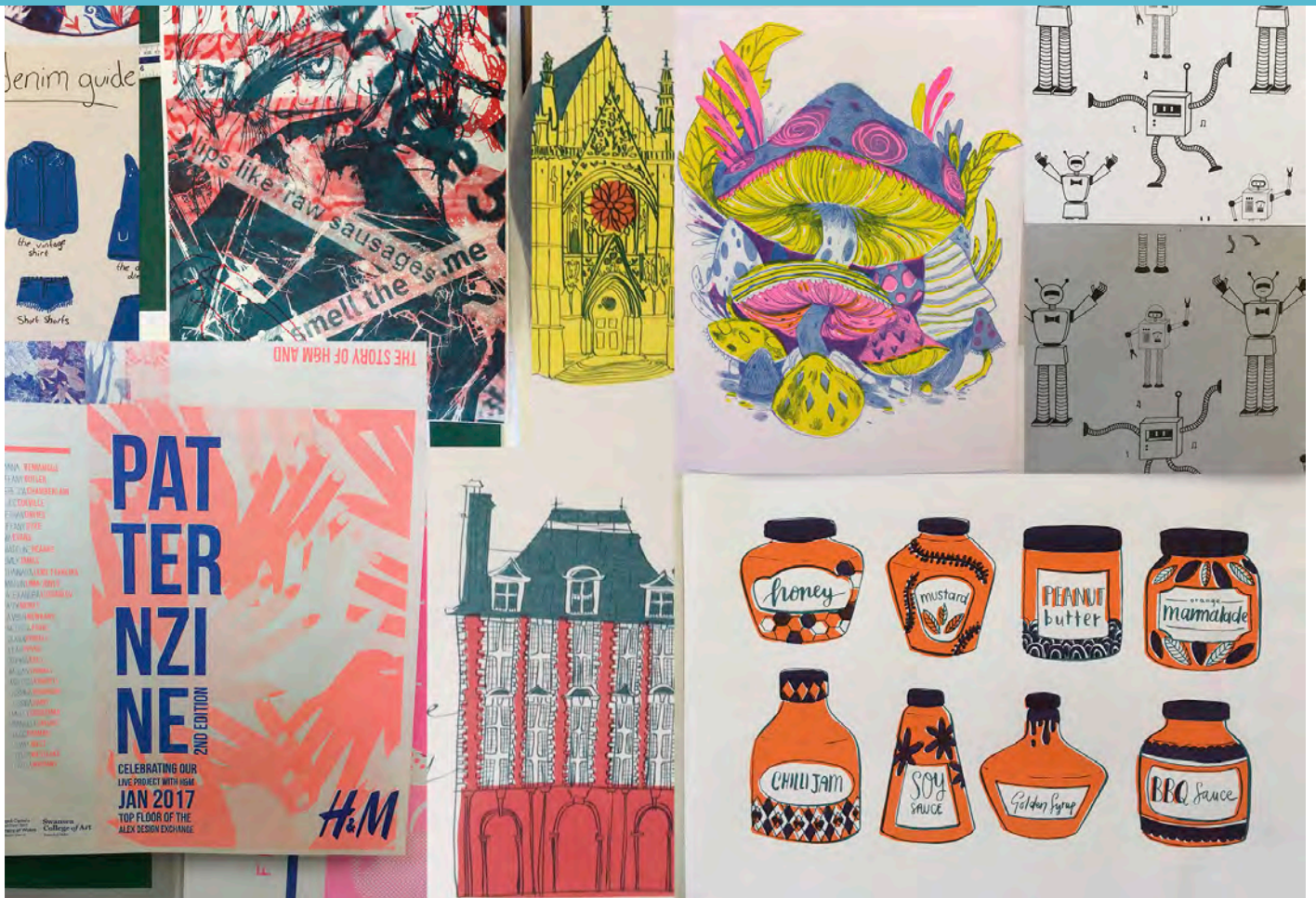




RISOGRAPH FILE PREPARATION AND PRINTING GUIDELINES



The Risograph ME9350 Printer

Risograph printing produces a similar output to the screen print process but offers both an analogue and digital methods to output prints. All colours are printed separately using a 'stencil', similar to a printing plate but we call it a master. The master is created from a master roll inside the Risograph printer and is wrapped around an ink drum. This rotates at high speed pushing ink out onto the paper as it passes underneath creating a print. Each colour will require a master of its own. Once you've printed all that you require the master is discarded. Each colour uses a dedicated drum.

