SUCCESS STORY

Baldor-Reliance® IEEE 841XL motor

Reliable, built to last and energy efficient

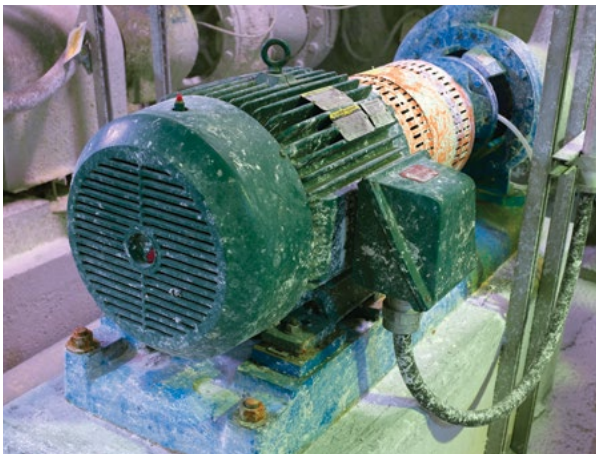
By standardizing on the IEEE 841XL motor, Essity's Menasha mill has experienced less downtime while reducing maintenance costs. The IEEE 841 industry standard was created for the petroleum and chemical industry - and adopted by process industries like pulp and paper, cement and mining - to improve the reliability, efficiency and performance of severe duty motors.

BALDOR • RELIANCE

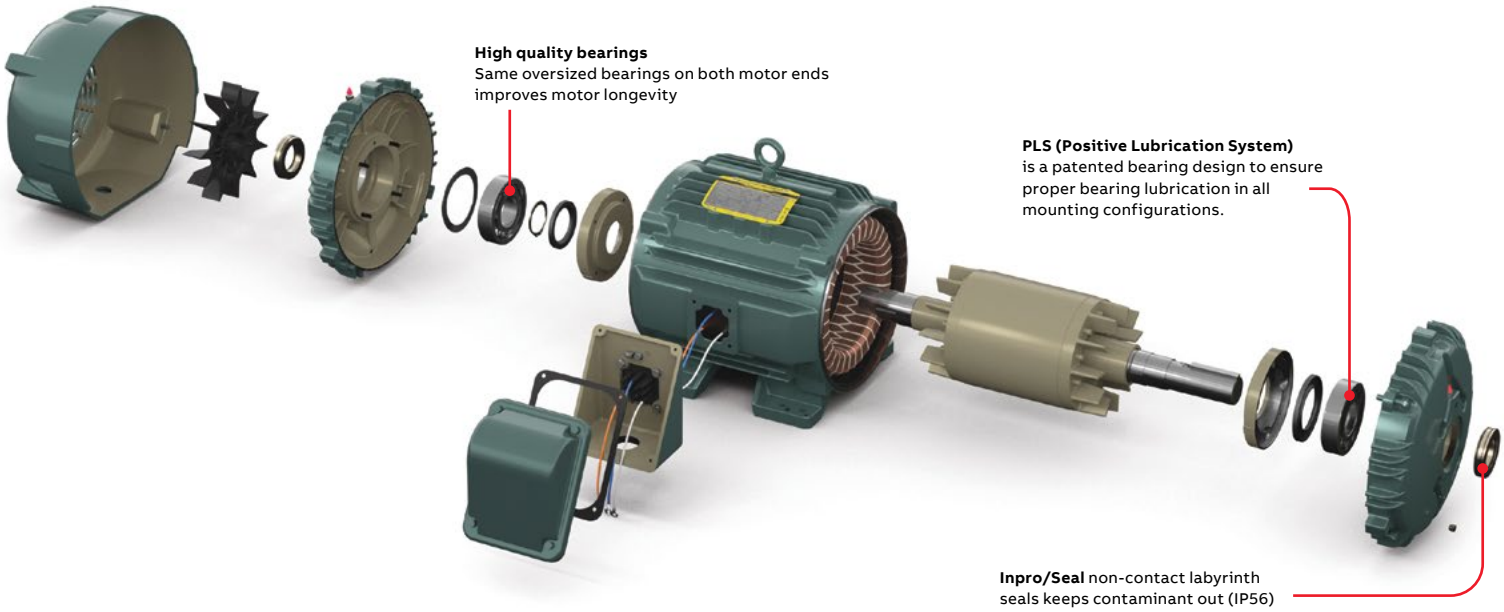
Essity AB, a global hygiene and health company headquartered in Stockholm, Sweden, (formerly part of the forest products company SCA), is a leading supplier of away-from-home tissue products and dispensing systems under the global Tork brand. Essity's Menasha, Wisconsin, USA, paper mill employs nearly 800 workers and recycles more than 300,000 tons of wastepaper each year into napkins, paper towels and toilet paper.

