



All-Electric Mustang Mach-E 1400 Prototype by Ford Performance and RTR Takes Racing, Drifting to New Levels

- Ford introduces the all-electric Mustang Mach-E 1400—a one-of-a-kind prototype developed in collaboration with RTR Vehicles to demonstrate the performance possibilities of electric propulsion
- Following on the heels of the all-electric Mustang Cobra Jet 1400, Mustang Mach-E 1400 is projecting 1,400 peak horsepower (1,419 PS) and more than 1,000 kg of downforce at 257 km/h (160 mph) from its seven motors and ultra-high-performance battery
- Making its first appearance at a NASCAR race soon, Mustang Mach-E 1400 is designed to challenge perceptions of what electric vehicles can do with performance tuning and advanced technology

Peak horsepower: 1,400 – and make it electric.

Mission accomplished: Ford introduces Mustang Mach-E 1400, an all-electric road rocket that shows just how much performance can be harnessed without using a drop of fuel. Coming hot on the heels of the 1,400-horsepower (1,419 PS) all-electric Mustang Cobra Jet 1400, this one-off Mustang Mach-E with its seven electric motors and high downforce is ready for the track, drag strip or gymkhana course – anywhere it can show how electric propulsion promises extreme Mustang performance. [Watch here](#) to see the all-electric prototype in action.

Developed in collaboration with RTR and built off a Mustang Mach-E GT body-in-white, the prototype targets 1,400 peak horsepower (1,419 PS). The chassis and powertrain work together for a multitude of setups offering capability unlike any other vehicle.

“Now is the perfect time to leverage electric technology, learn from it, and apply it to our portfolio,” said Ron Heiser, chief programme engineer, Mustang Mach-E. “Mustang Mach-E is going to be fun to drive, just like every other Mustang before it, but Mustang Mach-E 1400 is completely insane, thanks to the efforts of Ford Performance and RTR.”

The Mustang Mach-E 1400 is the result of 10,000 hours of collaboration by Ford Performance and RTR aimed at bridging the gap between what an electric vehicle can do and what customers tend to believe it can do.

“Getting behind the wheel of this car has completely changed my perspective on what power and torque can be,” said Vaughn Gittin Jr., RTR Vehicles founder, motorsports champion and professional fun-haver. “This experience is like nothing you’ve ever imagined, except for maybe a magnetic roller coaster.”

Mustang Mach-E 1400 has taken shape without rules. The Ford design team and RTR used many of the same tools Ford uses for its race cars and production programmes. Aerodynamics are optimised for shape and location, with a focus on cooling ducts, front splitter, dive planes and rear wing.

Mustang Mach-E 1400 has seven motors – five more than even Mustang Mach-E GT. Three are attached to the front differential and four are attached to the rear in pancake style, with a single driveshaft connecting them to the differentials, which have a huge range of adjustability to set the car up for everything from drifting to high-speed track racing.

“The challenge was controlling the extreme levels of power provided by the seven motors,” said Mark Rushbrook, motorsports director, Ford Performance. “Mustang Mach-E 1400 is a showcase of the art of the possible with an electric vehicle.”

The chassis and powertrain are set up to allow the team to investigate different layouts and their effects on energy consumption and performance, including rear-wheel drive, all-wheel drive and front-wheel drive. Drift and track setups have completely different front-end configurations like control arms and steering changes to allow for extreme steering angles in drifting. Power delivery can be split evenly between front and rear, or completely to one or the other. Downforce is targeted at more than 1,000 kg at 257 km/h (160 mph).

The 56.8-kilowatt-hour battery (installed) is made up of nickel manganese cobalt pouch cells for ultra-high performance and high discharge rate. The battery system is designed to be cooled during charging using a di-electric coolant, decreasing the time needed between runs.

An electronic brake booster is integrated to allow series regenerative braking combined with ABS and stability control to optimise the braking system. Mustang Mach-E 1400 features Brembo™ brakes, like the Mustang GT4 race car, and a hydraulic handbrake system designed for drifting that integrates with the powertrain controls to enable the ability to shut off power to the rear motors.

Mustang Mach-E 1400, which is set to debut at a NASCAR race soon, serves as a test bed for new materials. The hood is made of organic composite fibres, a lightweight alternative to the carbon fibre that comprises the rest of the vehicle.

Ford is investing more than \$11.5 billion in electric vehicles worldwide, with the first global vehicle, Mustang Mach-E, available to order now. The first all-electric Mustang Mach-E models for customers in Europe will arrive from early next year.*

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*Officially homologated energy efficiency figures will be published closer to on-sale date. The declared fuel/energy consumptions, CO₂-emissions and electric range are determined according to the technical requirements and specifications of the European Regulations (EC) 715/2007 and (EU) 2017/1151 as last amended. Light Duty Vehicle type-approved using the World Harmonised Light Vehicle Test Procedure (WLTP) will have fuel/energy consumption and CO₂-emission information for New European Drive Cycle (NEDC) and WLTP. WLTP will fully replace the NEDC latest by the end of the year 2020. The applied standard test procedures enable comparison between different vehicle types and different manufacturers. During NEDC phase-out, WLTP fuel consumption and CO₂ emissions are being correlated back to NEDC. There will be some variance to the previous fuel economy and emissions as some elements of the tests have altered, so the same car might have different fuel consumption and CO₂ emissions.

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