



Walstead
CENTRAL EUROPE

PSG Final Product
Quality Specification

SPOUT03

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1. SCOPE

This document defines general product quality standards produced by Walstead for PSG customers.

The below quality specification applies when the production files are prepared in accordance with the recommendations, gathered in QM.PR12.LI01.SPIN01 - Preparation of materials for printing.

2. DEFINITIONS

FUNCTIONALITY – Ability to use according to an intended or specified purpose.

When considering a booklet, it is assumed that it loses its functionality if:

- + The booklet is not complete – does not possess all ordered elements
- + The booklet cannot be used in the most common sense – it cannot be read, looked or flipped through.

NONCONFORMITY – Non-fulfillment of a requirement.

DEFECT – Non-fulfillment of a requirement related to an intended or specified use.

COLOUR GUIDELINE – Digital or material guidelines defining the color.

PROFIL ICC – The file that describes how a particular device reproduces the color. The profile defines device gamut in the context of a device-independent color space.

PROOF / REFERENCE PRINTOUT – A comparative printout imitating the achievable results on the real printing machine.

COLOR OK. – A comparative sheet/signature chosen from the printed count that matches the proof best – signed by the Customer, Walstead Shift Leader or an authorized Walstead Press Operator. Printed on the machine remains the real, achievable color guideline for the operator and it is treated as the reference for the rest of the count.

FORMAT OK. – A comparative book signed by the Customer, Walstead Shift Leader or an authorized Walstead Press Operator. Bound on the machine remains the real, achievable guideline and it is treated as the reference for the rest of the count.

ΔE – It is the color difference between the master and measured sample – the value calculated as Euclidean distance in the CIE L*a*b color space.

SPECTROPHOTOMETER – A device that measures the color – the obtained results which are defining the position of the particular color in a universal three-dimensional Lab color space.

JOB TICKET – The main instruction (specification) of the job

realization – the document used internally at Walstead, created by the CSR based on the information delivered by the Customer in the production order.

LOGO – it is a graphic mark or emblem commonly used by commercial enterprises, organizations and even individuals to aid and promote instant public recognition. Logos are either purely graphic (symbols/icons) or are composed of the name of the organization (a logotype or wordmark).

PAGES WITH LOGO – There is a logo or a branding mark on the page.

PAGES WITHOUT LOGO – There is NO logo or branding mark on the page.

CONTROL PATCHES – Color patches placed on the sheet/signature enabling both the visual and instrumental control of the print quality.

AQL - Acceptable Quality Level

3. PROCESS COLORS

3.1. COLOR GUIDELINE

The information presented on the proof is the main color guideline for the process colors. The proof shall be prepared in accordance with the recommendations, gathered in QM.PR12.LI01.SPIN01 - Preparation of materials for printing and QM.PR12.LI01.SPIN02 - External proof verification. The lack of conformance of the mentioned documents may result in differences in the color between the final product and the delivered proof.

In case, that no proof has been delivered or the delivered proof is not conforming to Walstead recommendations, Walstead standard digital values should be considered as the color guideline. Those target values describing the print parameters are defined in an appropriate way, used in the production as Walstead ICC profile.

The type of Walstead ICC profile to be used in the production is agreed between the Customer and Walstead before the production starts. In case of no agreements, Walstead applies the standard Walstead ICC profile adequate for the paper type, screening and the product characteristics.

All Walstead ICC profiles were defined in order to achieve the color parameters in the process, conforming to the guidelines described in: ISO standard ISO 12647-2:2004(E).

Based on the visual and/or instrumental conformance assessment of the printed page, together with the delivered color guidelines, the Color OK sheet/signature is signed.

When the Color OK sheet/signature is signed, it is the color

guideline for the operator and it should be treated as the reference for the rest of the count.

ATTENTION! The surface finishing (e.g. varnish, lamination) may influence the color – Walstead does not take any responsibility for the color changes appeared, due to surface finishing off the printing press.

3.2. VISUAL CONTROL

The main method of the color control is the visual assessment.

VISUAL CONTROL CONDITIONS:

The assessment should be conducted in standard viewing conditions according to the ISO 3664:2000 standard. The special recommendations are including the followings:

- + The relative spectral distribution of the illuminant should be close to the CIE illuminant D50 (corresponding color temperature of approximately 5000 K), the CRI index should not be lower than 90,
- + The intensity of the illumination on the viewed surface should be $2000 \text{ lx} \pm 250 \text{ lx}$,
- + The surrounding area and background used for the evaluation of the materials should be neutral grey and matt.

The Color OK sheet/signature as well as the count sheets/signatures shall match the color guidelines.

ACCEPTABLE	NOT ACCEPTABLE
Color insignificantly different from the	Color significantly different from the

3.3. SPECTRAL CONTROL

Different kind of measurements might be considered as additional methods of the color control. The spectral measurement becomes the main method of the print quality assessment when:

- + No proof has been delivered
- + The delivered proof does not conform to Walstead recommendations

MEASUREMENT CONDITIONS:

Device:	SpectroEye (GretagMacbeth)
Background:	selfbackground
Physical filter:	UV Cut
Illumination:	D 50
Observer angle:	2 °

TOLERANCES:

The L^*a^*b coordinates the process color solids on the Color OK. and count sheets/signatures shall conform to the standard target L^*a^*b values defined for those solids by the adequate Walstead ICC profile.

