

Process Performance Motors for the Pulp & Paper Industry



Pulp & Paper companies around the world are utilizing ABB's technology and expertise to increase productivity, minimize downtime and achieve precise process control.

What can ABB offer the pulp & paper industry?

For more than 100 years ABB has been supplying motors, drive products and systems to customers in a pulp & paper industry. Its unmatched experience, combined with its long track record in working with pulp & paper companies, enable ABB to produce innovative drive solutions that provide superior performance and reliability.

Designed for seamless integration into the customer's automation environment, ABB's reliable drive products and systems can play a major part in maximizing overall plant performance.

What are the types of applications where ABB products and systems are used?

ABB's reliable motors provide accurate process control for minimum downtime and high availability throughout the process. ABB supplies products and systems for a broad range of pulp & paper applications, including

- debarking drums
- wood chippers
- wood refiners
- wood grinders
- pulpers
- vacuum pumps
- winders
- paper machines
- pulp machines.





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What is ABB's process performance motor?

In developing its process performance motor range, ABB worked closely together with its customers in the pulp and paper sector. The motors can therefore be easily engineered to match the customers specifications.

What are the main features?

Low voltage motors

- IEC sizes 71 to 450
- aluminum and cast iron frames
- output up to 1000 kW
- voltage 220...690 V
- ambient temperature -55°C to +70°

High voltage motors

- IEC sizes 315 to 400
- cast iron frame
- voltage 2300...6600 V
- frequency 50 and 60 Hz
- ambient temperature -55°C to +70°C

Many of the features required in the industry - such as improved regreasable bearings, split terminal box, eyebolt lifting lugs, and external earthing terminal on the frame - are standard across most of the range.

In addition the motors are designed with great flexibility, and options can be easily added to tailor them to the customer's exact needs. The motors' generous thermal margin decreases sensitivity to momentary overloads and extends their lifespan.

Their high efficiency (EFF1) means the process performance motors can be optimized for minimized energy consumption and highest productivity. If required the efficiency level can be further increased to one step above EFF1.

The motors also have sound environmental and sustainability credentials. In particular, special attention is paid to ensure that the materials and paints used are environmentally compatible. High operational efficiency supports efforts to reduce CO₂ emissions.

What about compatibility with frequency converters?

ABB's process performance motors are designed for converter operation. Special steps are taken at the design stage to avoid asymmetries and minimize the incidence of bearing currents. In the low voltage motors the standard winding insulation level is sufficient for voltages up to 500V, and motors for higher voltages are supplied with reinforced winding insulation. The motors can be equipped with an external cooling kit to provide 100% torque at low speed in constant torque applications, as well as an encoder or other additional equipment as required.

Which are the main benefits for customers?

The process performance motors are robust and durable, and were developed to meet the needs of the pulp and paper industry. They combine high efficiency, reliability and low running costs.

Their high reliability means that maintenance intervals can be planned effectively, and they are designed to allow minor maintenance tasks to be carried out while running in order to avoid breaks in production.

What is ABB's total motor offering?

ABB offers several comprehensive ranges of AC motors and generators. We manufacture synchronous motors for even the most demanding applications, and a full range of low and high voltage induction motors. Our in-depth knowledge of virtually every type of industrial process ensures we always supply the optimum solution for our customer's needs.