We print using a Risograph ME9350, which has space for two ink drums and allows us to print two colours at the same time if needed, depending on the type of job and how it is set up. Risograph prints typically show imperfections that, although every effort is made to minimise this they cannot be fully eliminated. The automation and speed of the process means you need to expect some variation and mis-registration within print runs. This is more pronounced on prints with 3 or more colours.

Please note: The Risograph is driven by a PC not a Mac and there are specific requirements for submitting and handling files. This in most cases does not cause any issues as long as the files are prepared correctly.

Paper & Ink

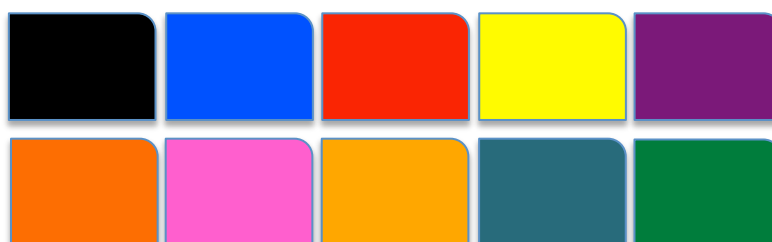
In most cases the Risograph prints best on between 60gsm and 250gsm. However we have the facility to handle paper up to 350gsm and depending on the paper type we can stretch to 400gsm. If you wish to use the heavier paper then it is advisable to discuss this first, so that it can be tested and the settings / workarounds identified in order to produce your work. If you have any other ideas then it's best to discuss these with your Tech Dem. Note that colours will react differently depending on the paper / card and also the transparency used if there are overlaying colours. It also worth pointing out that the Riso blue ink has the most water content and therefore takes longer to 'dry' out. In fact it never fully dries so keep this in mind.

All paper and card stock must be UNCOATED to allow the Riso soy-based ink to absorb and dry.

We keep a small range of uncoated paper and some card but this is by no means extensive. Again it would be sensible for you to explore and research your own preferences in paper / card to meet your intended / desired output and discuss with your Technical Demonstrator. We do not as a department order in paper / card for specific student work however there is a list of paper merchants attached which you can research and obtain samples from.

Please note: the process of printing on a Risograph is NOT the usual CMYK format, it uses a palette of spot colours which are shown below. It is important that you understand this from the start when creating your artwork for print.

We currently have the following colours: Black, Medium Blue, Bright Red, Yellow, Purple, Orange, Fluorescent Pink, Fluorescent Orange, Teal Green and Green



Accepted File Formats

We are currently running 2015 version of Adobe CC. Please supply all artwork in original Adobe format preferably as a .ai file with layers, photoshop psd with layers or a separated PDF files for each layer in registration. All artwork must be converted to grayscale / black and not the colour you intend to have as the final output. Because the Risograph uses spot colours and not cmyk each colour represented in your artwork needs to be converted to grayscale and/or black. Like screen printing the Riso printer prints one colour at a time and allows you to overlay colour of differing transparency to extend the colour range available. Always keep a colour master of your drawing / artwork / design for reference.

If you are working with other software, please come and discuss it first.

Images

Images created in Photoshop need to be saved as a jpeg with a minimum 300dpi without any screening applied. If you want specific half tone screening then apply it within the application you are using and save as a 600dpi jpeg. When printed the screen effect you have applied in your image will be preserved and the printing software will not override your settings embedded within your image.



