



ELLIKON
FINE PRINTERS

PREPRESS GUIDELINES



HOW THIS GUIDE WORKS

Ellikon is committed to developing the technical quality of printed material.

The purpose of this Prepress Guide is to make the setup and delivery of your digital material to Ellikon as safe and easy as possible.

If you require further information, we would welcome the opportunity to discuss your project when convenient.

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PRINT SERVICES

ACCORDING TO THE CUSTOMER'S NEEDS

Ellikon offers versatile print products and marketing communication solutions to assist your company achieve success.

ELLIKON PREPRESS SERVICES

Ellikon's Prepress department performs professional and quality work.

Producing Prepress in the same premises as the rest of production is to the customer's advantage: work progress and quality are easily monitored and no time is lost in traffic.

ELLIKON GRAPHIC DESIGN

Design and printing under the same roof has also proven itself in practice to be an excellent solution for the customer from both a workflow and a cost point of view.



PREPARATION

The following guidelines will assist you when you are preparing page material. The more carefully you prepare the material before it is sent to press, the more time will be saved in the production stage. Unnecessary costs are not encountered and the end result fulfils its objectives.

GENERAL GUIDELINES

Page size and trimming margins

The size of the publication has to be exactly the same as the final trimmed size of the product. Bleed should extend 3mm over the trimming line. With page-size and smaller advertisements allow appropriate bleeds on all sides

Avoid text cutting

You will avoid text cutting if you do not position text or other essential elements (e.g. logos) closer than 5mm from the trimming line.

With burst bound products, the effect of the spine has to be taken into account for headline text that crosses the double-page spread. In normal cases a 7mm + 7mm margin between letters is sufficient.

NOTE With burst bound products, try to avoid cross body text over the spread due to a poor readability. Also with perfect bound products, the effect of side gluing has to be taken into account with the inside covers and on the first and last pages of the contents. Side gluing reduces the usable page area by around 7mm starting from the spine.

Machine-glued products

Within press ready-made glued products, the space needed for the glue spine must be considered.

The glue spreads to the pages by approximately 2mm from the back. If, e.g. the text continues over the spread, leave 3mm + 3mm between letters, when preparing a page layout.

Picture over the spread

With burst bound and machine-glued finished products, a part of a picture will be hidden due to gluing into the spine.

Therefore, if you want the picture shows without "break", you should move picture from back to outward on both pages of the spread. Our recommendation for perfect bound products is 3mm per page (7mm + 7mm).



PREPARATION cont.

To move pictures, do as follows:

Create a single page document (not spreads).

1. Move the picture to the right position on a spread.
2. Copy the picture box and place the copy to exactly same position.
3. The right-hand page of the spread: move the left edge of the upper picture box to the back of spread (otherwise the picture box remains in its position). Then move the picture 7mm to the right inside the picture box.
4. The left-hand page of the spread: move the right edge of the lower picture box to the back of spread. Then move the picture 7mm to the left inside the picture box.

As a result, you have two separate picture boxes which both have same picture inside. In practice, a 14mm wide part of a picture will be printed twice, but visually, the picture continues correct over the spread.

Naming files

When the pages are in digital format, they are distinguished from each other on the basis of their file names.

For the automated imposition process it is important that the pages are put in to order according to the page numbers.

The simplest way to name the pages is to start the name with 3-digit page number (001_, 002_, etc).

Naming instructions

- use as short file name as possible. Maximum total length is 31 characters.
- in file names use only numbers 0-9 and letters a-z.
- Do not use spaces; replace them with underscore character (_). Do not use other special characters.
- use a file extension at the end of the name.
- use a period (.) only in front of a file extension.
- use the product name and its issue number in the file name.
- use the page number in the name.
- if a same file contains several pages, they must be consecutive in page number order and without empty pages.
- if the product contains language or other versions, always add the version to the name.
- examples of a good file name:
001_catalog8_MFC.pdf or
007_012_catalog8_MFC.pdf

PREPARATION cont.

Line thickness

Don't use "hairlines" when specifying the thickness of lines. The true thickness of hairlines varies depending on the software used and the printing resolution.

