



Application Training Press

Color management for Speedmaster SM 52 Anicolor



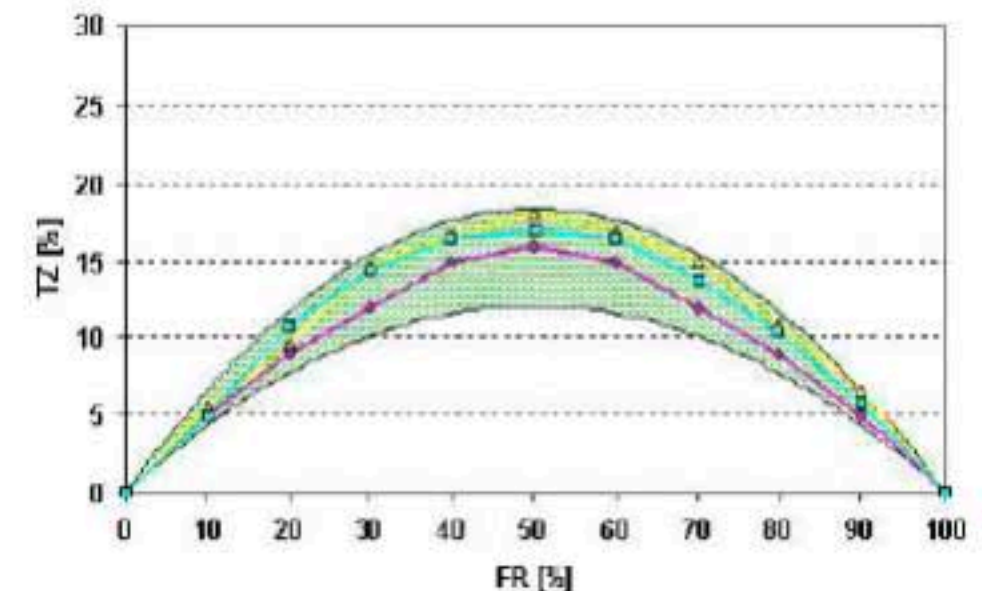
Print Media Academy

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Preparations for color management

- The dampening system must be optimally adjusted.
- Color standards (Lab values, dot gain, color sequence) must be defined.
- Consumables must be determined.
- Conditions for production must be determined.
- We recommend CtP for optimum plate quality.
- Printing plates must be output in calibrated condition.



Determining and documenting consumables



- Paper
- Inks and, if necessary, varnishes
- Additives
- Blankets and underlays
- Dampening solution
- Powder
- Printing plates and their development
- Proofing paper and ink



Ink series tested by Heidelberg. Guarantee!

Flint:

black:	Novastar F 916 Champion
cyan:	Novastar F 700 Champion
magenta:	Novastar F 916 Champion
yellow:	NovaArt F 2008

Saphira Precise

Sun Chemical:

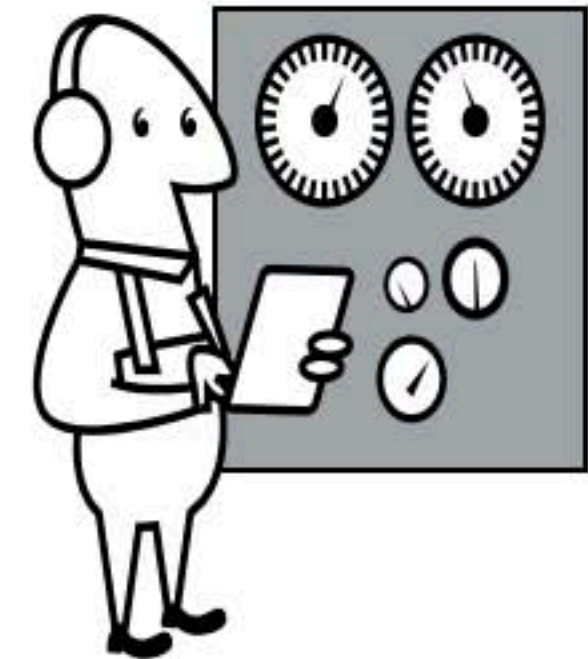
black:	EOS
cyan:	EOS High Speed
magenta:	EOS High Speed
yellow:	EOS High Speed

Saphira Concise



Determining and documenting conditions for production

- Choose the press
- Makeready speed
- Production speed
- Color sequence (KCMY, KMCY)
- Inking unit temperature
- When are sample sheets removed and measured
- Measuring device and measuring method (recommended: Use only one measuring device to avoid faults caused by deviations from one device to the next)
- Measuring elements and resources (e.g. FOGRA media wedge, DIPCO, Mini Spots)
- Screen type (AM, FM, special method)
- Screen resolution (lines per cm with AM screen, dot size with FM screen)
- Viewing light (D50)