Artwork – Digital & Drawn

Digital

We require original electronic artwork for all print work. However there may be the occasion where you have an original traditionally produced piece of artwork, if this is the case then make time to discuss the reproduction of your work in plenty of time, not just turn up expecting miracles. There are limits to what can and can't be achieved. Any type is best converted to outline prior to submitting your file and do this in Illustrator.

If you intend using Adobe InDesign as your source for creating files such as zines, booklets etc then make sure you create your pdf to the required resolution and all images are jpeg.

Artwork in hi res jpeg can also be printed.

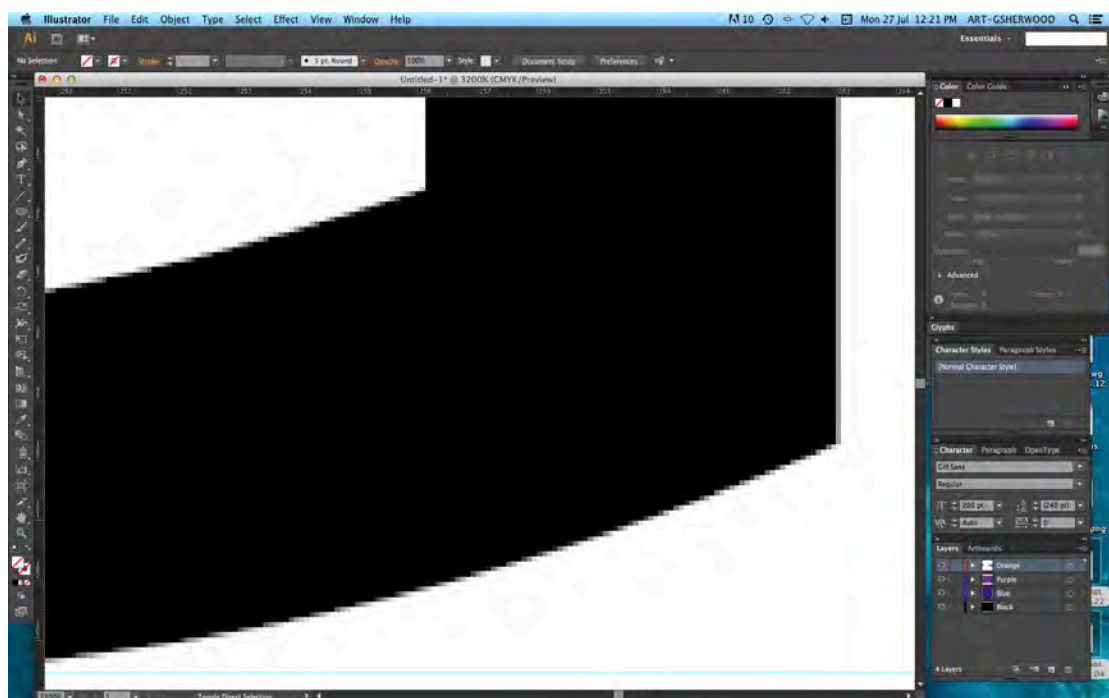
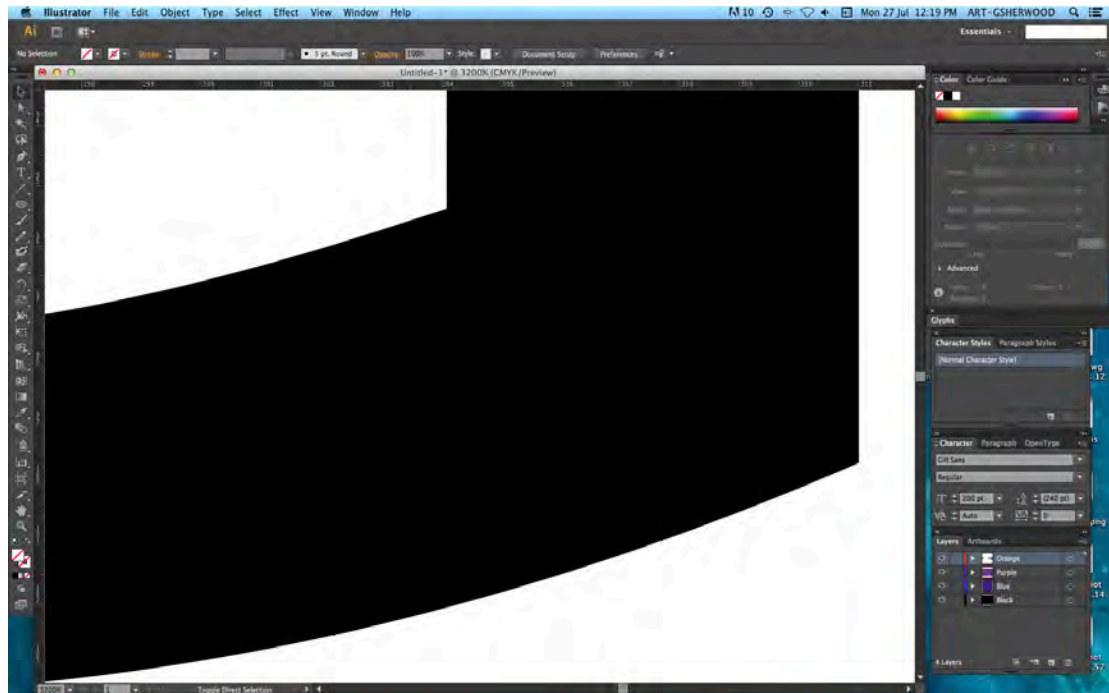
Drawn

