

MATERIAL PREPARATION FOR PRINTING PROCESS

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1. Standards concerning electronic materials.

1.1 Standards & Format of document.

- Electronic materials for printing should be delivered in PDF files, by version 1.3 to 1.6, compatible with PDF/X-4:2008 specification.
- Materials must be geometrically defined by : media box, bleed box, trim box.
- Page orientation in file must be identical for all pages in publication.
- Net format (trim box) must be relatively centered to media box.
- Minimum photo resolution included in document must be 200 dpi.
- It is accepted to transfer publication in one file (see files naming). To make it properly in this given manner files have to be arranged in order consistent with pagination and it must have vacants.
- Files with so called „spread“, consist pages arranged side by side as centrefolds 2-3, 3-4 etc. , are not accepted.
- Inside of the file cannot exist any unused elements like empty text frames, because it can affect on file's appearance after flattening and rasterization process. All unnecessary objects are removed by Acrobat Distiller with PDFX3 settings.
- Bleeds size:5mm(minimum of accepted value-3mm).
- Minimum line thickness is 0,076mm(0,216pt.). System automatically corrects every pointed value below the line.
- Minimum size of varnished element is 4 pkt.

Incision of self-adhesive paper (stickers).

- a) Die-cutting plates with huge amount of small elements, before production have overdrawn shapes. It is made by technologist in consultation with its performer/producer. Usually, small, complex elements are impossible technologically to produce. At the time, proposed simplifies are sent in PDF file – to receive acceptance of given changes from the customer. It is worth here to mention that, minimum distance between lines (knives, crease) is 2 mm. Every elements punched with sharp edge should be rounded by radius with minimum 0,8 mm.
- b) The nearest incisions counting from the spine, should be made with distance not less than 12 mm for each cover. It is usually made to avoid unsticking of elements while opening finished copy. In special cases, we use an increased number of bridges(locks, haltpoints) which hold the element; However, it has to be remembered, that bridges will hinder later process of peeling off.
- c) The details concerning proper preparation of files for stickers- **manual nr 1(see point 6.2). Illustration shows stickers prepared on „spread“- pages are combined into one image. For perfect binding and sewn and glued binding, stickers are prepared as single pages!**

Perforation:

- a) paralell to publication spine, performed during folding of sheets- minimum space from fold line(spine line) is placed between 10 and 12 mm!
- b) Paralell to publication spine, performed from Die-cutting plates- minimum space from spine line is between 10-12mm.
- c) Perpendicular to publication spine- it can cut the spine.

Registers:

In case of publication with registers, we suggest, to contact with our technologist in advance. Please communicate with technologist by dedicated account manager.

1.2 Color.

- PDF-s must be composite in coloraturas dimension - CMYK. While generating files for coated substrates, we use **ISO_coated_v2_300_eci.icc profile**. For Offset substrates (uncoated) - **PSO_Uncoated_ISO12647_eci**. Please do not add profiles in output files. If project has additional Pantone colours, the have to have proper names, which must absolutely correspond to Pantone libraries.
- The word "process" cannot be included in the name of the spot color(additional color), because this separation will automatically convert into CMYK colors. Therefore, it is unacceptable to use for example: Pantone process Yellow.
- Additional elements such as masks for varnish, die-cutting plates, registers, stampings, perforations must be defined in additional color (so called special), with name, which clearly identifies them. If punched, registered or perforated page was printed on back side, all additional lines in this case should be put on back page (mirror reflection). It happens because, often during assembly on front sheet (on its base the die-cutting plate is sent), there are back pages. If there will not be die cutting plate on it, the page will not be die-cutted. These colors must have overprint option activated and must be included on main file with CMYK. Die-cutting plate has to be prepared as a stroke and it has to be distinguished between knife lines and crease. Mask for varnish should be a vector object with 100 % of saturation.
- Total Ink Limit (TIL) i.e. the sum of the CMYK color values plus any additional colors, may not exceed 300% of the inking for coated papers and 280% for uncoated (offset) papers. Too much ink in the file may result in the ink breaking and the paper jamming in the printing mechanisms. Ultimately, this can lead to a reduction in printing efficiency and, in the worst-case scenario, to reflections in unplanned places, which will disturb the aesthetics of the entire job. Inking is a frequently overlooked issue, and it is very easy to verify when preparing files for printing. In both Adobe products- Acrobat and Indesign, just turn on the separations preview tab and select the option to limit the ink. By setting the value to 280 or 300%, both programs display areas with excess inks highlighting them with an additional color. **CGS company reserves the right to interfere with the colors, if they significantly exceed the above-mentioned standards.**
- Black texts must be overprinted and prepared only from black color (100%). Unless otherwise stated, CGS printing house do not take responsibility for possible discoloration as a result of print matching, by using all additional (unnecessary) colors.
- If we want black objects with big surface to have deep saturation, except 100% black, we increase Cyan and Magenta to 40 %. Yellow in this case stays on 0%, to do not let black colour change into brown one.