Workflow: Great variety

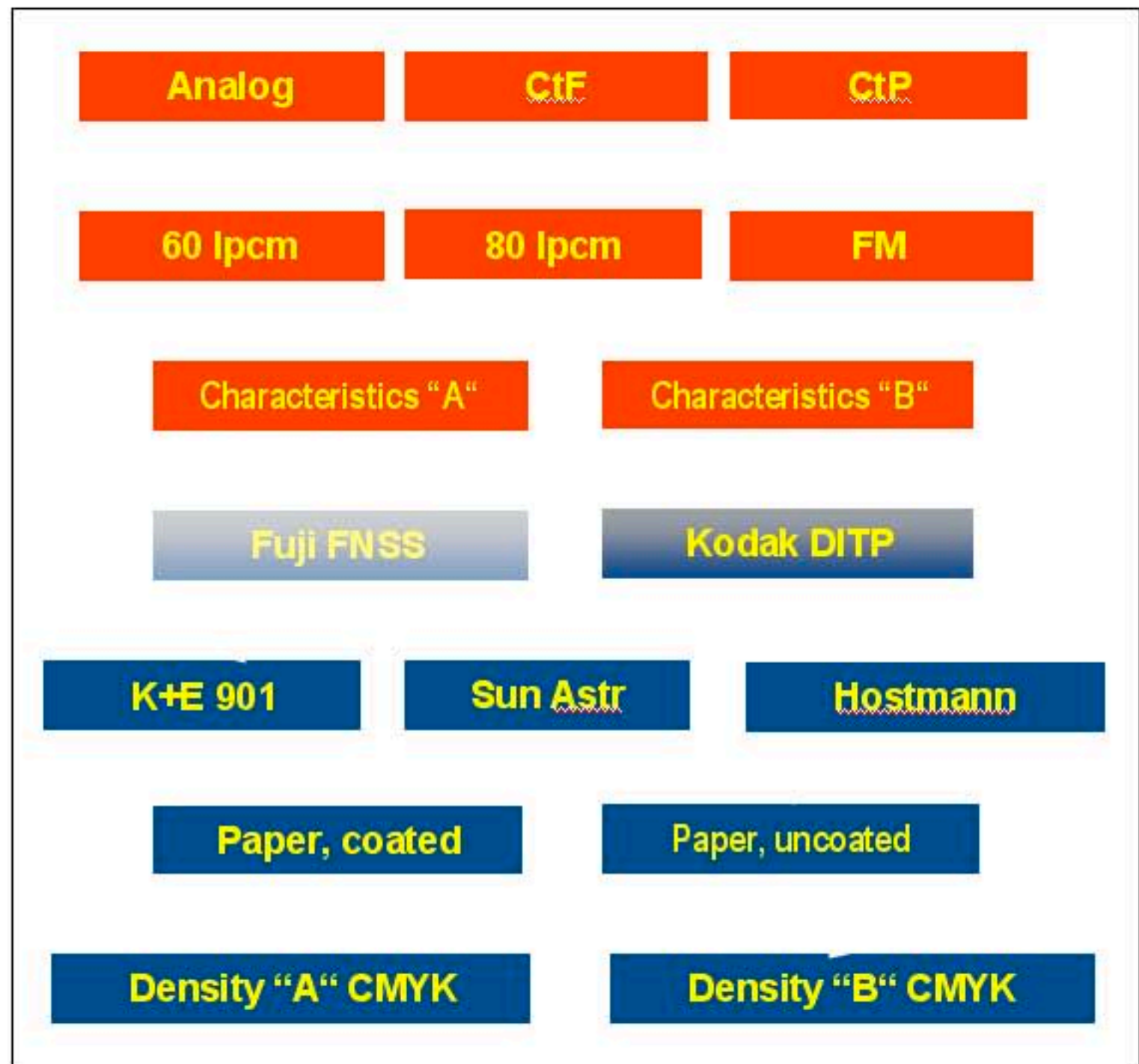
Different prepress processes

- Analog, CtF, CtP
- Screen resolution ...

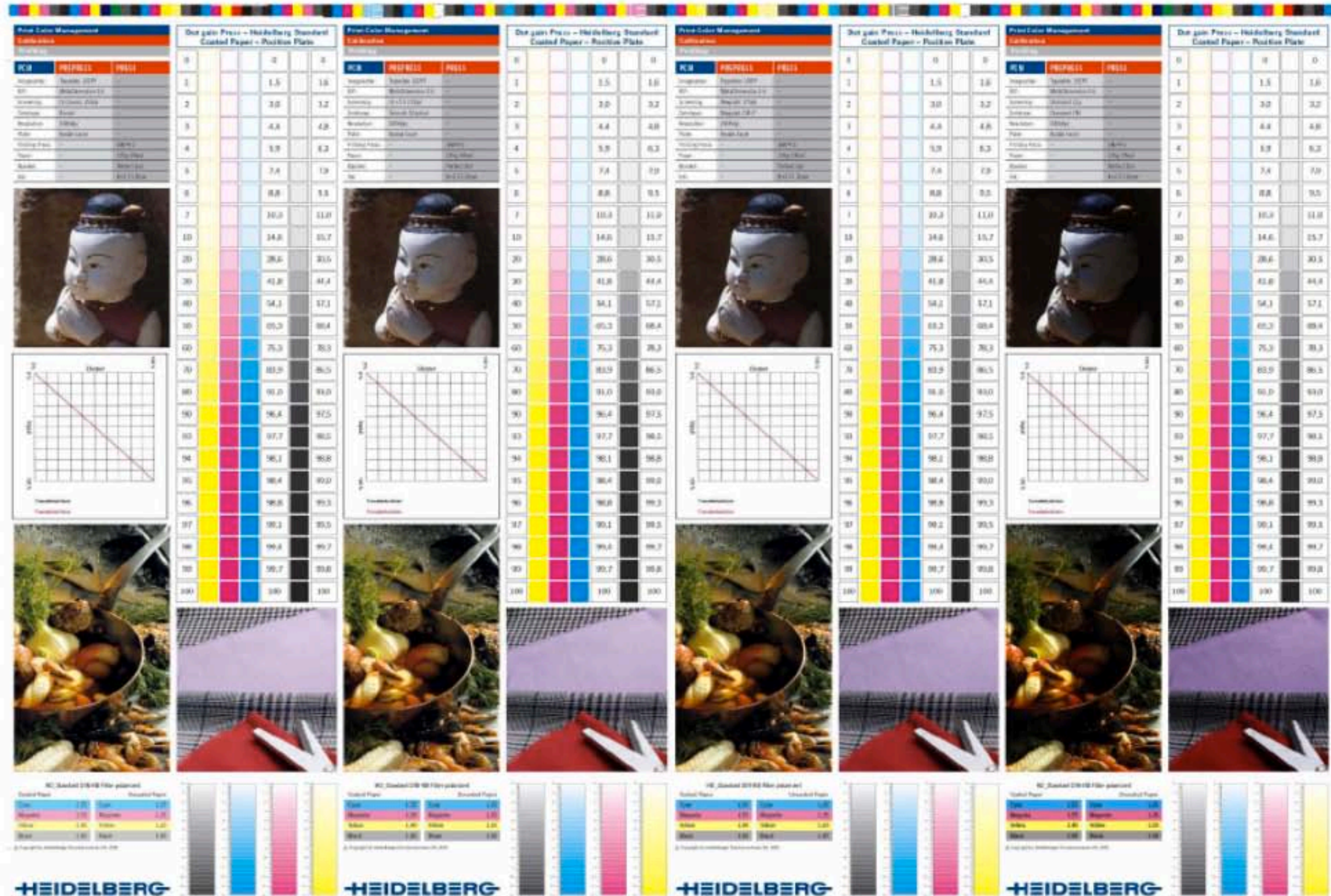
Different printing processes

- Reference values
- Inks, ..

