



# Pre-press Manual!

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Manual!**

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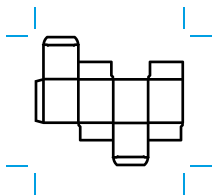
# Technical requirements for production data

GRAFOBAL BOHEMIA s. r. o. provides its customers with full graphic and DTP support for successful order execution.

The aim is to mutually strive to achieve the highest quality final products at the most efficient costs. To this end, the following manual has been created to show how best to prepare the print and production data. **Clients placing orders and graphic and DTP studios are requested to respect and comply with the below criteria and procedures for the input data delivered for production.** This will significantly speed up the processing of your order and help eliminate any complications during production.

Of course, **our specialists remain at your disposal for any expert consultations.**

**All delivered data undergoes an internal DTP check** focusing especially on the correct positioning of the graphic work in the required cutting die, compliance with the required colouring and any required effects for the final packaging refinement. It almost goes without saying that standard pre-press inspection tasks are also conducted.



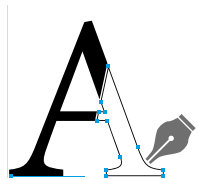
## Dimensions

All **print materials**, graphics, must be supplied **at a scale of 1:1**, e.g., in the actual size of the product.



## Links

The supplied supporting material must include all linked data contained in the graphics file. Either directly inserted or delivered as an external link in a separate folder.



## Texts and fonts

It is recommended to convert **texts into objects** for all texts. This makes the text uneditable, turns it into objects and prevents text deformation or text changes due to missing fonts. This is the recommended course of action.

If, for some reason, it is necessary to leave the text editable, for example, in order to allow for additional text editing, it is necessary to provide all fonts used with the data. In such case, the **licence terms for the font used** must be respected

[ We also recommend converting texts into objects for any accompanying texts, captions and comments on graphics. This will make it easier to process your files. ]

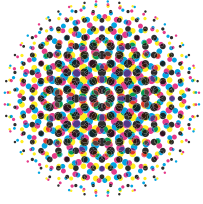


## Code number series

When sending numerical lists to apply winning codes, the lists must be provided in the (.xls) format, without codes containing the digit '0' or the letter 'O'. This prevents possible confusion when generating codes in the printing application.

# Basic requirements for graphics

Before creating your graphic works, we recommend that you review the technological restrictions (downloadable at [www.grafobal.cz/en/Contacts](http://www.grafobal.cz/en/Contacts) 'Downloadables – Technical and Delivery Terms'). This will ensure that the final packaging will look exactly as you want it to look. Your satisfaction is our goal.



## Colour scheme

We use offset printing on sheets with up to **6 colours per pass** using conventional or UV colours, including the option to print in white.

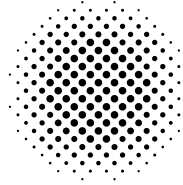
All supplied data must be within the **CMYK** or **Pantone®** colour space. A combination of CMYK and Pantone®, including grids and gradients, is also acceptable. Other colour spaces, such as RGB, are completely unacceptable.

Upon agreement, we may use a special colour in the graphic design specified directly by the client placing the order, which we will prepare for the printing job based on the specifications supplied in our digitally controlled colour mixing studio. In such case the colour must be defined as a separate spot colour with the identification in its name.

**The maximum colour coverage is 330% in the print register.** The dot gain is standard.

Caption colours must have a separate spot technical colour set with a corresponding caption.

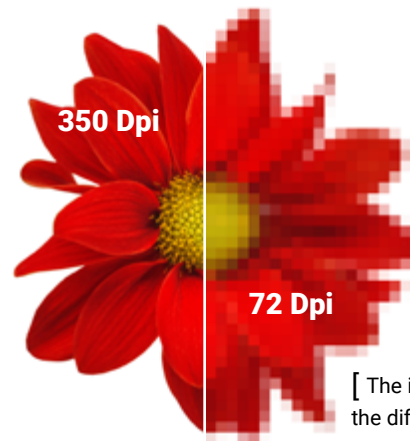
[ The requested colour design of the document should match the order. We recommend adding captions for the colours used in the document. ]



## Bitmaps

The minimum required resolution for bitmaps is **300 dpi for colour bitmaps and 1200 dpi for monochrome images**. The lines per inch density used is 175 Lpi/70 Lpc..

[ If resources permit, we recommend using a dots per inch of 350 dpi for colour images and 2,400 dpi for monochrome images. ]



[ The illustration shows the difference between a bitmap with the desired resolution setting and a low resolution bitmap. A clear fragmentation is also noticeable in the final print. ]

Avoid 'artificially' increasing the dpi value by simply converting a lower dpi image to the desired values while maintaining the original object size. While the resulting image will meet the required values, the quality of the visualisation will remain at its original level, and sharpness and delineation will be completely lost.

