

**Total control
at your fingertips!**

 **GSE** *Ink manager*

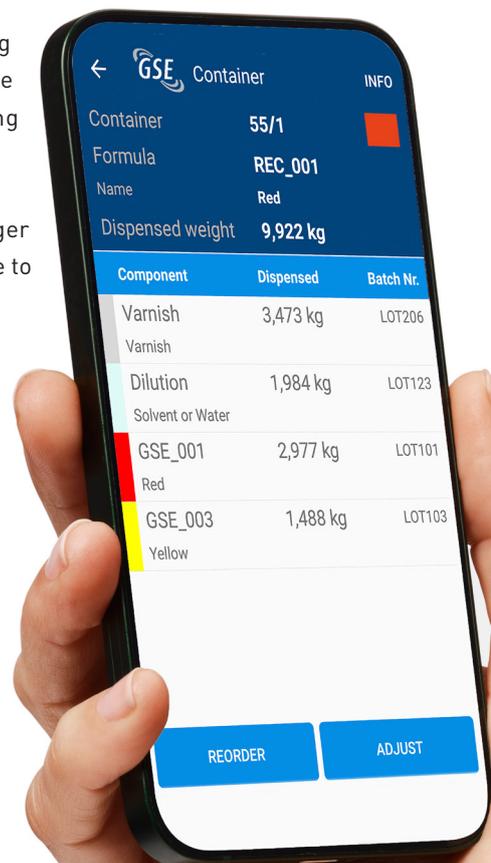
GSE Ink manager: total control at your fingertips

Thanks to pioneering software, achieving consistent spot colours doesn't have to mean a compromise in competitiveness. GSE's Ink manager software automates ink-handling at every step of the workflow - helping packaging printers meet brand owners' quality expectations, while staying efficient, agile and sustainable.

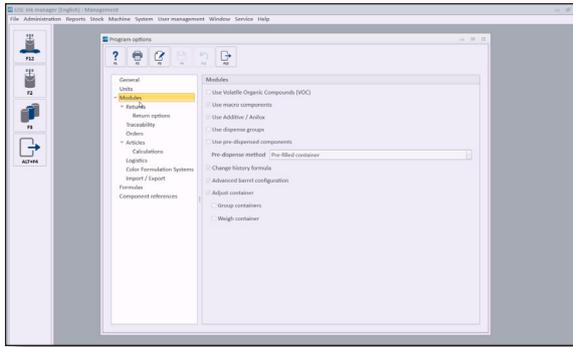
From dispensing special colours and tracing inks, to managing inventories or processing press returns on-demand, it's the solution for predictable quality without errors or waste - driving down ink costs by up to 30%.

Seamlessly integrating with planning systems, GSE Ink manager brings real-time visibility into your inks - empowering your people to make smarter decisions, so every drop adds value.

- Assure repeatable colour accuracy
- Cut ink costs by up to 30%
- Save time, avoid mistakes and cut ink waste
- Track and trace inks in line with food safety standards
- Align inventories with output needs - without administration
- Real-time insight into inventories, costs, and consumption

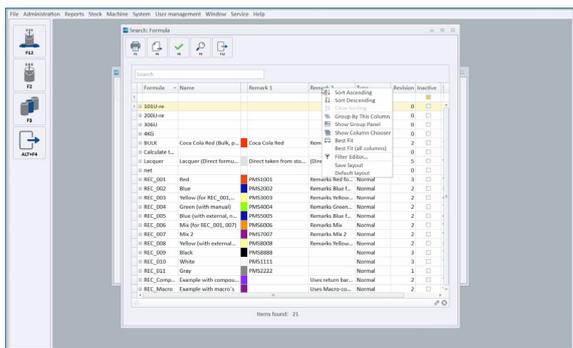


The GSE Ink manager software



Modular architecture, modern user interface

The modular software design combines the advantages of standardisation with those of customisation. Extensions with additional modules after initial installation are simple to make. Thanks to the fresh, intuitive Windows interface, the software is easy to learn and work with. You can sort, hide, drag and drop columns and save any lay-out you have designed. The software also includes extensive search, reporting and connectivity functions. In addition, controls can be easily extended to manage multi-track automatic conveyors, as well as weighing and blending stations.



