

Visualization above is purposes only, colors may slightly differ from the final product.



## MARKING

### Types of pallets used for marking

**CMYK** – simulation of visible colors by humans. The basic raster colors are cyan, magenta, yellow and black. This can be realized by digital printing on our products, the offset printing on the paper substrates of our packaging. The color described by CMYK values may vary depending on the printing technology used, the type of ink, the printing machine, the surface where the printing was done.

**Pantone®** – PMS colors are paints of specific colors made by mixing the correct proportions of component paints ALWAYS on a specific white substrate (matte or glossy). Color differences may come from the influence of the color of the substrate (white or other), the absorption of the substrate (absorbent and non-absorbent) and the opacity of the component paints. Pantone® colors in our company are most used for screen printing technology and pad printing from one to 4 colors.

**Most Pantone® colors do not have an identical reflection in CMYK colors, the human eye is able to capture the difference, and all kinds of digital color simulations using graphics programs (Corel, Adobe) is only a more or less correct approximation.**



## **Color differences on colored surfaces.**

The colored substrate definitively affects the perception of the observed color. Inks with high transparency (such as yellow) may not optically cover the marked surface. For better quality of the printed color, it is recommended to use a subprint - which is a barrier to the color of the substrate.

## **Graphic design file**

### **Please send the correct file formats for the marking method.**

#### **Bitmap file**

Image resolution should be a minimum of 300 dpi (a file with a lower resolution will not be considered in the claims process (print quality)). Color mode - CMYK.

We are not responsible for the printing color from files provided by the customer in RGB mode.

Printing technology: digital and offset printing on mats. Packaging.

**File extension .jpg/.png/.tif**

#### **Vector files**

Printing technology: screen printing, pad printing in Pantone C color mode (PMS), the design can contain up to four colors, and digital printing in CMYK color mode.

Other technology: Embossing/ Engraving/ Embossing with foil; single-bit vector file.

**File extension .pdf/.ai/.cdr/.svg**

## **Matching colors to customer requirements.**

Many clients have a specific color palette for their trademarks, product brands and logos in a "Brand Book." The graphics department can make changes to the files provided by the client to simulate the printing of specific colors included in the Pantone ® template into CMYK colors, but the responsibility always lies with the client.

Color changes, e.g. Pantone ® → CMYK, are made according to the client's guidelines (e.g. the client can provide the CMYK values selected by him), or through a graphics program (the program selects a similar color). Colors selected by this method are not subject to complaint processes.

#### **Files saved in the extension**

- PDF (Acrobat 6 version < 1 ,5),
- Adobe Illustrator (Ai version < CS6),
- Corel (cdr version < 16)

## **Text**

The text in the design must be changed to curves. Alternatively, please send the typeface (font) in .ttf extension along with a certificate of commercial license. Commercial purchase of the typeface license is on the client's side.

## **Logo vectorization**

It is possible to vectorize uncomplicated designs (changing bitmap design into curves) for an additional payment based on the price list.

## **Using paid graphics in projects**

Images used for marketing purposes presented in the offer are for the company's own use.

## **HGE does not have photos and graphics to be used in customer projects.**

The purchase of a commercial license for an image, graphic, etc. is on the client's side (e.g. buying an image from available online libraries). Uploaded file must not have watermarks and other symbols indicating the illegality of the owned graphics.

## **Marking restrictions**

Each method has technical restrictions.

Marks that are too small, sharp edges may be rounded (unprinted). If the lines are too thin, the graphics department improves the design to the minimum technical requirements, the design is visually changed.

Small elements (less than 1.5 mm) may be unreadable or unprinted.

## **We do not recommend marking below the technical requirements.**

## **PADPRINTING**

A technique for printing on small, not necessarily flat, surfaces. It is good for marking different types of plastics, metals or wood. Pad printing is based on the application of ink using a soft smooth stamp called a pad.

- On metal pens, printing is only possible in 1 color (exceptionally 2 colors, depends on the project),
- On plastic pens, we print in a maximum of 4 colors,
- The minimum thickness of the line should be 0.2 mm, (smaller thicknesses - as individual designs - will be confirmed after verification)
- In case of printing small details such as ® (registered trademark) the mark should be increased to a minimum diameter of 2 mm.

## SILKSCREEN

This is one of the printing techniques used for single and multiple marking of articles with different surfaces. Screen printing technique allows printing rounded surfaces. This increases the field of presentation of the advertisement on the item, thanks to the possibility of printing around the full perimeter of the pen.

- The minimum thickness of the line should be 0.3 mm, (smaller thicknesses - as individually designs - will be confirmed after verification),
- Counter distance of 0.3 mm, so that the lines do not overlap (smaller distances - as individually designs - will be confirmed after verification),
- The minimum printing distance from the clip for all models of plastic and metal pens is 9 mm (except: Kiki, Golff, Swing, Nove, Force, Elle - 14 mm),
- On pens with twist mechanism (rotary mechanism) imprint possible only in 1 color,
- The minimum printing distance from the metal ring for all models is 8-9 mm,
- When printing on transparent substrates, we recommend the addition of "covering" ink - generally white for opacity,
- when printing small details such as ® (registred trademark) we should enlarge the mark to a minimum diameter of 2 mm,
- When combining positive - negative printing into one sequence, the negative printing should be minimally larger (about 5%) to maintain the proportion after printing.

## EMBOSSING (and embossing with foil)

A type of marking / enhancement technique, the process of creating (in an embossed material) a three-dimensional pattern before the imprinting of a heated mold, so that the embossed material retains the deformation.

Foil stamping is a process using silver, gold or colored foil, which is applied permanently to the stamped surface using a die and embossing.

- The smallest elements on the die must not be smaller than 0.5 mm<sup>2</sup>,
- Space between elements not less than 0.5 mm,
- Embossed areas not less than 1 mm<sup>2</sup>. Larger embossing area = higher probability that the foil will not cover the entire design and cavities will form,
- The minimum distance of embossing from the printing is 5 mm,
- Permissible tolerance for offsets of 2 mm.

## DIGITAL PRINTING

Full color digital flat printing. Allows for tonal gradients. It is characterized by high softness and photorealistic quality. With digital printing, the printing machine performs marking directly from computer files, without the use of film as in screen printing.

- The minimum bitmap resolution for printing is 300 dpi,
- We do not print CMYK metallic colors (silver and gold),
- The minimum distance of digital printing from embossing is 5 mm,
- All files must be prepared in CMYK,
- Allowable tolerance for offsets of 2 mm.

## ENGRAVING

Laser engraving is the making of indentations (laser etching) of various depths, sections and shapes, on metal or other hard surfaces. Engraving is one of the most durable ways of marking advertising gadgets, and the effect obtained depends on the constituent layers of the engraved substrate.

- The minimum thickness of the line should be 0.3 mm, (smaller thicknesses - as individually designs - will be confirmed after verification),
- Counter distance of 0.3 mm, so that the lines do not overlap (smaller distances - as individually designs - will be confirmed after verification),
- The minimum engraving distance for all models of metal pens is 9 mm (except: Force, Elle -14 mm),
- The minimum printing distance from the metal ring for all models is 8-9 mm,
- for printing small details such as ® (registered trademark) the mark should be enlarged to a minimum diameter of 2 mm,

**We do not recommend marking below the technical requirements.**