Specify line thickness either in points or in millimetres. The smallest recommended line thickness is 0.25 points.

We do not recommend the use of thin lines with half tones or many colours. The minimum thickness of a negative lines is 1 point.

White text

Depending on the sheet width, paper weight, paper quality, etc. the offset process might have dimensional changes in a paper. The dimensional changes of the paper can cause 'misspass' in press. This problem appears especially clearly when a small size white text is used on a 4-colour image or on a multi-colour press.

These problems are compensated for at Ellikon's Prepress and Press stages, but the best result will be reached if you pay attention to the following recommendations when using white text multi-colour printing:

- Use at least 8 pt type size
- Use font type with even thickness (e.g. Grotesk, Sans Serif)
- Use bold or heavy typefaces.



COLOUR SPECIFICATIONS

4-colour production

In 4-colour production, define all colours as process colours (CMYK). It is very important that the final PDF file contains only elements with process colours.

If you have used spot colour definitions in a 4-colour job, check they have been changed to process colours.

Spot colour

In offset production it is possible to use 1-2 spot colours. Define the colour as a spot colour in layout software and prepare a PDF in same way as in normal CMYK production.

Ellikon's Prepress department separates the spot colour as the fifth separation.

Transparent elements

In 4-colour jobs, both transparent elements and overlapping elements must be in the same colour space (CMYK) in order for the elements and colours reproduce correctly.

Otherwise, there will be an error on page when transparencies are flattened. An error could appear e.g. as white background in the area where the elements overlap each other. InDesign's "drop shadow" is an example of transparency.

Transparency flattening is a task which must be performed before the plate output.

You can preview the elements that will be flattened with InDesign's "Flattener Preview" function. In Acrobat, check the result with Output Preview function.

Rich black

In order to achieve a strong deep black in bigger colour surfaces, we recommend the use of:

60%	cyan	(C)
40%	magenta	(M)
40%	yellow	(Y)
100%	black	(K)

COLOUR SPECIFICATIONS cont.

Trapping

Trapping is used to eliminate misregistration which could be caused e.g. by the stretching of paper. When trapping the adjacent coloured objects slightly overlap each others.

By overlapping, a small misregistration does not show in print.

Use of trapping makes multi-colour printing easier especially when printing paper with poor dimension stability. Normally an uncoated, low grammage paper causes greater misregistration.

Already in planning stage, you can minimize easily showing misregistration problems by avoiding the use of small point size white text (negative text) on multi-colour elements.

If this kind of text is used throughout the product, the misregistration can be obvious despite trapping has been used.

Ellikon uses trapping software in its Prepress process. Our workflow software traps according to given definitions and limit values.

Ellikon uses the following settings in its Prepress workflow (note these settings carefully!)

1. CMYK white is knocked out.
2. The overprint settings for coloured elements are preserved.

When producing pages, please pay attention to the overprinting settings for coloured elements that will be preserved in Ellikon's process. This will help you to avoid unexpected appearance in the final product.

NOTE Metallic spot colours (like silver) must be knocked-out from other colours because of their high opacity and quite weak ink trapping features.



COLOUR SPECIFICATIONS cont.

Checking the overprint

In advance, you can check from the document that the print result will be as desired. You do this, for example, using InDesign or with Adobe Acrobat.

In Acrobat and newer versions the overprint preview is set on in program's preferences, **General > Page Display**. If you do not have overprint setting on, Acrobat discards the document's overprint settings on screen.

Overprinting can be checked also with Acrobat's **Output Preview** option.

In Acrobat 10, do as follows:

1. Open a PDF file and choose from **Tools** menu **Print Production** and **Output Preview**.
2. Check **Simulate Overprinting**.
- 9 3. Check on the monitor that the page looks the way you want.

With Overprint Preview you can see overprinting even more clearly, when you choose **Color Warnings** and tick the **Show Overprinting**.

NOTE If you have a printed proof, its validity depends on the settings of the printer or RIP which might differ from Ellikon's settings.

