

# LEXUS RC



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# LEXUS RC

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# ABRIDGED

The new Lexus RC, a premium two-door coupe, pairs a provocative, stunning design with the pleasure of engaging and refined driving experience. Featuring the latest advanced Lexus technology developments, it is expected to attract new, younger customers to the Lexus brand. In Europe it will be available in two powertrains: 2.5l full hybrid in RC 300h and 2.0l turbo petrol in RC 200t.

## RC 300h

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The RC 300h's<sup>1</sup> Lexus Hybrid Drive system combines a 2.5 litre, 4-cylinder Atkinson Cycle petrol engine with a powerful electric motor to deliver maximum system power of 223 PS/164 kW. The RC 300h accelerates from 0-100 km/h in 8.6 seconds and has a maximum speed of 190 km/h, yet returns average fuel consumption figures as low as 4.7 l/100 km and generates remarkably low, highly tax-efficient CO<sub>2</sub> emissions of as little as 108 g/km.

The RC 300h benefits from enhanced EPS and suspension system, and builds on the platform's ride comfort and handling agility with the uniquely quiet, refined and sophisticated driving experience offered by its full hybrid powertrain.

The hybrid system's electronic, continuously variable transmission features a six step, sequential Shiftmatic override gear change, delivering all the driving

performance expected of a sporting coupe. And a full hybrid-unique, EV mode allows for ultra-quiet running on electric motor power alone, resulting in zero fuel consumption and CO<sub>2</sub>, NO<sub>x</sub> and PM emissions.

The RC 300h F SPORT variant features specifically tuned front and rear suspension systems, while its agility and handling performance is further improved through the adoption of Adaptive Variable Suspension (AVS).

## RC 200t

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The RC 200t<sup>2</sup> features the 2.0 litre, twin-scroll turbo unit introduced by Lexus on several models in 2015. Featuring a range of advanced, ESTEC (Economy with Superior Thermal Efficiency Combustion) engine technologies with a fast throttle response and high torque at low engine revs, the 4-cylinder engine develops 245 PS/180 kW and maximum torque of 350 Nm. This equips the RC 200t with a 0-100 km/h acceleration time of 7.5 seconds and a top speed of 230 km/h.

The 2.0 turbo unit drives the rear wheels via an 8-Speed SPDS (Sport Direct Shift) transmission originally developed for the high-performance RC F. Equipped with steering wheel-mounted paddle shifts for manual override,

<sup>1</sup> The RC 300h is available in all markets served by Lexus Europe, except Russia, Ukraine, Kazakhstan, Caucasus, Israel and Turkey.

<sup>2</sup> The RC 200t is available in selected EU markets as well as Russia, Ukraine, Kazakhstan, Caucasus, Israel, Turkey.

the transmission incorporates G AI-SHIFT Control, which varies gear shifting in accordance with the G-forces generated.

Both the suspension and Electric Power Steering (EPS) systems ensure the RC 200t delivers superior driving dynamics, with the agility, precise steering response and high levels of grip expected of a sporting, two-door coupe.

RC 200t F SPORT variant offers significantly enhanced handling performance through the adoption of a Torsen Limited Slip Differential and Adaptive Variable Suspension (AVS).

## DESIGN AND PACKAGING

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The RC's elegant yet powerful, two-door exterior design hints at refined driving performance and agility. The sporting, premium quality interior features a snug, driver-focused cockpit offering ergonomically ideal driver interaction with Lexus' advanced HMI (Human Machine Interface) systems. The cockpit is structured around an upper display zone and a lower operation zone.

On-board technology features a choice of Lexus Display Audio (LDA) or Electro Multi Vision Navigation (EMVN) multimedia systems with coor-

dated control via 4.2-inch Multi-information Display and 7-inch centre console screens, the second generation Lexus Remote Touch Interface (RTI) with touch tracer control, and a choice of sound systems including a 17-speaker Mark Levinson® Premium Surround System.

Both the RC 300h F SPORT and the RC 200t F SPORT variants feature grade-specific exterior and interior styling, including a unique spindle grille and 'F' mesh pattern, and exclusive alloy wheels, body colours, trim and ornamentation.

## SAFETY

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The RC is designed to offer the very highest levels of active, passive and preventive safety. It is equipped, as standard, with the Lexus' unique Vehicle Dynamics Integrated Management (VDIM) system and a sophisticated, Pre-Crash Safety (PCS) system incorporating Adaptive Cruise Control.

Further active safety technology includes a Blind Spot Monitor (BSM), Rear Cross Traffic Alert (RCTA) and Lane Departure Alert (LDA), an Auto Location Tyre Pressure Warning System (AL-TPWS) and an Automatic High Beam (AHB) headlamp system.

# DESIGN

- Stunning, two-door exterior design hints at refined driving performance and agility
- Sporting, premium quality interior design with snug, driver-focused cockpit
- Ergonomically ideal driver interaction with HMI (Human Machine Interface) technologies
- Exclusive F SPORT exterior and interior treatment, including unique grille and mesh, alloy wheels, body colours, trim and ornamentation

## ELEGANT TWO-DOOR COUPE EXTERIOR DESIGN

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With an 4695 mm overall length, 1840 mm overall width, 1395 mm height and a 2730 mm wheelbase, the low profile and wide stance of the stunning, two-door RC coupes' exterior design features a compact cabin contrasted by aggressively flared wings and body contours etched with deeply sweeping lines.

Creating these powerful character lines required advanced press technologies that surpass conventional production line standards, and have, hitherto, been reserved for concept vehicles alone. The resultant, powerfully three-dimensional forms constantly change in appearance as you move around the car, creating a striking presence when viewed from any angle.