The deviations from the target values shall not exceed the tolerance range specified in the ISO standard 12647-2:2004(E), under the chapter 4.3.2.3. (Ink Set Colors under the paragraph 4, note 2, table 3).

The table below presents the range of acceptable deviations for the process color solids.

COLOUR	Black I)	Cyan I)	Magenta I)	Yellow I)
The acceptable deviation from the target value for the Color OK sheet/sig-	5	5	5	5
The acceptable deviation from the Color OK sheet/signature for the	4	4	4	5
1) The hue share in total difference shall not exceed 2,5 2) At least 68% of the total count shall stay in this specified tolerance range				

3.4. DOT GAIN

The dot gain characteristic for the Color OK, as well as the count sheets/signatures shall conform to the standard, defined by curve B described in the ISO standard 12647-2:2004(E). The table below presents the target values and the deviations acceptable on patches of the different tone value.

The tone value of the control patch [%]	25	40	50	70	75	80
The target value [%]	12	16	17	15	13	12
The acceptable deviation from the target value for the Color OK [%]	4	4	4	3	3	3
The acceptable deviation from the target value for the count average [%]	4	4	4	4	4	4
The acceptable value of the count, standard deviation [%]	4	4	4	3	3	3
The acceptable value of the range between the chromatic colors [%]	5	5	5	5	5	5

Assuring the above parameters (described under the chapter 3.3. and 3.4.), may not be possible in case of heat-set production. If the run is lower than 30 000, print is realized on a press that is not equipped with an automatic system (ink feeding) of adjusting. What is more, there are no color proofs or the provided proofs have not been positively verified (see SPIN02 External Proof Verification). In such an instance, a statistical spread might be higher.

3.5. INFORMATION REGARDING STOCHASTIC PRINTING STACCATO IO

As the process of the stochastic printing is more variable, the acceptable degree of discrepancy between the printed sheet and the correctly prepared proof can be higher.

Due to these technical reasons, Walstead may change the method of screening at the last moment, while notifying the Customer Representative as the only person.

4. SPECIAL COLOR

4.1. COLOR GUIDELINE

The main color guideline for the special color printouts is the digital values describing the color parameters. They are specified in ISO ICC color profiles.

Additional guideline for the special color setting might be the reference printout from Walstead Ink Laboratory and /or current paper watch book - Pantone Special Colors.

For the special metallic colors, the main and only guideline is the current paper watch book - Pantone Metallic Special Colors.

Based on the visual and /or instrumental conformance assessment of the printed page with the delivered color guidelines the Color OK sheet/signature should be signed.

When the Color OK sheet/signature is signed, it is the color guideline for the operator and it should be treated as the reference for the rest of the count.

ATTENTION! The surface finishing (e.g. varnish, lamination) may influence the color – Walstead does not take any responsibility for the color changes appeared, due to surface finishing off the printing press.

4.2. VISUAL CONTROL

The visual assessment is considered as an additional method of the color control. The visual assessment becomes the main method of the print quality control, in case of no digital guideline is available.

VISUAL CONTROL CONDITIONS – see under point 3.2

The Color OK sheet/signature as well as count sheets/signatures shall match the color guidelines.

ACCEPTABLE	NOT ACCEPTABLE
The color is insignificantly different from the color guideline	The color is significantly different from the color guideline

4.3. SPECTRAL CONTROL

The main method of the color control is the spectra measurement.

MEASUREMENT CONDITIONS – see under point 3.3.

TOLERANCES:

The L*a*b coordinates the process color solids on the Color OK. and count sheets/signatures shall conform to the standard target L*a*b values defined for those solids in ISO ICC color profiles.

The conformance of the Printout to the guidelines is verified by using the “Best Match” function available in the SpectroEye device, which takes into consideration additionally the print process variables (e.g. substrate/paper or surface finishing)

The deviations from the target values shall not exceed the tolerance range specified in the table below:

The acceptable deviation from the “Best Match” value for the Color OK	1
The acceptable deviation from the Color OK for the count I)	3
I) At least 68% of the total count shall stay in this specified tolerance range	

In non standard cases, like:

- + Lack of guideline for the special color,
- + Overprint of the process colors on a special color,
- + Printing a double layer of a special ink (from two consequent ink units),
- + Special color separation is not self.

The above given tolerances are not applicable (in force) any more.

In such cases, the Customer is obliged to notify Walstead at an early stage, to have enough time for both parties for preparing the print process assuring that the final color effect is the closest as possible to the Customer requirements.

4.4. LIMITATIONS IN PRINTING WITH SPECIAL INKS

Using metallic inks in heatset printing

The metallic pigments may react with the fountain solution (lower pH value) and get matt, which may be seen as “dull” or “subdued” color.

The uncoated metallic ink surface is not resistant to rubbing and/or scratching with pressure.

Inks, with larger pigment particles are less suitable for printing raster surfaces and fine lines.

The UV varnish on a heat-set printed metallic ink surface will visibly reduce the metallic effect (especially on the metallic silver).

The UV varnish adhesion to the metallic ink is poor, might causing a risk of chipping. A thicker metallic ink layer makes the UV varnish application difficult, and eventually may cause an “orange peel” effect on the coating surface.

