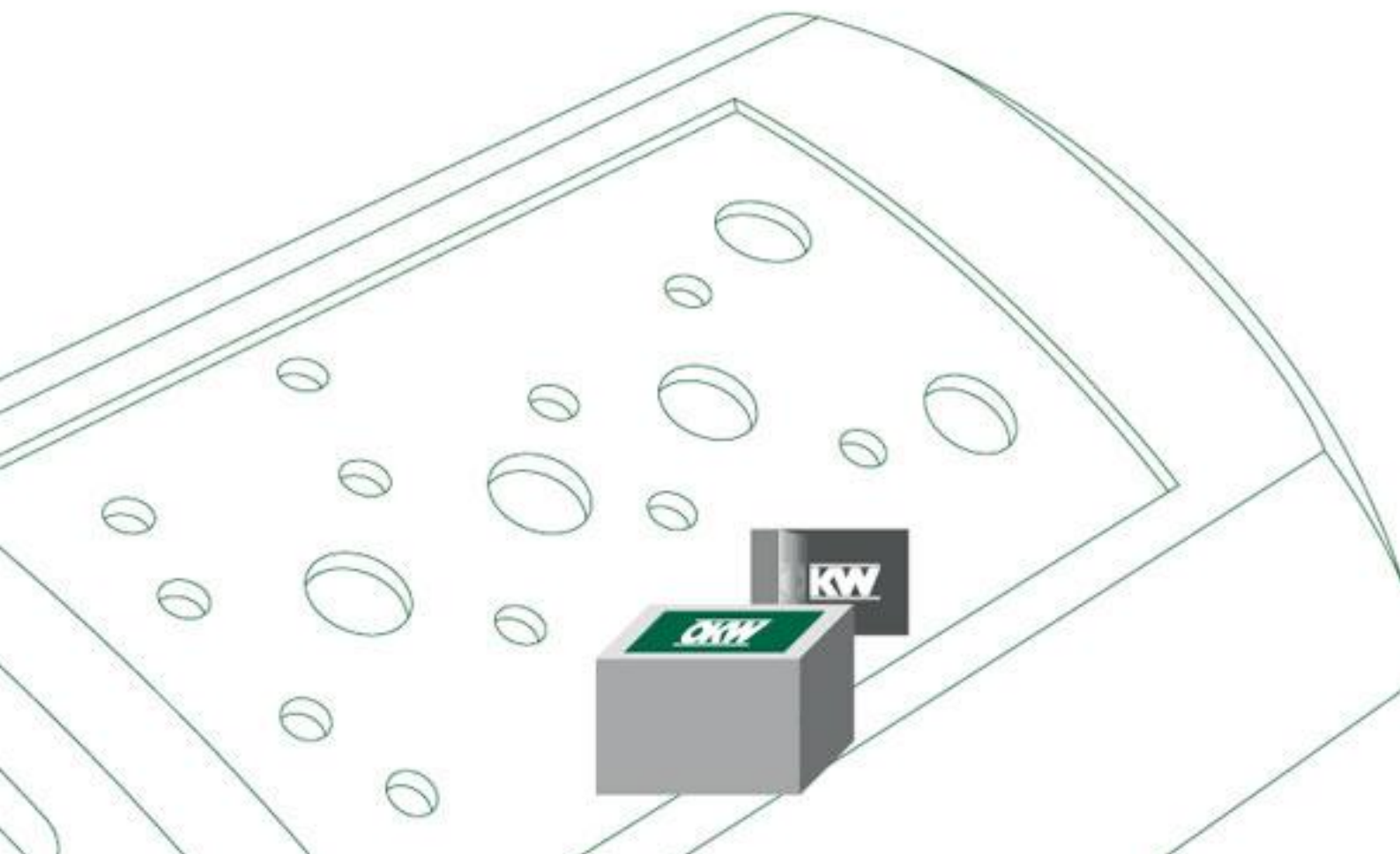


DIGITAL PRINTING



SERVICES

Decorative foils can be printed easily for lettering and for adding colour. Already possible from 1 piece, and is a particularly low-priced way of giving your cases a company-specific appearance.

DESIGN EXAMPLES



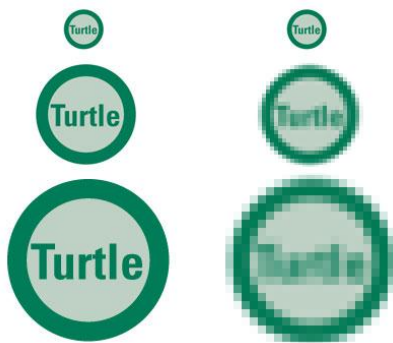
TECHNICAL POSSIBILITIES

The digital printing process (photo quality) allows easily different versions in design and consecutive numbering. Gradients are also possible.

