

# What is **image resolution**?

TIPS & TRICKS

If you have ever seen printed material that contains blurry or blocky images, it was most likely caused by inputting a low resolution image. Ensuring a high quality printed job is as simple as making sure all photos and images in your digital files are all at the highest resolution 300 dpi (or higher).

## IMPORTING IMAGES FROM A DIGITAL CAMERA

The only real difference between a high and low resolution image is the amount of pixels/dots (DPI) that are used to create the image. With this in mind, the higher mega pixel camera you use taking the picture, the higher resolution the photos will be. Most cameras today take photos well above 6 mega pixels. This should be more than adequate to provide you with high resolution images. Keep in mind that you must have your camera set to the highest possible resolution and quality setting when capturing your images.

**Images taken from a cell phone are too low resolution for print.** They also typically don't have the colour and image control settings to take good quality photos.

## RESAMPLING AND INTERPOLATION – WHY RESIZING ISN'T THE ANSWER

All artwork design programs allow you to resize an image you are working on, but it's important to understand why simply resizing a

low resolution image will not produce a true high resolution image. When you resize and make a low resolution image larger to meet the commercial printing specifications of 300 dpi and beyond, all you are really doing is stretching the image's pixels. Since high resolution images contain a higher number of pixels, resizing a low resolution with less pixels will not create new pixels. Resizing that image will only interpolate pixels, meaning the software guesses what is needed essentially stretching each pixel.

The only way to ensure picture-perfect high quality printing of your photos and images is to start with a high resolution image obtainable by the methods mentioned above.

**IMAGE RESOLUTION** is measured in "dpi" (dots per inch).<sup>1</sup> The higher the dpi, the better the resolution (clarity, crispness) of the image.

Resolution changes according to the size at which the image is being reproduced. The resolution you need will vary, depending on how the image (photo or illustration) is to be used:

**72 DPI** Photos used for computer-based applications, such as websites and PowerPoint presentations. They are not suitable for professional printing.

**150 DPI** Acceptable for use for some digital printing applications, such as inkjet/laser printers (e.g., for documents created with MS Word).

**300 DPI OR GREATER** Minimum acceptable resolution for professional printing (i.e., offset printing).

<sup>1</sup> Print resolution is measured in dpi. Screen resolution is measured in ppi (pixels per inch).



**1** IMAGE IS .75" x 1", 300 DPI. ACCEPTABLE RESOLUTION FOR PRINTING A SMALL PHOTO.

**2** SAME IMAGE RESIZED TO 2.5" X 3.75", 300 DPI. RESOLUTION CHANGES BUT PIXELS ARE "SOFT" AND INTERPOLATED.

