SISTAR® –
The perfect mix

SISTAR combines recipe control, replay mode, redundancy,
route control and even more into an integrated standard solution

siemens.com/sistar

SISTAR for the
food and beverage industry

SISTAR® process automation system is the first choice for process automation at facilities of all sizes in the food and beverage industry. It is economical, easy to manage, seamlessly scalable, enables fast engineering, offers easy reporting, is extremely stable in operation, and delivers precise results.

Automated control over all processes
with SISTAR

SISTAR control system enables fast, fully scalable and at the same time simple and reliable process automation for the food and beverage industry. The standard edition of SISTAR is used up to the largest food and beverage production facilities at globally distributed locations. SISTAR as Lean Edition fits perfectly for smaller applications and operations, e.g. small dairies, cheese dairies, bakeries, beverage or animal feed producers.

One system for all requirements

Using the SISTAR portfolio, you can configure your individual system for process automation based on your company's specific requirements, from very small to very large.

Fully scalable performance and functions

To run SISTAR you need a PC, a SIMATIC S7-1500 controller or SIMATIC ET 200SP open controller, and a license for the server. The functions and performance of this minimal configuration can be expanded as required. The SISTAR Lean Edition contains four units, which can be expanded to a maximum of 40. The SISTAR Standard Edition can be boosted to accommodate any number of units. SIMATIC Safety may be easily integrated and means safety for humans and machines at all times. And if you have any questions, our experts will be there to help.

Non-stop production

Graphical recipe system

Follow the progress of your production processes on the screen: The recipe system provides you with graphical information on the status of each individual unit (i.e. homogenizer). Intuitive dialog boxes are used to add operations and recipes. The recipe system is, of course, compliant with the international ISA-S88.01 standard. Also area specific structures are fully supported. Clear, simple, reliable: the uncomplicated operating concept based on improved usability aspects ensures safe plant control, however, authorized personal can intervene manually whenever necessary. SISTAR ensures the highest stability, proven since 1977 in many plants worldwide.

"SISTAR does really run around the clock and 365 days a year. We really can rely on the system, even during conversions and integrations.

Thomas Dahl,
Process control manager, Zott SE & Co. KG, Mertingen

Flexible order management

Your production week can be planned directly with the process control system SISTAR®. By using the intelligent timer and scaling functionalities as a sequence of batch orders, the planned production week can be processed in the network of recipe-based control and subordinate programmable logic controller. Flexible order and batch planning enables an optimal production process with variable parameters. You can react immediately and efficiently to changes in your production process.

Improved automation solution for cold block applications

In the cold block part of the plant, there are various methods for transporting or managing goods efficiently. A logistical challenge where unwanted mixing of materials must be avoided. The solution of how easy and efficient it can be to manage the numerous parameters, sensor data or times is the process control system SISTAR.

Cybersecurity with SISTAR

By using standard SIMATIC components, cybersecurity is constantly being improved. What appears secure today may already be weakly protected tomorrow. In addition to the hardware-coded password protection of the S7-1500 controllers, the secured terminal bus and a complete cybersecurity service and consulting from Siemens is ensuring that your plant is and remains protected. Unauthorized access and process manipulation can be made difficult by a secure login system based on ID card and RFID reader. The RFID card reader is connected to the SISTAR process control system and the PM-LOGON option.

Safety first – easy to install with SISTAR

The process control system also supports safety PLCs from the SIMATIC S7-1500 series. This means that it is easy to change an S7-1500 for an S7-1500F for safety purposes during engineering. With a safety concept, even more critical process parts are smoothly integrated into your plant, resulting in more safety to protect your employees.

Future-proof
investment

Innovation on the way to digitalization

The SIMATIC S7-1500 hardware platform offers additional new possibilities. Efficient engineering with TIA Portal and other new functionalities makes your process control faster and safer – even in combination with your existing SIMATIC S7-400! Upgrades and updates of the SISTAR system do not require any production downtime. With seamless scalability from micro to mega plants, your investment is protected as you can reuse all engineering data. With hot standby server redundancy, there is no compromise on process stability. Upgrade capabilities and downgrade compatibility keep the system up to date throughout its lifecycle with minimized effort.

SISTAR and OT/IT Integration

Interfaces such as SQL Adapter, OPC UA or REST allow bridging the gap between the OT and IT worlds. It allows you to evaluate production-relevant data in a system that also includes the packaging and auxiliary parts of the plant. In addition, Siemens offers the holistic Manufacturing Operations Management solution Opcenter for interaction with SISTAR on the OT level.

Partner program with proven SISTAR experts

For engineering, Siemens offers the world's best and most comprehensive partner program, where you will find proven BRAUMAT® and SISTAR® experts. All experts have been audited to prove their high quality of know-how and documentation. As a food or beverage producer, you now have the choice to select the best in their class. Our partners get access to exclusive data and documentation and are regularly trained on the latest developments.

SISTAR is exactly the right solution for us. It is absolutely stable, simple to configure and maintain, and troubleshooting is easy.