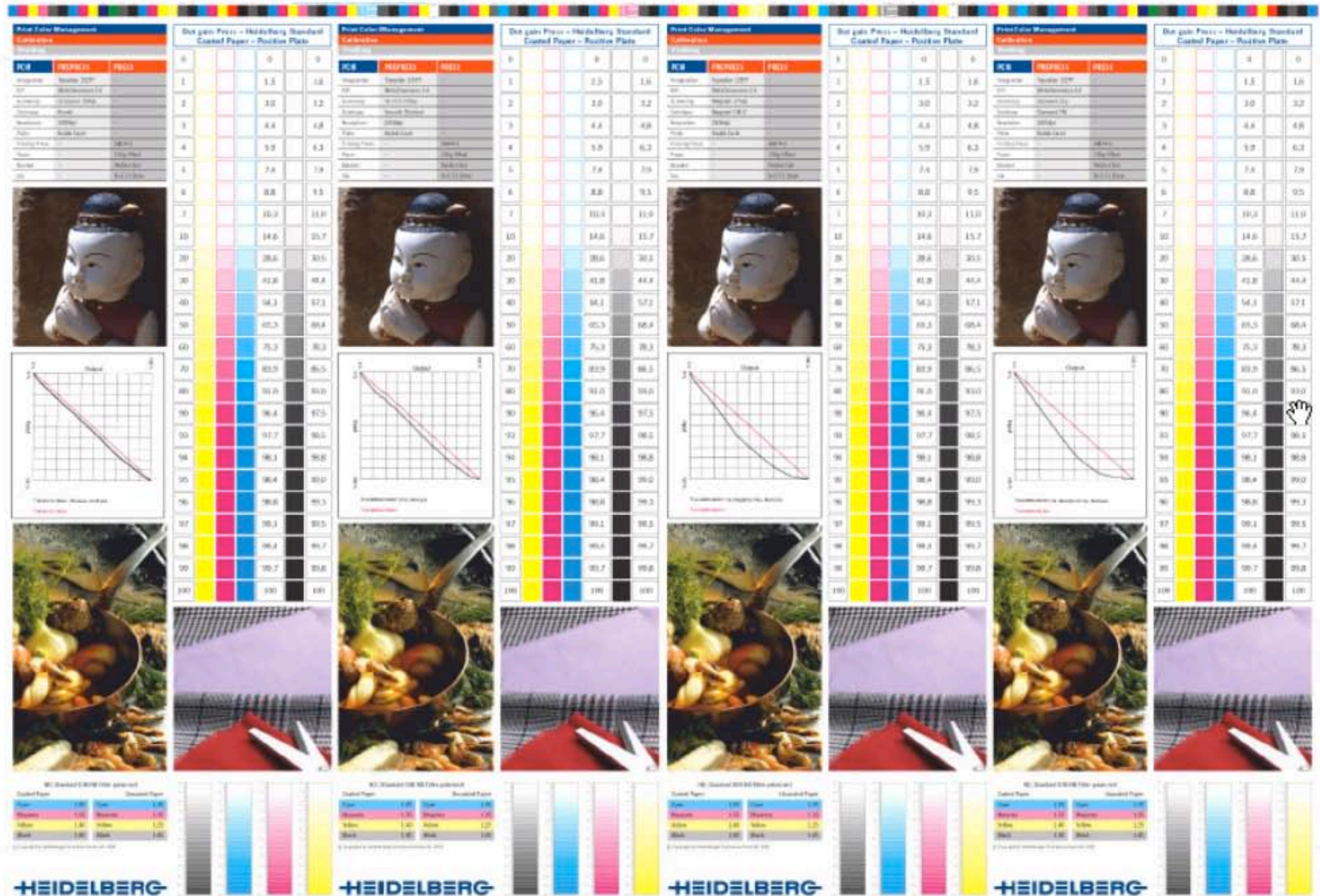
➔ Processes must be matched and the "inking variety" must be limited.



