



application

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More sustainable beer production made possible with plastic insert bearings

Heineken is a global powerhouse in the world of brewing. It's the largest beer company in Europe, and the second-largest in the world. Heineken generates tens of billions of dollars a year in revenue, and is an industry leader when it comes to tech infrastructure and sustainability.

Heineken's Brazilian location (Heineken Brasil) is one of the brand's largest, and a leader among the company in renewable energy. As part of Heineken Brasil's environmental focus, they began looking for ways to mitigate their use of lubricants in bottling conveyor belts.

Problem

Heineken Brasil needed an updated solution for conveyor belt bearings. The metal bearings used initially required relubrication on a weekly basis. With 600 bearings — each requiring three minutes of lubrication time per week — Heineken was losing 1,560 hours of time a year just to relubrication. Additionally, the bearings required a combined 124.8kg (275.14lbs) of lubricant a year to achieve adequate lubrication.

If the bearings in Heineken's conveyors were not adequately lubricated, they would become subject to snagging, oxidation, and increased wear and tear. This would ultimately lead to costly bearing replacements and extended downtime for the production line, delaying production and reducing overall profits.

White Paper: [The True Cost of Bearing Lubrication](#)





Heineken Brasil

The lubricants used also had a negative impact on the environment, contributing to emissions of 180kg (396.8lbs) of CO2 equivalents and 155kg (341.7lbs) oil equivalents annually. These values correspond to a 20 km (12.43 mi) flight of an Airbus A320 neo, and a 461 km (286.5 mi) journey of an average diesel truck.

Solution

In searching for a cleaner, lower-maintenance solution, Heineken Brasil came across igus' dry-running **igubal JEM insert bearings**. These plastic bearings operate without the use of any lubricating greases or oils, offering maintenance-free and food-safe operation.

The selected insert bearings **made replacement a simple drop-in process**, minimizing the time needed to replace each bearing and ensuring no special training or installation assistance was needed.

The service life of JEM inserts is also up to 8x longer than metal bearings, vastly reducing replacement intervals and further minimizing the amount of time and money spent on bearing upkeep. The new bearings also have a much more consistent service life because of the embedded lubricants, helping to avoid unplanned machine downtime.

All 600 bearings used in the Heineken Brasil's conveyor system were replaced with JEM insert bearings, and the new bearings performed exactly as expected. Standard lubrication-related maintenance was no longer needed, saving Heineken significant time and money.

Infographic: *Bearing Lubrication Facts*

If all 160 branches of Heineken were to make the switch to self-lubricating JEM insert bearings, the company would save 28,814kg (63,524lbs) CO2 equivalents a year, and a projected 20 tons of lubricant per year. This would equal about \$497,985 a year in lubricant costs, and \$5,975,829 in personnel and labor costs.

