



Does your plant need maximum efficiency?



**Pioneering Solutions for Pulp & Paper:
Let all your possibilities unfold – with SIPAPER^{CIS}**

Answers for industry.

SIEMENS



Highest quality requirements and the need for 100 percent availability, rising cost pressures and aggressive competition – never before have customers demanded that much of the paper industry. That’s why you should rely on our unique solutions portfolio to optimize your processes for the long term: SIPAPER^{CIS}.



The Industry Solution House – adding value to your paper plant

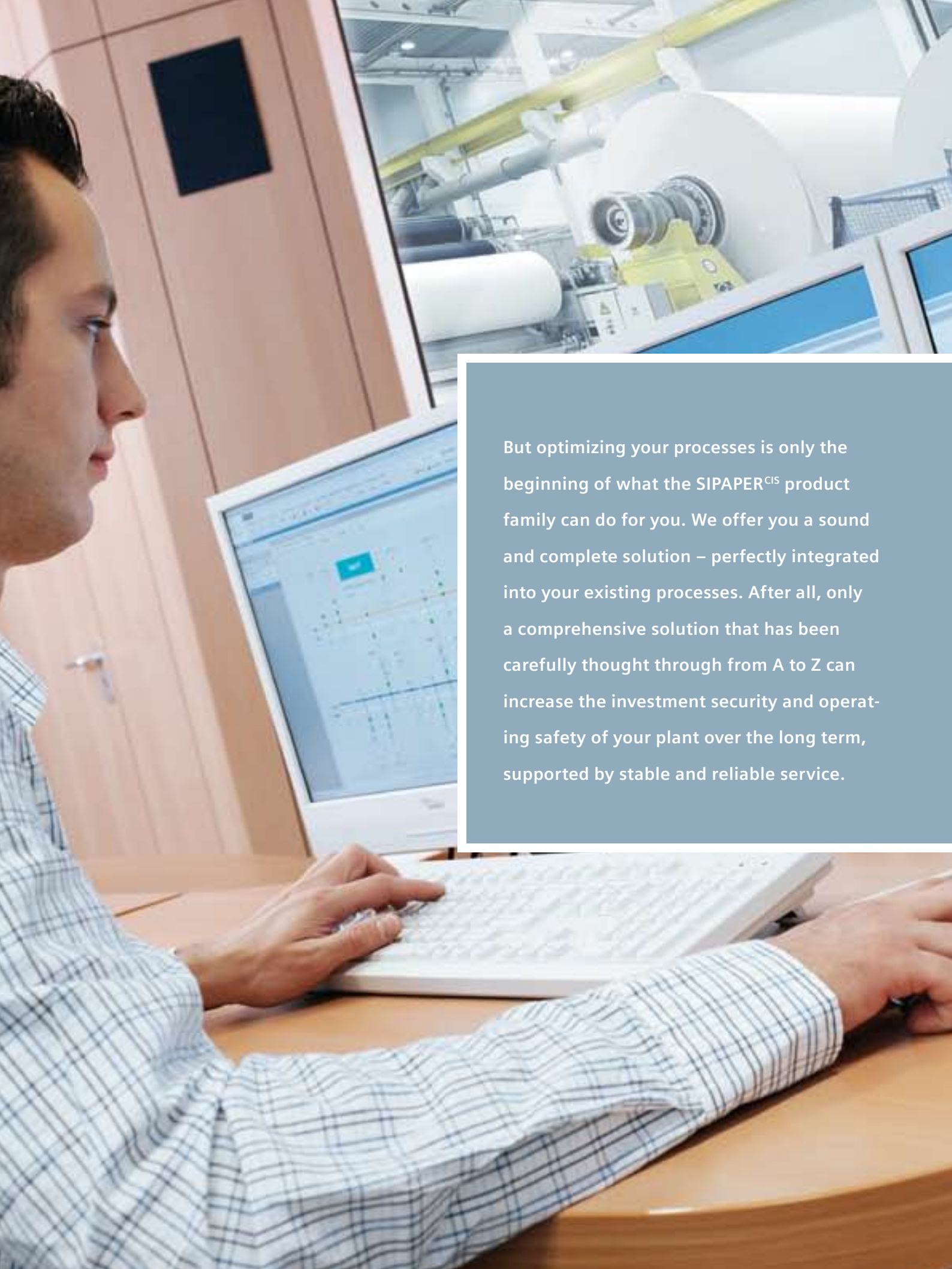
Recent global developments demand that you invest efficiently and streamline your production costs – while at the same time reducing the impact of paper production on the environment. At the Industry Solution House, we help you meet these challenges with our combination of expertise in paper manufacturing, service and upgrades to energy-efficient and raw material saving solutions.