We recommend rasterisation for vector effects, transitions, transparencies and similar elements. This will give you 100% control over further reproductions of the images.

[ CAUTION: Objects rasterised in this way can no longer be edited. ]

**Avoid rasterising small texts and vectors, such as complex logos, as this will cause line sharpness loss.**

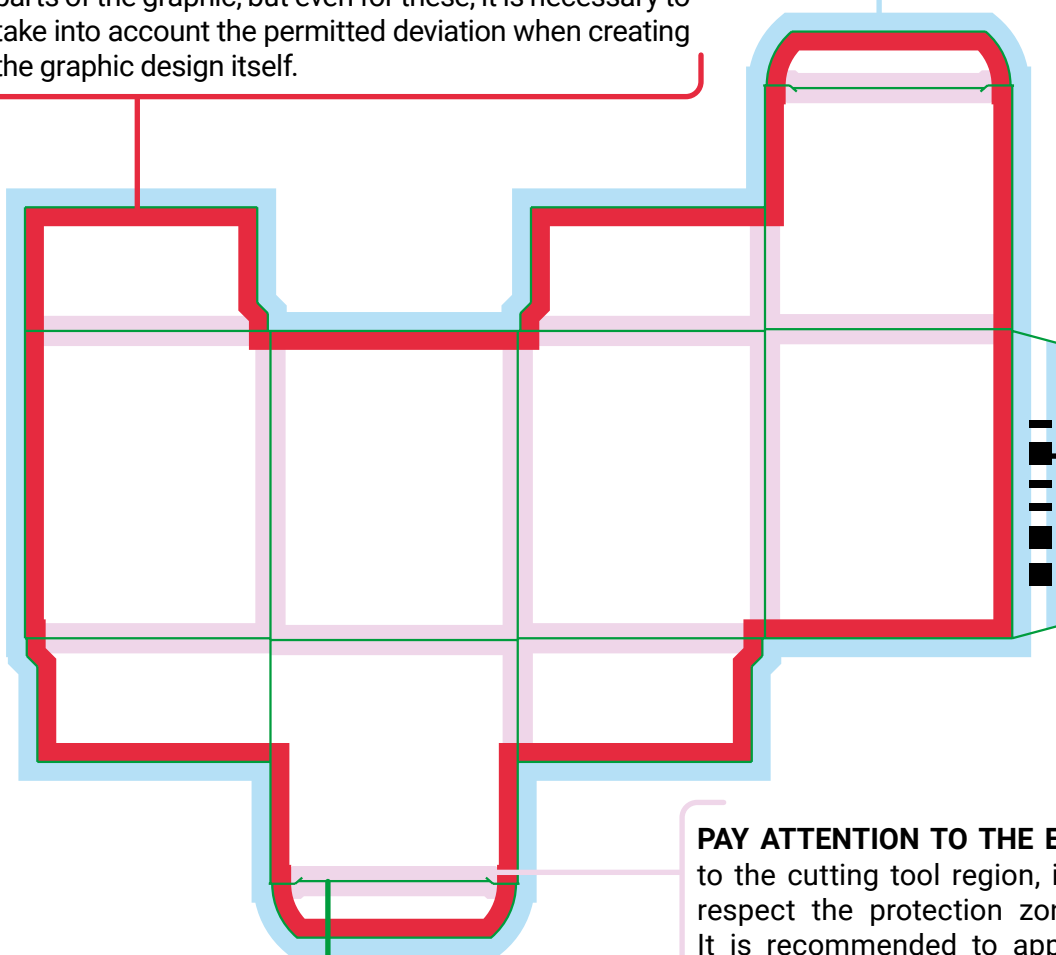


## Safety zones for graphics

**NOT HERE!** – never place important graphics such as logos, mandatory and otherwise important texts, codes, etc., in the red area, i.e., within the **protection zone**, which is **2 mm** wide from the outer edge of the cut-out edge. This prevents unintentional deterioration of the final product caused by a possible shift within the permitted tolerance. This restriction does not apply to 'unimportant' parts of the graphic, but even for these, it is necessary to take into account the permitted deviation when creating the graphic design itself.

**BLEED** – graphics extending over the net usable format after trimming. In our case, we use a **2.5 mm-wide bleed\*** around the entire perimeter of the usable space and the areas intended for gluing the packaging into its final form. Without this protection zone, there is a risk of the surrounding colour penetrating the space of the final product, which is often undesirable.

\*[ For products using the carton lamination technology, it is necessary to increase the bleed width to 5 mm. ]



### FOR PRODUCTION

– the bonding area is often used for production codes and other markings. Sometimes it may also be used for the markings generated by the customer placing the order. Check with your sales agent for information on how to use these zones

**CONSTRUCTION\*** – a line indicating the shape of the construction (stamp) of the usable space (box) is usually an integral part of the data supplied at the time of placing the (print) order. These lines must always consist of a separate **technical colour with a set overprint**. This colour separation is not printed.