Different screen resolutions, uncalibrated



Different screen resolutions, calibrated



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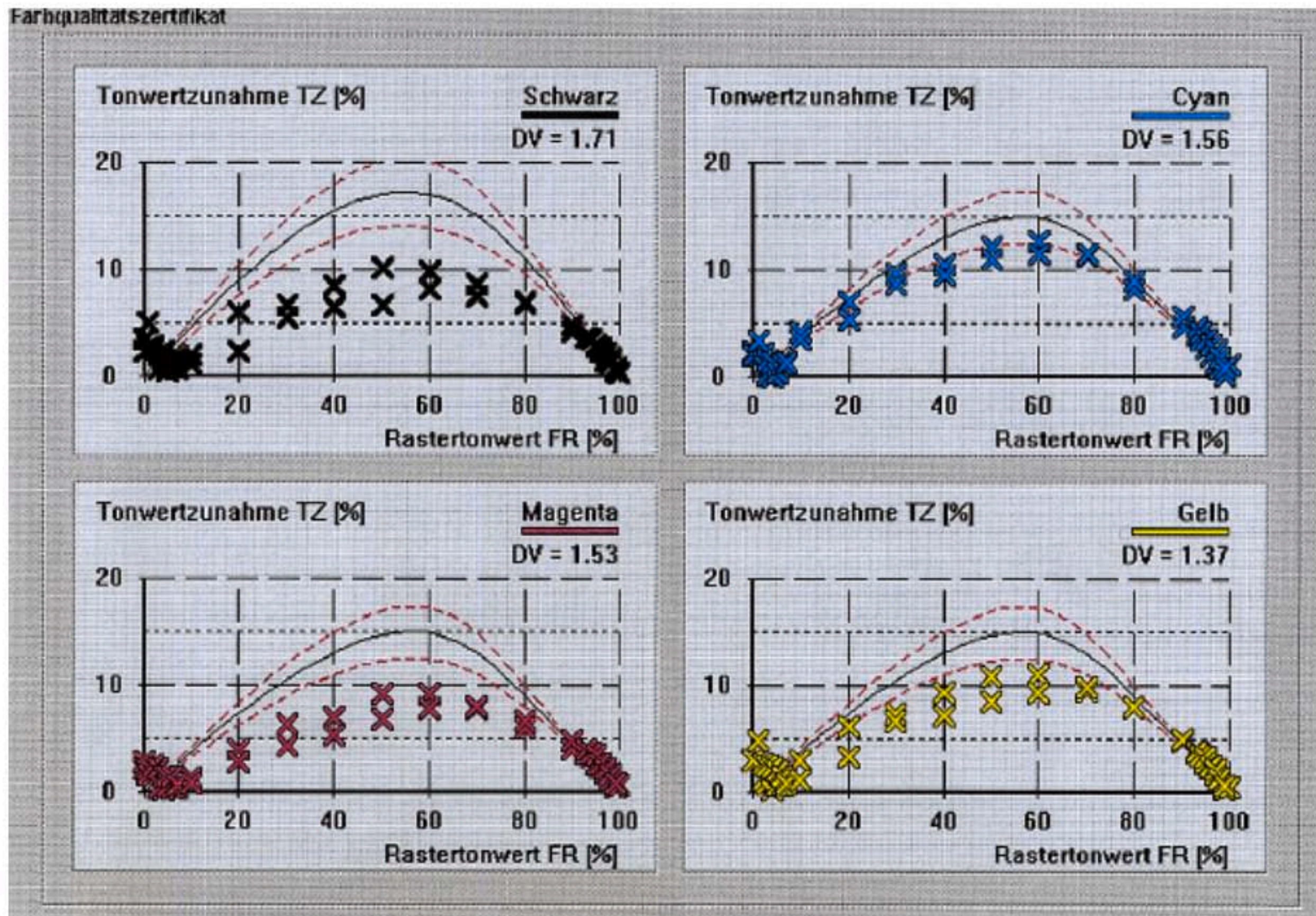
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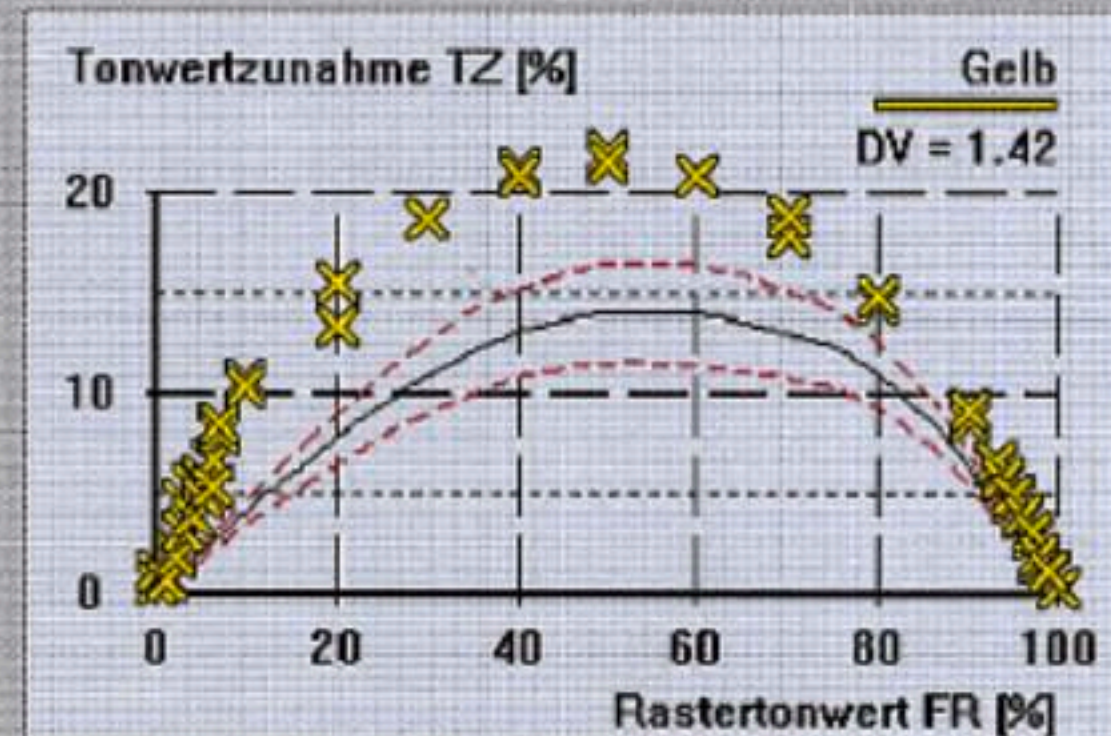
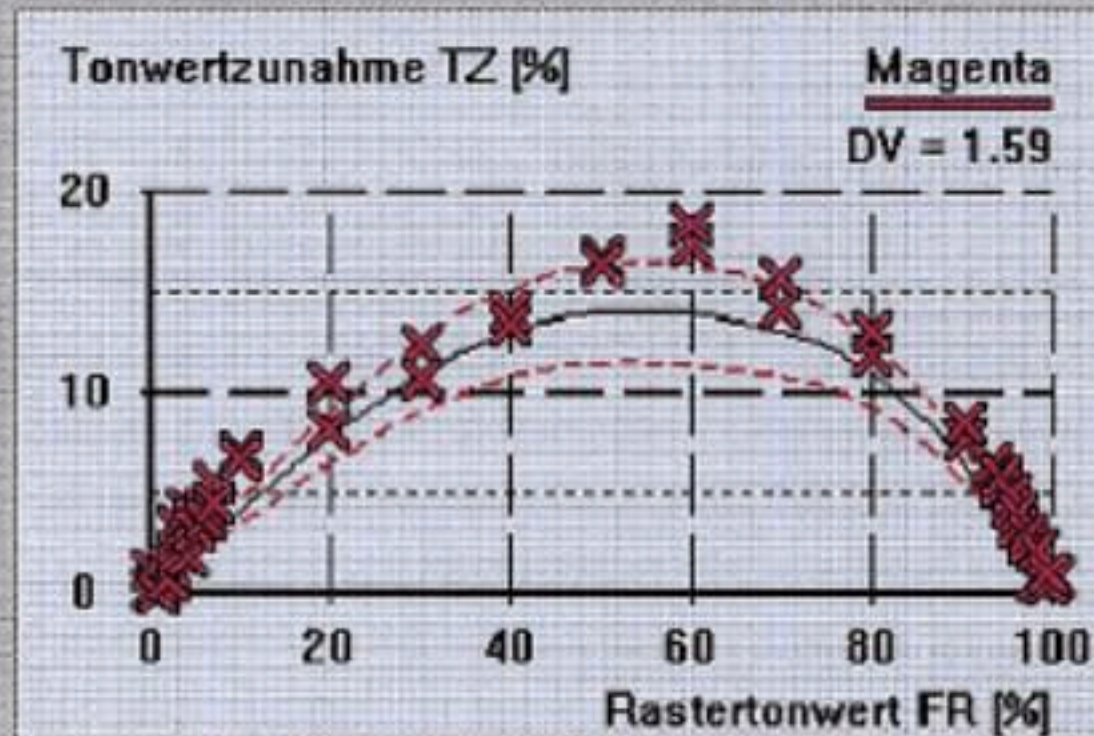
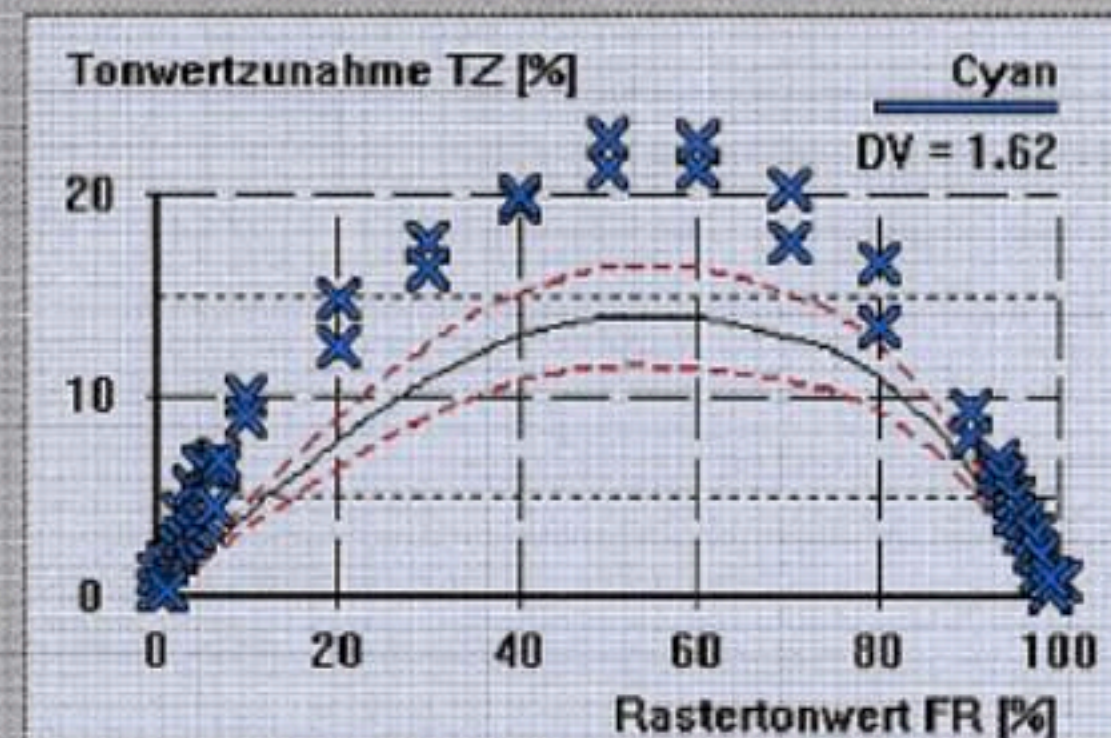
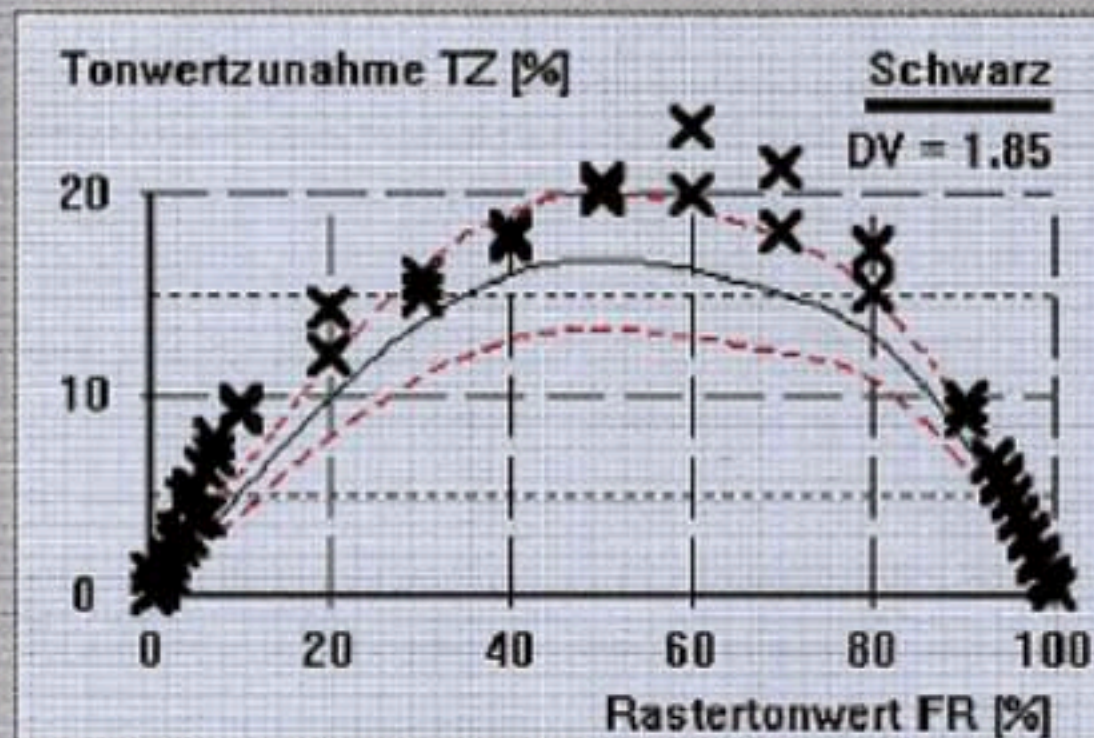
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Differences due to the plate type (type A)



