



Koenigsegg
Press information
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The Gemera's drivetrain and handling

The newly developed Tiny Friendly Giant engine (TFG), is coupled to the proven and patented electrified Koenigsegg Direct Drive (KDD) first pioneered in the Regera – a combination providing ultimate response from standstill to top speed in the form of a single gear direct drive. The result is a combined output of 1700 bhp and 3500 Nm of torque. The Gemera comes equipped with a small 800V battery, allowing it to travel up to 50 km in EV only mode and an additional 950 km in highway cruise speed in hybrid mode, before needing a fill-up – totaling a range of 1000 km.

“The Gemera is Koenigsegg’s most frugal and fastest accelerating car ever”, says CEO and founder, Christian von Koenigsegg. “It will go from 0 to 100 km/h in 1.9 seconds in one gear – thanks to the proven and patented Koenigsegg Direct Drive. The Gemera will even have over 1600 Nm of torque ‘left’ at 350 km/h – making it a contender for the fastest accelerating car to 400 km/h. Time will tell.”

Koenigsegg Direct Drive (KDD)

Traditional hybrids represent a compromise when it comes to weight, complexity, cost and packaging. The Gemera, on the other hand, together with its sibling the Regera, is a new breed of hybrid. Its main advantage? Providing ultimate response from standstill to top speed in the form of a single gear direct drive at lower weight and higher efficiency than what any other hybrid solution can offer.

During highway travel, for instance, the KDD reduces drivetrain losses compared to traditional transmissions or CVT by 3-5% as there is no step-up or step-down gear working in series with the final drive – just direct power from the engine to the wheels with the torque-converting HydraCoup locked up.

Torque is crucial, especially when accelerating to extreme speeds in one gear. In the Gemera, this is facilitated by the torque-converting HydraCoup – it converts the combined 1100 Nm coming from the TFG and front e-motor to almost double its torque up to 3000 rpm. That is why the Gemera has 3500 Nm of torque from standstill and why it can accelerate from 0-400 km/h in a single gear.

All-wheel drive, all-wheel torque vectoring, and all-wheel steering

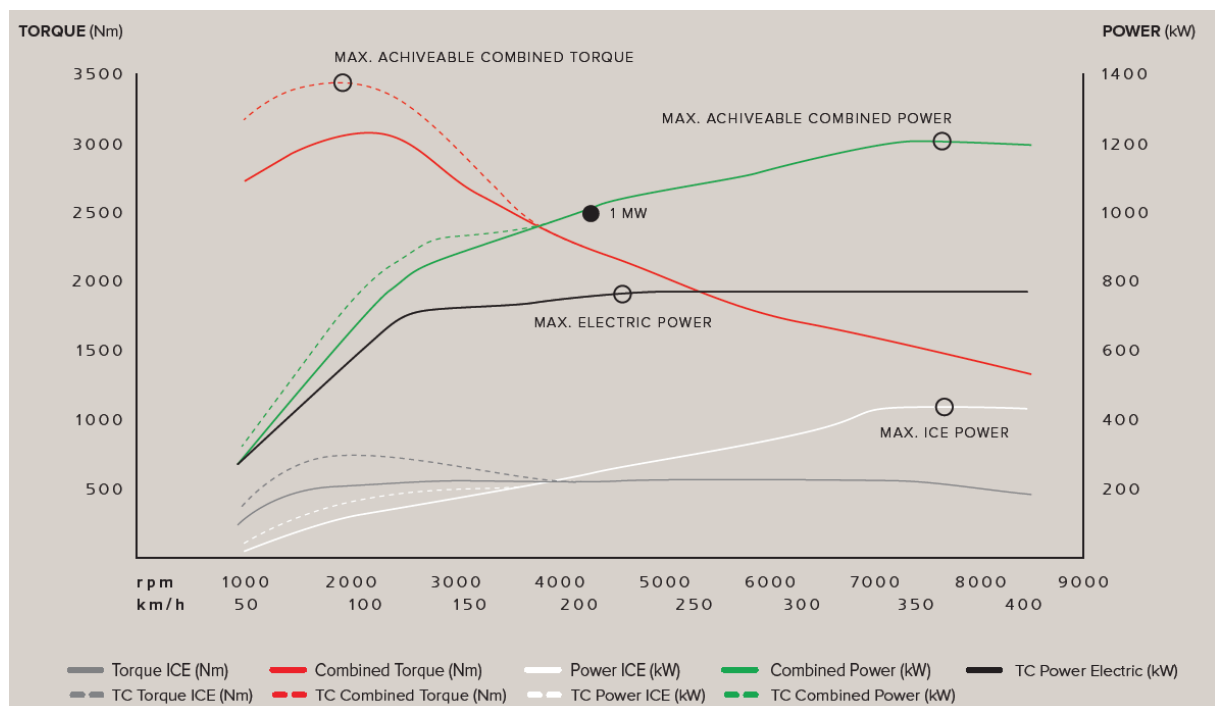
The separate rear e-motors enable torque vectoring and reverse. The front axle has an open differential with a wet clutch pack for each output shaft, also enabling torque vectoring. This means that the Gemera has all-wheel drive, all-wheel torque vectoring, and all-wheel steering, as it also has independent rear-wheel steering – offering maximum traction and safety, and one exciting driving experience. The Gemera also comes with active ride height to complement driving conditions.

Additionally, the all-wheel torque of over 11000 Nm is clawed into the ground from standstill, creating quite the undertaking for the Gemera’s massive and grippy Michelin Pilot Sport 4S tires.



Combined power output of 1700 bhp

Power output from the three motors – one for each rear wheel producing 500 bhp and 1000 Nm, and one E-motor on the crankshaft that produces an extra 400 bhp and 500 Nm to power the front wheels – add up to 1400 bhp as individuals and 1100 bhp when combined. In addition to the TFG’s 600 bhp (at 7500 rpm) and torque of 600 Nm (2000 rpm to 7000 rpm), the combined power output of the Gemera is 1700 bhp or 1.27 MW.



The Gemera's combined power curve of the TFG and KDD (graph can also be found among images)

The 800V battery pack

Taking cues from the Regera, the Gemera's 800V, 15 kWh battery will provide an amazing 900 kW of discharge and up to 200 kW of recharge. Every cell is carefully monitored for voltage, state of charge, health and temperature; and the cells are enclosed in a carbon fiber casing for efficiency, safety and stability. The battery is placed in the most protected area of the car – under the front seat and in the carbon-aramid chassis tunnel.

Range

The Gemera can travel up to 50 km in EV only mode and up to an additional 950 km highway cruise speed in hybrid mode, before needing a fill-up – totaling a 1000 km range. This makes the Gemera a true continent crossing family-oriented "Autobahn" rocketship.

**Technical specification**

See press information called “Technical specification”.

All data is provisional

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