

A man with a mustache is shown in profile, smelling a piece of wood. He has a thoughtful expression, with his hand near his nose. The background is a digital overlay of various furniture icons (chairs, tables, sofas) and binary code (0s and 1s) in shades of blue and green, suggesting a connection between nature and technology.

SIEMENS

Ingenuity for life

Machine results just as unique as wood itself

Modular system solutions for
all types of wood processing

[siemens.com/wood](https://www.siemens.com/wood)



Leading-edge solutions for sustainable success

We give answers to central issues of the wood sector

The challenges of the wood sector are extremely diverse and can only be addressed based on innovative, holistic solutions and extensive sector and application know-how. We are there to support you when it comes to key issues – because what moves the market also moves us.

“Is there a partner who can reliably help address my challenges?”

Partnership as basis for future perspectives

As globalization continues, companies active in the wood sector are coming under more competitive pressure. This calls for a strong partner with seamlessly integrated and holistic solutions, and an extensive portfolio for every processing step. From material production through to manufacturing the final product, from the sawmill to CNC machining center: With Siemens, you can quickly and efficiently tackle your drive and automation tasks. On the one hand, this is based on our extensive portfolio for all types of wood processing machines. On the other hand, on Totally Integrated Automation (TIA) – our industrial automation, which stands for the efficient interoperation of all automation components.

The open system architecture of TIA covers the complete production process and utilizes common attributes across the board: consistent data management, global standards and unified hardware and software interfaces. At each process step, you benefit from higher efficiency – and in turn, from an overall higher degree of competitiveness. Whether it be safety and security, efficient man-machine communication, enhanced plant and system availability or intelligent data analysis: We offer the optimum solutions to address each of your challenges.

“How can I boost efficiency over my complete value-added chain?”

Digital Enterprise Suite

Digitalization offers undreamt-of possibilities and potential to increase your value added. Having said that, as real and virtual worlds merge, new challenges also crystallize out. Manufacturing companies must drastically reduce their production times and massively increase their flexibility to address the ever-increasing trend for individualized mass production.



A partnership with Siemens – your advantages at a glance:

- Planning reliability
- Short time to market
- High degree of availability
- Security of development
- Security of investment
- Scalable systems
- Optimum processing quality

Efficient and innovative solutions for integrating data along the complete value-added chain are required in order that all of this can be successfully implemented. Siemens has a portfolio of hardware and software products that facilitates data to be seamlessly exchanged between development, production and suppliers. This in turn makes it possible to completely and digitally emulate the real physical process itself. Today, Digital Enterprise Suite, our seamlessly integrated automation solution, already addresses the main requirements of Industrie 4.0.

“Do I have the possibility of protecting my plants and systems against cyber attacks?”

Industrial Security

When it comes to the challenges relating to security that increasing digitalization is bringing with it, protecting plants and systems against external cyber attacks is becoming increasingly important. Industrial Security is a core element of Digital Enterprise, Siemens basic solution on the path to Industrie 4.0. With its “Defense in Depth”, Siemens is offering a multi-level security concept based on three pillars – plant security, network security and protecting system integrity – which extends down into the control level.

“How do I ensure that I’m effectively protecting my plants and systems?”

Safety Integrated

Demands relating to the functional safety of plants and machines is continually on the rise. In addition to the increasingly more stringent legislation, also the increasing demands relating to productivity and availability. With our Safety Integrated, we can offer you seamless integration of safety functions in your standard automation. Our extensive and seamless solutions reliably protect man, machine and the environment – and address today’s as well as future demands relating to cost effectiveness and flexibility.

“Where can I find long-term support for my individualized machine concepts?”

Extensive services

Mechatronic machine concepts are based on mechanical elements, electric drive technology and motion control software. The better these components are harmonized and coordinated with one another, the higher the potential to boost machine performance. Whether classic machine concepts or demanding robot handling: Our mechatronic support team can help you when optimizing the precision and productivity of any machine – and when implementing your customized machine concepts. The results are secured using machine analyses and simulation.

In order that your machine automation runs as efficiently and smoothly as possible, our support teams are there to help you with the know-how of Siemens application engineers in 19 countries.