SETTING 1 Set 100 % Black to Overprint

In other words, the document settings are discarded. The setting is on because a black body text is often placed on a coloured surface. If the colour surface is opened under the text a slight misregistration will disturb the reading of the text. With this setting 100% black is always the overprinting colour regardless of the settings in a document.

NOTE Note this also when you are preparing versions with black colour change.

Example

100% black element on a picture.

Print result

The tones in the picture can be seen under the 100% black element because it cannot fully hide the picture. The darkness of the black element varies according to the tones in the picture.

Correction Change the tone of the element to something other than 100% black, e.g. add 5% cyan or make a rich black. The image will then be opened under the element.

NOTE Do not use the correction to black body text. It must always be pure 100% black.

COLOUR SPECIFICATIONS cont.

SETTING 2 Set Overprint CMYK White to Knock Out

In other words, the document settings are discarded.

Example

White text defined incorrectly as overprint colour.

NOTE If you are viewing this situation in Acrobat with Overprint Preview on, you can see only the blue element because white text is transparent in 4-colour printing.

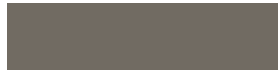
Print result

White text is seen in the blue element because its overprint definition is removed in Ellikon's Prepress process.

Correction

Is corrected in Ellikon's Prepress process.

Still, the best solution is to correct the problem already in your native document, provided that you notice the problem, e.g. with Acrobat's Overprint Preview.



Original PDF file viewed in Acrobat with Overprint Preview.



Print result

SETTING 3 Set Colours to Knock Out

In other words, the document's settings are preserved.

Example

Text defined incorrectly as overprint colour. In the printed product the text should have a blue colour.

Print result

Text has dark green or dark grey colour because yellow surface is not opened under the text.

Correction

The overprinting definition must be removed in the original document.



Desired result



Print result



FONTS & IMAGES

Use Adobe Type 1 or Open Type fonts. Other font types can cause faulty appearance in the Prepress process.

Avoid font problems

- Supply all fonts whenever possible.
- If you make a PostScript file, include all the fonts that you use.
- Don't use so-called 'system fonts'. They vary slightly in different operating systems and might cause erroneous word division in texts, even in PDF files.
- Don't use "fast buttons" in software when changing a font to italics, bold, underlined, shaded or transparent.

USE OF IMAGES

Image resolution

Ensure that the image resolution is sufficient for printing. Ideally, the image resolution is twice the screen line. The screen line ruling is determined according to the used paper and press.

By preparing the images with 300 DPI resolution, you ensure the resolution is sufficient for all printing. If you know the used paper and press combination, you can surely prepare the images to a lower resolution.

As a benefit you'll get a smaller file size, otherwise it has no importance.

NOTE Enlarging the image in a layout reduces the effective resolution, e.g. after enlarging a 300 DPI image to 200%, the real resolution is no more than 150 DPI.

Guideline values for image resolution

Print Method	Paper Coating	Resolution DPI	Screen ruling LPI
Sheet-fed	Coated	300	175
Sheet-fed	Uncoated	240-266	120-133



FONTS & IMAGES cont.

Total ink coverage CMYK images

The total sum, in percentage, of partial colours in the darker areas of an image are determined according to the paper and press used. In addition, this value is also affected by any UCR or GCR function that is used.

Today, the ICC profiles include this information. By using a proper profile in colour separation a correct TIC value is determined automatically into the images.

The total ink values used for standard output profiles are described in the table below.

The total ink values in the table – and the functionality of the profiles – are based on the printing according the values defined in standard.

Dot Gain

Dot gain is determined in images according to the print method, paper and the colours used. Ellikon follows the dot gain values defined in the FOGRA ISO 12647-2 standard. The dot gain increases gradually when going from heavy coated paper to newsprint paper.

Also, dot gain values are included in an ICC profile. For this reason, it is important to know at the image production stage from which paper the job will be printed, and then use a proper output profile for the CMYK conversion.

Guideline values for Total Ink Coverage (TIC)

Print Method	Paper Coating	Ink Coverage %
Sheet-fed	Coated	310
Sheet-fed	Uncoated	260 - 270



FONTS & IMAGES cont.

