Specifications

For preparing materials for print and basic production standards

Contents

I. OVERVIEW

This document defines technical requirements for materials supplied to Quad/Graphics Sp. z o.o. (the Company), general quality standards of products produced by the Company, quality controlled parameters, as well as definitions of acceptable product.

II. DEFINITIONS

Master Materials – materials used as a master for colours in the printing process. A master material can be a signature accepted by the Client or a certified contract proof. A master material can also be a non-certified proof or print from previous editions, however colour on such a master is treated only as a general reference.

Contract Proof – master material faithfully simulating the real effect of the printing process in a given technology. The basis to consider proof as a contract proof is its certification.

Proof Certification – process of checking of proof workmanship accuracy, consisting of determining the colour difference between values measured on test strip fields placed on the proof, and target values. Target values are determined on the basis of the ICC profile, with which the proof is executed. Proof certification may be carried out at the Client's facility or at the Company.

Certified Proof – proof with attached results of colour difference ΔE measurement, in which the colour difference may not exceed the tolerance limit defined in Basic Quality Standards.

ICC Profile – digital file containing colour characteristics of a given device. That profile meets requirements specified in ICC Specification.

Distribution List – document in the form of a table containing information concerning the method of preparation of dispatch of particular issue batches, including quantities (package standard, pallets, quantity of pallets), issue versions, dispatch addresses, method of sorting, packaging and marking of issues.

Type Page – print area of page. There are, for instance, one-, two- and three-column type pages.

Type Page Editing – combining of advertising and editorial materials into one type page.

Trim Box – area defined in PDF format which represents the net page format (after printing and trimming). Documents delivered to the Company must have a defined trim box. Trim box setting can be checked in Adobe Acrobat Professional

Bleed – area of an image extending to the crop marks defining net page size. Lack of bleed causes defect generation during bookbinding operations.

Self Cover – cover printed together with body pages of the publication as part of a single section (signature). The outer page of the signature serves as the cover. During binding, the cover is not fed separately, since it is part of one of the sections being bound together.

III. SPECIFICATIONS FOR PREPARING PRINT MATERIALS

1. Preparation and Delivery of Digital Materials

1.1. Digital materials should be delivered via the Internet by means of InSite, using the tools included. Location and data enabling access – login (user name) and password are made available by the Customer Service Representative serving your company. Logging in to InSite is possible via a web browser (Internet Explorer on the Windows operating system, Safari on the Mac OS X system) using the addresses: *http://insite.quadgraphics.pl*
The name of a dispatch (folders) may not include any local (diacritic) language signs, spaces and special characters (* > ! ? < : / \ etc.). Only the following characters are permitted: a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0 and _.
Digital materials can also be delivered by means of FTP (File Transfer Protocol) to the designated server: ***ftp.quadgraphics.pl.***
Location and data enabling access to the server – login (user name) and password – are made available by the Customer Service Representative serving your company.
Digital materials may also be delivered on most popular digital data carriers formatted for PC or Mac systems (CD-ROM or DVD). Under no circumstances should the Printing House download files from the Client's server. Digital materials should not be sent via e-mail.

1.2. Pages should be prepared in the following file formats:
- Postscript level 1, 2 or 3 (separated or composite),
- PDF 1.4 – 1.6 (Acrobat 5-7),
- PDF/X-1a:2001,

The Company recommends composite files, scale: 1:1, orientation: Portrait. Using both composite and separated files in the same publication is allowed.
A separate file should be generated for each page and spine, whose width should be previously agreed with the Title Supervisor. Separate files for the left and right side should be also created for spreads.

1.3. A type page montage of advertisements should be made by your editorial staff.

When particular editorial or advertising type pages are prepared in a format other than those stated, it is necessary to attach a dummy with the accurate determination of type page location, scaling percentage and scaling method (proportional or disproportionate).

Bitmap resolution for photographs in digital files:

Minimum	Optimal	Maximum
250 dpi	300 dpi	450 dpi

The Printing House will reduce to 300 dpi the resolution of all colour and greyscale bitmaps whose resolution exceeds 450 dpi.
By supplying an image with a lower resolution than the minimum recommended above, the Client indicates acceptance of an inferior quality reproduction of that image in print.