Using fluorescent inks

The light-fastness of the fluorescent printing inks is very poor. They are also not resistant to the spirit varnishes, nitro varnishes, or alkalize. The printing company will take no responsibility for the fluorescent inks color changes appeared after the exposure to the light, dispersion varnishes, UV varnishes, and after film lamination.

Because of higher pigments such inks are not suitable to print halftone areas and fine line drawings (see: QM.PR12.LI01. SPIN01 Preparation of materials for printing). Achieving the desired optical effect requires a high inking, which can cause killing delicate areas of the halftone.

YES

Lorem ipsum dolor
consectetur adipis
porta sodales sagi
sodales sit amet ip
lacinia. Pellentesq
felis sit amet semp
accumsan. Morbi e

NO

Lorem ipsum dolor
consectetur adipis
porta sodales sagi
sodales sit amet ip
lacinia. Pellentesq
felis sit amet semp
accumsan. Morbi e

5. REGISTER

The relative misplacements of the images printed from CMYK or PMS inks shall be within the acceptable tolerance range.

ACCEPTABLE	NOT ACCEPTABLE
Register off by ≤ 0.2 mm	Register off by > 0.2 mm

6. IMAGE NONCONFORMITIES

Tolerance range for IMAGE NONCONFORMITIES shows the table below.

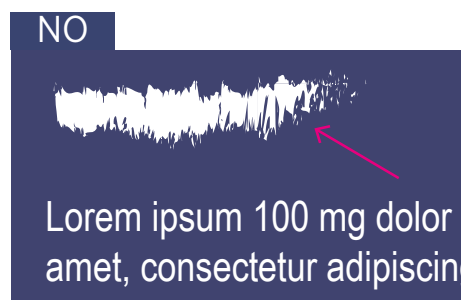
NON CONFORMITY	ASSESSMENT METHOD	PLACE	ACCEPTABLE	NOTACCEPTABLE
LINE (e.g. plate scratch)	Measure length and thickness	LOGO	n= 0	n> 0
		Pages with LOGO	length <= 5mm;	length > 5mm;
		Pages without LOGO	thin <= 0.1mm; n=1	thin > 0.1mm; n>1
			length <= 10mm;	length > 10 mm;
			thin <= 0.1 mm; n=3	thin > 0.1 mm; n>3
SPOT (e.g. print hickey)	Estimate total coverage and check the text legibility	LOGO	n= 0	n> 0
		Pages with LOGO	cov <= 1mm ² ; n=1	cov > 1mm ² ; n>1
		Pages without LOGO	cov <= 2mm ² ; n=1	cov > 2mm ² ; n>1
DIRTY AREA, STAIN, CATCH UP	Measure ΔE for color difference	LOGO	ΔE <= 2	ΔE >2
		Pages with LOGO	ΔE <= 2	ΔE > 2
		Pages without LOGO	ΔE <= 3	ΔE > 3

* –acceptable quantity of one type nonconformity per page (text must be legible in all cases)

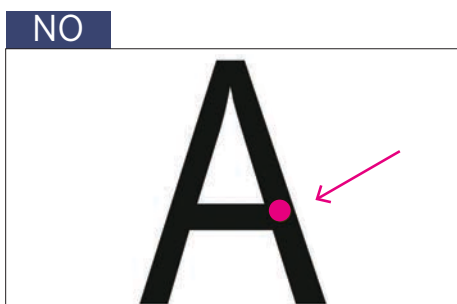
Tolerances for booklet backbone are the same as for pages with LOGO (an element of cover).



Line on the page with LOGO > 5mm



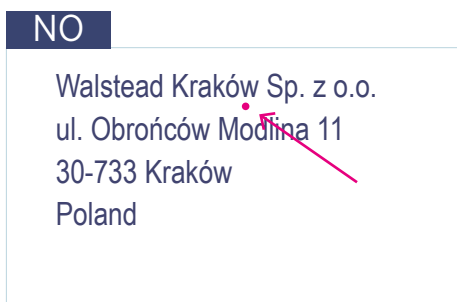
Dirty area on body pages



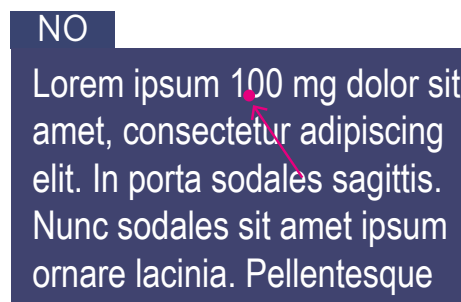
Spot on LOGO cov > 1 mm²



Water spot on cover



Text illegible - spot on contact data



Text illegible - spot on spot on measurement unit

7. IN-LINE GLUING

The standard in-line gluing book should have uniformly distributed glue throughout the length of the spine to maintain all pages in the booklet.

In-line gluing should ensure functionality of the product, pages cannot fall out.

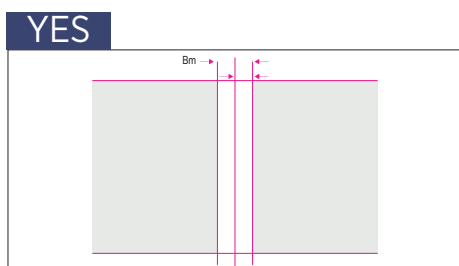
Strip width (aggregated e.g. front plus back of the booklet) should be in the range 2 - 5 mm.

In a single book, glue strip cannot be narrower than 2 mm or wider than 5 mm.