Befitting the coupe's styling flair, the trademark spindle grille is wider than on Lexus sedan models and has a longitudinal rather than lateral mesh pattern, emphasising the RC's wide, purposeful stance and low centre of gravity. Perfectly integrating design and function, the grille incorporates both fog lamps and brake cooling air intakes.

The coupe's compact, triangular headlamp design evokes the pedigree of Lexus sports model design. Each element of the simultaneously-illuminating,

three-light cluster design contains both high and low beam lamps. The Lexus hallmark L-shaped low beam lamp design combines with independently located LED Daytime Running Lights (DRL) to give the RC an aggressive, sporting and entirely unique visual signature.

Between prominent, muscular wheel arches, the rear design echoes the front spindle styling. The highly original twin-exhaust profile and aero stabilising fin bumper extremity treatment further hint at the exceptional driving performance and agility offered by the RC 200t and 300h coupes.

The sharp, narrow design of the rear combination lamps also adopts an evolution of the Lexus L-shaped motif. Previous designs have presented this motif as a graphic element within the lamp unit. By contrast, the RC unit raises the tail and stop lamps to form a strongly three-dimensional L-shape.

In addition, the seamless lighting method of previous models has been replaced by a glittering, gem-like illumination created by an inner lens with multi-layered surface serrations, awarding RC models an equally unique rear light signature.

In conjunction with the narrowest possible panel gaps, the coupe's low, sleek proportions have been further enhanced by the use of two advanced construction technologies: a rear wheel arch hemming treatment and laser brazing.

The former reduces both the thickness of the panel at the lip of the wheel arch and the vertical gap between the tyre and the arch.

RC models may be fitted with a choice of 9-spoke 17-inch<sup>3</sup>, 5-spoke 18-inch or 10-spoke 19-inch aluminium alloy wheels.

They will be available in a choice of 7 body colours including a Sonic White, which uses a SONIC system, two-stage painting process to create a solid, crystalline, three-dimensional depth, and a Radiant Red, which features an innovative, multi-layered painting process including a silver base coat to give brighter highlights and darker shading for a deeper, richer finish.

<sup>3</sup>The 17-inch wheels are available on RC 300h and in Russia on RC 200t

## UNIQUE INTERIOR DESIGN WITH DRIVER-FOCUSED COCKPIT

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Reflecting Lexus' commitment to fast, intuitive and ergonomically ideal driver interaction with its advanced HMI (Human Machine Interface) on-board technologies, the snug, highly-focused driver's cockpit is divided into an upper display zone and a lower operation zone.

The display zone houses the instrument panel and a 7-inch full-colour display screen. The sporting driver's instrument binnacle features a high-legibility, large-diameter speedometer and tachometer set either side of a central, 4.2-inch Multi-information Display screen with steering wheel-mounted switchgear control.

Driver's meter backlighting colour changes in accordance with the Drive Mode Select system; blue illumination indicating the selection of ECO mode, and red, SPORT mode.

The layered centre console of the lower, operation zone integrates either the Lexus Display Audio (LDA) system with 8-directional joystick control, or the Electro Multi Vision Navigation (EMVN) system controlled by the second generation of Lexus' Remote Touch Interface (RTI).

A circular hairline finish has been applied to the controls of both the LDA and EMVN control panels to recreate the finish of high-end audio systems, whilst the panel design of the EMVN system equipped with the Mark Levinson Premium Surround System adopts machined aluminium controls, mirroring the design of Mark Levinson home audio systems.

The centre console also incorporates electrostatic switches to control the air conditioning temperature with the touch of a finger.

An exclusive, highly-supportive sports front seat design uses an 'integrated foaming' construction method. This allows for the moulding of large concave surfaces whilst ensuring that there are no gaps between the seat upholstery and its foam padding, thus ensuring a combination of excellent comfort and outstanding lateral holding performance.

A one-touch walk-in function gives easy access to the 60:40 split folding rear seats. The front seat automatically slides forwards when the seat back is folded forwards by means of the shoulder-mounted lever. The seat automatically returns to its original position when the seatback is raised again.

Contrast stitching to the seats, centre console trim and generous knee pads adds a high quality accent to the interior design, whilst further enhancing the holding performance of the smooth, synthetic or semi-aniline leather seat upholstery.

Highlighting the sporting elegance of a coupe, the premium quality interior of the RC makes maximum use of contrasting colours, materials and lighting. The latter features unique, upward- rather than downward-reflecting ambient illumination, including door trim lighting which automatically adjusts in brightness to suit driving conditions.

High-contrast interior colours and sculpted, polished metal accentuate the layered design of the centre console and door panels. Genuine Shimamoku wood highlights -the result of a painstaking, layered wood production tech-



nique refined by Lexus- are amongst the ornamentation used to emphasise the surrounding trim.

A choice of four colour schemes -Black, Topaz Brown, and newly developed Clove and Moon Stone- reinforce the sporting elegance of the RC interior design.

## **EXCLUSIVE F SPORT EXTERIOR AND INTERIOR TREATMENT**

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The F SPORT variants of RC feature an exclusive spindle grille that is wider and lower than that of any other Lexus, and incorporates a new 'F' mesh pattern.

They both combine a unique 19" alloy wheel design with model-specific badging and a choice of nine body colours, including F SPORT-exclusive Lava Orange, Heat Blue and F White paintwork. In addition, the RC 200t F SPORT may be equipped with exclusive Orange front and rear brake calipers.

On-board, all F SPORT versions inherit a descendant of the innovative driver's meter with moving centre ring from the LFA. The F SPORT-exclusive interior design is completed by free stitching to the front seats, a perforated leather-clad steering wheel and shift lever, aluminium pedals and scuff plates, the three-dimensional surface treatment of Wedge Metal ornamentation, and a Dark Rose colour scheme.