1.4. The resolution of 1-bit images shall not exceed 2400 dpi.

1.5. Graphic elements of the page must not include attached profiles (no tagged profiles).

1.6. Graphic elements of the page must not include OPI (Open Prepress Interface) comments.

1.7. Supplied files must not contain copy-dot elements without prior agreement with the Company.

1.8. Before sending the materials to the Printer it is recommended to preflight the files with the use of an appropriate software applications, such as Adobe InDesign (version CS4 or higher), | Adobe Acrobat (version 6.0 or higher) or Enfocus PitStop to detect the most frequently occurring errors.

1.9. The client must indicate to the Customer Service Representative the differences between versions/mutations and provide the naming scheme used for the files. The name of a file should contain a description of the version.

1.10. The date of delivery of digital materials shall be considered the date of delivery of completed materials not requiring correction.

1.11. Failure to keep these terms of delivery may cause delays in shipping the finished product, for which the Company shall not be responsible.

2. File Generation

2.1. The Company recommends composite files in PDF generated with Adobe or QuarkXpress applications. The Company allows also files created by PS file conversion using Adobe Acrobat Distiller in version 5.0 or later according to manual available for download on website: http://www.quadgraphics.eu/content/Services/Premedia/CreatingPDF

2.2. In case of questions, please send us sample files and contact your Customer Service Representative. We also recommend visiting: http://www.quadgraphics.eu/content/Services/Premedia/CreatingPDF.

2.3. In case of starting cooperation it is obligatory to send us sample files.

3. Total Area of Ink Coverage

3.1. Total Area of Ink Coverage (TAC), is specified as a percentage. There is a maximum percentage total ink coverage determined for the certain paper types and it can be used during the files assembly (TAC). The printer will not take the responsibility for any defects caused by exceeding of TAC. TAC values for each paper type for the corresponding profiles are given in the table below:

Paper Group	TAC
MWC, WFC - sheet fed presses	330
MWC, WFC - Web presses	300
LWC_Improved	300
LWC_Standard	300
MFC	280
UC	270
SC	270
SNP_Paper	260

4. File Naming

4.1. All files delivered to the Company should be named according to the following scheme:

Publication body, publication with self cover (see Definitions on page 3):

nnn_KOD_ww_vl_spot_a.ext

where: ***nnn*** – no. of the page in publication (e.g. 001, 002); ***KOD*** – title code (e.g. POL – Politics);
ww – Issue no. (e.g. 04);
v1 – file version; use if files have more than one language, price, etc. version. Each version should be marked with a consecutive number (e.g. v1, v2, etc.);
spot – special colour employed; use when colours different than CMYK were used in the file;
a – file version; use if it is necessary to upload file correction (consecutive versions should be marked as b, c, etc.);
ext – file extension (e.g. pdf, ps).

Example:		
	001_POL_04.pdf	first page of a publication (self cover)
	003_POL_04_a.pdf	first file correction of page three
	004_POL_04.pdf	file dedicated for page 4 of the publication
	005_POL_04_spot_b.pdf	second correction of the file dedicated for page 5, file contains special colour

Covers

nnn_cover_KOD_ww_v1_spot_a.ext

where: ***cover*** – information that file contains a cover (do not use when publication contains self cover);
nnn – consecutive no. of cover page in publication
(e.g.: 001_cover...; 002_cover...; 003_cover...);
... – for other symbols see above.

Example:		
	001_cover_POL_04_spot_a.pdf	first correction of page 1 of a cover, cover contains special colour
	002_cover_POL_04.pdf	file dedicated for page 2 of the cover
	003_cover_POL_04_b.pdf	second correction of a file dedicated for page 3 of the cover

Other cases:

If there is more than one file per page (e.g. one with content and one with advertising), letters should be added to the page number:

Example:		
	001a_POL_04.pdf	the first file for page 1
	001b_POL_04.pdf	the second file for page 1

In such cases, attach a dummy showing the layout of page components.

4.2. The Company has a right to impose additional charges for ensuring product quality, if the file naming scheme is not followed.

4.3. The name of the files may not include any local (diacritic) language signs, spaces and special characters (* > ! ? < : / \ etc.). Only the following characters are permitted: a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0 and _.

Important!

It is absolutely crucial that the file naming scheme be followed, since automatic processing of the files depends on their names.

