

PRESS KIT



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DYNAMIC PRESS LAUNCH OF THE NEW ALL-ELECTRIC LEXUS RZ 450e

Welcome to Aix-en-Provence and the Château La Coste for the European dynamic launch of the RZ 450e crossover, a landmark new model for our brand – the first to be wholly designed from the start as a battery electric vehicle.

The award-winning Château La Coste provides an ideal location for our event: contemporary and bold in its design yet in harmony with the natural landscape. It is home to an exceptional art collection and contemporary design works by some of the world's most famous creatives, including Renzo Piano, Frank Gehry and Damian Hirst. Set in a landscape that once inspired Paul Cezanne, it also has its own organic vineyards and winery.

The venue is an apt setting for a new Lexus that embraces advanced technologies and presents a strikingly modern design. We have prepared driving routes to help you explore the new RZ 450e's capabilities and the special qualities it brings in terms of performance, handling and the qualities of the Lexus Driving Signature: Comfort, Confidence and Control.

We aim to provide everything you need for a successful visit, but please do not hesitate to contact a member of the Lexus team if you have any questions or special requirements.

THE NEW ALL-ELECTRIC LEXUS RZ 450e

- Lexus' all-new battery electric SUV constructed on a dedicated BEV platform
- Introduction of advanced technologies that enhance the Lexus Driving Signature handling and performance
- Lexus-first e-Axles with DIRECT4 all-wheel drive torque control
- Lexus Next Chapter design realises the opportunities of a BEV, including a new Lexus spindle body
- Long-life 71.4 kWh lithium-ion battery expected to retain at least 90% of its capacity after 10 years of driving
- Efficient system achieving energy consumption between 16.8 kWh and 18.7 kWh per 100 km in the combined WLTP cycle
- Evolution of the Lexus Tazuna concept for a fully focused driver's cockpit
- New technologies enhance life on board, including heat reflecting/insulating panoramic roof, radiant heaters and new Mark Levinson Premium Surround Sound system
- Full suite of safety and driver assistance features, including Lexus' exclusive Safe Exit Assist preventing door opening into the path of vehicles and cyclists approaching from the rear
- Lexus to introduce breakthrough One Motion Grip steer-by-wire system with steering yoke on RZ by 2025

INTRODUCTION

The RZ 450e is Lexus' first model to be developed as a BEV from the outset. The intention is not simply to deliver the benefits of zero emission, all-electric driving, but to capture the potential of BEVs to reinvent the driving experience. To help achieve this, the car has undergone extensive track testing and refinement at the Shimoyama Centre in Japan, soon to be Lexus' new global headquarters.

It is not a vehicle that simply adopts battery electric power in place of a conventional engine; it goes much further to realise the exciting potential of new technologies that enhance performance and driving pleasure, true to the Lexus Electrified philosophy.

Chief Engineer Takashi Watanabe said: "The RZ has been developed with the aim of creating a uniquely Lexus BEV that feels secure to ride in, is pleasing to the touch and is exhilarating to drive.

"Our vision is to use electrification technology as a means to enhance fundamental vehicle performance, so that we can continue to pursue driving pleasure for all future generations."

First and foremost, the RZ is a Lexus, retaining all the fine qualities of performance and craftsmanship associated with the brand. The company has leveraged its wealth of vehicle electrification experience to deliver the benefits of a BEV with the essential refinement and driving experience that are unique to its brand.

The RZ also marks the first application of Lexus' new e-Axles, compact motor units used front and rear that work in conjunction with new DIRECT4 all-wheel electronic drive torque control. High-quality handling and responsiveness are secured with a dedicated new electric vehicle platform, which brings excellent body rigidity, a low centre of gravity and a long wheelbase. A powerful lithium-ion battery unit is fully integrated in the chassis, beneath the cabin floor, its quality finely controlled to ensure performance is maintained long-term.

The platform and battery electric drivetrain also open up new freedoms in design. The exterior reinterprets the signature Lexus spindle shape in the vehicle's body, while the interior is a light and open space that is both simple and luxurious, expressing Lexus Omotenashi hospitality and Takumi craftsmanship.

With its zero-emission performance, the RZ will help Lexus in its progress towards carbon neutrality and a sustainable mobility society. Here, the focus is not just on the car's performance on the road; it embraces its entire lifecycle, from parts procurement, manufacturing and ownership through to eventual disposal. Already new methods have been adopted at Lexus' Motomachi factory, the RZ production centre, in the processes that produce the highest emissions.

Looking beyond its market introduction, the RZ is set to offer an enhanced driving experience with an optional by-wire steering system. Lexus' new One Motion Grip, currently under development, will provide easier and even more precise steering without sacrificing important feedback from the road surface.

EXTERIOR DESIGN

- 'Seamless e-Motion' design expresses the performance, driving pleasure and refinement of an all-electric vehicle
- Lexus signature spindle grille shape deeply integrated into the complete frontal design
- Exterior dimensions position the RZ between the Lexus NX and RX models
- Aerodynamic design details help optimise the RZ's energy efficiency

Building a car on an all-new battery electric platform opened up new design opportunities and the freedom to create a look that sets the RZ 450e apart from other vehicles. At the same time, its styling is an evolution of Lexus "Next Chapter" design, embracing themes that can be seen in other new Lexus models, such as the RX.

The basic theme was seamless, emotional design inspired by the experience of driving a BEV. The RZ is instantly recognisable as both a Lexus and a BEV, with proportions that reflect its dynamic character.

The new, dedicated BEV platform and electric powertrain give the RZ a lower centre of gravity and allow for a lower nose profile. This is the starting point for a silhouette that flows through a smooth cabin section to a rearward peak in the roofline, giving more head room (67 mm) for rear seat passengers. A sleek horizontal door axis accentuates the long wheelbase and the large diameter 18 and 20-inch wheels are pushed out to the corners, expressing a wide stance and the low centre of gravity.