# ENGINES AND TRANSMISSIONS

## RC 300h

- 223 PS/164 kW full hybrid powertrain: average fuel consumption 4.7 l/100 km, CO<sub>2</sub> emissions as low as 108 g/km.
- 2.5 litre, 4-cylinder Atkinson cycle petrol engine with a thermal efficiency rating of 38.5%.

As with every Lexus hybrid vehicle, the RC 300h is a full hybrid capable of operating in petrol or electric modes alone, as well as a combination of both. Its Lexus Hybrid Drive system combines a Euro 6-compliant, 2494 cc, dual-injection, 4-cylinder Atkinson Cycle petrol engine generating 181PS /131kW at 6,000 rpm and peak torque of 221 Nm between 4,200 and 4,800 rpm with a 143 PS/105 kW electric motor.

Delivering maximum system power of 223 PS/164 kW, the engine and the electric motor drive the rear wheels both independently and in tandem, as appropriate.

In addition to the petrol engine and electric motor, the new RC 300h's hybrid drive system further comprises a generator, a high-performance nickel-metal hydride battery, a power split device which, via planetary reduction gears, combines and re-allocates power from the engine, electric motor and generator according to operational requirements, and a compact power control unit to govern the high speed interaction of the system components. The RC 300h accelerates from 0-100 km/h in 8.6 seconds and has a maximum speed of 190 km/h, yet returns average fuel consumption figures as low as 4.7 l/100 km and generates remarkably low, highly tax-efficient CO<sub>2</sub> emissions of as little as 108 g/km.

The Atkinson cycle petrol engine is equipped with numerous advanced technologies designed to optimise its integration within the full hybrid powertrain, enhancing performance whilst minimising fuel consumption and emissions. Atkinson cycle timing features an expansion stroke that is longer than the compression stroke, resulting in a more efficient conversion of combustion energy. The adoption of the Atkinson cycle, a higher compression ratio and other advanced technologies contribute to the enhanced thermal efficiency of the engine, which achieves the rating of 38.5%.

The new generation D-4S fuel injection system features a higher, 20 MPa injection pressure and increased fuel flow volume. This helps to produce a more homogenous air-fuel mixture, contributing to both high power output and fuel efficiency.

Fuel efficiency is also enhanced through in-cylinder direct injectors with a side slit and an optimised injection hole shape, a revised intake port shape, and optimised airflow. The adoption of roller arm-type valve gear and roller-type D-4 pump gear further improves fuel economy.

The friction of sliding parts within the cams has been greatly reduced. And the adoption of a low-friction timing chain with enhanced wear-stretch performance and a stretch belt to lower tension further reduce friction to enhance fuel economy.

Dual VVT-i (Variable Valve Timing-intelligent) to both intake and exhaust camshafts also significantly ameliorates engine performance. Dual VVT-i allows a greater intake/exhaust valve overlap, benefiting both low-end and top-end torque as well as contributing to a reduction in exhaust emissions and better cold-start performance.

A high-efficiency Exhaust Gas Recirculation (EGR) system incorporates a water-cooled EGR cooler, a step motor EGR valve with significantly enhanced responsiveness compared to conventional technology and optimal EGR gas flow. In combination, these technologies help realise excellent fuel economy.

Finally, several measures ensure that engine quietness and smoothness have been maximised to compliment the inherently quiet operating characteristics of the Lexus Hybrid Drive system.

The location of the port injectors has been optimised, along with port injection during idling and low load driving and the crankshaft shape. Noise and vibration have been further reduced through the enhanced rigidity of the cylinder block and intake manifold, the optimised efficiency of the balance shaft and the adoption of resin gears within the hybrid transaxle.

The full hybrid drive system's seamless electric continuously variable transmission (E-CVT) is controlled by Shift-by-Wire technology. Fully described in the Driving Dynamics chapter, it features a six step sequential Shiftmatic override gear change operated via steering wheel-mounted paddle shifters.

## **RC 200t - 2.0 Litre Turbo**

- 245 PS/180 kW 2.0 Litre Turbo: 0-100 km/h in 7.5 seconds and maximum speed of 230 km/h.
- 8-Speed SPDS (Sport Direct Shift) transmission with G AI-SHIFT Control -varies gear shifting in accordance with G-forces generated

Weighing just 160 kg, the RC 200t's remarkably light and compact 1998 cc, 4-cylinder, turbocharged petrol engine features a unique combination of advanced, ESTEC (Economy with Superior Thermal Efficiency Combustion) engine technologies for increased thermal efficiency through combustion enhancement.

They include a D-4ST (Direct injection 4 stroke petrol engine Superior version with Turbo) fuel injection system, a twin-scroll turbocharger, a water cooled cylinder head with integrated exhaust manifold, and VVT-iW (Variable Valve Timing-intelligent Wide).

Combining a fast throttle response and high torque at low engine revs with remarkably frugal fuel consumption, the engine develops 245 PS/180 kW and maximum torque of 350 Nm. This equips the RC 200t with a 0-100 km/h acceleration time of 7.5 seconds and a top speed of 230 km/h and results in a fuel consumption of 7.2l/100km and CO<sub>2</sub> emissions of 166g/km. D-4ST combines high pressure direct cylinder injection with low pressure intake port injection. This achieves optimum, uniform combustion even under high loads and cold temperatures.

This advanced fuel injection system works in combination with turbocharging to create a high level of compatibility between the 'high tumble ratio' achieved by optimising the shape of both the cylinder head intake ports and the piston tops, and turbo 'boost control'.