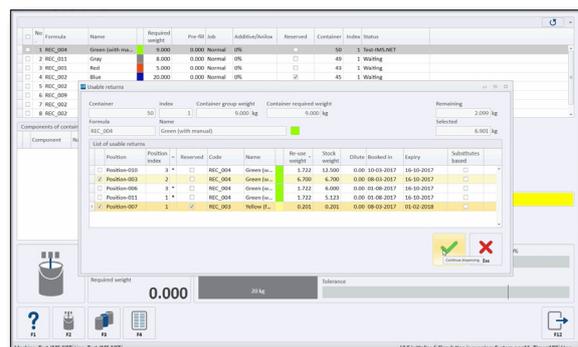
Overcoming your business challenges

Digital ways of working are key to optimising competitiveness and sustaining a talented workforce. The question, therefore, is not if you automate your ink logistics, but how. GSE Ink manager's intelligent solutions drive waste and delays from your workflow, so you can meet brands' demands efficiently, responsively - and profitably. Empowered with real-time data to make informed decisions, your staff boost their contribution to company success!



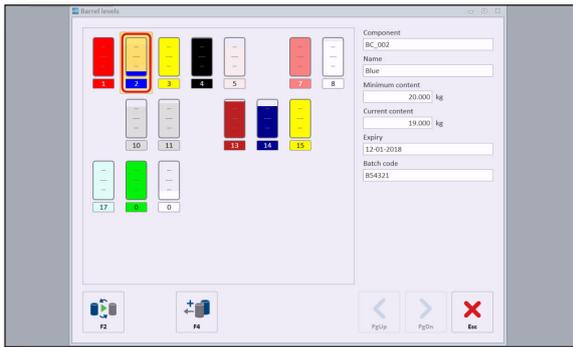
Making your own inks:

The software and dispensing system enable instant availability of exact colours in precise quantities for the job, made from base components. This reduces ink costs by as much as 30 per cent: there is no need to purchase ready-mixed colours, or excess amounts "just-in-case". Ordering base components less frequently saves transport, warehousing and administration costs.



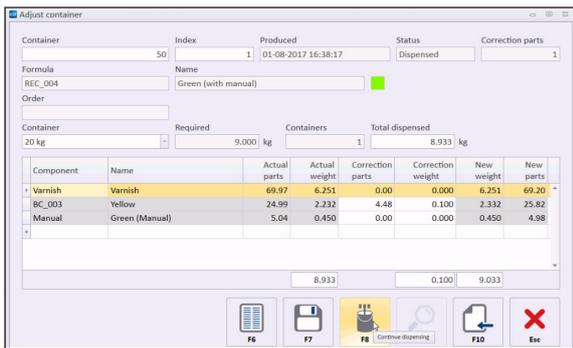
Reusing return inks:

Ink manager enables press-return ink reuse in various ways, by processing individual containers or by producing 'clusters' - where return inks with similar colour or base components are combined into a single base colour, which is then connected to the ink dispenser.



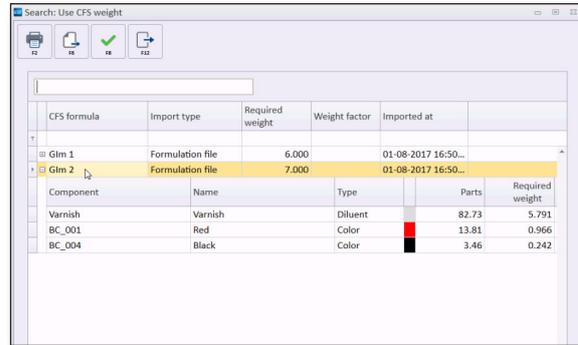
Supply chain management:

The software provides real-time insight into inventory and shows exactly which base components are needed for scheduled jobs. It updates automatically when materials are fed to the dispenser and generates purchase lists when minimum volumes are reached.



Colour corrections:

Colour adjustments after dispensing can be needed because of substrate or anilox roll inconsistencies. Both temporary corrections to the container or permanent changes to the formula can be made – either manually, or with the help of colour formulation software. This enables the right colours to be reordered, and return containers with corrections to be reused properly.



