



SPRETIMB[®]

Solutions for Sawmill Automation

www.sprecher-automation.com

sprecher
automation

AUTOMATION OF WOOD- WORKING COMPANIES

Today, wood encompasses an enormous spectrum of processing possibilities that have been devised and developed over thousands of years. Traditional methods such as carving still exist. The sawmill, on the other hand, has developed into a high-tech center.

Sprecher Automation has made a decisive contribution to this – with solution-oriented systems for the specific tasks in modern wood processing plants.

With SPRETIMB, Sprecher Automation offers individual solutions for sawmills. From the log to the finished board, the following stations in the sawmill operation are included: Log yard, saw infeed, sawing line.

The SPRETIMB industry solution is divided into the following packages

- Supervisor level and process visualisation (SPRECON-V)
- Control level (SPRECON)
- Sensors and scanner systems (SPRESCAN)
- Power supply (SPREPOWER)

Sprecher Automation offers decades of experience in the equipping and modernisation of woodworking plants.

This process know-how flows into the entire system design. In addition to automation, the SPRETIMB industry solution also covers the complete heavy current technology and drive technology of sawmill operations. The latest technical developments are used for targeted innovations.

For us, comprehensive advice and a high level of technical solution competence in the joint development of your individual concept are a matter of course.

The use of standardised elements and modular technology for hardware and software leads to a high quality standard and enables simple, rapid assembly and a wide range of services.

At the same time, you benefit from the highest possible availability and optimum ease of use.

SYSTEM DESIGN

SUPERVISOR LEVEL & PROCESS VISUALISATION

The highest hierarchical level is the master computer level (master control). Specially developed computer systems are used for machine-related data processing and real-time control. In addition, all production data is collected, evaluated and forwarded to the company's EDP system.

With process visualisation software optimised for the entire application, all plant areas are controlled, monitored and all relevant data is logged. SPRECON-V is also used in the control level and the scanner level.

SENSORS & SCANNER SYSTEMS (SPRESCAN)

The SPRESCAN series includes a variety of sensors and scanner systems for logs and saw. Many years of experience in this field have shown that the use of SPRESCAN measuring systems can significantly increase added value.

CONTROL LEVEL (SPRECON)

The control level comprises the control hardware and software required for the process – whereby the structure can be organised centrally or decentrally – and thus forms the interface to the process.

The system is characterised above all by its modular nature and the resulting simple expansion options. In addition, a decentralised arrangement

avoids long cable routes. Networking by means of fibre optic cables offers additional interference immunity.

POWER SUPPLY (SPREPOWER)

The flexible system architecture continues up to the motor control centers (MCC). Here, the modular system developed by Sprecher Automation has proved particularly successful.

In addition to the drive technology, SPREPOWER also includes all elements for the plant's internal low and medium voltage supply, as well as the switchgear for the connection to the public supply network.



SCANNER SYSTEMS

For the sorting of the wood, Sprecher Automation supplies a variety of measuring systems within the SPRESCAN series for the detection of diameter, contours, length, width and thickness of the wood. Decades of practical experience in this field have shown that the use of these scanner technologies can significantly increase the value creation of the raw material.

SPRESCAN-3D-L

The full contour scanner measures the ovality and curvature of the logs with up to 400 measurements per second. A stable steel frame ensures the high accuracy of the intelligent high-performance matrix cameras.

SPRESCAN PHOTOLOG-L

SPRESCAN PHOTOLOG-L is used for quality assurance for legally binding transactions. The database stores up to 1 million logs with up to four views per log.

LOG SORTING

SPRETIMB including all its components is applied to the entire sawmill operation.

Depending on the respective plant areas, the individual packages are offered in different variants. This applies in particular to the SPRESCAN series, which is characterised by its variety of different measuring systems. Sprecher Automation supplies systems for production-optimised log sorting and log registration for this plant area. In addition, data acquisition can be logged for legal transactions.