The water cooled cylinder head features an integral, four-into-two exhaust manifold. This system pairs cylinders according to their expansion or compression stroke. Acting in conjunction with the highly-efficient, twin-scroll turbocharger, this innovative manifold structure prevents interference between the exhaust gasses from each cylinder, generating high torque across the widest possible rev band.

The adoption of an air-to-liquid intercooler mounted directly to the engine significantly reduces the intake volume downstream of the turbocharger, minimising turbo lag for a rapid throttle response.

The turbocharger itself is equipped with an active waste gate valve. The opening of the valve in the low engine load driving range reduces exhaust manifold pressure and, hence, pumping losses, to enhance combustion efficiency.

The engine further benefits from variable valve timing technology which adopts VVT-i on the exhaust valves and VVT-iW on the intake valves. This combines wide open throttle performance with optimised torque delivery throughout the rev range, whilst allowing the engine to start in the Otto cycle and yet run in the more fuel-efficient Atkinson cycle. During acceleration the Otto-cycle kicks in again.

## **8-SPEED SPDS TRANSMISSION**

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The 2.0 turbo unit drives the rear wheels via an 8-Speed SPDS (Sport Direct Shift) transmission originally developed for the high-performance RC F.

Equipped with steering wheel-mounted paddle shifts for manual override, the exceptionally smooth, quiet transmission features Uphill Downshift Control, Downshift Lock-up Control, Deceleration Flex Lock-up Control, Power Saving Control, Stop & Start Control and G AI-SHIFT Control, which varies gear shifting in accordance with the G-forces generated.

Activated with the RC 200t's Drive Mode Select system in Sport mode, G AI-SHIFT Control automatically downshifts during hard braking before a corner, holds a lower gear through the corner, then selects the most suitable gear on corner exit to give the driver greater throttle response.

In M mode, the transmission will not only hold selected gears, but also offers complete lock-up for quick-response shifting from 2nd through to 8th gear.

# DRIVING DYNAMICS

- High rigidity bodyshell and aerodynamics tuned for precise steering response and high levels of mechanical grip
- Comprehensive Noise and Vibration (NV) minimising measures for optimised comfort and quietness in the cabin
- F SPORT - Enhanced agility with Adaptive Variable Suspension (AVS) and, on RC 200t, Torsen Limited Slip Differential

The driving dynamics of the new RC perfectly reflect Lexus' objective to evolve the ride and handling of its vehicles, offering its customers a more sporting and engaging driving experience.

## **HIGH RIGIDITY BODYSHELL**

The foundation of the RC's agility, precise steering response and high levels of mechanical grip is its high rigidity bodyshell. This features large cross-section rocker panels almost twice the size of those in the Lexus IS, cowl side bracing, the optimisation of underbody brace reinforcement, and even the use of high rigidity front and rear screen glass adhesive.

Numerous specialised Lexus manufacturing techniques further enhance rigidity. They include body adhesives, multi-spot welding, and laser-screw welding around the door openings, quarter glass and upper back panel.

These measures combine to maximise the torsional rigidity of the bodyshell, contributing to enhanced steering response and body control during cornering.

## **AERODYNAMICS**

Designed to enhance stability during high speed driving, the RC incorporates tried and tested race car aerodynamics to both upper and underbody surfaces.

Air ducts in the front bumper corners control the speed of airflow along the body sides, reducing turbulence. An aero stabilising guide located behind the spindle grille suppresses vortex formation within the airflow entering the grille, enhancing radiator cooling efficiency.

Front and rear wheel arch spats improve aerodynamics by reducing the airflow hitting the tyre, and a grooved front fender liner helps direct airflow along the tyre. A bead integral to the rear fender liner expels air generated by tyre rotation from the wheel arch, enhancing aerodynamics.

Aero stabilising fins are located at the front tip of the door frame moulding and on the rear combination lamps, smoothing airflow along the sides of the vehicle to promote straight line stability and suppress wobble during cornering. To the rear, the shape of the trunk lip, rear bumper corners and the bottom edge of the lower garnish plate have all been optimised to funnel the airflow to the back of the vehicle and cleanly away.

Underbody aerodynamics are no less comprehensive. They feature large undercovers to the engine, main floor and rear floor, and the fitting of aero stabilising fins to each undercover to further suppress airflow turbulence. In addition, the underfloor angle rises to the rear of the car, creating a Venturi

effect to both increase downforce and smooth the flow of air away from the rear of the vehicle.

### **LOW NOISE AND VIBRATION MEASURES**

Particularly pertinent to the inherently smooth, quiet operation of the RC 300h's Lexus Hybrid Drive powertrain, the RC benefits from a comprehensive package of Noise and Vibration (NV) minimising measures, offering all occupants the quietest, most comfortable cabin environment possible.

In conjunction with careful resonance tuning of the dash panel and floor pan, underbody vibration countermeasures include the optimised thickness of the dash and centre floor panels, and the shape and layout of centre floor beading.

The dash features a sandwich sheet steel constructing incorporating a cross member and centre brace. The dash inner silencer is composed of a thick, two-layer structure which uses materials of different density to maximise the reduction of engine noise.

Sound absorbing and insulating materials have been comprehensively applied throughout the bodyshell, doors, dashboard and transmission tunnel, with a particular focus on the suppression of engine and air-conditioner noise

within the dashboard. The widespread use of coated damping material efficiently reduces floor panel vibration whilst further enhancing cabin quietness. Additional NV- and wind noise-suppressing measures include the optimisation of the front pillar cross-section, the use of foam and vibration damping materials in the door and quarter window opening and front header, and fender and hood side sealing to reduce the penetration of engine noise to the cabin.

