



Lamborghini Revuelto: the first super sports V12 hybrid HPEV

- **The new paradigm for super sports cars: presenting the first Lamborghini High Performance Electrified Vehicle delivering 1015 CV**
- **Revolutionary architecture, with naturally-aspirated V12 engine combined with eight-speed, double-clutch transverse gearbox and three electric motors**
- **13 drive modes, and all-wheel drive also available in fully-electric mode for the absolute driving experience**
- **Aerodynamics and design express the maximum synergy between efficiency, functionality and style**
- **Fully immersive experience for driver and passenger with the new Lamborghini Infotainment System**

Sant'Agata Bolognese, 29 March 2023 - In the marque's 60th anniversary year, Automobili Lamborghini presents Revuelto¹, the first super sports V12 hybrid plug-in HPEV (High Performance Electrified Vehicle). Revuelto defines a new paradigm in terms of performance, sportiness and driving pleasure from its unprecedented new architecture; innovative design; maximum-efficiency aerodynamics; and a new carbon frame concept. An output of 1015 CV is delivered from the combined power of an entirely new combustion engine together with three electric motors, alongside a double-clutch gearbox that makes its debut on a 12-cylinder Lamborghini for the first time.

The powertrain combines high specific power elements: the new 127 CV/liter combustion engine works synergically with two front axial flux motors that deliver an outstanding weight-to-power ratio, with a radial flux electric motor positioned above the first eight-speed double-clutch gearbox debuting on a 12-cylinder Lamborghini. The three electric motors are powered by a lithium-ion high specific power (4500 W/kg) battery pack that also supports a fully-electric drive mode.

"The new Revuelto is a milestone in the history of Lamborghini, and an important pillar in our Direzione Cor Tauri electrification strategy," said Stephan Winkelmann, Lamborghini Chairman and CEO. *It is a unique and innovative car but at the same time faithful to our DNA: the V12 is an iconic symbol of our super sports heritage and history. Revuelto was born to break the mold, combining a new 12-cylinder engine with hybrid technology, creating the perfect balance between delivering the emotion that our clients want with the necessity to reduce emissions."*

Carbon fiber, produced via artisan craftsmanship in the Sant'Agata Bolognese factory, is the principal structural element within the new car, used not only in the monofuselage and frame but also for many elements of the bodywork. The extensive use of carbon fiber and lightweight

¹ The vehicle is not yet offered for sale and is therefore not subject to Directive 1999/94/EC. The fuel consumption and emissions data are in the type of approval stage.



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materials, combined with the potent engine power, contributes to achieving the best weight-to-power ratio in the history of Lamborghini: 1.75 kg/CV.

The new Revuelto combines these attributes to deliver performance figures at the peak of its segment: acceleration from 0-100 km/h in only 2.5 seconds and a top speed of more than 350 km/h. These numbers combine with its exceptional dynamism thanks to the introduction of electric torque vectoring, and four-wheel drive available also in fully-electric drive mode, ensuring the Revuelto super sports car expresses its amplified qualities both on track and in daily driving.

“With Revuelto we take the experience of driving a Lamborghini to a superior level,” said Rouven Mohr, Lamborghini Chief Technical Officer. *“Revuelto takes a significant step forward in terms of reactivity and responsiveness to ensure the most emotive and natural driving in every environment. Revuelto is a car delivering the highest performance but our objective right from the start was to confirm it at the very summit of driving emotions.”*

Design

Revuelto brings the future of Lamborghini design to the road today. It stays constant to the exclusive Lamborghini design DNA but establishes an entirely new stylistic language. It links with the iconic and legendary Lamborghini V12 cars of the past throughout the new shape, while the new proportions open the door towards the future.

While Revuelto delivers a quantum leap in an all-new car design, both externally and internally, the inspiration of previous V12 legends is still clear. Starting with the 1971 Countach prototype and its perfect proportions developed on a single longitudinal line, this car was responsible for creating a pure and essential style contextualized in the Space Age era. It defined the Lamborghini V12 super sports car DNA and introduced one of the most distinctive Lamborghini V12 elements: the vertically-opening scissor doors, which contribute to creating the character of Revuelto.

The new car also defers to the inimitable proportions of the Diablo and the floating blade on the rear fender, while the muscularity and inclined front of the Murciélago is evident.

“The Revuelto is adrenaline made visible,” says Mitja Borkert, Lamborghini Head of Design. *“The design of the new Lamborghini Revuelto opens a fascinating door towards the future of our unique design language. From first sight, Revuelto is an intriguing next-generation Lamborghini V12, with all lines embracing the monocoque and celebrating a free view towards the V12 HPEV powertrain.”*

“The unique and recognizable Y-shape light signature is significant in this new era of our most iconic flagship car, and the interior is a dramatic leap forward in defining the new design direction”



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of Lamborghini. Our philosophy of "feel like a pilot" is vivid and visible in every detail: the driver and passenger are deeply integrated in the very lightweight Y-shape design of dashboard and center console, replicating the sensations of being in a race car but with a perfect intuitive balance between digital and physical controls."