1.3 Color pattern - proof.

- Prepress department at the request of the customer, performs certified proof, which plays role of color pattern in printing process, both for coated and uncoated papers. This pattern is based on CMYK color, it means, that whether in file appears additional color f.ex Pantone, it will be only simulated by mentioned colors.

- Proof delivered by customer should be made in accordance with ISO 12647-7 norm. It must be performed by using ICC profile compatible with surface, on which the order will be printed. For coated papers we use **ISO_coated_v2_eci.icc** and for uncoated surfaces **ISO_uncoated.icc**. Inside of every proof, there must be placed a control strip, which stands for making measurements. Control strip must be integrated part of the proof. Suggested type of control strip is UGRA/FOGRA, used only in certification purpose.

Additionally, on proof there should be placed such a data like:

- performance date
- job title
- page number
- profile ICC used to make proofs
- mentioned above color strip.

Attention! In case of situation, when proof will not pass the positive certification, it cannot be color pattern for printing. In case of Customer's proof, client will be informed about it. If Client will let such a proof for printing, we reserve the right to color discrepancy.

1.4 Text.

- Minimum font size:
 - a) 4 pt. – for texts prepared in one color on white background.
 - b) 8 pt.- for white texts on color background.
 - c) 8 pt.- for texts made from CMYK.
 - d) **All fonts used in the document must be placed inside the file.**

1.5 Files naming.

On file names it is unacceptable to put diacritical or special signs : \ / : * ? " < > |

Perfect binding, sewn and glued binding.

- a) Interiors of publication with multiple pages should be sent in one file. We use naming: **INSIDE_NAME.PDF**. If file size exceeds 500MB , You need to divide document maximum to this given size into several parts: **INSIDE_NAME_RANGE OF PAGES.PDF**,
- b) We prefer to deliver covers in distinguish between single pages with a separate spine. In this case, we name pages: **COVER_NAME_NO_PAGE_COVERS.PDF** and spine: **SPINE_NAME.PDF**.
- c) If covers are prepared as spread, then we give names like: **COVER_NAME.PDF**, where 1st page is an external and 2nd is an internal cover. If customer sends covers in two files than their must be called: **COVER_EXTERNAL_NAME.PDF, COVER_INTERNAL_NAME.PDF**
- d) If publication contains inserts or stickers then files needs to be send separately with proper names: **NAME-INSERT.PDF** or **NAME_STICKERS.PDF**

Saddlestitching:

- a) Whole publication can be delivered in one document, provided that, two first pages are covers and two on the last positions are penultimate and last page of the cover. Such a file should be named: **NAME.PDF**. If file size exceeds 500MB, You need to divide document maximum to this size into several parts, using name: **NAME_RANGE OF PAGES.PDF**.
- b) If publication concerns inserts or stickers, then files should be sent separately with proper names: **NAME_INSERTS.PDF** or **NAME_STITCHERS.PDF**

Posters and leaflets- maximum two-page:

- a) **NAME.PDF**.

Corrections.

- a) Names analogically to given above with additional prefix **POP**.

