GUIDELINES ON HOW TO GENERATE FILES FOR DIGITAL PRINT

Digital materials should be submitted via:

- Prinect Portal (https://webportal.drukarniaperfekt.pl/PrinectPortal/login2)
 Recommended browsers: Chrome for Windows, Safari for Mac-OS.
 You will get your login and password from your customer support contact officer
- e-mail and/or any other available file transfer channel, e.g. wetransfer.com

Perfect S.A. suggests file naming according to the following principles:

- cover word/abbreviation followed by a Roman numeral, e.g. cover I, cvr IV;
- **endpaper** word/abbreviation followed by an Arabic numeral, e.g. endpaper_1, also in case of endpaper contained in the book block (i.e. own endpaper);
- **block** word/abbreviation followed by Arabic numerals, e.g.: pages_1-32, p_1-120, (adverts, illustrations, etc. <u>included</u> in the numbered pages are also deemed to be book block components);
- leaflets, advertisements, tipped-in insert sheets, sticker sheets, overlays, illustrations, inserts, etc. (and any other additional elements to a brochure or a book that are not included in the numbered pages) a file name with an item descriptor and indication of the item placement, e.g.: advert_p_25, but a mock-up or clear instructions are required in all such cases;
- title the title or its abbreviation, e.g. world_maps, user_mnl, etc.;
- **series/collection** consecutive volumes should be indicated with a word/abbreviation followed by an Arabic numeral, e.g. volume1, vol3, part2;
- **corrections** should include the file name of the corrected item preceded with the word 'correction' or its abbreviation, e.g.: correction_cvr_I, corr_p_32; a consecutive numeral should be added for further corrections of the same item, e.g. corr2_p_32.

Pages should be submitted as PDF files:

- PDF 1.4 to 1,6
- PDF/X-1a:2001

Perfect S.A. recommends submitting composite files prepared in a scale of 1:1.

For file generation, you should use the ICC profile appropriate for the paper type on which your order will be printed in accordance with ISO 12647-2:2013. You will get your ICC profile from our Customer Service Department. You should only use the profiles specified by the Customer Service Department of Perfect S.A.

You should verify (pre-flight) your files before submitting them to Perfect S.A. (using suitable software, e.g. Adobe InDesign vers. CS4 or higher, Adobe Acrobat vers. 6.0 or higher, or Enfocus PitStop to detect the most common mistakes).

If the maximum TVS (Tone Value Sum) is exceeded for the specified paper, Perfect S.A. reserves the right to optimise CMYK components to maintain proper print quality or to **request corrections** from the Customer.



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Perfect S.A. disclaims any responsibility for the correctness of transferring to printing plates of any files that have been generated in non-compliance with the above guidelines and retains the right of refusal to accept any incorrectly generated files.

All additional operations required to adjust a file to bring it in compliance with the agreed specifications and all changes introduced by Perfect S.A. on the Customer's request will be invoiced as an additional chargeable service.

The resolution for the images in digital files:

- minimum 250 dpi
- optimal 300 dpi
- maximum 350 dpi

We will automatically downscale all colored and grayscale images with a resolution higher than 350 dpi down to 300 dpi. The Customer submitting an image with a lower resolution than the above minimum resolution agrees thereby to a lower reproduction quality of the image concerned.

Graphic elements on the page may not contain any attached ICC profiles (no tagged profiles) and any OPI (Open Prepress Interface) comments.

The submission day of a digital file is the day on which a complete set of files is submitted, that does not require any corrections.

Not meeting the agreed submission deadline may cause delays in the delivery of the finished product and Perfect S.A. disclaims all responsibility for the delay in such situations.

In case of any doubts, you are kindly requested to send us sample files and to contact our Customer Service Department.

COLOR PROOF

The Customer is recommended to attach a certified proof to each page.

Proofs should be made from the files already approved for printing by the Customer.

For the proof, you should use an ICC profile and a paper substrate compatible with the material on which your order will be printed in accordance with ISO 12647-2:2013. For coated paper, the profile can be e.g. ISO-coated v3 (FOGRA 51), and for uncoated paper it can be e.g. ISO-uncoated v3 (FOGRA 52).

Each proof should have a control strip and the correct certification in accordance with UGRA/Fogra standard. Lacking certification reduces the proof's value as a colour reference and makes it impossible to use such a proof as a reference; in such cases Perfect S.A will manufacture its own certified proof, **notifying the Customer accordingly well in advance**.

The color assessment of the color standard should only be performed at colour-proof workstations with standardised lighting in accordance with ISO 3664:2009.

In the case of print acceptance by the Customer, the sheet approved and signed by the customer becomes the master reference for the printing engineer.



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Unless the Customer provides proofs and/or is present at the printing press for the sheet approval, Perfect S.A. reserves the right to manufacture its own (certified) proofs to ensure adequate print quality in accordance with ISO 12647-2:2013.