Glue strip should be evenly distributed on the front and back of the book (shift limit in the position according to p. 8 Fold and 10.3. Image position on the page).

Strip width is measured on the spine of ready product after removal of outside pages (front and back).

ACCEPTABLE	NOT ACCEPTABLE
$2 \text{ mm} \leq B_m \leq 5 \text{ mm}$	$B_m < 2 \text{ mm}; B_m > 5 \text{ mm}$



Tolerances for the width of the strip

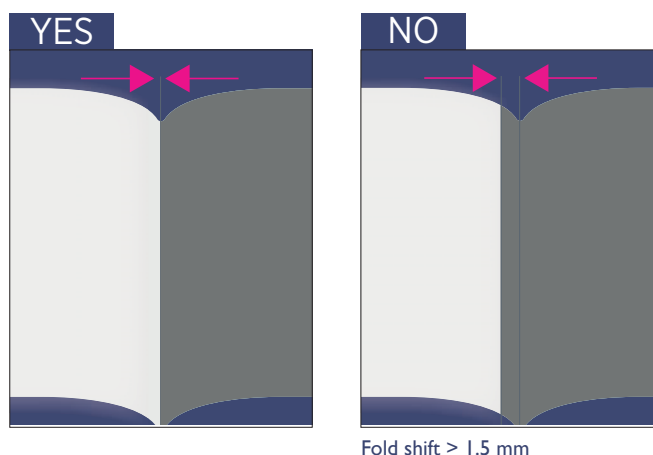


Pages fall out

8. FOLD

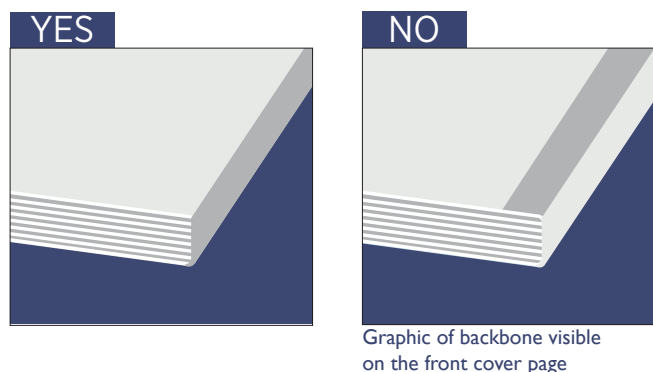
Fold shift out of specified fold line in horizontal, vertical and diagonal position shall be within the acceptable tolerance range.

ACCEPTABLE	NOT ACCEPTABLE
Fold shift $\leq 1.5 \text{ mm}$	Fold shift $> 1.5 \text{ mm}$



Fold shift $> 1.5 \text{ mm}$

The same tolerance is used for spine position shift in PB and SS products but the graphic of booklet backbone cannot be visible on the front cover page (if needed the tolerance must be reduced to 1mm).



Graphic of backbone visible on the front cover page

9. BINDING

9.1. COLLATION

The description of the book content is specified in the Job Ticket and the Collation List is considered as the main guideline. The book must have the collation, position and the orientation of all forms and additional elements (inserts, onserts, gadgets etc.) conforming to the guideline.

ACCEPTABLE	NOT ACCEPTABLE
Correct collation	Incorrect collation

9.2. OPENING

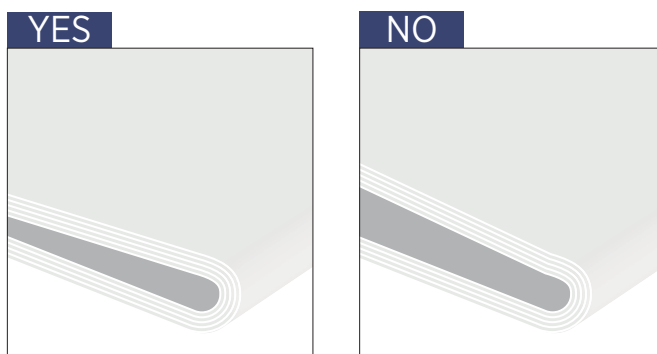
Booklet opening measured at the widest point between the inside shall be within the acceptable tolerance range.

ACCEPTABLE	NOT ACCEPTABLE
For format A4 $\leq 5 \text{ mm}$	For format A4 $> 5 \text{ mm}$
For format A5 $\leq 10 \text{ mm}$	For format A5 $> 10 \text{ mm}$
For format A6 $\leq 15 \text{ mm}$	For format A6 $> 15 \text{ mm}$
For format A7 $\leq 20 \text{ mm}$	For format A7 $> 20 \text{ mm}$

For format A8 ≤ 25 mm	For format A8 > 25 mm
For format A9 ≤ 30 mm	For format A9 > 30 mm

The material must be placed on an even level when measuring.

The spring effect shall be measured within 1 minute after leaving the box.



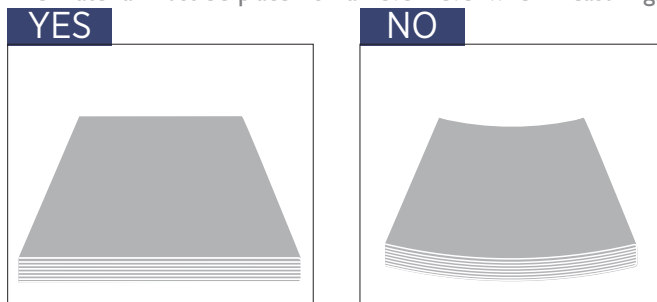
For format A6 opening > 15 mm

9.3. DEFORMATION

Booklet deformation measured between flat surface and the bottom of the block shall be within the acceptable tolerance range.

