

PDF and Page layout Guidelines + Manufacturing Tolerances.

October 2022

These specifications have been produced to help ensure we can achieve a quality end product for our customers and that errors do not occur during the design stage or conversion processes from PDF to ink on paper.

Our prepress process relies on our customers providing print ready PDF files, taking full responsibility for the PDF files they produce: creation, content and layout checking and pre-flighting.

The volume of PDF's file we process daily means we do not have the opportunity to visually inspect pages; in nearly all cases the first opportunity we have to see content is when checking the imposition prior to print, even then it is solely a check for missing bleed and pagination laydown.

Walstead will endeavor to identify any obvious basic errors through our normal pre-flight checks; we will not be held liable if there is an error in your file that makes it through to print. Should your files not comply with these specifications, the processing of the job may be delayed or errors this specification seeks to avoid/address will pass through to print. Should you be supplying files late in the day or during the evening then we would ask that you have a structure in place ready to correct any errors with a focus on weekly titles. Where files are supplied which do not meet the below specifications, they will be returned to you for your correction and resupply. To avoid press standing time or other associated costs it is important that you have the resources in place to correct the files, resupply and approve once sent back to you for sign-off.

Should you ask us to correct files for you, if it is feasible for us to do so, the work may be subject to an extra charge. We will be correcting your file and we accept no liability for any unintended issues that arise from this work. The corrected page will only go to press after your approval.

Contact us if you have any questions on the creation and supply of PDF files, aspects of printing and binding to consider when designing your product or the production process in general. We much prefer to discuss and make recommendations prior to putting ink on paper.

PDF FILE

Version: 1.3

PDF/X1-a recommended

Single file per page

No double page spreads or readers pairs

Naming convention: <title>_<issue>_<year>_<version>_<page(0000)>.pdf – minimum naming <title>_<page>.pdf Example: Magazine_Jan_2019_0001.pdf

Revised and resupplied file names to be appended with a version number <Vn> Example: Magazine_Jan_2019_0001_v2.pdf

Please use underscores to delineate the information in the file name.

BLEED and PAGE MARKS

3mm bleed to be included

Corner trim marks, at least, to be included

Bleed is necessary to provide allowance to support the manufacturing

PDF PAGE BOXES and CONTENT POSITION

In most cases PDF page boxes are created by the application and do not need to be adjusted.

PDF Page Trim Box

Positioned on the trimmed page origin.

The imposition process uses the PDF Page Trim Box to position the page into the signature against the page holder contained in the imposition.

PDF Page Bleed box

Set to, at least, 3mm bleed.

PDF Page Media Box

Ensure the page content is centered on the PDF page media box

PDF Page Crop box

This is not used in the prepress process

PDF Page Artbox

This is not used in the prepress process

COLOURS

Greyscale or CMYK

Spot Colour Channels if printing - do not include non-printing spot colour channels.

Spot Colour naming to match against known Pantone colour library names. Generic spot colour names are not supported, can be the cause of processing errors will not proof correctly.

No RGB, LAB or ICC based colours

NOTE ON SPOT COLOURS: Non printing spot colours will not be converted to CMYK during the prepress process. Files will need to be resupplied with the non-printing SPOT colour converted.

TRANSPARENCY

Flattened PDFs are recommended, use high resolution flattener settings. Creating a v1.3 PDF will apply flattening.

Our prepress workflows use the Adobe PDF Print Engine and can handle transparency, as transparency is complicated errors may result during processing. It is recommended files containing transparency are approved using InSite.

Transparent elements coloured with a non-printing spot colour will be rejected and will have to be resupplied with the non-printing spot colour converted to CMYK.

FONTS

Embedded as subset or full set.

We are unable to offer text/typo correction services to PDF files.

FONT SIZE and CLARITY

Font clarity is directly related to font weight, size and colour. Lightweight, small size fonts coloured with tones of CMYK or white out of 4col sets are most susceptible to clarity issues arising from screening and colour registration. 100% single colour fonts on a white background provide the best clarity.

Recommended minimum font sizes, based on regular weight font:

Black: 6pt

CMYK: 8pt

White out: 8pt

IMAGE RESOLUTION

CMYK/Greyscale recommended 300ppi when placed at 100%

1bit recommended 600ppi or greater when placed at 100%

If scaling is required perform this in Photoshop prior to placing

IMAGE COMPRESSION and DOWNSAMPLING

Image down sampling will degrade image quality when images are placed at a small scale factor. As an example: a 300ppi image placed at 25% has an effective resolution of 1200ppi. Down sampling to 300ppi at PDF creation will remove three quarters of information from the image. Compression is required to maintain a manageable PDF file storage size.

Colour and Greyscale images

Downsampling: off

Compression: JPEG

Image Quality: Maximum

Monochrome

Downsampling: off

Compression: ZIP or CCITT

Antialias to grey: Off

COLOUR MANAGEMENT: CMYK SEPERATIONS

Image CMYK separation must be created using the ICC Profile file that represents the print conditions. For Lithographic print with inks conforming to ISO 2846-1 the paper type is the primary driver for the choice of print condition. Therefore, when considering which ICC profile file to apply make the decision relative to the paper that page will print on. For example a brochure with 150gsm wood free gloss cover and 65gsm standard lightweight coated text will require ISO_Coated_V2_300_eci.icc for the images on the cover pages and PSO_LWC_Standard_eci.icc for the images on the text section.

