cds

Corporate Document Services

A good practice guide to supplying artwork

About CDS

We are a corporate communications and publishing company. Since incorporation in 1994 we have grown from 50 to over 160 employees; from a single site to 11 sites across the UK.

We have a strong management team and experienced employees who are experts in their fields. These include writers, journalists, graphic designers, web developers, internet consultants, print managers, print staff, project managers, marketing consultants, engineers, communications consultants, account managers and support staff – all of whom share our brand ethos to meet our customers' every need.

We have earned a reputation as a robust, reliable, award-winning company able to deliver creative, innovative solutions within tight deadlines and limited budgets.

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A good practice guide to supplying artwork

Setting up your artwork

This guide was written to help you set up your artwork so that the process from design through print is smooth and efficient.

We will take you through the procedure step by step but if you have any questions please ask us before you start on your design as we may be able to save you time and effort.

This is not an in-depth guide so does not cover all circumstances, but is meant as an overview.

Designers by their nature like to push the creative boundaries; however, the practicalities of making sure design prints correctly needs careful consideration.
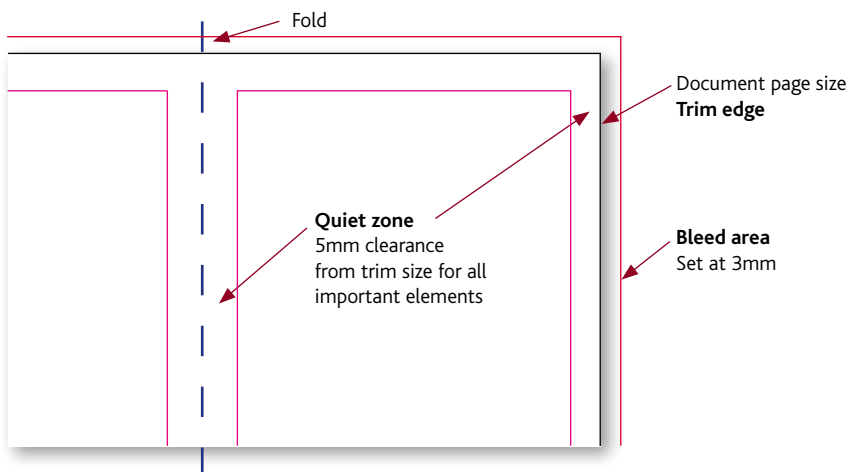
We hope you find the guide a useful tool. However, do please let us know if you feel we have missed something important (email **paul.meersman@cds.co.uk**)
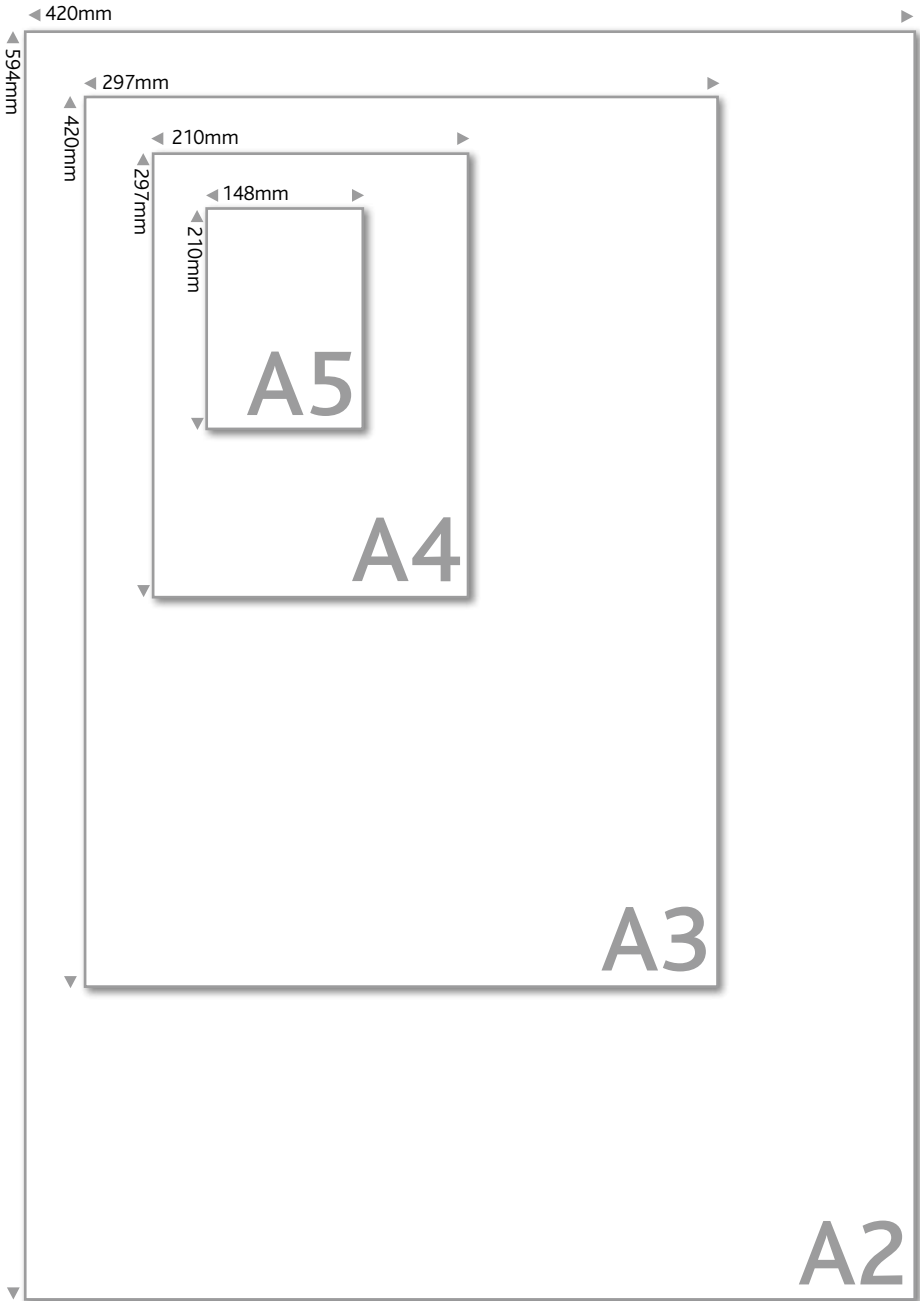
Version 1.0, November 2007