Enlargement of images

If the image resolution is in accordance with the guideline values, you can safely scale the image in publications by 50% to 130%. The greater the change in image enlargement, the poorer the quality of the printed image. If you intend to reduce the size of the image by more than 50%, make the change in the image processing program.

Image format

The colour format of images must be CMYK when making print ready PDF.

Image linking

All images must be placed and packaged (InDesign) or embedded (Illustrator) within the file.

Packaging and embedding files

Adobe InDesign

Go to File - Package and follow the prompts. This will collect all fonts and images into a single folder to be supplied.

Adobe Illustrator

Go to Window - Links and Embed Image. Image will be part of the file now and file size will increase.



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MOCK-UP PROOF

CONTENT/LAYOUT ONLY

Please check the content/layout of this document thoroughly.
The responsibility for the accuracy of this proof rests with you, our valued client.
(Note - this mock up is not colour accurate)

Ellikon Job No. _____

APPROVED

Please sign and return all proofs

Is the Page Layout correct? Yes No

Name/Signature

Date

Corrections and additional proofs will be charged accordingly.

PROOFS

Always supply a proof of the very latest version. If possible, a 1:1 scale version of the proof should be given. If the proof is not 1:1 scale, this should be clearly marked.

In a digital Prepress process, proofs are also printed from digital material. Digital proofs can be divided into two groups, Content Proofs and Contract Proofs. A digital Contract Proof is a proof with accurate colours which means that the colours of proof and printed matter are within a small tolerance.

Content Proof

The Content Proof is produced using a printer or copier. The proof can be used to make a rough check on the accuracy of the text and colouring ("red is red"), but the colours do not correspond to the printed end product.

Proofs are signed by the client on approval.

Contract Proof

By Contract Proofs means proofs which can be used to check colour tones. The proof is made on a proofer calibrated to FOGRA 12647-2 standard for print quality.

The validity of a Contract Proof must be checked by measuring a color bar, like FOGRA Media Wedge, which has been printed on the proof.

The proof is acceptable if the following tolerances are passed:

- paper tone (dE 3)
- max dE (dE 6)
- primary color (dE 5)
- average (dE 3)

NOTE With Contract Proofs the following limitations may be encountered:

- It is not always possible to simulate the influence on print quality of the paper used in the printing process.
- It is not always possible keep the final printed product identical to the proof as far as all colour tones are concerned.
- If the digital proof technique does not produce halftone dots, moiré effects caused (e.g. by difficult textile patterns) might not be reproduced on the proofs.

Observing environments of proofs.

The colours of contract proofs, as well print, must be examined in standard lights D50 (5000 K).

A change in lighting conditions also affects the viewing of colours in an observer's eye. Note that between print and proof, the change can be different due to different materials.



COLOUR MANAGEMENT

ICC-PROFILES

When preparing images and proofs for printing, use for separation and proofing the ICC profiles recommended by Ellikon. These profiles are descriptions of the colour separations that are suitable for our printing processes. This means that a profile contains information on dot gain, trapping, etc. All of our profiles are output profiles.

When the profiles are used for colour separation, proofing or monitor acceptance, be sure that the procedure is performed correctly. For example, if the profile is used for proofing, your proofing workflow should support ICC-profiles. It is also very important that the proofer itself is calibrated and profiled. The profiles used for simulation should be able to be read from the proofs.

When using output profiles for CMYK conversion, you should remember that low quality pictures do not improve by the profile. The profile only optimises the colour separation for the printing process used.

How to choose a proper profile?

All of our profiles are made for traditional screening. You should select the correct one according to the:

- paper quality
- printing method

NOTE If you don't know which profile should be used, ask always from Ellikon.

Soft proofing with a profile

When you want to simulate a profile on screen, do as follows:

1. Make sure that your monitor is calibrated.
2. In Photoshop, open the image using the embedded profile. If a profile is not embedded, use the profile in which the image has been adjusted.
3. Select the desired profile from the **Proof Setup** menu.
4. If a CMYK image has another embedded profile, check **Preserve Colour Numbers**.

NOTE This is not active in the case of an RGB image.