The RZ measures 4,805 mm long, with a 2,850 mm wheelbase and short overhangs – 995 mm front, 960 mm rear. Overall height is 1,635 mm and the width is 1,895 mm (excluding door mirrors). In terms of external dimensions and footprint, the model sits between Lexus' mid-size NX and large RX crossover models.

In side view, the design creates volume around the front wheels, illustrating the power in the front axle, while the rear wheels are pushed back to give a "torqueful" look. The doors have contrasting forms and striking surface treatments, creating a seamless visual sweep from front to rear.

As with the recently launched all-new RX, the design sees the familiar spindle grille shape more deeply integrated into the complete frontal design, generating a stronger three-dimensional effect. As the electric powertrain requires less cooling airflow than a combustion engine, the familiar grille has been dispensed with. The area is instead finished in the car's body colour, while the position of the slim headlamps and the blacking out of the bumper corners add emphasis to the central spindle shape, establishing a distinctive Lexus BEV look.

The new-design headlight units are unified with the spindle body. Ultra-slim, they accentuate the Lexus L-motif of the daytime running lights, while the principal headlight lamps and turn indicators are made less prominent.

The rear presents a cool, high-tech look with a split roof spoiler that extends the design's rearward flow and contributes to the car's stable performance.

The elongated LED light bar across the width of the car has become a hallmark feature of Lexus design. Here it wraps around the muscular rear quarters with a geometric pattern and has an exceptionally thin centre section that throws the new LEXUS script on the back door into sharp relief. The rear track is widened to 1,627 mm (+15 mm vs front track), further emphasising the car's planted look.

Aerodynamic features

Aerodynamic measures were a key focus in achieving a low drag coefficient (0.263 Cd) that would contribute to the car's energy efficiency.

The cabin shape has been optimised to gain smooth airflow on the outside and comfort inside. The belt moulding sits flush with the bodywork to help regulate the flow of air and keep the car stable. The rear spoiler design contributes to handling and stability in straight-line driving and cross-winds without producing drag. The back door is also shaped to adjust the angle of airflow from the roof, reducing drag and contributing to the driver's sense of the car being in firm contact with the road.

A fully covered under floor is another drag-reducing factor, the front section with a dimpled surface that helps maintain stability at high speeds and rear featuring fins that direct airflow rearwards from the wheels. The small front grille aperture features shutters that close automatically when cooling air flow into the motor compartment isn't required.

New colour options

The RZ is launched with a choice of exterior finishes that includes new Aether metallic, inspired by blue skies, and striking Sonic Copper. It's also available in Sonic Chrome, Sonic Quartz, Sonic Iridium and Graphite Black. The sonic shades use an advanced paint technology in which pigment particles and metal flakes are highly compressed into micro-thin layers, contributing to deeper, more lustrous finish and stronger light and shade contrasts.

The RZ is available in a new bi-tone design which features a contrast black finish that extends from the front of the car, over the bonnet, pillars, and roof.

Wheels and tyres

The RZ is offered with two wheel sizes – 18 and 20-inch. The 18-inch wheels have a standard dark grey metallic finish but are also available as an accessory option in all-black. The 20-inch wheels are high gloss or contrast black/machined, according to grade specification. The 18-inch wheels are aerodynamically styled with aero-ventilating flaps on the face of each spoke.

The 20-inch rims – standard on high grade and optional elsewhere in the range – are expected to be the choice of about 80% of RZ customers in Europe.

Driving stability is supported by using different size tyres at the front and rear: 235/60R18 front and 255/55R18 rear for 18-inch wheels and 235/50R20 front and 255/45R20 rear for 20-inch wheels.

DRIVING PERFORMANCE

- RZ performance delivers the Lexus Driving Signature, characterized by Confidence, Control and Comfort
- Lexus-first combination of e-Axles and DIRECT4 all-wheel drive torque control
- Highly rigid body founded on new e-TNGA electric vehicle platform supports precise, prompt chassis response
- One Motion Grip steer-by-wire system to be introduced on RZ in 2025

The Lexus Driving Signature

Securing the Lexus Driving Signature was the primary goal in the development of the RZ's dynamic performance and strengthening the car's core characteristics – the “three Cs” of confidence, control and comfort in all driving situations. Going further, the benefits of BEV-specific qualities, such as fast response and high precision were maximised. To achieve this, Lexus has been able to call its years of pioneering experience in electrified vehicle technologies, going back to the original RX 400h hybrid electric of 2004.

Lexus has ensured the vehicle always responds as the driver intends, making driving both comfortable and exhilarating, even for people who are not used to driving a BEV. The result is the addition of a BEV dimension to the Lexus Driving Signature – the refined, linear and reassuring responsiveness and rewarding feeling of control and connection with the vehicle that define the driving character of new Lexus vehicles.

This is true to the performance concept of “The Natural” adopted by chief engineer Takashi Watanabe and his team during the car's development. They focused on driving quality with a natural feel, the car moving faithfully to the driver's inputs through the optional One Motion Grip steer-by-wire system and precise DIRECT4 all-wheel drive control. Special attention was paid to giving the driver an excellent sightline and feedback and ensuring precise vehicle posture control, at all times.

Body structure

The RZ's BEV-specific platform provides an inherently strong foundation on which to construct a vehicle with excellent body rigidity. Advanced techniques have been applied, including laser peening and laser screw welding for the rocker panels and joint reinforcement to suppress or prevent distortion. Laser welding allows a thicker rocker panel to be used, eliminating the cut-away sections required for spot-welding. Elsewhere, extensive use is made of structural adhesive (1.79 m in total), laser screw welding and short-pitch welding (at an unprecedented degree) to increase the jointing area and gain higher rigidity.

High-rigidity foam is used in each corner of the back door aperture to strengthen an area that is particularly susceptible to deformation. This also reduces noise and vibration. The rear of the car has a double-annular frame, which helps the car settle after cornering or changing lanes.

At the front, braces and thicker support pillars for the radiator suppress lateral deformation. Rigidity is further enhanced by suspension tower braces and front and rear performance dampers.