Setting up the page size

It's very important that you set up your page size correctly. If you don't, some parts of your design may be chopped off, misaligned, look off-centre, or have areas of unwanted white space. Here's what to do:

1. Make sure you know the correct dimensions of the **page size** you want to set up. (See page 3 for examples of common page dimensions.) Please call us if you need help.

2. When you open your application (InDesign, Illustrator, Quark etc) these are the dimensions you should set your page size to on your document. This will create the **trim edge** where the final document will be cut.

3. Now think of the **bleed area**. This is normally set to 3mm on all four sides. (On facing-page documents, where pages are joined together, a bleed will not be required on the edges where one page joins another.) The bleed area allows for any small variations in cutting when automated guillotines make their cuts according to the page size.

4. To remind yourself to add bleed, it's sometimes useful to add some guidelines 3mm out from each edge on your page size. Make sure any images or colours that run to the edge of your page size also run over the page into the bleed area.

5. It's also good practice to leave a **quiet zone** of at least 5mm in from the trim edge. This will make your job look more professional and it won't look like any objects are about to fall off the edge. It's also best not to put any important objects, such as text or logos, closer than 5mm from the trim edge, or from any fold or page crease.

6. See the diagram below for examples of trim edge, bleed area and quiet zone.

7. No objects should extend beyond the bleed area.

Fold

Document page size
Trim edge

Quiet zone
5mm clearance
from trim size for all
important elements

Bleed area
Set at 3mm

Common page sizes

420mm

594mm

297mm

420mm

210mm
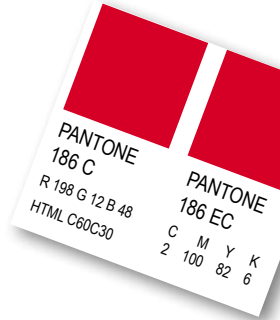
297mm

148mm

210mm

A5

A4

A3

A2

All about colour

How is colour created?

The colour we work with in the printing industry is created in two basic ways; by mixing light or by mixing inks.

1. Monitors, digital cameras and scanners create the colours you see by mixing Red, Green and Blue (**RGB**) light (additive colour mixing).

2. Printing presses, on the other hand, use subtractive colour mixing. This involves mixing four different coloured inks – Cyan, Magenta, Yellow and Black (**CMYK**) or 4 colour process.

3. Printers also use premixed inks, called **spot colours** which have a specific Pantone® reference. Spot colours are often used to ensure colour accuracy, for example in a logo or corporate colour.

4. **Monochrome** printing uses shades of a single ink. Images need to be converted to greyscale.

5. Duotones and tritones can be made up by mixing spot colours. A duotone can also be achieved using two colours from CMYK, for example by mixing process blue (cyan) with black.

PANTONE 186 C
R 198 G 12 B 48
HTML C60C30

PANTONE 186 EC
C 2 M 100 Y 82 K 6

PANTONE 361 EC
C 80 M 0 Y 98 K 0

Getting colour right

To ensure your colours print correctly:

- when printing in 4 colour process convert all images from RGB to CMYK using an appropriate software package like Photoshop

- convert spot colours to CMYK if you send the job to print in 4 colour process – if a spot colour is not converted to CMYK that element may not appear in your final printed document

- be aware that some spot colours do not have an exact CMYK equivalent, a Pantone matching guide will show you the best match (see page 6)

- check colours by printing 'separations' on your desktop printer. If a colour other than cyan, magenta, yellow or black prints then you have an extra colour and you will have to either convert it to Process colour or specify a spot colour when sending the job to print.

Setting up colours

Computer monitors do not show colour accurately as it will appear on a printed sheet. A standard colour matching system is required. Pantone provides the system most widely used by designers and printers.

Selecting Pantone colours

Pantone offers books that help designers see how colours will look when printed. Pantone colours are classified with numbers and a suffix. The number indicates the Pantone colour itself, and is standard across all types of stock; the suffix indicates the media or stock, which affects how the ink is formulated to achieve the specific colour.

Same colour, different papers

The type of paper used will affect the appearance of colours. Pantone uses swatch books to show you how colours look on **coated, uncoated and matt** paper. The number of the colour (for example, Pantone Red 032) is followed by a suffix, which indicates the type of stock your Pantone colour is meant to be printed on.

For example:
- Pantone Red 032 C for coated, shiny paper

- Pantone Red 032 U for uncoated paper

- Pantone Red 032 M for matt paper

These three are the most important Pantone library abbreviations. You may, however, encounter the abbreviation CV followed by C, U or M. CV stands for Computer Video, which is the electronic representation of the Pantone colours – now discontinued, but still seen in old versions of software.

Note of warning: If you use a colour with a specific suffix, don't use it again with another suffix in the same publication. If you use the same colour but with different Pantone suffixes in the same publication, your desktop publishing software will see the colour as two different colours and this will cause the production of an extra plate, adding to the print cost. The only exception would be for example when you use the same colour in a 4-colour glossy magazine and on an insert printed on bond paper.

Colour swatch guides

There are several types of Pantone colour guides including narrow swatch books and binders with chips (rectangular swatches) that can be torn out and sent to a client with a proof.

Pantone has guides for both premixed spot colours (Solid colour) and colours derived from mixing CMYK (Process colour).

A special guide called the **Colour Bridge** shows you the spot colour and how it will look printed in CMYK, along with the appropriate CMYK values required to achieve a close match.

