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**Company Background**

**See us at Labelexpo Europe 2025, Stand 3A-47**

**GSE: 50 years of innovation in ink logistics**

*How GSE’s ink logistics solutions support fast-response, efficient and sustainable workflows in label and packaging printing, by Maarten Hummelen, marketing director, GSE Dispensing*

Efficient, controlled handling of ink is fundamental to meeting customer quality expectations, and staying competitive in the increasingly service-driven, regulated and fast-moving supply chains for packaged retail goods.

Whether a label or packaging converter prepares special ‘spot’ colours or uses process colours, managing inks presents risks and challenges.

The costs and associated emissions resulting from ink handling or colour errors can be significant, when scrapped material, rework, transportation and lost production time are taken into account.

Additionally, access to data about ink, on-demand, is essential for fast-response manufacturing, environmental reporting, proof of safety compliance, planning and forecasting.

GSE, based in Brummen, the Netherlands, has been addressing the converter’s ink-related challenges for 50 years. The company’s innovations in ink dispensing and ink management software are keeping printers and manufacturers ahead of the competition in markets like packaging, labels, textiles, wallpaper and coating, by:

* Driving waste and waiting time out of processes
* Assuring accurate, repeatable colour quality
* Reducing the environmental footprint
* Accelerating response times and decision-making

**Ink dispensing: repeatable colour on-demand**

GSE’s *Colorsat* branded automatic ink dispensers enable printers to achieve exact colour quality on-demand, supporting operational efficiency and sustainability. These dispense precise amounts of each ingredient in exact quantities needed for the print job, according to a formula. Supported by software, they can also reuse leftover ‘press return’ ’inks, in new jobs. Additionally, semi-automatic dispensers reduce makeready time and motion, preparing single ingredients of inks for the press.

By preparing accurate colour fast and repeatably, ink dispensers can reduce ink spend - cutting consumption by up to 30%, while avoiding the risk of delays and boosting production time.

GSE Colorsat dispensers feature a modular build with exchangeable parts. This allows customisation and extendability, to suit application, output requirements, space availability, or ink-set used. Optional equipment includes grounding and extraction equipment for explosion-proof handling of solvent inks.

**Software automates and integrates ink-handling throughout the workflow**

Ink management software boosts a converting business’s overall performance and competitiveness in two ways: first, by automating processes, which drives down waste and improves quality, and second, by supporting data-led decision-making and responsive manufacturing.

*GSE Ink manager* is dedicated ink management software that automates a host of ink-handling tasks. Specifically, there are software packages for:

* Ink purchasing - automating purchase notes for suppliers or internal procurement teams.
* Inventory management **-** tracking ink stocks from order intake to the ink room, with real-time updates on availability.
* Colour recipe creation and adjustment - importing and adapting recipes from colour formulation software for fast response to new product launches.
* Re-using ‘press-return’ inks.
* Ink batch traceability – linking ink batch use per job, this supports traceability for food safety audits and rapid recall management
* Ink consumption calculation – accurately predicting ink quantities required per job, based on artwork and job data.
* Software integration - seamless connection between ink management software and colour formulation software, other MIS systems and the cloud. This enables access to ink data without administrative efforts.
* Advanced reporting – delivering automated, customised ink reports (e.g. consumption, stock, job schedules) to user groups for workflow optimisation.

Together, these software programs support an efficient operation that is aligned with the market’s fast-changing needs and just-in-time service expectations - and compliant with tighter safety and environmental regulations.

**Timeline of GSE’s innovations in ink logistics**

**1975:** GSE (Gerritse Systems Engineering), Netherlands is founded by Jan Gerritse. Based in Brummen, the Netherlands, the company would become a leading supplier of ink dispensing and software solutions for the textile, packaging, label, paint and industrial coating industries.

**1981:** The company introduces the world’s first automatic gravimetric dispensing system. The IPS (Integrated Paste System) was developed in partnership with Dutch engineering conglomerate Stork, for the textile printing industry.

**1989:** Development of the first automatic dispensing machine for the packaging industry, marketed to this day under the ‘Colorsat’ name.

**1998:** introduction of the first PC-controlled dispensing systems after developing its Windows-based IMS (Ink Management Software). This brings substantial process improvements in the ink kitchen, including improved accuracy and reduced makeready times.

**2004:** The company introduces a ‘plug-and-play’ dispenser, Colorsat Slim, the first affordable solution for small to medium-sized wide-web printers.

**2007:** Launch of the Colorsat Match, the first dispenser specifically for label and narrow-web applications.

**2008:** Relaunch of the Colorsat Compact dispenser. This is the first dispenser to feature a redesigned cabinet and a modular architecture that allows rapid configuration - even for customised installations.

**2012:** Relaunch of the Colorsat Slim, a trail-blazing dispenser for medium-sized paperboard and flexible packaging operations thanks to its scalability. It features a new cabinet design with enhancements in user-friendliness and ink preparation times.

**2013:** Launch of the Colorsat Switch dispenser for label printing. Inspired by the previous year’s Slim redesign, it features a flexible configuration with waterfall frames for storing base containers of 25kg and smaller, with optional connections for drums up to 1000L.

**2017:** GSE Ink manager (GIm) software is introduced. Its suite of optional packages automate ink-related processes at every stage of the workflow, including purchasing, inventory control, traceability, reporting, recipe generation, among others - further advancing efficiency, responsiveness and sustainability in flexo.

**2019:** Introduction of new machine controls, moving from VLC integrated in the Machine PC, to a separate industrial real time controller (RTC), in combination with Windows 10 operating systems.

**2021:** Launch of GSE’s [InkConnection](https://gsedispensing.com/inkconnection/) blog - a regularly updated source of information and guidance to help professionals in the label and packaging sectors maximise value from managing inks.

**2024:** Introduction of Windows 11 IoT-based system controls and modular conveyor systems enhances automation in the dispensing, blending, and handling of inks during the makeready stage, with a design that is adaptable to requirements.

**2025:** Introduction of an augmented reality (AR) experience, to help converters design and better visualise their ideal ink workflow.

**About GSE:**

GSE delivers robust, fast and smart dispensing equipment, software and services to minimise ink-related waste in the printing workflow. With 50 years’ experience in the industry, the company has an installed base of 2,300 systems worldwide. The company is based in Brummen, the Netherlands.

**Media Contacts:**

GSE: Maarten Hummelen,  tel: +31 (0)575 568080; fax: +31 (0)575 – 568090; Email: [info@gsedispensing.com](mailto:info@gsedispensing.com) Web: [www.gsedispensing.com](http://www.gsedispensing.com)

Adrian Tippetts (Be Known Agency): Email [adrian@bkagency.co.uk](mailto:adrian@bkagency.co.uk); Tel: +44(0) 7799 14184

In 2021 we introduced InkConnection

You mention 2022 for the modular design, but in 2024 we launched the new modular design of conveyor systems

In 2025 we introduced an augmented reality experience to design your ideal ink flow