Volkswagen Golf R

Features and Specifications

Safety and Security		R	R Wagon
Airbags	Driver and front passenger airbags	S	S
	Driver and front passenger side airbags	S	S
	Rear seat side airbags	S	S
	Curtain airbags, front and rear	S	S
Anti-theft	Alarm system with interior monitoring and towing protection	S	S
	Electronic engine immobiliser	S	S
Body	Fully galvanised body with 12 year corrosion perforation warranty	S	S
	Door side impact protection	S	S
	Rigid safety cell with front and rear crumple zones	S	S
Brakes	Automatic flashing brake lights activated in emergency braking situation	S	S
	Auto hold function	S	S
	Anti-lock Braking System (ABS)	S	S
	Blue brake callipers	S	S
	Brake Assist	S	S
	Electronic Brake-pressure Distribution (EBD)	S	S
	Electro-mechanical parking brake	S	S
	Multi-collision brake	S	S
	Performance front brake system	S	S
Child restraints	Child seat top tether anchorage points (3)	S	S
	ISOFIX child seat anchorage points, outer rear seats	S	S
Head restraints	Integrated front head restraints	S	S
	Rear head restraints height adjustable (3)	S	S
IQ.DRIVE	Adaptive Cruise Control (ACC) with stop and go function	S	S
	Automatic kerb function when reversing, passenger's side exterior mirror	S	S
	Side Assist with Rear Traffic Alert	S	S
	Distance warning display	S	S
	Driver Fatigue Detection system	S	S
	Emergency Assist	S	S
	Exit Warning System	S	S
	Front Assist with Pedestrian and Cyclist Monitoring functions	S	S
	Lane Assist	S	S
	Manoeuvre braking, front and rear	S	S
	Oncoming vehicle braking when turning	S	S
	Optical Parking System (OPS) in infotainment display	S	S
	Park Assist, parking bay and parallel parking assistance	S	S
	Parking distance sensors, front and rear with acoustic and visual warning	S	S
	Rear View Camera (RVC) with dynamic and static guidance lines	S	S
	Traffic Jam Assist	S	S
	Travel Assist	S	S
Locking	Child safety locks on rear doors	S	S
	Fuel filler flap lock/unlock by remote, push to open	S	S
	Keyless Access, keyless entry and starting system including starter button	S	S
	One touch lock / unlock for driver	S	S
	Programmable locking functions	S	S
	Remote central locking	S	S
Warning triangle		S	S

Safety and Security (cont'd)		R	R Wagon
Seat belts	Front height adjustable with pre-tensioners and belt force limiters	S	S
	Proactive occupant protection system in combination with Front Assist and Side Assist	S	S
	Outer rear with belt tensioner and force limiter	S	S
	Visual and acoustic warning for driver and front seat passenger seat belts not fastened	S	S
	3 point seat belts for all passengers	S	S
Traction Control	Anti-Slip Regulation (ASR)	S	S
	Electronic Differential Lock (EDL)	S	S
	Electronic Stabilisation Program (ESP)	S	S
	Vehicle Dynamics Manager, coordinates and activates the functions:	S	S
	4MOTION all-wheel drive with R-Performance Torque Vectoring	S	S
	Adaptive Chassis Control	S	S
	Extended Electronic Differential Lock (XDL)	S	S
Exterior Equipment / Styling			
Exterior highlights	Body coloured bumper bars and door handles	S	S
	Chrome roof rails	-	S
	Exterior mirrors in matte chrome finish	S	S
	Exposed dual chrome exhaust tail pipes, left and right	S	S
	Radiator grille with blue/illuminated strip and R nameplate	S	S
	R front bumper with gloss black C signature, front spoiler and large lower air intake	S	S
	R rear bumper with gloss black motorsport style diffuser	S	S
	R performance rear roof spoiler in body colour and gloss black	S	-
	Side sill panel extensions in body colour	S	S
Exterior lighting	Coming / leaving home function	S	S
	Dynamic Light Assist	S	S
	Fog lamp, rear		
	Illuminated door handle recesses	S	S
	Illuminated LED strip on radiator grille	S	S
	IQ.LIGHT Matrix LED headlights with unique light signature, dynamic cornering lights and dynamic indicators	S	S
	Low light sensor with automatic headlight function	S	S
	Premium LED rear tail lights with dynamic indicators	S	S
	Rear registration plate light, LED	S	S
	Surround lighting with welcome light (R projection from door mirror)	S	S
Paint	Gloss paint finish	S	S
	Metallic / Pearl Effect paint finish	S	S
	Premium Metallic paint finish	S	S
Tinted glass	Darkened rear tail light clusters	S	S
	Dark tinted rear side window and rear window glass, 65% light absorbing	S	S
	Heat insulating tinted glass	S	S
Wheels	Alloy wheels (Estoril) 19x8” with 235/35 R19 tyres	S	S
	Anti-theft wheel bolts	S	S
	Low tyre pressure indicator	S	S
	Tyre mobility set, tyre sealant and 12-volt compressor	S	S
Comfort and Convenience			
Armrest	Front centre armrest, height and longitudinally adjustable with storage box and rear air outlets (2)	S	S
	Rear seat centre armrest with cup holders (2) and load through provision	S	S