With the Revuelto, Lamborghini launches a new Space Race, ushering in a design language that adapts to the challenges imposed by electrification, and presaging the shapes and proportions of super sports cars of the near future. The design is inspired by aerospace elements, characterized by sculpted surfaces encompassed by two lines that start from the front and embrace the cabin and engine, tapering down to the hexagonal-shaped exhausts.

The aerospace elements blend harmoniously with an animalistic muscularity starting at the front: the shark-nose section modeling of the broad monolithic carbon-fiber hood conveys a sense of power and speed. This is matched by the headlamp clusters with Y-shape daytime running lights - a distinctive stylistic feature of contemporary Lamborghini design - framed by aerodynamic blades that connect the splitter to the hood itself. The side fins, located behind the front wheel arches, channel the airflow along the sides and the pronounced concavities of the doors to the side air intakes, which feature sharp edges that echo the arrows on the front.

The roof combines more headroom with aesthetic qualities and specific aerodynamic functions. The recessed profile channels air to the rear wing but at the same time allows more headroom in the cabin for both the driver and passenger.

The rear is a tribute to the hybrid V12. The fully-exposed longitudinal engine highlights the mechanical heart of the Revuelto, visually connecting it to the double hexagonal exhaust surmounted by the geometrically profiled wing, framed by headlamp clusters with the Y-shape light signatures.

The "Y" is also the hallmark of the driver-oriented interior design influenced by the "feel like a pilot" philosophy. The interior mirrors the all-new futuristic design of the exterior: every aspect of the cockpit is clearly Lamborghini, combining a perfect balance between a digital and physical experience both in daily driving and track environments. The visual center of the cabin houses a pronounced carbon-fiber profile, with a "space-ship" design that encloses the central air vents and the 8.4" vertical touchscreen, the technological heart of the car.

With Revuelto Lamborghini initiates a new immersive, shared driving experience, where pilot and co-pilot can simultaneously view the same information on the displays located in the 12.3" digital cockpit on the driver's side and on the 9.1" display installed on the passenger-side dashboard. Revuelto introduces the "swipe" function in a Lamborghini, allowing the pilot and co-pilot to move applications and information from the central display to the side displays with the same intuitive,



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gestural ease as using a smartphone. The three digital screens not only respond to the need for stylistic cleanness that enabled most of the physical buttons to be eliminated, but implement new features that allow the driver to concentrate fully on driving, just as in a race car.

The steering wheel was inspired by the racing world and the experience of the Essenza SCV12. The four rotors located on the spokes are used for selecting both the driving modes and the car's lifting system and rear wing tilt. The intuitive design of the cockpit and controls deliver a distinctive Lamborghini feeling: buttons are used to activate the turn signals and the launch control among other functions, while allowing the driver to maintain an optimal grip on the steering wheel at all times.

The Revuelto juxtaposes its personality as a track-inspired super sports car with a character designed for everyday driving with exceptional functionality. Significant attention was given in the design stages to ensure the cabin is roomy and practical as well as perfectly equipped for track-day outings. The roof design offers 26 mm more headroom than the Aventador Ultimae, while the new monofuselage provides 84 mm more legroom, leaving additional space behind the seats to accommodate luggage up to the size of a golf bag. This space is in addition to the compartment under the front hood, which can hold two cabin trolleys. Moreover, to make life on board even more comfortable, functional elements such as storage compartments located under the center dashboard and between the two seats have been included, as well as a cup holder built into the passenger-side dashboard.

Personalization

Revuelto is the production Lamborghini model that offers the most potential for personalization. In fact, 400 bodywork colors are offered together with many more personalization options at the client's disposal allowing the creation of an entirely individual super sports car. The sustainable sportiness of Revuelto does not stop at the technical specification of the plug-in hybrid: all the paints used are water based rather than solvent based.

'Sustainability' continues throughout the car's interior, reflecting the company's attention to avoiding waste that has become the modus operandi of the Lamborghini universe. This includes upholstery materials, cut in the Lamborghini 'selleria' utilizing latest-generation machinery: this limits waste as much as possible without affecting the craftsmanship and embroidery processes, in which 'hand-made' continues as a point of excellence within Lamborghini.

The cabin is characterized by the presence of visible carbon fiber used on the dashboard, in the hexagonal air vents and to frame the dashboard and central vents. The upholstery combines fine leathers with the new ultralight Corsa-Tex fabric in Dinamica® microfiber, made of recycled polyester via a water-based production process. The customer can customize the interior of his



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car by opting for a balanced mix of leather and Corsa-Tex, or favor one material depending on his preference, with 70 color options available.

Aerodynamics

Function and style share a singular mission on the Lamborghini Revuelto: aerodynamic efficiency. The new layout of the super sports car has different design requirements compared to the Aventador, which influenced the car's aerodynamic development. The development was based on four pillars: efficiency; synergy between the components; integration between the components; and design.

Optimum efficiency was achieved by combining high downforce and minimized drag. One of the key elements in this strategy is the new active rear wing, created to ensure the best aerodynamic performance in all driving conditions. For this reason, entirely new actuators have been developed, managing the load optimally in every situation thanks to three different settings.