In a period of tight investment budgets, increasing environmental regulations and consistent demand for high plant productivity, we can create value with:

- Our SIPAPER^{CIS} product family, which covers everything from drives systems and automation technology to energy supply systems, control systems, water treatment and rejects recycling. It also includes specific advanced process controls and IT-solutions for the pulp & paper industry.
- SIPAPER^{CIS} Services that include consulting, commissioning, documentation, training, and spare-parts procurement, as well as maintenance and modernization – thus maintaining plant performance at a high level.
- A wide range of options from individual solutions to turnkey projects.
- Professional project management with motivated and qualified employees that ensure successful implementation and service – transforming enthusiasm for paper solutions into operational value.

We help you optimize your ROI, extend your plant's life cycle, improve its competitiveness, and profit – all while implementing intelligent environmental protection.

Let all your possibilities unfold – with SIPAPER^{CIS}



But optimizing your processes is only the beginning of what the SIPAPER^{CIS} product family can do for you. We offer you a sound and complete solution – perfectly integrated into your existing processes. After all, only a comprehensive solution that has been carefully thought through from A to Z can increase the investment security and operating safety of your plant over the long term, supported by stable and reliable service.

We have the perfect solution – SIPAPER^{CIS}!



Increase and sustain plant efficiency

Efficient, powerful, environmentally friendly – these are the main characteristics of the SIPAPER^{CIS} product family. We developed this innovative solutions portfolio specifically for the requirements of the pulp & paper industry. What's special about it? Its modular concept guarantees you the greatest possible flexibility and performance. All modules are compatible, can be expanded individually, and are available as individual products or complete systems.

Reliable energy supply

SIPAPER^{CIS} Power has it all: From power feed and distribution to regulation and control of power users, we will ensure power in your process chain. We can handle planning and management of your high-voltage, medium-voltage, and low-voltage switchgears, transformers, and system protection. Let us develop a customized energy management system and optimization system concept for you – to ensure that power gets to the right place at the right time!

The perfect drive solution

SIPAPER^{CIS} Drives is the reliable driver for your plant – a modular, integrated solution for all of your drive needs. The spectrum ranges from low-circuit feedback, speed-regulated geared or gearless drives to attached drives, single, or group drives. The high-quality software from **SIPAPER^{CIS} Drives** will ensure trouble-free, uninterrupted production.

Intelligent drives for finishing machines

From winders to complex paper roll slitters, **SIPAPER^{CIS} Winder** is the ideal drive solution for new or modernized finishing machines. A modular system structure, numerous integrated interfaces, and powerful drives based on the SIMATIC S7, the world's leading automation platform – that's how compactly we can bundle expertise in a single product!



The energy bundle:
SIPAPER^{CIS} Power



The drivers of your success:
SIPAPER^{CIS} Drives and
SIPAPER^{CIS} Winder



Safe and secure: monitored processes

For our **SIPAPER^{CS} DCS** ("Distributed Control System"), we have developed standardized software modules that deliver tremendous flexibility for your plant control system. These modules can be combined to create integrated, scalable automation solutions for the entire process chain. Coordinated applications for control, reporting, and archiving in the process control system provide the necessary overview for everything – from the field level to the ERP (enterprise resource planning) level, giving you room to make decisions and take action. Continuous process monitoring gives you maximum security over the entire lifecycle of your plant.

The quality assurance of tomorrow

Maintain the quality of your products – with **SIPAPER^{CS} QCS** ("Quality Control System"). We support you in your day-to-day quality monitoring through extraordinarily transparent data processing. The control system records and regulates all relevant quality parameters. In addition, the standardized components and platforms secure your investment and ensure simple and inexpensive maintenance – over the entire product lifecycle.

Innovative water concepts

SIPAPER^{CS} Water includes all services related to water – from the design and planning to implementation and initial startup, as well as service for complete water treatment and purification plants. Whether you're planning a new purification plant or just want to optimize the one you have, you'll gain a critical advantage: consistently high water quality and lower fresh water usage with high product quality.

Intelligent waste material reuse – turning waste into energy

SIPAPER^{CS} Reject Power is the solution to counter constantly rising energy and waste disposal costs. Paper production waste (including sewage sludge, wood waste, etc.) is processed into a fuel mix and burned, generating energy. The resulting steam can be used in paper production or converted to electricity using a cogeneration system. You'll be amazed at how much your waste is worth!



Keep an eye on the big picture:
SIPAPER^{CS} DCS and
SIPAPER^{CS} QCS



It'll send you soaring:
SIPAPER^{CS} Water for
SIPAPER^{CS} Reject Power



Perfectly integrated – and always up to date

Intelligent process control

SIPAPER^{ci5} APC (“Advanced Process Control”) uses model-based control and optimization solutions to help you achieve the required product quality while simultaneously minimizing your costs for raw materials, energy, and process materials.