Differences due to the plate type (type B)

Farbqualitätszertifikat

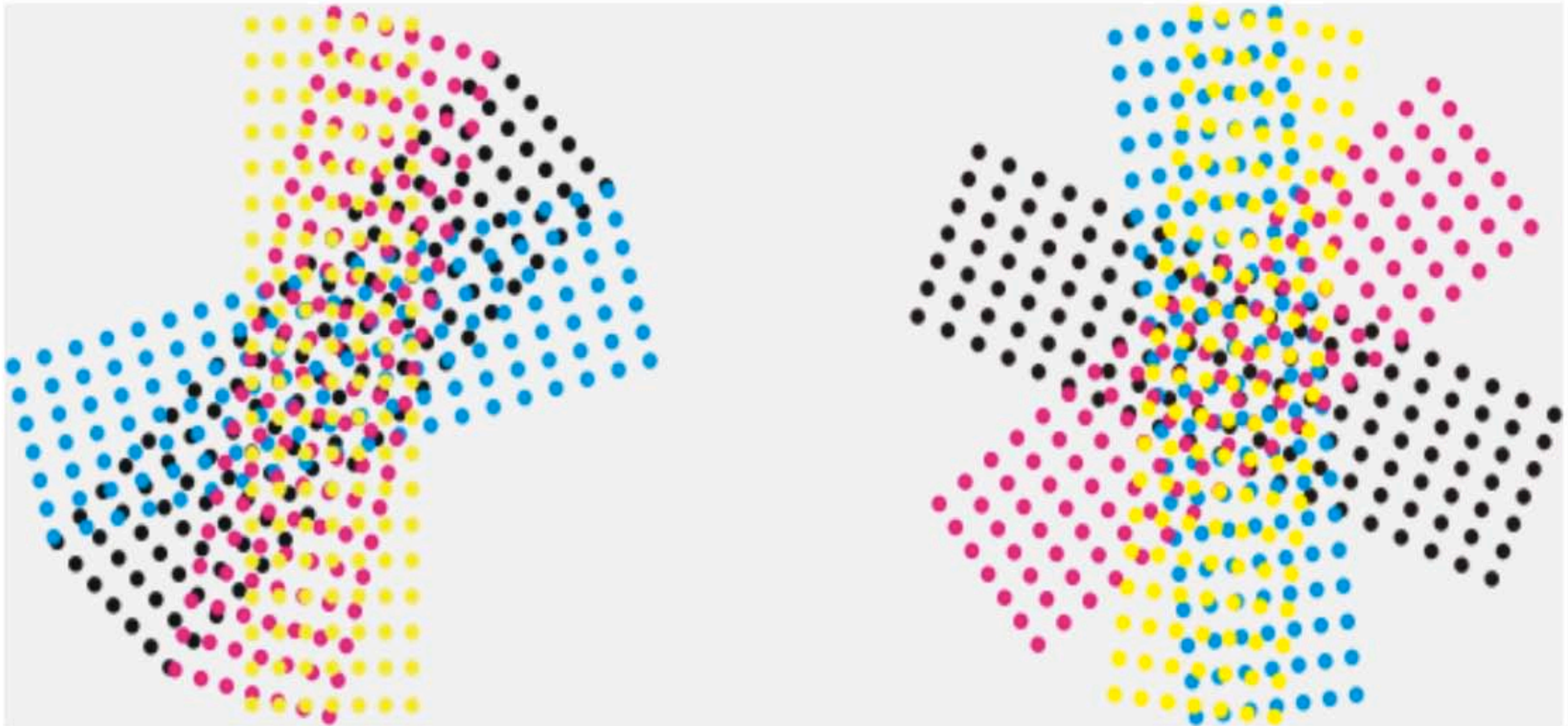


Recommendations for printing plate production

- We recommend CtP for an optimum plate quality
- Resolution 80 lpcm, 200 lpi (Moire' with 70 lpcm)
- Dot shape: Smooth elliptical
- Preangles required for flexoprinting (e.g. Classic +7.5°)
- Screen system: IS Classic + 7,5°



Screen angle and the corresponding CMYK colors



Moiré

Two superimposed screens of different rulings create an optical effect called Moiré.