The position of the wing changes according to the driving mode and dynamics, or it can be changed manually by the driver according to his or her preferences using the dedicated rotor on the steering wheel. The "closed" position (low drag) ensures minimum resistance, for example when driving in electric mode. This position is also the most suitable for fuel economy. It improves top speed values while still ensuring stability. The "high downforce position" on the other hand, maximizes downforce by optimizing the agility and handling of the Revuelto.

The front section of the new super sports car from Sant'Agata is distinguished by a carbon fiber splitter with a radial leading edge in the central part and slanted in the lateral part, generating vortices that increase frontal load and deflect the air, avoiding the wheels. The central area has a shape that channels the flow to four rear vortex generators, consisting of narrow curved blades positioned in the underbody that are essential for increasing the energy of the airflow that strikes the car at the bottom. This, in turn, generates additional downforce and directs the airflow toward the diffuser, which has never been so extreme in a V12. The diffuser performs aerodynamic functions by extracting the incoming flow from the underbody via a differentiated channeling system between the central part with low slant (11° vs. the 7° of the Aventador Ultimae) and the lateral part with high slant (15° vs. 8° of the Aventador Ultimae). The diffuser also performs a structural and cooling function for the engine compartment.

In summary, the new design approach enabled the Revuelto to increase the front aerodynamic load by 33% and the rear load by 74% compared to the Aventador Ultimae (under maximum load conditions).

The synergy between components is evident in the focus placed on the cooling pattern that distinguishes the new Lamborghini Revuelto. The front radiator generates hot air that must be managed in the correct way so as not to impair the performance of the side radiators. Outward-facing louvers on the front radiator outlet grille direct the flow of hot air away from the wheel and away from the side radiators, while fins located on either side of the front bumper reduce aerodynamic drag.



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All the elements have been designed and engineered to optimize airflow. Even the door handles perform an aerodynamic function thanks to the Y-section wing profile: a solution that allows them to divert the flow of fresh air they receive from the front hood to one of the horizontal fins located along the side, directing it toward the radiator.

The maximum integration between the components is evident in the cooling pattern of the brake system, where aerodynamics becomes part of the system. The pair of front suspension deflectors and the grille inside the wheel arches are designed to improve not only the cooling of the front brakes - the deflectors draw air from the front diffuser and channel it to the brake - but they are shaped to reduce resistance inside the wheel well, limiting any compression phenomena while increasing the load at the front.

At the rear end, the two NACA ducts located in front of the rear wheels collect flow from the underbody and direct it to the rear brake cooling duct.

The carbon fiber roof also plays an important aerodynamic role with a structural function that improves interior roominess. The wing profile design with a hollowed-out central part directs air to the rear air intakes, and consequently to the inverter and electric motor located on the gearbox, while the roof's side volumes provide more headroom for both driver and passenger.

Monofuselage

The Revuelto is based on a new aeronautics-inspired chassis, the 'monofuselage'. As well as a monocoque made entirely of multi-technology carbon fiber, it features a front structure in Forged Composites; a special material made of short carbon fibers soaked in resin. This technology was developed and used by Lamborghini in its first structural applications as far back as 2008.

The monofuselage represents a significant step forward from the Aventador in terms of torsional stiffness, lightweight qualities and driving dynamics. What's more, the Revuelto is the first super sports car to be fitted with a 100% carbon fiber front structure: carbon fiber is also used for the front cone structures to ensure a level of energy absorption that is significantly higher when compared to a traditional metal structure - double that of the Aventador's aluminium front frame - combined with a substantial reduction in weight.

In fact, the Revuelto monofuselage is 10% lighter than the Aventador chassis, and the front frame is 20% lighter than its aluminum predecessor. The torsional stiffness has also been improved with a value of 40,000 Nm/°, up +25% compared to the Aventador and guaranteeing best-in-class dynamic capabilities.

The design concept underlying the development of the new monofuselage is based on the maximum integration between components. This is optimized thanks to the introduction of extensive Forged Composites technology, as well as the development of the monolithic rocker ring.



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This use of carbon fiber makes the Revuelto unique in the super sports car arena: the single-element ring-shaped component is made of CFRP (Carbon Fiber Reinforced Plastic) and forms the supporting structure of the car. The rocker ring encloses and connects the Forged Composite elements such as the tub, the front firewall and A pillar.

The more traditional, but no less efficient, technology of autoclave composite production with pre-impregnated material was retained for the roof construction. The autoclaved carbon fiber meets high technical, aesthetic and quality requirements, complemented by craftsmanship in the highly specialized hand lay-up process, which results from years of quality-driven in-house production of composite material components. It is a manufacturing decision that also gives the customer maximum versatility in roof customization.

The rear chassis is made of high-strength aluminum alloys and features two important hollow castings in the rear dome area: these integrate the rear suspension's shock towers and powertrain suspension into a single component with closed inertia profile, guaranteeing a significant reduction in weight, an increase in rigidity and a substantial reduction in welding lines.

The Revuelto represents a new "year zero" in relation to the use of carbon fiber in car production, summed up in the acronym AIM (Automation, Integration, Modularity). 'Automation' refers to the introduction of automated and digitalized processes into material transformation, while preserving traditional Lamborghini manufacturing, such as in the discipline of composites.