Two innovative product components are available:

SIPAPER^{ci5} APC Bleach regulates the dosing of bleaching chemicals during a single bleaching stage or across multiple connected bleaching stages to achieve the specified whiteness while minimizing chemical costs. **SIPAPER^{ci5} APC DrySec** reduces the specific steam usage of a drying section by optimizing the way the system operates.

Reliable data management

Our **SIPAPER^{ci5} IT** is a highly flexible, standardized, and scalable MES (manufacturing execution system) solution. This means graphic process maps show you all of your production processes, enabling you to analyze, synchronize, coordinate, and optimize them. Reduce paper waste, coordinate orders better, view process information at any time, and make quick decisions – with **SIPAPER^{ci5} IT!** We will customize the individual modules of this data coordination and acquisition system to fit your plant perfectly, enabling you to work at maximum efficiency.

Maintenance and service

Play it safe: **SIPAPER^{ci5} Services** guarantees plant availability over the long term. Here as well, we utilize the in-depth technical knowledge of our employees and their many years of experience from many service calls and maintenance projects in a wide variety of plants. Our primary focus is always on each customer’s specific requirements and business goals.



And the color is perfect:
SIPAPER^{ci5} APC



Ensures clever connections:
SIPAPER^{ci5} IT



Fast, reliable, efficient:
SIPAPER^{ci5} Services



How you can optimize your processes in the fastest possible time – and get the best possible results! With innovative products and services that are specifically tailored for your plant’s requirements. Secure your long-term productivity – with a solution that we customize to meet your specific needs.

Infinite possibilities – for every paper manufacturing process



Perfection even in mechanical pulping

SIPAPER^{CL5} begins its work right at the lumberyard. For everything from groundwood pulping to refiner processes, we have drive and automation solutions for every process step. We'll record your production data and make this available for further processing and material tracing.

Well prepared: secondary fibers

Quality plays an important role in chemical and mechanical pulping. The same applies to paper recycling. With our interactive control and logistics concepts, you can optimize your entire process, regardless of which one you use. For example, energy-efficient **SIPAPER^{CL5} Drives** are perfect for pulping, grinding, and pumping processes. **SIPAPER^{CL5} DCS** automation solutions control the overall process and make it transparent.

SIPAPER^{CL5} APC achieves the required brightness while minimizing costs for bleaching chemicals and maximizing yield in the DIP system.

Efficiency across the board: chemical pulp production

Huge amounts of energy are required for chemical pulp production in particular. **SIPAPER^{CL5} Power** optimizes power generation in the recovery boiler, power boiler, and at the utility. It also monitors and optimizes power draws and feeds into the grid. **SIPAPER^{CL5} Drives** supplies the pumps, fans, and agitators with energy-efficient solutions.



From mechanical pulping to the production of boxes, tissue, and graphic papers: We have the right solution for you



A well thought out process: box manufacturing

Often, it is the packaging that determines whether a product will succeed in the marketplace. Therefore, demands on high-quality packaging continue to rise. From preparation of the raw material to the finished product – we'll guide you through your entire process. Our experts will customize a technologically and economically sound program for you. We pay careful attention to an integrated technical solution, even at the concept development phase, thus providing you with a smooth process.

