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Press Release

Not just a bridging technology: Schaeffler offers extensive range from components to systems for all hybrid powertrains

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- Schaeffler registers growing demand from customers for components and systems for full, mild, and plug-in hybrids as well as range extenders
- Broad product portfolio for hybrid powertrain solutions like dedicated hybrid transmissions, spoke dampers or electromechanical camshaft phasing units
- Development aims to reduce emissions and ensure high driving comfort

The future of mobility is electric. Schaeffler predicts that in 2035, around 50 percent of the newly manufactured cars and light commercial vehicles worldwide will be fully electric and 30 percent hybrid. Another 20 percent of all newly manufactured passenger cars will have an efficient internal combustion engine only in 2035. The regional markets paint a nuanced picture of the powertrain mix, as Matthias Zink, CEO Powertrain & Chassis, explained in his keynote address at the 2026 Vienna Motor Symposium: “Whereas here in Europe, we are gearing up for a ban on internal combustion engines more or less due to current legislation, we are seeing significant demand for hybrid vehicles in markets outside the EU far beyond 2035.”

Above all in North and South America, and in Southeast Asia, hybrids are set to dominate new vehicle production within the next ten years. In Japan, hybrids will account for as much as around 77 percent of production. “In this context, our technology-neutral product strategy embracing all powertrain system options helps us to manage these mixed market developments and above all, address increasing customer demand for hybrid solutions,” says Zink.

Volume production launch for dedicated hybrid transmissions

The Motion Technology Company sees great potential in the efficiency and flexibility of hybrid powertrain technologies – in close collaboration with vehicle manufacturers worldwide. This is why Schaeffler offers the entire spectrum of components, including complete systems, for the most diverse hybrid topologies – mild, full, and plug-in hybrids and vehicles with range extenders. These vehicles play an important role in reducing CO_2 emissions and achieving fleet targets when driven predominantly in electric mode. Schaeffler had already started developing complete systems for the hybrid powertrain more than ten years ago. A current example is the company’s MultiMode dedicated hybrid transmission, which goes

into volume production this year worldwide at various European and Asian vehicle manufacturers. It is a highly integrated system with two electric machines, power electronics, and smart hydraulics for cooling and actuation of clutch and parking lock. Schaeffler supplies the associated software and functions from a single source. The total weight of the compact module is 125 kg which delivers up to 145 kW of peak power. It is suitable for full and plug-in hybrids and offers three driving modes: electric, serial and parallel. In serial mode, this flexibility allows the internal combustion engine to operate consistently at optimum efficiency. Several presentations at the Vienna Motor Symposium addressed the dedicated hybrid transmission. Matthias Zink explained the strategic rationale behind it: “We are convinced that hybrids offer consumers an easy introduction to electric mobility. If driven extensively in electric mode, these vehicles make an important contribution to the decarbonization of the mobility sector. Every gram of CO2 saved counts.”

Components for the hybrid powertrain

Internal combustion engines in hybrid powertrains also have to be highly efficient and meet all future emission standards and noise requirements. Ideally, they should be designed so that the driver doesn’t detect any difference between electric and internal combustion engine driving mode. Schaeffler sees enormous innovation potential in this requirement. This is why, for example, the Motion Technology Company is developing damping solutions like the spoke damper, which eliminates torsional vibrations at the crankshaft and minimizes the installation space. Its position directly in the crankcase means that there is no need to seal off the crankshaft, which reduces friction. The spoke damper is already in volume production at leading Chinese manufacturers, with further production starts set to take place in the course of this year. To further improve engine efficiency without compromising driving dynamics, Schaeffler also offers next-generation camshaft phasing units. These incorporate a brushless DC (BLDC) motor including control unit, highly integrated electronics, and software for optimized valve control across a wide range of loads and speeds. The high adjustment speed and precision allow for highly efficient combustion. Last year, Schaeffler celebrated the production launch of the latest generation of camshaft phasing units at its plant in Taicang, China, and is supplying customers worldwide.

Growth segment sensor technology

Thanks to the merger with Vitesco Technologies in 2024, Schaeffler now has an extensive sensor technology portfolio, which is used, for example, in emission control and exhaust gas aftertreatment. For improved emission control when using renewable fuels, Schaeffler offers the Flex Fuel sensor. This high-precision sensor is mounted between the fuel tank and engine and measures the ethanol content in the fuel before it is injected. “Following our merger with Vitesco Technologies,

we have a well-rounded, innovative product portfolio, expanded capabilities in the key R&D segments, an increased global presence, and greater vertical integration," says Matthias Zink. "We are therefore in a good position to work with our customers as a key partner to successfully shape the transformation – in Germany, Europe and worldwide."

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Schaeffler Group – We pioneer motion: The Schaeffler Group has been driving forward groundbreaking inventions and developments in the field of motion technology for 80 years. With innovative technologies, products, and services for electric mobility, chassis solutions, and renewable energies, the company is a reliable partner for making motion more efficient, intelligent, and sustainable – over the entire life cycle. Schaeffler describes its comprehensive range of products and services by means of eight product families: from bearing solutions and all types of linear guidance systems through to repair and monitoring services. With around 110,000 employees and more than 250 locations in 55 countries, Schaeffler is one of the world's largest family-owned companies and ranks among Germany's most innovative companies.

Volume production launch in 2026: The Schaeffler MultiMode hybrid transmission offers three driving modes: electric, serial, and parallel. (Photo: Schaeffler)

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Damping solutions from Schaeffler: The spoke damper reduces vibrations in the powertrains of hybrid vehicles. (Photo: Schaeffler)

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Produced at Schaeffler since 2025: The electric camshaft phasing unit for hybrid engines has an electric motor with control unit and gearbox. (Photo: Schaeffler)

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