Pantone Colour Bridge (Euro)

In late 2005 Pantone designed its new Colour Bridge libraries to reflect current printing technology and standard practices. Printers nowadays generally use digital screens, whiter paper, cleaner printing presses, with less dot gain and improved ink pigments. New swatch books were printed to show these improvements.

Pantone Colour Bridge libraries (Euro)

There are Pantone libraries for solid, process, pastel, metallic and hexachrome inks printed on coated, uncoated and matt stock. There are also different libraries for **European printing,** largely because Europeans print with different standard settings and lay the ink down in a different order to most US printers.

Keeping up to date with colour

About 90% of the Pantone colours were improved from the old Pantone 'solid to process' guides when the new Pantone Colour Bridge Guide was introduced. Most guides prior to 2006 have the old formulas. A few designers and printers may silently curse Pantone for changing things, but for the past decade the industry has been caught up in a whirlwind of change. The new colour management enhancements obtained through Pantone Colour Bridge libraries should mean better and easier colour management and a closer match for every Pantone Colour in the swatch book.

Digital colour guides for DTP applications

Most modern creative applications ship with all the relevant Pantone libraries pre-installed. Adobe Illustrator, for example, includes complete coated, uncoated, matt, metallic, fluorescent, and pastel colours, among others. Latest versions of these software programs offer up-to-date Pantone libraries with the exception of the new Pantone Colour Bridge library (previously known as 'solid to process'). This updated library may be downloaded free from Pantone for use with Adobe Illustrator, Adobe Photoshop, Adobe InDesign, and QuarkXPress. Even if you don't have those programs, the generic EPS and TIFF file versions may be used to import the Pantone colour swatches into most other applications.

Where to get the new Pantone Colour Bridge libraries

The new Pantone Colour Bridge libraries are available for download from www.Pantone.com

Note: Make sure you install the Pantone Colour Bridge Euro libraries for European printing.

Using black properly

Black can be produced in two ways, single colour black made up from 100% black ink or a CMYK black.

Single colour black ink is good for small areas and fine text but on larger areas it can appear washed out and uneven. It is best to use a **rich black** made up from 100% black ink and 40% cyan to ensure dark, even coverage across large areas.

Make sure the black in your images matches the black used in the layout of the rest of your document. Check the CMYK mix. In certain layouts a difference in blacks can look odd. It is best to use a program like Photoshop to ensure the shades of black match each other.

100% black

Rich black
100% black
40% cyan
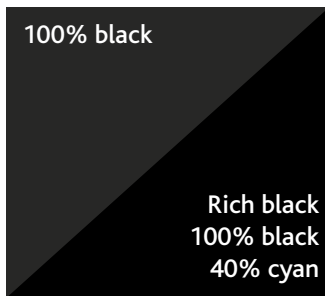
Preparing photographs for print

Photographs, whether in electronic format or on printed material are subject to copyright laws. Please ensure that you have permission from the copyright holder to use a photograph before including it your document to avoid legal and financial consequences.

Image file formats

Acceptable image file formats for print are:

TIFF	EPS	**JPEG** (if saved at high or maximum quality). JPEG is a lossy format so images that are severely compressed may suffer from blurring. Care needs to be taken.

Resolution

1. Images should be provided at **300dpi,** set to the correct **height** and **width** for use in the document. Be aware that an image that looks good on your computer monitor at 72dpi may not print well because the resolution is too low.

2. Negatives and transparencies should be scanned professionally at **high resolution** to deliver a final file size above 20MB.

3. Scan prints at 300dpi and set the output size to the same size the image will appear in the final printed product. Please note that scanning prints at a resolution higher than 300dpi adds to the file size but will not improve quality.

4. If you scan previously printed images, such as a picture in a magazine, use the de-screen function on your scanner to avoid moiré patterns. Your scanner manual will tell you more about this.

5. Scan black and white line art (text, logos etc) at 1200dpi to preserve sharpness.

6. Image files can originate from digital cameras. A camera capable of 6 megapixels or more should be used. This will deliver a high enough resolution for most requirements.