The driver witnesses the benefits of the car's rigid structure in straight-line stability and precise handling and steering response, contributing to the control and confidence elements of the Lexus Driving Signature.

Weight-saving construction

Reinforcing the car's structure increases weight, which in turn has an impact on power consumption and dynamic performance. To counter this, Lexus has used materials and methods to reduce the weight of the frame, helping maintain the driving range without compromising body rigidity. Priority was given to reducing the mass of parts located higher in the vehicle, to preserve a low centre of gravity and suppress body roll when cornering.

For example, lightweight 1470 MPa steel is used for the centre roof reinforcement and a patchwork material for strengthening the front and centre pillar. The bonnet is made of aluminium and the door and wheel arch mouldings and back door garnish are light, moulded resin which uses less material but remains rigid and light.

Noise and vibration control

Although the battery electric drivetrain produces less noise than one with an internal combustion engine, its quiet performance makes noise from the road and the car's surroundings more noticeable. The RZ's engineers and designers made it a priority to ensure the cabin environment was appropriately calm and quiet, applying a three-part strategy: controlling the noise; preventing it from entering the cabin; and paying particular attention to noise experienced in the rear seats.

The measures to reduce noise and vibration include an all-round seal for the bonnet, which prevents air flow escaping through gaps, reducing disturbance and sound. Inside the RZ, the thickness of the dashboard inner silence has been gauged to reduce the gap between peripheral parts and achieve better noise insulation and absorption.

The large roof area is a primary source of noise when driving. To address this, a vibration-damping sheet has been added that makes the roof structure more rigid, with a significant impact on NV levels. Other measures include foam coating at the base of the front and centre pillars, acoustic glass in the front and rear doors and the placement of liners and insulation material in the cowl, dashboard, bonnet, wings and wheel arches.

The RZ has a new version of active sound control which uses surround sound to introduce noise-cancelling frequencies into the cabin, via the audio speakers.

Efficient and compact electric e-Axle

The RZ is the first production model to feature Lexus' new e-Axle, designed for use in BEVs. This is a compact, modular package which consists of a motor, gearing and a PCU (Power Control Unit), located between the driven wheels. The RZ uses both front and rear e-Axles, which work in conjunction with the DIRECT4 all-wheel

drive control system (details below) to adjust the vehicle’s posture, traction and power distribution, according to the driving conditions. The e-Axles are quiet, efficient and deliver precise power.

The front motor produces 150 kW and the rear 80 kW, together delivering 230 kW maximum output. The RZ achieves excellent energy efficiency, with consumption rated at 16.8 kWh or 18.7 kWh per 100 km in the combined WLTP cycle, depending on wheel size and car specifications.

Their compact dimensions –short front e-Axle and low rear e-Axle - contribute to the car’s packaging, helping gain more room in the cabin and a low load compartment floor, and provide more space to accommodate the EV battery low down beneath the vehicle floor.

DIRECT4 all-wheel drive control

DIRECT4, an exclusive Lexus technology, is an intelligent system that constantly and seamlessly balances the drive torque between the front and rear axles. The result is stress-free performance and stable handling, with intuitive operation strengthening the sense of connection between driver and machine.

The system uses ECU (Engine Control Unit) sensors to collect, evaluate and react to a range of factors, including vehicle speed, steering angle and G forces. From these inputs, it calculates and immediately applies the appropriate drive torque to each e-Axle to maximise grip and traction suitable for the road surface. The front/rear torque bias can be adjusted in milliseconds – faster than any mechanical system.

Its benefits are experienced in different driving scenarios: -

- Starting off – drive force is securely delivered to all four wheels
- Straight line driving – vehicle remains steady at all times
- Entering a bend – change of direction is smooth
- Steering through a bend – steering provides good feedback
- Accelerating out of a bend – easy for the driver to trace a faithful line
- Exiting a bend – confident, direct acceleration

The balance of front/rear drive torque is adjusted to achieve ideal performance. Details of the distribution in different driving situations are shown in the table below.

Driving situation	Normal torque distribution	Potential torque distribution	Aim
Starting off	60:40	20:80	Drive torque transferred to the rear to enhance traction and stability.
Straight-line driving	70:30	40:60	Torque distributed to optimise straight-line stability and improve efficiency.
Turning	75:25	20:80	More torque directed to the rear wheels to achieve better traction in low-grip conditions and confident line-tracing and good acceleration when exiting a bend.

BATTERY ELECTRIC POWERTRAIN

In developing a new battery electric powertrain, Lexus sought to strike a practical balance between performance and efficiency. To achieve its aims, it was able to apply multiple technology advantages from its experience of developing successful hybrid electric vehicles over the past two decades. Key to this strategy was adoption of an optimally sized battery that delivers the best balance between driving range, efficiency, cost, and size/packaging.

Battery electric powertrain

Lexus has designed a compact, high-voltage system circuit in which a transaxle and inverter are contained within the e-Axle units. An Energy Storage Unit (ESU) integrates the charging, power supply and power distribution functions. Noise filters have been added to the circuit to enhance electromagnetic compatibility; this helps avoid interference with the vehicle's audio system.

The permanent magnet motors have a high power density and 17,000 rpm rotation speed. The inverter achieves high volumetric efficiency while allowing for a high current output. Its compact size – helped by a frame-style construction – allows it to be integrated in the transaxle. The motors are located on a symmetrical three-point aluminium mounting system giving balanced support that contributes to comfort, handling, stability and quiet performance.

Using grille shutters in front the radiator reduces air resistance and gives high cooling performance when required; these automatically close when not required. Ducts in the front grille direct air flow to the radiator, even when the shutters are closed. Cooling performance is provided a single, large-diameter fan.

Lithium-ion battery

The battery stack is positioned entirely beneath the cabin floor and forms a structural part of the vehicle's frame. This contributes to the vehicle's rigidity and its low centre of gravity, while the unit's slim profile also means there is no intrusion in cabin or load compartment space. The battery is contained in a sealed, reinforced structure to protect it in the event of contact with the road surface or a collision.