You can find additional information and application examples at [siemens.com/wood](https://www.siemens.com/wood)

From the sawmill to the final product

The optimum, innovative solution for every requirement – based on many years of experience

Woodworking and timber processing machines have many tasks. The requirements in each individual segment of the wood industry are just as specific as the applications themselves are varied. We offer the optimum solutions for many woodworking and timber processing machines based on our many years of experience in the project business – and our unique portfolio of drive and automation technology.



Solutions for sawmills

In a sawmill, one thing is more important than anything else: speed. This is why our extensive portfolio of controls and drives is the right choice. With our solutions, we ensure a high cutting yield with a high processing speed – making your sawmills significantly more productive.

Your advantage:

- **High production rates** by optimally coordinating the control and plant and/or motor
- **Effective implementation of safety requirements** – integrated fail safety of the drives, through the I/O up to the control system
- **Maximum protection** of your application based on integrated know-how protection
- **High degree of plant/system availability** based on rugged products that are being continually developed and innovated

Solutions for continuous particle board presses

When it comes to automating continuous particle board presses, highest cost and energy efficiency is of paramount importance. Our globally unique portfolio of energy-saving components can be precisely adapted to address your specific production processes – therefore providing the optimum solution for each and every press line.

Your advantage:

- **High cost- and energy-savings** using new motor and drive technologies that are more energy-efficient
- **Consistent particle board quality** based on perfectly harmonized and coordinated automation solutions
- **Highest precision and availability** using a high-performance bus system (PROFINET IRT)
- **Straightforward and fast engineering** using the TIA Portal

Solutions for short-cycle presses

Short-cycle presses are judged by their output per unit time – and they must supply a consistently high quality. With our portfolio, solutions can be implemented that help reduce the pressing and loading times, therefore playing a crucial role in increasing speed, reliability and cost effectiveness.

Your advantage:

- **Full planning security** with a high availability of spare parts going far beyond what is available as standard in the market
- **High availability** based on system-tested drive solutions that are coordinated with one another
- **Short time-to-market** through series commissioning in the TIA Portal



Solutions for wide belt sanders

When it comes to wide belt sanders, efficiency and cost effectiveness have utmost priority – requirements that can be optimally satisfied using our scalable portfolio. In any case, with our systems, you can depend on high availability and productivity.

Your advantage:

- **Simple implementation** of innovative operating concepts through the TIA Portal
- **Short cycle times** by employing a drive system with high dynamic performance
- **Security of investment in the future** by securing product availability and comprehensive support over many years
- **High degree of cost effectiveness** of your machines by scaling the product portfolio

Solutions for panel saws

Panel saws are used both in industry as well as in the trades – and the associated machine concepts differ correspondingly. No matter what your actual specific requirements are: With our portfolio, you are always optimally equipped to address your highest demands.

Your advantage:

- **Modular and flexible machinery construction** through openness in the TIA Portal, handling options and scalable hardware
- **Price-sensitive solutions** through scalable systems
- **High productivity** through short spindle acceleration and braking times based on innovative software functions

Solutions for dowel hole drilling machines

Dowel hole drilling machines place high requirements on automation solutions. Our innovative solutions for automatic drilling machines mean that each and every format is reliably handled. These solutions are created through the perfect interaction between our control systems, converters, motors and software.


Your advantage:

- **High degree of compactness** through innovative motor and drive technology as well as a reduction in the switchgear systems employed
- **Fast positioning** using high cycle rates of the control and high-speed drives
- **Extreme safety** using extended safety functions, e.g. safe position or override of the safe speed via PROFIsafe



You can find additional information and application examples at [siemens.com/wood](https://www.siemens.com/wood)





“I see tremendous potential in seamlessly linking the entire process – from the initial customer request up to the finished product by using CAD systems, where customers themselves can configure the products they require.”

Frank J. Geppert, CEO of Popp Carpentry in Forchheim, Germany



Solutions for edge banders

What also sets wood apart from other materials is its attractive optics. Edge banders must operate perfectly in order that the final product satisfies even the highest aesthetic demands. Our precise motion control and drive systems form the basis for outstanding processing quality – to achieve an invisible joint or seam.