5. Check 'Paper White'.



COLOUR MANAGEMENT cont.

PROOFING WITH A PROFILE

If you make a proof with a digital printer, do as follows:

1. Make sure that your proofer supports colour management.
2. Calibrate the proofer and use the paper profile together with a proper output profile.
3. Certify the proof by outputting a measurable scale – like FOGRA Media Wedge – on the proof. Then measure the scale and let the software make the comparison between the measurement and the corresponding values of output profile used.

PROFILE CONVERSION IN IMAGE PROCESSING APPLICATION

RGB-to-CMYK

Ellikon recommends the following procedure for RGB > CMYK conversion (separation):

1. Make sure that the RGB image uses a proper working space profile (source profile). This means the profile that was used when adjusting and approving the RGB image.
2. In Photoshop, move to **Convert to Profile** menu.
3. Select the desired output profile as the destination profile.
4. The rendering intent can be chosen by comparing different intents and choosing the one that provides the best result.

The best result is often achieved with **Relative Colorimetric** intent, which Ellikon also recommends for most cases.

CMYK-to-CMYK

In the case there has not been used a profile recommended by Ellikon in a CMYK separation, ensure the functionality of the image by proofing it with a profile we recommend. If there is a clear difference, make the CMYK-to-CMYK conversion as following:

1. As a source use the profile used in the first CMYK separation.
2. Use a correct profile as a destination profile.
3. Use **Relative Colorimetric** intent.



COLOUR MANAGEMENT cont.

PROFILE CONVERSION WHEN EXPORTING PDF

The profile conversion can be done when exporting PDF file in

InDesign. This kind of workflow is used normally when the layout contains images in RGB mode. The benefit is that there is no need to archive CMYK images.

If you are going to use this method, note the following:

- you must make all adjustment to the images in RGB mode.
- you must use same rendering intent for all images on a page.
- the sharpening of the images.
- make sure that all other elements than images in the layout are in CMYK mode.

Do as following (InDesign):

1. Check in InDesign Colour Settings that the Colour Management is on.
2. In colour settings check that in **Working Spaces > CMYK** is selected the **proper output profile**. This means the profile which Ellikon has recommended to use for CMYK conversion.
3. In InDesign choose **Export**.
4. On the Output tab in **Colour** select the following settings:
 - Colour Conversion: **Convert to Destination (Preserve Numbers)**
 - Destination: Check the output profile is correct.
 - Profile Inclusion Policy: **Don't Include Profiles**

5. Make sure that the setting on the other tabs are correct and then export the PDF.

NOTE It is important to use the alternative "Convert to Destination (Preserve Numbers)".

This setting makes a conversion only to the images which are in RGB mode.

In CMYK-to-CMYK conversion is provided that Preserve Embedded Profiles is selected also in the CMYK policy of Colour Settings, when the InDesign document is prepared.

COLOUR MANAGEMENT cont.

PROFILES AND PRINT READY PDF'S

In a print-ready PDF file there is no need to have profiles for the images. If a PDF file contains an RGB image, the system will perform CMYK conversion using Ellikon's output profile for coated paper.

COLOUR MANAGEMENT IN A PAGE LAYOUT APPLICATION

It is possible to simulate a print result in page layout applications by setting the colour management to 'ON' and choosing a proper destination profile.

However, if you do not need colour management, the safest way to work is to turn it 'OFF' because incorrect settings in the print process can cause problems in the Prepress stage.

Do as follows (InDesign):

1. Go to the Edit - Colour Settings in InDesign.
2. In Settings choose the alternative: **Emulate Adobe InDesign 2.0 CMS Off**.
3. Click **OK** to accept the settings.

Colour management ON

When you want to turn on colour management, choose the settings according to the picture below (InDesign CS5).

Do as follows:

1. Go to the Colour Settings in InDesign.
2. Define the settings according to the picture. Pay attention especially to the following:
 - For the CMYK profile choose the profile that is suitable for the job you are doing.
 - In 'Colour Management Policies', choose: **Preserve numbers (Ignore Linked Profiles)**.
3. Click **OK** to accept the settings.



