

# Value Added Packaging Tutorial: RLS Cosmetics



Real Life Samples Cosmetics with prototype jar



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**USP:**

Efficient in-line production with strong visual and tactile effects

Hot foil stamping, pigment coating, UV gloss coating and screen printed special-effect coating

Cosmetics industry | Food industry | Tobacco industry

**Machine requirements:**

Heidelberg ICS 670 with 8 EVA platforms, additionally equipped with 6 flexo modules (5 x UV, 1 x conventional, 1 x UV module for reverse printing), 1 hot foil stamping module and 1 UV screen printing module, in-line die-cutting module, in-line waste stripping station, delivery unit

**Design requirements:**

Motifs with sharp edges that can be achieved with hot foil stamping, the screen-printed coating and the pigment coating effects

**Special features:**

The two design variations are shown in two different finishes and are based on the same machine configuration and ink/coating sequence (UV flexo black / UV flexo violet / UV flexo yellow / WB flexo pigment coating / UV flexo black in reverse printing / hot foil stamping / SENOLITH® UV GLOSS LACQUER / SENOSCREEN® UV RELIEF LACQUER / die-cutting and embossing); they are produced together, in-line, on a mixed sheet.

**Description:**

This project, part of PrintCity's Value Added Packaging Initiative, is intended to demonstrate that even folding cartons with a very high degree of print finishing can be produced efficiently in-line on a Heidelberg ICS 670 printing system. In the production of the two cosmetics packages, a variety of foil and coating effects, pigments and embossing effects were used to fabricate realistic, luxury packaging in just one production run. The process was a combination of flexo and screen printing. The unique shape of the packaging, reminiscent of a cut diamond, perfectly stages the effects at the POS thanks to its special reflective properties, and was developed by A&R Carton. A special, visually unique cosmetics jar was developed to match the unusual packaging, which fits perfectly inside the diamond-shaped carton. The jar was produced by means of 3D printing, in two colour variations, as a fully functional prototype.

**Remarks:**

In this complex production process, involving different printing methods, substrates and materials, numerous parameters had to be taken into account from the outset during production planning. First, a defined scaling factor had to be incorporated during form production (flexo plates/rotary screen/die-cutting and stamping tools) in order to factor in the varying shrinkage of the board web resulting from the different contact pressures and drying temperatures. Without this, accurate production is impossible. Second, the materials, inks, coatings and foils being used had to be coordinated. Optimum results can only be achieved if there is perfect interplay between material, man and machine. Consequently, it is essential that a project of this kind be clearly discussed with everyone involved ahead of production, so as to avoid technical problems in advance and, where necessary, incorporate changes in the design and production planning.

Carta Allura, a fully coated bleached paperboard from Metsä Board for folding cartons, is ideally suited for print jobs of this kind thanks to its smoothly coated surface, easy shaping and high dimensional stability during processing.

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## Realisation:

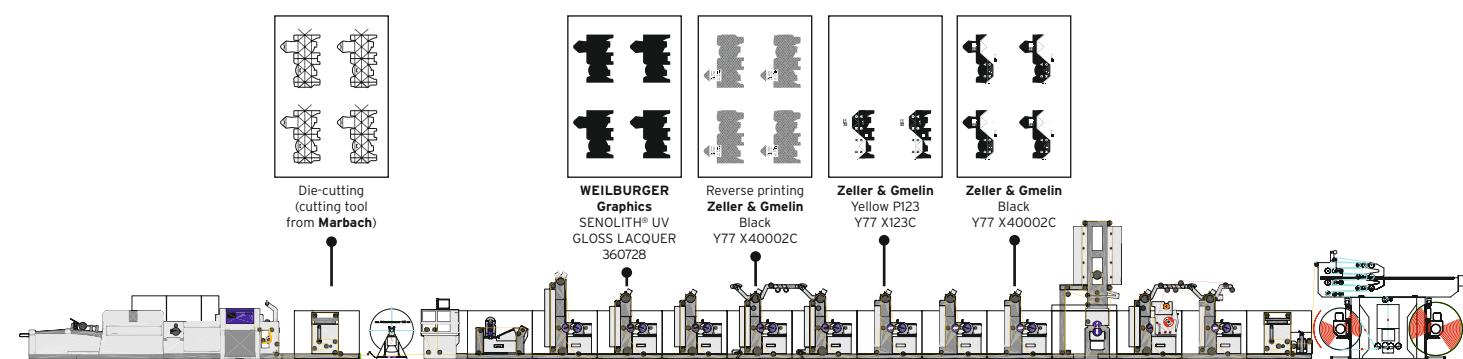


For these two print jobs, the main focus was on achieving maximum contrast in the tactile and visual effects. The brand name "DANO NODA" lends itself to switching syllables, as in an anagram, a device that can be used to create a new visual effect for the observer, because it appears not to matter where he begins to read the name. This promotes brand cognition among end consumers and was to be incorporated in the design of the packaging and its finishing.

As an eye-catcher, the diamond-shaped packaging is visually divided along the diagonal and given a strong contrast between black and spot colour. This contrast is additionally enhanced by the use of the individual finishing methods. For this purpose, a continuous dividing line is applied with the gold hot foil toward the black, above the creasing line. What is important here is not to apply the hot foil in the creasing line, as this could cause damage to the foil during the die-cutting process and subsequent erecting and filling of the packaging. The hot foil also is applied in the top closure panel to enhance the brand name, and as individual letters around the packaging, on the concave triangular surfaces. The anagram can be seen here by turning the package around its vertical axis or by reading the two colour surfaces. The coating effects (relief coating on the one hand and gold pigment coating on the other) are also positioned along a continuous diagonal with one syllable on the line below. As a result, the anagram again is visible from all viewing angles. In designing the relief coating form, we create all surfaces in 85 %. When using a suitably coarse screen in conjunction with the relief coating, this results in a highly detailed dot pattern, which can be perceived both visually and tactiley. To prevent the relief coating from cracking and the packaging from being damaged, all cutting and creasing lines are left blank. Because this packaging was designed to include monochrome printing on the inside, the repeated brand name is also applied in black on a new page in Illustrator with a mirrored die-cutting contour.

Production of the final printing data should then be handled by a repro studio that has sufficient experience with this particular production system and is also familiar with, and capable of applying, the necessary register and scaling requirements of this production system. This is followed by a final quality control step before the data are forwarded to the individual production partners for preparation of the plates, sleeves and tools. Due to the mechanical forces on the print medium during the subsequent erecting process, it is important in fabricating the cutting die to determine the optimum ratio of paperboard thickness to creasing depth.

The appropriate anilox rollers and screen then have to be used for production. In this context, the black for the top side was applied with 240 L/cm and a 6.5 cm<sup>3</sup>/m<sup>2</sup> anilox roller, violet with 160 L/cm and a 7.5 cm<sup>3</sup>/m<sup>2</sup>, yellow with 160 L/cm and an 8 cm<sup>3</sup>/m<sup>2</sup>, the pigment coating with 80 L/cm and a 14 cm<sup>3</sup>/m<sup>2</sup>, the black for the reverse side with 280 L/cm and a 6.5 cm<sup>3</sup>/m<sup>2</sup> and the gloss coating with 80 L/cm and a 12 cm<sup>3</sup>/m<sup>2</sup>. The screen was a Screeny USS with 10 nm thickness and a 48 T/cm mesh (123 T/inch). The power of the UV lamp systems should be such that sufficient curing can occur, but that the inks and coatings do not become too brittle, so as to avoid damage during postpress.



Technical design, bonding:  
**A&R Packaging**

Graphic design/documentation:  
**Alexander Dör - CMD**

Printed on:  
**Heidelberg ICS 670**

Prepress and flexo plates:  
**Flexo-Service CL. Jaehde**

Anilox rollers:

**Praxair**

Drying/Curing systems:

**IST**

Substrate:  
**Metsä Board Carta Allura 270 g/m<sup>2</sup>**