The unit comprises 96 cells with a gross capacity of 71.4 kWh. Quality, durability and reliability are reflected in Lexus guaranteeing that the battery will retain at least 70% of its capacity after 10 years. Lexus is confident however, given its long experience in battery technologies, that actual capacity at the point should be at least 90%.

Most RZ variants – running on 20-inch wheels – achieve a range of around 395 km in the WLTP combined cycle test. Those which use 18-inch wheels see the range extended by about 40 km. These ranges apply to performance from full charge to complete depletion of the battery.

As it is the case for any Battery Electric Vehicle, real-world range might differ from the reference WLTP range. The real-world distance that the vehicle travels will vary based on individual factors such as driving style and speed, battery state of charge and temperature, use of climate control and type of tyres equipped on the vehicle.

Importantly, for drivers whose priority is to maximise the vehicle range, the RZ can be operated in Range mode (see Drive modes chapter below for details).

Furthermore, the evaluation of the remaining range as shown on the driver's instrument display integrates several factors to ensure customers peace of mind. Besides the remaining charge of the battery, it also considers previous electricity consumption efficiency, actual driving conditions and current air conditioning usage. Also, the display will show the remaining range as 0 km from when the battery's state of charge reaches approximately 8%¹.

Efficient cooling is key to battery performance and durability. A long-life, high-resistance LLC coolant is used for both the lithium-ion battery and the BEV system. This controls the temperature in a highly efficient system that helps maintain stable battery output even under high loads, such as high-speed cruising or repeated rapid charging. The battery cooling and the car's air conditioning system work co-operatively, which enhances power performance, ensures cabin comfort and supports longer battery life. The unit is cooled from the bottom with a uniform flow path size for the refrigerant, giving even better cooling performance. The coolant is contained in separate chamber, so there is no direct contact with the battery in the event of a leak.

When operating in colder temperatures, a battery heater can be activated when charging the vehicle. This uses the heater in the air conditioning system and comes into play automatically when using a DC charger.

Battery charging

The RZ is equipped with a compact and lightweight 11 kW on-board charger. Battery recharging when connected to a three-phase power supply takes around six-and-a-half hours; using a one-phase supply the time is around 10 hours; connected to a DC fast-charging system, an 80% recharge can be accomplished in about 30 minutes².

Using the Lexus Link app, owners can set a charging time in advance to make use of off-peak energy and can programme a repeat charging schedule for convenience.

Acceleration

The RZ delivers a strong, continuous acceleration feel in the high throttle range and speed controllability in the low range. Using a battery electric system allows for a slip suppression function: a motor ECU in the e-Axles monitors wheel speed and detects any slip before the vehicle's traction control operates, initiating drive torque control and reducing initial wheelspin.

When using Sport mode, Dynamic G Control provides a continuous acceleration feel, balancing the smooth and strong increase in speed with controllability.

¹ The buffer below 0 km on the display is included in the WLTP calculation.

² The charging times may vary due to factors such as the charge level and temperature of the battery, the outside air temperature, power supply voltage, and the AC or DC charger specifications.

Four-level deceleration

The driver can choose from four deceleration strengths to gain different degrees of slowing performance, selected using paddle shift controls. Deceleration is stronger when the car is in Sport mode, and on inclines, promoting safe, confident driving.

Acceleration Sound Control

The driver's sense of connection with the car is enhanced by Acceleration Sound Control. This generates sound that reflects the vehicle's state and behaviour, transmitted via the audio speakers. A constant tone is modulated to reflect the car's drive mode and shift position and the driver's use of the accelerator. The system can be switched off if the driver prefers.

Four selectable drive modes, including exclusive Range mode

The RZ's performance and driving character can be adjusted with selectable drive modes. In Normal mode, a optimal balance of performance and power consumption is provided to suit a wide range of driving situations. In Eco mode, power is preserved by generating a lesser amount of drive torque in response to accelerator inputs and suppressing the air conditioning. In Sport mode there is stronger steering feel and accelerator response is sharpened. Drivers can set their preferred powertrain, chassis and air conditioning modes using a Custom mode, accessed via the multimedia touchscreen.

In order to meet the expectations of customers whose first priority is to maximise the real-world range of RZ, the car is also equipped with an exclusive **Range mode** which maximises the driving range by reducing power consumption, restricting power output and vehicle speed and turning the air conditioning off.

When Range mode is selected, the balance of DIRECT4 front/rear drive torque distribution is also optimised for power efficiency. When driving in the low torque range, only the rear motor is used; the front motor is brought into play as the torque level increases. If any wheelspin is detected, normal AWD operation resumes.

Braking system and Vehicle Braking Posture Control

The RZ uses an AHB-G braking system (Active Hydraulic Booster) which delivers pressure on demand via a high-performance pump motor. Front and rear brakeforce distribution is controlled by independent front and rear pressure regulators, giving comfortable drivability and stable posture under braking.

Vehicle Braking Posture Control varies the balance of front and rear braking according to the driver's use of the brake pedal and vertical movement of the suspension. During initial braking, in low deceleration range, the vehicle is made to pitch so the driver can feel the deceleration effect. As the driver puts more pressure on the brakes, more brakeforce is distributed rearwards so body lift over the rear wheels is suppressed. This provides linear feel with clear initial braking effectiveness and giving the driver a strong sense of the car's secure contact with the road surface.

Suspension

The suspension system has been designed to support exhilarating driving performance and to contribute towards delivery of the Lexus Driving Signature, helping generate a natural dialogue between driver and car.

The fundamental dynamic benefits of the BEV platform – high rigidity, a low centre of gravity and dynamically balanced chassis and low yaw inertia moment – are matched by suspension which contributes to faithful line-tracing, natural and stable vehicle posture and a comfortable ride. Attention has been paid to optimising the shock absorber characteristics to reduce unpleasant vibrations and large, undulating vehicle movements.