1.6 Language versions (versioning) manual no 6 (see point 6.2)

In case, when product has many language versions, files have to be prepared according to given guidelines:

- For every version, separate PDF file is needed, which contains listed text and vector elements. It should be delivered in **one (replaceable)** color with given **overprint parameter!**
- Base has to contain all of repeatable elements (f.ex photos) for every version in CMYK.
- All files must have the same amount of pages and in the same way configured Trimboxes.
- File names should clearly define its application f.ex: " catalogue_PL", "catalogue_DE", "catalogue_Base".

1.7 Overprint, knockout, trapping.

- Black color above the level 95% of saturation, in all texts is automatically overprinted.
- White objects (which has components like C=0,M=0,Y=0,K=0), with incorrect parameter of overprint (overprint on), are automatically chosen in colors, which are placed below the object (took knockout process).
- Texts written in fonts above 14 pts. should be made by Trapping.
- Given settings of trappings and overprints by client are superior for CGS.
- Suggested size of Trapping is 0,08 mm.
- In case of imposition of, white text on CMYK background, where K=100%, there is a need of making slightly larger choke in others separations (CMY) in accordance to K choke size.

1.8 Way of delivering print materials

Printing materials must be delivered only and exclusively by Prinect Portal. Customers, who upload files for the first time, should send e-mail to our Account manager and dzial.rozwoju@cgs.pl, to establish necessary details such as user name, password and approval manner.

2. Graphic parameters of page layout.

2.2 For saddlestitching.

- Interior margins:

- a) internal (spine)- for crucial graphic elements- 10 mm.
- b) others (top, bottom, external)- for crucial graphic elements(f.ex. register, folio)- 5 mm.
- c) Pictures which cross from "page to page" – minimum size of transfer area is 10 mm.
- d) Bleeds which have 5 mm -because of creep technology, or process that stands for the increased width of a front page versus a page printed in the center (when measuring gutter to outside edge).

2.3 For Perfect Binding.

- If in publication there are expected on internal pages of centrefolds of the material has to be prepared by having 3 mm spacing on given pages relatively to each other. It means, that every page which has the continuation of graphics on next page, must be pushed away from the spine exactly 1,5 mm. The responsibility, for making graphic extensions on pages that are centrefolds, **lies on the customer side! Manual no 3 (see point 6.2)**
- If in publication there are expected centrefolds between internal and external page of cover, material has to be prepared by having 10 mm spacing on given pages relatively to each other. It means, that every page which has the continuation of graphics on next page, must be pushed away from the spine exactly 5 mm. The responsibility, for making graphic extensions on pages that are centrefolds, **lies on the customer side! Manual no 4 (see point 6.2).**
- The width of spine is calculated by technologist, basing on given type and grammage of paper and publication volume.
- If customer sends us materials for cover in spread (combining external and internal pages with spine as integrated image), he/she must remember that spine should be indicated in file by register marks (both in front and back). Internal page of cover in this layout must have empty space (without ink) for side gluing (empty space in ink for spine plus 2mm for every page). For instance, publication in A4 format with 5 mm spine, the size of spread cover will have 425x297 mm, empty space for side gluing on back side, has to have 9 mm width (2 mm ink in left side, 5 mm of spine, 2 mm in right side). **Manual no 5 (see point 6.2).**
- Margins in crucial graphic elements (counts from spine side) for internal covers, and for first and the last interior page have 10 mm. For other pages – 5 mm. The rest (top, bottom, external, spine on remaining inside pages)- 5 mm. We talk about texts, logs, pages etc.
- Minimum area size for transferring graphics from page to page is 10 mm. It means that, minimum width of picture with continuation must have 10 mm.

2.4 For Sewn and glued binding

- Centrefolds between internal part of cover and interior page (see point 2.2)
- Internal centrefolds without moving apart so called saddlestitching,
- Spine parameters are given by technologist, after making model from first overprinted and folded sheets,
- Covers prepared in spread- see point 2.2

3. Substantive approval

3.1 Proper configuration of Acrobat Reader software. **Manual nr 2 (see point 6.2)**

3.2 Prinect Portal.

After uploading pages to Prinect Portal, customer gets back automatically a job report. If the report do not show any of critical errors, such as incorrect color RGB, the files for approval are automatically generated. Customer has a possibility to accept or reject every single page. In case of rejecting pages, the new PDF file must be upload to the system, of course with proper for it „pop“ in its name (correction). In case of file substitution in already accepted material, This situation must be reported to given account manager or person responsible for this production. Regarding the fact, that released files directly after acceptance are transfered to production department, another substitution can be associated with additional costs. After agreeing on the terms and possible financial coverage, please send an email to prepress@cgs.pl with information, which page should be substituted.