Finally, further minimising wind noise, the level difference between the wind-screen glass and its surrounding structure has been reduced, and the position of both the door mirror and the windscreen wiper are optimised.

## **ENGAGING DRIVING DYNAMICS**

The RC's front double wishbone and rear multi-link suspension systems have been exclusively tuned to combine well-balanced, agile handling with superior straight line ride comfort.

The front suspension benefits from specific tuning of the upper support, coil spring wheel rate, stabiliser bar and bushing, and lower arm number 2 bushing. The shock absorber combines low friction hydraulic fluid with a resin-free piston to reduce friction.

The rear suspension benefits from similar fine-tuning to the shock absorber, coil spring, stabiliser and upper number 1 bushing.

In combination, these measures are designed to reduce understeer, ensure accurate yaw response during steering, effect a smooth transition to cornering attitude, and help achieve an integrated feel between steering input and

vehicle behaviour, marrying a fine ride quality with agile, engaging handling characteristics.

Particular attention has been paid to the feel, feedback and accuracy of the RC's Electric Power Steering (EPS), which is designed to clearly transmit the interaction between tyres and road surface to the driver. Highly rigid column mounting and a damperless intermediate shaft combine to offer a smooth, accurate and instantaneous vehicle response to even the smallest steering inputs.

The RC is equipped with a Drive Mode Select system, offering drivers a choice of SNOW, ECO, NORMAL and SPORT (SPORT S and SPORT S+ with F SPORT) modes. When SPORT mode is selected, the engine output, throttle opening and EPS steering assistance are adjusted to improve throttle response and add steering weight for a more powerful, dynamic driving experience.

The RC 200t also benefits from an Eco Driving Indicator to help drivers use the accelerator in the most fuel efficient manner. When driving in an eco-friendly manner, the Eco Driving Indicator light illuminates, while the Eco Driving Indicator Display shows accelerator operation within the most environmentally-friendly zone. When the use of the accelerator exceeds this zone, the right hand side of the display begins to flash.

## **RC 300H - UNIQUELY QUIET AND REFINED**

Benefitting from the high-rigidity bodyshell, and EPS and suspension system enhancements, the RC 300h builds on the model's ride comfort and handling agility with the uniquely quiet, refined and sophisticated driving experience offered by its full hybrid powertrain.



Over the course of any journey, the Lexus Hybrid Drive system operates in several different modes to maximise the RC 300h's overall efficiency.

At rest, the engine stops automatically to conserve fuel. Under operating conditions of low engine efficiency such as start-up and low to mid-range speeds, the vehicle runs on the electric motor alone, thus eradicating CO<sub>2</sub>, NO<sub>x</sub> and PM emissions.

Under normal driving conditions, power allocation is constantly adjusted between engine and electric motor to combine optimum performance with maximum fuel efficiency.

During deceleration and under braking, the electric motor acts as a high-output generator to effect regenerative braking. Normally wasted as heat, kinetic energy is recovered as electrical energy for storage in the high performance battery.

The hybrid system's uniquely smooth electronic, continuously variable transmission features a six step, sequential Shiftmatic override gear change. This configuration delivers all the driving performance expected of a sporting coupe, combined with the excellent fuel economy that is the hallmark of Lexus Hybrid Drive technology.

The RC 300h's Drive Mode Select system offers a choice of four drive modes to increase the capabilities of the full hybrid powertrain, including a full hybrid-unique, EV mode which allows for ultra-quiet running on electric motor power alone, resulting in zero fuel consumption and CO<sub>2</sub>, NO<sub>x</sub> and PM emissions.

## **RC F SPORT - ENHANCED HANDLING PERFORMANCE AND AGILITY**

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Significantly enhancing handling performance without detriment to ride quality, the RC F SPORT features front and rear suspension systems equipped with an Adaptive Variable Suspension (AVS) and the RC 200t F SPORT, additionally, with the Torsen Limited Slip Differential.

AVS automatically activates adjustable damping force shock absorbers to independently adjust the performance of the suspension at all four wheels, offering drivers the optimum combination of straight line ride comfort and cornering stability.

When SPORT S+ Drive Mode is selected, the AVS system increases the difference between inner and outer shock absorber damping through corners, further reducing body roll.

# ON-BOARD TECHNOLOGY

- Advanced multimedia systems with coordinated control via 4.2-inch Multi-information Display and 7-inch centre console screen
- Second generation Lexus Remote Touch Interface (RTI) with touch tracer control
- 6-speaker, 160 W or 10-speaker, 256 W Pioneer sound systems, and 17-speaker Mark Levinson Premium Surround System

## ADVANCED MULTIMEDIA SYSTEMS

Two types of multimedia system are available for use in conjunction with the RC's high-resolution, 7-inch full-colour display screen - Lexus Display Audio (LDA) and Electro Multi Vision Navigation (EMVN).

With 8-directional joystick control, the LDA system features smartphone linking capabilities that allow customers to use smartphone navigation applications and view the data on the 7-inch display.

The EMVN system has been developed to provide excellent connectivity and enhanced HMI features. It features a multimedia linkage function which offers drivers coordinated system control via both the 4.2-inch Multi-information Display and the 7-inch centre console screen.

The ability to link the EMVN to the Multi-information Display allows the driver to view audio data, mobile phone reception and incoming call information, as well as navigation directions, while also using the cross switch on the steering wheel to select music tracks and place outgoing phone calls. Menus accessed on the display can be customised to the user's preference.

The CPU of the integral navigation system has high processing power for smooth, fast and accurate operation.

Incorporating automatic screen zoom at intersections, the navigation system features several advanced functions. They include a digital terrain modelling, the accurate replication of motorway signage, speed limit information, a traffic bar for en route congestion information, and urgent traffic event notification.