It is possible to scan certain original drawings that you have created and even combine scanned drawings with digital files. Drawn images ideally need to be in black / greys / tints and flat as the scanning bed on the Riso printer doesn't handle 3D objects or raised artwork. If your artwork is one colour only this is straightforward. If there is more than one colour then the drawing needs to be separated i.e. if its 3 colours then you need to produce 3 separate drawings for each colour and in registration so that when they are overprinted through the Riso they will produce the correct colours and aligned as per your original drawing.

Note: If you are still unsure about how to prepare your work then please see your Tech Dem who will provide further guidance / assistance.

Type and vectors

Type always looks best when printed from vector artwork, and this is created in Illustrator or InDesign. Please don't use Photoshop to create type. Fonts printed from rasterized images look 'rough' around the edges.

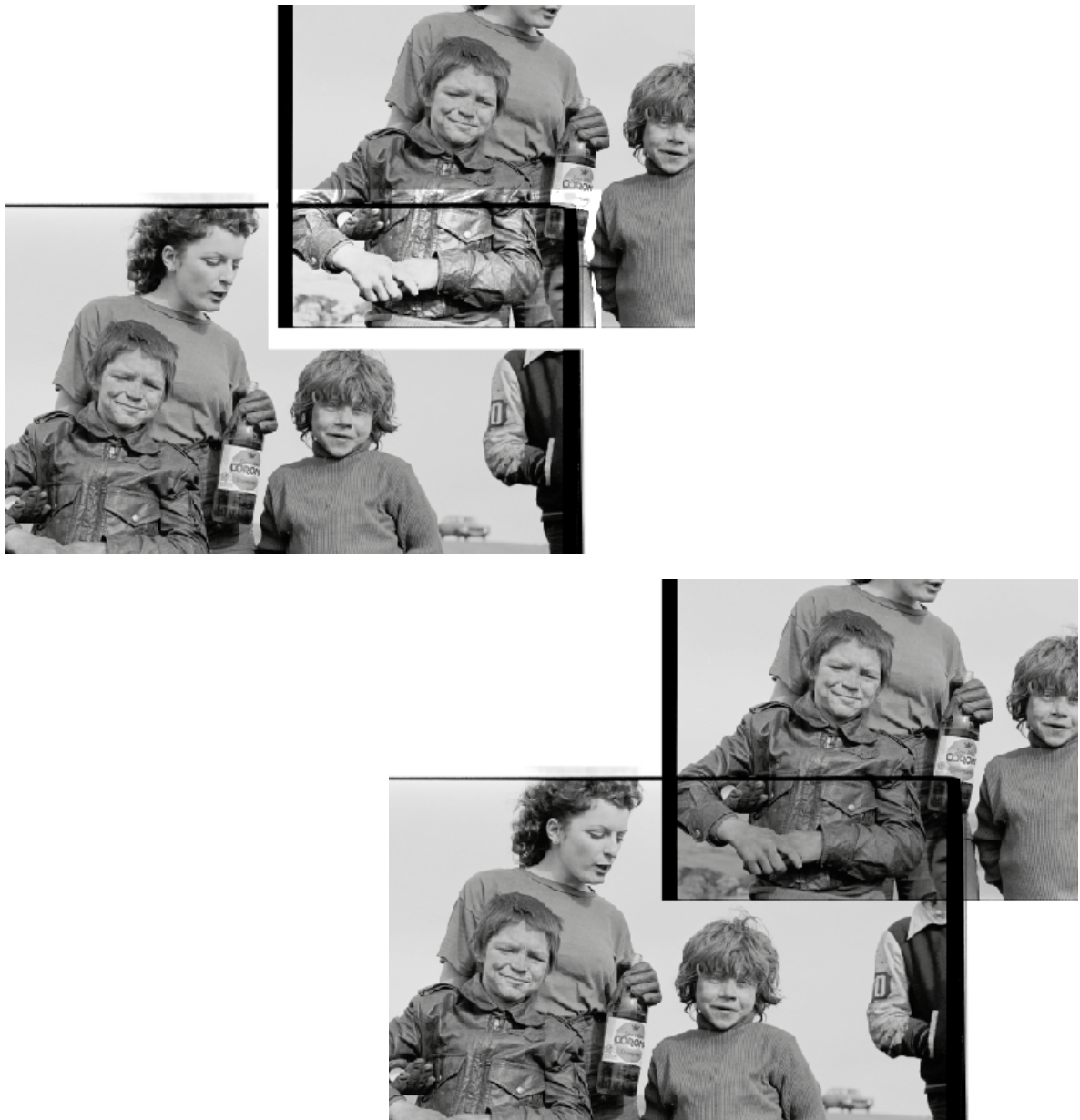


Links

Images must be linked within the document, rather than embedded / copied and pasted. These are easy to see and package in InDesign. Illustrator files may require closer attention if you have dropped a JPG into the artwork. We recommend using InDesign for all compositions.

Transparency

All transparency, overlays and multiply effects need to be flattened before the artwork can be printed. This can be done within Photoshop. Please also be aware that these effects can cause issues with output and don't always appear the way you envisaged. It would be advisable to discuss your ideas first and arrange some test printing and evaluate the output.

