Lubrication: supporting safety and efficiency

The correct lubrication of processing equipment is critical to end product safety as well as plant efficiency as Food & Beverage International discovers

Optimising the benefits of lubrication

Lubrication and tribology (the science and engineering of interacting surfaces in relative motion) specialist, Klüber Lubrication not only offers a wide range of food grade lubricant solutions, but also provides consultancy and advice on selecting the right lubricant and the correct administration of a lubricants regime, which can ultimately help to optimise production efficiency.

"Klüber Lubrication is more than just a manufacturer of speciality lubricants", explains Jesus Diaz, market manager food industry at Klüber Lubrication. "As a specialist, we offer our customers a comprehensive lubrication package. Lubricant users benefit from our experience and tribological know-how and do not have to worry about finding the optimum solution for their particular application themselves."

Under its KlüberEfficiencySupport services and consulting, Klüber says its expertise can help companies protect their valuable resources such as energy and water, reduce wear, and help to reduce operating costs. Services can involve systematic optimisation of lubrication processes including schedules, cleaning and relubrication, lubricant and component analyses and consistent control of lubricant quantity.

Klüber also offers ‘intelligent packs’ to simplify precise lubricant metering of installations and components. The automated metering system Klübermatic ensures reliable and precise lubrication of friction points at variable lubrication intervals to avoid overlubrication. At Drinktec, Klüber introduced a new flexible lubrication unit with compact design to its Klübermatic range.

"Klübermatic Flex is a very clean, safe and economical device supporting compliance with the strict hygiene requirements for lubricants in the food-processing industry," explained Mr Diaz. "The automatic lubrication system does not only prevent overlubrication of components, but also reduces premature wear of machine parts due to starved lubrication while extending maintenance intervals and reducing production losses."

Automatic lubrication also provides advantages over manual lubrication when it comes to lubrication points that are difficult to access or at high temperatures and also for lubrication points that are far apart from each other. Klüber’s automatic dispensing system is available in several designs that each facilitate variable lubrication interval settings. They can be used for single-point lubrication of rolling and plain bearings, slideways, open gears, toothed racks, threaded spindles, shaft seals and chains.

The optimum application of a lubricant without excess lubrication or dropping is particular important in food processing environments, and Klüber has innovated to create a food contact solution for the lubrication of vertical or overhanging surfaces, chains, or difficult to access components.

Combining the lubricating properties of a synthetic lubricating oil with the application properties of a foam, the newly developed Klüberfoam ensures that the lubricant stays at the lube point and does not drip off. At the same time, excess lubrication is prevented. Oil is dispensed gradually due to the slow dissolution of the foam and its ‘conversion’ back into oil. Owing to the capillary effect, only the specific quantity of oil that is actually needed is actually dispensed to the friction point, with any remaining oil remaining as a foam. Due to the white colour of the foam, already lubricated points are clearly visible at all times.

"Both synthetic oils and foams present particular advantages," said Dr Andreas Hasslinger, marketing communications. "Pooling these advantages in one product offers substantial benefits to the food-processing industry."

"The practical benefit of this new product manifests itself, for example, in the maintenance of chains which are difficult to access," said Mr Diaz. "Such chains are often lubricated overhead, so the oil is sprayed upwards and dripping off is difficult to avoid. Also, when rotating the chain, it cannot be seen where lubricating oil has already been applied. Our new lubricant foam solves these particular problems."

Klüber’s new Klüberfoam combines the advantages of synthetic oils with the application properties of a foam. Klüber also offers ‘intelligent packs’ to simplify precise lubricant metering of installations and components.