

1.0 Purpose and validity of these specifications

These specifications define the framework for the exchange of data and data carriers with respective customers / suppliers. Adhering to these specifications / recommendations ensures the smooth and error-free exchange of data and data carriers. These specifications are valid for the exchange of data and data carriers with customers / suppliers of the print shop CPC Haferkamp GmbH & Co. KG, 26131 Oldenburg, Schlagbaumweg 25 and the print shop CPC Haferkamp GmbH, Stellmacherstraße 25, 26506 Norden. Both companies are hereinafter jointly referred to as "CPC Haferkamp".

Note: Internally distributed copies of this document are subject to a change service by the Digital Prepress Department. Specifications distributed in other places are **not** subject to the change service (e.g. customer copies).

2.0 Technical support

If customers / suppliers have questions concerning the acceptance, processing or return of data / data carriers, they can contact the responsible staff member in Sales or in the Digital Prepress Department:

CPC Haferkamp GmbH & Co. KG
Schlagbaumweg 25
26131 Oldenburg
Telephone: +49 (0) 441 95 55 0
Fax: +49 (0) 441 95 55 119
E-mail: druckerei@haferkamp.de
Internet: www.haferkamp.de

Data delivery

Klaus Tegtmeier
Telephone: +49 (0) 441 95 55 470
Fax: +49 (0) 441 95 55 419
FTS: fts.haferkamp.de (access information on request)
E-mail: preflight@haferkamp.de

Prepress

Manfred Höll
Tel: +49 (0) 441 95 55 410
E-mail: manfred.hoell@haferkamp.de

Sven Hanken

Tel: +49 (0) 441 95 55 473
E-mail: sven.hanken@haferkamp.de

Colour management

Klaus Helbig
Tel: +49 (0) 441 95 55 480
E-mail: klaus.helbig@haferkamp.de

3.0 Data delivery

Our data workflow is standardised and processes **composite PDF/X-1a**, which you can generate yourself by using Postscript und Acrobat Distiller. For each data delivery, please add a completed **Checklist for Data Delivery**. The exact positioning of the print-ready PDFs is described in the **Sample Sheet** on Page 7.

3.1 Open data

Open data are only accepted by the print shop CPC Haferkamp in exceptional cases. When transferring open data, please add a completed **Checklist for Data Delivery** to let us know which application program and version was used.

Open formats generally have to be processed before production. This involves additional production times.

Please make sure that your files are provided with status, sample and colour information. Avoid confusing or too long file names, "umlauts" or special characters.

a) **This_way_is_right_4c**

b) **This/way.is:wrong!**

At CPC Haferkamp, delivered data are checked to see whether they are appropriate for further processing and whether they correspond to the attached proofs.

3.2 Job information

Add a sample of the last version of the design in the original size that is marked as a binding colour sample. It should contain all information, such as programs used (please state version), fonts used, images, eps data, screen settings, if required, and exact information concerning the desired colours (4c, Pantone, HKS). Each file must have a unique file name. Please mark the data carriers and the associated packaging with the company and theme name as well the item number.

The data carriers must also be labelled with the folder name, order name and work date. The print job for a product must fit the trimmed, final format. To ensure that the trimming can be flexibly chosen, the print must bleed by least 2 mm over the final format. The job must be centred in the document.

To minimise the risk of white edges due to production-related tolerances, a trap of 0.04 mm has to be provided. Barcodes must be created according to the common specifications, e.g. the size of the barcode as well as the white field must be considered. **The minimum size of the barcode is SC 0**, the reduction is 0.02 mm.

3.3 Application programs

- Freehand
- Illustrator
- Art Pro
- InDesign
- Quark XPress
- Photoshop-compatible formats

3.4 EPS files

EPS files may cause problems (e.g. generic EPS from QuarkXPress or Freehand). Fonts are not stored with an EPS file. We recommend converting the fonts used into graphs or paths when storing the file. It is essential that the setting "Postscript - deactivate colour management" should be deactivated when saving EPS files from Photoshop.

3.5 Image resolution

Please use the following resolutions to ensure good quality and to avoid unnecessary computing time during the processing of the data in RIP:

Colour and grey-level images	405 dpi
Line images	1200 dpi
Frequency modulated 25 µmin.	405 dpi

If available, please add the original Photoshop file with levels. Avoid high magnification in the layout programs. It leads to a loss of quality

3.6 Image storage format

We require the images unrepeated as "TIFF" or "EPS" file, 8-bit encoding, no screen angle in 4C, **not** RGB, loss-free compression (e.g. LZW / ZIP).

