

Press release

Fit into any space

SEW-EURODRIVE planetary gear units meet the demanding requirements of sugarcane mills

Bruchsal/Hannover, 19.04.2026 – With the high-performance planetary gear units of the PPK and XP industrial gear series, SEW-EURODRIVE covers the entire range of drive technology solutions required for sugar production in the food industry. Sugar cane mills are particularly widespread in Brazil, this year's partner country at HANNOVER MESSE. The Bruchsal-based drive specialist is therefore showcasing its expertise in this segment at the trade fair with highly compact, lightweight, and powerful solutions.

Brazil is by far the world's largest producer of sugarcane. In addition to plenty of water, this sweet grass requires temperatures of 25 to 30 degrees Celsius and is therefore grown in the tropical and subtropical regions of the world. The raw material is primarily used to produce table sugar, but also bioethanol, for example for use as biofuel in cars.

Sugar cane mills are a central component of industrial sugar production. Technically speaking, they are large-scale pressing systems in which several heavy, counter-rotating steel rollers compress the sugarcane multiple times under high pressure. This process extracts the raw juice from the plant fibers. Depending on the desired yield, these systems consist of three to six roller stages and operate continuously 24 hours a day during the harvest season.

High torques, extreme loads

The demands placed on the drive technology are enormous: Torques of up to 3,300 kilonewton-meters (kNm) can occur per roller, with an operating power of approximately 3,000 kilowatts and comparatively high drive speeds. In addition, strong recoil forces act on the gear units, for example, from stones in the sugarcane or fibers getting caught in the rollers. The drives are installed very close together and must withstand these loads continuously and reliably. Another critical factor is thermal management. Due to the high continuous power output, significant waste heat is generated, which is why high-performance, custom-designed cooling systems are also required.

XP Series: Maximum performance in a compact design

"Our XP series of industrial gear units are specifically designed for this high-performance segment with its extreme requirements," explains Kai-Keng Man, Product Manager for Industrial Gear Units at SEW-EURODRIVE. With a torque range of 600 to 9,000 kNm, XP planetary gear units cover a wide range of applications and performance levels. Their particular strength lies in the design of the planetary stages: the input torque is distributed evenly across several planetary gears, resulting in a very high torque density. This even load distribution enables a very compact and particularly lightweight design while ensuring high operational reliability.

Images

Sugarcane mill

Keyword

Sugarcane mill

Link

<https://www.sew-eurodrive.de/press>

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Kai-Keng Man illustrates what this means with a comparison: "Unlike conventional helical gear units, planetary gear units can be designed to be significantly narrower and shorter. This is a decisive advantage, especially in confined installation spaces such as those found in sugarcane mills." The complete gearing in the XP planetary gear units is also designed for fatigue strength and are suitable for continuous heavy-duty operation. The application also utilizes cooling systems with capacities of up to 70 kilowatts, supplemented by temperature and pressure monitoring sensors for maximum process reliability.

PPK Series: An efficient solution for low torque applications

At the lower end of SEW-EURODRIVE's planetary gear portfolio, the PPK series planetary gear units round out the product range. This series starts at torques of 2.3 kNm and exemplifies compact, efficient drive solutions. A comparison with a conventional helical gear unit of a similar performance class clearly demonstrates the advantages: A size 17 PPK gear unit, which delivers approximately 17.65 kNm, is significantly more compact and shorter than the helical gear unit, while weighing only about half as much.

There are also clear advantages in terms of oil consumption: While a spur gear reducer in this power class requires about 40 liters of oil, the planetary gear reducer needs only 7 liters of lubricant. This saves a tremendous amount of resources, reduces maintenance requirements, and thus has a positive impact not only on the environment but also on operating costs.

Flexibility, sustainability, and operational reliability

Thanks to their compact design, the PPK and XP series planetary gear units fit even in confined installation spaces and offer designers a high degree of flexibility in machine and plant development. Low weight, low oil consumption, optimal load distribution, and application-specific cooling concepts contribute to high efficiency, process reliability, and durability.

"With both of these industrial gear unit series, we at SEW-EURODRIVE offer a future-proof solution to the growing demands of industrial applications – from the food industry to heavy industry. This underscores the high performance of modern planetary gear technology – from small to very large," concludes Kai-Keng Man.

About SEW-EURODRIVE

Ever since it was founded in 1931, the family business SEW-EURODRIVE GmbH & Co KG has been headquartered in Bruchsal, near Karlsruhe, in the Baden-Württemberg region of Germany. Today, SEW-EURODRIVE is one of the world's leading specialists in drive and automation technology, with around 22 700 employees, 18 production plants, and 92 assembly plants in 57 countries. As one of the leading companies in its field, SEW-EURODRIVE keeps applications, processes, systems, and machinery moving in countless sectors – from airport logistics to industrial processes. With around 850 research and development staff, it is making an innovative contribution to shaping the future of drive technology. Proximity to customers is one of SEW-EURODRIVE's top priorities. An extensive sales and service network provides professional advice on site and ensures the rapid availability of spare parts and repairs – anywhere in the world. Alongside its headquarters and production facilities in Bruchsal and its plant in Graben-Neudorf, the company operates 30 other sites across Germany.

About SEW-EURODRIVE in the partner country Brazil

When SEW-EURODRIVE opened its first branch on the South American continent back in 1978 – over 48 years ago – in Brazil, many European beverage manufacturers who were SEW-EURODRIVE customers also built new production plants overseas. The global manufacturer of drive technology components and customized automation solutions has now become a permanent fixture in this multicultural country. Key sectors in Brazil that use SEW-EURODRIVE technologies include the sugar and ethanol industry, mining, and the automotive industry. Today, SEW-EURODRIVE BRASIL, which has its national headquarters and a production plant in Indaiatuba (in the Metropolitan Region of São Paulo), employs over 1700 staff at 18 locations, including two assembly plants in Rio Claro and Joinville. That makes Brazil the third-largest foreign subsidiary of the Bruchsal-based family company after China and France.