The front suspension uses a MacPherson strut-type design. At the rear, the set-up features double wishbones with trailing arms, with geometry precisely calculated to accommodate the highly responsive acceleration of a BEV. The shocks contain new frequency-sensitive pistons which vary the damping force according to frequencies transmitted by the road surface – softer in the high frequency range and harder in the lower.

One Motion Grip steer-by-wire

At the time of launch, the RZ is equipped with a conventional rack-assisted electric power steering system. This features an intermediate shaft that absorbs vibrations to maintain a smooth feel. The three-spoke steering wheel has variations in its cross section to provide a pleasing, snug grip.

Furthermore, the RZ is set to be the first model to use Lexus' new One Motion Grip steer-by-wire system, currently under development and planned for market introduction in 2025 as a new option.

Instead of the conventional mechanical connection between the steering wheel and the front axle, via the steering column, this communicates the driver's steering inputs to the wheels electronically. The result is instant response and more precise steering control.

The driver will also notice less steering wheel sway when travelling over rough roads; stable control and correction in strong crosswinds; and stable straight-line performance on angled surfaces.

Steering feel is important for driver confidence and control. Lexus engineers have ensured the system still provides feel and feedback, maintaining a strong connection between driver and car. There is also fail-safe provision of processors and an emergency power supply that automatically engages should the system lose its primary power supply.

One Motion Grip uses a new-look steering wheel, with a butterfly shape like the controls found in an aircraft cockpit. Its design was refined with input from Lexus' Takumi drivers, who studied every element to ensure driver experienced the optimum grip, feel and feedback.

This design is suitable as the technology requires less steering effort from the driver, with no need for hand-over-hand turns. This makes for smooth lane-changing on the highway, a more comfortable drive on winding roads and easier manoeuvring in tight spaces, with the steering gear ratio automatically adjusting in line with the car's

speed. The steering characteristics also adjust according to the drive mode selected, with a sharper, more weighted feel in Sport mode.

Feedback from the system blocks out unwanted tyre and brake vibrations but communicates an accurate feel of the road surface.

The new-shape steering wheel has no top section, so the driver gains a more open view of the instrument binnacle and road ahead. Lexus' designers took advantage of this to set the meters higher and further away than would be possible with a conventional steering wheel, minimising the driver's need to adjust their sightline. This takes the concept of the Tazuna cockpit to a higher level, concentrating the driver's attention on the road. The yoke design also gives the driver more leg room and makes it easier to get in and out of the car.

LIFE ON BOARD: HUMAN-CENTRED DESIGN AND TECHNOLOGIES

- Driver's cockpit layout follows Lexus' Tazuna concept, giving the driver fast, easy and intuitive control of the vehicle
- Customisable driver's instrument display
- New radiant heaters for front seat passengers
- New heat-shielding panoramic roof, dimmable at the touch of a switch

The RZ's cabin has an open, spacious and airy feel with a driver-focused cockpit developed according to the principles of Lexus' Tazuna concept – design approach successfully applied previously to the all-new NX and RX models. Lexus has introduced a number of human-centred advanced technology features that enhance comfort, convenience and life on board, reinforcing the spirit of Omotenashi hospitality.

Tazuna driver's cockpit

The RZ's cockpit is an evolution of Lexus' Tazuna concept, inspired by the way a rider can intuitively control a horse using just small adjustments of the reins. It brings together the driver's position at the wheel and a precise arrangement of meters, controls and displays to create a space where the driver needs only to make small movements of the hand and eye to operate the vehicles. With the future introduction of One Motion Grip by-wire steering (detailed above), the full benefits of the Tazuna cockpit concept will be even more fully realised.

The layout of the controls and information sources – 14-inch centre multimedia display, meters, multi-information display and head-up display – require minimum hand and eye movement to reach, operate and read, helping keep the driver's attention on the road ahead. The layout and shape of the cockpit also guide the driver's line of vision forwards. With the One Motion Grip steer-by-wire system, the effect is heightened with the new-look steering wheel, opening up the space in front of the driver.

The design and the driver's position at the wheel with a commanding view ahead reinforce the qualities of the Lexus Driving Signature – comfort, confidence and control at all times.

Bright and open cabin environment

The open feel of the interior is enhanced by the instrument panel having a thinner construction and being set low, relative to the front passenger's seating position. Space has also been gained by moving the passenger airbag rearwards and adopting a new air conditioning system with an integrated blower unit, located in the centre of the instrument panel.

The centre console has a slim and elegant upper section, incorporating a storage box with a lid that is hinged to open to the left or right, so is equally easy for the driver or front passenger to use. The unit also features cupholders, USB ports, a 12V power outlet and (where specified) a wireless charging tray. The design provides further storage space beneath the console, big enough to hold a tissue box, a pair of shoes or owner's manual.

Interior colours and trims

Three interior colour combinations are available, each creating a different ambience. Orange upholstery (a shade of blue) is matched with black trim and a Solis White covering for the interior door shoulders and armrests for a bright, clean and advanced look. Hazel seat coverings are combined with black trim in a luxurious and modern effect and the pairing of Greyscale upholstery and black trim provides cool monotone finish.

A new Tsuyasumi ornamentation is available for the console, with a charcoal finish with subtle shiny veining like a natural cinder block. The effect is created through the overlaying of numerous delicate layers, a process using advanced film technology, overseen by Lexus' Takumi craftspeople.

Ambient lighting

The cabin atmosphere is enhanced by an ambient lighting system with a spectrum of 64 colours, grouped in 14 different themes to create the right mood for the journey. The colour and brightness of each lamp can be adjusted using the settings screen in the centre display.

The RZ features a new In-ei illumination effect, which casts a pattern of light and shadow across the door panels, creating different effects as the surrounding light conditions change with the time of day.

Seating

The seats feature Lexus' global architecture frame design and are upholstered with "deep-hung" seams to promote more comfortable support and posture on long journeys. The integrated heaters have been redesigned to operate across the entire seat, with temperature adjusted for the shoulders, back and upper thigh areas.

