

RHINO™ IIS - the profitable single pass decoration solution for luxury labels

The wine and spirit market today thrills with extremely creative, highly embellished designs. From noble single foil to complex multi foil designs: these labels inspire, attract buyer's attention and assign a high value to the underlying product and are therefore an essential cornerstone for the success of the brand owner. Being active in this field can also be very lucrative for label printers. But it presupposes to have a nose ahead when it comes to refinement technologies and efficiency.

Kradolf / Switzerland – SEPTEMBER 18, 2018 – There is probably no product where the label is as important as for spirits or wines. A large proportion of spirits buyers make their decision as to whether to buy a particular brandy, wine or sparkling wine based on what the label looks like. Therefore a spirits or wine label must be an eye-catcher, as it is an important part of the purchase decision. But the quality of the labels has meanwhile reached a high level in general, what makes it more and more difficult to differentiate. Noble designs, mostly finished with hot foil, dominate today's shelves. But the more complex the embellishment become, the higher the costs involved. To stay ahead in this battle for customer attention, manufacturers are interested to provide brand owners new design options without driving packaging costs to immeasurable levels.

RHINO™ IIS is the answer to these requirements. The in-line flatbed embossing system offers sophisticated embellishment techniques with unrivalled performance and is thus an added value for every production line for high-quality labels.

To this day, more than 100 RHINO™ flatbed systems help label printers worldwide to differentiate and offer complex designs cost effectively. RHINO™ systems are running in almost all presses: Mark Andy, Gallus, MPS, Miyakoshi, Nilpeter, OMET, Rotatek, Lombardi and fast running offline systems.

The beauty of flat bed in-line embellishment with RHINO™ IIS

Foil stamping is a popular and effective method of refinement in the wine and spirits sector. The multistroke process of RHINO™ IIS allows several different foils to be applied to one label in one production run. For example, several foil colors can be used to emphasize individual text modules. With multistroke also additional accentuation of graphic elements with transparent foil can be applied.

The robust construction of the machine as well as the combination of foil stamping and relief cutting in one tool allows the further refinement of the hot foil. In this way, the foil can be given its own structure by micro- and nano-embossing and can be placed precisely in register with other elements. This opens up completely new possibilities for graphic designers. With the register-accurate application of holograms and lenses, RHINO™ IIS now also enables the use of the latest finishing technology.

Multistroke on single tool: Different foils in perfect register

The revolvable foil head of RHINO™ IIS allows the application of several foils in one machine pass. With a tool length of 410 mm and a label width of 10 cm, for example, up to 4 foils can be applied. With a label width of 12 cm 3 foils are possible.

The special thing about it: since all embossing steps are on one and the same tool, there is no register deviation. This embossing precision results in completely new design possibilities in the use of hot foil as the adjacent example shows. In this way, specific borders can be placed around fonts or a wide variety of foil elements can be placed with the highest precision in relation to one another.

High, crisp relief – suitable for overprinting

The flat embossing process is technically the only way to apply relief structures at in-line speed, especially with uncoated substrates. With rotary application - due to the short line contact between the tool, the foil and the substrate - often 35 to 40 m/min cannot be exceeded. In addition, the production of rotary foil embossing tools is very complex and the set-up on the machine is complicated and time-consuming.

With the special design of RHINO™ IIS, the contact time is factor 7 and higher compared to rotary. This allows higher linear speeds, better transfer quality, cheaper

foils and cheaper tools. Combined with the high embossing force of 60 tons and a process temperature of 180° C (356° F), inimitable relief structures can be created.

Due to the special temperature/pressure/embossing time constellation during the embossing process, RHINO™ IIS changes the structure of the substrate in such a way that the relief structure remains unchanged and stable during subsequent overprinting.

Microembossing - additional hot foil refinement for exceptional effect

Simple foil embossing has become the standard finish for high-quality labels. With RHINO™ IIS micro and nano-embossing patterns such ordinary foil embossing can be enhanced with extraordinary optical effects. For example, the look of foiled frames can be extended by roughened nanostructure. Or foiled letters of brand or product names receive a bevel shape (partly) microembossed structure.

Further microembossing applications are holographic looking structures, micro texts for security purpose or individual paper structures. Buyers do not consciously see this kind of embellishment, but these effects make labels stand out from the crowd.

It's the very sturdy and robust design of RHINO™ IIS making micro and nanoembossing possible, as there needs to be perfect alignment between stamping tool and counterpart. But not just that: Only in combination with the high, uniform embossing pressure and the long dwell time these extraordinary effects can be achieved.

Patch and hologram inseting in perfect register

Rather new effects available in the market are the so called lenses, which generate a spatial depth with an optical effect that's hard to look away from. These lenses are available in round or angular shapes, coloured in silver, gold, or transparent.

The effect of these lenses is even more impressive if applied onto a pre-printed element as shown in the example. This application requires the lens to be applied in perfect register. With its servo controlled foil motion and extension technology plus the friction free foil motion RHINO™ IIS meets this requirement. But not just the register is perfect. RHINO™ IIS applies lenses and holograms at full in-line speed.

