

Porsche Fully Electric Race Car Targets Formula E Championship Using ANSYS Technology

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PITTSBURGH, Nov. 21, 2019 /PRNewswire/ -- The <u>TAG Heuer Porsche Formula E Team</u> is racing to the finish line of the 2019/2020 ABB FIA Formula E Championship through a new collaboration with <u>ANSYS</u> (NASDAQ: ANSS). <u>Porsche Motorsport</u> engineers are using ANSYS' industry-leading system-level simulation solutions to create an advanced electric powertrain that will substantially increase energy efficiency for Porsche's first-ever fully electric race car — the Porsche 99X Electric.

Porsche_99X

Accelerating at extreme speeds through demanding urban courses within metropolitan city centers exerts massive stresses on the powertrain of the Porsche 99X Electric. While regulations stipulate a standardized chassis and battery, engineers can customize the powertrain and its subsystems and components to deliver maximum energy efficiency and vehicle performance from the starting line to the finish line.

ANSYS system-level solutions deliver a critical competitive edge for the Porsche 99X Electric, enabling Porsche engineers to create the next-generation Porsche E-Performance Powertrain. This helps provide the highest level of energy efficiency for its vital subsystems and components — maximizing the efficiency of the motor and power electronics to significantly reduce losses.

After proving itself on the track, Porsche will leverage the electric powertrain of the Porsche 99X Electric to push engineering boundaries and usher in a new era of commercial e-mobility vehicles. The car's 800-volt technology is currently being used in the series production of the fully electric Porsche Taycan.

"ANSYS system-level simulations are instrumental for optimizing the Porsche E-Performance Powertrain's motor, gearbox, power electronics and control software, allowing the Porsche 99X Electric to sustain unprecedented speeds over long distances while conserving as much energy as possible," said Fritz Enzinger, vice president, Porsche Motorsport. "Delivering unparalleled energy management, the powertrain is a decisive competitive factor that provides our driver with numerous tactical options during the race, empowering him to push the car to the edge of its envelope."

"Porsche Motorsport sets the standard for racing excellence and we are honored to help revolutionize the electric powertrain of the Porsche 99X Electric, break new e-mobility barriers and speed their team to Formula E victory," said Shane Emswiler, senior vice president and general manager, ANSYS. "Delivering a critical competitive advantage, ANSYS system-level simulations slash the Porsche 99X Electric's energy losses and greatly increase its electrical efficiency — enabling the car to provide maximum power during challenging races."

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