ACCEPTABLE	NOT ACCEPTABLE
Deformation ≤ 5 mm	Deformation > 5 mm

The material must be placed on an even level when measuring.



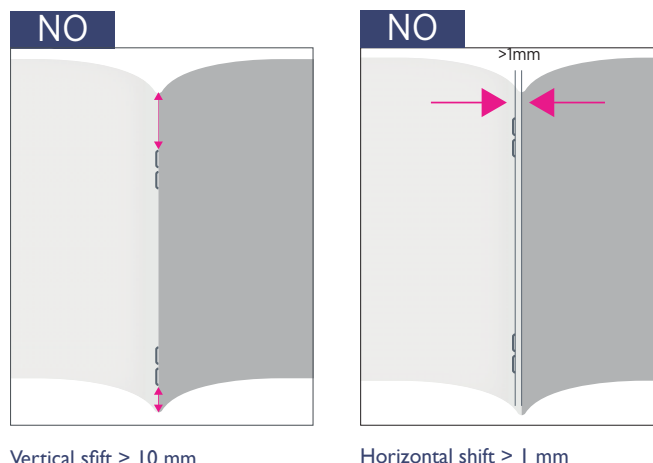
Deformation > 5 mm

9.4. STITCHING QUALITY

Stitches position

Number of staples is given in product specification. Stitches are put symmetrically on the backbone.

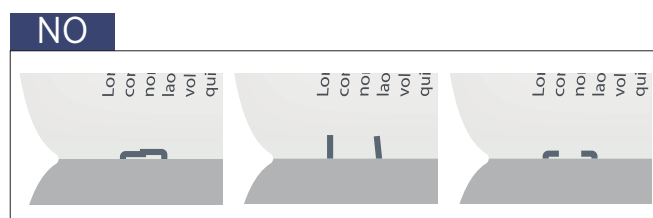
The stitches shall neither shift along the backbone towards the edges nor rollover onto the back or front of the book. The tolerances for both vertical and horizontal move are as follows:



ACCEPTABLE	NOT ACCEPTABLE
Vertical shift ≤ 10 mm	Vertical shift > 10 mm
Horizontal shift ≤ 1 mm	Horizontal shift > 1 mm

Additional STITCHING nonconformity symptoms:

- + The closure too strong – cutting the paper
- + The closure too weak – loosening the pages
- + The stitching legs overlapping or the legs' ending distance are more than 3mm
- + The stitching leg length is < 2mm
- + Stitch leg is partly open in comparison to the backbone (more than 0.5mm)



Incorrect stitch

9.5. STITCHING DURABILITY

Instrumental method

The durability might be verified with an Instrument /device called the pull-tester; that quantifies the strength needed to pull out the page from the book.

The stitching durability is verified with the Instrument in a following way:

- + Using the pull-tester to pull out two central pages from the book,
- + Divide the obtained result by the number of the stitches in the book.

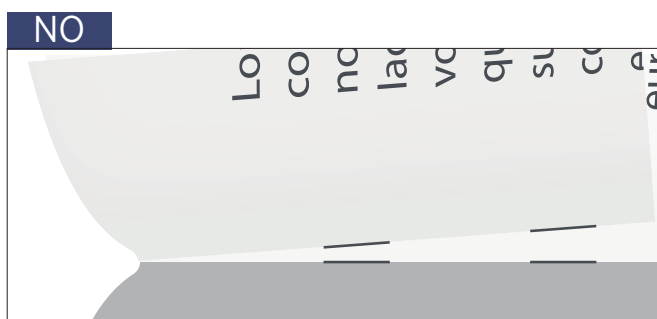
ACCEPTABLE	NOT ACCEPTABLE
Result ≥ 2.5 N/stitch	Result < 2.5 N/stitch

Manual method

The manual method is to be applied in the absence of a pull-tester.

The durability is verified manually in a following way:

- + Hold the book by the two central pages and shake it with a moderate strength,
- + Durability is considered as appropriate if the two central pages can bear the weight of the whole book even if shaken with a moderate strength.



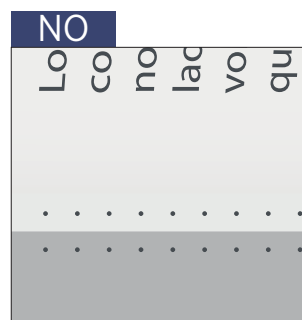
Falling pages

9.6. PERFECT BOUND QUALITY

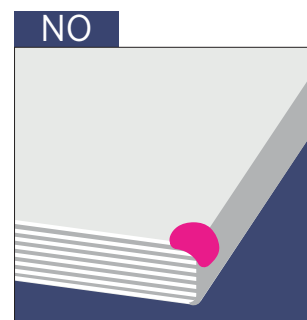
The perfect bound book shall possess a properly done backbone as well as side gluing. These together constitute the basic conditions for the fulfillment of the durability requirements.