In case of reprints of previous editions, volumes, parts, etc. proofs should also be approved by the Customer at the printing press; otherwise they are not considered the colour reference and the printing engineer will only use them for comparison purposes. Using unapproved colour samples may result in color deviations due to e.g. insufficient data on the required pre-treatment of the materials before printing, printing process technology, ageing of the material, storage conditions, etc.

Using certified color references for reprints (editions, volumes, parts, etc.) maximises the desired continuity of the colour effects.

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PRINTING FORM EXPOSURE PARAMETERS

The screen ruling, resolution and screen angles are set during exposure of the printing plates. The following information and data should be regarded as FYI.

AM (Amplitude Modulated) screen:

- the respective screen angles used in printing: K = 105°, C = 165°, M = 45°, Y = 0°, SpotColor = 45°,
- exposure resolution: 2540 dpi,
- screen ruling depends on the paper: 150 lpi for uncoated paper, 175 lpi for coated paper;
- dot shape: elliptical.

FM (Frequency Modulated) (stochastic) screen:

- screen Stochastic Screening Starter: Prinect
- dot size: 20 μ m.

SOME FILE GENERATION RULES

Each page should have equal bleeds of at least 3 mm on each side.

Important text or graphic elements should be positioned at least 5 mm from the trim line.

For **perfect binding and section-sewn binding**, the 2nd and the 3rd pages of the cover and the first and last pages of the block will have 4-5 mm taken by side gluing, thus reducing the actual size of the middle pages. A "cut-out" effect will occur, unless a correction is made – the page size should remain the same, only the image size on the page needs to be changed.

When machine-gluing the block into the spine (on a folder machine), the minimum space between the text or other graphic elements and the spine should be 6 mm because of the above-mentioned effect.

In **saddle-stitched binding**, a "push-out" effect can occur. The internal signatures are pushed out from the spine at a distance that will depend on the paper thickness and the number of the signatures. This effect reduces the actual width of the page and a shift the column's graphic content, which can lead in extreme cases to cutting off of graphic elements located near the external trim line. To avoid such a situation, it would be necessary to increase the outer bleeds of successive pages in your layout by the values shown in the table (indicative data in mm), whilst maintaining the other bleeds and the page size.

16-p signatures	60 g/m²	70 g/m²	80 g/m²	90 g/m²
1	-	-	-	-
2	0.5	1.0	1.0	1.0
3	1	1.5	1.5	1.5
4	1.5	2.0	2.0	2.0
5	2.0	2.5	2.75	2.75
6	2.5	3.0	3.5	3.5

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The size of the trim box (the area defined in the PDF file that determines the net page size after printing and trimming) must match the net page size.

Extending the illustration a few millimetres onto the adjacent page is unacceptable in view of the manufacturing tolerance of folding and binding.

The minimum typeface size for single-color is:

- 6 pt. for fonts with a constant line-width,
- 7 pt. for fonts with a variable line-width.

The minimum typeface size for more than 1 colour or for print on a coloured background:

- 8 pt. for fonts with a constant line-width,
- 10 pt. for fonts with variable line-width.

The least acceptable line width is 0.2 pt. Lines drawn on a colored background or in more than one colour should be at least 0.75 pt. thick.

For greater depth in flat black colour, it should be generated from 4 CMYK colours. The recommended percentages are:

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C = 70\%, M = 60\%, Y = 60\%, K = 95\% for coated (gloss, matte) paper; C = 50\%, M = 40\%, Y = 40\%, K = 95\% for uncoated (offset) paper.
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Black texts on colored backgrounds (CMYK) must be overprinted (Overprint). The only exception is black text printed together with metallic colours: A knockout must be applied in such cases(Knockout).

To avoid imprecise matching, it is necessary to generate trapping, i.e. minimal colour overlapping. The Customer is expected to generate trappings in composite files, which are preferable for Perfect S.A. The recommended trapping value is 0.05 mm (0.144 pt.).

The choke of 0.17 mm (0.5 pt.) for CMY colours is preferable for texts on black 4-colour background.

If "metallic" ink is used in printing, a CMYK choke should be created to mimic the metallic color.

All graphic elements on the page must be in the CMYK colour space. Graphic elements and images submitted in other color spaces such as RGB or Lab will not be accepted and the files will be deemed incorrectly generated. All additional colours (SpotColors) used, e.g. of the Pantone® system, must be converted to CMYK. Additional colours may only be used upon approval by our Customer Service.

Mask files for enhancement must be submitted in a vector and curves.

For foil stamping over print, the submitted files should meet the following requirements:

- minimum line width = 0.2 mm;
- minimal knockout line width = 0.35 mm;
- for low color saturation, it is not recommended to use knockout under the foil;
- on the foil-print borders, trapping should be applied (1-2 mm for large areas, 0.2 mm for small areas).

For dry embossing:

- minimum line width = 0.35 mm,
- minimal knockout line width = 0.5 mm.