5. Layout

5.1. Each page should have bleed of at least 3 mm from each side.

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

5.3. When perfect binding, remember that pages 2 and 3 of the cover and the first and last page of the body will have 3 mm from the backbone glued through side gluing, which will reduce the effective format of the spreads. If no correction is made, part of the picture will be "cut out" as a result of the binding process. The page format should stay the same – it is only the size of the image area that should be subject to change.

5.4. A trim box size must be set in accordance with the net page format.

5.5. Reduction of effective page format will occur as a result of incomplete copy opening in the perfect bound book.

5.6. When in-line gluing (on a printing press), the minimum distance of text and other graphic elements from the backbone should be 6 mm, due to the phenomenon described in items 5.3. and 5.5.

5.7. Moving the illustrations several millimeters onto the adjacent page will not correct the file for folding and binding tolerance (see Basic Quality Standards).

5.8. For the sake of print aesthetics and tolerance of folding and binding one type line of small type size should not be placed on the adjacent type pages. Dividing of text between type pages in the middle of a word is impermissible.

5.9. Minimum type size for one colour printing is:
- 6 pt for one-element fonts,
- 7 pt for two-element fonts.

Minimum type size for more than one colour or drop out type is:
- 8 pt for one-element fonts,
- 10 pt for two-element fonts.

5.10. Minimum permissible line thickness is 0.2 pt. Lines printing in more than one colour or dropping out of colour should have a thickness of at least 0.75 pt.

5.11. In order to obtain richer black depth and avoid picking effect in solid areas, black should be generated from 4 colours. Recommended formulas are C 70, M 60, Y 60, K 100 for coated papers (MWC, LWC) and C 50, M 40, Y 40, K 100 for uncoated papers (SC type and newsprint).

5.12. Registration inaccuracy is avoided by trapping, (minimal overlapping of colours on one another). When submitting composite files, which are preferred by the Company, the Client should not make trapping. This process is carried out by the Company, provided the Client does not express any reservations. If Client submits separated files the Company cannot introduce trapping. Separated files trapping must be made by the Client. Recommended trapping value is 0.05 mm (0.144 pt).

When reversed print against black background of 4 colours is needed, negative trappings for CMY colours of size 0.17 mm (0.5 pt) are recommended.

If spot ink is used for printing (Pantone, metallic colour), a CMYK spread must be made in the direction of the spot colour (Pantones, metallic colours).

5.13. Black text smaller than or equal to 24 pt set against a colour background must be overprinted. The exception is the text (K or CMYK) on spot colours (Pantones, metallic colours), where knockout-should be applied, according to 5.12 or K or CMYK spread towards the spot colour. All graphic sprinted over spot colours (such as shades) must also be selected and spread in a similar manner. This is the only way we can ensure proper representation of all elements.

5.14. Black text larger than 24 pt may be made of 4 colours according to the formula specified in item 5.11.

5.15. All graphic elements must be prepared within the CMYK space. Graphic elements and photographs in other colour spaces, such as RGB or Lab, are automatically converted to the CMYK space utilizing ICC ISO Coated v2_300_eci profile by means of perceptual rendering intend. All spot colours used, e.g. from the Pantone® system, must be changed to CMYK. Spot colours may be used only in agreement with the Company.

5.16. "Pushing out" of sections.

In saddle-stitched binding there is a phenomenon called "pushing out" of sections. Internal sections are moved away from the backbone by values dependent on paper thickness and signature number. This phenomenon causes a reduction of the effective page width and displacement of graphic content of the page, which in the worst case scenario may lead to the cutting of typography or graphic elements situated near the outside trim edge. To prevent this the outside margin of individual pages of consecutive signatures should be increased by the values given in the table below, keeping the other margins and page size unchanged. If in the files the Client has not foreseen the push-out effect of the sections, the Printing House may create a push-in effect on its own when it considers necessary to obtain a good quality final product. We would also like to inform you that all graphic elements and texts on pages will be reduced by the value of this push-out effect depending on the paper weight (according to the table below). For instance, from 0 mm value for the first pages of the first sheet to 4 mm value at the centerfold of the eighth sheet for 70 g/m2 paper weight. Such changes in images are invisible to the eye and they can be verified only by measuring the chosen objects.