30'000 strokes per hour and fast job change - the basis for high production efficiency

With its 30'000 strokes per hour, RHINO™ IIS is the fastest flatbed embossing machine available on the market. With this high stroke rate, multi-foil designs can be produced at high in-line speeds. But also single-foil designs, which are produced in-line, benefit from the performance: the high stroke rate allows the use of very short tools. This reduces material costs and setup time - and thus the downtime of the entire press - considerably. Speaking of downtime: Pantec offers a so-called job saver plate for repeated jobs, eliminating the time-consuming setup of the counter plate.

Cost efficient single pass production of complex multi-stroke designs

Traditional label embellishment with hot foil has a substantial influence on production costs - and usually also increases lead times. With RHINO™ IIS the refinement process goes in-inline, allowing cost effective high end label production in a single pass.

The 30'000 strokes per hour RHINO™ IIS also cope with the latest market requirement, namely the increasing demand for higher numbers of foil effects. The machines high multistroke performance ensures also economic single pass production in future without any loss of overall press performance.

The high stroke number of RHINO™ IIS enables impressive production speeds for multi-foil designs (e.g. 12 cm repeat): 102 m/min for 2-foil designs, 68 m/min for 3-foil designs and 51 m/min for 4-foil designs.

The RHINO™ job saver plate - no setup effort for repetitive jobs

The initial setup of flat bed embossing tools is known as a very time consuming job, as the shimming of the counterplate needs a countless number of trials and error.

Without the appropriate tools, this work is also required for repetitive jobs again and again. RHINO™ IIS has a solution for that. The shimming elements are applied onto a so called "job saver plate", thus the final setup of the tool is kind of stored for further jobs.

High embossing frequency allows in-line speed with short tools

The sophisticated RHINO™ IIS embellishment features as microembossing and patch inseting help to upgrade basic single foil designs to a new level. But that's not all: the production of single-stroke designs with RHINO™ IIS can be done with a short tool, which is not only cheaper, but means also much less effort for tool setup. As a result, this means significant lower production costs compared to slower in-line systems. Exemplary calculations show that RHINO™ IIS setup costs considering tool and press time can be more than 40% less compared to other systems running with half the number of strokes.

The RHINO™ series – flat bed multi foil embossing for rotary, semirotary and intermittent presses

RHINO™ IIS is the latest and most powerful of the RHINO™ series introduced in 2010. The machine offers a 410 x 410 mm stamping area, revolvable head, 30'000 strokes per hour, registered hologram streams and 6 independent heating zones. RHINO™ IIS comes with electronic impression control and higher tonnage.

With RHINO™ II 250L, Pantec offers the ideal machine to start with. Providing 250 mm embossing length, the machine fits perfectly for typical 2 stroke wine and spirit label designs. The system is upgradeable to RHINO™ IIS 410 as business and requirements grow. The 330 mm wide RHINO™ 330W fits for semi-rotary machines. With 20'000 strokes per hour and a stamping length of 410 mm its suitable highest complex designs and small jobs.

RHINO™ IIS, the answer to increasing label design complexity

Pantec GS Systems Owner Reinhard Braun: "Luxury label printing, especially flat bed stamping is an "art", leaving a lot of space for creativity. With the versatility of RHINO™ IIS printers can offer their customers with effects they develop and offer as their unique knowhow. Along with the efficiency of small, low cost tooling and short single pass delivery time, printers make themselves unique to their customers. Both brand owner and printers profit."

Footage

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((Caption)) RHINO™ IIS provides same high quality embossing as traditional wet glue sheet units, but at much higher speed of up to 30'000 strokes per hour on uncoated stock.



((Caption)) Creative designs and novel embellishments attract the attention of potential buyers



((Caption)) 3D microembossed gold foil for essential elements, holographic foil for accentuation and transparent foil for a spatial impression of the background level make this tequila label a unique piece of art.



((Caption)) Single pass label production with 3-stroke foil decoration. The font is perfectly surrounded with a golden line, the font itself decorated with an embossed transparent foil. The 3rd foil attached is a holographic foil in the lower part of the label.



((Caption)) RHINO™ IIS provides long dwell time, zero register and high processing temperature resulting in outstanding 3D reliefs



((Caption)) A roughened nanostructure gives a distinguished look to a label frame



((Caption)) A view down onto a sealed rum bottle: the closure is printed with a compass, embellished with a lens perfectly fitting to the round shape, giving a spatial depth impression



((Caption)) RHINO™ has a tool cassette for quick job change. In combination with the job saver counter plate the setup of the machine for repetitive jobs can be done without fine tuning.

About Pantec Print Decoration

Pantec Print Decoration provides sophisticated in-line refining solutions. The dedicated equipment for rotary and flat bed hot foil stamping & embossing, high performance vacuum foil savers and high speed & precision patch / hologram placement is made to provide efficient high quality refining, directly in-line. Pantec Print Decoration is an independent subsidiary of Pantec AG, a worldwide operating technology supplier for industrial applications and medical devices offering services, products and solutions in the field of machinery and medical engineering.

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