Efficient production: graphic papers

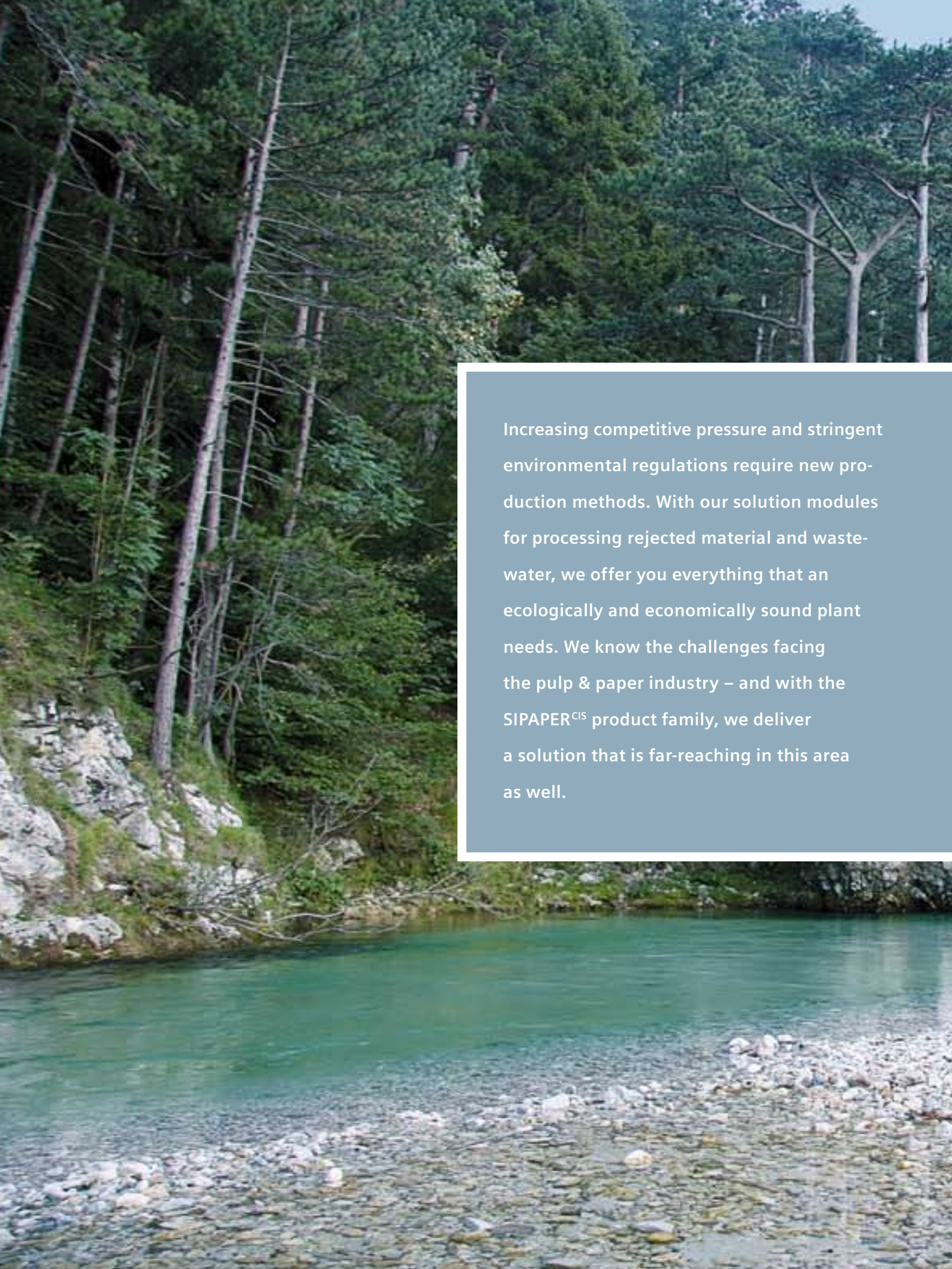
Rising energy and raw materials costs demand highly effective plants. We can give your machine the right "drive" with precise, speed-regulated, and torque-regulated drives, for example. And the SIMATIC S7 control system can ensure the correct interaction between motors and auxiliary functions, while the **SIPAPER^{ctis} DCS** automation solution with SIMATIC PCS 7 optimizes the production process and auxiliary processes. Special MES solutions ensure efficient production control.

The highest quality: tissue

Tissue papers should be soft, light, tear-proof, absorbent, and extremely resistant to wetness and moisture. These requirements demand a specific production process. Fiber preparation that is carefully thought through from beginning to end is what stands behind these products. **SIPAPER^{ctis}** has a unique comprehensive package of energy, drive, and automation technology for your entire tissue production area. We can support you from the planning and setup through the expansion and smooth, problem-free operation of your tissue production line.



The requirements of the paper and pulp industry are as far-ranging as the modules in our product line



Increasing competitive pressure and stringent environmental regulations require new production methods. With our solution modules for processing rejected material and wastewater, we offer you everything that an ecologically and economically sound plant needs. We know the challenges facing the pulp & paper industry – and with the SIPAPER^{CIS} product family, we deliver a solution that is far-reaching in this area as well.

Top performance following minimalist principles: saving resources and protecting the environment



Maximum savings: systematic energy concepts

This basic philosophy is integrated into all of the modules in the **SIPAPER^{CL5}** product family: from high-capacity drive systems to innovative solutions for power supply. In addition, we offer you special components specifically designed to optimize your energy budget. With **SIPAPER^{CL5} Reject Power**, we have developed a completely new method to combine waste material recycling and energy capture. Our integrated optimization solutions ensure proper energy management. Let us develop your customized energy concept!

Recycling makes sense: water supply

Water is also a key production and cost factor. Furthermore, as a medium that is a key component of the technical process, water has a critical impact on the quality of the paper. Our **SIPAPER^{CL5} Water** concept bundles our expertise in water treatment. How this benefits you: Enjoy a significant reduction in the percentage of fresh water used per ton of paper produced and stable product quality you can count on. Make an important contribution to protecting the environment and secure your own long-term competitive advantage!



Efficient energy budgeting and protection of resources: With concepts like **SIPAPER^{CL5} Reject Power** and **SIPAPER^{CL5} Water**, we're on your side

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