



Hyundai Motor All-New Genesis

Press information

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NEW THINKING. NEW POSSIBILITIES.

HYUNDAI MOTOR EUROPE GmbH
Kaiserleipromenade 5
63067 Offenbach, Germany
www.Hyundai.com/eu

Hyundai Motor All-New Genesis

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1. INTRODUCTION

All-New Genesis - a demonstration of capability

At a glance

- Executive sedan will come to Europe in limited numbers to play a key role in building the Hyundai brand
- Refined performance from powerful, smooth drivetrain
- HTRAC all-wheel drive system heightens driving pleasure and security
- Flawless ergonomics and clean design make extensive levels of standard equipment immediately accessible
- A comprehensive suite of smart, discreet technologies enhances well-being
- Delivers true comfort courtesy of fine materials, caring features and serene ambience

All-New Genesis is a high-technology premium sedan that clearly demonstrates Hyundai's capabilities in a number of key areas, including technology, style, comfort and driving pleasure. Limited numbers of All-New Genesis will be made available in Europe, providing a select number of customers with a highly-capable and luxuriously-equipped executive sedan that rewards with high levels of comfort and calm.

Though All-New Genesis is the biggest, most fully-equipped and technologically advanced Hyundai model available in Europe, it delivers fully on the brand's promise to provide value beyond expectations. Previewing advanced comfort and safety equipment and technology, All-New Genesis offers European customers an exclusive purchase proposition that focuses on refined performance and occupant well-being.

Available in a single, high-specification form, All-New Genesis is powered by a potent 3,8-litre V6 GDI engine delivers that plentiful power and torque across a broad range of engine speeds, and works in harmony with a smooth 8-speed automatic transmission to deliver refined performance. Driving pleasure and security is ensured by the new, in-house-developed HTRAC all-wheel drive system, sophisticated multi-link rear suspension and near-equal weight distribution.

The generous accommodation provided includes levels of space and comfort never before seen in a Hyundai vehicle in Europe, and cossets occupants in opulent comfort. The accommodation uses fine materials to present a serene ambience, supported by advanced architecture that delivers superior refinement under all conditions.

Extensive levels of standard comfort features are immediately and simply accessed, thanks to excellent ergonomics and easily comprehended design. Minimal interior details support the calm cabin ambience, combining with the comfort-orientated suspension to leave occupants feeling fresh after even the longest of journeys.

Occupants of All-New Genesis are protected and cared-for by a full portfolio of features that are both intelligent and unobtrusive. These include Smart Cruise Control, Automatic Emergency Braking and the world's first CO₂ cabin sensor to monitor the cabin's environment and protect the driver from drowsiness.

Showcasing the latest evolution of Hyundai's design philosophy, fluidic sculpture, the sleek, sophisticated styling of All-New Genesis hints at its technical capabilities and conveys its assured road manners.

All-New Genesis is the result of a 500 billion Won (€342 million) investment by Hyundai over a four-year period. It has been designed primarily for markets such as the USA and Korea, where its predecessor enjoyed great success, underscoring Hyundai's global policy of building the right cars for the right regions. The original Genesis won several prestigious industry awards in North America and played an important role in the rapid evolution of the Hyundai brand. In Europe, it will also help to raise brand awareness - and will play a different though equally well-defined role demonstrating the capabilities of Hyundai.

Global demand for All-New Genesis is being supplied from Hyundai's Ulsan production plant in Korea.

Allan Rushforth, Senior Vice President and Chief Operating Officer, Hyundai Motor Europe, commented: "All-new Genesis offers a unique premium ownership experience that demonstrates the true breadth of our engineering and technological capabilities. There are a number of world and Hyundai-first technologies applied to this car, making it a true showcase of what we can achieve, and continuing Hyundai's legacy of delivering value beyond expectations across a broadening number and variety of high-quality cars."