MATERIAL DELIVERY

What material is the best and when? This section deals with the different ways that material can be delivered to Ellikon.

Digital material can be delivered in two different ways: in 'document format' or in 'closed format'. A closed format is the safest and, from the point of view of quality, the best way to deliver completely ready material to Ellikon.

Our Prepress department is at your service with respect to page preparation.

Delivery

Please check that all the material relating to the work is included and compressed (ZIP). Delivery in document format means that e.g. InDesign document is sent to Ellikon complete with all related files, images, logos, fonts, EPS files, tiff files into a packaged folder. See page 14.

The Mac operator opens the delivered document and updates all the necessary fonts and links and output the document in the desired form (file, proof).

Send the files via FTP or by saving the documents on transferable media (USB, CD-ROM, DVD). Files can also be sent via the internet through such sites as 'mailbigfile'. Image originals and proofs of layout designs can be sent by post or courier.

If smaller files can be emailed, ensure the documents have been compressed (ZIP) prior to emailing.

Although we will endeavour to handle your data safely in our system to the best of our ability, never send us irreplaceable original files; always send copies.



MATERIAL DELIVERY Cont.

MATERIAL ENCLOSED ALONG WITH THE DOCUMENT AND ITS ORGANISATION

Linked files

Enclose all the necessary line and tone images (generally .EPS or .TIFF). Ensure that all the fonts in logos and such have been converted into paths.

Supported formats

Ellikon supports image in EPS, TIFF, PSD and JPG format. If a clipping path has been used in an image, don't use the TIFF format. Remember to provide images with sufficient resolution.

Ellikon support file document formats in all Adobe products.

Unsupported formats

Ellikon can support PowerPoint, Word, Publisher and Quark XPress but it is not advisable.

Contact your sales representative for information about an alternative file format.

Fonts

Use Adobe Type 1 or Open Type fonts, enclose them along with the material.

Proofing

Always supply a proof of the very latest version. After treatment, material delivered in document format, including advertisements, will be proofed at Ellikon.

PDF

Material consisting of a PDF file contains all the required elements.

Everything belonging to the page:

- text, images, graphics and fonts
- is packed into a single file, which in practice is locked.

When material is delivered in this way, you can be highly confident that it will be printed at the printers in the same way as it was during the planning stage.

NOTE All elements must be in CMYK format in the print-ready PDF file delivered to Ellikon.



MATERIAL DELIVERY Cont.

PREPARING A PDF FILE

A PDF file is made with Adobe applications by either exporting from InDesign or saving in Illustrator.

All elements embedded

The PDF file must contain all elements and fonts. Make sure if you have linked EPS files that the fonts they require are also included in the file. The surest way of ensuring this is to convert the fonts used in logos and such to vector graphics.

Output as single pages

Saving pages as spreads is not advised the pages will be printed as single pages. One file can still include several pages, but the page numbers must definitively be consecutive.

Corrected pages

If you send pages for replacing, send only the corrected pages and only one page per file, so you can be sure only the corrected pages will be changed.

PDF format

Our Prepress system supports all PDF formats.

PDF output with InDesign Export command

From InDesign CS versions you can output a PDF file using the Export command.

MATERIAL DELIVERY Cont.

PDF review

Open the PDF file with Acrobat and check at least the following:

- the page size (trim box) is as agreed.
- bleed is 3mm.
- crop marks offset by 5mm.
- overprinting (Output Preview > Simulate Overprinting). 100% black body text should be always overprinting.
- all elements are in CMYK format
- images are with high resolution.

You can check the PDF files also using software like PitStop, a plugin for Adobe Acrobat. PitStop creates a report, from which you can check, e.g. colour space, embedding of fonts and resolution of image files.

Other Closed Formats

Please contact Ellikon Customer Service if you want to send material in a format other than PDF.

Testing a File

When a new customer sends material in closed format, a test file must be first run through our process beforehand in order to ensure that the files are working when the real production starts.

Contact your sales representative for support when sending a test file.

4-Colour Change

It is clear when the change is in 4 colours. You just prepare your own files for every version.