'Integration' relates to the integration of several functions into a single component through the development of compression molding. This process uses preheated polymers to enable the production of components with a wide range of lengths, thicknesses and complexity, ensuring optimum integration between components to guarantee high torsional stiffness. Finally, 'Modularity' refers to making the applied technologies modular and therefore more flexible and efficient, to respond to all the product requirements and characteristics.

Powertrain and Layout

The car showcases an unprecedented layout and powertrain: the naturally-aspirated 6.5-liter V12 mid-mounted engine is complemented by three electric motors, one of which is integrated into the new double-clutch eight-speed gearbox. This is mounted transversely and placed for the first time behind the combustion engine. In what has been the transmission tunnel since the days of the Countach, there is a lithium-ion battery instead, which powers the electric motors.

The electric motors boost power delivery at low revs and can also turn the new Revuelto into a purely electric car, reducing overall CO₂ emissions by 30%² compared to the Aventador Ultimae.

² The vehicle is not yet offered for sale and is therefore not subject to Directive 1999/94/EC. The fuel consumption and emissions data are in the type of approval stage.



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A unique architecture

Lamborghini has been synonymous with V12 engines since the company was founded. The very first Lamborghini model to sport this characteristic engine was the iconic 350GT launched in 1963. The first time that an electric motor was matched to a 12-cylinder internal combustion engine in a Lamborghini was in 2019 with the Sián, which used a 25 kW electric engine to support the previous generation of V12, storing the electrical energy in a supercapacitor.

The Revuelto introduces an unprecedented hybrid architecture and a new generation of V12. The car is launched as the very first High Performance Electrified Vehicle - HPEV: a plug-in hybrid super sports car equipped with a lightweight high-power lithium ion battery, housed within the transmission tunnel in the central section of the chassis. It's an innovative solution, designed to reduce emissions compared to the previous V12 while maximizing performance.

The new L545 engine has a capacity of 6.5 liters and is the lightest and most powerful 12-cylinder engine ever made by Lamborghini. In total it weighs just 218 kilograms: 17 kilograms less than the Aventador unit. The Revuelto features the engine rotated through 180 degrees compared to the Aventador layout. The superquadro V12 puts out 825 CV at 9250 revs per minute thanks to the redesigned distribution system that supports a maximum rev range of 9500 rpm. Specific power is 127 CV per liter, the highest output in the history of Lamborghini's 12-cylinder engines, while maximum torque is 725 Nm at 6750 rpm.

The air intake ducts to the cylinders have been re-engineered to increase the supply of air and guarantee optimal airflow in the combustion chamber. The combustion within the actual engine has also been optimized, thanks to the regulation of ionization in the chamber with two control units: a solution already used in the Aventador and now transferred to the new model. The new combustion system is also characterized by an increased compression ratio (12.6:1 compared to 11.8:1 for the Aventador Ultimae). The fluid dynamics of the exhaust have also been improved to reduce counter-pressure at high revs and increase the specific power output.

From the very beginning, Lamborghini cars were famed for their uniquely emotional and unmistakable sound. Particular attention has been lavished on the 'soundtrack' of the new L545 to emphasize the tone of the engine, already melodious at low revs and then rising to a natural harmonious crescendo.

Electric four-wheel drive

The Revuelto retains one of Lamborghini's strongest traditions: four-wheel drive. As well as the internal combustion engine that provides power to the rear wheels, a pair of electric motors now make their debut on the front axle, each supplying traction to one of the front wheels. There's also a third electric motor positioned above the eight-speed double-clutch gearbox that can supply power to the rear wheels, depending on the selected driving mode and the conditions.



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The combined torque from the combustion engine and three electric motors offers performance levels that are unique even within the domain of super sports cars, with 725 Nm produced by the internal combustion engine and 350 Nm from each of the front electric motors. In total, the power unit delivers a combined maximum output of 1015 CV.

The two electric motors at the front are oil-cooled axial flux units and offer an exceptional weight-to-power ratio: 18.5 kilograms from each of the 110 kW units. As well as providing power to the front wheels, they also have a torque vectoring function, optimizing driving dynamics, and recuperating the energy produced under braking. When in electric mode, the Revuelto is front-wheel drive only to optimize energy consumption, while electric drive to the rear axle is activated on demand when needed.

The Lamborghini Revuelto is equipped with a lithium-ion high specific power (4500 W/kg) battery pack situated within the central tunnel, keeping the center of gravity as low as possible and ensuring optimal weight distribution. The battery is protected by a lower structural layer and is connected to the front electric motors, the rear electric motor, and an integrated recharging unit.

The battery is 1550mm long, 301mm high, and 240mm wide, containing pouch cells with an overall capacity of 3.8 kWh. When the charge drops down to zero it can be recharged using both ordinary domestic alternating and charging column current up to 7 kW in power, and completely recharges in just 30 minutes. It can also be recharged under regenerative braking from the front wheels or directly from the V12 engine in just six minutes.

Getting into gear

The adoption of a new platform has prompted innovative technical decisions involving the gearbox: the nerve center of the hybrid plug-in unit. The adoption of a new platform has delivered innovative technical decisions involving the gearbox: the nerve center of the hybrid plug-in unit. To achieve its goals, a new compact transmission unit was developed, able to meet the needs of such a potent electric power unit and following Revuelto will go on to equip the next generation of super sports cars from Sant'Agata Bolognese. Incorporation of a wet double clutch as the most efficient and performance-oriented solution, ensures optimum management of the 725 Nm of torque at 6750 rpm from Revuelto's internal combustion engine.