**PAY ATTENTION TO THE EDGES** – similarly to the cutting tool region, it is necessary to respect the protection zone at the bends. It is recommended to approach the space at the creasing rules in a similar way. The recommended **offset from the edge is 2 mm** for important graphic and text elements. This prevents unintentional degradation of the final product caused by a possible shift within the permitted tolerance

\*[ We **recommend** that you request the construction of the usable space from the sales agent. Structures can be delivered in .EPS format. ]

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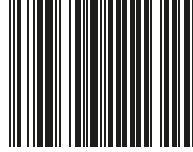
## Lines and texts

High demands are generally placed on packaging, and the resulting graphic design often tests the very limits of what constitutes permissible content. In order to prevent your data from being lost, it is necessary to respect the technological limits in the form of **minimum printable line thickness of 0.15 mm in the positive version and minimum line thickness of 0.2 mm in the negative version.**

To achieve the **correct rendering of the texts, a minimum size of 5 points for positive text and 6 points for negative text** are required.

Keep in mind that packaging is often printed on special material (most often coated cardboard) with a coarser surface, which negatively affects the accuracy of the graphics compared to conventional printing, for example, on coated or offset paper. **Respect the surface texture** of the material you require and adjust the minimum line thickness accordingly; **a coarser surface means thicker lines.** This prevents the rendering from being blurred or buried in texts and thin lines.

[ Sample material will be provided by the sales department upon agreement. If you have any concerns, please do not hesitate to contact us. We will assess your case and propose possible solutions to meet your wishes. ]



## EAN & barcode

To **comply with the EAN code standard, the recommended minimum size is SC-0** (width 29.8 × height 20.7 mm), which corresponds to 80% of the SC-2 size (width 37.3 × height 25.9 mm). **We are ready to print smaller-scale EAN and other barcodes while adhering to the minimum printing requirements for line rendering.** However, when reproducing an EAN code below size SC-0, we cannot guarantee 100% readability of the code in normal operation.

All codes should be made in a contrasting colour. White and red are unacceptable colours. For more information on EAN codes, please visit [www.gs1.org](http://www.gs1.org).

[ We can generate the EAN codes; all we need is the correct number series and code designation. ]



## Trapping

Trapping is a technique used to **compensate for inaccuracies when printing multiple colours**, especially where individual colours overlap or touch. When printing multiple colours, slight shifts may occur, which could lead to visible white gaps between the colours. Trapping minimises these gaps by slightly extending the edges of one colour into the other, ensuring that even with a slight shift, the colours will still be in contact.

Trapping is checked and adjusted, if necessary, as part of our pre-press preparation.

[ The recommended trapping value is from 0.06 to 0.1 mm. ]

# Requirements for print finishing

Various print finishing techniques are a common feature in today's packaging, whether it is special coating, foil stamping or embossing, or a combination of these. For this purpose, please follow these guidelines:



## Stamping

Another finishing option involves **hot foil stamping**. Deliver the **underlying stamping graphic** directly as part of the data, where the separate elements will be defined by a **separate spot technical colour with set overprints and appropriate captions**. The stamping data can also be supplied as a separate file. In such a case, the graphic must be **at a scale of 1:1 to the print data and fit exactly into the construction of the cut-out**.

For correct rendering of the hot foil stamping, please observe the following recommendations:

- **The minimum width of the negative line is 0.3 mm.**
- **The minimum width of the positive line is 0.1 mm.**

[ These values are recommended. The final quality depends on the complexity of the motif and the materials used. In the event of any uncertainties, we recommend having the graphic design reviewed before production. ]



## Blind embossing

Blind embossing follows specific rules depending on the **material used**. Before production, we recommend consulting the graphic design with our **DTP department to assess your graphic and suggest possible solutions** according to the material.



## Varnishing

A common surface treatment involves the **use of varnish**, which both **protects the print** and often refines it with **UV varnishes**, both on a full- and partial-surface basis.

If your design includes **partial-surface varnish**, whether a complex graphic element (e.g. text) or an **area left unvarnished for additional overprinting or label application** when using the packaging in your operation, it is imperative that you mark the **varnish** in the data supplied **using the separate spot technical colour with the appropriate caption and overprint setting**. Whether the colour is used for varnished or unvarnished areas is irrelevant; everything must be captioned appropriately.