New colours:

New formulas created with colour formulation software are sent directly to Ink manager. Sampling can be done with formulas or by component dispensing (without a formula).

Traceability report for batch code									
Batch code		Batch-002B							
Component		BC_002 Blue							
Name		Blue							
Date of first use		07-03-2017							
Expiry		12-12-2017							
Container	Parts	Weight	Order	Formula	Produced	Expiry			
12/1	18.18	1.623		REC_005	08-03-2017 11:34:51	12-12-2017			
13/1	9.09	0.992		REC_007	08-03-2017 11:35:34	02-05-2017			
23/1	30.00	4.167	Test	REC_Compound	08-03-2017 11:42:03	02-05-2017			
33/1	30.00	2.700		REC_Compound	10-03-2017 14:23:34				
22/1	6.00	0.893	Test	REC_Macro	08-03-2017 11:28:53	02-05-2017			
22/2	6.00	0.893	Test	REC_Macro	08-03-2017 11:29:28	02-05-2017			
23/1	33.29	0.992		REC_Macro	08-03-2017 16:25:26	19-03-2017			
33/2	5.96	0.899		REC_Macro	10-03-2017 14:53:18	02-05-2017			
Trace returns on batch code									
Return store	Return location	Position	Position index number/index	Formula	Total contents	Weight	Parts	Expiry	
Main store	Location	Position-001	2	22/1	REC_007	8.000	0.800	6.00	02-05-2017
Main store	Location	Position-001	3	23/1	REC_007	7.900	0.992	33.29	19-03-2017
Main store	Location	Position-006	2	13/1	REC_007	7.700	0.700	9.09	02-05-2017
No. of items					3	Total	23.20	2.137	
Total						3	23.20	2.137	
Batch code previous and following barrel									
Next barrel									
Batch code	Machine	System	Mutation date	Remaining	Expiry	New weight		Operator	
Batch-00C	Test-BMS.NET	2	07-09-2017	19.000	12-01-2018	219.000		Operator	
Previous barrel									
Batch code	Machine	System	Mutation date	Remaining	Expiry	New weight		Operator	
Batch-00A	Test-BMS.NET	2	01-02-2017	189.410	12-09-2017	289.410		Management	

Traceability:

The software provides a documented traceability system for inks, in accordance with global food safety standards. It gives instant access to information about the quality and quantity of the ingredients for any job and, conversely, which orders were produced with any specific batch of ink. Reports link batch numbers to jobs, with details of expiry dates and press-return containers used, and press-return containers used.

No.	Formula	Name	Required weight	Unmixed product	Weight	Substrate	Thickness	Color	Cost
1	BULK	Coca Cola Red (Bulk, pre-blended)	10.000	10.000	13.000	0.000	0.000	0.000	6.97
2	REC_009	Black	0.000	7.938	4.300	0.000	0.000	0.000	6.97
3	REC_010	White	0.000	73.813	11.700	0.000	0.000	0.000	6.97
4	REC_011	Gray	0.000	3.969	2.100	0.000	0.000	0.000	6.97
Total			100.000	133.720	31.300	0.000	0.000	0.000	792.28

Management reporting:

Based on real-time information, reports can be generated on-demand or automatically emailed - ensuring decisions are driven by data, not guesswork. Pre-defined reports (for returns, orders, formulas and traceability) are available, while powerful grid functions let you customise reports from any table in the software.

No.	Formula	Name	Price/kg	Absorption (g/m²)	Coverage %	Weight(1000 kg)	Price	
1	BULK	Coca Cola Red (Bulk, pre-blended)	6.98	5.00	40.00	1.000	6.98	
2	REC_009	Black	6.98	3.00	10.00	0.100	6.98	
3	REC_010	White	7.00	3.00	20.00	0.500	3.50	
4	REC_011	Gray	7.20	5.00	20.00	0.500	3.60	
							2.100	37.68

Cost control:

Optional software provides deeper insight into ink consumption and costs, per package design or production order. It is powered by an algorithm that makes precise calculations on ink volume requirements for a job, based on coverage levels, substrate type and run lengths. Understanding ink requirements also supports accurate inventory forecasting and environmental impact reporting.