The new eight-speed gearbox is positioned transversally behind the longitudinal V12 engine, to leave space in the tunnel for the lithium-ion battery that feeds the electric motors. It's a technical solution that's unique in the world of high-performance cars, and places Lamborghini once more at the cutting-edge of automotive engineering. The layout helps to keep the car's wheelbase contained and supports effective weight distribution for the best driving dynamics.

In the 60-year history of Lamborghini, only two other V12 cars have been equipped with a transverse rear gearbox: the revolutionary Miura launched in 1966, which also adopted a mid-rear



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transverse engine layout; and the Essenza SCV12, a track-focused hypercar with a longitudinal engine and load-bearing transverse gearbox.

The internal structure of the new gearbox has two distinct shafts as opposed to the usual three. One manages the even-numbered gears, the other manages the odd numbers. Both engage the same rotor. This layout helps to keep down the overall weight while also saving space.

The development of an eight-speed Double Clutch Transmission (DCT) comes from the desire to create a unit that provides everything needed for sporty driving such as fast gear shifts, while the inclusion of an eighth ratio helps optimize fuel consumption and drivability while cruising.

A particular feature is the 'continuous downshifting', which drops down multiple gears under braking simply by holding down the left paddle, giving the driver the feeling of total control.

Leaving aside the electrical components, the new DCT gearbox is lighter and faster in terms of shifting speed compared to the seven-speed double clutch unit that is used in the Huracán range. The transverse layout has also allowed for a more spacious cabin interior, creating more room behind the driver and passenger to improve comfort.

The double-clutch gearbox is extremely compact; just 560mm long, 750mm wide and 580mm high. Total weight is just 193 kg, which includes a new component fundamental to the car's hybrid architecture: the rear electric motor, with maximum power of 110kW and peak torque of 150Nm.

Located above the gearbox, this electric motor doubles as the starter motor and generator, as well as supplying energy to the front electric motors via the battery in the transmission tunnel. In full electric mode it can also provide power to the rear wheels that, in addition to the e-motors driving the front wheels, allows electric four-wheel drive. How the system functions depends on which driving mode is engaged, thanks to an uncoupling mechanism with a dedicated synchronizer allowing the connection to the double-clutch gearbox. When it is providing additional power to the V12 internal combustion engine, the electric motor is in P3 position, separated from the gearbox, while it moves into the P2 position to recharge the battery at low speeds and when parked, also serving as a starter motor.

In the P3 position, the Revuelto can become an electric four-wheel drive car, depending on the drive mode selected, continuing Lamborghini's four-wheel drive tradition even in electric mode.

Reverse gear is provided by the two front electric motors, although if extra momentum is needed the rear electric motor can also kick in, which activates the rear axle and wheels. As a result, the Revuelto can drive all four wheels in electric mode even when reversing in low grip conditions.



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Absolute driving experience

Revuelto has been designed and developed to deliver absolute excitement and control in all situations and in all grip conditions, providing the driver with a level of confidence and connection with the car never experienced before.

The innovations that place the Revuelto at the apex of its category include the architecture and balance of the car; the cutting-edge approach to the chassis and the aerodynamic design; and the new hybrid powertrain that makes it possible to maximize the electric motor support and introduce new driving modes, including electric 4WD, for a total of 13 different driving experiences.

The car features an unprecedented layout: a 6.5-liter naturally aspirated V12 mid-engine, three electric motors, two of which are located on the front e-axle and one integrated into the new 8-speed dual-clutch transmission, arranged for the first time behind the combustion engine and transversely to the V12. The tunnel, a space traditionally reserved for the gearbox since the era of the Countach, is now the location of a new lithium-ion battery with high specific power that drives the electric motors.

The new architecture allows for optimal weight distribution (44% at the front and 56% at the rear), bringing them closer to the center of gravity and optimizing the length of the wheelbase, resulting in a perfect balance that makes the Revuelto extremely agile and effective both on the road and in the curves of a circuit. This capability is also enhanced by the increased stiffness of the anti-roll bars (+11% at the front and +50% at the rear), and by the reduced steering ratio (-10% compared to the Aventador Ultimae): an approach already successfully tested on the Huracán STO³. The Revuelto's capabilities are complemented by the four-wheel steering system, which contributes significantly to the sensation of a car that is agile, responsive and compact but at the same time stable and precise, and by the specially developed Bridgestone Potenza Sport tires featuring a more generous front footprint (+4% compared to the Aventador Ultimae).

Thanks to the e-axle, with the Revuelto Lamborghini introduces electric torque vectoring for the first time in its history and inaugurates the Lamborghini Dinamica Veicolo 2.0 system. Electric torque vectoring increases the car's agility in narrow cornering as well as its stability in high-speed cornering, distributing torque optimally to each wheel and working in synergy with the four-wheel steering system. In addition, unlike conventional systems, the new torque vectoring intervenes on the brakes only when strictly necessary, to maximize efficiency and ensure a more natural driving style as well as an even higher level of performance. When braking, the e-axle and rear electric motor contribute to deceleration, reducing stress on the brakes while recharging the battery.