3.3 Acceptance by email or by print imposition and color Proofs.

Depending on the client's needs, we send an imposition file (illustrating the printing sheet), or so-called booklet (file generated page by page, from assembly). These files are compressed to obtain "light" PDF files, the actual bitmap resolution in print will correspond to a 1: 1 quality of photos prepared in the production file. By accepting a file, You should focus mainly on the content. At the customer's special request, it is also possible to make model from imposition prints, as well as certified color proofs. Performing such a materials, is combined with additional costs; the price should be agreed with the client's account manager. The confirmation of substantive compliance of the files is sent by the customer to the following address: prepress@cgs.pl the substantive approval with job number and sheet designation. In case of willingness file substitutions inside already accepted material, we proceed as in point 3.2.

3.4 Language versions approval.

In case of versioning, customer gets booklet to approval from every language version. Booklet shows whether all elements are listed out in accordance to places in the base. Additionally, after turning off separation (substituted color), it can be seen, if under listed elements, empty space for gluing appears. If such a situation took place, file with element which knockouts graphic area should be corrected. If it not happen, **given text will appear in other language versions.**

4. Automation for Prinect Portal customers.

Prinect Portal customers have possibility to automate process of making imposition. It works without operator interference, relying on properly named pages. Naming is given only by CGS for every case separately. If customer would like to have automatic order of pages inside the job- please contact account manager and prepress manager- bartlomiej.sibilski@cgs.pl, in purpose of discussing all naming details .

5. Responsibility.

5.1 Job elements which are no subject to verification.

- a) Bleed size,
- b) Trimboxes – nett trimm lines of page format,
- c) Settings of overprint, knockout and trappings,
- d) Substantive content,
- e) Inking (the client is informed about the exceeded limits in the form of a report on Prinect Portal).
- f) Fonts size,
- g) Page geometry size (centering of net format for medium, trim box, bleed box, media box)
- h) Page orientation(all two-pages files are turned by the side during imposition- horizontally)

5.2 Job elements which are subject to verification on CGS Drukarnia side.

- a) Damaged document,
- b) Adding fonts (rejected, if there is a lack of added files or are the screen ones)
- c) Photos resolution (rejected when there is less than 200 dpi) – conditionally approved after customer acceptance.
- d) Net format (compatibility with order, rejected, if different formats in one file)
- e) Color (rejected if has no accordance to order)
- f) Color dimension (rejected if is in RGB or Lab).

In case, when materials do not suit for printing, like:

- Low resolution of PDF files,
- Given material is made in MS WORD or different text editor,
- Photos are in RGB and delivered in low resolution,

The most crucial thing is the properly prepared publication for printing.

Prepress department offer a free of charge processes(a Customer's demand earlier send by email):

- RGB to CMYK conversion,
- Spot colors to CMYK conversion,
- Color to Grey scale conversion,
- Automatic trapping,
- Automatic reduction of inking to 280%.

Substantive acceptance is unequivocal, process of conversion, trapping and inking reduction runs correctly and file in this form can be printed!

Whole preparation process of publication ready to print we carry out by CGS Studio **+48 227 59 51**
Prices are determined individually, in accordance to scale of difficulty concerning given project.

Every time our Printing house verifies correctness of delivered materials by the client, but do not guarantee, that every error and incompatibility relative to above specification will be noticed.

6. Supplementary information.

6.1 Basic printing concepts.

BLEED - image surplus going beyond the net format. It guarantee, that after trimming to net format, image will pass to the edge of paper.

TRIMBOX - net format of job after printing and cutting process (must be centralized according to MEDIABOX)

BLEEDBOX - gross format of job or Trimbox+bleed.

MEDIABOX - whole page content.

OVERPRINT - printing objects on background.