2. STYLING & DESIGN

Refined exterior style, plentiful interior space

At a glance

- Distinctive visual aesthetic with sleek lines and short overhangs
- Elegant proportions reflect natural poise and superior driving dynamics
- Displays latest evolution of fluidic sculpture design philosophy
- Spacious interior design defined by calming ambience and minimal details
- Precision fit and finish reflects proposition of understated sophistication

Exterior design

The exterior of All-New Genesis is defined by elegant proportions and clean lines that reflect its natural poise and superior driving dynamics. The long hood and short trunk emphasise its long wheelbase and minimal overhangs, conveying its assured road manners. The car's styling is the latest interpretation of fluidic sculpture, the company's successful design philosophy, with restrained details adding to the air of sophistication.

All-New Genesis also features the family Hyundai look, with a striking hexagonal front grille as a key geometric element. The single-frame 3D-grille is depicted in a semi-gloss chrome finish, framed by the high-intensity discharge (HID) headlamps, powerful light-emitting diode (LED) indicators and fog lamps. Detailing is subtle and refined, such as the two-tone outside mirrors with embedded slim-type LED visual elements.

In profile, the All-New Genesis is expressive, with fluid lines and voluminous, blended surfaces giving it a three-dimensional presence in motion. A sleek, sharply sloping C-pillar echoes the model's sporty styling, which results in an extremely low drag coefficient (Cd) figure of just 0,26. The rear of the All-New Genesis benefits from a sculptural aesthetic with jewelled, LED rear light clusters.

Mark Hall, Vice President of Marketing, Hyundai Motor Europe: “With All-New Genesis, Hyundai’s designers have created a distinctive and stylish package that reflects the comfort and composure it allows all occupants to enjoy. The balanced proportions, reassuring stance and clean lines of this car provide an aesthetic balance that will appeal to discerning buyers.”

Interior design

The cabin of All-New Genesis presents occupants with an immersive environment that offers generous space and a relaxing environment. Intuitive controls and instrumentation make the rich list of comfort features easy to access and promote a feeling of serenity. The seats are highly adjustable, allowing occupants to find the optimal position for lasting comfort, and they have been designed to offer total support throughout even the longest of journeys. Finding a comfortable driving position is made even easier by the steering wheel that adjusts electrically for height and reach.

Every interior detail of All-New Genesis has been carefully considered to create a calming, intuitive and ergonomic space. Ergonomic research to ensure ease of control was meticulously undertaken, including the use of a specially-designed laboratory tool created to measure occupant operational force.

Precision fit and finish can be found throughout All-New Genesis, and its interior trim has been carefully designed to match the vehicle’s proposition of understated sophistication. To maintain the luxurious feel, the relationships between different materials, their texture and colour coordination materials were intensely scrutinised.

The plentiful space available inside All-New Genesis is highly usable, with particular attention paid to the provision of storage for items such as mobile electronics of all shapes and sizes, as well as the flexibility of interior beverage holders.

A new design pattern has been applied to the finest soft-touch materials to decrease interior reflections and brighten dashboard surfaces, while high-grade materials such as genuine aluminium and matte-finished wood are available to further lift cabin elegance. Cohesion between the central fascia and audio controls has been streamlined by making the two separate sections appear as one.

New comfort-focused features for All-New Genesis include manual rear-seat side sunshades and a panoramic sunroof.

3. COMFORT

An intimate space of complete calm and convenience

At a glance

- An atmosphere of refined luxury with optimal comfort for all occupants
- Finest leather, wood and aluminium matched to attractive and tactile finishes
- High levels of standard convenience features include world's first CO₂ cabin sensor
- High-tech features carefully integrated to maintain ambience
- Spacious interior design and calming cabin environment leave occupants refreshed
- Smart Trunk System allows both feet to remain on the ground

All-New Genesis provides generous space and comfort for all occupants, coupled to a standard of specification and equipment that has never before been seen in a Hyundai in Europe. The luxury interior includes minimal design details, creating a calm cabin ambience that leaves all occupants feeling refreshed. Driver convenience has been optimised through high levels of equipment, including several technologies fitted to a Hyundai car for the first time.