The chassis also makes a substantial contribution to the vehicle dynamics. The Revuelto is the first Lamborghini to be equipped with the new aviation-inspired monofuselage, an ultra-lightweight integral carbon fiber structure (weighing 10% less than the Aventador chassis) that combines high performance in energy absorption with increased torsional stiffness (+25% compared to the

³ Fuel consumption and emission values of Huracán STO; Fuel consumption combined: 13.9 l/100km (WLTP); CO₂-emissions combined: 331 g/km (WLTP)



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Aventador), making the Revuelto exceptionally stable and contributing to the car's overall feeling of compactness and responsiveness.

Active aerodynamics play an essential role, achieving new levels of efficiency and downforce: +61% and +66%, respectively, in high-load situations compared to the Aventador Ultimae, especially thanks to the front splitter and roof design that channels air flow to the high-efficiency rear wing. The aerodynamics work in synergy with the semi-active wishbone suspension, controlled by the Lamborghini Vertical Control system designed specifically for the Revuelto, which electronically manages vertical force exchanges such as sudden load transfers during track driving, adapting the suspension and rear wing behavior in real time.

To respond to the highest performance situations, the braking system and brake cooling system have also been redesigned. The car features latest generation CCB Plus (Carbon Ceramic Brakes Plus). The front calipers with ten pistons instead of six, are combined with 410x38mm discs (in place of the previous 400x38mm of Aventador Ultimae); at the rear are 4-piston calipers and 390x32mm discs (in place of the previous 380x38mm). Discs are covered by a friction layer for a better performance, thermal management and acoustic comfort when braking.

Aerodynamics contribute to the system's efficiency, as the pair of front suspension strips and the grille inside the wheel arches are designed to improve not only the cooling of the front brakes - the deflector draws air from the front diffuser and channels it to the brake - but they are shaped to reduce resistance inside the wheel well, limiting any compression phenomena, while increasing the load at the front. In addition, the two NACA ducts located in front of the rear wheels collect flow from the underbody and direct it to the rear brake cooling duct.

Debuting along with the hybrid system are three new dedicated driving modes: Recharge, Hybrid and Performance, to be combined with the Città (City), Strada, Sport and Corsa modes, selectable via the two rotors located on the redesigned steering wheel, for a total of 13 dynamic settings that highlight the Revuelto's different personalities and potential depending on the situation and the type of road, or track, on which it's driven.

Città, for example, is the driving mode designed for everyday driving in urban centers, also at zero emissions; if the lithium-ion battery that powers the electric motors needs to be recharged and there are no charging stations available, the V12 intervenes to fully recharge it (Recharge mode) in just a few minutes. This makes it possible, for example, to access historic city centers with emission restrictions in electric mode. The suspension system, traction control and gearbox deliver maximum comfort, just as reduced aerodynamic drag makes Città the most fuel-efficient mode with maximum power limited to 180 CV.

Strada mode is perfectly suited to dynamic everyday driving and long trips, combining elevated comfort with elevated sportiness, expressing up to 886 CV of power. The V12 is always active, also ensuring a constant state of battery recharging that is optimized and pushed to the maximum in Recharge mode. The front e-axle supports torque vectoring and the active aerodynamics work to provide maximum stability at high speeds, for example on the highway.



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Selecting Sport mode changes the Revuelto's personality, and the car's behavior is set to offer an exciting driving experience with a fun-to-drive and responsive orientation in each of the three combinable modes: Recharge, Hybrid and Performance. The combustion engine, aided by the hybrid system, is active in all three situations, delivering a maximum of 907 CV of power with the sound of the V12 expressed in its most compelling tones. The gearbox reacts with maximum responsiveness, while the suspension and aerodynamics enhance the car's agility and driving pleasure in cornering.

The pinnacle of dynamism and power output, in terms of both performance and sound, is reached in Corsa, the driving mode designed to highlight the Revuelto's dynamic capabilities on the track. In Performance mode, the powertrain expresses the peak of its potential by delivering 1015 CV, and the control of the hybrid system is calibrated to get the most out of the e-axle in terms of both torque vectoring and all-wheel drive, for an ultra-sporty yet accessible drive. In Corsa Recharge mode, it's possible to prioritize the battery, maximizing its recharge. For expert drivers, it's also possible to disable the ESC to experience maximum available power without active controls, and feel the thrill of a standing start at full power thanks to the "launch control" function, which can be activated by holding down the button located in the center of the left rotor.

Tyres

Lamborghini's tyre partner for Revuelto is Bridgestone, which developed bespoke Potenza Sport tyres to enhance the new car's sporty and high-speed capabilities.

The premium high-performance Potenza Sport tyres are available as mixed fitment with 265/35 ZRF20 on the front axle and 345/30 ZRF21 on the rear axle, as well as with 265/30 ZRF21 on the front and 355/25 ZRF22 on the rear, both featuring run-flat technology. This technology supports drivers to continue driving safely even after a puncture; for at least 80km at 80kph with 0-bar pressure for drivers' additional peace of mind.

