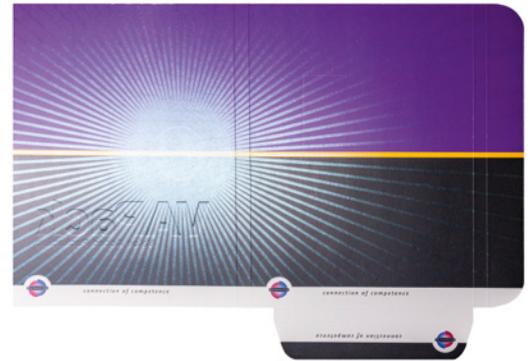
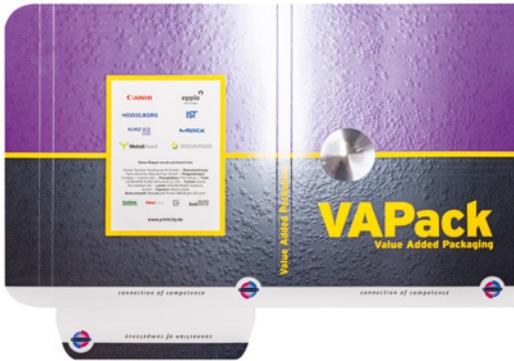
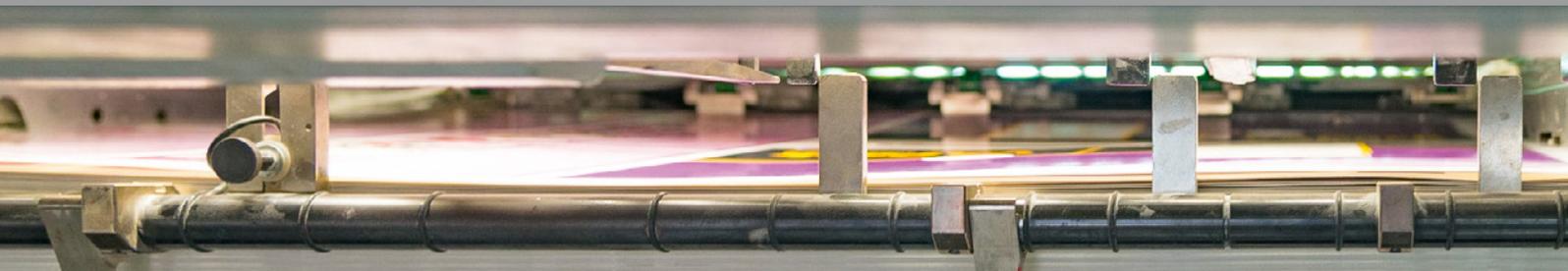


Value Added Packaging - Tutorial VAPack Mappe

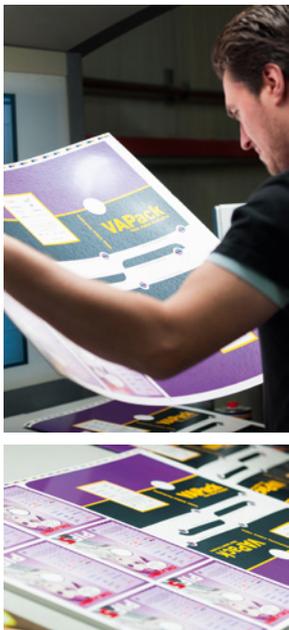


- USP:** The combination of three different, outstanding 3D effects: Two are purely optical illusions and have a wow effect in terms of the tactile experience. They are paired with classical, haptic embossing.
- Description:** This project illustrates how different 3D effects work in conjunction with holograms, embossing and lacquer application, resulting in designs that effectively draw attention at the POS or in direct marketing. The folder was designed for collecting the PrintCity Alliance's print finishing samples and tutorials. It was produced together with the invitations to the Packaging Inspiration Forum on a mixed sheet (2 x folder, 6 x invitation card) in a UV-based offline process.
- Suitability:** Cosmetics industry | Food industry | Tobacco industry
(only outer packaging on hermetically sealed containers)
- Print finishing:** Deep Lens hot foil embossing, VE3D lacquer effects, UV gloss lacquer, pigment lacquer, relief embossing
- Design requirements:** Distinct motif contours that can be rendered in hot foil finishing and embossing. Homogeneous, dark colour areas result in high brilliance and a pronounced 3D effect in combination with the pigment lacquers.
- In this context, the line thickness should not be less than 2 tenths of a millimetre. Applying the Deep Lens hot foil embossing effects requires the use of round design elements (43 mm for the invitations, 53 mm for the folders).
- The repeat of the lenses on the substrate should be taken into account during imposition of the printed sheet so as to minimise the number of embossing steps.
- For the invitation, a mirrored motif is used in the perfecting process to take advantage of the dual effect of the relief embossing, visible both inside and out.
- Materials:** Selecting the right materials, inks, lacquers and foils is very decisive for this project because it incorporates a variety of print and finishing methods. Optimum results can only be achieved in such a process with perfect interplay between man, machine and material.
- Consequently, a project meeting with all stakeholders in the preparation phase is imperative: Clients, designers, producers, manufacturers and suppliers.
- The objective is to adapt the design to what is technically feasible, this being the only way to ensure that the desired effects can actually be achieved and that technical problems are avoided from the outset.
- Material selection begins with the right substrate, which is critical for the quality of the final result. The MetsäBoard Prime FBB Bright coated folding boxboard used here is ideally suited to demanding jobs of this kind thanks to its homogeneously coated surface, easy shaping, high-level whiteness on the reverse side and high dimensional stability in processing.
- Machine requirements:** Four-colour offset press with dual coating unit and UV capability, hot foil embossing machine with camera register system, die-cutting machine.

