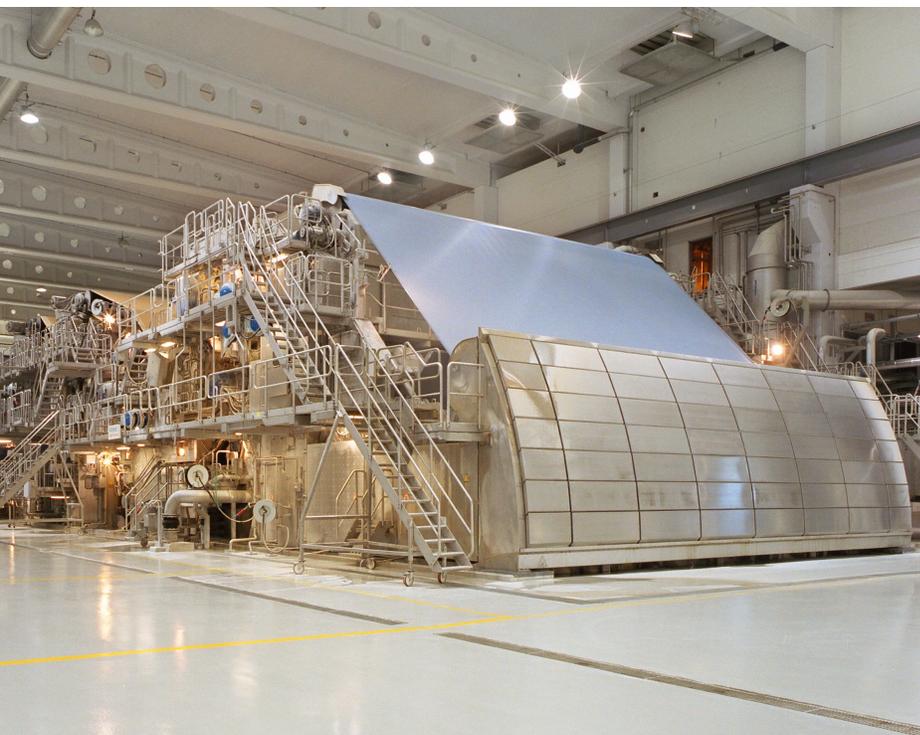


# A unified portfolio for pulping and papermaking

## Integrated solutions for improved mill productivity



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For more than 100 years, ABB has been developing products and services that help papermakers realize higher levels of productivity and profitability. Our comprehensive and integrated portfolio supports optimal papermaking throughout the entire process. From power distribution and advanced control systems to state-of-the-art scanning and measuring equipment, ABB brings together deep industry knowledge, world-class solutions and expertise to make your mill more efficient.

### Overview

ABB's pulp and paper portfolio contains all the major automation, power, measurement and optimization solutions required for efficient pulp, paper, board, and tissue manufacturing. When combined, these solutions have the power to keep costs down and productivity high – while maintaining quality to specifications.

### Benefits

- Optimizes the use of capacity and materials
- Increased productivity
- Improved process and operational performance
- Higher quality
- Maximized uptime
- Optimized paper machine performance
- Maximized quality
- Higher energy efficiency
- Reduced lifecycle costs and higher returns

### Automation

ABB's distributed control systems seamlessly integrate physical and digital objects throughout the plant and provide effective visualization of information through the entire operation. As our flagship process automation offering, ABB Ability™ System 800xA is a real-time automation solution based on open technology and the latest global standards. From the world's largest pulp mills to small single machine paper companies, System 800xA has proven it can deliver results. As an added enhancement, we offer a complete range of standard and industry specific batch, instrumentation and control libraries, as well as advanced process control.

### **Power distribution and electrification**

ABB's complete power distribution and process electrification solutions provide profitability, functionality, quality, reliability and environmental compatibility. Our scope includes basic and detailed engineering, supply management, site management, supervision, and implementation and commissioning of the entire electrical systems and solution. The product range covered includes everything from incoming power supply to motor control centers and more.

### **Paper machine drives**

Our coordinated system drives solutions are the result of 40 years of knowledge in delivering pulp and paper specific solutions, built on industry-leading drive technology. Our knowledge and experience deliver value using our own software libraries that include functions that maximize safety and availability, reduce wear and tear, maximize machine speed, and help to avoid sheet breaks. These libraries and the application experts who implement them reflect our deep experience in delivering drives to the pulp and paper industry. In addition, our direct drive solution for paper machines dramatically reduces the need for mechanical drive components and space by coupling the motor directly to the paper machine. Our wide-range of paper machine drive system solutions include pulp dryers; paper and tissue machines; board machines; coating machines; finishing machines; and winders.

### **Motors**

Electric motors are the workhorses of the pulp and paper industry. ABB offers a full range of high-efficiency motors that can handle even the most demanding production processes.

### **Manufacturing Execution Systems**

Based on almost four decades of experience in supplying information technology to the pulp and paper industry, ABB Ability™ Manufacturing Execution System (MES) for pulp and paper consists of integrated enterprise software modules that bring together business and manufacturing information to help papermakers make decisions based on the financial impacts of production choices. Flexible and scalable, MES provides visibility to enable fast and informed decision making.

### **Process measurements**

Our process measurement portfolio includes everything from fiber and pulp analysis to consistency measurements, as well as continuous moisture measurements of the paper web and more.

These solutions guarantee accurate and frequent measurements, helping provide optimal conditions to control production with lower tolerances and closer target ranges.

### **Paper machine measurements**

ABB Ability™ Quality Management System (QMS) for pulp and paper enables mills to manage the stringent quality demands of their customers. Our QMS portfolio includes everything you need for on-spec product and more consistent operations: the strongest and smartest quality control systems (scanners, sensors, actuators and applications), web imaging, and web monitoring. Combined, these lead to improved production, energy savings and reduced costs.

### **Laboratory and process measurements**

ABB is the industry leader in testing and industry-specific instruments, providing multiple measurement options for better quality control. Built on the heritage of Lorentzen & Wettre, the measurement equipment is available as laboratory instruments or as part of an automated testing system, L&W Autoline, which can be an integral part of the QMS offering. It provides reliable, accurate and fast information about the quality of the sample.

### **Chemical delivery systems**

ABB designs and installs turn-key chemical delivery systems for every aspect of the use, preparation and management of chemicals and coatings used in the paper manufacturing processes, adding value to the product by enhancing quality and improving technical performance characteristics such as printability and brightness.

### **Service**

Whether you need spare parts or repairs, maintenance assistance or training, or are seeking advanced services and performance optimization solutions, ABB works with you to understand your needs and can package the appropriate Pulp and Paper Care agreement to cut complexity and control costs.

### **ABB Ability Collaborative operations**

Collaborative Operations links world-class digital technologies, advanced data analytics and human expertise for faster and more informed problem solving. Data is collected and analyzed continuously to help identify, categorize and prioritize actions. ABB experts are available 24/7 for monitoring and support, ultimately helping you increase productivity and improve performance while reducing costs.

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