...by turning the screens they are no longer aligned.

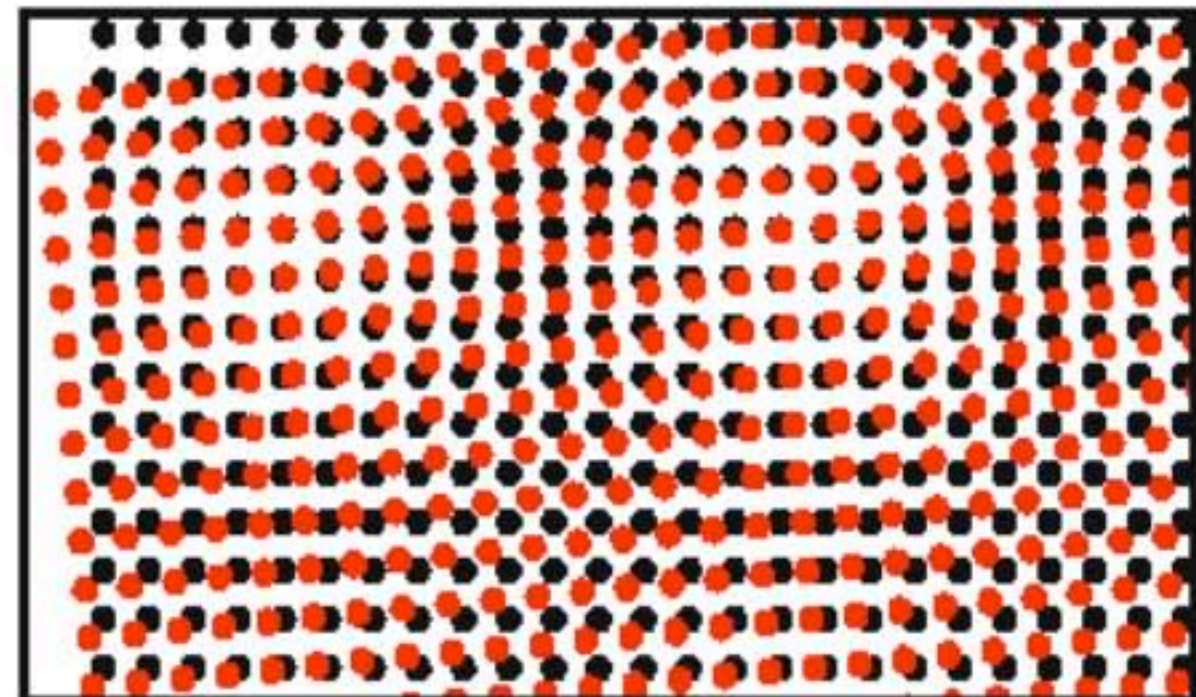
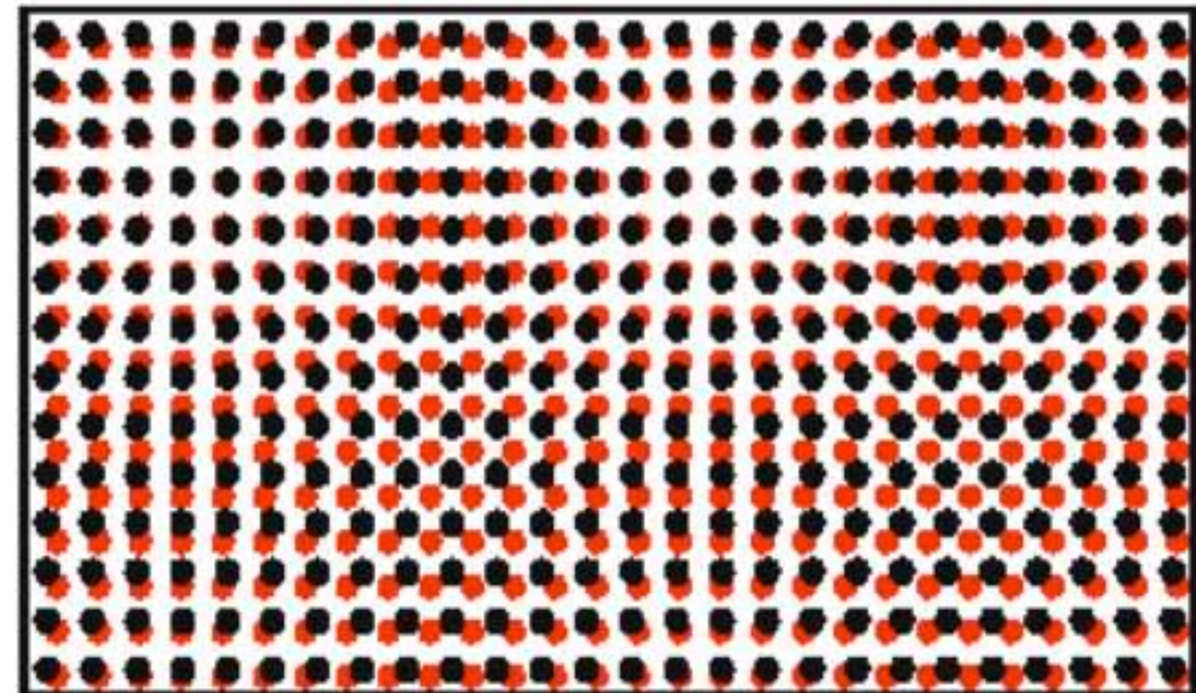
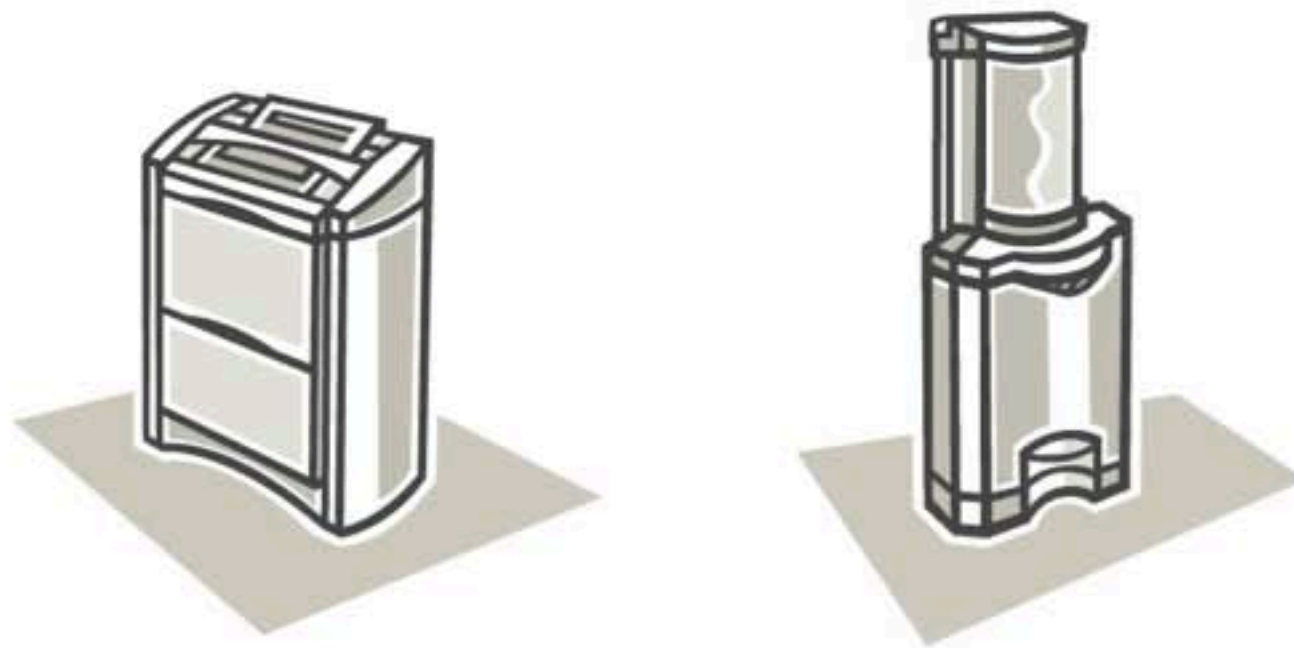


