • The print parameters, such as the paper type, the ink used, solid tint densities and the printing press, are stored with each calibration curve. Setting these parameters ensures that the correct curve is selected. Calibration Tool supplies only those curves that are actually suited to the print parameters for the job. This not only makes operation easier, but also helps to avoid errors. The target tone value increase is generally defined according to process standards.

Rapid calibration with Prinect Image Control

The interaction of Calibration Tool and Prinect Image Control color measurement system provides superbly rapid and precise calibration with Mini Spots. The measuring elements are assessed in one go and after a few seconds the measuring data are available for a calibration adjustment.

RIP-independent installation • Calibration Tool does not have to be installed on the RIP station. It is also possible to set up a separate calibration station in which the curves are measured and compiled centrally for the connected RIP imagesetter stations. By additionally installing Profile Tool and Quality Monitor, this station can be upgraded to a central color management workstation within the company.

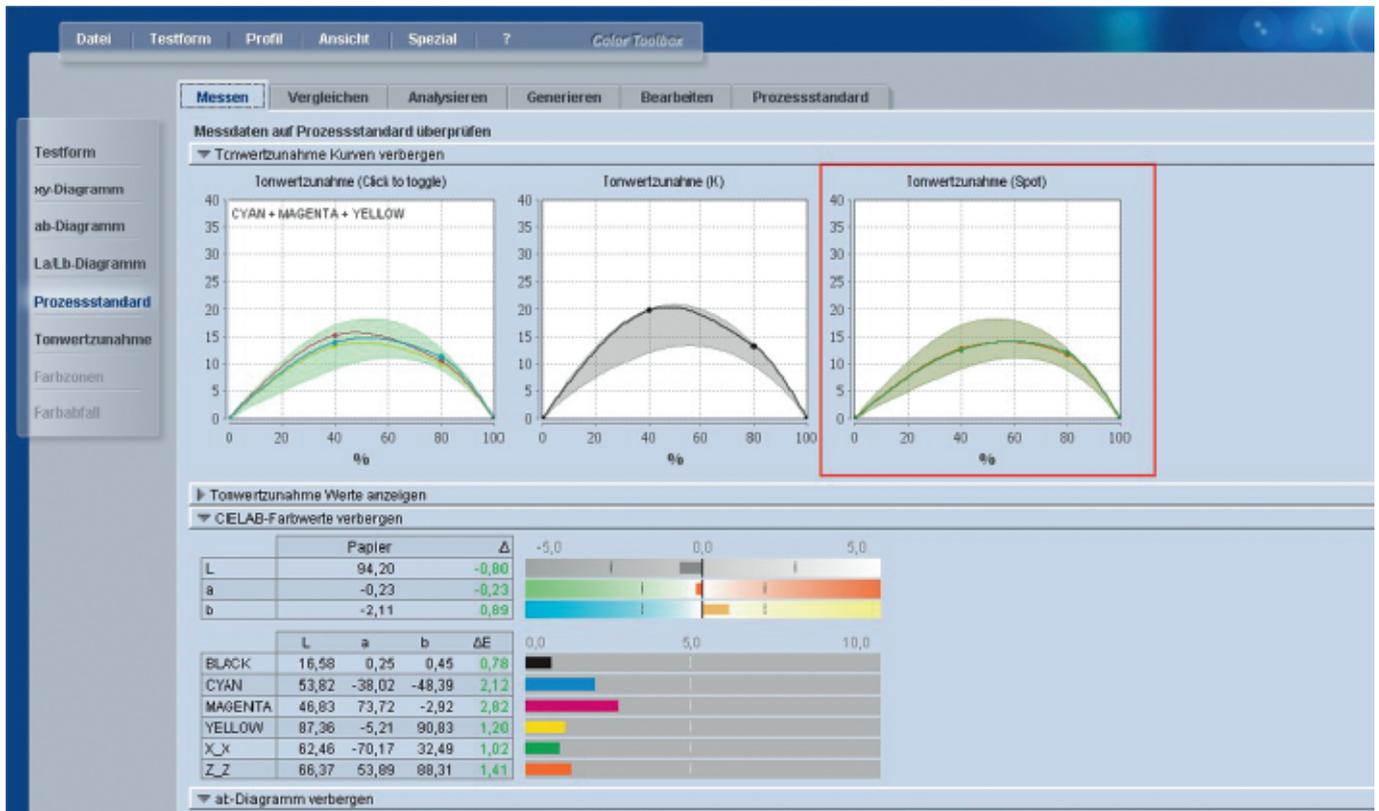
Quality Monitor

Seamless process and quality control • Print shops are increasingly applying for certification to a quality standard. This means they also need to provide evidence that they consistently comply with the standard and this is where Quality Monitor comes into play. Quality Monitor is the ideal tool for seamless process and quality control. It provides every print shop with detailed analysis results. Both print shops that have already documented their high standards through certification, as well as companies that are just starting out with standardized printing can demonstrate the high quality of their work and document it clearly at any time with Quality Monitor. Detailed reports, even when compiled over a longer period of time, can be used as both documents for control as well as evidence of reliable production at a consistently high level. The user can carry out all the key tasks of process monitoring and checking the proof and print with Quality Monitor:

Measure • Numerous keys, linearization strips and entire test sheets can be measured out with spectral photometers, densitometers or plate measuring devices.

Compare • Quality Monitor permits comprehensive comparisons between two sets of measuring data, e.g. the deviation between the proof and print or process standards for CMYK, MultiColor and spot colors.

Assess • The assessments can be viewed in many different ways on the screen or output as a printed report. Color space comparisons between two sets of measuring data can be shown in two or three dimensions.



Quality Monitor is the ideal tool for seamless process and quality monitoring.

Long-term analysis • Several sets of measuring data can be read in and compared. They make it possible to analyze color behavior over a longer period of time. It is therefore possible to document a quality standard and color fidelity is no longer a subjective sensation.

Gray balance control • Print shops also need tools for process control that enable the user to check not only the tone value increase and Lab values for primary colors, but also the values for gray balance. Quality Monitor also delivers these data, as correct reproduction of gray values is one of the keys to quality in the print process.

Display of an individual Quality Index (iQi)

Customers often require not only the display of the process standard, but also information on the quality level of their print production. They want to be able to assess for themselves the quality criteria, such as dot gain, Delta E and gray balance. The iQi assessment system is valid for all available process standards: CMYK, MultiColor and spot colors.

Proof report • Quality Monitor supplies a report on the color accuracy of the proof. This report can be handed over to the customer in the form of a certificate together with the proof.

Measuring devices and test forms

Prinect Color Toolbox applications work with many of the leading spectrophotometric and densitometric measuring devices, as well as supporting standard test forms in accordance with ISO 12642, ECI 2002, IT8.7/3 and IT8.7/4.

Quality Monitor is the ideal tool for a seamless process and quality control.