Signatures 16s	54 g/m^2 [mm]	60 g/m^2	70 g/m^2	80 g/m^2	90 g/m^2
1	—	—	—	—	—
2	0.35	0.5	1.0	1.0	1.0
3	0.6	1.0	1.5	1.5	1.5
4	1.0	1.5	2.0	2.0	2.0
5	1.5	2.0	2.5	2.75	2.75
6	2,0	2.5	3.5	3.5	3.5
7	2.45	3.0	3.75	3.75	4,0
8	2.95	3.5	4.0	4.25	4.5
9	3.45	4.0	5.0	5.0	5.5
10	3.95	4.5	5.5	5.5	6.5

6. Separation

6.1. ICC profiles used for generating separations should be adjusted to the paper grade on which the printing is done according to the ISO 12647-2 standard. ICC profiles are made available to clients by your Customer Service Representative. Profiles recommended by the Company should be used. Using other ICC profiles is permissible only in agreement with your Customer Service Representative.

6.2. The Company takes no responsibility for the final product, if files have not been prepared in accordance with the above guidelines or if they contain objects imported directly or indirectly from CorelDraw or AutoCad software. The Printing House also has the right to refuse the acceptance of any files not consistent with specifications.
All additional operations aimed at correcting the files in order to reach consistency with specifications and all changes made by the Company at the Client's request are considered additional paid service.

7. Master Materials

7.1. Attaching a contract proof to each page is recommended.

7.2. Contract proofs should be made after the last correction of files submitted for printing.

7.3. The ICC profile acquired by the Customer Service Representative should be used for making a contract proof.

7.4. Title, publication number, page number, file name, date of proof performance and name of the ICC profile used should be included on each contract proof. Also, a control strip must be placed on each contract proof. Use a Ugra/FOGRA Control Strip or the one provided by the Customer Service Representative. Lack of description or strip makes it impossible to use a contract proof as a master material in the Company.

7.5. When the proof is accepted by the Client, the signature accepted and signed by the Client becomes a master material for the offset operator.

7.6. Prints from previous editions are not contract proofs; they may serve only as a reference point for the offset press operator. Using that type of master material entails the possibility of obtaining a different colour as a result of lack of information concerning the preparation of materials and the printing process or as a result of a different placement of the type page on the sheet.

7.7. If the Client does not deliver contract proofs, the print will be carried out according to Lab coordinates of primary colours corresponding to the ECI profile of the job and dot gain specified by ISO 12647-2 standard for a given paper grade.

7.8. Detailed requirements concerning methods of control proof preparation are included in Basic Quality Standards (chap. IV, item 1.1.2)

7.9. Pantone® for the title must be given to the person leading this title minimum 48 hours before the release date of the respected cover/signatures printing materials.

8. Additional Orders – Inserting

8.1. Information concerning insert and delivery dates

8.1.1. Detailed information on the insert and the inserting process which is to be provided by the Client to the Customer Service Representative, and delivery description and the Company`s acceptance criteria for the insert are listed in the appendix to the specification: "SUPPLYING INSERTS AND PROMOTIONAL MATERIALS." If the inserts/promotional materials are not prepared in accordance with the requirements, the Company reserves the right to charge the Client for additional activities carried out by the Company, like sorting, unpacking or moving.

9. Inkjet

9.1. Requirements and recommendations concerning addressing should be discussed and agreed upon with the Customer Service Representative for each project run. This should include material preparation and delivery and other requirements for executing the order.

9.2. Overprint location – the location on the printed piece in which the overprint is to be made - should be discussed and agreed upon for each print run (e.g. label on the type page, address coupon, label on foil package).

9.3. Label – standard; minimum size of the label is a white area 90 mm wide and 40 mm high.

9.4. Overprint layout – the following data should be given: number of lines and their location in the label the reference to each line in the field name (actual name saved in the database) or the number of the characters beginning and ending the field the number of characters for individual records.

9.5. Type face and its size – for dot matrix printers it is specified by the number of dots, while for graphic printers by typeface (MS Windows).

9.6. Sorting criteria – give criteria specified by the post that will receive the shipments.

10. Data bases for customisation

10.1. All materials necessary for customisation (data intended for customisation, reports, etc.) must be placed on the server of the printing house not later than on the date specified in the time schedule (appendix to the printing order).