Both driver and passenger seats optimise occupants' posture thanks to adjustable driver's seat bolsters and seat cushion extension, enhanced seat pad density and seat support technologies. Position adjustment can be made with the 12-way electronic front seats, including 4-way electronic lumbar adjustor. Heated and ventilated front and rear seats ensure occupants' total comfort. Seat quality has been enhanced with the introduction of double, rather than single stitching. The driver's seat incorporates additional functionality, with a new air-pressure pump and

controller valve, providing seatback bolster adjustment through individual air-cells located in the seat. With a total operating time under eight seconds, the new model benefits from both a faster activation process and a greater range of adjustment than many rivals' models.

Hyundai's design and engineering teams have worked together to ensure that while the full portfolio of advanced equipment can be quickly and easily exploited, it is never intrusive. All controls are instinctive to find, intuitive to use and a pleasure to touch, utilising high-quality materials and being logically-placed and easy to operate.

To enhance quality of life and ensure the highest levels of protection for all on board Genesis, as well as other road users, All-New Genesis is fitted with the world's first CO₂ cabin sensor. Constantly monitoring air quality, the sensor guards against drowsiness and enhances comfort.

The climate control system of All-New Genesis is simple to operate, and automatically detects temperature, humidity and CO₂ levels, and maintains safe levels of visibility and comfort. A three-zone function allows different temperatures to be set independently for driver, passenger and rear seat passengers.

The power door latches fitted to All-New Genesis enhance convenience for all occupants by automatically completing the closure of doors, and the logo puddle lamp provides a warm welcome.

Even the hands-free trunk-opening system has been designed to offer more convenience than other systems. Typically, hands-free trunk-opening uses a kick sensor under the rear bumper to enable the driver to open the boot lid. Hyundai's ergonomic engineers found this method to be difficult when carrying packages. So the All-New Genesis Smart Trunk System is designed to open the boot automatically

if the smart key is detected in a pocket or purse within close proximity of the rear of the car for longer than three seconds, allowing hands-free ease of operation when desired. This system allows the driver to keep both feet comfortably on the ground, simply waiting by the trunk for a few seconds for it to open automatically. The Smart Trunk system also provides an audible warning and flashing light prior to opening.

All-New Genesis also offers an electronic parking brake with Automatic Vehicle Hold (AVH) for convenience when driving in traffic. AVH automatically holds the vehicle at a stop until the accelerator pedal is depressed, such as at a traffic signal or while in stationary traffic. The vehicle hold re-engages whenever the vehicle is brought to a complete stop. The new car also includes smart key entry with push-button start fitted as standard.

4. TECHNOLOGY & CONNECTIVITY

Discreet forward-looking assurance and advanced infotainment deliver connected experience

At a glance

- Sophisticated modern connectivity and user-friendly functionality
- Integrated next generation infotainment systems provide cutting-edge levels of information on the move
- Advanced navigation systems are straightforward to access and control
- Advanced augmented assessment aids and assistance features protect occupants from hazards
- Premium multi-media system offers unparalleled in-car entertainment experience

Drivers and passengers of All-New Genesis will enjoy access to an array of equipment that ensures their safety and allow them to stay connected at all times. Just like the plentiful comfort and convenience features, these systems are discerning and discreet, providing forward-looking assurance to occupants without disturbing the on-board serenity.

All-New Genesis features high levels of technology, reiterating Hyundai's capabilities and its commitment to delivering value beyond expectations. Advanced driver comfort and occupant safety aids - including Smart Cruise Control and Automatic Emergency Braking - are joined by sophisticated multi-media and next generation infotainment systems.