***Always provide the image data with embedded ICC profiles (see Point 6 "ICC profiles").
No DCS images, as they cannot be processed in a composite PDF workflow!***

3.7 Colour space

We prefer CMYK for the colour space for the image data. The appropriate ICC profile has to be embedded in your data set. Please take note of Point 6 "ICC profiles". The following parameters must be considered when you deliver the images in CMYK:

First printing tone	2%
Last printing tone	98%
Max. total colour, paper	330%
Max. total colour, foil	300%

3.8 Image data compression

Only use loss-free compression methods when saving images (e.g. LZW or ZIP)

3.9 Colours

When your product has to be printed with special colours, they must be defined accordingly in your document as full tone colours. Alternatively, when printing in process colours (CMYK), set the colour as process colour / four-colour separation. **Delete all unused colours from the document.** Do not use RGB colours.

3.10 Trapping

If trapping is not provided, it is automatically calculated in our workflow. The size of the trap / undercutting is 0.05 mm

3.11 Fonts and lines

Please take note of the following parameters when designing your documents:

Negative lines at least	0.15 mm
Black lines at least	0.10 mm
Negative text at least	7 pt (Helvetica)
Black text at least	5 pt (Helvetica)

Hair lines should be avoided.

For all fonts that do not originate in German- or English-speaking countries, we require an additional file in which the fonts are converted to vectors. It can otherwise not be guaranteed that all symbols and characters are represented correctly.

Printing text on foil

Due to their material properties, register problems can be expected when printing on foil. Fonts consisting of several colours should be avoided. We therefore recommend the use of **special colours** for multi-coloured fonts.

3.12 Bleed

Elements / images that extend to the edge of the format must exceed the final format by at least 2 mm, i.e. extend into the bleed. These 2 mm are a safety margin for a possible difference in cutting. The distance from the text to the net end-format is 2 mm all around.

3.13 Cutting paths

When you work with an EPS with cutting paths, please set the curve approximation to 0.5 pixels, otherwise PostScript errors might occur, which might cause extensive fault searches.

4.0 Bent labels / shrink foils (ArtPro Power Warp)

Labels are bent with the ArtPro software.

The following points must be considered to achieve better quality:

- Use vectors where possible (aliasing)
- Design gradients in the layout program, not in Photoshop (aliasing)
- Grey levels –TIFF and bitmap resolution at least 1000 dpi (aliasing)
- Resolution of the image data 600 dpi (aliasing)
- Add planes used in Photoshop as a PSD file, if applicable

5.0 Data carrier

CD for Mac or PC

DVD for Mac or PC

Please always format your data carriers for MAC and PC.

Please add a printed table of contents to all your data carriers.

When transferring print data and colour proofs (digital proof or press proof), please ensure that they are complete. Use the standard **Checklist** provided by CPC Haferkamp.

6.0 ICC - Profile

ICC profile source information concerning the way an image file was created is required for colour-true and problem-free processing of image data. Preferably, CMYK data should be provided. If you do not use ISO-ICC profiles to compile your CMYK data, we need additional information concerning the ICC profile used by you. This information states for which print process the data were generated, and allows us to determine whether we should accept the data delivered 1:1 for our print process or whether we have to convert them. Please state the ICC profiles used at the appropriate point in the checklist.

The print shop CPC Haferkamp recommends the ISO-ICC profiles, as they were tested in our production. Our standard ISO profiles are available from the print shop CPC Haferkamp or at <http://www.eci.org>. In the download area, you will find the ECI_OFFSET_2007 with the appropriate profiles.

7.0 Digital proofing devices

Print templates can be produced on the following devices:

- Kodak Approval
- Epson 7880

7.1 Digital proofs

We require a true-colour proof for coordinating the print production. CPC Haferkamp always produces a digital proof to check the data or to have them checked by the customer. The following parameter settings are required to ensure that the print result corresponds to the specifications:

Ugra/FOGRA media wedge V 2.0

The digital proof must contain an Ugra/FOGRA media wedge V 2.0-CMYK (if possible, the AT layout, see figure). The colour deviation between the measured, actual values of the proofed media wedge and the target values of the Ugra/FOGRA must be within the defined tolerance. Information concerning the tolerances, tone value increases and CIE L*a*b* values are provided in the Ugra/FOGRA Excel table (the Excel table is supplied with the media wedge).



ICC profiles are already available free of charge for the following paper types. They are provided at <http://www.eci.org> or on request from the CPC Haferkamp Digital Prepress Department.

ISO-ICC profile	Definition	Paper type	Total colour application
ISOcoated_v2_eci	Paper	Paper type 1/2	330%
ISOcoated_2_300_eci	Foil	Foil	300%

Specification of production parameters

The footer line of the digital proof must contain the **file name, date, rendering intent and the source and target profile used**. If no standard ISO-ICC profile was used, information concerning the profile used must be provided (see Point 6 "ICC profiles").

If the specifications above are not adhered to, the print result may deviate from the colour proof.