Your advantage:

- **High throughput** through fast (1µs) and high-precision switching of the cams
- **Simple implementation** of innovative and complex operating concepts with TIA Portal
- **Precise adjustment** of the formats using servo technology and motion control

Solutions for profiling machines

Companies involved in profiling are challenged with being able to profitably produce even the smallest batch sizes. This is why our solutions for profiling machines ensure the highest degree of flexibility – from engineering through operator friendliness of the machine control up to precise profiling.

Your advantage:

- **Flexible machinery construction** using an open engineering system, scalable hardware and option handling
- **Customer-friendly support** when operating and programming
- **Short cycle times** by employing drive systems with high dynamic performance
- **High degree of compactness** through innovative motor and drive technology as well as a reduction in the switchgear systems employed

Solutions for CNC machining centers

Irrespective of whether 3-axis or 5-axis machining centers: You can enjoy all the benefits of leading-edge technology with our drive and automation solutions. Our scalable hardware and software interact perfectly with one another to achieve first-class results – for stationary as well as complex processing or machining operations.

Your advantage:

- **Maximum flexibility** based on a modular system
- **High throughput** for repeat parts using a high-performance CNC control and up to 300% overload capability
- **Short acceleration/braking times** of the spindle, independent of the tool, based on innovative software functions
- **Extreme safety** using extended safety functions, e.g. safe position or override of the safe speed via PROFIsafe

The world's largest portfolio for all wood-working & timber processing machines

System-tested products for perfect interaction



Safety



Security



Quality



Productivity



Today, plants and machines must operate with an even higher productivity and efficiency – and with the lowest possible costs. Our response to these challenges: System-based automation, where all the automation components interoperate perfectly with one another. Our portfolio for woodworking and timber processing machines includes system-tested products with long-term availability for all tasks. These can be optimally integrated into the TIA Portal, our leading-edge engineering framework. Further, integrated safety functions ensure that your plants and systems function safely. You benefit from an overall higher degree of competitiveness, productivity and higher plant/system availability.

SINUMERIK CNC controls

Whether basic standard CNC machines, standardized machine concepts or modular premium machine concepts: SINUMERIK is the optimum choice if your CNC control is to combine leading-edge technology and revolutionary

operating concepts. The extensive portfolio offers innovative controls in all performance classes – from compact, user-friendly entry-level solutions up to a maximum of openness and flexibility.

Find out more at siemens.com/sinumerik

SIMATIC controls and IPCs

SIMATIC stands for automation at the uppermost level. And there are good reasons for this: SIMATIC – the core of Totally Integrated Automation – represents the highest degree of flexibility and seamlessness. With our SIMATIC controls and IPCs you can always find the optimum solution – whether for small, independent applications or highly complex automation tasks. SIMATIC IPCs are extremely attractive as they represent a unique combination of state-of-the-art technology and the highest degree of ruggedness.

Find out more at siemens.com/simatic

SIMOTICS motors

Low-voltage motors, motors for motion control, high-voltage motors or DC motors: Our portfolio of SIMOTICS electric motors addresses each and every requirement. Each motor represents more than 150 years of experience. SIMOTICS motors put on a convincing show every day with their unique mixture of reliability, ruggedness and high performance.

Find out more at siemens.com/simotics

SINAMICS converters

From basic drives through servo drives for motion control applications with a high dynamic performance – up to customized solutions: There is an optimum SINAMICS converter to address every requirement. Also in the wood industry, they can be used in every conceivable application.

Find out more at siemens.com/sinamics

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Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a comprehensive, state-of-the-art industrial security concept. Siemens' products and solutions only form one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines, and networks themselves. Systems, machines, and components should only be connected to the company network or the Internet if necessary and even then only to the extent required, and with appropriate protective measures in place (e.g. use of firewalls and network segmentation).

In addition, you should inform yourself about Siemens' recommendations on appropriate protective measures. You can find more information about Industrial Security by visiting

<http://www.siemens.com/industrialsecurity>

Siemens' products and solutions undergo continuous development to improve their security. Siemens strongly recommends applying product updates as soon as they become available and always using the latest product versions. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

To ensure that you are always informed about product updates, subscribe to the Siemens Industrial Security RSS feed at

<http://www.siemens.com/industrialsecurity>