10.2. Data intended for customisation must be delivered by FTP (File Transfer Protocol) to the following server: ftp://sftp.quadgraphics.pl.
Login and password are sent to the designated contact person.

The account contains two folders:
INCOMING – here the client uploads files
OUTGOING – here files are stored for the client on request

In extraordinary circumstances the client may send a base by e-mail to: baza@quadgraphics.pl after prior agreement with the Title Manager. The base should be zipped and encrypted. Password to the base should be sent by a separate e-mail. Messages which do not comply with this standard will be deleted automatically.

10.3. Accepted file formats:
- TXT
- CSV

with stated code page of the file.

EXCEL – only XLS files, other files with activated macros and functions will be deleted from the server. Excel cells may not contain more than one line and non-printable characters may not be used. If the above requirements are not met, the client will be charged with additional costs of work.
ACCESS – files in this format may be handled after prior agreement.

10.4. Method of preparing files for customisation

PREFERRED
- fixed-length field and fixed-length record file. Switching to next record should be carried out by <CR><LF> (CR – carriage return, LF – line feed). For all fields the data type should be set to text.

PERMITTED
- file with fields separated by a delimiter. A TAB or | (vertical bar, hexadecimal representation 0x7C) may be used as a filed delimiter. If a different delimiter is used to separate the fields, errors may occur during data processing. End of a record should be marked with <CR><LF> (CR – carriage return, LF – line feed). The sent base should be accompanied by a description containing names of the fields in the base, information whether a particular field should be used during customisation and a description.

A description containing the following information should be enclosed with each base:

- number of records
- number of copies
- field delimiter (only for bases with fields separated by a delimiter)
- post office – state the name of the post office delivering mail
- country – name of the country to which the mail will be delivered
- names of the fields in the base
- a character which starts a given filed (only fixed-length field files)
- field length – number of characters in a given field (only fixed-length files)
- information whether a given field should be used during customisation
- field description

Layout template for fixed-length bases:

Field name	Start	Width
RecordNumber	1	6
Line1	7	60
Line2	67	60
Line3	127	60
Line4	187	60
Line5	247	60
Line6	307	60
Base	367	2
Field1	369	10
Field2	379	5
PackageNo.	384	5
CH_B	389	1
WorkNo.	390	5
CH_W	395	1
PalletNo.	396	5
CH_P	401	1
Pallet Alpha	402	5
BookID	407	4

10.5. Required fields

Address bases to be used for customisation should contain the following fields:

- item number – subsequent record number in the delivered address base filed in by zeros to full field length (in the case of 5 character long fields subsequent record numbers should be the following: 00001, 00002, 00003, etc.)
- surname
- first name
- name of the company/institution
- street and house/apartment number – a house/apartment number may be given in a separate field
- post code – a post code and city name should not be given in one field. Such preparation of

the address base may prevent proper preparation of mail for the post office
- city
- country name.

The printing house prefers the fields in the address base to be presented in the above-mentioned order. Apart from the above-mentioned data the file may contain additional fields which should be described in detail in the provided specification (“remarks” field), in a way which makes it possible to unambiguously interpret the information contained therein.

IV. BASIC QUALITY PRODUCTION STANDARDS

1. Printing Process

1.1. Colour:

1.1.1. The colour of the finished product should be as close as possible to the colour of the properly made contract proof supplied by the Client taking into consideration the specificity of offset print, paper quality, proof characteristics and other factors affecting the colour of the copy.

1.1.2. Requirements concerning contract proofs
A control strip should be placed on each proof. Recommended control strips are the UGRA/FOGRA strip or the strip supplied by Customer Service at the Client's request. Each proof delivered to the Company should have a certificate confirming its correctness. Certification of contract proofs is based on the ISO 12647-7-2007 standard.

Acceptable proof	Not acceptable proof
ΔEab primaries <5	ΔEab primaries>5
ΔEab average of the control strip <3	ΔEab average of control strip > 3
ΔEab maximum <6	ΔEab maximum >6
ΔEab substrate simulation <3	ΔEab substrate simulation >3
ΔH maximum of primaries <2.5	ΔH maximum of primaries >2.5
ΔH average of grey balance <1.5	ΔH average of grey balance >1.5

Measuring conditions:
- white backing,
- illuminant D50,
- standard observer 2°,
- absolute value,
- no UV cut filter and no polarizing filter.