7.2 Release of PDF

PDFs for print release are handed with our web-based **Dialogue Softproof**. You only need a PC linked to the Internet with a Java application. As soon as a PDF ready for release is available in Dialogue, we automatically send you an e-mail with the access data required.

8.0 Print

Tone values, tone value increase during printing (%)

Paper type 1st and 2nd, foil

40%	9 – 13 – 17
50%	10 – 14 – 18
70%	10 – 13 – 16
75%	9 – 12 – 15
80%	8 – 11 – 14

The values shown relate to the tone values for a positive copy, 60/70 grid. The differences in tone values for # may not be greater than 5% (maximum spread). Black is higher by 3% in the middle tone and by 2% in the deep tone. The CIE L*a*b* values for offset print are provided in the following table:

Colour values of the primary colours measured on the printing surface

Paper type 1 and 2

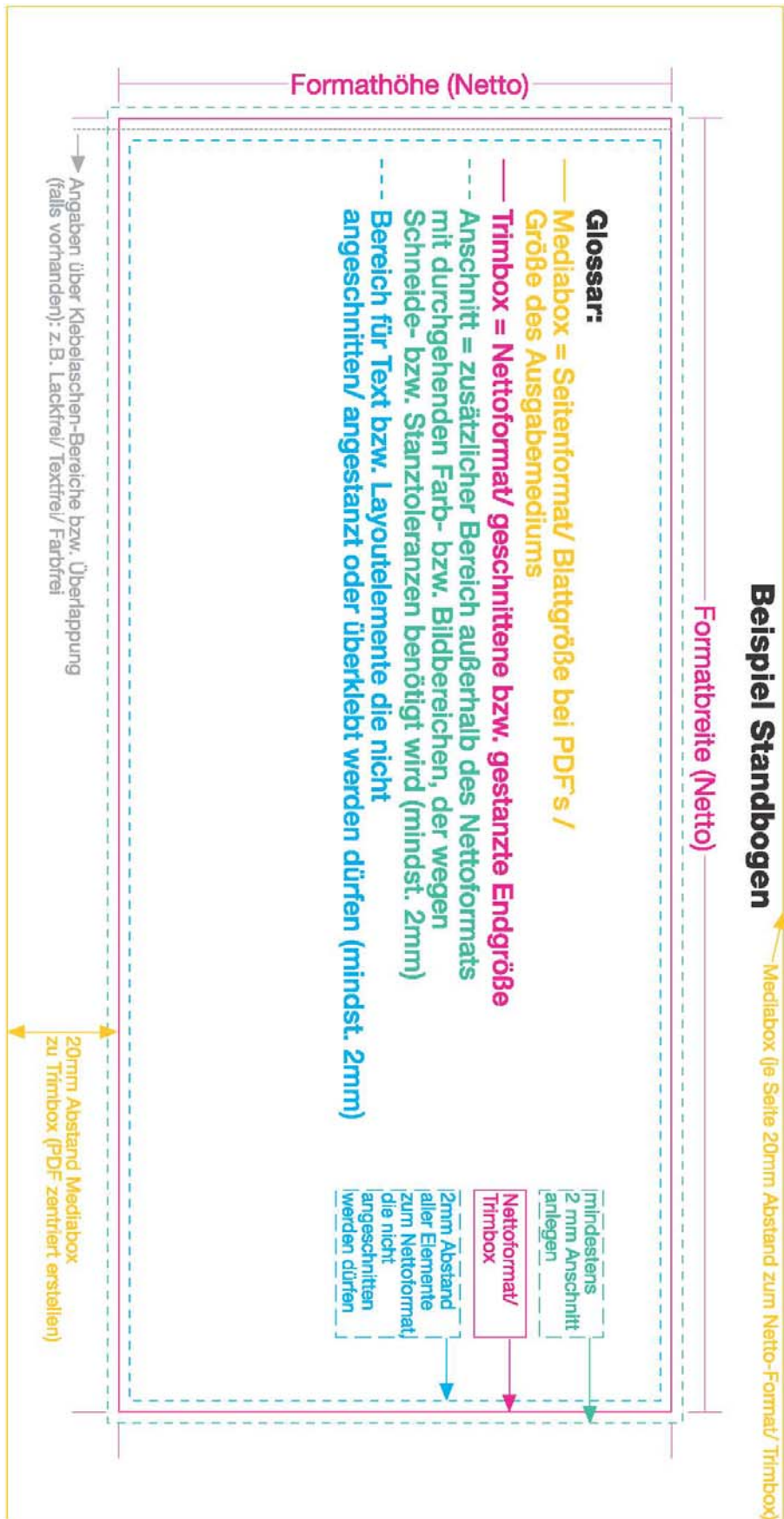
	<u>L* / a* / b*</u>
Black	16 / 0 / 0
Cyan	55 / -37 / -50
Magenta	48 / 74 / -3
Yellow	89 / -5 / 93

9.0 Return of the data

Data that have been processed in the Haferkamp print shop can be handed over in the following ways:

- CD / DVD (format as agreed ISO or Mac)
- FTS (access data as agreed)

The data are returned in original form or in the file format of the program in which they have last been processed. The software with which a file is processed, is determined by the Haferkamp staff member responsible, if not otherwise agreed upon with the customer. If the customer has special requirements with regard to the data format of the returned files, they must be coordinated with the responsible department in the company. In spite of various protective measures, we cannot be held responsible for damage suffered by the customer due to virus-infected data.