Since the early 1990s, the Menasha mill has focused on energy efficiency, installing energy-efficient motors throughout the facility as one part of its program. Its energy-saving efforts earned it awards at both the state and federal levels, as well as inclusion in the Dow Jones Sustainability World Index; however, mill officials began to realize that there is more to a motor than just efficiency levels.

At the time, Joe Rehorst, the maintenance supervisor for the Menasha mill, said the facility experienced too many maintenance issues and unplanned downtime with its previous motor systems. "We wanted to find another motor and make a switch because of performance and durability issues," says Rehorst. "We wanted a motor that would be reliable and last longer."



Because of the wet environment in the mill, Essity officials point to the Inpro/Seal non-contact labyrinth seals at both ends of the motor as another key to the quality of the ABB's Baldor-Reliance IEEE 841XL motor.



Baldor-Reliance IEEE 841XL motors PLS video

Brian Nowak, sales manager for Kurz Industrial Solutions in Neenah, WI, at the time (now president and CEO), knew he had exactly the motor the mill was looking for – Baldor-Reliance IEEE 841XL. “Not only is the motor premium efficient, but it’s also engineered and built to perform in the most brutal conditions,” explained Nowak. “Once the team in Menasha understood all the mechanical features the motor offered, they were willing to try a few. Their decision was based on quality.”

However, before the mill committed to upgrading all motors to the 841XL, it had to be assured that switching out the motors would be as easy as possible. “We wanted to be able to place the 841XL in the same spot as the previous motor so it would match up without us moving connections,” explained Rehorst. “Kurz did a motor survey for us, identified the existing motors’ conduit box dimensions and then compared them to the 841XL. What they were able to show us is that, in most cases, only a minor adjusment would be necessary.” The mill has since standardized on the 841XL, and mill officials are convinced they made the right choice. The bottom line, according to Rehorst, is that the 841XL is a well-built motor, and he can point to three features that make the difference: bearings, lubrication and sealing.

“This motor has the same high-quality oversized bearings on both the drive and the opposite drive end,” says Rehorst. “This is an important feature, especially in a belt-driven application that puts a lot of tension on the back bearing. Other manufacturers use a smaller and sometimes lesser-quality bearing on the opposite drive end.”

The 841XL also features an exclusive positive lubrication system (PLS), which ensures that the bearings are properly lubricated regardless of the motor’s mounting orientation. “Keeping the bearings lubricated and protected keeps the motor running,” says Rehorst. “I estimate that nearly 80 percent of all motor failures are caused by bearing failures, which is why the PLS is a good feature.”

Because of the wet environment in the mill, Rehorst also points to the Inpro/Seal non-contact labyrinth seals at both ends of the motor as another key to the quality of the 841XL. “The seals help keep water from running down the shaft and getting into the bearings,” explains Rehorst. “Again, that prevents premature bearing failure. I didn’t realize how important it was to have these seals on both ends of the motor until I watched the crews wash down the equipment with water hoses.”

The 841XL motors also get high marks from Gary Cowan, procurement operations manager at Essity. “I’ve received positive feedback on the Baldor-Reliance motors,” said Cowan. “But even more so, I know it’s been a reliable motor because I haven’t gotten any complaints. No news is good news in my world. If I get complaints, that means we are having a lot of trouble. If I don’t hear anything, then I know things are going well.”

The proven performance of the Baldor-Reliance IEEE 841XL in the mill was all the assurance Rehorst and Cowan needed to choose it again for the mill’s expansion. “Our corporate engineer in charge of the project asked us what kind of motors we preferred,” says Rehorst. “We told him that we wanted Baldor-Reliance, and we were able to drive our spec back to the OEM.”

In their effort to standardize on a motor that would last longer, neither Rehorst nor Cowan lost sight of the need for a premium efficient design. The IEEE 841XL was designed to exceed the requirements of IEEE Std. 841. This industry standard was created for the petroleum and chemical industry - and adopted by process industries like pulp and paper, cement and mining - to improve the reliability, efficiency and performance of severe duty motors. 841XL, like many of ABB’s Baldor-Reliance motors, also exceeds NEMA Premium efficiency standards. “Focus on Energy”, Wisconsin utilities’ statewide energy efficiency and renewable resource program, is rewarding end users like the Menasha mill with rebates for purchasing energy efficient motors. Better yet, the mill gets the rebate instantly through Kurz Industrial Solutions.

