

Stainless steel drives

Interview with an expert



Hygienic drive solutions for the most stringent demands

Hygiene requirements in the food and beverage and pharmaceutical industries are particularly strict. In this interview, Eiko Filler, a product manager at SEW-EURODRIVE, explains how the innovative technology and ingenious design of our stainless steel gear units can make your production operations more efficient and more dependable.



How do you choose the right drive for a specific application?

Eiko Filler: That depends on the requirements of the application in question. For example, needs in terms of dynamics and positioning accuracy will determine whether you opt for an asynchronous or synchronous motor. The mechanical connection is also important. A hollow shaft allows you to push the gearmotor onto your machine's input shaft, while a solid shaft allows you to fasten belt pulleys, sprockets, and coupling elements directly to the gear unit. In terms of machines used in food and beverage production, a crucial consideration is whether your drive is subject to regular chemical cleaning, is exposed to rapid temperature changes, aggressive belt-lubrication agents and disinfectants,

or comes into contact with production substances such as fruit acids and tomato sauces. These considerations determine the degree of protection you need and your choice of corrosion protection, and whether it's best to opt for a gearmotor made of stainless steel for the drive.

Stainless steel drives have ideal properties for food and beverage production – a high degree of protection, smooth and easy-to-clean surfaces, and maximum corrosion protection. The housings are made entirely of stainless steel, which means that even intensive mechanical stresses won't destroy their corrosion protection.



What stainless steel drives does SEW-EURODRIVE offer?

Eiko Filler: SEW-EURODRIVE has more than ten years of experience in designing and manufacturing stainless steel gear units and gearmotors. Due to growing demand, we have considerably expanded our portfolio over the last twelve months.

The range now comprises planetary gear units, helical gear units, and SPIROPLAN® right-angle gear units in various sizes, as well as helical-bevel gear units up to a maximum

permitted output torque of 820 Nm. When used with asynchronous stainless steel motors and synchronous servomotors made of stainless steel, they create versatile gearmotors that can be combined in a variety of ways.

What's more, these can be used in virtually all applications in the food and beverage and pharmaceutical industries. A wide range of stainless steel adapters also gives customers the option to utilize motors from other manufacturers.



In terms of hygienic production, where is the best place to position the drives in a plant or machine?

Eiko Filler: It's crucial that, as far as possible, gear units and motors are not used in the food area (a) as defined in DIN EN 1672-2. This is where requirements in terms of hygiene and suitability for cleaning are especially high. The same applies to the area directly above the food, as dirt deposits

or leaking oil could fall directly onto the food. For these reasons, drives should be located outside this zone wherever possible. It's better to locate drives in either the splash area (b) or non-food area (c), as defined in DIN EN 1672-2.



Let's move on to maintenance. How can the service life and efficiency of gearmotors be maximized?

Eiko Filler: Gearmotors from SEW-EURODRIVE are known for their durability and require little in the way of maintenance. Using the latest generation of lubricants and advanced

sealing technologies has helped reduce the frequency of maintenance work considerably. This means less downtime and greater process efficiency for our customers.



How can companies optimize the efficiency and sustainability of their drives in operation?

Eiko Filler: Motors with a high energy efficiency class of IE3 or IE4, combined with highly efficient gear units, reduce energy consumption and waste heat. This is an added advantage in refrigerated production areas in particular, as less heat is emitted into the surrounding area, saving energy and creating a more pleasant working environment. Food grade lubricants usually need to be used for gear units in food and beverage production systems. SEW-EURODRIVE offers a wide range of lubricants for this purpose, comprising various types and viscosities, all with the usual ap-

provals, such as NSF H1 registration and Halal and Kosher certificates, as well as confirmation that they are MOSH/MOAH free. Our special GearFluid Poly 220 H1 lubricant is a sustainable NSF H1 lubricant manufactured with a mass balance approach that utilizes renewable biomass instead of fossil-based crude oil. This reduces CO₂ emissions during the production of the lubricant by up to 84 percent.

Moreover, GearFluid Poly 220 H1 also extends the usual service life of food grade lubricants by around a half.



Stainless steel drives from SEW-EURODRIVE

Every day, billions of products are manufactured in the food and beverage and pharmaceutical industries. In these hygiene-sensitive areas, the very highest requirements in terms of hygiene and ease of cleaning are absolutely essential.

SEW-EURODRIVE offers a comprehensive portfolio of stainless steel products that have been specially developed to meet these requirements. The stainless steel gear units in our RES., KES., and WES. series and the PSH. stainless steel gearmotors combine hygienic design with durability and efficiency. Thanks to their resistance to moisture, temperature changes, and aggressive cleaning agents, they are ideally suited for use in demanding environments.

Would you like to find out more?

Please contact us for more information or to get a customized quotation.



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