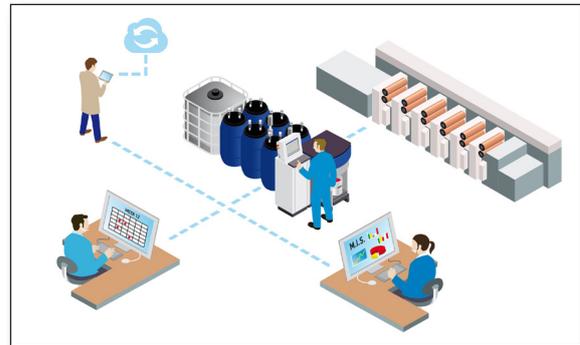
Support

The software includes extensive HTML5-based help, making it easy to find answers yourself. With a support contract, users also benefit from direct access to our helpdesk and receive free software updates as soon as they become available.

Formula	Name	Required weight	Pre-ink job	Address/Recipe	Reserved	Container	Index	Status
1 REC_009	Red	5.000	0.000	Normal	OK	30	43	1 Waiting
2 REC_009	Black							
3 REC_011	Gray							
4 Job 3								
5 REC_002	Blue							
7 REC_004	Green (dark green)							

Workflow management:

The job list streamlines your process by separating work preparation from ink production. With our optional software modules, you can manage every aspect of internal and external ink logistics - and expand your workflows step-by-step, to match your evolving needs.



Software integration:

With web-based functionality and mobile app technology, our software offers seamless integration with other applications, like ink formulation, management information and cloud software.

GSE INK MANAGER BASIC FUNCTIONALITY

User interface:

- Interactive dispensing
- Sort and hide columns: design and save your own layout
- Job list with search, group and editing possibilities
- Extensive grid functions (including filter and sum rows, search box and select all functionality)
- HTML5-based help system
- Supports 43 languages, covering ~90% of the world's population

Components:

- Component information with expiry date and customized references
- Macro components
- Component conversion

Formulas:

- Formula details with creation, modification, and dispensing dates, blend time and absorption rate, return location, customised references, change history and "inactive" mark
- Formula import / export
- Additive / anilox correction
- Special formula types: bulk, direct

New colours and colour adjustments:

- Sampling new colours with formula or component dispensing
- One-time container correction, update formula or create new formula

Dispensing and logistics:

- Check and display of base component availability
- Dispensing priority
- Split dispensing
- Special dispense types: external, stock
- Park container
- Quick start container with barcode
- Machine stock (including real-time visualisation)
- Fill / exchange barrels

Grids and reports (with export possibilities):

- Dispense history list
- Event history list
- Background events list
- Usage and available stock lists and reports
- Performance list
- Component changes list
- VOC report
- Label editor

Configuration:

- "Machine-Line-Station" control, with full management of multi-track automatic conveyors and weighing / blending stations
- Customisable "references" for many database objects
- Multiple container and lid configurations (sizes and weights)
- Circulation pause schedule / parallel circulation / possibility to disable circulation by hardware
- Advanced password protection and log-out timer
- User management with user groups
- Database back-up with generations (max 10)
- Simultaneous computer operation on same database

OPTIONAL MODULES

- GSE Return ink management (reusing press return inks by container or cluster)
- GSE Order management (planning, processing and tracking of orders)
- GSE Traceability (tracing of base component batches in dispensed printing ink)
- GSE Article management (calculating and managing ink volume requirements per print design)
- GSE Advanced logistics (planning, purchasing and booking in base components delivered by your ink supplier)
- GSE Advanced reporting (ink-related info straight to your inbox, automatically)
- GSE Colour connect (integration with a colour formulation system)
- GSE MIS connect (integration with an ERP/MIS system)

GSE Dispensing

GSE delivers robust, fast and smart dispensing equipment, software and services to minimize ink-related waste in the printing workflow. The company is based in the Netherlands.

With more than 50 years of experience in the graphics, textile and coating industry, we have an installed base of more than 2,300 automatic dispensers and software packages at factories in 90 countries. We are supported by a global network of sales, service and supply chain partners.

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