Specifications:

- printing foils single-sided
- printing enclosures Surfaces made of ABS. Max. depth of 1.5 mm.
With additional clear lacquer for the protection of the digital printing.
- colours CMYK Lc Lm + white
- pixels 300 – 1.440 dpi
- max. printing format 610 x 410 mm

- Layout Print file must be a vector graphics (no raster graphics!) in Corel-Draw or EPS format.
Scale 1:1, included image file, e.g. .jpg or bmp minimum resolution 1200 dpi,
all contents must be editable!



vektor graphics raster graphics
Vector graphics can be scaled without any loss of quality.

Otherwise there will be charges according to the complexity creating a print file. As a model for creating a print file we need a drawing/sketch that contains all machining relevant dimensions. If it is not possible to provide logos, symbols (as an image file, e.g. .jpg with min. resolution 1200 dpi) or possible special fonts, slight non-conformances are possible.

Data medium: E-Mail, CD-Rom, DVD, Zip (100 MB)



MATERIAL / STANDARD FOILS

Foil material	Polyester
Material thickness	standard 0.5 mm
Foil surface	mat or glossy
Display window	transparent clear or coloured clear back-printed, with laminated adhesive back, embossing possible*

***standard embossing**
embossing height 0.6 mm ± 0,3

WORKING WITH KEYBOARDS / ASSEMBLY INSTRUCTIONS

Before lamination, the surface must be free of grease and release agents. Solvents must be used for cleaning, e.g. plastic cleaner. The transfer adhesive used requires a surface roughness of 25 micrometers. A contact pressure of 20 N/cm² is sufficient for lamination. Only then may the protective paper be partially removed.

The adhesive edge must be at least 5 mm.

In order to guarantee fitting accuracy of decoration foil / enclosure, machining and foil production should be done at OKW. Otherwise, a machined enclosure is to be put at OKW's disposal.

PRINT QUALITY

Of opaque printing, transparent colours and window printing.

Dirt and dust inclusions / strains / fluff / scoring / scratches

- ▶ max. size (mm²) 0.25
- ▶ max. size (mm²) with weak colour contrast 0.4
- ▶ max. number/dm² 2
- ▶ minimum inter-space (mm) 50

For windows smaller than 1dm² the max. number of faults applies for the entire window surface, and as minimum inter-space: diagonal length (mm) / 2

- ▶ lower fault limit (mm²) 0.063

Other quality deviations

- ▶ Colour deviation Reference sample/tolerance limit sample to be defined by customer and supplier
- ▶ Gloss level deviation By arrangement



- ▶ Clouding (colour shading)

Special requirements to be met by opaque printing

Not visually perceptible in working position

Reference sample/tolerance limit sample to be defined by customer and supplier.

Reproducibility of colour tones: ΔE 2.

Reproducibility of colour tones adjusted to enclosures: ΔE 3.

Light blocker according to agreement:

The foil is additionally relief-printed with a special colour that prevents light shining out of the enclosure. Colour deviations possible.

DIMENSIONAL TOLERANCES

Printing tolerances

Definition / edge blur (mm) ± 0.2

Permissible variations in the line width $\pm 10\%$

Tolerances within the print

- ▶ within a shaping print (mm) according to general tolerances DIN ISO 2768-1 fine:
 $< 120 \text{ mm}: \pm 0.15$
 $\geq 120 \text{ mm} < 400 \text{ mm}: \pm 0.2$
 $\geq 400 \text{ mm}: \pm 0.3$

Embossing tolerances

Embossing tolerances with respect to the print

- ▶ Dot embossing (mm) ± 0.3

Embossing height tolerance

- ▶ Standard embossing (mm) ± 0.3

Blanking tolerances

Outer contour and cut-outs (mm) ± 0.3
 (closer tolerances possible by arrangement with customer)

Blanking for print (mm) ± 0.3

TEST CRITERIAS

Tester trained, experienced person with normal vision

Viewing distance (mm) 500

Viewing angle (with respect to viewing direction) 90° , mirroring not permitted

Lighting

- ▶ Top lighting 1000 lx standard illumination D65
- ▶ Transmitted light Light table

Display window

test against black-and-white background
or by arrangement with customer

Test scope

- ▶ Function test 100%
(restricted to random sample
by arrangement with customer)
- ▶ Optical test 100%
(restricted to random sample
by arrangement with customer)
evaluation with Keyboard Forum test board
for surface faults

Viewing time/dm²(s)

(not longer than 15 seconds in all)

5
Depending on the design and size, viewing time is limited
to a typical duration of 4 sec.

FIXED COSTS

Accordinging quotation.

FORM OF DELIVERY

Packed in PE-bags resp. cartons; protected from scratches.
Assembly on demand.

Quantity differencies + 10 % possible.

Odenwälder Kunststoffwerke
Gehäusesysteme GmbH
Friedrich-List-Str. 3
74722 Buchen/Germany
www.okw.com