

PRESS ARTICLE

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With smartGRAVURE, gravure printing enters the digital age

Sometimes innovation brings incremental benefits. And other times, it can take great leaps forward.

With smartGRAVURE, BOBST has achieved a great, game-changing leap forward for gravure printing. smartGRAVURE totally revolutionizes the gravure printing process from being a highly manual operation to a fully digitalized workflow.

The traditional advantages and disadvantages of gravure are well known. While it enables high-quality printing and high-speed production with excellent consistency, the setup is timely and expensive, resulting in longer production lead times and making small print runs non-viable. In addition, gravure printing traditionally has had some challenges around manual and time consuming color adjustment compared to other printing methods like offset or digital printing, and there are also some sustainability challenges around the use of solvent-based inks.

smartGRAVURE changes all that.

BOBST has developed smartGRAVURE for its gravure machine platform MASTER RS 6003. smartGRAVURE offers an end-to-end digitalized process, which enables printers to meet and exceed the highest industry standards with ease. It overcomes the set-up time and tuning required with gravure printing, which requires high level operator skills. With offline setup and automatic selection of the optimal process data for each new job, the machine frees up press time and disengages from the operator skills level.

Therefore, the optimal settings for each print job are automatically determined by smartGRAVURE at the push of a button, while the system continuously ensures that the gravure machines operate with the optimal production parameters during the printing process. Compared to the previous manual setup process, the time required is minimized, input errors are reduced, and waste during setup is significantly lowered.

With ECG printing, digitalized set up and controls, and connectivity with BOBST Connect, smartGRAVURE increases productivity and output consistency, reduces downtime and complexity, and offers considerable sustainability benefits.

Easy as 1-2-3: oneSET, onePRINT, oneECG

smartGRAVURE is modular. The complete system includes three components—oneSET, onePRINT, and oneECG (Extended Color Gamut)—each offering various benefits and collectively revolutionizing the gravure printing process.

oneSET is part of the BOBST Connect recipe management function. It is 100% automated, meaning a fast and accurate machine set-up. After taking over the customer's order data in the form of PDF files, the system suggests the most suitable and efficient machine settings on its own. Importantly, this step no longer needs to be performed on the printing machines but can be moved to the prepress stage. One click is enough to transfer the offline-created recipes to the print queue of the machines.



onePRINT is an innovative new inking system with in-line and fully automated process color measurement and adjustment, significantly relieving machine operators. Continuous monitoring and adjustment of the process colors are based on measurements with an inline spectrophotometer. This provides input for the onePRINT color control, that when combined with oneECG ensures reliable color stability from the first to the last print.

The new system limits the amount of ink in the color circuit to the necessary minimum, reducing ink in the machine by over 50% compared to conventional gravure solutions and reducing ink waste simultaneously.

oneECG is BOBST's technology for fixed palette printing, now available for gravure printing and an essential element of digitizing this printing process. oneECG works with a fixed set of up to seven printing inks, so gravure printers only need to change the printing cylinders for job changes, while the inks remain in the printing machines. This reduces ink waste. A digitalized version of "color matching" can therefore be performed in the prepress stage—before the print jobs are transferred to the machine controls.

A smart investment with significant benefits

The benefits for converters and brand owners are immediately clear.

Downtime in job changeovers is reduced by up to 70%, enabling significant productivity gains.

The machine provides 100% job repeatability and perfect color consistency. In fact, the MASTER RS 6003 with oneECG technology is officially Pantone validated, providing complete peace of mind.

It has significant sustainability benefits. The innovative technology reduces waste and ink waste drastically by up to 50%, and lowers the energy consumption of this printing process, which also provides an economic advantage.

Excitingly, it opens up gravure printing for medium and short jobs. It enables profitable production of smaller and medium-sized orders from about 5,000 m². Orders can be delivered faster with high profitability, whether they are small, medium or long runs.

For brand owners that require premium quality packaging, gravure has always been the obvious choice. However, until now, it has been a challenge for gravure printers to meet the increasing demands for shorter print runs, faster delivery and more sustainability.

Now, with the leap forward in innovation provided by smartGRAVURE, all of this is possible, setting them on the path for a highly productive and profitable future.

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About BOBST

We are one of the world's leading suppliers of substrate processing, printing and converting equipment and services for the label, flexible packaging, folding carton and corrugated board industries.

Founded in 1890 by Joseph Bobst in Lausanne, Switzerland, BOBST has a presence in more than 50 countries, runs 21 production facilities in 12 countries and employs more than 6 300 people around the world. The firm recorded a consolidated turnover of CHF 1.960 billion for the year ended December 31, 2023.



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