



MALTEUROP
NORTH AMERICA
SELECTS
RELIABLE
BALDOR
PRODUCTS
FOR MALTHOUSE
UPGRADE





The Baldor•Reliance® SSE™ Stainless Steel Super-E® motor, with its all-stainless construction, including housing, conduit box and end plates, makes this product impervious to rust and deterioration caused by high-pressure sanitizing. Premium external and internal bearing protection prevents water from entering the motor. Encapsulation using Baldor's E3 Effusion Epoxy Encapsulation™ process on the windings adds another level of moisture protection. The Dodge® Quantis® E-Z Kleen gear reducer is manufactured with a 13-step coating system that provides greater than three times the corrosion resistance of standard epoxy-painted units. E-Z Kleen reducers have a two-piece, harsh-duty sealing system that protects against high-pressure sprays and sanitizing solutions.

Malt is a processed form of barley and is one of the basic ingredients used to brew beer. Often referred to as the “soul” of beer, malt provides most of the complex carbohydrates and sugars needed to give this beverage its distinctive flavor and color. The Malteurop Group, the world’s leading malt producer headquartered in Reims, France, has perfected the precise control required to produce premium quality malt barley.

Malteurop acquired U.S.-based ADM Malting in 2008, including a malting facility in Milwaukee, Wisconsin, a city

historically linked to the beer industry. Soon after, work began to upgrade the facility, including one of the large malt houses at the plant.

Gary McLoughlin, vice president of operations for Malteurop North America, says all 12 malting beds needed to be upgraded, replacing aging equipment with more reliable and more efficient technology. Each bed is nearly 127 feet long and 18 feet wide and holds 100 tons of cleaned and hydrated barley. Over a four-day period, 11 separate screw mixers are continuously moved back and forth through the bed,

while the barley germinates. Moisture levels are maintained or raised during this process by moving humidified air through the barley. McLoughlin says there is no room for error over this time-critical process because equipment failure can result in substandard barley malt.

“Once we give the barley water and air, there is no stopping the germination process — the barley doesn’t care that we’ve had a breakdown, it just keeps growing,” explains McLoughlin. “If we are down too long, we’ll have to throw the batch out, and if we can’t



evacuate the bed in time, we have a real problem with backing up production because there is always a batch waiting. This is why equipment reliability is so important to us.”

Dave Hinners, the facility’s project engineer, led the in-house design effort for the upgrade. He says the high humidity required for the germination process and the extensive cleaning between batches has led to a high failure rate for both mechanical and electrical equipment. Working with Kurz Electric Solutions, a local distributor helping them with repair work, Hinners



Malthouse Project Engineer Dave Hinners says they chose a Baldor-Reliance RPM AC® motor for the travel drive because it meets the unique requirements required for the application. When the travel drive is moving back and forth turning the barley, it moves just under two feet per minute. But during the unload, it moves nearly 100 feet per minute. “That’s over a 60-to-1 ratio, and we needed a motor that could handle that wide range of speed with the torque that we needed,” says Hinners. “Because the RPM AC motor offers continuous constant torque to zero speed, it’s the perfect choice for this machine.”

discussed how bearings were especially troubling, difficult to maintain and even more difficult to remove. When the Kurz team demonstrated the features of the Dodge Imperial™ bearing, Hinners believed he may have found the solution.

“The unique mounting method of this bearing makes it easy to install but also easy to remove, if needed,” says Hinners. “But it’s the triple-lip sealing system that really sold us on the Imperial. The biggest enemy in our facility is water, and if we can keep water out, a major problem is solved.”

Needing to be certain before making the final decision, an Imperial bearing was installed to see how it would perform. Hinners says after an 18-month test, he got the results he was hoping for.

“Taking a bearing off in the past would have involved hydraulics, torches and saws,” says Hinners. “But the Imperial

was easy to get off. The sealing system worked because this bearing looked very good.”

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Dave Hinners,
facility project engineer,
Malteurop Milwaukee
plant

While the bearing was under test, the Malteurop team continued to work with the Kurz team, the local Dodge field sales engineer and Baldor’s Milwaukee district office to put together the most reliable motor and gearbox package. The products had to be engineered to withstand the harsh conditions, and because this was a retro-fit, they had to fit the existing envelope. Because motors were failing due to severely corroded housings, Mike Glynn, Kurz vice president for marketing and new business development, recommended Baldor’s SSE Stainless Steel Super-E motor.

“This stainless motor is designed to perform in harsh conditions longer than anything else available today,” says Glynn. “And, to make sure we could get the right reducer to fit, Dodge sales engineer Brian Koch helped us with a design for the Dodge Quantis E-Z Kleen. And just like the bearing test, we placed a plate from the unit in the environment to prove that the reducers’



The Malteurop team selected Dodge Imperial roller bearings because of the patented triple-lip contact sealing system that prevents water and other contaminants from entering the bearing. The team is also pleased with the adapter mounting system that makes these bearings easy to install and remove.



Based on the success of the other Baldor products used on the germination beds, the Malteurop team asked for a reliable gearing solution for their screw conveyor applications. Gene Gestwicki, plant maintenance and project engineer, says the existing units required constant maintenance to keep them running. When Kurz told Gestwicki about the Dodge Motorized Torque-Arm™ (MTA), a totally enclosed, shaft-mounted speed reducer, he was eager to try one. The product was a hit right out of the box. “It was an easy, straightforward installation,” says Gestwicki. “Plus, everything is sealed on the MTA, so it won’t be affected by the environment. We have more on order, and we are going to continue to replace older equipment with this new solution.”

13-step coating system would hold up without rusting — and it did.”

As an added benefit, Baldor pre-assembled the motors and gearboxes, so the Malteurop team didn’t have to worry about assembly on-site.

With the project nearly complete, McLoughlin says he’s pleased with the results. Between the performance, reliability and energy savings these products offer, he is convinced they have found the right solution. He credits the success to the skills of the in-house engineering team and the expertise provided by valued partners.

“This has been a significant project for us,” says McLoughlin. But with this collaboration and the attention to detail, the project is a success. “We knew what we wanted, and with help, we got what we wanted. And now we believe we have the right solution.”



Malted barley is the main ingredient in beer, and Malteurop is the world’s leading malt producer. The Malteurop North America plant in Milwaukee produces 220,000 tons of Pilsen-style malt used by local brewers and by companies in Kentucky and Tennessee that produce bourbon and malt whisky.