Taking inspiration from aircraft technology, a new Head-Up Display (HUD) is fitted to All-New Genesis, projecting a virtual image onto the windscreen and enabling the driver to keep his or her eyes on the road using a system of mirrors combined with a TFT LCD display. The system utilises wide-angle projection with adjustable brightness to ensure both excellent day and night time visibility. Driving information such as speed, Smart Cruise Control (SCC) status, navigation, Blind Spot Detection (BSD), Forward Collision Warning (FCW), speed limit, Lane Departure Warning System (LDWS) and audio information can be projected at a perceived virtual distance of approximately two metres ahead of the driver for maximum legibility while driving.

Composed and stress-free progress aboard All-New Genesis is aided by the undemanding navigation service. Built around a super-large 9,2-inch 720p High-Definition screen, its advanced features are easy to access and control, thanks to intuitive, smooth operation. The system also incorporates a 64GB Solid State Drive (SSD) for multimedia.

The specially-tuned Lexicon® Discrete Logic 7 Surround premium audio system fitted as standard to All-New Genesis turns the car's spacious interior in to an immersive auditorium of exceptional quality. The musical experience delivered through its 17 speakers (14 speakers on the UK version), Logic 7 Surround Sound processing and 12-channel digital amplifier with 900-watts of equivalent output is defined by quality, with power and clarity sure to satisfy the most demanding audiophile. Rear seat passengers can enjoy their own entertainment system with independent controls.

Augmented assessment and assistance features protect those in and around All-New Genesis. These include a Blind Spot Detection system that incorporates Rear Cross Traffic Alert to make avoidance of hazardous situations more likely; and an Around View Monitor that utilises four cameras to provide 360° vision and make manoeuvring easy.

The new model's cluster displays consists of a high-resolution screen with 7,0-inch TFT LCD cluster display. The route screen displays speed limits, details the next three manoeuvres and displays real road signage with junction views and lane guidance. Lane guidance outlines the lane or lanes the driver needs to remain in when a road ahead splits. Junction view uses street and actual road sign images to match what the driver will see when arriving at the next manoeuvre.

5. ENGINE & TRANSMISSION

Smooth and progressive power delivery for effortless driving experience

At a glance

- Powerful, refined and economical drivetrain
- Optimized power delivery ensures smooth, comfortable and luxurious ride
- Advanced automatic transmission system with manual shift delivers impeccable gear changes
- Noise and vibration intrusion suppressed for a quiet and serene driving experience for all occupants

All-New Genesis has been engineered and developed to provide drivers with a potent level of performance to ensure unruffled progress. A powerful 3,8-litre V6 GDI engine delivers plentiful levels of torque over a broad range of engine speeds, providing instant yet controlled performance. The responsive eight-speed automatic transmission provides seamless gear changes to enhance the refined driving experience.

Direct-injected Lambda 3,8-litre V6 engine

The All-New Genesis is powered by a powerful 3,8-litre direct-injected 'Lambda' engine, optimised to deliver a flatter torque curve, providing more pulling power at low engine speeds for enhanced usability. Comprehensively redeveloped, the engine includes a three-stage variable intake system, triangular-pattern fuel injector for improved combustion, an air-gap exhaust manifold to reduce noise and vibrations from the engine bay, and an upgraded cylinder block with a variable-vane two-stage oil pump for reduced parasitic losses. The 3,8-litre unit, from the company's

'Lambda' engine family, utilises direct-injection technology to produce a maximum power output of 315 ps at 6000 rpm and 397 Nm of torque at 5000 rpm. Thermal efficiency gains are achieved thanks to the high 11:1 compression ratio, simultaneously increasing engine performance and fuel economy.

The engine also features a Dual Continuously Variable Valve Timing (D-CVVT) system, as well as variable induction, all-aluminium block and heads, steel timing chain and iridium-tipped spark plugs for the greater durability and performance demanded by European customers.

Eight-speed automatic with manual shift

The power unit of All-New Genesis is coupled to a carefully-refined eight-speed automatic transmission. The Hyundai-developed transmission offers smooth gear changes, better acceleration delivery and top speed, sport-mode mapping, and reduced in-cabin intrusions. The transmission includes SHIFTRONIC® manual shift capability with an ergonomically-placed, force-fed paddle shift system for a sporty driving mode with manual operation when required.