The proof must be made with the ICC profile provided by your Customer Service Representative. The proof must be made with printing base-paper simulation.

1.1.3. If the proof is not made according to specification, it will not be considered a contract proof. In such a case, the Company shall make a contract proof at the Client's expense. If the Client does not give his/her consent to make the proof, then the proof supplied by the Client may be treated as the master material for the offset press operator. However, this proof colour may not be attainable on press.

1.1.4. Optical densities of the printing process are selected in a way that ensures that Lab values of solid CMYK patches are obtained on paper of a given grade and with given inks, according to ISO 12647-2 standard tab. 2.

1.1.5. Printing control tolerances for particular colours in relation to the signature accepted by the Client or by an authorized Printing House employee:

	Acceptable	Not acceptable
Solid Ink Density	≤ ± 0.1	> ± 0.1
Dot Gain	≤ ± 4%	> ± 4%

Measuring conditions:
- black backing,
- standard E (DIN),
- relative to paper,
- no polarizing filter.

1.1.6. Consistency of colours between the contract proof and the printed product is assessed visually at D50 standard lighting as per ISO 3664:2000 standard.

1.1.7. If it is necessary to obtain optimal consistency with the master material, Lab values of solid patches can go beyond tolerance limits specified in ISO 1247-2 standard.

1.1.8. In order to ensure the highest quality of colour reproduction relative to a correctly made contract proof the Company may apply additional optimisation to input data.

1.2. Colour registration

1.2.1. Permissible deviation of register of colours printed consecutively one after another:

Acceptable	Not acceptable
≤ 0.1 mm	> 0.1 mm

1.2.2. Because of the automatic registration systems used on presses and the manner of their operation, colour register tolerance may be temporarily exceeded. In such a case it should be assumed that the error concerns a maximum of 200 signatures.

1.3. Fold and page arrangement

1.3.1. Permissible fold deviation from fold line:

Acceptable	Not acceptable
≤ ± 1 mm	> ± 1 mm

1.3.2. Permissible deviation of the arrangement of pages in the signature in relation to one another:

Acceptable	Not acceptable
≤ ± 2 mm	> ± 2 mm

1.3.3. A fold should be considered to have been made incorrectly when it causes a crumpling of paper, creasing, etc., which makes it impossible to read the content or view an illustration.

1.4. Additional Pantone® colours

Because of possible lack of densitometric control of colour intensity, correct colour should be considered to be colour that visually fits between sample (-) and sample (+) supplied by the producer of the ink. Additional colours should be individually accepted by the Client.
Pantone® color system
Pantone colors are printed in accordance to the current Pantone® color system issued on yearly basis. The printer will not take the responsibility for unmatched colors compared to old Pantone® color system.

1.5. Gluing in line

On low-absorbing papers (MWC, LWC) there is a risk of "spreading" of glue outside the gluing line. Permissible paper gluing width beyond the gluing line:

Acceptable	Not acceptable
≤ 4 mm	> 4 mm

1.6. Perforating during printing tolerance from the theoretical perforation line concerning longitudinal and lateral perforation:

Acceptable	Not acceptable
≤ 2 mm	> 2 mm

1.7. Register of picture and varnish layer in case of selective varnishing:

Acceptable	Not acceptable
≤ 1 mm	> 1 mm

1.8. Varnish layer

The varnish layer is considered incorrect when there are unvarnished spots on the surface intended for varnishing no matter whether it is offset, dispersion or UV coating.

1.9. Due to heat-set web offset printing specificity the process is accompanied by smearing (rub-off). The Company will make all possible effort to minimize this phenomenon, but cannot guarantee its complete elimination.

1.10. Due to heat-set web offset printing specificity the process is accompanied by fluting. The Company will make all possible effort to minimize this phenomenon, but cannot guarantee its complete elimination.

1.11. Error extent assessment

In each case the basis for determining the percentage of defective signatures shall be the revision signatures put off by every ten thousand signatures or as agreed with the Client.