Additional PERFECT BOUND nonconformity symptoms:

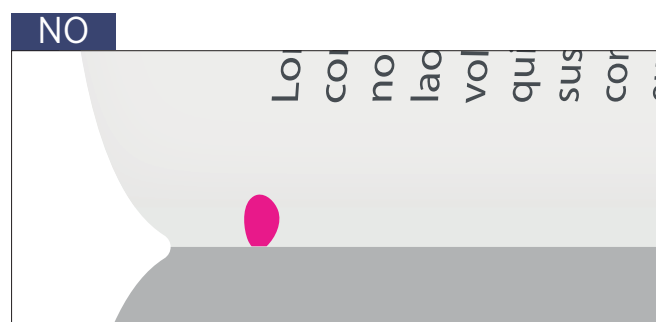
- + The glue layer is not evenly spread onto the backbone or the side strip (visible after the cover tear-off)
- + Glue thickness should be between 0.6 – 1mm.
- + The glue flows out on the page – glue drops are visible on the page more than 1mm.
- + Lack of cross seal.
- + The cross seal is too wide.



Lack of cross seal



Glue flows out on the backbone



Glue flows out on the page > 1 mm

9.7. PERFECT BOUND DURABILITY

Instrumental method

The durability might be verified with an Instrument /device called the pull-tester; that quantifies the strength needed to pull out the page from the book.

The perfect bound durability is verified with the Instrument in a following way:

- + Using the pull-tester: pull out from the book 3 evenly spread pages, if the backbone thickness of the book ≤ 1 cm,
- + Using the pull-tester: pull out from the book 5 evenly spread pages, if the backbone thickness of the book > 1 cm,
- + The first and the last page of the book shall be excluded from pulling if the book has side glue
- + Divide the obtained result by the backbone length in cm.

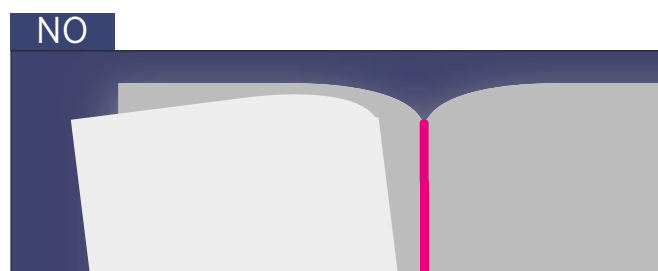
ACCEPTABLE	NOT ACCEPTABLE
Pull result ≥ 3.5 N/cm	Pull result < 3.5 N/cm
Average Pull result ≥ 4.5 N/cm	Average Pull result < 4.5 N/cm

Manual method

The manual method is to be applied in the absence of a pull-tester.

The durability is verified manually in a following way:

- + Hold the book by the selected single page and shake it with a moderate strength,
- + Durability is considered as appropriate if the page can bear the weight of the whole book even if shaken with a moderate strength.
- + Repeat the shaking for few evenly spread single pages (the first and the last page of the book shall be excluded from shaking if the book has side glue).



Falling pages

10. GEOMETRY

10.1. TRIM SIZE

The trim size is understood as the physical dimensions of the book (x: horizontal, y: vertical) given in millimeters and specified in the product specification.

Format is always measured in millimeters. If the production files defined the product format in inches, inches will be converted to full millimeters (1 inch = 25.3995 mm)

When the Format OK book is signed, it should be the trim size guideline for the operator and it is treated as the reference for the rest of the count.

The trim size of the Format OK book may deviate from the target value only in case if it is crucial for keeping the image within the net size of the page. It is acceptable within the tolerance range given below.

The trim size within the count may deviate from the target Format OK value due to the natural process variability. It is acceptable within the tolerance range given below.

	ACCEPTABLE	NOT ACCEPTABLE
For trim and folded products	Size decrease \leq 1.5 mm	Size decrease $>$ 1.5 mm Or Size increase
For SS and PB products	Size decrease \leq 1.5 mm Size increase \leq 1.5 mm	Size decrease $>$ 1.5 mm Or Size increase $>$ 1.5 mm

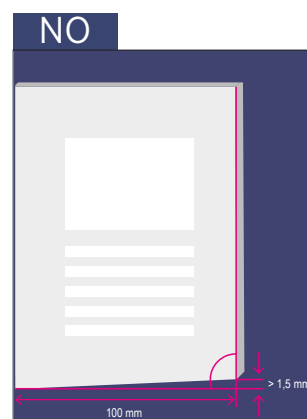


Cut text. Size decrease $>$ 1.5 mm

10.2. SQUARENESS

The trimmed, perpendicular product edges shall create a 90-degree angle. The squareness deviation is measured with the reference to the backbone. The deviation shall not exceed the tolerance range given below and shall never be greater than 2mm over the longer edge of the book.

ACCEPTABLE	NOT ACCEPTABLE
Skew \leq 1mm over 100mm	Skew $>$ 1mm over 100mm



Skew $>$ 1 mm over 100 mm

10.3. IMAGE POSITION ON THE PAGE

The image position of the net size of the page - specified / visible in the production file delivered by the Customer - is considered as the main guideline. The proof, plotter printout or dummy book prepared based on this production file is also considered as the image position guideline.

The inappropriate image position may results mainly from the folding or cutting failures and is visible either as vertical/horizontal shift or skew of the image on the page.

The shift or skew of the image on the page is commonly measured with the characteristic image elements (e.g. margins, viniets) with reference to backbone.