Plate production (optimizing the prepress stage)

- Measure the printing plates
- Linearize the platesetters, if necessary
- Output a linear plate set with the appropriate test form

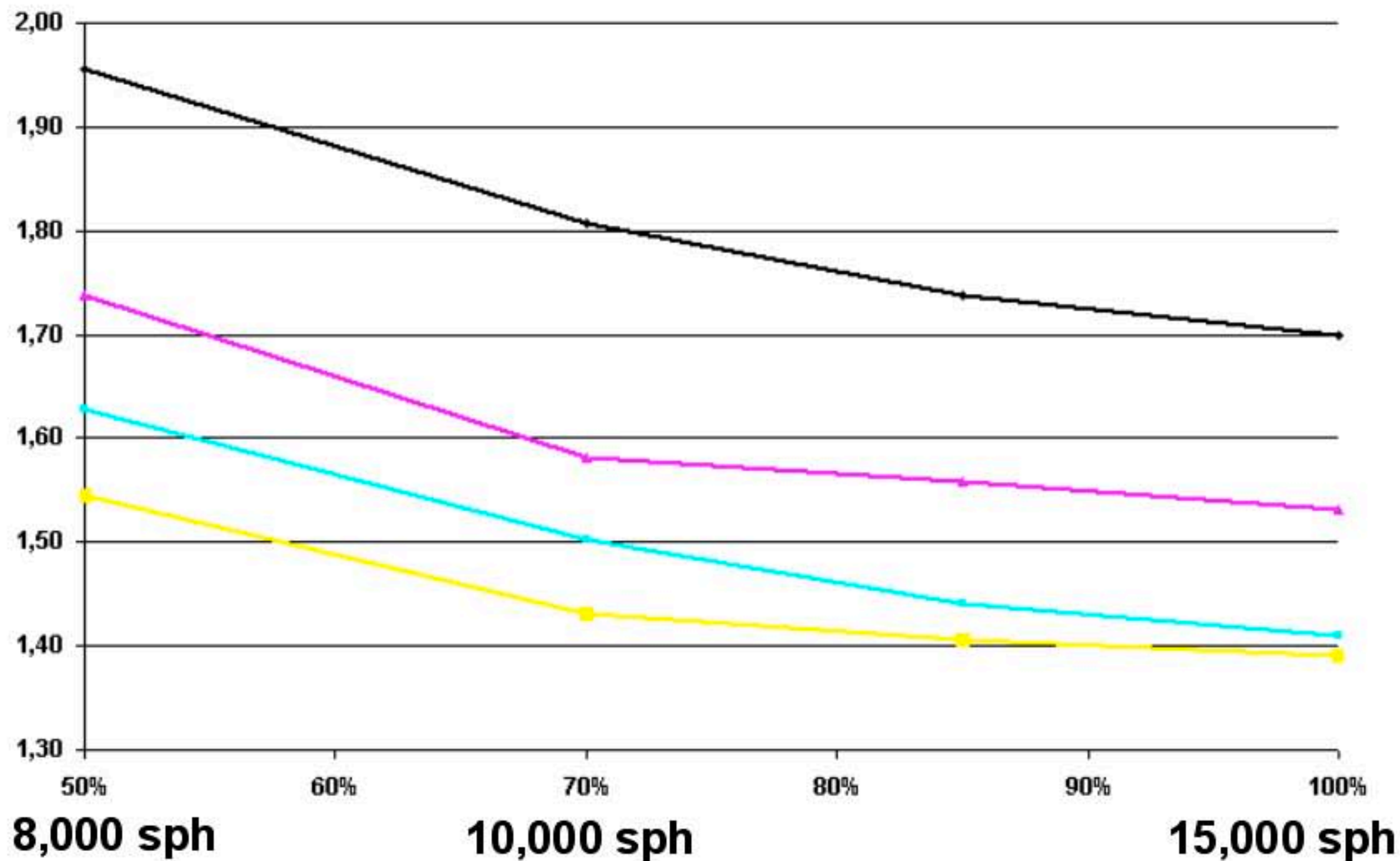


Optimizing the press

- Adjust the dampening system
- Check the dampening solution
- The press should be made ready close to production speed!
(there is no ink presetting, no preinking program and no speed compensation).



The ink density depends on the speed

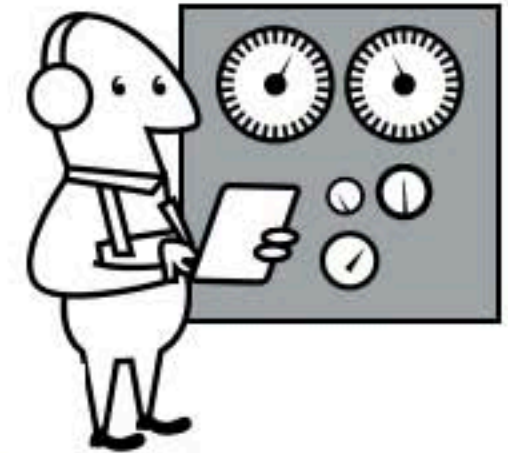


No automatic speed compensation !



