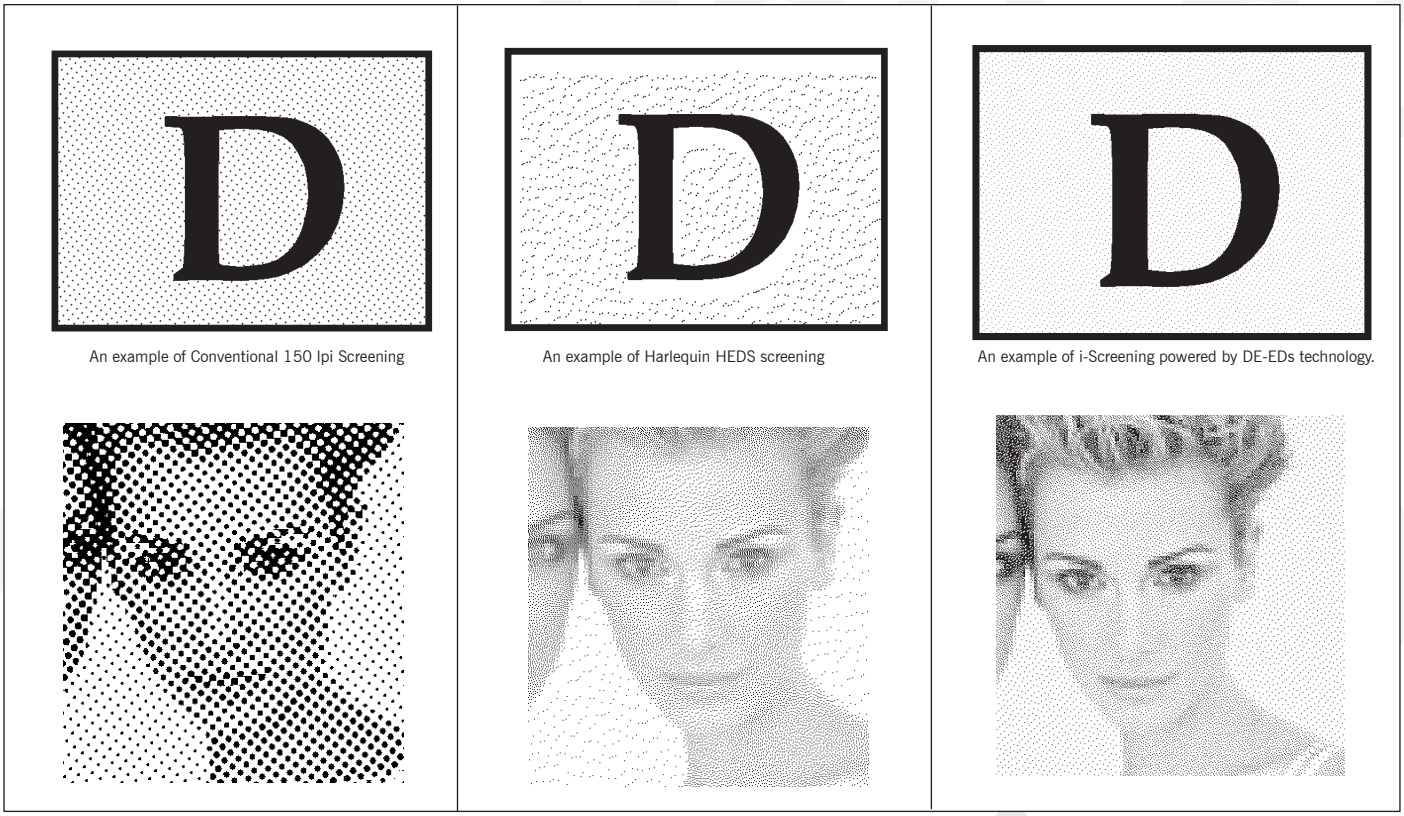
i-Screening

(Dynamically Even – Error Diffused Screening (DE-EDs-PW))

Glunz and Jensen's i-Screening delivers the exceptional advantages of error diffusion screening including, total freedom from moire, as well as unparalleled accuracy in reproducing fine detail. In addition, these features have been blended with a Dynamically Even structure similar to that found in the highlights of conventional halftone screens, which makes i-Screening more uniform, eliminating the wormy or grainy textures that can occur with conventional stochastic (FM) or error diffusion methods.

With the smooth highlight areas created by i-Screening's dynamically even screens, "tearing" is also eliminated. Tearing refers to a screening artefact which can be seen where inferior screening algorithms cause the halftone dots drop out next to high-contrast areas, creating a gap or a "tear" in the halftone image. This "tearing" effect is particularly noticeable in jobs containing flat tints running up to solid text or line art.

An example of how i-Screening's dynamically even screens compare to the industry standard Harlequin HEDS screen.



An example of Conventional 150 lpi Screening

An example of Harlequin HEDS screening

An example of i-Screening powered by DE-EDs technology.

i-Screening provides 256 enhanced grey levels

With traditional Stochastic screens like the Harlequin HEDS screens, the screen was developed to work across a variety of printers for proofing. Each printer has a different gain tolerance, and so calibration is normally required which can suppress grey levels. If used for plate making, the gain experienced on press with a generic screen is so significant that the screen has to be heavily calibrated within the RIP, this reduces the number of grey levels available in halftones even further and can create banding or stepping due to the generic (non-device dependant) screens' excessive calibration. Unlike generic screens, iScreening is powered by DE-EDs Technology which was developed specifically for the PlateWriter this has allowed Glunz and Jensen to add output device dependant feedback for the PlateWriter2400 Platform. Tuning the screening in this way, to the application of PlateMaking using the PlateWriter2400 has enabled Glunz and Jensen to eliminate the tradition issues caused by using generic Stochastic screening. As a result, using iScreening for the PlateWriter increases the number of shades of grey that can be delivered to jobs delivery the full 256 levels of grey and also eliminates the undesirable effects of banding or stepping.

Why is iScreening the preferred screening, why not conventional halftone screens?

An inkjet printer uses a fixed dot size, or up to 3 fixed dot sizes (Small, Medium and Large). Conventional halftone screens use constantly varying dot sizes arranged in a fixed cell structure. It is entirely possible to use the inkjet to emulate a conventional screen, by building up the dots in size, however in Glunz and Jensen's opinion, the feed tolerance on inkjet based printers is not capable of producing flat tints using this type of screening (a fixed non random screen is likely to show banding at higher line screens) nor is it accurate enough at dot placement to reproduce high line screens with fine high lights and in addition, an irregularity in this type of screen will introduce moiré.

iScreening is powered by DE-EDs Technology and is a based around FM screening but adds, variable dot placement and noise with complex algorithms which not only eliminates moiré, but also eliminates banding or feed related artefacts and improves the reproduction of flesh tones. None of these features are available when using conventional screening, this is why iScreening is the preferred choice of screening from Glunz and Jensen. Having said that the iCTP PlateWriter 2400 does support emulation of conventional screening including round, square, line, elliptical and Euclidian thus customers are welcome to judge for themselves.

iScreening provides the solution for iCTP PlateMakers

iScreening eliminates moiré, produces excellent rendition of fine detail, delivering smooth tints and vignettes with no noise. With the DE-EDs powered iScreening you can be assured of outstanding reproduction of fine detail, no visible dot structure in skin tones and increased colour gamut due to the device dependant feedback used to tune the screens, this results in greater visual impact.