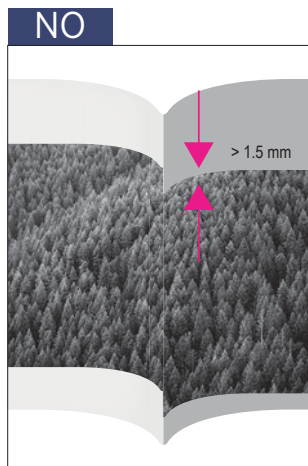
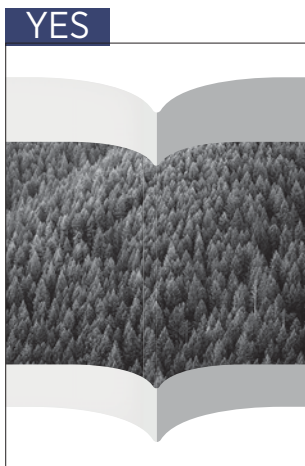
The shift or skew of the image on the page shall not exceed the tolerance range given below.

ACCEPTABLE	NOT ACCEPTABLE
Shift ≤ 1.5 mm*	Shift > 1.5 mm*
Skew ≤ 1 mm over 100 mm and no more than 2 mm over the backbone	Skew > 1 mm over 100 mm or more than 2 mm over the backbone

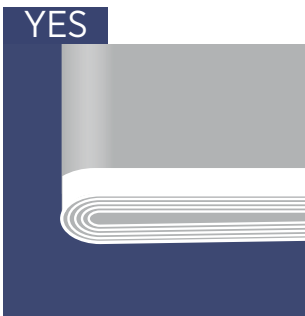
*) White lines at the edges of colorful cover pages are not allowed.
The tolerance for white lines at the edges of colorful body pages is 0.5mm.



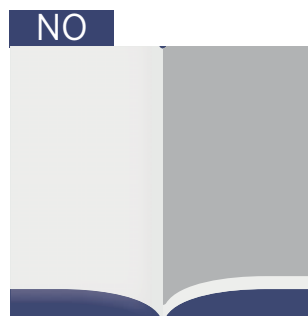
Shift > 1.5 mm



Shift > 1.5 mm on each page



White line on the cover



White line on body page
 > 0.5 mm

11. MECHANICAL NONCONFORMITIES

Tolerance range for mechanical nonconformities shows the table below.

NONCONFORMITIES	ASSESSMENT METHOD	PLACE	ACCEPTABLE	NOTACCEPTABLE
TEARS, CRACKS, CHIPS	The nonconformity length measurement and counting the nonconformities	LOGO	n = 0	n > 0
		Pages with LOGO, backbone and pages without LOGO	Sum length <= 3 mm, n=2	Sum length > 3 mm, n> 2
Knife scratches	Quantity	LOGO	n = 0	n > 0
		Pages with LOGO, backbone and pages without LOGO	n <= 3	n > 3
CRUMPLES, BENDS	The nonconformity length measurement and counting the nonconformities	LOGO	n = 0	n > 0
		Pages with LOGO, backbone	Length <= 10 mm, n=2	Length > 10 mm, n>2
		Pages without LOGO	Length <= 30 mm, n=2	Length > 30 mm, n>2
WRINKLE	The nonconformity length measurement and counting the nonconformities	LOGO and pages with LOGO	n = 0	n > 0
		Backbone	Length <= 10 mm, n=2	Length > 10 mm, n>2
		Pages without LOGO	Length <= 30 mm, n=2	Length > 30 mm, n>2
Holes, DOGS EARS	Checking presence	LOGO, pages with LOGO, backbone and pages without LOGO	n = 0	n > 0

* n – means acceptable quantity of one type of nonconformity per one book (text must be legible in all cases)



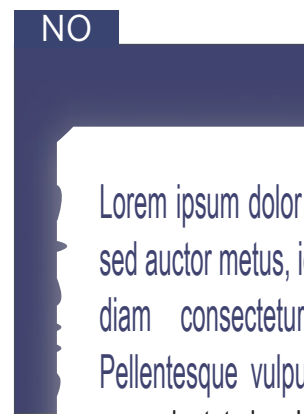
Length of both tears > 3 mm



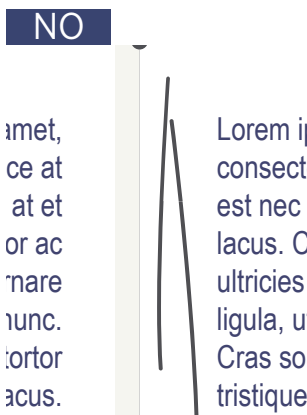
Crack > 3 mm



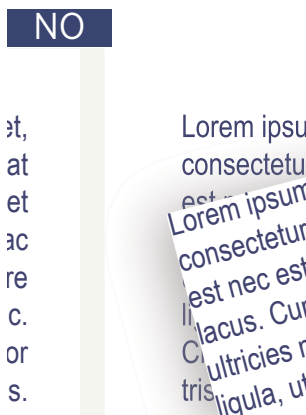
Dog Ears



Torn cutting edges



Wrinkle on body page > 30 mm



Bends on the body page > 30 mm

12. OTHER ELEMENTS OF THE FINISHING PROCESS

This section specifies the quality guidelines for the set of most often ordered / appearing additional finishing elements. The quality parameters of any other finishing options not regulated in this section shall be separately agreed between the Customer and Walstead (see the section: Non standard production).

