

OVERVIEW

The Indigo HP-Indigo 3000 is a sheet-fed CMYK direct-digital-offset printing press. By printing directly from a Macintosh or Windows file, the Indigo eliminates the need for film and printing plates. Trapping is also virtually eliminated due to the Indigo's precise registration capabilities.

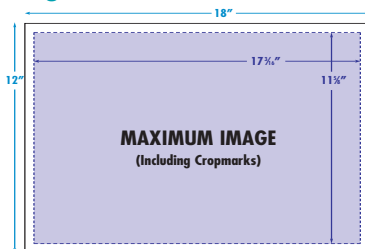
Unlike other competing technologies, the Indigo uses an oil based liquid *ElectroInk* rather than conventional dry-powdered toner to print an image. Fine ink particles suspended in a liquid are precisely deposited and instantly bonded to the paper surface.

As in conventional offset printing, ink is transferred from a blanket to the paper. However, unlike conventional presses, the Indigo leaves no residual ink on the blanket. Since the ink is applied to the paper in a semi-solid state, any liquid remaining is removed, allowing almost immediate trimming and finishing. This enables the Indigo to produce quality rivaling or exceeding conventional offset printing in hours rather than days.

Paper Stocks

The Indigo prints on a wide variety of substrates with additional stocks being added frequently. Most stock that runs on the Indigo has been specially designed for digital printing. Page One carries a variety of stocks with the ability to special order more upon request.

Page Dimensions



Maximum sheet size is 12 x 18 inches. Maximum image area is 11 $\frac{3}{8}$ x 17 $\frac{3}{8}$ inches including crop marks. This allows for a $\frac{1}{8}$ inch bleed on an 11 x 17 page with cropmarks.

Press Proofs

After a file has been pre-flighted and RIPed, a single print can be output as a press proof for approval. Press proofs are charged as follows: \$20 for 4/0, \$25 for 4/1, and \$40 for 4/4. Archival of proofed file must be requested when the order is placed. Page One will archive files at no charge for 24 hours upon request. File alterations can be made by Page One for an additional charge.

Fonts

The entire Adobe font library for Macintosh and Windows is supported. Other Postscript Type 1 fonts, Open Type fonts (OTF) and TrueType fonts must be supplied with the job, except for CorelDraw fonts. Adobe Type 1 fonts are recommended with all variable data jobs.

Supported Applications

The following applications are supported for output from the Indigo:

| | |
|-------------|--------------------|
| QuarkXPress | CoreDraw (PC only) |
| InDesign | Illustrator |
| PageMaker | Freehand |
| Photoshop | Acrobat |

Files from other applications can be imaged by supplying us with a high resolution PDF. Some setting in Acrobat 7, such as PDF-X do work consistently with the Indigo digital press. Please call for more information.

Pre-flighting and File Preparation

Basic file pre-flighting is included with each Indigo job and consists of the following:

- Verification that all non-supported fonts are supplied before proceeding with job.
- Verification that all imported graphics and images are supplied before proceeding with job.
- Verification that all imported graphics and images are of the proper file format, resolution and mode.

Basic file pre-flighting does **not** include trapping, knockouts, overprints, layout, alignment, or embedded graphics. These services are available for an additional charge. **All** jobs should be supplied with a composite laser proof or other proof and include, if necessary, a folding sample.

IMAGING GUIDELINES

File Format

Imported graphics and images must be in CMYK and provided in TIFF, EPS, hi-res JPG or Scitex CT format. The Indigo does not support the DCS (desktop color separation) format. Do not pre-separate or set screen angles or transfer functions when saving files. Duotones created with PMS colors **must** be converted to CMYK and saved as a TIFF or EPS. Image formats like BMP and GIF do not work well on the HP-3000 and should be avoided.

Image Resolution/File Size

The Indigo's default line screen output is 144 lpi at normal resolution. Images should be saved at 300 DPI, however image between 250 DPI and 300 DPI will show little difference. Page One can sample down images to the appropriate resolution for an additional charge. Lineart images should be scanned at a minimum of 800 DPI for best results.

CMYK Color

Predictable color output can only be achieved on the HP-3000 in CMYK color space. All data that you submit to be printed to the press should be converted to CMYK. Pantone colors will automatically convert to CMYK process when printed, please see below.

Color Specification

The Indigo uses the CMYK color model. All spot colors and Pantone colors are converted to CMYK process screen mixes. Please refer to our *Indigo Pantone Solid to Process Color Chart* as a guide.

Background Colors

In general, small areas of solid color reproduce better than large areas. Large areas of flat background color are currently not recommended since they may appear mottled. Cyan and black are also susceptible to mottling in the 40% to 80% tint range. To avoid this mottled effect, create a TIFF image in Photoshop using the *Add Noise* filter. Set a value between 5 and 15, and check *Monochromatic* to avoid introducing randomly colored pixels.

Screen Tints and Highlight Areas

As in all printing processes, reproduction of light screen tint values and highlight areas is process-critical. Screen values for highlight areas should not be below 6% for cyan, and 5% for magenta, yellow or black.

Blends and Gradients

Subtle blends and gradients tend to show some banding. To avoid this effect create the blend or gradient in Photoshop using the *Add Noise* filter and save as a TIFF or EPS file. Set a value between 5 and 15, and check *Monochromatic* to avoid introducing randomly colored pixels. Optimal results are achieved shorter blends and gradients with a tonal value change of 50% or less.

Imposition

In most cases it is better to allow Page One to impose your document to maximize sheet size and allow for better front to back registration. You still need to design in any bleeds that will be necessary in your document. Remember you can design your document to make the best use of a 12 x 18 sheet and save on print costs. A 6 x 9 postcard might be easily designed to fit on 5.5 x 8.5, therefore fitting four up instead of two up on a press sheet.

Bleeds and Cropmarks

The Indigo automatically images single pages or items multiple-up. Place crop marks for ganged items such as individual business cards within the document manually. When ganging items that have a bleed, extend the image $\frac{1}{8}$ inch beyond the crop marks. Allow a gutter of at least $\frac{1}{4}$ inch between all items that bleed. More than two items on a sheet will require an additional cutting charge.

Duplex (2-sided) Printing

A slight variation in image positioning can occur from sheet to sheet. Allow for $\frac{1}{16}$ inch variation from front to back.

Trapping and Registration

Because the sheet remains stationary on a rotating drum while each color is transferred, the Indigo has near-perfect image registration. Consequently, the need for trapping is almost non-existent. Files are processed as composite Postscript only. Composite Postscript does not consider separate colors as independent, and therefore disregards information used to create traps. Automatic trapping in programs such as PageMaker, QuarkXPress and Illustrator will be ignored by the Indigo. To obtain a denser black when using 100% black that overlays an image or underlying color, use the following formula to create a rich black color: 40% cyan, 40% magenta, 30% yellow and 100% black.