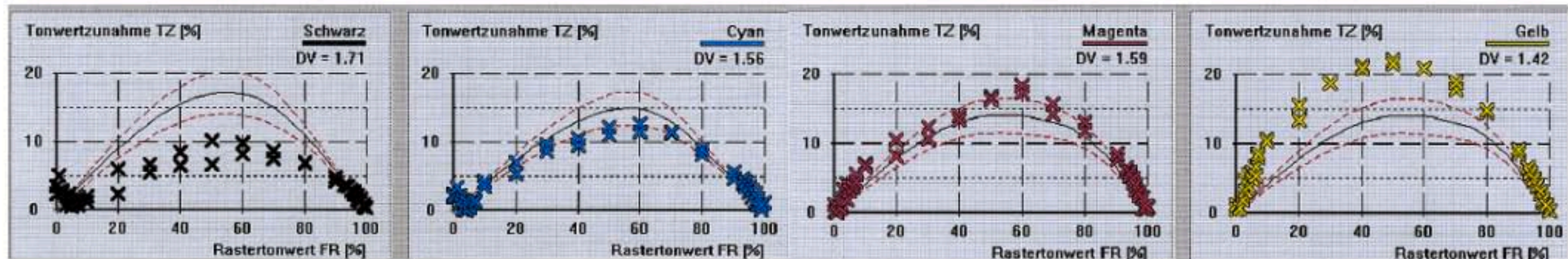
Proofprinting and measuring a test form

- Linear plates (test form)
- Defined consumables (ink, paper, blankets...)
- Blankets OK, chamber blade ok (blankets 1 week)
- Blankets are under tension
- Packing thickness and underlays OK
- Press has been warmed up

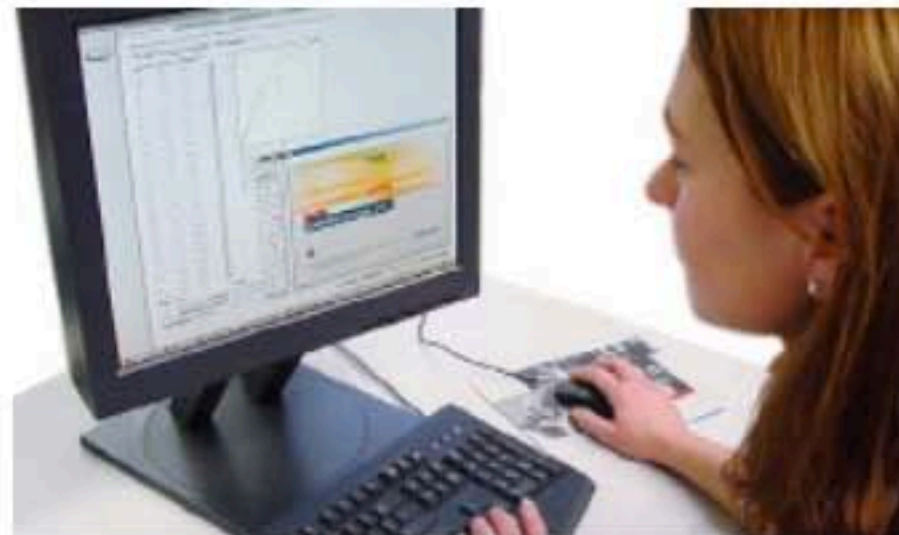


Process calibration

- Compare the measured values of the printed test form with the reference values
- Observe the neutral gray balance
- If the tone values are not in the standard range (dot gain, dot loss), a calibration is necessary.



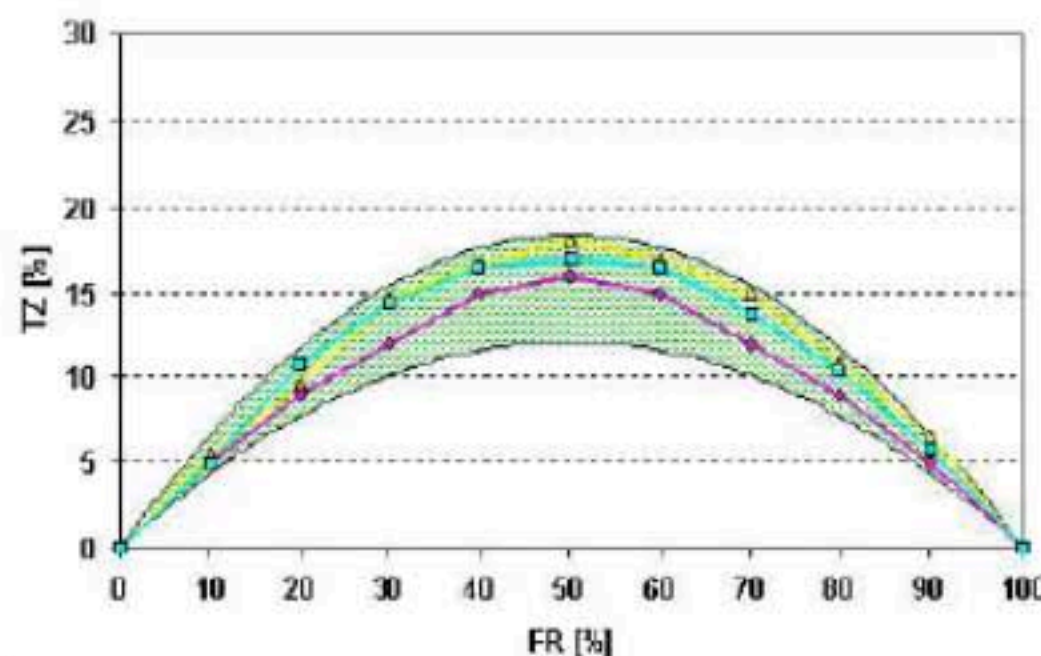
- The dot size on the CtP plate is corrected at the RIP.
= process calibration



Checking the result

Once the values have been entered in the calibration program of the CtP unit, the result should be checked:

- Image a test form with the corrections.
- Always image the **complete plate set!**
(even if individual colors were not corrected)
- **Proofprint the form**
(defined consumables, blankets OK, packing thickness and underlays OK, press has been warmed up)
- **Measure the tone values**
(The values should correspond to the standard. Deviations of +/- 1% are OK)



Consistently good results with Color Management

Standardization aims at minimizing the number of adjustments at the press and being able to work toward a result (standard) that can then be reproduced any time:

- Proofs with faithful color reproduction
- Faithful color display on the calibrated monitor
- Color separations optimized for printing



Standardized workflow