Specification print-ready PDF – Offset -

Data acceptance

CD / DVD

FTS: fts.haferkamp.de (access data on request)

E-mail: preflight@haferkamp.de

Print method

Offset (up to 8 colours + varnish)

Print order

K, C, M, Y, special colours ...

PDF

PDF/X-1a

Images and fonts embedded

Image resolutions: 405 dpi

Line resolution: min. 1200 dpi

Template contour in special colour "Format", overprinting

Specify special colours used as follows:

PANTONE 186 C

Specify special colour white used as follows:

SF_White

Channel *Black (K)*, overprinting

Exactly centre PDF horizontally and vertically

Store PDF as composite (not separated)

Bleed

2 mm all round

Distance from text to net end-format min. 2 mm

Font size

Min. 5 pt. positive, 7 pt. negative (Helvetica)

Line thickness

Min. 0.10 mm positive, 0.15 mm negative

Barcode

Min. size SC 0, reduction 0.02 mm

Leading & trailing edge of white field acc. to GS1 + 1 mm
left and right

Trap / reduction

0.05 mm

Info !!!

All traps, reductions and colour values must be contained in PDF. Corrections may have to be performed by the customers. After such corrections, a new PDF file has to be provided.

Specifications for prepress Oldenburg – Offset -

Data acceptance

CD / DVD

FTS: fts.haferkamp.de (access data on request)

E-mail: preflight@haferkamp.de

Print method

Offset (up to 8 colours + lacquer)

Print order

K, C, M, Y, special colours ...

Programme

Freehand

Illustrator

ArtPro

QuarkXPress

InDesign

Photoshop

Please state software version!

Bleed

2 mm all around

Distance from text to net end-format min. 2 mm

Font size

Min. 5 pt. positive, 7 pt. negative (Helvetica)

Line thickness

Min. 0.10 mm positive, 0.15 mm negative

Barcode

Min. size SC 0, reduction 0.02 mm

Leading & trailing edge of white field acc. to GS1 + 1mm
left and right

Trap / reduction

0.05 mm

Screen

Point size: min. 2%, max. 98%

Point shape: Elliptic Dot

Screen width: 70er / 175 L / inch

Staccato 25 µ (frequency modulated)

Colour management

Our proofing systems (Kodak Approval & Epson 7600) are adjusted to the respective print method, the print surface as well as the respective reproduction method that comes closest to a true-colour proof.

ICC profile paper: ISOcoated_v2_eci, Foil: ISOcoated_v2_300_eci

Max. colour applic.

Paper 330 % Foil 300%



Schlagbaumweg 25
D 26131 Oldenburg
Tel: +49 (0) 441 95 55 410
Fax: +49 (0) 441 95 55 419

Checklist for data delivery

Please add this checklist to your data or fax it to +49 (0) 441 95 55 419 if your data are submitted in electronic form

Date of data dispatch:

Contact person:

Telephone extension:

1. Object description

Title:

Contact person for CPC Haferkamp sales:

2. Documentation

The text and status of this printing proof / colour sample from test issue, with the Ugra/FOGRA-media wedge V2.0-CMYK will be binding

- attached not attached to follow
 Printing proof Colour sample from test issue
 Digital proof with Ugra/FOGRA media wedge V2.0-CMYK.

Note on digital proof: Compiled with the aid of the ICC Offset Profile by ECI according to ISO 12647-2 (ISO-ICC-Profile). Download of ISO-ICC profile at www.eci.org. Here you will find the corresponding profiles in the package **ECI_OFFSET_2007**.

3. Data and data carriers

Operating system

MAC-OS: Version:

Data carrier for complete works (ISO-formatted)

CD-ROM

DVD

Table of contents

included as a print-out

File formats

Illustrator Vers.

Freehand Vers.

Indesign Vers.

ArtProVers.

Data compression

Print PDF uncompressed

PS compressed as Archive

Data download / upload

The data are available from the FTS Haferkamp (Login, if not known, order from preflight@haferkamp.de)

Data download from server

http://

Log-in:

Password:

4. Further information

Each data medium must be provided with a name, address, telephone number and order description.

5. Contact person for data deliveries

Mr Tegtmeier Telephone (0441) 95 55 470

eMail: preflight@haferkamp.de

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