The rear seatbacks have a two-stage recline function. The outer rear seats are available with heaters with high and low temperature settings.

Sustainable Ultrasuede

Ultrasuede upholstery is available for the new RZ, a sustainable suede-like material for the seats and upper door trims that is partly made from bio- and recycled materials. The other options are Tahara synthetic leather with a cloud-effect finish and a fabric with a woven texture. The fabric is made using a spin-dyed yarn, reducing wastewater from the dyeing process.

Omotenashi welcome display

The driver's instrument display presents a full-screen Omotenashi welcome, personalised to the driver. As the driver unlocks and enters the vehicle, they are welcomed by name (as registered with their smart key) and an animation sequence begins, showing the vehicle in silhouette. When the power button is pressed, animation graphics and sounds are co-ordinated across the meters, head-up display and centre display, guiding the driver's focus forwards.

A welcome lighting sequence illuminates the front door handles and cabin lighting as the driver approaches the car. When exiting, the lights remain for up to seven seconds if the driver remains close to the vehicle.

Customisable meters and multi-information display

The meters in the instrument binnacle can be customised to suit the driver's preference and their appearance automatically changes according to the drive mode selected. They are designed for clear and instant recognition, and on high grade models are presented in high definition.

There is a choice of three centre faces for the meter, which can be chosen via the centre display's customisation screen: power meter and surplus energy gauge; analogue speedometer; and digital speedometer. The Surplus energy indicator gives the driver peace of mind, showing in real time the energy available, in relation to electric motor output and the level of regenerated energy.

The multi-information display content can be selected and adjusted using the touch-tracer switches on the steering wheel on high grade models; on other grades the standard steering wheel tabs and switches can be used.

Head-up display

The head-up display is projected onto the base of the windscreen in the driver's straight-ahead view. Its position, layout and content can all be adjusted to suit personal preference. Three content versions are available: full, standard and minimum.

Switches and controls

While the Tazuna cockpit concept ensures the principal driving-related controls are positioned close at hand for the driver, those which are less important and less frequently used are now accessed using the central touchscreen. Physical buttons have been retained in the centre display for intuitive operation, including the audio on/off and air conditioning controls.

Another example of the easy, intuitive control provided in the Tazuna concept is touch-sensor switches on the steering wheel. First introduced in the all-new Lexus NX, these can be customised to operate the driver's preferred functions, such as drive mode, navigation and audio. When the driver touches the switch, its shape and function are shown on the head-up display, so the driver doesn't have to look down at the wheel to check for the right control. Although they work using electronic signals, they have a satisfying "click" feel to confirm operation.

Rotary shift selector

The RZ's shift-by-wire system is operated using a new rotary shift selector on the centre console. The driver presses the control down and turns the tactile machined outer ring clockwise for drive and anti-clockwise for reverse; pressing the control down puts the vehicle in neutral. There are further switches on the console for "Park" and the electronic parking brake.

Heat-shielding, dimmable panoramic roof

The optional panoramic roof increases the feeling of space and light in the cabin, extending far back so that there is an open view for rear passengers, even when the rear seats are reclined (the roof is wider and 44 mm longer than that featured on the Lexus NX). The glass has a low-e (low-emissive) coating that reflects infra-red radiation and reduces radiant heat on sunny days, while helping keep heat inside the cabin when the weather is cold.

The roof has an electric dimming function, which renders it opaque at the touch of a switch. As a result, there is less need to use the air conditioning system to maintain a comfortable temperature and there is no need for a retracting sunshade, which saves weight – factors that reduce the RZ's energy use and help maintain its driving range. Dispensing with a sunshade also helps provide more head room – as does shaping of the headlining to raise the ceiling height.

New air conditioning system

The RZ uses a new, compact air conditioning unit with an integrated heater and blower. It makes use of an efficient heat pump system which uses heated coolant to warm the cabin in cold weather driving. This reduces the load placed on the vehicle's power supply, helping maximise the driving range. Its compact dimensions and central position beneath the instrument panel free up more leg room for the front seat passenger.

The Lexus Climate Concierge co-ordinates the air conditioning, seat heaters, heated steering wheel and (where fitted) radiant heaters to warm or cool the cabin to the desired temperature quickly and efficiently. Lexus' S-FLOW control detects which seats are occupied and adjusts air conditioning performance accordingly, saving power.

Cabin air quality is maintained using nanoe X™ technology, which emits microscopic water particles containing hydroxy radicals in the air flow. These are effective in inhibiting viruses, bacteria, pollen and other allergens and can act against the spread of mould. They can also counter bad odours and stop moisture evaporation, helping keep occupants' hair and skin moisturised.

The air conditioning can be activated remotely using the Lexus Link smartphone app, so the cabin can be warmed or the screen defrosted ahead of making a journey. The app allows temperatures settings to be registered and for the demister, seat and steering wheel heaters to be switched on.

Radiant heaters

New radiant heaters are positioned at knee-level in front of the driver and front passenger, beneath the steering column and lower instrument panel. Unlike convection heating, they use infrared radiation to heat solid objects directly in front of them. They also use around 8% less energy.

Integrated into the Lexus Climate Concierge, they work in conjunction with the seat heaters and heated steering wheel to speed up warming of the cabin, feeling like a warm blanket around the legs. They operate silently and with no air draught. They have an automatic safeguard should anyone come into contact with them, automatically

reducing the panel temperature to 43°C. As with the panoramic roof, they reduce the load on the air conditioning system and help preserve the car's driving range.

Digital rear-view mirror

A digital rear-view mirror is available³, using a rear camera to give the driver a clear rearward view, unobstructed by any passengers or luggage inside the car. Touch controls on the mirror can be used to position the mirror, to scale the image and change the brightness level. The unit can also be switched to work as a conventional optical mirror when desired.

