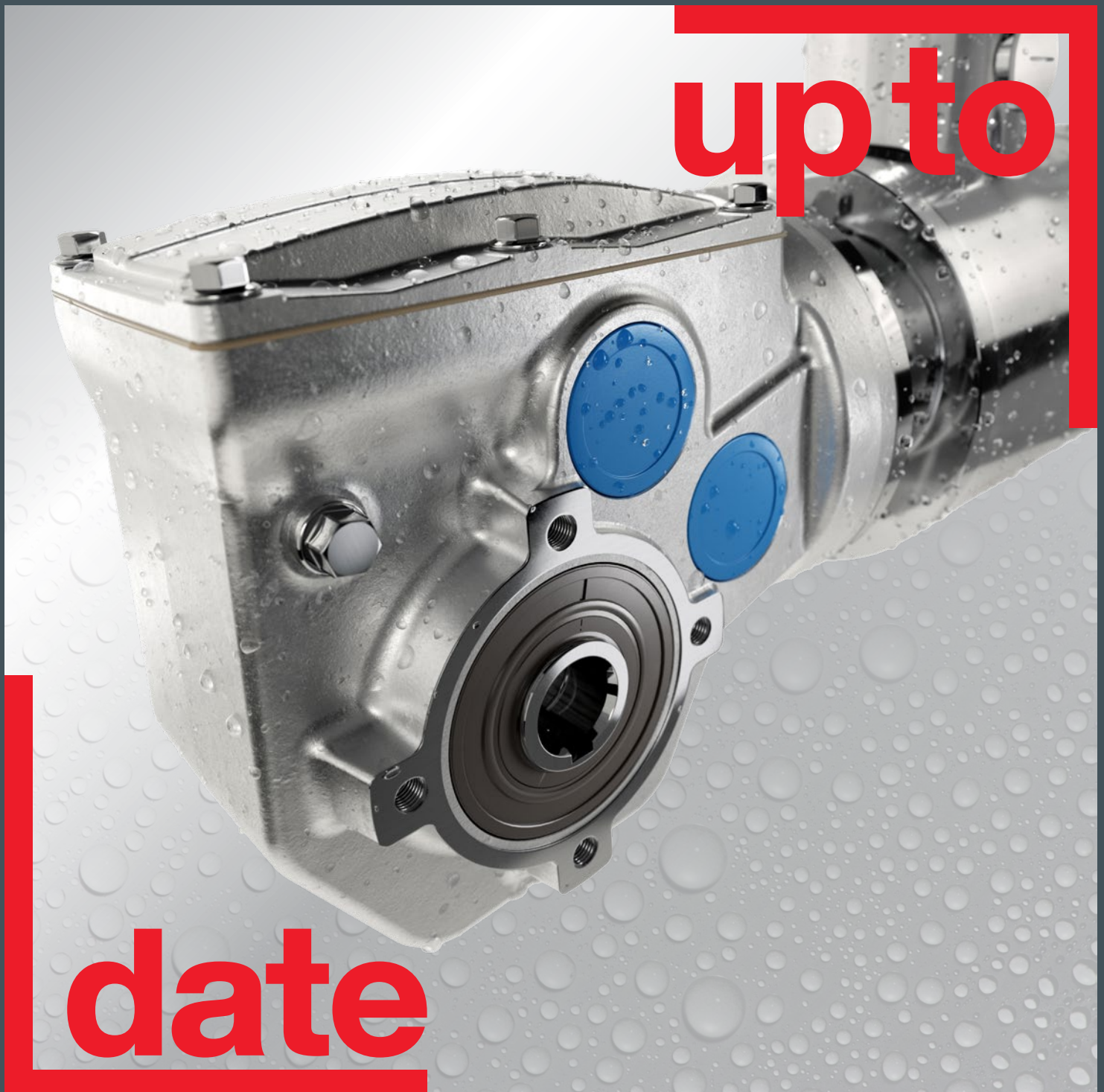


Essential

Efficient solutions for the most stringent hygiene standards

Your questions about stainless steel drives

→ 8/2024



Stainless steel gear units are an essential element in hygiene-sensitive areas such as the food and beverage sector and pharmaceuticals industry.



Find out from our FAQs why stainless steel drives are the best option and how you can use them to optimize your production.



→ **What benefits** do stainless steel drives offer compared with conventional drives?

Stainless steel drives have a smooth and hygienic design. This makes them particularly easy to clean, and the material is also resistant to both corrosion and mechanical stresses. Even deep scratches in the surface will not lead to corrosion

or infiltration underneath the corrosion protection. During hygiene audits, stainless steel gearmotors are usually rated as uncritical in terms of potential hygiene risks.

→ **In which industries** are stainless steel drives particularly useful?

Our stainless steel drives are used throughout food and beverage production. The milk-processing industry, for instance, is one of the classic application areas where strict hygiene requirements apply. Nowadays, it's hard to imagine this industry without aseptic fill and seal machines fitted with suitably resistant drive technology. These machines are used, for example, to fill pots, bottles, and jars with yogurt, pudding, and drinks. The same hygiene and cleaning requirements apply to processes involving the use of slicers.

Our stainless steel drives can help slice and package fish, meat, sausage, and cheese in perfectly hygienic conditions. What's more, stainless steel drives are particularly useful in many other hygiene-relevant areas such as the pharmaceuticals and cosmetics industries, washing facilities, environmental, wastewater, and recycling technologies, and many other areas where there is a high risk of corrosion.