KNOCKOUT - making empty space under object.

SPREAD - combining two pages as a integrated image.

CROP MARKS - register marks which designate net format.

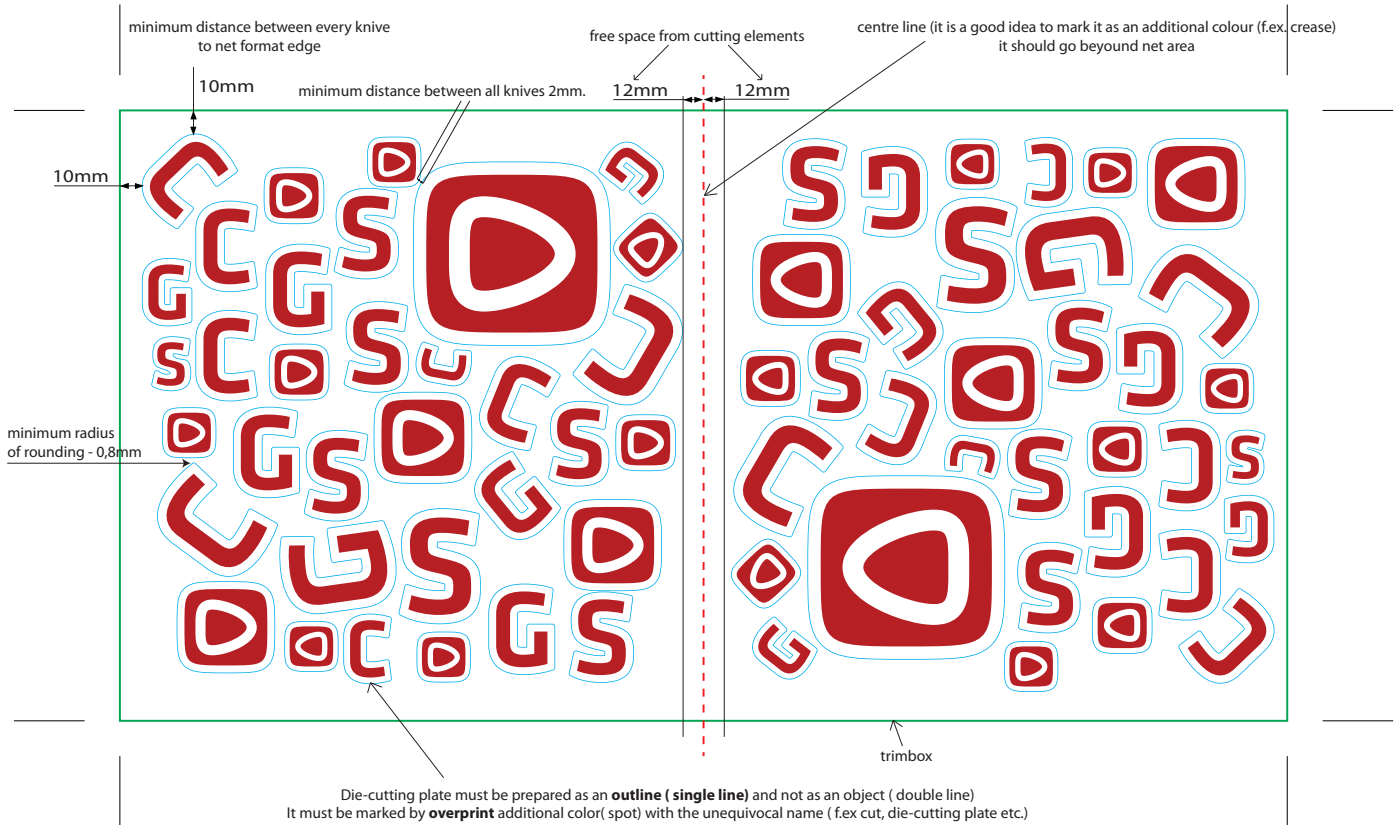
CREASE - lines which designate place of fold.

SPECIAL COLOR - spot color do not take part in printing process. Special color are simulated by blanking die, perforation, register, crease, varnished spaces, hotstampings.

