

Bellissima DMS

Seeing is believing

hamillroad 
Transforming the image of print



The flexo challenge

Flexographic printers are facing many challenges in today's highly competitive print market, with increasingly demanding customers.

Expectations are high. The demand is for: near-offset and gravure print quality, reduced manufacturing costs, and the adoption of fixed palette printing.

But we have a solution...



Bellissima Digitally Modulated Screening for unrivaled quality

Bellissima DMS is Hamillroad's "Digitally Modulated" Screening for flexo.

Bellissima DMS, the ultimate in flexographic screening, delivers a previously unobtainable level of image reproduction for flexo. Rivaling the quality of print typically associated with offset and gravure, Bellissima DMS is challenging digital as the future for flexible packaging and labels.

This unique screening digitally modulates every pixel it produces thereby precisely controlling the dots in each separation while its "stochastic rosette" interleaves the dots between the separations to eliminate noise and moiré.

In addition, the stochastic rosette maximises the ink-on-paper area and minimizes the amount of ink-on-ink to expand the available color gamut while eliminating color shifts due to misregistration.

But that's not all...



Highlight dots down to 1.0% - Shadow dots up to 99.5%

Bellissima DM Screening's carefully controlled dots produce presswork equivalent to a traditional 350-450 lpi screen with incredible image detail from highlights to shadows. In addition, it's easy to plate and print.

Bellissima DMS precisely controls the size of its highlight and shadow dots which, like an XM (hybrid) screen, allows it to retain a full tone range of 0-100%. However, unlike an XM (hybrid) screen, Bellissima DMS does not suffer from problems such as moiré, or noisy flat tints and color shifts with misregistration.



Capability that inspires new possibilities

Bellissima DMS utilizes innovative patented technology that's a fusion of the best characteristics of AM (Amplitude Modulation), FM (Frequency Modulation), XM (Cross Modulated), GS (Geometric) and CS (Concentric) screening while avoiding their limitations and problems. It dramatically enhances the quality and stability of flexo presswork.

Compared with AM/XM dots, which can appear partial/broken in images with tone values between 5-45%, and don't plate or print well causing them to ink up quickly on press, Bellissima DMS produces patented flexo dots that never appear partial/broken, and are consistent and stable on press. Furthermore, Bellissima DMS flexo dots don't suffer from problems such as dot-bridging and rivering on press.



The sky's the limit

Like an FM screen, Bellissima DMS produces a stunning level of image detail, equivalent to 350-450 lpi with an AM/XM screen. However, unlike an FM screen, it does not suffer from problems such as noisy flat screen tints and variability on plate and press.



Overcoming printing press problems

Bellissima DM Screening helps to extend the life of a flexographic printing press. Using Bellissima's patented dots, common printing problems including bounce, barring and slur are significantly reduced and, in some instances, completely eliminated.



Beautiful image reproduction

Bellissima DM Screening analyzes each pixel to ensure that no dot is too small to plate or print yet still not large enough to be visible. Dots are created in a carefully controlled manner, to ensure detail is placed exactly where it is needed, vignettes are smooth and flat tints are 'flat.'

The result is a quality of print, particularly on flexible substrates, that was previously unachievable in a flexographic environment.



Moiré free prints

Like a Geometric Screen (GS), Bellissima DMS uses carefully crafted geometric shapes that improve stability on press and eliminate problems such as rosettes and color shifts. However, unlike a GS screen, it does not suffer from problems such as moiré clashes with image content, rosettes, or lack of image detail.



Ink savings

Bellissima DM Screening uses specially shaped dots that, like a Concentric Screen (CS), minimize ink build-up. This maximizes the amount of light filtered by the ink to create significant ink savings which can be augmented by GCR based software.

However, unlike a CS screen, it does not require high-definition plates to hold tiny pixel shapes that often suffer from wear and which are, on flexo, technically impossible.

About Hamillroad

Hamillroad Software is a dynamic company working to provide the printing industry with innovative solutions to everyday problems.

Hamillroad was born out of the pioneering work of Robert Miller who developed many productivity and performance enhancement concepts for the benefit of Harlequin RIP users. These ideas created a base of technological innovation ripe for further development and commercialization.

Hamillroad Software Limited was then incorporated in the UK as a vehicle to develop this technology even further and bring it to market. It is led by CEO Andy Cave, the original creator and Chief Designer of the Harlequin RIP and founder member of Harlequin Limited (now Global Graphics Software Limited).

**We want to develop products
that change the print world
and have fun too**

Andy Cave, CEO

Our products

Auraia DMS | Digitally Modulated Screening for Offset printing

Auraia Digitally Modulated Screening utilizes ground-breaking patented technology to create a unique product that combines the best characteristics of AM, FM, XM, GS and CS screening techniques.

Auraia DMS dramatically enhances quality, stability, and gamut, while delivering ink savings over conventional screening. Auraia DMS provides these benefits in real production environments under plate and press conditions which are not usually capable of FM or high lpi AM/XM screening.

Bellissima DMS | Digitally Modulated Screening for Flexo printing

Achieve the levels of detail & print quality typically associated with offset and gravure.

Lightning Plugins | High-performance output plugins for the Harlequin RIP

Lightning TIFF/PDF/LEN are high-performance output plugins for the Harlequin RIP, designed to replace standard TIFF and PDF output plugins and to create Esko-compatible LEN files.

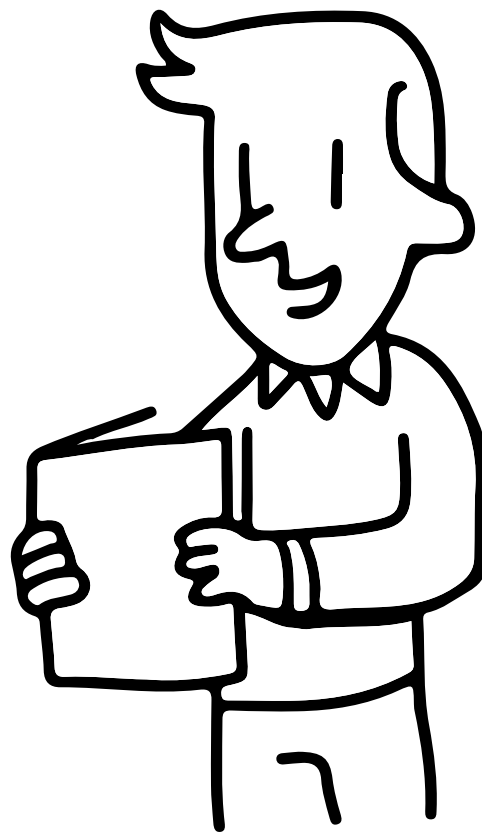
FirstPROOF | Prepress Soft Proofing Solution

FirstPROOF is a high-performance prepress soft-proofing product that is designed to work in a tightly integrated way with the Harlequin RIP, Esko Flex (LEN) RIP, Presstek DI RIP or any RIP that produces TIFF files. It's an indispensable tool that helps to guarantee that what is printed is right the first time thereby reducing waste and saving significant amounts of time and money.

Notes

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Watch our 'Getting Dotty About Spots' video at www.hamillroad.com



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This booklet was printed using Auraia
Digitally Modulated Screening for offset.