A performance combination has also been designed, which features 265/35 ZR20 on the front axle and on the rear 345/30 ZR21 Potenza Sport (tubeless version). Both run-flat and tubeless solutions deliver outstanding high-speed performance, excellent steering precision and response, and exceptional grip on dry and wet surfaces.

To answer all the needs of the Revuelto's drivers, custom-designed Bridgestone Blizzak LM005 tyres are an option for winter use, delivering outstanding grip on snow, along with responsive steering and precision on dry and wet surfaces.

The Bridgestone tyres were designed using Bridgestone's ground-breaking Virtual Tyre Development technology, reducing raw materials and emissions during development.



Media Information

HMI, Infotainment, Connectivity and ADAS

The Revuelto offers a completely new Human Machine Interface (HMI) system consisting of three displays: a 12.3' instrument cluster, 8.4' central display, and in addition a 9.1' display. The system has a fresh look and feel, with 3D graphics, animations, widgets and styling. The three displays are managed by one technological 'brain' within a unified design, ensuring both a consistent user interface in terms of colors and graphics, as well as coherent interaction across all displays.

The new Revuelto infotainment system offers new functions that allow personalization and customization to create an authentic, immersive Lamborghini experience. In particular, using a two-finger swipe, owner can move infotainment content either to the instrument cluster or to the passenger display. Using a similar gesture, the owner can memorize favorite features so they are just a touch away.

The new steering wheel design is inspired by the interaction with the steering wheel of a Squadra Corse race car, providing the feeling of a pilot. The added controls allow all vehicle dynamics and multimedia commands to be comfortably within short reach. The Revuelto allows the passenger to enjoy the sensations of a co-pilot, thanks to the dynamic driving information available on the dedicated passenger display.

The navigation system is entirely redesigned and developed, using maps downloaded in real-time to ensure they are always updated for the areas required. Route calculation and the search mechanism are now significantly faster using online servers. Navigation also incorporates real-time traffic information, weather, and other integrated information, such as an online bank of continuously updated points of interest including parking spaces, petrol stations and charging point availability. In addition to locations, other information such as opening hours, prices and usage details are displayed where available.

Amazon Alexa allows access to vehicle control functions such as climate, navigation and media via voice commands. These come in addition to standard Alexa functions relating to entertainment and the control of smart home devices. Alexa for Lamborghini Revuelto also integrates the What3Words functionality which, in conjunction with the embedded navigation system, allows driving to any place in the world, even if it does not have a specific address.

Lamborghini Revuelto features a renovated entertainment system, with an original new design. The new online radio system has thousands of stations available, with a search function based on popularity, genre, and country. SiriusXM 360L (for the US market) is a significant upgrade compared to previous SiriusXM, and now offers significantly more connected content including shows, sports, podcasts, Pandora and Xtra.

The Lamborghini Revuelto connected infotainment system can evolve over time. With the integrated Over-the-Air software update system, the vehicle will be offered updates to provide further content. The improved system supports the functionality update of not only the infotainment display but also the instrument panel and passenger display.



Media Information

Lamborghini Revuelto is connected to a growing number of extra applications, that the owner can select from to customize and personalize their vehicle experience. With the safety of customers always paramount, Lamborghini Revuelto integrates both emergency call and roadside assistance. The system proactively reacts in the case of a breakdown to allow the customer to receive help. The Lamborghini Connect vehicle tracking system is able to detect unauthorized use of the car, and not only notify the owner, but also communicate with a 24-hour security operation center that will assist customers with vehicle recovery. Lamborghini Revuelto has worldwide support incorporating more than 30 languages to ensure a highly accurate localization experience.

The interaction with the Lamborghini Revuelto continues even after the engine is switched off. Using the Lamborghini Unica mobile application, the owner can constantly monitor the car's status including the fuel level, battery charge, electric range and its exact position when parked. The Unica app also allows a series of remote operations, such as locking and unlocking doors, sounding the horn or activating the car's lights, some functions available also with Apple Watch. The owner is in control of his car even when driven by another. Maximum speed parameters can be set, as well as hourly and usage limits via geolocation: if the car exceeds a set speed, exceeds the limits of a set area, or is used beyond a certain time, the owner is warned via the app.

The Lamborghini Revuelto provides maximum security for its customers. Data managed by the vehicle are protected by applying cybersecurity standards and data protection rules. The customer can always control whether and which data is processed as set forth by the applicable law since the car has been designed in application of privacy by design approach.

Revuelto sees Lamborghini implementing a complete ADAS (Advanced Driver Assistance System) for the first time, which includes advanced functions to improve safety and daily driving thanks to a sophisticated system of cameras, radar and sensors. The package includes Active Lane Departure Warning (ALDW), which monitors lane markings and corrects steering if the driver inadvertently crosses the lane line. In addition, Lane Change Warning (LCW) monitors blind spots and warns the driver of any danger before changing lanes. Adaptive Cruise Control (ACC) regulates the car's speed and its distance from the vehicle in front, accelerating or braking autonomously.

To make maneuvering easier and safer, Revuelto is equipped with Rear Cross Traffic Alert (RCTA). When reversing, the device warns the driver if there are obstacles crossing behind and brakes in the event of an imminent collision. In addition, the camera system allows the rear view and top view functions to display on the dashboard: not only can the driver see the rear view but a virtual overview of the car seen from above.

