

Press Release

Thema / Subject

Innovative UV-LED drying on the Gallus ECS 340

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Trade press

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Ref.:
31 August 2009

Working in cooperation with partners Siegwerk Switzerland and Phoseon Technology/USA, Gallus has developed an LED-UV drying system for narrow-web rotary presses that is being unveiled to a specialist audience at Labelexpo 2009. The system boasts outstanding benefits in cost efficiency (up to 60 % lower energy consumption) and environmentally friendly credentials (no ozone or UVA or UVB radiation emissions).

The new UV drying technology consists of a high-performance UV-LED lamp and newly developed UV flexographic inks. The entire system is being demonstrated at the Gallus stand (5B50, Hall 5) in the form of a working technical prototype integrated into a printing unit of the new Gallus ECS 340.

All in all, the results of comprehensive print testing, advances in the development of printing inks and the availability of UV-LED technology indicate that this innovative and environmentally friendly drying technology is on the brink of achieving market maturity.

“As a technology leader in the label industry, we are committed to boosting our customers’ competitiveness through a process of continuous innovation. And in doing so, we are committed to handling the world’s resources in a responsible manner. This UV drying system, which has been developed in cooperation with our partners, shows how sustainability and innovation can work hand in hand,” explains Stefan Heiniger, VP Research and Development at the Gallus Group.

Siegwerk developed the new UV-LED ink system based on its successful SICURA Flex 39-8 ink system. The challenges involved in developing the inks included surface hardening, gloss and drying at speeds of over 100 m/min.

“Our tried-and-tested SICURA Flex 39-8 label-printing ink system served as the benchmark for our newly developed UV-LED ink system. We have now succeeded in meeting all the demands set out by our customers in relation to ink properties,” adds Bernd Miller, Head of Technology at the Labels business unit of Siegwirk Switzerland.

The following processing properties have already been demonstrated when using the RX Fireflex lamp supplied by Phoseon:

- When using optimized inks, the UV irradiance enables printing speeds of up to 120 m/min. This applies to flexographic inks, screen inks and coatings.
- The UV-LED drying systems do not emit ozone or infrared radiation.
- Because the system does not cause the printing substrate to heat up significantly, there is no need for re-cooling.
- The elimination of cooling processes and ozone extraction delivers energy savings of up to 60 % in comparison to conventional UV drying technologies. In addition, print operations consume far less air and water for cooling purposes.
- As the system minimises fire hazards and prevents ozone, UVB and UVC radiation emissions, it has greener credentials and improves working conditions.

The response from visitors to the fair forms an important basis for the decision to continue developing the UV-LED drying system and the corresponding ink systems.

The Gallus Group

The Gallus Group is one of the world’s leading partners for label printers. At its headquarters in St. Gallen, Switzerland, and its development and production facility in Langgöns, Germany, the Group develops and manufactures label printing solutions that have proved a success the world over. Thanks to its focus on the needs of an international customer base, Gallus has become a leading global specialist in printing and process technology.

Wide-web rotary presses and die-cutters offer the folding carton sector a cost-effective means of producing folding cartons and card products inline. Besides its portfolio of presses, the Group also offers consumables and a global, decentralised service and spare parts network.

Gallus and Heidelberger Druckmaschinen AG, the global market leader in solutions for the print and media industry, have been working in partnership since 1999. The Gallus Group has a workforce of approximately 560 and is based in St. Gallen, Switzerland.

The Siegwerk Group

With a workforce of 3,900 and sales amounting to EUR 820 million (2008), Siegwerk is a leading ink manufacturer and the world's number 2 in ink systems for label printing.

Siegwerk has subsidiaries in more than 30 countries that enable it to offer customers in the world's largest markets uniform product quality, skilled contacts and rapid on-site support.

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