7. When enlarging or compressing an original image file to get it to the right size for your document always use an image processing software package like Photoshop. Do not use drawing/vector software (such as Illustrator).
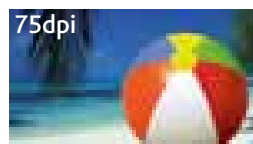
Colour considerations

When printing in 4 colour process, images should be converted to CMYK before sending them to print. Never submit pictures in RGB. Any greyscale, duotone or tritone should be made up out of CMYK. When you convert images please take care that the blacks in your image match the blacks in the rest of the document, otherwise it can look odd (see page 7).

Fonts and text

The most common font issues, such as font substitution and reflow of text, can be avoided by embedding fonts before submitting the document for print.

Please note that fonts are licensed and that we need a licence for a particular font if we have it on our system at any time. If you have any questions about font licenses it is best to contact your CDS account manager.

Dos and don'ts

Do:

- use OpenType fonts which should be problem-free in terms of quality as well as being compatible, without conversion across both Mac and Windows platforms, and fully supported by our preferred design software programs InDesign and QuarkXPress

- provide a list of all fonts you have used in your artwork

- supply both screen and printer fonts for Postscript fonts (True Type fonts have only one part)

- provide hard copies of your artwork so we can check the proof

- be careful of sending fonts across Mac and PC platforms – some fonts do not travel well across platforms

- try to submit artwork as a PDF with the fonts embedded.

Don't:

- use any faux italics or bolds in your artwork (ie text effects applied using software packages)

- use bitmap programmes such as Photoshop to set text. It will not print as sharply as vector text created in Illustrator, InDesign or Quark

- put text over photographs as it makes it hard to read. If you do have to put text over a photograph, try to ensure that the contrast between the text and background is high enough to make it stand out. Avoid putting text on top of a lot of detail in an image as this will also make it hard to read.

Imposition

Designs may look fantastic but it is important to make sure they work on a functional level as well. Here are some tips to help you make sure your documents don't fall foul of common imposition errors.

Presentation folders

Check that when pockets are folded, they don't obscure text.

Roll fold mini brochure

Check that the flap that folds in can be trimmed smaller to prevent buckling. We can advise on sizes.

Cut-out shape

Ensure that the reverse shape is a mirror image of the front shape.

Perforation

Check that both sides have the perforation marks in the same place.

Please supply pages either as singles or as double page spreads.

The best way to check imposition is with a mock-up.

Booklet design

Designing booklets requires a professional level of experience. If you are confident that you can tackle designing a booklet please read the tips below and the rest of this guide carefully.

Design single pages or double page spreads

We are set up to receive single pages and double page spreads. Do not supply 'printer's pairs'.

Use a 3mm bleed

Add a 3mm bleed to all sides of the page. This is essential when colours or images run to the edge of the page (see page 2).

Allow for creep

On a stapled booklet the inner pages will extend further out than the outer pages when the booklet is folded. This means that when the booklet is trimmed the inner pages are narrower than the outer pages. The amount of creep depends on paper thickness and number of pages. It is important to take this into consideration when designing, as creep could lead to objects being too close to the edge of the page.

We recommend leaving a **quiet zone** of at least 5mm in from the trim edge (see page 2).

Be careful with objects which cross pages

When a layout requires a headline or image to cross over two pages you have to take page alignment into consideration. Try to split any headlines so the page gutter falls between words – use point sizes and kerning to make slight adjustments to text. Also make sure that nothing important in an image (eg the middle of somebody's head) ends up in the page gutter with a staple through it.

Proofing

There are numerous ways to produce proofs including digital, on-line and machine methods. Each approach has its own cost and time element and we will advise you on the best choices for each job.

PDF proofs

We will always provide a PDF proof. A PDF is a quick way of producing a proof, and gives the printer a complete copy to follow. Please remember that as a computer generated image a PDF does not necessarily provide accurate colour reproduction.

High resolution digital print proof

If required, we will provide a high resolution digital proof which is suitable for checking 4 colour process work. It will give you an excellent approximation of the final printed product. A big advantage is that alterations only involve manipulating data which avoids the high costs of changes further along the printing process.