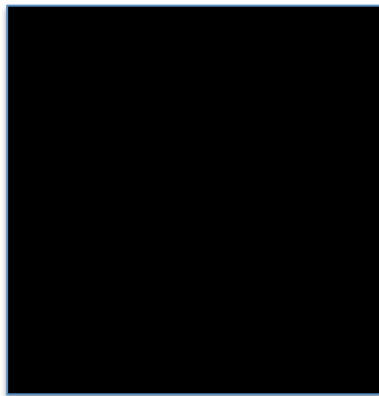


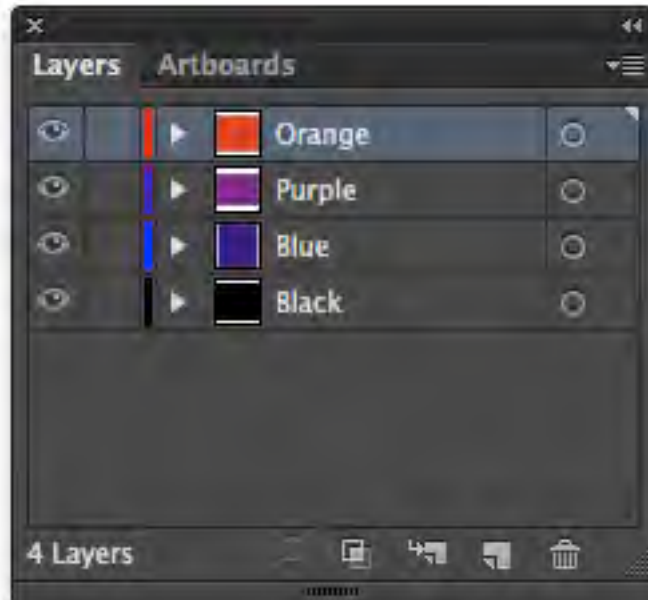
Flat colour

Please avoid large areas of flat colour, in other words 100% coverage. They cause the paper to stick to the drum and produce banding marks when the paper is separated from the drum. It doesn't look good and will spoil your print/s. Small areas of 100% of a colour can be achieved but trial printing always helps to ascertain if it will print ok or not.

If you want to print like a larger area of colour, you will need to consider applying a 75-85% tint instead, sometimes even less depending on the colour and complexity of your design.

Below is a basic example of how 100% Teal Green could print.



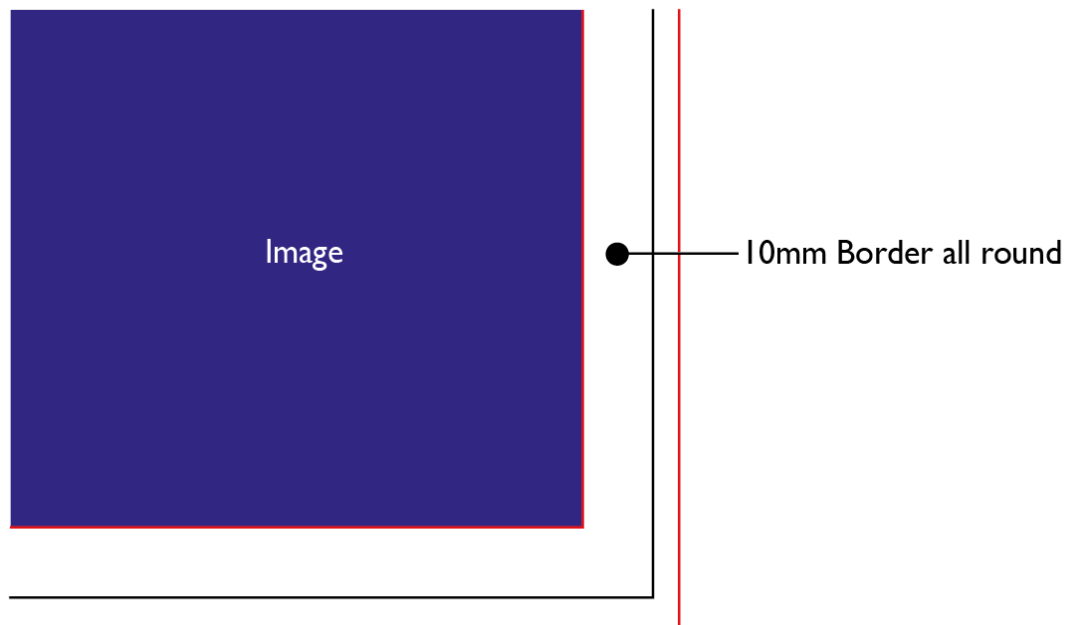


Layers

The Riso artworking process is much like the screen printing process. Each colour needs to be on a separate layer, and will be made into its own plate. Please make a layer for each colour in each of your supplied files. As previously mentioned colour each layer must be converted to black or grayscale and not the actual colour you want to print with. This is because colours on your screen will print differently to the respective colour on the Riso printer.