- Measuring systems for log length, diameter, curvature, woodiness and cubature
- Database-driven master photography
- Roundwood sorting according to customer requirements

The SPRESCAN LOG 3D-L laser scanner system is used for log measurement. Furthermore, measuring systems from Sprecher Automation can be easily adapted to mechanical specifications.

RANGE OF SERVICES

- LOG CONTROL: Automatic log manipulation and monitoring with data registration and data connection to the operating EDP system
- Telecontrol
- Momentary information

ADMISSION TESTS

- Austrian calibration approval for measuring systems to determine value-determining characteristics of roundwood

STANDARDS

- ÖNORM L1021 – Measurement of round timber

SAWLINE

Decades of experience and best practice from large-scale projects lead to mature control systems developed specifically for the timber industry. This includes, for example, the optimisation of machine motion sequences while taking into account the continuous production process.

As in all other plant areas, a continuous data link can be established to the higher-level master computer system (Master Control) as well as to the infeed and outfeed production plants, such as saw feed and board sorting systems.

The uniform user interface also enables centralised maintenance access to the overall system.

RANGE OF SERVICES

- Extensive range of sensor and scanner systems
- Remote maintenance
- Moment information
- Speed optimisation of the main machines in relation to feed rate, cutting pattern, chipping quality and stability of the processing tools
- Continuous master tracking including synchronous data management in the machine
- Integration of peripheral systems such as central lubrication, compressor station, wood chip disposal systems, etc.
- Global overall integration of control and drive technology as well as servo technology
- Cutting pattern creation and optimisation specifications on the control PC
- Input of main and side material, saw blades and production parameters for turning and side board optimisation
- Input of the forest edge rules, product list for the side material to be optimised incl. price specification
- Control of the cut (load cutting pattern, start cut, cut protocol, ...)
- Visualisation of the system parameters, positions of the aggregates and production progress
- Intuitive operation
- Optimisation of the log position
 - Preselection of the indentation optimisation according to cutting pattern, ovality and curvature
- Optimisation of the angular position of the turning device
- Adaptations to customer-specific requirements possible
- Side board optimisation
 - Optimisation according to price or volume
 - Position optimisation
 - Adaptations to customer-specific requirements possible
- Data recording of the optimised products for logging and yield calculation in the customer's own data processing system



OUR PRODUCTS & SERVICES

DESIGN & ENGINEERING

Experienced engineers from Sprecher Automation provide professional advice in advance as well as smooth planning and execution of the projects.

SOFTWARE ENGINEERING

The software packages from Sprecher Automation cover all tasks in sawmill operation: control, regulation, visualisation and logging.

The control technology and process visualisation components are supplied on the basis of Windows® or LINUX®.

ENERGY SUPPLY & CONTROL TECHNOLOGY

Sprecher Automation offers the complete power supply (SPREPOWER) and the control system SPRECON-E.

- Distribution & control cabinets
- Medium voltage switchgear (SPREPOWER MV)
- Low voltage switchgear (SPREPOWER LV)

ASSEMBLY & COMMISSIONING

Our experienced installation specialists take care of the correct installation, cabling, connection and testing of your equipment, systems and installations on site – from fibre optic cables to high-voltage cables.

In the course of commissioning, our specialists check and test all components of the process, accompany you during trial operation and ensure a smooth handover.



TRAININGS

High-quality products and solutions also include professional training, workshops, coaching and e-learning.

In our Training Center, users learn, among other things, how to handle our equipment and systems efficiently and maintain them optimally with simulation programmes.

BENEFIT FROM OUR EXPERIENCE!

Sprecher Automation has been developing new technologies with renowned representatives of the timber industry for decades.

Based on many years of experience, excellent process know-how and international reference installations, we are the specialists for the automation of sawmill operations.

Among others, the following internationally successful companies are among our customers:

- Bergkvist
- Mayr-Melnhof
- Stora Enso Timber
- UPM Kymmene

