

## Images

### – getting ready for print

This factsheet is intended to provide basic guidance on what to bear in mind when getting images ready to print, and to save time and money in the print process. It is written for general guidance, rather than for seasoned design professionals. If you have any queries at all, you can find our full contact details at the end of the factsheet.

This factsheet by nature contains some technical terms. If you would like to find out more, please see our complementary glossary of print terms, which is available for download from [www.victoirepress.com/factsheets.php](http://www.victoirepress.com/factsheets.php)

Images are a vital part of most printed output (leaflets, magazines, etc.), but can become a major spanner in the works because of certain key differences between what you see on the screen and what comes out of the printing press.

Two of the most important differences are image resolution and image format.

If you can spend some time making sure that your images are the correct resolution and format, then this could save significant time and problems in the printing process, and produce a better, quicker output.

### Image resolution

Image resolution is commonly expressed as the number of dots per inch, also written as DPI. A high-resolution image, therefore, has lots of dots per inch, which means that there's lots of very precise detail. A low-resolution image has fewer dots per inch. Resolution is really all about quality.

A high-resolution image will also be a larger file size than a low-resolution image, because it contains more data.

A computer monitor displays at a screen resolution of 72dpi (i.e. 72 dots per inch). This is a comparatively low resolution compared to, say, a laser printer, which might print at 300dpi or even 600dpi. What this means is that a 72dpi image will look perfect on a computer monitor, but may look imprecise and pixelated when printed on a laser printer. The important point to understand is that a 72dpi image is not suitable for printing.

Images on websites are normally 72dpi. Website owners will typically reduce any higher resolution images down to 72dpi to make the page load more quickly, and because 72dpi is the maximum quality that a computer monitor can display. Because of this, images taken directly from websites are often not suitable for printing.

For professional printing, you should really try and get hold of images which are at least 305dpi, and higher if possible.

This can be trickier than it sounds because, without a professional artwork package such as Adobe Photoshop, it's not that easy to accurately establish the image resolution. Try to always get the images in the right format in the first place, i.e.:

- if you're buying an image, or getting the image from somewhere else, make sure you ask for a high-resolution image in the first place;
- never simply take an image off a webpage, because most web images are low resolution or there may be copywrite issues;
- look at the file size – a small file size of, say, 10K is unlikely to be high enough resolution for print. However a file size of 500k may well be.

Also note that, while it is possible to reduce to use software to reduce the resolution of an image, it is not possible to increase the resolution of an image. Using Adobe Photoshop to simply increase an image resolution from 72dpi to 305dpi will not increase the quality of the image. A low resolution image is simply not suitable for print, you will either need to try and get hold of a better quality version, or choose a different image.

If in doubt, please get a graphic designer involved or ask Victoire for assistance – we're always happy to help!

### Image format

Computer monitors display images using the basic colours red, green and blue (RGB) in combination to create all the other colours. Increasing the strength of these colours increases the brightness on the screen, and combining all these colours at the same strength produces pure white. Images designed for computer

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screens (e.g. on websites) are therefore normally produced in RGB format.

Unfortunately – again - printing presses are different. Increasing the strength of an ink makes that colour less bright (because of the white background), and printer needs to combine the colours together to make black, because they already have white available (because paper is usually white). Printers therefore print colour images in four colours: cyan, magenta, yellow and black (CMYK).

Black is "K" because it is said to be the "key colour".

If you supply your images as RGB, the printer can convert them to CMYK format easily enough, but the output colours may change slightly because all the components have changed. Therefore, if possible, always supply your images in CMYK format so you don't get any shocks!

The only way of accurately establishing the colour format of an image is using a professional artwork package such as Adobe Photoshop, or a free version such as GIMP. If you're buying or getting hold of an image for print, try and get it supplied in CMYK format in the first place.

In terms of file format, there are a few cross-platform formats which you may come across, including GIFs, JPEGs, TIFFs, and EPSs. Generally, avoid GIFs for print, because this is a web format where the colour information is extremely compressed.

Software packages can convert between formats, but note that – at each conversion and compression – a little of the image quality is likely to be lost. So, if you can, get the image supplied in the preferred format (e.g. TIFF) in the first place.

## Supplying images for print

If you are supplying your print job in PDF or MS Word format, then the images will be embedded. Note, however, that if you supply your artwork in QuarkXPress or Adobe InDesign then you'll also need to supply the separate image files to the printer, in addition to the main document.

## The big picture

If you understand a little about image resolution and image formats, then you're a long way down the line to saving time and avoiding nasty surprises for print jobs (and understanding what on earth the printer is talking about when he tells you an image simply isn't good enough for print).

If your print job is at all complex, involves lots of images, and/or a high quality of output is important to you, then it may be wise to consider involving an independent graphic designer or Victoire's graphic design team at an early stage.

If you have any questions at all, please don't hesitate to give us a call on 01954 781919.