Via internet connection using the customer's Bluetooth mobile phone, the system provides access to an on-line Points of Interest search facility from the Google Local Search database, and allows addresses from the Google map website to be added as destinations. The Google link also gives access to Google Street View and Panoramio.

## **SECOND GENERATION REMOTE TOUCH INTERFACE**

The EMVN system is operated via a second generation Lexus Remote Touch Interface (RTI) multi-function control device, which has been enhanced for increased user-friendliness and ease of operation.

The system features touch tracer control. The user moves their fingers over an electrostatic pad, either pressing or double tapping to select a desired function, giving the feel of smartphone operation. Pulsation feedback uses vibration to notify users of nearby on-screen icons, and pinch-in and -out and flick operations also mimic those of a smartphone.

The touch pad has a wide operating area, and features a pleasing surface texture specially developed to ensure smooth finger movement that never feels sticky or rough during operation.

Usability has also been improved through the addition of electrostatic pad surface ambient lighting, and by minimising the difference in height between the RTI controller and the armrest.

## **PREMIUM SOUND SYSTEMS**

The RC may be equipped with a choice of 6-speaker, 160 W or 10-speaker, 256 W Pioneer sound systems, offering distortion-free, clear sound quality with wide-ranging sonic reproduction, rich presence and natural sound dynamics.

The 10-speaker system features Coherent Source Transducer (CST) technology which integrates the mid-range speaker and tweeter of the left- and right-hand side instrument panel speakers, creating a more natural sound.

The system also automatically compensates for the loss of high frequency sound and other musical detail inherent in the use of compressed sound sources such as MP3 players to create a fuller, richer sound with greater presence.

Both audio systems are equipped with two USB ports, and iPod functionality and interface quality has been enhanced. The audio system can now display album cover art both via iPod and USB port connectivity, on the 7-inch centre console screen.

### **MARK LEVINSON PREMIUM SURROUND SYSTEM**

Available with the RC coupe's EMVN system, the 17-speaker Mark Levinson Premium Surround System has been developed with an emphasis on high resolution and high musicality, to deliver excellent natural dynamics and rich harmonies in a 360 degree, three-dimensional sonic space.

Despite its compact size, the 835 W system delivers significantly high power and high sound quality, with 5 channel playback. Front centre, front right and left, and rear surround right and left speakers realise optimum consistency of sound quality for every cabin occupant.

The Mark Levinson Premium Surround System also incorporates Signal Doctor, the latest music playback technology, which compensates for the loss of high frequencies and the lack of clarity which can occur when using digital music players and other compressed sound sources, to create a clearer, richer sound, close the original recording quality.

# SAFETY

- Pre-Crash safety System (PCS) with Adaptive Cruise Control
- Vehicle Dynamics Integrated Management (VDIM) system
- Blind Spot Monitor (BSM), Rear Cross Traffic Alert (RCTA), Lane Departure Alert (LDA) and Auto Location Tyre Pressure Warning System (AL-TPWS)
- High- tensile steel body structure for maximum occupant protection
- Pop-Up Hood (PUH) design combining low front profile with optimum pedestrian impact protection
- Eight airbags fitted as standard

Every Lexus is designed to offer the very highest levels of active, passive and preventive safety. The RC builds on Lexus' unique Vehicle Dynamics Integrated Management (VDIM) system with a sophisticated, pre-emptive Pre-Crash Safety (PCS) system, which incorporates Adaptive Cruise Control.

Further active safety technology includes a Blind Spot Monitor (BSM), Rear Cross Traffic Alert (RCTA) and Lane Departure Alert (LDA), an Auto Location Tyre Pressure Warning System (AL-TPWS) and an Automatic High Beam (AHB) headlamp system

Within a highly rigid body structure of exceptional car-to-car impact compatibility, eight airbags are fitted as standard, and a pop-up hood design allows for the lowest possible vehicle front profile whilst optimising pedestrian impact protection.

## **ACTIVE SAFETY**

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### **PRE-CRASH SAFETY (PCS)**

The RC is equipped with a sophisticated Pre-Crash Safety system (PCS) that can help reduce collision damage and injury. The PCS system features a millimetre-wave radar sensor which can detect obstacles in front of the car, even during cornering. Via numerous sensors, a pre-collision system

computer monitors vehicle speed, steering angle and yaw rate inputs to help determine in advance whether an impending collision is unavoidable.

If there is a high possibility of a collision, PCS will alert the driver via both a buzzer and a warning on the Multi-information Display and, when he begins to brake, provide Pre-Crash Brake Assist to supplement his own braking effort. If the driver does not brake and a collision is inevitable, Pre-Crash Brake will automatically apply the brakes in order to prevent the collision or mitigate the force of impact.

### **ADAPTIVE CRUISE CONTROL (ACC)**

Complementary to the PCS system, the RC also features an Adaptive Cruise Control (ACC) system. The system offers two modes: constant speed control, and vehicle-to-vehicle distance control.

The constant speed control functions in the manner of a conventional cruise control system. The vehicle speed that can be set ranges from approximately 40 km/h to 200 km/h (and for the RC 300h to 190km/h).

The vehicle-to-vehicle distance control system employs the PCS millimetre-wave radar sensor, allied to constant speed, decelerator, follow-up and accelerator controls, to automatically slow the Lexus, match the speed of the vehicle in front and, once the road is clear ahead, accelerate to the previously selected cruising speed.

### **VEHICLE DYNAMICS INTEGRATED MANAGEMENT (VDIM)**

The RC features the Lexus' unique, state-of-the-art Vehicle Dynamics Integrated Management (VDIM) system to enhance performance, traction control and vehicle stability.

