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Cleanliness is no problem for aseptic drives

When a leading European fruit processor needed to improve its glass jar filling line it was keen to specify equipment which would meet its strict hygiene standards but would also offer improved energy efficiency. IE3, aseptic drives met all of the requirements

Food manufacturers need to ensure that the cleanliness of their production lines is maintained to the highest standard to avoid contamination of product. For Europe's leading fruit processing company, a reputation for high quality products and the highest quality controls was hard won, and depends on careful control of a number of manufacturing aspects, including maintenance of a hygienic manufacturing environment. So when the jam and fruit spread production line, based in Germany, needed replacing it was essential that the replacement geared motors were aseptic drives to maintain the high standards.



Aseptic drives are carefully designed for applications where regular washdowns are required to maintain a clean environment. The motor is designed so that a fan and cooling ribs are not required thereby allowing for a completely smooth outer casing with a non-drive end which is sealed. This eliminates any dirt traps on the motor casing and also prevents re-infection of the local environment caused by air movement from a cooling fan.

For suitable drives, the company turned to Bauer Gear Motor, which has developed a combination of aseptic motor/gearbox packages with variable frequency drives (VFDs) to enable a very efficient package to be installed. The majority of the drives are used 0.75kW motors, with some smaller 0.55kW units and most of these were coupled to the BK20 hollow shaft bevel gearboxes.

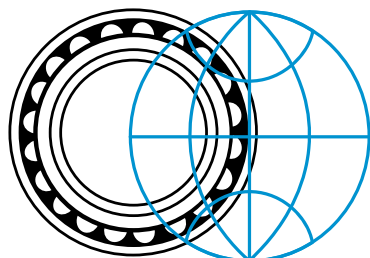
The design also includes a very high level of ingress protection, up to IP69K, which is a special designation for washdown applications involving high pressure, high temperature water. In addition, the aseptic drive is painted using an acid and alkali resistant formula, which can withstand chemicals with a pH range of 2 – 12.

When installing a large number of motors onto a production line, it is important to maintain high energy efficiency so that the return on investment can be minimised. All of the aseptic motors from Bauer are rated IE3 energy efficiency class and when combined with the VFD they can deliver optimum energy consumption and running costs.

As a result the new drive system can withstand the cleansing solutions and disinfectants that are commonly used within the food industry without affecting its performance.

By designing a system with a large number of common components, the engineers were also able to minimise the spare parts inventory while still ensuring the most energy efficient and reliable design.

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