ADDITIONAL COLOR - color which take part in printing , in addition to process colors CMYK.

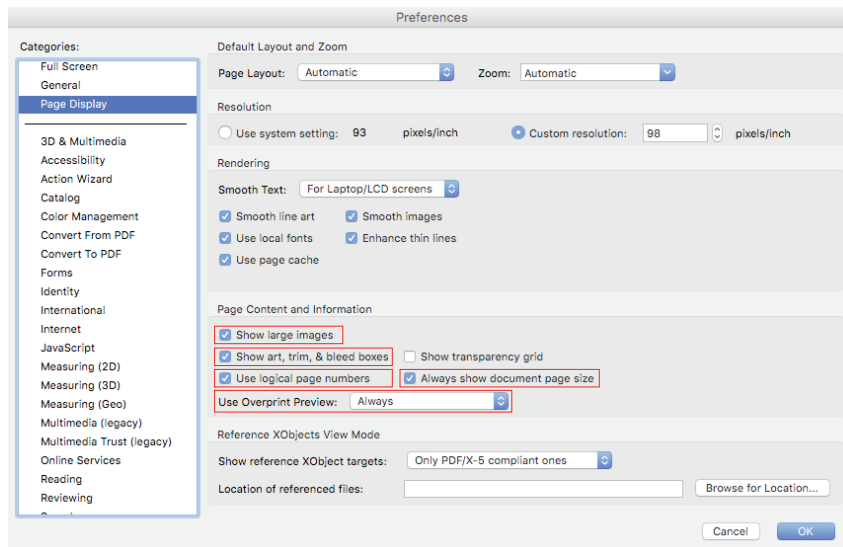
6.2 Instructions / Manuals.

Manual no 1



Manual no 2

Correct Acrobat Reader settings



Manual no 3

Internal centrefolds for perfect binding

If in internal pages area will appear centrefolds, client is obliged to take into account moving apart of transitional object relative to each other for about 3 mm (for 1,5 mm on one side) to obtain, photos getting together in the spine area.

Centrefold prepared incorrectly- zero. In such a layout , photos will not get together.



Centrefold prepared correctly- photos were moved apart to 1,5 mm in net format area.
After binding graphic transition will be fluent.



Manual no 4

Centrefolds between internal page of cover and interior page in division to particular binding types.

Centrefold between internal page of cover and interior page prepared on 0 for Saddlestitching binding.