With comprehensive status data provided by sensors throughout the vehicle, VDIM integrates the RC's Anti-Lock Brakes (ABS), Electronic Brakeforce Distribution (EBD), Traction Control (TRC) and Vehicle Stability Control (VSC) active safety systems with the Electric Power Steering (EPS) and, where fitted, Adaptive variable Suspension (AVS).

By the application of integrated control of all the elements related to vehicle movement, including motor torque, brakes and steering, VDIM not only optimises the activation of braking, stability and traction control systems, but is also able to further improve the overall kinetic performance of the vehicle.

Moreover, whereas conventional active safety systems are only activated immediately after a limit of the vehicle's dynamic envelope has been reached, VDIM activates control before that limit is realised. As a result, the limits of the vehicle's dynamic threshold have been expanded, whilst offering smoother vehicle behaviour at this threshold through less obtrusive intervention and, hence, a more pleasurable drive.

### **BLIND SPOT MONITOR (BSM)**

The upgraded Blind Spot Monitor system uses rear-facing quasi-millimetre-wave radar with a range of up to 60 metres to detect both vehicles in the RC's blind spots and those approaching rapidly from behind in adjacent lanes. It notifies the driver of either situation by illuminating the BSM icon on the corresponding door mirror. If the turn signal is in operation at the time, the BSM icon will blink.

### **REAR CROSS TRAFFIC ALERT (RCTA)**

The Rear Cross Traffic Alert system employs the BSM radar to alert the driver backing out of a parking space to approaching vehicles which may not be visible in either the rear view monitor or door mirrors. When approaching vehicles are detected, the system flashes the BSM icons on the door mirrors and sounds a warning buzzer.

### **LANE DEPARTURE ALERT (LDA) SYSTEM**

Monitoring road markings with a camera, the Lane Departure Alert (LDA) system helps prevent unintended lane changes by alerting the driver with a warning meter display and buzzer alert when the vehicle deviates from its lane without the operation of the turn signal.

### **AUTO LOCATION TYRE PRESSURE WARNING SYSTEM (AL-TPWS)**

Based on data from a sensor integrated within the tyre air valve assembly, the AL-TPWS indicates pressure values for each of the four tyres via a display located within the driver's instrument binnacle. When low tyre pressure is detected, the display shows the air pressure of the affected tyre in amber, highlighting the figure.

With a conventional system, the warning lamp will not notify the driver of the specific tyre in question, whereas AL-TPWS clearly indicates which of the four tyres has low-pressure status.

Since sensor data is received the moment the ignition is turned on, the driver can check tyre pressures before starting off. This not only helps enhance fuel economy and tyre longevity, but also contributes to preventive safety by helping to reduce the risk of a flat tyre or similar failure.

### **AUTOMATIC HIGH BEAM (AHB)**

An Automatic High Beam (AHB) headlamp system maximises visibility at night by automatically switching to low beams when its camera detects the lights of either an oncoming or preceding vehicle.

## **PASSIVE SAFETY**

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### **BODY STRUCTURE**

Reflecting the stringent car-to-car impact compatibility standards unique to the Lexus marque, the RC has been created with the express aim of achieving optimum safety in full-frontal, offset, side-on and rear collisions.

The comprehensive use of high-tensile steel within the body structure optimally transfers and disperses impact load, minimising cabin deformation during a collision and maintaining space for the occupants.

Improving the dispersal of frontal impact load, the RC features a No. 2 member, an enlarged rocker cross-section and a forward projecting rocker structure and a high tensile steel front pillar and rail structure. Further protection

in the case of small overlap collisions is provided by the adoption of a torque box and A-shaped brace to protect occupants against impact from the tyre side.

Reducing body deformation by optimally transferring and dispersing impact load, the RC's side impact absorbing structure includes instrument panel, front header, roof and rear header reinforcement and several floor cross-members. A centre floor cross-member gusset connects the high-tensile steel centre pillar inner structure and the centre floor cross-member to actively transfer load to the cross member.

Anti-rollover performance is assured by the extensive use of high-tensile steel in the front pillar, roof rail and front header construction, combining strength with light weight, and helping to preserve the RC's low profile design.

Within the cabin itself, additional head, abdomen and hip impact absorbing structures are incorporated within the roof head lining, each pillar, and both the door trim and armrests.

## **PEDESTRIAN PROTECTION**

The RC's Pop-Up Hood (PUH) design allows for the lowest possible vehicle front profile whilst optimising pedestrian impact protection.

The system uses a sensor in the front bumper to detect that a person has collided with the front of the vehicle. Actuators then immediately pop up the hood, maximising the space between the hood and engine, and allowing the hood to deform in order to absorb the collision impact of the person's head. The high-precision sensors and control system ensure that the PUH will not deploy in the event of a collision with a bollard, lamp post or other street furniture.

## **AIRBAGS**

The Lexus RC benefits from eight airbags; dual-stage Supplemental Restraint System (SRS) front airbags, both driver and front passenger knee airbags, front side airbags, and full length side curtain airbags.

The advanced, Supplemental Restraint System controls variable-force front airbags for both driver and front passenger. Sensors determine the severity of an impact and, hence, the force with which the airbags are deployed.