The headlamps provide Auto Adaptive low beam with cornering function to improve visibility in all driving conditions and during maneuvers. The high beam is equipped with a no-glare matrix function (depending on market) which automatically controls independent sectors allowing a more precise and comfortable driving experience: furthermore, they also offer an additional boost function to reach a light depth of around 400m.



Media Information

Technical Data

ENGINE

Internal Combustion Engine	V12 NA 6,5 l
Displacement	6498,5 cm ³ (396,6 cu in)
Bore/stroke	Ø 95 mm x 76,4 mm (3,74 x 3,01 in)
Compression ratio	1 : 12.6
Max power @ rpm (ICE)	825 CV @ 9250 rpm
Max power (combined ICE+EE)	1015 CV
Max torque @ rpm (ICE)	725 Nm @ 6750 rpm
Emission Class	EU6; LEV III; CN6b
Emission Control System	4 pre-cats close to engine, 4 lambda sonds
Cooling System	Liquid cooled - dedicated circuit for HV components
Engine Management System	PFI - Bosch
Lubrication	Dry sump

TRANSMISSION

Transmission type	AMT
Gearbox	8 gears
Clutch	Dual clutch

HYBRID SYSTEM

Battery	Lithium-ion high specific power battery with pouch cells
Generator	Rear P2-P3 eMotor (110kW @10000rpm)
Electric engines	Front e-axle (220kW @3500rpm)

PERFORMANCE

Top speed	>350 km/h
Acceleration 0-100 km/h	2.5 s



Media Information

BODY AND CHASSIS

Frame	Multi-technology carbon fiber monocoque, front structure in Forged Composites
Body	Carbon fiber body, aluminium doors, thermoplastic front and rear bumpers
Aerodynamics	Active rear wing featuring 3 positions according to the different driving modes and driving dynamics

SUSPENSION

Suspension	Front and rear double wishbone with LMR dampers - Lamborghini MagneRide
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BRAKING SYSTEM

Brakes	CCB Plus (Carbon Ceramic Brakes Plus) brakes with fixed monoblock calipers in aluminum with 10 pistons (front) and 4 pistons (rear)
Front brakes	410x38mm discs
Rear brakes	390x32mm discs

SAFETY

Airbag	Driver, passenger, side airbags. Knee airbags only for specific markets
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WHEELS

Electronic Stability Control (ESC)	ESC integrating ABS and TCS with different characteristics according to the driving mode selected
Steering	EPS - Electric Power Steering
Tyres - front	265/35 ZR20 - Potenza Sport Runflat (265/30 ZR21 - Runflat optional)
Tyres - rear	345/30 ZR21 - Potenza Sport Runflat (355/25 ZR22 - Runflat optional)



Media Information

Front rims	20 x 9,5j (21 x 9,5j optional)
Rear rims	21 x 12j (22 x 12,5j optional)

DIMENSION

Wheelbase	2779 mm
Overall length	4947 mm
Overall width (excluding mirrors)	2033 mm
Overall width (including mirrors)	2266 mm
Overall height	1160 mm
Front track	1720 mm
Rear track	1701 mm
Dry weight	1772 kg
Weight-to-power ratio	1,75 kg/CV
Weight distribution (front-rear)	% 44/56

CONSUMPTION

This vehicle is still not for sale and therefore not subject to Directive 1999/94/EC. Fuel consumption and emissions data are still undergoing type testing.

Photos and videos: media.lamborghini.com

Information on Automobili Lamborghini: www.lamborghini.com



Automobili Lamborghini S.p.A.

Headquarters

Director of Communication
Tim Bravo
T +39 051 9597611
tim.bravo@lamborghini.com

Polo Storico & Heritage

Media Events & Brand Extension Communication
Rita Passerini
T +39 051 9597611
rita.passerini@lamborghini.com

Corporate Publishing

Product & Motorsport Communication
Francesco Colla
T +39 051 2156850
extern.francesco.colla@lamborghini.com



Media Information

Massimo Delbo
T +39 3331619942
massimo@delbo.us

Barbara Grillini
T +39 051 9597459
barbara.grillini@lamborghini.com

Regional Offices

Europe, Middle East & Africa
Liliya Dovbenchuk
T +39 349 756 2077
liliya.dovbenchuk@lamborghini.com

Asia Pacific
Tricia Tan
T +65 9073 3031
tricia.tan@lamborghini.com

South-East Asia & Pacific
Alethea Tan
T +65 8711 1329
alethea.tan@lamborghini.com

United Kingdom
Juliet Jarvis
T +44 (0) 7733 224774
juliet@jjc.uk.com

Chinese Mainland, Hong Kong & Macau
Ma Weichao (Ms.) 马唯超
T +86 138 1009 5399
weichao.ma@lamborghini.com

India
Meghana Dave
T +91 96194 07009
extern.meghana.dave@lamborghini.com

North & South America
Jory Wood Syed
T +1 332 220 5217
jory.syed@lamborghini.us

Japan
Yasuki Yamagishi
T +81 801 1343 7756
yasuki.yamagishi@lamborghini.com