

New Polymer Spherical Ball From igus Strengthens Food Safety

New iglide A181 spherical ball material improves wear resistance of the igubal FC joint system threefold

STAMFORD, CT, UNITED STATES, August 25, 2022 /EINPresswire.com/ -- To make food processing facilities and machinery even safer, igus®, the Germany-based manufacturer of motion plastics, is launching a new standard in the form of the high-performance plastic iglide® A181 as a spherical ball material for the [igubal](#) Food Contact (FC) joint system. The spherical cap is three times more wear-resistant than the previous version made from iglide FC180. The new material is also 25 percent cheaper, self-lubricating, maintenance-free, and is FDA and EU 10/2011 compliant.

Dangers of physical contaminants in food production

Physical contamination can occur anytime during food production and often consists of metal or glass fragments from broken components of processing machinery. According to the World Health Organization (WHO), physical food contamination affects an estimated 600 million people annually. Nearly 1 in 10 people fall ill each year after eating contaminated food.



More food safety with lubrication-free motion plastics from igus: Thanks to the new A181 spherical cap, the igubal FC joint system is now three times more wear-resistant and 25 percent cheaper. (Source: igus GmbH)

"Regardless of whether it's a bottling machine, a meat processor, or a packaging system, food

manufacturers are faced with constantly improving the robustness and reliability of their systems. At the same time, they need to increase the detectability of tiny impurities," says Dennis Steffen, Product Manager of igubal spherical plain bearings at igus. "We support manufacturers in optimizing food safety by continuously developing the pillow block bearings, rod ends, and flange bearings of the igubal FC joint system. Our latest innovation is a spherical cap made from the new material iglide A181."

Three times more wear-resistant and 25 percent cheaper than the previous version. The housing of the igubal FC joint system continues to be made of igumid® FC. This robust and corrosion-free high-performance plastic is resistant to moisture, acids, alkalis, and UV rays.

"Thanks to a new material composition, the spherical ball moves on stainless steel shafts, and the ball is up to 3 times more wear-resistant than the previous FC180 version," Steffen said. "This makes movements in the machine even more reliable and safe."

Like all igus products, the igubal spherical plain bearings prove their durability in numerous tests in the company's own 3,800 square meter test laboratory. At the same time, it has been possible to reduce the price by 25 percent. A positive side effect that should make it easier for many machine builders to say goodbye to traditional metal joint systems.

"The price advantage is now enormous. igubal FC is now up to 85 percent cheaper than stainless steel variants," continued Steffen.

Self-lubricating and dry-running material eliminates the risk of contamination

But the igubal FC joint system with the new A181 spherical ball is not only cheaper than its metal counterparts. It also improves the hygiene of machinery and equipment in the food industry. Unlike metal bearings, there is no need for an external lubricant that could combine with dirt and dust to form sticky coatings and become a risk of contamination.

Instead, igus integrates a solid lubricant into its material, which enables low-friction and hygienic dry running. As a result, the housing and the new spherical ball material are FDA and EU 10/2011 compliant.

"The approval of the U.S. Food and Drug Administration (FDA), which follows one of the strictest hygiene guidelines in the world, and the conformity with the EU 10/2011 directive confirm the high hygiene level of our joint system," Steffen emphasizes.

To further improve hygiene and facilitate inspection, both the bearing housing and the spherical ball are colored blue. Blue is used to quickly identify food residues and mold spores during cleaning and inspections and helps visual detection in the event of machine damage.

In addition, food-grade, detectable additives are also integrated into the housing material. In an emergency, they make it possible for metal detectors to detect even the tiniest splinters in the range of a tenth of a gram.

Learn more about maintenance-free, food-safe plastics from igus here:

ABOUT IGUS:

igus GmbH develops and produces motion plastics. These self-lubricating, high-performance polymers improve technology and reduce costs wherever things move. In energy supplies, highly flexible cables, plain and linear bearings, and lead screw technology made of tribo-polymers, igus is the worldwide market leader. The family-run company based in Cologne, Germany, is represented in 35 countries and employs 4,900 people across the globe. In 2021, igus generated a turnover of €961 million. Research in the industry's largest test laboratories constantly yields innovations and more user security. Two hundred thirty-four thousand articles are available from stock, and service life can be calculated online. In recent years, the company has expanded by creating internal startups, for example, ball bearings, robot drives, 3D printing, the RBTX platform for Lean Robotics, and intelligent "smart plastics" for Industry 4.0. Among the most important environmental investments are the "chainge" program – recycling of used e-chains and participating in an enterprise that produces oil from plastic waste.

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