# RC TECHNICAL SPECIFICATIONS

MAJOR DIMENSIONS AND VEHICLE WEIGHTS		RC 300h	RC 200t
Overall dimensions	Length mm	4695	4695
	Width Without Mirror mm	1840	1840
	Width With Mirror mm	2069	2069
	Height Unladen mm	1395	1395
Wheelbase		2730	2730
Tread	Front mm	1580	1580
	Rear mm	1600*2, 1570*3	1600*2, 1570*3
Interior	Length mm	1875	1875
	Width mm	1520	1520
	Height mm	1120, 1110*5	1120, 1110*5
Couple Distance	Front to Rear mm	833	833
Seating Capacity	person	4	4
Overhang	Front mm	930	930
	Rear mm	1035	1035

# RC TECHNICAL SPECIFICATIONS

<b>MAJOR DIMENSIONS AND VEHICLE WEIGHTS</b>		<b>RC 300h</b>	<b>RC 200t</b>
Coefficient of Drag		0.285*5	0.285*5
Min. Running Ground Clearance	mm	135	135
Location of Min. Running Ground Clearance		UNDER COVER	UNDER COVER
Angle of Approach	degrees	12.4*6	12.4*6
Angle of Departure	degrees	15.6*6	15.6*6
Kerb Weight	Front Min. - Max. (EC/ECE) kg	870 - 895	895 - 925
	Rear Min. - Max. (EC/ECE) kg	865 - 880	780 - 800
	Total Min. - Max. (EC/ECE) kg	1736 - 1775	1675 - 1725
Gross Vehicle Weight		2170	2170
Trunk Space	L	340	374
Fuel Tank Capacity	L	66	66

ENGINE		RC 300h	RC 200t
No. of Cyls. & Arrangement		4 cylinders, In-line type	4 cylinders, In-line type
Valve Mechanism		16-valve DOHC with Dual VVT-i	16-valve, DOHC, VVT-i:W (intake), VVT-i (exhaust)
Bore x Stroke	mm	90.0 x 98.0	86.0 x 86.0
Displacement	cm <sup>3</sup>	2494	1998
Compression Ratio		13.0:1	10.0:1
Fuel Injection System		EFI, D-4S	EFI, D-4ST
Intake System		-	Turbo Charged with Intercooler
Emission Certification		Euro 6	Euro 6
Fuel Type		Petrol	Petrol
Recommended Octane Rating	RON	95 or higher	95 or higher
Max. Output	EEC kW/rpm (ps/rpm)	133/6000 (181/6000)	180/5800 (245/5800)
Max. Torque	EEC Nm/rpm (kg-m/rpm)	221/4200-5400 (22.5/4200-5400)	350/1650-4400 (35.7/1650-4400)
Fuel Consumption	Urban L/100km	4.7*5, 4.9*11, 5.1*3	9.5*11, 9.6*3, 11.2*8
	Extra Urban L/100km	4.7*5, 4.9*11, 5.0*3	5.8*11, 5.9*3, 6.1*8
	Combined L/100km	4.7*5, 4.9*11, 5.0*3	7.2*3, 11, 8.0*8
CO <sub>2</sub> Emissions	Urban g/km	108*5, 114*11, 117*3	220*11, 221*3, 260*8
	Extra Urban g/km	108*5, 112*11, 116*3	135*11, 137*3, 143*8
	Combined g/km	108*5, 113*11, 116*3	166*11, 168*3, 186*8

# RC TECHNICAL SPECIFICATIONS

<b>MOTOR GENERATOR</b>		<b>RC 300h</b>	<b>RC 200t</b>
Motor Type		Permanent magnet synchronous motor (1KM)	-
Max. Voltage	V	650	-
Max. Output	kW (hp_ps)	105 (141_143)	-
Max. Torque	Nm (kg-m)	300 (30.6)	-

<b>HYBRID BATTERY</b>			
Battery Type		Nickel-Metal hydride	-
Nominal Voltage	V	230.4	-
Number of Battery Cells		192	-
System Voltage	V	650	-

<b>TOTAL SYSTEM OUTPUT</b>			
Total Max. Output	kW (hp_ps)	164 (220_223)	-

<b>PERFORMANCE</b>			
Max. Speed*10	km/h	190	230
Acceleration (0 to 100 km/h)	sec.	8.6	7.5

CHASSIS	Type	RC 300h	RC 200t
		CVT	Automatic
Layout		FR	FR
Transmission Gear Ratio	1st	-	4,596
	2nd	-	2,724
	3rd	-	1,863
	4th	-	1,464
	5th	-	1,231
	6th	-	1,000
	7th	-	0,824
	8th	-	0,685
	Reverse	-	4,056
Differential Gear Ratio (Front/ Rear)		- /2.764	- /3.133
Brake Type	Front	Ventilated Disc	Ventilated Disc
	Rear	Ventilated Disc	Ventilated Disc
Brake Type	Front	334/30	334/30
	Rear	310/18	310/18
Parking Brake Type of Control and Location		Foot Pedal Type	Foot Pedal Type

# RC TECHNICAL SPECIFICATIONS

CHASSIS	RC 300h		RC 200t
	Front	Double Wishbone	Double Wishbone
Suspension Type	Rear	Multi-link	Multi-link
		2.84	2.84
Lock to Lock	Min. - Max. (VGRS operating)	2.35 - 3.18	2.35 - 3.18
		5.2	5.2
Min. Turning Radius	Tyre <sub>m</sub> (ft.)	5.6	5.6
	Body <sub>m</sub> (ft.)		
Power Steering Type		Electric	Electric

\*1: Unladen vehicles

\*2: Models with 17-inch wheel and 18-inch wheel

\*3: Models with 19-inch wheel

\*4: Models with sun roof

\*5: Models with 17-inch wheel

\*6: With one person on board

\*7: TMC design value

\*8: Models for Russia and Kazakhstan

\*9: Models for South Caucasus (Azerbaijan, Armenia, Georgia) and Kazakhstan

\*10: Toyota in-house measured figures

\*11: Models with 18-inch wheel