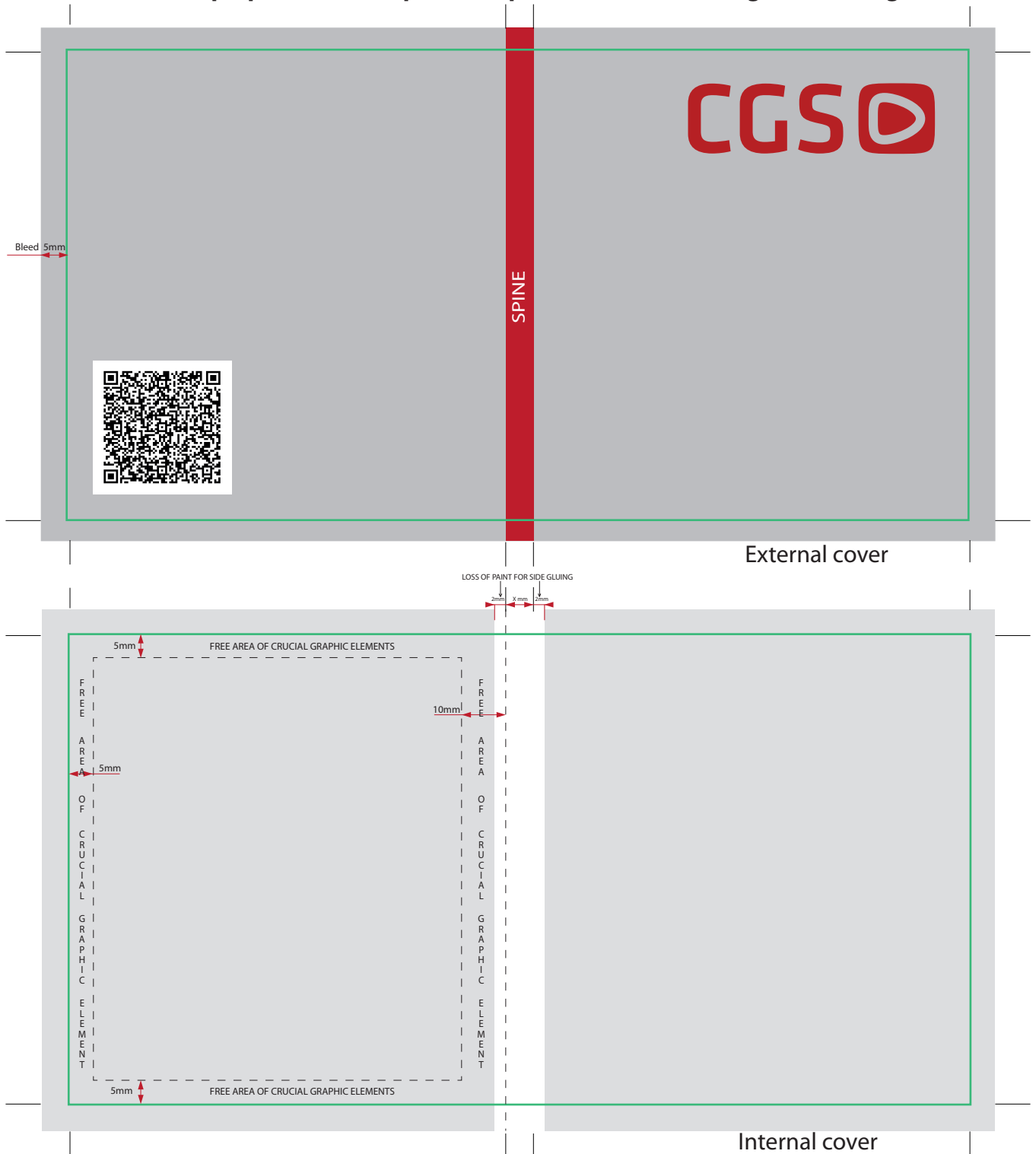


Centrefold between internal page of cover and interior page for Perfect binding and Sewn and glue binding, with 10 mm moving apart (photos were split for 5 mm)



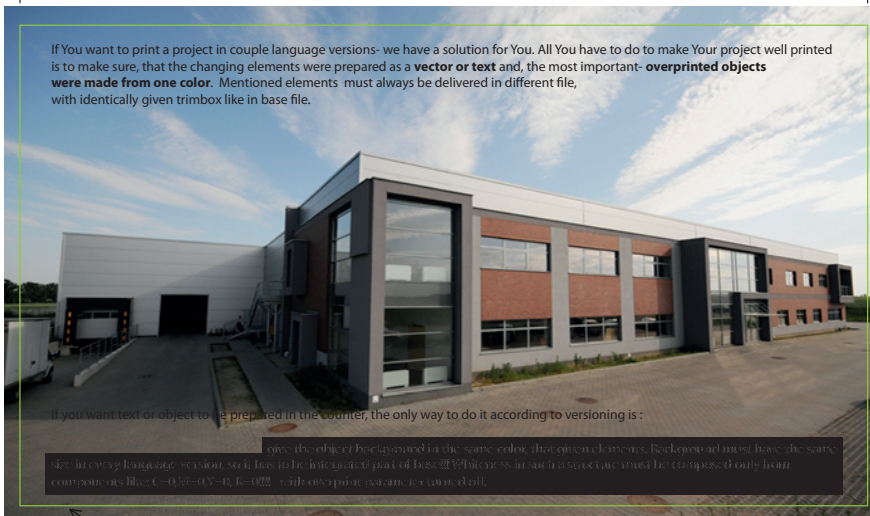
Manual no 5

How to prepare cover in spread for perfect and sewn and glued binding.



Manual no 6

VERSIONING basic information



trimbox

Base prepared in CMYK, which must be identically for all language versions, **remember about Trimbox.**



Exchanged text, sent in one file, **remember about Trimbox.**