6. RUNNING GEAR

Intelligent HTRAC all-wheel-drive system and advanced structure deliver driving security and serenity

At a glance

- New multi-mode HTRAC all-wheel drive system provides maximum stability in even difficult driving conditions
- Multi-link rear suspension ensures greater driving composure
- Chassis behaviour engineered around the world, including at Hyundai's Technical Centre at Nürburgring
- Intelligent driving modes suit preferred personal driving preferences and changing road conditions
- All-new platform uses high strength steel and advanced construction to achieve high rigidity
- Isolation from the imperfections of the outside world makes true relaxation possible
- Accurate control in every situation is delivered with a connected, confidence-inspiring feel

All-New Genesis is equipped with Hyundai's in-house-developed HTRAC all-wheel drive system and multi-link rear suspension, ensuring that the plentiful power is transferred to the road even in difficult, slippery conditions, and acceleration and advanced braking performance for driver security and comfort. A near-equal front-to-rear weight distribution (52:48 front:rear) furthers the sensation of security and composure.

The HTRAC system maximises driving pleasure and makes performance accessible in even the most demanding conditions by automatically distributing torque to utilise available grip - aiding acceleration and braking, especially when grip is low.

Underlining Hyundai's commitment to engineering the right cars for the right global regions, All-New Genesis was developed through extensive on-the-road and laboratory-based trials. Circuit testing of the new model took place in Germany, Korea and at Hyundai's California Proving Ground in the United States. Extreme G-force assessment of the new HTRAC all-wheel drive system was completed at the Korea International Circuit in Yeongam, built to FIA Formula One standards. Durability and high-performance handling driving tests took place at Hyundai's European test centre at the legendary Nürburgring Nordschleife circuit in Germany, to precisely fine-tune the cossetting ride of All-New Genesis, as well as refining its braking and handling characteristics.

The use of ultra-high-strength steel allows All-New Genesis to offer a compliant ride that isolates occupants from the imperfections and undulations that are commonly found on European roads. The addition of our new HTRAC all-wheel drive system ensures driving characteristics can be changed to suit driver preferences and road conditions.”

New HTRAC AWD system

The All-New Genesis is equipped with Hyundai's new HTRAC All-Wheel Drive (AWD) system*. HTRAC is a multi-mode system, providing an electronic, variable-torque-split clutch with active torque control between the front and rear axles. In the pursuit of optimal weight balance and driving dynamics, Hyundai engineers produced one of the lightest all-wheel drive systems in use today, at just 75 kg.

An Intelligent Driving Mode allows drivers to select from three operational modes designed to maximise driving security and pleasure in all conditions and for all driving preferences. Each mode alters transmission mapping, power distribution, throttle responsiveness, stability control and suspension damping settings. Selected modes are applied seamlessly by the HTRAC system.

Intelligent Driving Mode	Driving characteristics
Eco	Fuel conservation
Normal	Balanced
Sport	Dynamic focus

‘Normal’ mode helps provide further driver confidence and control in all-weather conditions. The ‘Sport’ setting sends more available torque to the rear wheels for even greater agility with progressive handling characteristics that are more like those of a rear-wheel drive sedan.

To maximise engine efficiencies, the computer-aided system can direct more available torque to the rear wheels during steady highway cruising to reduce drivetrain friction losses and noise. This system has a wider range of torque distribution variability than many other systems and has been tuned to variable conditions, such as straight-line acceleration, medium- and high-speed cornering, and hill-starts.

New ultra-rigid platform

All-New Genesis sits on a new platform, 51,5% of which is formed from advanced high-strength steel supplied by the world-class Hyundai Steel plant in Korea. The benefits of using more high-strength steel are immediately evident - a 16 per cent increase in torsional rigidity and a 40% increase in bending rigidity. As a result, the All-New Genesis is stiffer in both torsional and bending rigidity than almost all cars of comparable size.