→ **How robust** are the stainless steel drives from SEW-EURODRIVE?

They are made of high-quality stainless steel, and are durable and resistant to moisture, temperature changes, and aggressive cleaning and disinfecting agents. For over a decade,

SEW-EURODRIVE has been manufacturing stainless steel drives that are still running reliably in machinery and plant operated by food and beverage manufacturers to this day.



2 × PSHKZ211
CM2H52S-55A-E/PK/AK0H/...

2 × KESF37 AESQSH100/4
CM2H62M-40A-K/BH/PK/AK0H/...

2 × PSHKZ211
CM2H52S-55A-E/PK/AK0H/...

1 × CMS50S/BP/KY/AK0H/SB1
(electric cylinder)

Controller: UHX71B
Inverter: MOVIDRIVE® modular
double-axis module

Food packaging:
High-precision portioning and filling of
yogurt or pudding

→ What are the material properties of the stainless steel drives?

We use exclusively high-quality stainless steels based on a chromium nickel alloy (CrNi steel) for our stainless steel drives and adapters. These stainless steels are highly resistant to steam, humidity, food acids, and corrosive and aggressive cleaning agents and disinfectants, making them ideal for use in the food and beverage, pharmaceutical, and

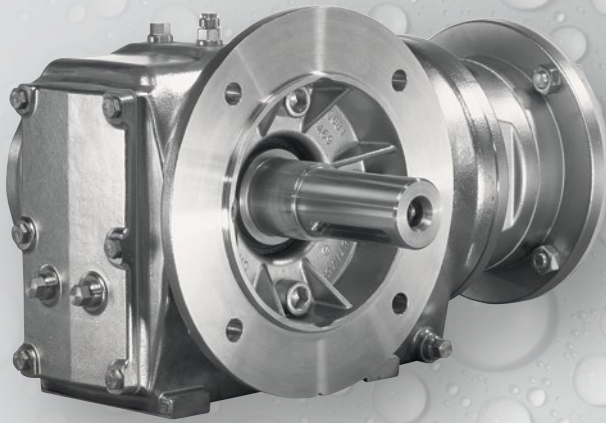
cosmetics industries. Even mechanical surface damage is uncritical, because the material itself is corrosion resistant and therefore doesn't rely on just a thin outer layer of corrosion protection, as is the case when using anti-corrosion coatings.

→ What is the difference between the RES., KES., WES., and PSH.. gear unit series?

The RES.. series comprises two-stage and three-stage helical gear units. The KES.. series consists of three-stage helical-bevel gear units and the WES.. series is made up of two-stage and three-stage SPIROPLAN® right-angle gear units. Thanks to a total of eight sizes, these series cover maximum permitted output torques (M_{amax}) from 80 to 820 Nm. When used in stainless steel gearmotors, the stainless steel gear units in the RES., KES., and WES..

series are combined with an asynchronous stainless steel motor. They are optimized for efficiency, durable, maintenance-friendly, hygienic, and easy to clean.

The PSH.. planetary gear units are available in five sizes up to an output torque of 100 Nm. When combined with stainless steel servomotors, they are particularly suitable for dynamic processes and precise positioning.



AESMS.. stainless steel adapter for connecting stainless steel IEC and NEMA standard-compliant motors

→ **What other stainless steel** components does SEW-EURODRIVE offer?

Our AESMS.. and AESQS.. stainless steel adapters can be used to connect standard-compliant asynchronous motors (IEC or NEMA standards) and servomotors made of stainless steel. The stainless steel adapters can be combined with the RES.., KES.., and WES.. stainless steel gear unit series.

The stainless steel servo gearmotors of the PSH..CM2H.. series satisfy the stringent guidelines of the U.S. Food and Drug Administration (FDA) and have been engineered according to the specifications of the European Hygienic

Engineering Design Group (EHEDG). They have been specially designed for applications where dynamics and positioning are key, such as in packaging machines.

The stainless steel servomotors of the CM2H.. series are also easy to clean and resistant to both acids and alkalis. There are no corners, edges, or indentations in the housing where liquids and dirt could be deposited. The stainless steel servomotors are available as stand-alone motors with an output-side B5 or B14 flange, which offers flexibility for machine design.

→ **What concrete benefits** do the stainless steel gear units offer on a day-to-day operational basis?

Manufactured on the basis of high-quality stainless steels and boasting high degrees of protection up to IP69K, our stainless steel gear units and stainless steel adapters are specifically designed for long-term use in damp and hygiene-critical environments where cleaning is carried out on a regular basis.

Besides withstanding high humidity, changing temperatures, and hot steam, these products are also resistant to corrosive cleaning agents and disinfectants such as alkalis and acids.

This makes our stainless steel products perfectly suited to clean-in-place (CIP) and sterilization-in-place (SIP) processes. Additionally, the rounded corners with a radius greater than 3 mm ensure that no dirt edges form, significantly simplifying the cleaning process. Additionally, the rounded corners with a radius greater than 3 mm ensure that no dirt edges form, significantly simplifying the cleaning process.

Due to their solid and robust design, our stainless steel drives and adapters are dependable and durable, and therefore ensure maximum plant and machine availability.

→ **Contact us** for personal consulting or visit our website for further information.



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