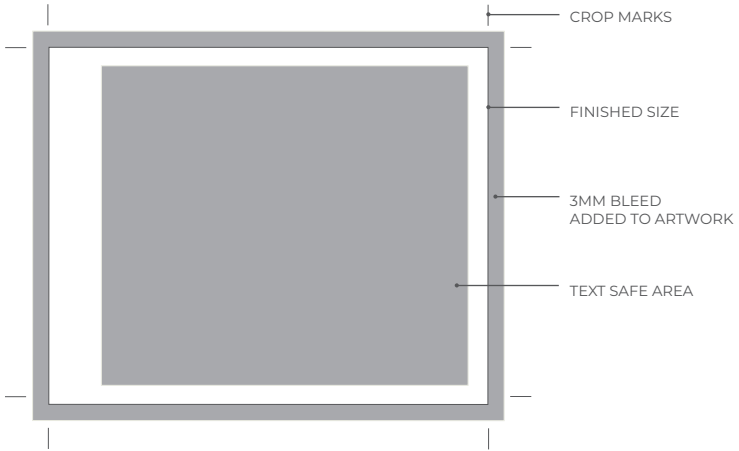
Logo Change in Black Colour

If a logo change is only in black, for every logo prepare its own PDF page and ensure that the logo is placed in right position. The page size should be same as the original page.

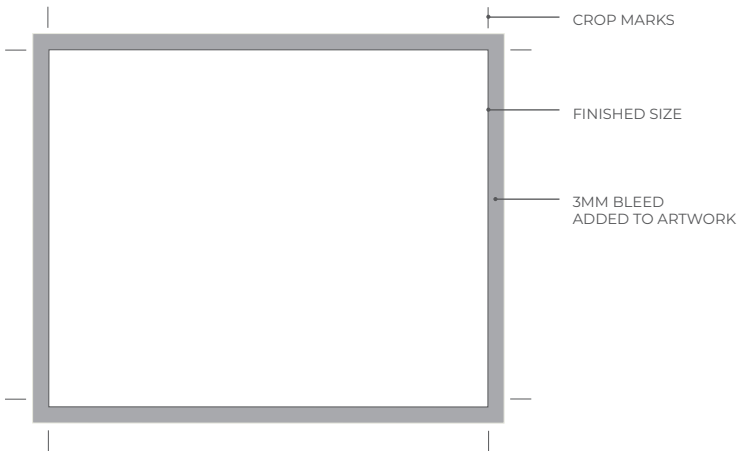
Changes in Black Text

If only black text is to be changed, make one image PDF file and additional PDF files for each language version. The black image file and black text file are combined by Ellikon in the imposition. You can produce the files, e.g. by locking the images in the layout application and duplicating this file for each language version.