Body and mounting point stiffness has also been improved, ensuring a smooth ride over uneven road surfaces. This was a top development focus for Hyundai's engineers and they achieved a more robust connecting structure via the extensive use of laser welding, double-reinforced body and chassis mounting points, and a new hot stamping and dipping technique for the B-pillar and roof sides. The new model's front shock towers are constructed from aluminium rather than steel while a diamond-shaped strut bar maximises front-end rigidity for a more precise steering response. The front seat frames have been also strengthened for greater feeling of rigidity from inside the cabin.

Performance chassis

The stiffer chassis employs a new rear multi-link suspension arrangement, with newly optimised geometry for dynamic performance and ride comfort. Lateral suspension stiffness improvements have been achieved by the use of the fully-independent, five-link front and rear suspension design, with increased suspension travel (front and rear), for greater wheel articulation and bump absorption over a variety of road surfaces. The reduction in camber angles when turning at speed results in improved steering feedback, 23 per cent less tyre flex, and increased lateral grip. Bespoke 19-inch alloy wheels are stronger and offer more precise suspension response across variable road surfaces.

The Continuous Damping Control (CDC) suspension system reduces body motion and roll, allowing a more responsive and dynamic drive complemented with a cossetting ride. Independent roll control is achieved using separate HTRAC modes: 'Normal' helps provide a superior ride comfort, while 'Sport' mode helps increase damping forces for enhanced dynamic precision and control. Handling and road holding also benefit from the near-equal 52:48 front-to-rear weight distribution.

In addition, special focus was given to the development of, with a Variable Gear Ratio (VGR), helping to provide high-speed stability and a more direct feel at low and medium speeds. These driving qualities are attained while retaining the incremental fuel economy benefits of an electric system over the higher parasitic losses of hydraulic systems.

NVH reduction

In the pursuit of optimal refinement and minimal sound intrusion, Hyundai engineers spent considerable time during the development of All-New Genesis to analyse idle noise and vibration; acceleration, road and wind noise; and audible booming throughout the vehicle. Multiple sound-absorbing materials and a low-noise fuel pump have been fitted, bulkhead insulation and sealing improved, and vibrations minimised through the improvement in overall rigidity. Additional rear insulation helps reduce sound boom and vibration, resulting in the lowest possible levels of audible noise (as low as 50 dB when accelerating) inside the soothing cabin.

Under acceleration, improved sound quality has been achieved through mid-to-high-frequency noise reduction, and dynamic engine sound improvements were achieved through intake and exhaust system tuning. Engine support brackets have been moved further apart for greater stiffness, while transmission and sub-frame mounts have been stiffened by up to 100 per cent.

To improve NVH performance at cruising speeds (around 100-190 km/h), Hyundai engineers increased the stiffness of parts associated with the sub-frames and suspension, lowering levels of cavity and rumble noise. To ensure All-New Genesis recorded lower interior noise in crosswind conditions, the doors were thickened, sunroof articulation reshaped, and changes were made to the sealing process for increased durability and performance. In addition, cowl bulkhead insulation and sealing has been improved. In total, just 3 kg of sound insulation is used during

production of each All-New Genesis, yielding a remarkable NVH reduction-to-weight ratio.

*For right-hand-drive markets, the All-New Genesis is only available in rear-wheel drive configuration.

7. SAFETY

Comprehensive suite of active and passive safety features protects and assists

At a glance

- World's first CO₂ cabin sensor created to manage driver fatigue during longer journeys
- Vehicle features 'active' Sensory Surround Safety technologies to ensure drivers are fully aware of hazards around them at all times
- Advanced Lane Departure Warning system prevents potentially dangerous motorway collisions
- Automatic Emergency Braking aids safety in town driving and avoids potential low speed impacts with other vehicles and street furniture
- Smart Cruise Control enables distances to surrounding vehicles to constantly modulate ensuring maximum possible safety
- Active hood protects pedestrians and cyclists

All-New Genesis is equipped with an abundance of safety features and advanced driver aids as standard. The new model showcases Hyundai's capabilities and commitment to enhancing the safety of drivers, passengers and fellow road-users.