To achieve the correct rendering of the partial UV varnish, please observe the following recommendations:

- **The minimum width of the negative line is 0.4 mm.**
- **The minimum width of the positive line is 0.1 mm.**
- **Transitions are possible, but the risk of varnish bleeding between printing dots must be taken into account.**

[ These values are recommended. The final quality depends on the complexity of the motif and the materials used. In the event of any uncertainties, we recommend having the graphic design reviewed before production. ]



# Recommended data delivery methods for production

Use our **FTP repository** to deliver your production print data or background production documents; the repository meets the latest security requirements. Access data will be provided by our sales department upon request, or you can reach out to the DTP department directly.

If you wish to send the data by email, data attachments are limited to **max. 20 MB**.



The **most appropriate** format for delivering graphic data is the 'print' **.PDF** subject to the PDF/X-4 standard



Other **acceptable file formats** are **.Ai** or **.EPS**

\*Alternatively, the composite **.Ap** (ArtPro) by ESKO may be used



[ SW udržujeme neustále aktualizovaný, díky tomu používáme vždy poslední vydanou verzi Adobe CC. ]

## Pre-press data proofs

The **recommended practice**, especially for new orders, is to **send a preview of the final print data** that has already gone through our pre-press preparation and **has been settled into the desired shape construction**. These proofs also contain a list of the colours used and, where appropriate, an indication of other modifications such as varnished and unvarnished surfaces, blind embossing and foil stamping positions, etc.

Once approved, this pre-press proof serves as a **template for production**.

## Binding colour designs

To check the colour scheme during printing, a **binding colour design (digital proof)** is used, which for new CMYK colour prints is created by our DTP studio on a certified printer, calibrated to match our **offset printers**. For this reason, **proofs supplied by an external studio cannot be accepted as a binding colour pattern**.

We will be happy to **create and send you a digital proof for your approval upon request to the sales department**.

**Pantone® colours cannot be faithfully simulated** and therefore the digital proof for spot colours cannot be considered as a guideline. **The current Pantone® colour swatch and a control sample made directly on the substrate by our spot colour mixing studio serve as a reference guideline for spot colours**.

Another option to have direct control over the resulting colour is **your presence during the print run**. Contact our **sales department** for more information about this option.



## Contact

DTP studio    [kunst@grafobal.cz](mailto:kunst@grafobal.cz)    (Head of Department)

[novosad@grafobal.cz](mailto:novosad@grafobal.cz)    (Graphic Designer)

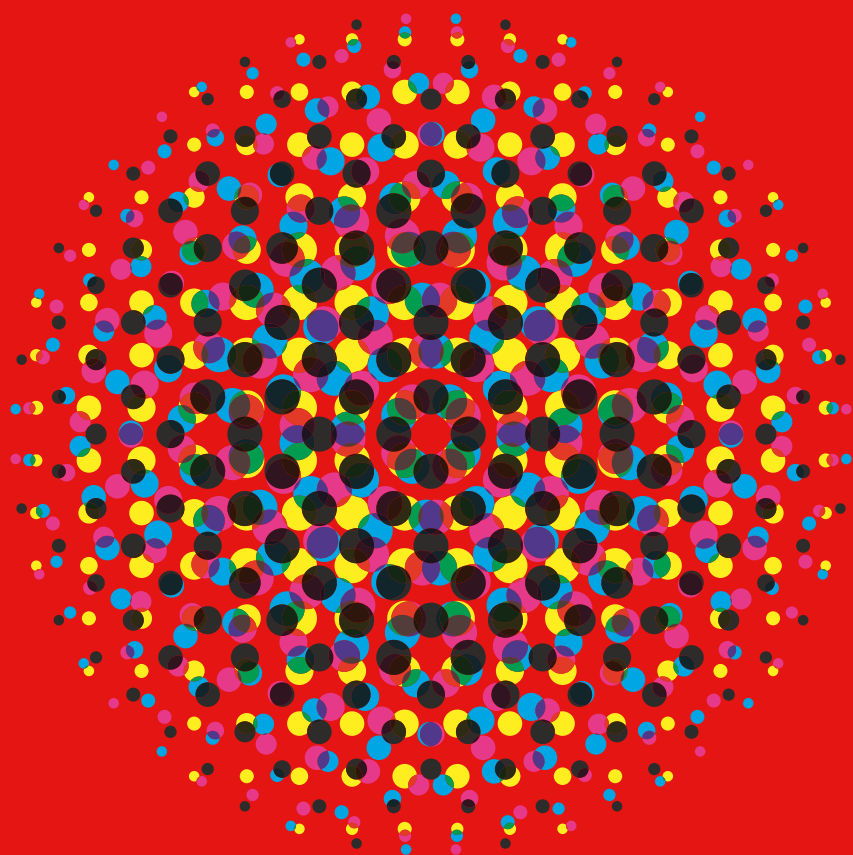
[joza@grafobal.cz](mailto:joza@grafobal.cz)    (Graphic Designer)

address

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**We look forward  
to working with you!**



[www.grafobal.cz](http://www.grafobal.cz)