Machine colour proofs

The most accurate proofs are machine colour proofs, also known as plate or wet proofs. This proofing process involves doing a short run on the presses with custom-made plates, so it is expensive. It is the best way to check colour accuracy.

Amendments

Amendments on proofs should be made by the person who created the original artwork. The job will be re-proofed and sent back to be checked again. Small changes can have a knock-on effect so everything needs to be carefully re-checked.

An approved proof represents a contract between you and CDS, so it is essential to check thoroughly to avoid disputes, extra costs and wasted time.

More things to avoid

What to avoid	Why?
Borders	Guillotines are never accurate enough to guarantee complete trimming off of a border.
EPSs within EPSs	The risk of postscript errors is greatest when this is done. Certain Illustrator EPSs also cause problems in Quark.
Postscript fills	Behave erratically. Avoid them.
Hairlines	Hairlines are 'device dependent'. They print at different resolutions on different machines, so they may appear on your office laser but not on a plate setter. Use a 0.25pt line instead.
Corel texture fills	These are best avoided as they don't print consistently. Convert them to 300dpi CMYK bitmap and ensure the background is not set to transparent.
Overprint	When using overprint settings particularly in Quark, the printed result may look quite different to what you see on screen or proof. Check your software manual for details. Black text is generally set as default to overprint.
OLE objects	Windows applications allow you to copy objects from one application to another. Unfortunately they don't print properly. Always convert OLE objects to bitmaps before sending them to print.
Set-off	Set-off is the marking of the underside of a sheet caused by transfer of ink from the sheet underneath. Set-off is most likely to occur on uncoated stocks. We will always recommend using a sealer varnish if we feel there is a chance set-off will occur.

Glossary of printing terms

A sizes

The A sizes are the main trimmed paper sizes in the ISO international range.

Adhesive or perfect binding

A method of binding where the leaves of a book are held together by a glue.

Art (paper)

Art paper is a paper that has been coated and sized. The surface is very smooth and can have a glossy, silk or matt finish.

Artwork

Artwork is the term used to describe the components sent to a printer for making up a print job. These can consist of illustrations, text and photographs or any combination of these. Usually artwork is submitted on CD, DVD or uploaded to an FTP site. A hard copy print out is usually sent to the printer as well.

ASCII

Stands for American Standard Code for Information Interchange. It is industry standard computer code for storing, displaying and using type.

Author's corrections

Corrections made to the original content of a proof by the originator. These are charged to the customer.

Bite

A term used to describe the process of giving separated colours a slight overlap to assist in registration.

Bitmap

A bitmapped image is arranged according to its bit locations in rows and columns.

Bitmapping

Bitmapping is a term often used to describe the effect where edges of a picture take on a 'blocky' shape due to errors in image processing.

Blanket

The blanket of a printing machine is a rubber image carrier that takes the ink from the plate to the paper.

Bleed

In printing terms bleed is where the printed image runs off the edge of the paper.

Bulk

Bulk is a term used to describe the relative thickness of a sheet of paper compared to its weight.

Calender

A machine similar in operation to a large iron that compresses and polishes the surface of paper.

CMYK

Used to describe 4 colour process when printing with cyan, magenta, yellow and black inks.

Collation mark

A small block of colour printed on the spine of a section to be bound. Collation marks are set slightly down from one section to the next to allow the binder to easily see if there are sections missing.

Colour bar

Quality control device used by printers to see how much of each colour is being printed on the sheet. Most colour bars also show information to help the printer keep good registration and check trapping.

Continuous tone

The term used to describe an image that appears to blend into millions of colours (such as a photograph).

CTP

Stands for computer to plate. The process of directly imaging a printing plate from a computer system without the need for film.

Dot gain

The enlargement of the halftone dots of an image from the initial stages of repro to the final printing.

Dummy

A sample of the proposed job made up of the actual materials that will be used in production.

Duotone

An image made up of two colours.