Please see pages 4 & 5 of the accompanying file 'ECI ICC profiles and Fogra datasets.pdf' for details on the alignment of paper type to Fogra Dataset to ICC Profile file name.

Existing CMYK images should be converted to CMYK by applying the correct ICC Profile file prior to placement into the page layout application.

If you operate an RGB image library a suggested workflow is to place the images as RGB into the page layout application, on PDF creation enable colour management ensuring to preserve existing CMYK numbers and set the Destination colour space as the ECI ICC profile file representing the print conditions.

As well as ensuring there will be no out of gamut colour issues the correct ICC Profile file sets the Total Area Coverage for ink and includes GCR to help stabilise CMYK grey balance on press. These are important aspects for image reproduction and follow production processes.

Walstead Press Group disclaims against conversion of colour we are asked to undertake outside of our professional reprographic services provided through rhapsodymedia.com

SUPPLYING PROOFS / PRESS TARGET

Proofs must be run to the print conditions described by a Fogra dataset and produced in accordance to ISO 12647-7. A proof must contain the Fogra/Ugra V3.0a, be certified to have passed ISO 12647-7 tolerances, be labelled with the measurement results of the certification and list the destination print conditions.

In the absence of validated colour proofs the print will be run according to our standard colour settings for that paper type.

NON-PRINTING GUIDES

Cutter and spot varnish guides supplied as separate files. We do not accept liability for any issue's arising if these guides are provided composite with the data destined for print. Fold marks to be placed in the page margin between the bleed area and PDF Page Media Box.

PAGE MARGINS / DEAD ZONE

Recommended minimum 5mm dead zone on trimmed edges to allow for section folding and movement of product during the manufacturing process. The dead zone will increase on small page, large pagination sections, consult with your Walstead Press Group point of contact if in doubt. Walstead will not be held liable should live type matter or folios trim close or be trimmed into.

PERFECT BOUND TEXT PAGE READ ACROSS ALLOWANCE

Unlike a saddle stitched product a perfect bound product does not naturally open all the way to the spine, this is because of the spine glue holding the pages in position. The results in read across that is not at the spine but, when minimal force is applied, appears where the product naturally falls open. If this presents an issue for read across DPS it should be accounted for by building in an allowance to position the read across point at away from the spine, visually this will appear as a duplication of a small part of the read across that will only be noticeable when the product is forced open. This is not an exact science and there is no formula to calculate the allowance, 3mm is generally used.

PERFECT BOUND INSIDE FRONT COVER TO 1ST PAGE READ ACROSS

Front covers often have a hinge to the 1st page of text, an allowance should be made for to ensure read across line ups, please consult with your Walstead Press Group point of contact for additional information.

PERFECT BOUND COVER SPINES

Perfect binding requires a spine, in general supply this as part of the front cover page if this is not practical consult with your Walstead Press Group point of contact on how the spine should be supplied.

OVERPRINT and TRAPPING

Overprint is to be provided in the PDF file. Please pay attention to white out text to ensure that overprint has not been accidentally applied. Black text should be set to overprint. Large black areas, including large bold fonts can be set in rich black: 100%Black with 40%Cyan. Paid for Acrobat products have a Print Preview tool that contains a check box to see the effects of overprint by toggling it on and off as well as displaying individual colour channels. Likewise, our InSite approval system allows you to view the effect of overprint.

Trapping is relative to the number of colours used and unique to the press the product prints on, this is set by the Walstead Press Group print factory at platemaking stage and is not to be supplied in the PDF.

FILE UPLOAD AND APPROVAL

Walstead Press Group provides and recommends the Kodak Insite system for file upload and page approval. Contact with your Walstead Press Group point of contact for more information on the InSite page approval system.

FTP & sFTP services are available, there is a HTTPS drop page on walstead-uk.com

Walstead Press Group does not recommend the use of free public file transmission systems and can assume no liability for receipt of files from these online systems.

VERSIONED PRODUCTS

PDF's for black change version products should be supplied as an individual file per version not as a single file containing version layers. The recommended supply of files comprises:

- A file to be used as the base containing only CMYK common elements,
- A file per version containing only the elements that change.
 - The version file can be supplied as Black or as Spot Colour, either way we combine the version file with the base CMYK to produce a version Black plate which is changed on press to produce the distinct versions.

ADDITIONAL INFORMATION on PDF CREATION

Popular page layout application PDF advice and PDF creation process can be found at:

<http://www.ppa.co.uk/sitecore/content/PPA%20Website/Resources/Resources/PPA%20Production%20Resources/Pass4Press>

Please note the settings files, if used, will need to be checked for image down-sampling settings, colour-management should be according to the recommendations under the Colour Management sub heading of this document. Destination profile must always align to the print conditions; if required consult with your Walstead Press Group point of contact.