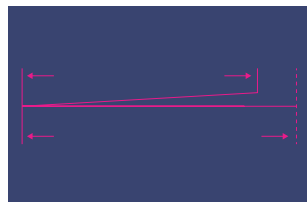
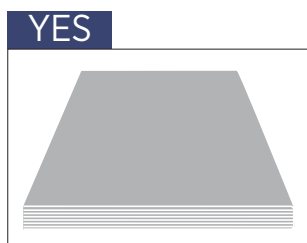
12.1. FOLD

NOTE! Following guidelines refer to the booklets broken in folding process as the Final Product.

Fold shift out of specified fold line in horizontal, vertical and diagonal position shall be within the acceptable tolerance range.

ACCEPTABLE	NOT ACCEPTABLE
Fold shift <= 3 mm	Fold shift > 3mm

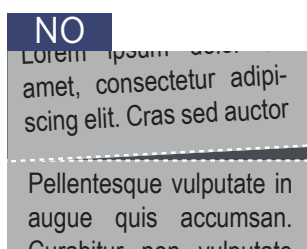
The material must be placed on an even level when measuring.



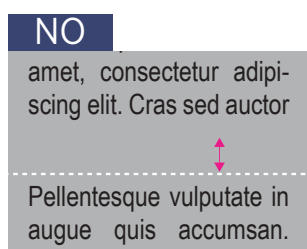
12.2. PERFORATION

PERFORATION nonconformity symptoms:

- + Shift from the specified target place by > 1.5 mm,
- + Lack of ability to tear off the element along the perforation line,
- + The perforation is already torn off.



Perforation is torn off

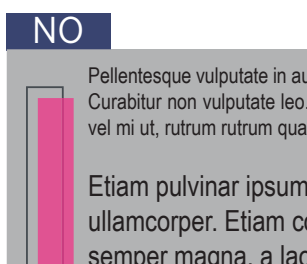
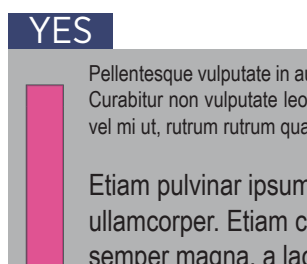


Shift from the specified target place > 1.5 mm

12.3. REMOIST GLUE

REMOIST GLUE nonconformity symptoms:

- + Shift from the specified target place by > 3 mm
- + Lack of the glue strip continuity – holes, chips, missing in glue strip
- + The page put on the page with remoist glue does not cling to this page after moistening
- + The page put on the page with remoist glue cling to this page without moistening

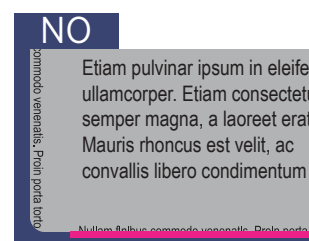
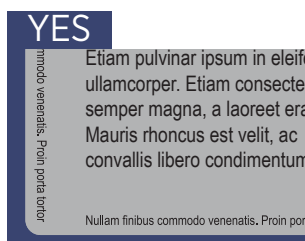


Shift > 3 mm

12.4. DIE CUT

DIE CUT nonconformity symptoms:

- + Shift from the specified target place by > 1.5 mm
- + The element is not fully cut,
- + Rough cutting edges.



Shift > 1.5 mm

12.5. INSERTING

INSERTING nonconformity symptoms:

- + Lack or excess of the inserts,
- + Damaged inserts,
- + The insert location in the book is different than specified,
- + The insert position and/or orientation on page is different than specified,
- + Shift from the specified target place by > 5 mm (for inserts with precise position guidelines),
- + Shift from the specified target place by > 10 mm (for inserts with rough position guidelines),
- + The insert attachment method is different than specified,
- + Not sufficient durability of the insert attachment,
- + Page /paper damage due to the improper inserting.

12.6. POLLYBAGING

POLLYBAGING nonconformity symptoms:

- + The seam is not fully holding,
- + Foil damages.

13. NON STANDARD PRODUCTION

The non standard production means every product or service that either is not regulated by this document or special Customer requirements exceed the tolerance mentioned in this specification.

The non-standard requirements shall always be discussed and agreed separately between the customer and Walstead.

The agreed standards shall be based on Walstead experience and/or performed tests and shall be clearly stated in the contract or any other quality document signed by the customer and Walstead prior to production.

14. FINAL QUALITY INSPECTION

While determining the conformity of the product with the requirements based on the rules set by the ISO standard 2859-1:1989 Sampling Plans indexed by the acceptable quality levels (AQL) for lot-by-lot inspection.

The quality of the delivered product is checked through the use of Final Control on the level $AQL=0.65$.

Final Control is organized in accordance with the guidelines of Polish Standard PN-ISO 2859-1+AC1:1999

“Inspection plans based on the acceptance quality level (AQL) used in the inspection lot after lot.”

15. PACKAGING AND SHIPPING

The packaging description specified in the Job Ticket is considered as the main guideline. In the absence of a special Customer requirement Walstead PSG Platform Team applies own internal packaging standards.

The packaging method shall be adjusted to the product characteristics in order to ensure the protection against potential damages while storing and through the transportation. The packed pallet shall be marked in the way that is enabling the product identification.



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