Thomas Bissinger,
Head of process control, Zott SE & Co. KG, Mertingen

Full
transparency

Reporting, batch report, cellar report and end-to-end reports

What is an ad hoc report? Reports related to the batch or fermentation process that have not been programmed are often difficult to create. This challenge can be solved by using the SISTAR process control system. As a basic functionality and without programming through ready-made Excel macros, no MES system is required in this case. The PM-Quality option enables reports on all production steps and thus increases transparency. Flexibility and speed are the main features of the overall reports with the SISTAR process control system and PM-Quality. In just a few minutes, complete end-to-end reports can be created using drag-and-drop. But also the breakdown of production logs including handwritten input values can be realized immediately. For the integration of long-term values from an archive, the SQL adapter enables access to an SQL server.

Recipe controlled dosing and weighing by using weighing electronics SIWAREX FTA or SIWAREX WP351

Dynamic adjustment of the required quantities and combinations of ingredients depending on the recipes used is the task of the SIWAREX FTA or WP351 modules, which are seamlessly integrated into the SISTAR recipe management system. The advantage for users is recipe-dependent weighing and dosing with maximum accuracy. In addition, the weighing process is even optimized for speed to improve the entire production process, whether in the syrup room, during yogurt production, or when mixing a new shampoo.

Route Control System (RCS)

With the Route Control System (RCS), you can save energy and time by transparently structuring your production routes! Like an electronic route planner, the system knows which transport route is currently closed, e.g. due to construction work, and selects an alternative. RCS was developed for the automation of extensive piping and transport routes, such as those found in silo and tank farms with complex piping systems. In addition, a partial selection of routes is possible, which can be visualized and provides an overview even for very complex material transfers.

Trending, logging, and archiving

The trending function provides a real insight into your production process: The simultaneous acquisition, logging and archiving of analog and digital data from all areas of the plant enables increased plant transparency. The data is logged and archived on a batch and time basis. In this way, technologically related curves can be displayed in the same diagram. With the comparison function, any curves can be retrieved from the archive. Each production order is stored in a step log consisting of the entire recipe data, all process steps, associated set points and actual values. Changes to the process are recorded in the operation log for each batch.

Tank management

SISTAR gives you the opportunity to manage your tank farm according to the actual tank information. Based on this information you can plan your tank farm in a cost-effective way without losing the control in the automation. With the tank cooling functionality, it is also possible to cool down specific areas inside of a tank to ensure the best mixing of the content.

Service and maintenance

Replay mode and maintenance

The integrated recording of all relevant process data and parameters enables time-delayed observation and analysis of all process images and process dynamics. With the replay mode available since version 7.5, you have easy access to the entire time frame of your process and even beyond. The look back is not limited to the screens that were displayed at that point in time, but you can also review other process screens, faceplates and more process values or events based on historical data. This approach is best used for immediate error detection, service purposes, and training new operators. To support maintenance in the SISTAR system, there is built-in maintenance functionality in each valve motor faceplate. SISTAR has also proven itself in the use of virtualization based on Microsoft HyperV or VMware, which saves a great deal of time in maintaining the various operator stations. Virtualization as a service is offered on demand.

Mobile interaction with the process

By connecting a smartphone to the SISTAR system, the operator can see critical values at any time. Even cascaded alarms can be analyzed via the smartphone to find the critical component in your process for a quick response. Automatic forwarding of emails, phone calls, SMS messages and more is possible with the Alarm Control Center (ACC) extension.

Standardization and support

SISTAR is a standard software product from Siemens and is subject to the standard product lifecycle including all quality, test and documentation formalities. Siemens offers 24-hour support and covers all time zones – worldwide. The first access to the hotline is free of charge and can be used for 1 h without a service contract. In addition, all documentation, tips and tricks are available online free of charge. For training, Siemens offers online and classroom courses. Only five days are needed to train the complete SISTAR system.
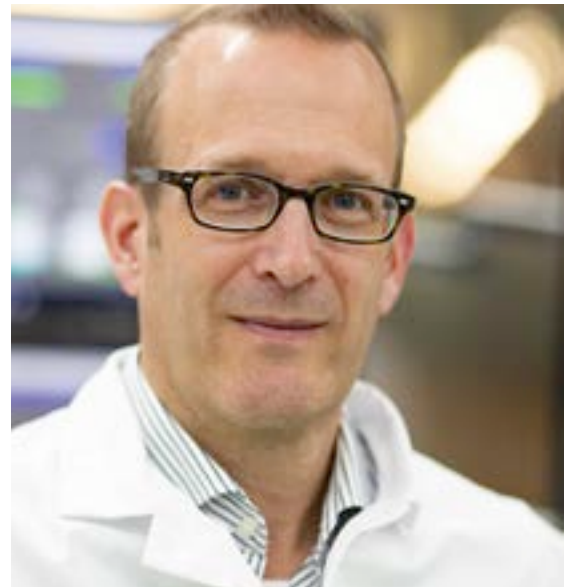
„
With replay mode, we're certainly saving 50% of the time required for trouble-shooting.

Thomas Dahl,
Process control manager, Zott SE & Co. KG, Mertingen