The high level of standard active and passive safety systems included is designed to protect occupants at all times, against all hazards.

Traditional active safety equipment fitted as standard to All-New Genesis includes Electronic Stability Control (ESC) Anti-lock Brakes Assist System (ABS), and

Electronic Brake Distribution (EBD). Large 345mm front discs use four-piston fixed monobloc brake calipers for precise braking response.

All-New Genesis also features a Lane Departure Warning System (LDWS). When the system is activated, upon detection of a lane crossing without indication, the driver receives two types of warning: vibration from the haptic steering wheel, and a warning light within the binnacle, allowing the alteration of direction accordingly. Additionally, the sensors can also activate a Lane Keep Assist System (LKAS) which varies the amount of steering input required to change lanes to minimise sudden movements. All-New Genesis also benefits from a Tyre Pressure Monitoring System (TPMS), enhanced with individual tyre pressure readouts, ensuring correct inflation at all times.

Passive safety technologies include padded front and rear head restraints, protecting the occupants' from whiplash in the event of a rear-end collision. In total nine airbags, including advanced dual front airbags, driver's knee airbag, front and outboard rear seat-mounted side-impact airbags, and roof-mounted side curtain airbags for both front and rear outboard seat occupants.

Daytime running lights are fitted as standard on All-New Genesis for maximum visibility to other motorists. For convenience and safety, a High Beam Assist (HBA) function is also available. When switched to automatic mode, it detects both oncoming vehicles on the opposite side of the road, and vehicles in the same lane ahead at night, and switches the vehicle's headlights to low-beam as appropriate, reducing blinding effects on other drivers. Whenever there are no vehicles detected, the system automatically re-activates the high beam lighting, maximizing the driver's range of vision. To maximise driving visibility, Genesis offers HID headlamps with dynamic auto-levelling that compensates for varying vehicle loads.

Sensory Surround Safety technologies

All-New Genesis incorporates Sensory Surround Safety, a suite of active driver safety technologies designed to reduce risk by raising awareness of surroundings and other road users.

All-New Genesis offers a Hyundai-first application of Automatic Emergency Braking (AEB), utilising sensor-fusion technology to help avoid a potential collision or to reduce its impact. The system will employ automatic braking whenever it detects another vehicle at an unsafe closing speed. This system uses the Smart Cruise Control system and the on-board forward camera from the LDWS to provide this extra margin of safety.

Automatic Emergency Braking (AEB) Functional Range:		
Speed when braking	Application	AEB result
80 - 180 km/h	Partial braking	Collision warning
8 - 80 km/h	Full braking	Collision mitigation

The Smart Cruise Control (SCC) system incorporates stop-start functionality, which operates seamlessly in slow-to-stationary traffic. Using the front grille-mounted radar sensor, the SCC system enables Genesis to help maintain safer, consistent spacing to the vehicle ahead in varied traffic conditions. The system will also detect a stationary vehicle ahead and apply the Automatic Emergency Braking system.

The HTRAC system featured on All-New Genesis includes an Emergency Steering Support (ESS) mode which automatically changes the suspension and electronic stability control (ESC) settings for emergency steering, assisting collision avoidance.

All-New Genesis also debuts an advanced Blind Spot Detection system (BSD), which helps monitor traffic around the car. The system uses radar sensors located in the rear bumper to help warn the driver of an approaching vehicle in his or her blind spot via an indicator on the exterior mirrors. If the driver activates the indicator and attempts to change lanes, ignoring warning indicators, BSD additionally issues an audible warning and haptic steering wheel vibration. All-New Genesis models equipped with a head-up display projects the BSD system indicator onto the vehicle's windscreen, nearer the driver's view of the road.