2. Bookbinding Process

2.1. Trim dimension

Permissible deviation of trim dimension in relation to nominal dimension measured for each 100 mm:

	Acceptable	Not acceptable
Head and feet trim	≤ ± 1 mm	> ± 1 mm
Front trim	≤ ± 1 mm	> ± 1 mm

2.2. Trimming parallelism

Permissible deviation of parallelism of two binding edges when measured after folding the book in half:

Acceptable	Not acceptable
≤ ± 2 mm	> ± 2 mm

2.3. Arrangement of pages

2.3.1. Permissible vertical deviation in arrangements of pages between signatures in the finished copy:

Acceptable	Not acceptable
≤ ± 2 mm	> ± 2 mm

The permissible vertical deviation consists of the sum of deviations from previous technological processes:

- permissible deviation of the fold from the fold line is ± 1 mm,
- permissible deviation between signatures ± 1 mm.

2.3.2. Permissible vertical mismatch between cover and body:

Binding type	Acceptable	Not acceptable
Perfect binding	≤ ± 2.5 mm	> ± 2.5 mm
Saddle-stitched	≤ ± 1.5 mm	> ± 1.5 mm

The permissible vertical mismatch consists of sum of deviations from previous technological processes:
- folding tolerance within the limits of permissible deviations ± 1mm,
- deviations arising during sheet fed printing and cutting into single pieces (covers) ± 1mm,
- tolerance of feeding and application of the cover ± 0.5mm.

2.3.3. Permissible deviation of copy width between the cover and the body in perfect bound and saddle-stitched copies (caused by shrinking of paper, humidity difference, basis weight):

Acceptable	Not acceptable
≤ ± 1 mm	> ± 1 mm

2.4. The format deviation of master binding from the specified net format should fit within the tolerance scope. Change of format of master binding in relation to the specified net format may result exclusively from striving to keep the picture in the format.

2.5. Binding strength

2.5.1. Perfect binding

The strength of perfect binding is measured by means of Pulltester. The number of sheets which should be tested in a single book is:
- 3 sheets spaced evenly in the copy for books of backbone ≤ 1 cm
- 5 sheets spaced evenly in the copy for books of backbone > 1 cm

Acceptable	Not acceptable
≥ 4.5 N/cm	< 4.5 N/cm

2.5.2. Saddle-stitching

Saddle-stitching is considered correct when signatures stay joined and do not tear apart at the folds as a result of staples used and the number of staples corresponds to their ordered amount (for one edge).
Staples shall be considered correct if:
- they firmly keep the joint of saddle-stitched book edges,
- the total length of staples does not cause overlapping of edges,
- the edges of staples are bent in the way specified in the order (flat-bent or rounded).

Staple position tolerance in the direction perpendicular to the spine:

Acceptable	Not acceptable
≤ ± 1 mm	> ± 1 mm

The strength of a saddle-stitched book is not measured, as in this case the obtained result is not the strength of binding but the strength of paper.

2.6. Sheet cutting

Permissible deviations when cutting sheets into single pieces:

Acceptable	Not acceptable
≤ ± 1 mm	> ± 1 mm:

2.7. Off-line folding and perforations

2.7.1. Folding – permissible deviation of fold from nominal line of its location (on each fold):

Acceptable	Not acceptable
≤ ± 1 mm	> ± 1 mm

2.7.2. Permissible deviations of the made perforation from its nominal location:

Acceptable	Not acceptable
≤ ± 1 mm	> ± 1 mm

2.7.3. Final deviations of the executed folds and perforations are also affected by permissible deviations arising during earlier technological processes, i.e. printing and cutting of the sheet.

2.8. Inkjet

2.8.1. Permissible deviations of Inkjet overprint position from the area intended for performing it:

Acceptable	Not acceptable
≤ ± 5 mm	> ± 5 mm

2.8.2. Permissible deviation of overprint on the label during saddle-stitching, perfect binding and packing:

Acceptable	Not acceptable
≤ ± 5 mm	> ± 5 mm

2.8.3. Overprint shall be considered correct when it was placed and configured according to specification (overprint layout, type) and all its elements are readable.

3. Delivery Acceptance Criteria

Delivery is considered consistent with the order when at least 98% of the product's quality parameters fall within the scope of tolerance permissible by this specification. The Printing House reserves the right to have differences +/- 2 copies in packs.
Any possible comments or reservations should be submitted within 14 days of shipment.[1]

[1] The 14-day deadline is applicable if the agreement does not specify otherwise.