Embossing

Stamping of a shape into a paper surface.

EPS

Stands for Encapsulated Postscript. It is a type of digital file used in graphics computer systems.

Folio

The folio of a page is the page number.

Font

The font is a set of type characters of the same design. It includes the upper and lower case letters and all the figures and symbols. Also referred to as a 'typeface'.

Foredge

The term used in binding to describe the edge of a book that is opened.

FTP

Stands for File Transfer Protocol. A method of transferring large data files using secure sites on the internet.

Grain

All papers have a grain direction. The characteristic is caused by the fibres in the paper lining up in the same direction as the paper-making machine is moving. Grain direction is important to printers and binders as papers behave differently 'across the grain' and 'with the grain'.

GSM

Stands for grammes per square metre. The standard measure for describing the weight of paper. Also described as the grammage of paper.

Halftone

The term used to describe a picture which has a screen applied to allow for printing.

Highlights

The lightest areas of a picture.

Imposition

Page layout to permit correct folding of a section.

Inkjet

A method of producing a printout from a computer. There are many types of inkjet technology. IRIS proofs for example are produced by a continuous jet method.

Insetting

A binding method where one section is inset inside another prior to binding into a cover.

ISDN

Integrated Services Digital Network used to transfer data.

Justification

The arranging of words within a body of type ensuring one or both margins are straight.

Lamination

The application of a plastic film to a print.

Landscape

Printing term for a page that is wider than it is high.

Lithography

Lithography is the most common form of general print. The process is also known as offset litho as the ink is transferred (offset) to a rubber blanket before printing onto the paper.

Mechanical paper

Any paper that contains a proportion of mechanical wood pulp.

Mechanical wood pulp

The type of pulp is produced by grinding the wood. It is used in cheaper papers, with the more expensive papers using 'chemical wood pulp' which is broken down using chemicals or water.

Moiré

This is a term used to describe the patterns caused by the incorrect angling of the dots of the screens used for halftone printing.

NCR

Or carbonless paper used on sets of forms to create multiple copies when completed.

Overs

The extra copies printed above the quantity of the order, to allow for machine setup.

Pantone

The Pantone matching system (PMS) colours are a standard system of coded colours for printers, designers and customers used to define colours accurately, for example in a corporate logo.

PDF

Portable Document Format is a way of displaying documents in a form in which they will be printed. Used when an exact copy of a printed document must be available electronically.

Perfecting

A method of printing whereby the machine prints both sides of the sheet in one pass through the press.

Point system

The point system is the standard for measuring sizes of type.

Postscript

A computer language developed by Adobe which describes the contents of a page.

Proof

Printing term for creating an image which represents the work prior to running the finished copies.

Register

Printing for the position of the colours on the sheet relative to each other.

RIP

Raster Image Processor. A device used for interpreting Postscript data and sending binary data to an image setter.

Set-off

The pulling of ink from one sheet to another during the stacking process.

Screen ruling

The number of rows or lines of dots per inch or centimetre in a screen tint or halftone. Also called line counting, ruling, screen frequency, screen size or value.

Sheet fed

Sheet fed printing machines are fed sheets of paper, and not a reel as in web printing.

Stochastic screening

A screening system that uses a random pattern of halftone dots. It is suitable for certain types of work and eliminates halftone rosettes and moiré patterns.

Tiff

Tagged Image File Format. An image file format that uses lossless compression and therefore preserves maximum quality unlike a JPEG.

UCR

Under colour removal. The process of replacing greys formed by cyan, magenta and yellow with black. The purpose is to reduce the total ink film on the sheet which reduces the risk of set-off and makes the sheet easier to handle.

Web fed

Web fed printing machines are fed from a web (reel) of paper as opposed to sheet fed printing machines.

Woodfree paper

Paper made from chemical wood pulp as opposed to mechanical wood pulp.

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w: www.cds.co.uk

recycle

This booklet is printed on ERA silk (50% post-consumer UK waste and 50% virgin fibre from FSC managed forests).

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