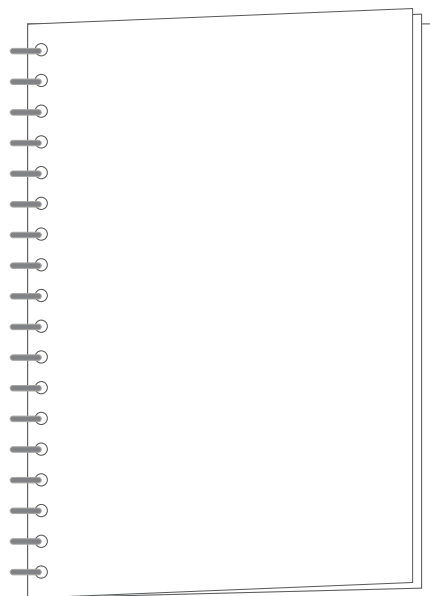
VISUAL EXAMPLES



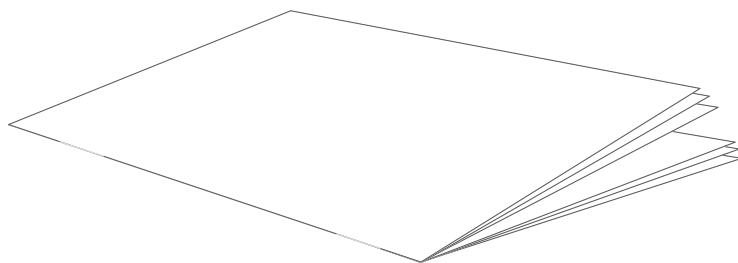
TEXT FREE AREA



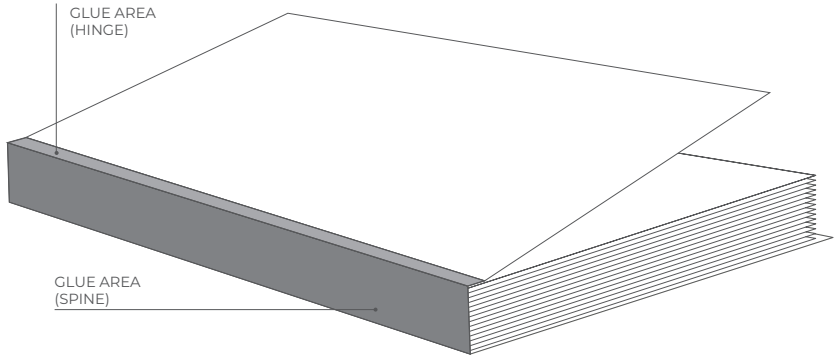
LAYOUT DOCUMENT SIZE AND BLEED



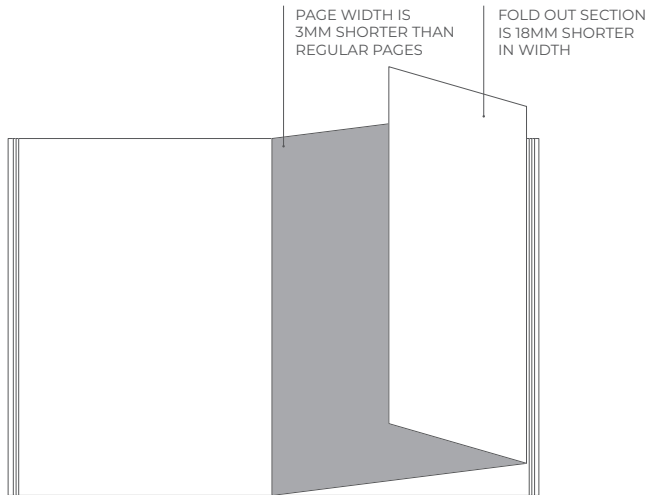
WIRO BIND



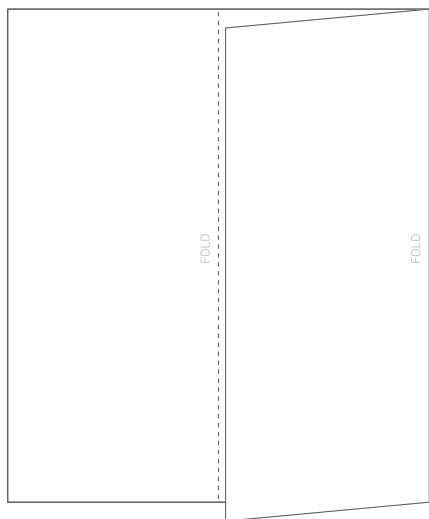
SADDLE STITCH



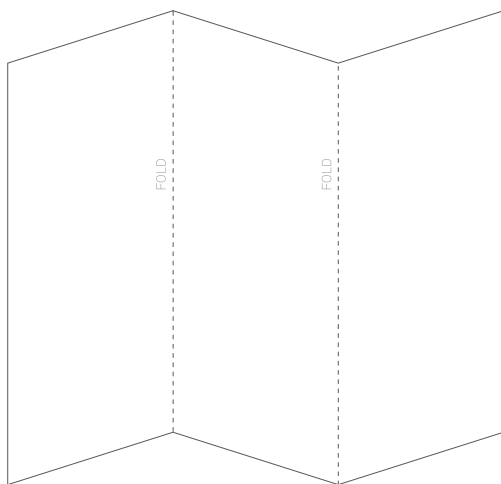
BURST BOUND



GATE FOLD



ROLL FOLD



CONCERTINA FOLD



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