Standard ICC profile files built from the Fogra datasets can be found at: www.eci.org

Fogra: www.fogra.org

PRINT CONDITIONS

Walstead Press Group target print to ISO 12647-2 and Fogra datasets, based on this standard, that represent the various paper types.

Note: there is no guarantee a particular paper will fit to print characteristic, under this condition there will be a variance to the proof that cannot be overcome on press.

MANUFACTURING TOLERANCES

Walstead aims to provide its customers with the highest possible manufactured quality underpinned by ISO quality standards. However, as with any very high speed continuous mechanical manufacturing process, there is a degree of tolerance expected across the manufacturing processes. Whilst every care is taken to control and minimise the effect of these tolerances it is inevitable throughout any given production run there will be copies that exhibit small variations in quality attributed to these tolerances. These tolerances are industry wide.

To inform our customers on the tolerances the key elements are summarised below

- Paper gauge, coating, opacity, hue, tension, moisture content and regularity are subject to small variation. Walstead is unable to control any of the paper production and as such we are unable to take liability for any variations. Customers who chose to supply their own paper will be responsible for the quality of the paper delivered and should Walstead encounter any problems processing sub-standard paper the customer will be responsible for all subsequent consequences. Should we encounter paper problems a Walstead representative will contact you to discuss.
- Web offset folding
 - Perfect bound section variance +/- 1.25mm
 - Saddle Stitched section +/- 2.5mm
- Final trim size may vary by +/- 2mm
- Perfect bound spine registration may vary +/- 1mm in any direction including squareness.
 - Narrow spine widths (2.5-4mm) are most at risk of variation
- Page Creep on section folding. Large pagination folds comprise nested pairs of leaves that add paper bulk to the fold. From the outer pair of pages the increasing fold bulk results in the trimmed width of the pages decreasing, this is cumulative across the pairs increasing toward the centre pair of leaves. To avoid the loss of the foredge page margin Walstead apply a creep ratio that attempts to equalise the loss, this is accomplished by offsetting the page on the paired leaves into the spine by a small amount resulting in the foredge page margin be better maintained at the detriment of the spine margin. This will effect read across pairs of pages, we will need to be informed of such pages so that we can remove the creep allowance on those and maintain read across, however the outside page margin will be effected. The weight and bulk of the paper controls the fold bulk. The best measurement of this is to open a stitched product and measure the width of the first page and the width of the centre page, the difference being the amount of page creep that is needed to be factored in.
- Paper Marking. Even with our modern printing presses and finishing lines customers are advised that Silk and Matt Coated paper are industry-wide notorious for exacerbating marking problems on HSWO presses and finishing lines. It is impossible to quantify the level of marking that may occur on the printed copy although Walstead will always endeavour to minimise any marking to a commercially acceptable standard. The design of the product and the total ink coverage will influence any potential marking.
- The hygroscopic nature of paper. Wood fibres are hygroscopic, they absorb/adsorb moisture with the humidity of their surroundings. This property of wood produces the phenomenons of text growth and cockling. Wood fibres swell as they absorb moisture, increasing in diameter opposed to length. In general wood fibres run parallel to the spine and the increase in size therefore is cross grain which effects the width of the page.
 - Text Growth occurs when the paper used for the text sections contains more wood and less coating than the paper used for the cover, lighter papers are effected more than heavier papers. After trimming, the text paper slowly absorbs moisture from the humidity of the surrounding air, at a different rate and intensity relative to the cover, resulting in the foredge of the text slightly extruding beyond the cover. Cover finishes such as inline UV or lamination further limit the absorption capacity of the cover.
 - Cockling is when the surface of a heat set web offset page appears corrugated along its length. The wood content, the moisture content of the delivered paper, the paper weight and the paper coating in relation to ink coverage create different layers of moisture adsorption in the drying process. As the paper passes through the oven the wood fibres lose more moisture than the ink layer resulting in them pulling against the ink layer. This results in corrugation along the length of the paper. Reduction in total area ink coverage can minimise this effect however on lightweight categories of paper which contain more wood and less coating it is impossible to eradicate.
- Tracking is the term used to describe pages that print in line with each other and with the rotation of the press. Large areas of single solid ink cover will influence the colour of that track. Our press minders monitor this and seek to minimise the effect working to a compromise that achieves a suitable result. The lithographic process and tracking can result in an effect called ghosting where a latent image from a strong part of the track is visible in other parts of the track. An example of this is white out text of a solid that can be seen in a large area of the same solid colour in the same track. Walstead use anti ghosting technology on press to mitigate this effect however the design of the product may allow this to appear.
- Silicone residue - an inherent part of the printing process is the application of silicone emulsion to the web paper after the drying stage in order to eliminate or minimise marking effects through the folder. Depending on image and colour coverage it is possible with some designs that a small degree of silicone residue will remain on the sheet which in most cases will mostly dissipate over time. Very heavy ink coverage designs are more susceptible to a small degree of residue remaining once the product is finished. Every care is taken to eliminate or minimise any residue although it is always a fine balance for the Printer between ensuring no unsightly marking and possible silicone emulsion residue.

Acrobat Distiller Screen Shots to create a PDF/X-1a v1.3 flattened file with no colour management destined to print on Wood Free Gloss Paper