Colours

Please specify, for each layer of colour, which Riso colour you would like to use to print it in. You do not need to match the colours exactly in your document, just name them accordingly (refer to Formats info at the beginning) ie Blue Layer, Pink Layer etc. Riso colours can be overlaid; switch on the 'multiply' or 'overlay' effect in Illustrator to see how this will look. The more colours your print uses, the more times it will need to go through the machine. This increases the chance of the machine leaving marks as the rollers will pick up ink already on the sheet. These can be very difficult to remove and recommended in most cases that no more than 4 passes, or 2 when using heavy coverage or darker colours should be attempted.



Border

The maximum printable area for the Riso is 400mm x 277mm, and the largest paper size our Riso can print on is A3. If we are producing A3 prints, we need a 10mm clear border around the edge of the sheet. It is possible to fold an A2 sheet up to 210gsm only and feed it through the machine but it is not suitable for long print runs. You cannot fold anything heavier than that as it will not physically feed through the Riso. Paper / card weights the printer can handle range from 70gsm up to 350gsm and depending on the card type possibly to 400gsm so there are plenty of options.

NOTE: If at all possible try and create your design so it is about 50mm from the leading edge of the sheet ie the edge of the paper which enters the printer first. This helps avoid any paper grip roller marks and ink pick up which can be transferred to the subsequent prints as it builds up on the roller. Some marks can be removed with a putty rubber.

Bleed

Bleed is a technical term for when an image goes to the very edge of a page. Extra image area will provide you with enough bleed to get a clean trim. At least 3mm bleed is required on anything that will need to be trimmed to size.



image © Camille Relet / www.camillerelet.com



image © dittopress.co.uk

4 colour

In traditional methods of printing whether digital or litho normally colours are specified using the CMYK colour space as a rule. You need to be aware that Riso does **not** print using CMYK, there is no cyan or magenta ink available. You will need to replace those channels when creating your files for output with spot colours using red and / or blue when preparing your images for print on the Riso. This is the same for yellow and black.

Using Photoshop there is a specific way in which full colour images need to be printed and the process is quite lengthy but the results can be quite amazing. You need to be aware of screen angles and dot frequency for each colour and the sequence in which they are printed over one another. There are a few different ways but the colour order we use is K,Y,C, M. K being black, cyan would be replaced with blue and magenta with red or experiment with fluorescent pink or even orange. Your Tech Dem will advise on the specific settings for colour images and run through the process. With regards to dot frequency i.e. lpi changing the settings can have an adverse affect possibly resulting in dirty / muddy looking images. Success also depends on the original image so choose wisely.

Screen angles for each colour are set up within the Riso print driver options box prior to printing. This is the same for the dot frequency / lpi (lines per inch).

1 colour

Some useful Riso web links.....

<http://www.jameswilsonillustration.com/Print-Screen-Press-Promo-print>

<http://peowstudio.com/print/>

<http://www.peopleofprint.com/studio/jonzo/>

<http://hatopress.net/>

<http://cargocollective.com/jakeb/Risograph-work>

<http://www.creativereview.co.uk/cr-blog/2010/september/a5-joy-nice-new-zines-from-kid-acne-nobrow-and-landfill-editions>

<http://www.textbookstudio.co.uk/>

<http://www.prtscrpress.co.uk/index.php/project/catherine-ade/>

<http://www.prtscrpress.co.uk/index.php/project/gabrielle-hoad/>

<http://www.theduplicators.co.uk/index.php>

<http://www.printedbymono.co.uk/>

<http://cataloguepress.tumblr.com/>

<http://risoprint.co.uk/>

<http://harrietalana.co.uk/Brash-Zine>

<http://www.creativebloq.com/print-design/risograph-printing-51411803>

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