

DeltaProof 3.0 for Packaging Gravure

DeltaProof is a unique quality control tool for packaging gravure. Its main goal is to verify that the final Tiff files used for engraving are in-line with the content approved by the client.

Paper-based FormProofs are used in many packaging gravure sites to detect faults prior to engraving.

Furthermore in many cases a specially printed foil which shows the client approved data is compared against the Formproof.

DeltaProof is an alternative soft proofing solution. Instead of making physical prints, DeltaProof visualizes the Formproof on a large 4k monitor. The client approved data is shown on the monitor as a “floating image“ on top. All checks that were done using the paper FormProof can thus be performed without actual prints.

The highlights of DeltaProof:

- ◆ **Image Comparison** - DeltaProof compares the approved content of the report file with the content of the cylinder layout Tiff files and point out possible differences
- ◆ **Cost saving** - DeltaProof eliminates significant expenses on ink and paper while speeding up the verification process.
- ◆ **Hairline detection** - detecting 1-pixel lines which sometime appear due to rendering or other faults
- ◆ **Verification** – DeltaProof offers features which are not available with a paper-based proof, like separations turning on/off and density reading
- ◆ **Automation** – DeltaProof has a manual and an automatic mode



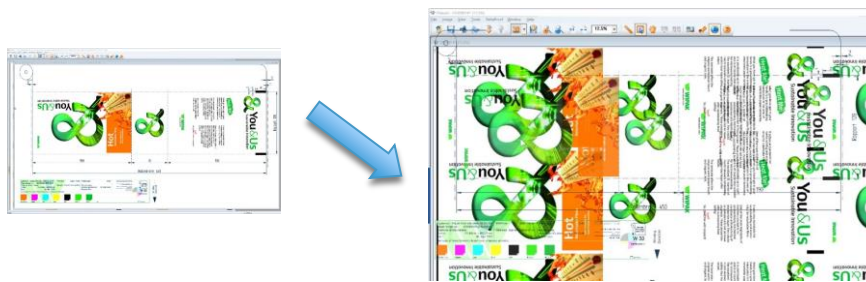
DeltaProof eliminates physical prints

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The DeltaProof Workflows

A. The Interactive Workflow

- ◆ The user selects the cylinder layout job (job ticket and Tiff data) and displays it on a large 4K monitor.
- ◆ Separations can be turned on and off, distance and density measurement can be taken
- ◆ The user selects the PDF which contains the “1-up“. The PDF is rendered and a “floating mask“ is created.
- ◆ The DeltaProof automatically finds the location of the repeats on the cylinder layout image and offers a convenient view for comparing the “1-up“ data and the actual repeats to be engraved.



Client approved data is shown as a “floating image“ on top of the cylinder layout

B. The Automatic Workflow

- ◆ The user selects all the participating files (cylinder layout, report file, etc.)
- ◆ The user selects which separations should be turned off, in both cylinder layout and report files
- ◆ Upon hitting ,Run‘, the system perform all operations, including automatic content comparison and hairline detection without the need for further user intervention.
- ◆ Upon completion, the cylinder layout and the report files are displayed together with a list of found. Only then the user is invited to look at the results and perform further checks
- ◆ The DeltaProof automatically finds the location of the repeats on the cylinder layout image and offers a convenient view for comparing the “1-up“ data and the actual repeats to be engraved.



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Additional Features

- ◆ Cylinder layout files can be “packed” into PDF, providing an additional option for remote viewing, annotation and archiving
- ◆ The field proven paper-based FormProof is included as part of the DeltaProof, in case there is still a need to produce such proofs.

DeltaProof ROI (Return of Investment)

◆ Higher Chance to find Errors at an Early Stage

- ◆ Automatic and faster comparison of the content in the cylinder layout Tiff files
- ◆ Hairline detection - find faulty 1-pixel lines which might appear in the data

◆ Direct Cost Saving due to Soft Proofing

- ◆ Saving the whole expense on the plotter’s ink and paper, which may result in saving of several thousand euros per year.
- ◆ No need to buy a new plotter every few years
- ◆ Saving office space – plotter, large verification table.
- ◆ Saving foil printing of the 1up/report
- ◆ No additional cost for making and distributing multiple copies
- ◆ Speed of verification

System Configuration and Architecture

- ◆ DeltaProof is a 64-bit application
- ◆ For performance gain, it uses acceleration in image decompression, parallel processing and GPU.
- ◆ The system uses consumer 4K TV as the system display. The user may benefit from the wide choice of TV sizes as well from the vast progress in consumer display technologies.

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Comparison

	Direct	Paper Proof	Delta Proof
Content Comparaison	-	-	✓
Hairline detection	-	-	✓
Automation	-	✓	✓
Turn-off separations	-	-	✓
1Up mask placement	-	-	✓
Saves ink & paper	-	-	✓
Low hardware cost	-	-	✓
Saves 1Up foil printing	-	-	✓
True to scale	✓	✓	✓
R.O.O.M*	-	✓	✓
Mixed Resolution Jobs	NR	✓	✓
Seamless proof	-	✓	✓
Proof combinations	-	✓	✓
Testcut proof	-	✓	✓
Density measurement	-	-	✓
Speed	-	-	✓ Fastest
Archive & Remote	-	-	✓ Easiest

Subject to design modifications. Errors expected. Version: D7

Seeing it on YouTube: <https://www.youtube.com/watch?v=gldpOOs7hoM>