Lane Change Assist (LCA) performs a similar function to help detect and alert the driver of vehicles approaching from the rear at high closing speeds, while Rear Cross-Traffic Alert (RCTA) scans the full-width of the vehicle when the driver is reversing out of parking spaces.

The All-New Genesis also offers a parking assistance system with eight ultrasonic sensors located on the front and rear bumpers. The sensors, along with the rear camera, help detect how close objects are when parking. Distance is indicated on the in-dash screen and accompanied by an audible warning tone.

To ensure maximum driver alertness, All-New Genesis also benefits from a world-first technology: a CO₂ sensor control system, located under the glove box. Hyundai engineers discovered that occupants start to get drowsy when high levels of CO₂ was detected, so the new ventilation system helps ensure the cabin maintains a CO₂ concentration well below that level at all times using freshly-ventilated ambient air. The system monitors the vehicle's intake of fresh or re-circulated air using a dedicated CO₂ sensor.

All-New Genesis has also been designed to help protect other road users - when imminent impact with a pedestrian is detected, its active hood is lifted to absorb shocks and minimise the risk of injury.

8. TECHNICAL SPECIFICATIONS / EUROPE

Body and chassis

Four-door, five -seat sedan with unitary construction bodyshell. 3,8-litre V6 GDI engine driving all four wheels* via an eight-speed automatic transmission and HTRAC AWD system*.

Engine

3,8-litre V6	
Type	Lambda V6 DOHC
Capacity	3778 cc
Bore x stroke	96,0 x 87,0 mm
Compression ratio	11:1
Power	315 ps at 6000 rpm
Torque	397 Nm at 5000 rpm

Transmission

Engine	3,8 V6
Automatic - speeds	8

Gear ratios

3,8-litre V6	
1st	3,665
2nd	2,396
3rd	1,610
4th	1,190
5th	1,000
6th	0,826
7th	0,643
8th	0,556

Reverse	2,273
Final drive	3,909

Suspension and damping

Front	Multi-link
Rear	Multi-link

Steering

Type	MDPS (motor-driven power steering) electric power-assisted rack and pinion
Gearing	11,8
Steering turns	2,55 (lock-to-lock)
Turning circle	5,7 m (AWD) 5,52 m (RWD)

Brakes

Front	360 mm ventilated discs 4-pot caliper brake with pad wear warning device
Rear	314 mm ventilated discs 1-pot caliper brake with pad wear warning device
Assistance	Power-assisted Braking System with EBD, ESP system fitted as standard. ABS, TCS, BAS

Wheels and tires

Wheel size	Tires	Spare tire
8,5 x 19-inch (front)	245/40 R19 (front)	Temporary Tyre
9,0 x 19-inch (rear)	275/35 R19 (rear)	

Dimensions (mm)

Exterior

Overall length	4990
Overall width	1890 (excluding door mirrors)
Overall height	1480
Wheelbase	3010
Front overhang	845
Rear overhang	1135
Drag coefficient	0,26

Interior

	Front	Rear	Combined
Head room	1000	970	----
Leg room	1160	890	2050
Shoulder room	1480	1450	----

Capacities (litres)

Luggage	493 (VDA)
Fuel tank	73

Weights** (kg)

Engine	3,8-litre V6 (AWD) <i>(not RHD markets)</i>	3,8-litre V6 (RWD) <i>(RHD markets only)</i>
Minimum curb	1980 - 2075	1890 - 1995
Maximum laden	2520	2470

Performance**

Engine	3,8-litre V6 (AWD) <i>(not RHD markets)</i>	3,8-litre V6 (RWD) <i>(RHD markets only)</i>
Maximum speed (km/h)	240	240
0-100 km/h (seconds)	6,8	6,5

* For right-hand-drive markets, the All-New Genesis is only available in rear-wheel drive configuration.

** Figures stated are manufacturer's estimates

-Ends-