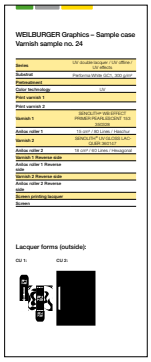
TUTORIAL - SAMPLE CASE

USP:	Sample case with inlay in corrugated direct printing with 24 finished folding boxes (offset) and screen printing sample booklet.	
Machine requirements:	Corrugated box	5c flexo sheetfed press with min. 1,200 x 1,055 mm
	Folding boxes:	6c offset press with double coating unit and UV/UV LED equipment
	Screen printing booklet:	4c offset printing machine with coating unit, screen printing machine
	Converting:	Die Cutting Machine, Laminating Machine, Gluing Machine
Project description:	For the presentation of the extensive product catalog of WEILBURGER Graphics GmbH, a sample case including inlay is produced in direct corrugated printing, which can hold 24 refined folding boxes (offset) and a 64-page screen-printed booklet, which is also newly published. This tutorial describes the production of the case and inlay using corrugated direct printing. There are 24 short tutorials available separately for the 24 folding boxes. The technical specifications for the individual effects of the screen-printed booklet can be found on the respective back pages in the booklet itself.	
Requirements technical design:	The outer packaging of this sample box is designed as a suitcase with a carrying handle to ensure easy transport to customers by the company's sales and service staff, to provide sufficient and lasting protection for the folding boxes and the booklet, and additionally to create an attractive presentation platform via an inlay specially tailored to the contents to hold the folding boxes and the screen printing booklet. Here, the folding boxes are fixed in place by means of coordinated dimensioning and matching of the outer packaging and the tray to the 24 boxes of the same size. Furthermore, a locking device for the screen-printed booklet is incorporated.	
Requirements graphic design:	Graphically, the exterior of the sample case is kept in noble black to demonstrate the quality of the highly pigmented SENOFLEX® WB inks and the SENOFLEX® WB coating used, but also to increase the tension curve of the unpacking experience through the modern aesthetics of this design object. The interior design of the case follows the design line of the folding boxes and the booklet and works with trendy colourful visualized paper cut design elements. In addition, the back of the inlay is coloured yellow using SENOFLEX® WB inks to round off the quality and overall design of the box.	
Substrates/Printing:	Sample case inside/outside:	Metsä Board WKL (Kemi light) 185 g/m² printed on Bobst Masterflex 5 colors + Mastercut die-cutter
	Inlay Outside:	Metsä Board WKL (Kemi light) 185 g/m² printed on Bobst Masterflex 5 colors + Mastercut die-cutter
	Inlay Inside:	Duplex White 135 g/m² printed on Bobst 1600 3 colours Inline SENOFLEX® WB Pantone 109U
Notes:	As with all extensive print finishing, clear project planning and coordination of all parameters with all companies involved in the production chain is essential. Materials as well as process steps must be defined and coordinated in advance. Cross-discipline optimization of all individual production steps is also important in such multi-part projects. In the end, not only the dimensions of all components but also their sensory properties must match.	



Realization:

The WEILBURGER Graphics sample case:
Consisting of a total of 56 different print jobs, including 2 corrugated cardboard productions, 24 folding box productions and 32 screen printing productions. A total of 72 varnishes, 6 flexo inks and 2 adhesives from the company were used.

Products (box and inlay):

SENOFLEX® WB | SENOFLEX® WB FP PLUS

First, the technical design of the corrugated box, the inlay and the 24 folding boxes will be implemented, assembled and tested as a white sample from original substrates, and the interaction of all components will be tested and optimized. The final block thickness of the screen-printed booklet must be extrapolated on the basis of empirical values due to the expected high volume build-up of the relief coatings used there and their influence on the sheet thicknesses. In order to simplify and standardize the subsequent dispatch of the folding box samples, these are also not imposed as is usual in packaging printing, but one DIN A4 sample sheet is designed for each box. This means that the boxes can then be dispatched later simply using a C4 envelope. To ensure that the boxes can still be built up, however, they are creased and die-cut, but held back in the DIN A4 blanks by means of holding points that are precisely adjusted to the respective substrate. This means that the folding boxes can be manually cut out, erected, glued and inserted into the case.