Value Added Packaging - Tutorial VAPack Mappe



Achieving the effects:



The main focus was on the highest possible contrast between the haptic and optical effects. Deep Lens hot foil embossing is supported by the likewise purely optical 3D lacquer effect as well as relief embossing in order to maximise the illusion of depth. The 4c Euroscale colour space was selected.

VE3D lacquer effect: This lacquer effect requires a dual coating machine with UV capability. In the first coating unit, a pigment lacquer is applied partially over larger areas, and in the second coating unit it is then slightly embossed by a special coating plate, which partially re-orientates the pigments in the still-wet lacquer. Only after this step is the UV carrier lacquer cured to "freeze" the orientation of the pigments.

Because this effect works best on dark backgrounds, a 70/100/0/0 violet and a rich black with 60% cyan were used. All other design elements are excluded from this lacquer effect. The design chosen for this effect is a star cluster centred in the region of the Deep Lens.

Deep Lens hot foil stamping: Two round, standard Deep Lens designs of different size were used. For the folder, the 53 mm lens is shown in full, whereas on the invitation the 43 mm lens is only partially embossed. To apply the Deep Lenses, a hot foil embossing system with camera register detection is required (also known as a registered hologram system).

Relief embossing: All embossed elements are designed for relief embossing. For this purpose, a spot colour form was created in Illustrator based on the designs to be embossed and the relief effect for the embossing tool defined using halftones and vignetting. The project description specifies which colour value stands for which level.

Pigment lacquer: In addition to the effects on the outside, a partial pigment lacquer was also applied on the inside. A starburst pattern was created in this case for both print jobs. On the invitation, it is based on the mirrored background of the front-side illustration; on the folder, the rays radiate from the Deep Lens on the front.

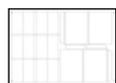
Because the reverse side of the board is coated only once, an elegant matt effect is obtained, which is strongest on dark backgrounds.

Workflow:

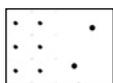
The design was created in Illustrator. Following final quality control, the finished data was sent in PDF/X-1a format and as an open file to the individual production partners.

Anilox rollers:

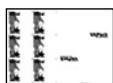
Glossy protective coating, outside:	14 cm ³ /m ²
UV pigment lacquer, outside:	12,6 cm ³ /m ²
Matt protective coating, inside:	10 cm ³ /m ²
UV pigment lacquer, inside:	13 cm ³ /m ²



Die cutting
(Die from **Buchner**
with rules from
CITO)



Hot foil stamping
Deep-Lenses
(Tools from
hinderer+mühlich)



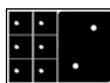
Relief embossing
(Tools from
hinderer+mühlich)



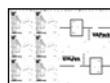
Coating plate for
VE3D-Effect



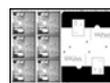
Merck
Effect pigment
Iriodin 6123 Icy
White Satin; in
WEILBURGER
Graphics
SENOLITH® UV
GLOSS LACQUER
360551
FP NDC
350072



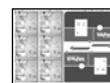
WEILBURGER
Graphics
SENOLITH® WB
GLOSS PRIMER
FP DC 350071



Epple
Yellow



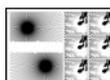
Epple
Magenta



Epple
Cyan



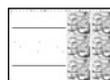
Epple
Black



Merck
Effektpigment
Miraval Pacific
Twinkle;
in **WEILBURGER**
Graphics
SENOLITH® WB
CARRIER COATING
FOR EFFECT
PIGMENTS
FP NDC 350147



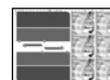
WEILBURGER
Graphics
SENOLITH® WB
MATT COATING
FP DC 350359



Epple
Yellow



Epple
Magenta



Epple
Cyan



Epple
Black