Rivoli, Italy 18th November 2014 – High-performance transmission specialist Oerlikon Graziano, a brand of Oerlikon Drive Systems Segment, will reveal how its innovative OGeco transmission can overcome the unique challenges of high performance HEV applications at the SAE Electric Powertrain Technologies Symposium in Stuttgart, on November 19th.

In a paper entitled ‘Sports car powertrain electrification: challenges and potential solutions’, Carlo Cavallino, the company’s Project Development Engineer, will outline the technical priorities for a sports car application and show how, by integrating a 6-speed AMT with a 120KW electric motor through a 2-speed epicyclic transmission, the OGeco transmission provides torque infill, electric boost, regeneration, electric drive and engine cranking. The conventional approach used by hybrid sports cars is based on DCT technology but Oerlikon Graziano believes the OGeco provides a more efficient, compact and cost-effective solution.

A prototype unit has been installed in a Mercedes-Benz SLS AMG by Oerlikon Graziano and its UK partner, Vocis, and the packaging is so effective that the OGeco with integrated electric motor fits into the same space as the 7-speed DCT normally fitted to the car. The demonstration vehicle has been well received by OEM customers.

“For high performance sports car applications, the quality and speed of the gear shift are both priorities,” explains Cavallino. “Our presentation describes how this was achieved by a combination of torque infill from the electric motor and a gear change actuation system that integrates each shift valve into its corresponding shift rod. The smooth shifts we achieve at low-to-medium vehicle performance levels match current DCT expectations, without compromising the rapid shift time and responsiveness required during spirited driving.”

Though the demonstrator vehicle is front-engined with a rear transaxle, the OGeco transmission is equally suitable for mid-engined cars and either four wheel drive or rear wheel drive. The concept is sufficiently flexible to be adapted to transverse transaxles in the future.

Cavallino’s presentation, which will take place on 19th November at 11:30, will also outline other products in Oerlikon Graziano’s range of state-of-the-art transmissions for HEVs. These include the 2SED, a 2-speed seamless-shift transaxle for small cars and light commercial vehicles, and the 4SED, a 4-speed seamless-shift transaxle that can be applied to electric passenger or commercial vehicles, or high performance hybrids with 4 wheel drive.
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About Oerlikon
Oerlikon (SIX: OERL) is a leading high-tech industrial group specializing in machine and plant engineering. The company is a provider of innovative industrial solutions and cutting-edge technologies for textile manufacturing, drive, vacuum, coating, and advanced nanotechnology. A Swiss company with a tradition going back over 100 years, Oerlikon is a global player with around 13,000 employees at around 160 locations in 34 countries and sales of CHF 2.9 billion in 2013. The company invests around CHF 100 million per year in R&D, with over 1,000 specialists working on future products and services. In most areas, the operative businesses rank either first or second in their respective global markets.

About Oerlikon Drive Systems
Oerlikon Drive Systems, with its brands Oerlikon Graziano and Oerlikon Fairfield, is a leading worldwide provider of complete drive systems, gearing solutions and transmission components, with a product portfolio providing transmissions for high performance cars, complete solutions for all-wheel-drive vehicles and agricultural tractors, as well as Torque-Hub® planetary drives for industrial machinery and off-highway mobile equipment. The know-how and the capabilities allow the segment to lead the full deployment of a development program from conceptual and simulation phases to mass production, for complete mechatronic driveline systems as well as for single gearing components. With more than 90 years in the market of power transmission, Oerlikon Drive Systems is focused on automotive, off-highway and industrial key markets. Excellent manufacturing, engineering and innovative expertise have made both the brands the global drive systems supplier of high-tech solutions in all mobility markets.

Photographs: Pictures are available electronically from public.relations@oerlikon.com

OGeco concept has been designed to provide torque infill from an electric motor during gear changes

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