ABB’s Baldor-Reliance IEEE 841XL motors feature the exclusive positive lubrication system (PLS), which ensures that bearings are properly lubricated regardless of the motor’s mounting orientation.

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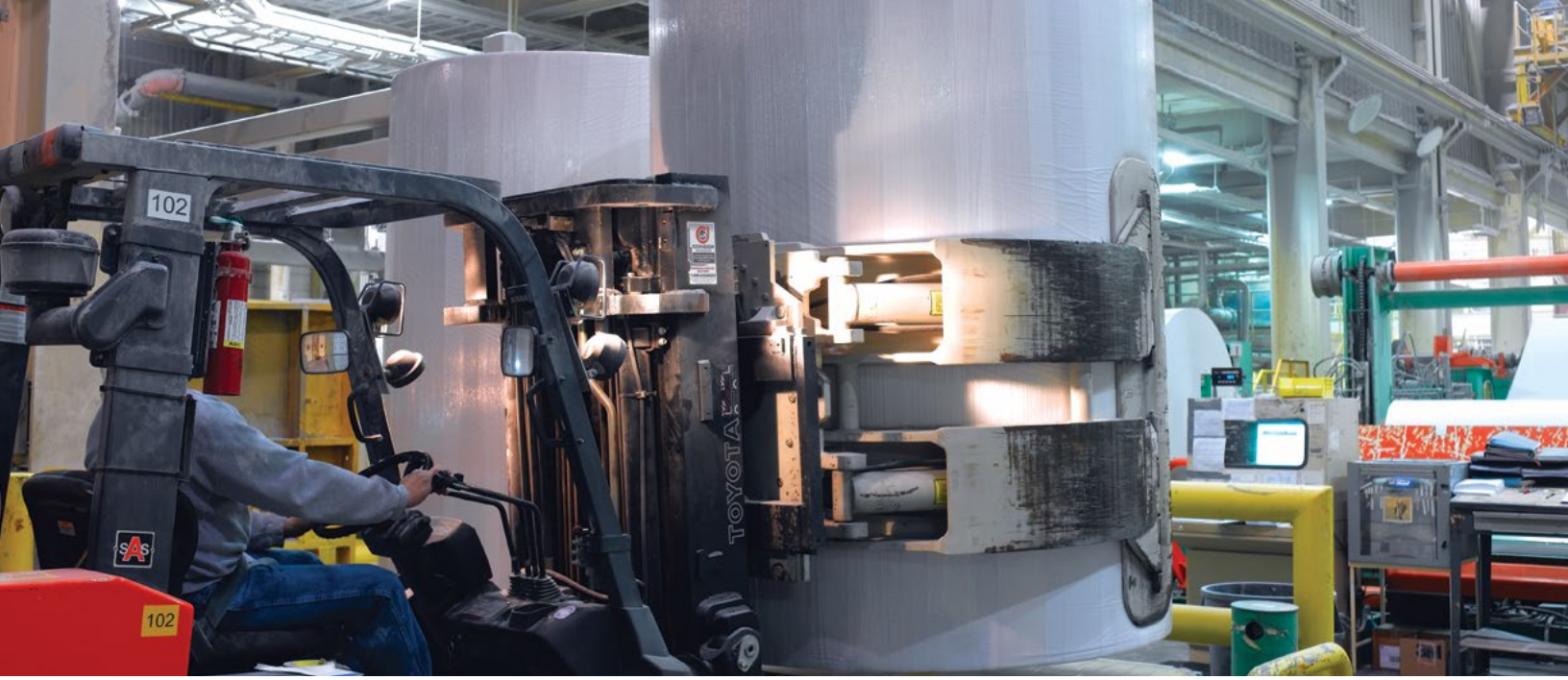

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01 These large rolls of paper are the mill's end product. Rolls are transported to Essity's converting mill to be cut into napkins and paper towels.

IEEE 841 motor series brochure

"Kurz does all of the paperwork for us, and we get the rebate right up front," explains Cowan. "This is a wonderful service because we juggle so many jobs every day. They save us a lot of time, and we know we are getting the full benefit of the rebates being offered."

Joe Rehorst's job is to keep the mill running with no unplanned downtime, while keeping energy costs in check. Gary Cowan's job is to manage procurement costs, while at the same time giving Rehorst what he needs. By standardizing on the 841XL, a motor that Cowan says is cost competitive and comes with a five-year warranty, both of them are able to meet their objectives.

"Because of the quality and reliability of the product, we have reduced unplanned downtime and maintenance costs," reports Cowan. "Plus, they are energy efficient, which fits right into Essity's green initiative and our culture of sustainability. Between the reliability, the efficiencies and the rebates, the total ownership cost of these motors is second to none."

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