Once all the technical design work has been completed, the graphic designs are prepared based on the company's CD specifications and the contents of all the print jobs are created. For the corrugated box, a five-color print is planned on the inside and outside. On the outside, the design can be realized as a pure line conversion without a screen. On the inside, however, a motif is deliberately to be shown in halftone, which is increasingly in demand in corrugated direct printing. For this purpose, an orange motif with finely coordinated gradients is created to match the designs of the folding boxes. All the forms are now manually overfilled and underfilled, the dot gains customary in flexographic printing are included in order to match the colour values of the screened inside print as closely as possible to the spot colour print on the outside, and the sheet assemblies are created.

SENOFLEX® WB GLOSS COATING FP PLUS 350470 is chosen as the protective coating for the inside and outside. In addition to enhancing the appearance of the box, this glossy protective coating should prevent marking of the box due to the high black content.

During production, care must be taken to ensure that the perfecting register is as exact as possible so that the design elements, which are deliberately placed in a very delicate manner - especially the three-colour triads that are part of the corporate design, which must always be positioned in the bleed or edge area of designs - are kept in position with as few tolerances as possible even after further processing and assembly of the boxes.

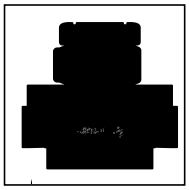
For a final preview of the entire project in interaction, a CGI version of all components is then developed on the computer and used via renderings and animations to finally check the filled sample case with all individual designs before going to press. In particular, carelessness errors such as logos standing on their heads after assembly or positional errors in design elements overlapping components stand out in most cases during such a virtual final check.

Anilox roller box:

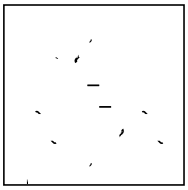
SENOFLEX® WB colours (screen ruling cliché 39 L/cm)	Stepped Hex anilox roller 5 g/m² 360 L/cm
SENOFLEX® WB GLOSS COATING FP PLUS 350470 inside and outside	Hexagonal anilox roller 14 g/m² 100 L/cm

Printing (using Box as an example):

Outside:

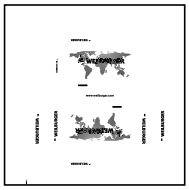


DW5:
SENOFLEX® WB GLOSS COATING FP PLUS 350470

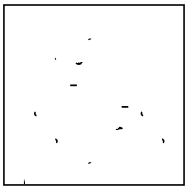


DW4:
SENOFLEX® WB YELLOW P109C

DW3:
SENOFLEX® WB BLACK HK FP NDC 395080

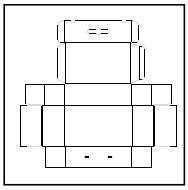


DW2:
SENOFLEX® WB COOL GREY 7C

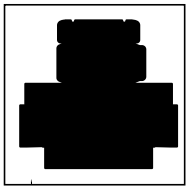


DW1:
SENOFLEX® WB GREEN P362C

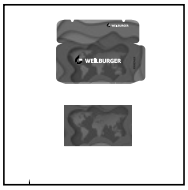
Inside:



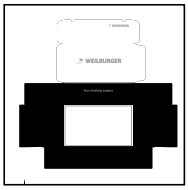
Converting:
Cutting die



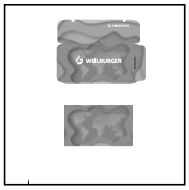
DW5:
SENOFLEX® WB GLOSS COATING FP PLUS 350470



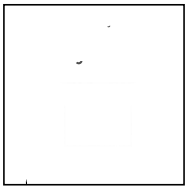
DW4:
SENOFLEX® WB YELLOW P109C



DW3:
SENOFLEX® WB BLACK HK FP NDC 395080



DW2:
SENOFLEX® WB MAGENTA HK FP NDC 395030



DW1:
SENOFLEX® WB GREEN P362C

WEILBURGER Graphics GmbH
Am Rosenbühl 5 | 91466 Gerhardshofen (Germany) | Tel.: +49 9163 9992-0 | **www.weilburger.com**

Member of WEILBURGER