Load compartment

The space available in the load compartment is not compromised by the vehicle battery and extra nine litres has been gained by mounting the audio system's subwoofer within the back door. With all seats in place, the area offers 522 litres; fold the rear seats down and the maximum volume is 1,451 litres, loaded to the ceiling. With the tonneau cover in place, there is room for two suitcases (110-litre and 97-litre). Beneath the deck board there is a further 58 litres of space in a practically shaped, fully lined area, handy for storing the BEV charging cable.

Easy access is aided by a 740 mm loading height and the availability of a power back door. Changes to the motor make the back door opening and closing sequence quicker and quieter, and the opening angle can be pre-set to suit the location, for example to avoid hitting a low garage roof. According to model specification, a kick-sensor is provided for hands-free operation.

³ Digital mirror is not available when the dimmable panoramic roof is specified.

MULTIMEDIA, INFORMATION AND CONNECTIVITY

- **Faster, more intuitive Lexus Link multimedia with 14-inch touchscreen**
- **Improved voice command control, including “Hey Lexus” on-board assistant**
- **Bespoke 13-speaker Mark Levinson Premium Surround Sound system**

Multimedia system

The RZ is equipped with the all-new Lexus Link multimedia platform, with faster, more intuitive operation and increased functions for connectivity, efficient journey planning and information.

The system includes “always on” cloud-based navigation, benefiting from up-to-the moment information on traffic events, accidents and road conditions. The voice recognition function understands and responds to conversational requests and is better able to detect commands when there is background noise. There is also a new “Hey Lexus” on-board assistant and smartphone integration is enabled via Apple CarPlay (wireless connection) and Android Auto.

The vehicle’s DCM (data communication module) allows functions to be conveniently updated or added over the air, without any interruption to the vehicle’s use.

14-inch touchscreen

Information, entertainment, navigation, air conditioning and access to vehicle settings is via a 14-inch touchscreen. Mounted on the centre of the instrument panel, this also includes physical buttons for frequent functions including audio on/off and climate control temperature.

The screen presents an icon-based menu with sharp, colourful graphics in high definition. As well as touch operation, voice commands can be used: the Dynamic Voice Recognition is able to discern different voices and operate when there is background noise – for example, the audio doesn’t have to be turned off.

On-board “Hey Lexus” assistant

The “Hey Lexus” assistant can be used for multimedia commands and to adjust some vehicle functions, such as the air conditioning and opening or closing the windows. It can detect whether the commands come from the driver or front passenger.

My Setting

The My Setting function allows customisation of the audio, navigation, driving position, cabin illumination, meter display and Lexus Safety System + for up to three drivers/users. This can be accessed using the multimedia screen, or via a Bluetooth device. The vehicle will also recognise an individual driver when they use their registered smart key and automatically apply their chosen settings when they enter the car.

Mark Levinson Premium Surround Sound system

Lexus' exclusive audio partner Mark Levinson has developed a 13-speaker system delivering high-quality sound reproduction comparable to a high-end audio package across all genres of music, creating a live ambience with purity, depth and faithful reproduction of the original sounds. Key to this is a Harman discrete amplifier that allows playback of high-resolution sound sources (96 kHz/24-bit) that contain more information than a compact disc (44.1 kHz.16-bit).

The speakers are optimally positioned around the cabin: 9 cm Unity speakers left, right and centre on the instrument panel; eight by nine-inch woofers on the lower front doors; and 9 cm Unity speakers on the rear doors. Completing the array is a 22.4 cm sub-woofer. This is installed in the back door, avoiding any loss of load space. Its construction includes a large neodymium magnetic circuit to achieve heavy bass sound reproduction.

10-speaker audio system

The standard audio package for the RZ is a premium 10-speaker system, tuned to deliver clear mid and high-range tones and rich, crisp low tones. As with the Mark Levinson Premium Surround System, the amplifier has the capacity for playback of high-resolution sound sources, greater than the information contained in CD files. A 20 cm sub-woofer is housed in the back door.

Connectivity

Three USB ports are provided on the centre console – one for multimedia connection and two suitable for device charging. Two further charging ports are provided on the rear console, together with an AC power outlet on Luxury grade.

WORLD-CLASS SAFETY PERFORMANCE

- **Latest generation Lexus Safety System + with new and improved functions**
- **New Driver Monitor and Proactive Driving Assist**
- **Future software upgrades delivered seamlessly over-the-air**

Lexus' aim was to equip the RZ with a world-class package of preventive safety features that are able to recognise and react to an even wider range of accident risk scenarios. The car benefits from the latest generation Lexus Safety System +, with new and improved functions that operate seamlessly in the context of a battery electric vehicle.

Advanced technologies are applied to detect more hazards, provide driver warnings and initiate steering, braking and acceleration assistance when required to help avoid a collision or mitigate the consequences if an impact does happen. They also reduce the burden on the driver, making the job of driving less tiring.

Making use of the car's data communications module (DCM), the safety systems can be updated over-the-air, with no need for the vehicle to be taken to a service centre.

These features combine with comprehensive passive safety provisions and the RZ's robust construction to provide comprehensive protection for everyone on board.

Pre-Collision System

The radar and camera used by the RZ's Pre-Collision System (PCS) have a wider detection range and can recognise a wider range of hazards than previously. This includes the risk of a head-on collision with traffic coming from the left or right when making a turn at an intersection. The system's response time is faster and it is also now able to identify motorcycles, as well as cyclists and pedestrians.

Emergency Steering Assist helps keep the car stable and within its traffic lane when the driver has to avoid a parked car, pedestrian or other obstacle to the side of the road. The system is also available with Active Support, which works to avoid a collision by providing gentle braking and steering.

The PCS further provides Low Speed Acceleration Suppression, recognising sudden, unintended use of the throttle when driving at low speed.

Dynamic Radar Cruise Control

The RZ's Dynamic Radar Cruise Control (DRCC) provides a wider range of inter-vehicle distance settings, so the driver has more freedom to tailor performance to their personal preference. Activating the system has been made easier with simple switch operation and the option of voice command control to set the cruising speed and distance from the preceding vehicle.

New functions include Curve Speed Reduction, ensuring an appropriate speed for smooth driving through bends, and Overtaking Prevention, which regulates the car's speed to avoid overtaking a slower vehicle on the wrong side on a multi-lane road. The driver can also easily reset the cruising speed to comply with changes in the speed limit detected by the Road Sign Assist system (RSA).

Lane Departure Alert and Lane Tracing Assist

The Lane Departure Alert (LDA) has been improved so that it can now recognise more objects, including adjacent street furniture such as utility poles, kerbstones and guard rails. It can also recognise when the driver is steering to avoid a person or parked vehicle in the RZ's traffic lane.

The high-performance camera used by the Lane Tracing Assist (LTA) is better able to distinguish road markings; when these are obscured, for example in heavy traffic, the system will follow the path of the vehicle ahead. Expansion of the system's DNN (deep neural network) has enabled it to recognise 3D objects. This means it can adjust its performance to give appropriate lateral clearance from vehicles in adjacent lanes or roadworks, operating in way that feels natural to the driver.

Lane Change Assist

Lane Change Assist can be used when the car's LTA is activated. When the driver signals to make a lane change, the system checks for safety using the PCS radar and camera, calculates the target trajectory and provides appropriate steering control. Once the lane change is complete, LTA returns to its normal operating status.

Driver Monitor

The Driver Monitor is a new feature that uses a camera mounted above the steering wheel to keep constant check on the driver's condition. If it recognises that they have lost concentration through being tired or unwell, it triggers visual and audible alerts. In a world-first, the system is linked to the car's active safety systems, so that should the driver fail to respond, the car can be brought smoothly to a controlled halt with the hazard lights activated (Emergency Driving Stop).

Proactive Driving Assist

Proactive Driving Assist (PDA) includes Obstacle Anticipation Assist, Deceleration Assist and Steering Assist. The system operates at lower speeds, for example when driving around town. The PCS front camera scans the area in front of the car to check for hazards such as pedestrians about to cross or walking along the side of the road, parked cars and cyclists. If there is a collision risk, the system will provide braking and steering to avoid the obstacle, while keeping the car in its traffic lane.

Additional features

The Lexus Safety System + package for the RZ also provides Automatic High Beam or an Adaptive High-beam System for automatic adjustment of the headlight beams to achieve optimum forward illumination without dazzling oncoming traffic. The RZ is the first Lexus to be fitted with AHS using a single bi-projector LED headlight.

Road Sign Assist (RSA) is able to recognise and display a wider range of highway warning and command signs. The car's speed limiter can be linked to the RSA, reducing powertrain output and applying braking if necessary to keep the car within the legal speed limit for a given road.

Passive safety

The RZ has a full complement of SRS airbags, including a centre airbag between the front seats, helping protect driver and passenger from colliding with each other in the event of an impact. A dual-stage driver's airbag is integrated in the new-design One Motion Grip steering yoke as well as the conventional steering wheel.

The impact-absorbing quality of the car's frame has been enhanced with a new door impact beam and quarter lock pillar design. The beam helps ensure impact loads are shared by each of the car's pillars and rockers; the quarter lock pillar prevents crushing of the wheel house.

EASIER, SAFER DRIVING WITH ADVANCED ASSISTANCE FEATURES

- Multiple systems for easy and precise vehicle manoeuvring
- Smooth, automated parking with Advanced Park system
- e-Latch with Safe Exit Assist, helping prevent accidents caused by inadvertent door opening.

In addition to the provisions of Lexus Safety System +, the new RZ offers a wide range of features to support easy and safe use of the car – from automatic parking to blind spot monitoring and control for safe opening of the doors.

Rear Cross-Traffic Alert and Rear Camera Detection

The driver's sightlines can be compromised when negotiating narrow and confined spaces, such as car parks. The RZ uses clearance sonars and cameras that can detect both static objects and both vehicles and pedestrians crossing behind the car when moving at low speed. If a hazard is spotted, a buzzer sounds and an alert appears in the multi-information display, showing the vehicle position in relation to the hazard.

In addition, the Advanced Park system (see below) warns of accidental contact with static objects to either side of the car, using side-mounted sensors and cameras to look out for hazards such as bollards when exiting a parking space. The Parking Support Brake will control drive and brake force control if there is a risk of contact with pedestrians, objects or approaching vehicles.

Advanced Park

The Advanced Park takes all the strain out of parking, providing automatic control of the steering, shift selection and braking to move the car smoothly and efficiently into series and parallel parking places. The system can recognise up to three regularly used parking spots.

Lexus e-latch with Safe Exit Assist

The RZ follows the all-new RX and NX in adopting the smooth and easy e-latch electronic door release system. This is linked to the car's Blind Spot Monitor to provide Safe Exit Assist which prevents doors from being opened in the path of cycles or vehicles approaching from the rear. Lexus estimates this safeguard can help prevent more than 95% of the accidents caused by hazardous door opening. The system can be customised with a choice of three levels of sensitivity.

Panoramic View Monitor

The Panoramic View Monitor uses the RZ's array of four cameras and 12 sensors to give the driver a 360-degree view of the car's immediate surroundings and the option of a composite, overhead view. Cameras in the door mirrors provide a side clearance view to help negotiate narrow lanes and spaces, and there is also an under-floor "see-through" view option, to check the driving surface beneath the car and the position of the wheels. A cornering view provides a diagonal image to help with turns in narrow roads and avoid contact with kerbs. A

moving view shows the car as seen from diagonally above. A camera washer system keeps the monitor clear, activated when the rear screen washer is used.

Additional features

To help protect against rear-end collisions, the hazard lights can be activated automatically to warn a following vehicle. Designed primarily to alert buses or trucks, the system operates at approaching speeds of 30 to 100 km/h.

In the event of a rear-end collision, a secondary brake will operate automatically, to help prevent the RZ being propelled forwards into another vehicle.

The RZ also provides Drive Start Control, which recognises excessive pressure on the throttle when the shift selector is being used and suppresses acceleration.

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