Comfort and Convenience (cont'd)		R	R Wagon
Air conditioning	3 zone automatic climate control air conditioning with Smart and Classic Climate menus	S	S
	Air Care air cleaning function	S	S
	Air quality and humidity sensor with automatic air recirculation	S	S
	Dust and pollen filter	S	S
	Touch slider temperature controls	S	S
Cup holder	Front (2)	S	S
	Rear (2)	S	S
	Bottle holders in front door pockets	S	S
Driving profile selection	Comfort, Sport, Race (with additional Special and Drift modes) and Individual driving modes	S	S
Floor mats	Front and rear, carpet with blue seam stitching	S	S
Grab handles	Soft fold away grab handles, front and rear	S	S
In car entertainment and technology	Innovision Cockpit	S	S
	Digital Cockpit Pro Colour digital display with multiple customisable views of speedometer, tachometer, navigation, driving data, audio, telephone and driver assistance systems	S	S
	Discover Pro audio and satellite navigation system 10.0” colour capacitive touch screen display with smartphone style HMI, customisable home screen, proximity sensor, gesture and voice control, AM/FM radio, navigation map views, telephone, media, App-Connect, sound, background lighting, vehicle and driver assistance system settings	S	S
	App-Connect USB interfaces for Apple CarPlay® and Android Auto™ in front centre console	S	S
	Wireless App-Connect for Apple CarPlay® and Android Auto™ App-Connect featuring wireless Apple CarPlay® and wireless Android Auto™ is compatible with the latest versions of iOS and Android, active data service required, optional connection cable (sold separately).	S	S
	Inductive wireless charging	S	S
	2 USB-C ports in the front, 2 USB-C charging sockets on the centre console in the rear	S	S
	Audio, voice control, driver assistance system and Digital Cockpit touch controls mounted on steering wheel	S	S
	Bluetooth® phone connectivity with contacts display, operation via touch screen audio unit or Multi-Function Display and Bluetooth® audio streaming	S	S
	DAB+ Digital radio reception	S	S
	Head up display, windscreen projection - display of speed, driver assistance systems and navigation turn by turn direction	S	S
	Speakers, front and rear (6) plus centre speaker	S	S
Interior highlights	Aluminium finish accelerator and brake pedals	S	S
	Black headlining and pillar trim	S	S
	Decorative inlays, “carbon grey” to dashboard and front doors	S	S
	Silver highlight trim on air vents, power window and exterior mirror switches	S	S
Interior lighting	With time delay	S	S
	Front reading lights (2) and rear passenger reading lights (2), LED	S	S
	30 colour LED ambient lighting	S	S
	Driver and front passenger LED foot well lighting, selectable light colour	S	S

Comfort and Convenience (cont'd)		R	R Wagon
Luggage Compartment	Electrically operated automatic opening and closing of the tailgate with Easy Open and Easy Close functions	-	S
	Load restraining hooks	S	S
	Luggage compartment light	S	S
	Luggage cover, removable	S	S
	Luggage net partition, extendable rear seat backrest to roof lining, removable and storable	-	S
	Shopping bag hooks	S	S
	Storage compartments in side lining	S	S
	12 volt socket	S	S
Mirrors	Automatic dimming interior rear-view mirror	S	S
	Electrically foldable exterior mirrors	S	S
	Electrically heated and adjustable exterior mirrors	S	S
	LED turn indicators integrated in exterior mirrors	S	S
	Memory function for exterior mirrors	S	S
Power steering	Electro-mechanical, vehicle speed and steering input sensitive	S	S
	Progressive steering	S	S
Seating	Sports front seats with additional side bolstering and integrated head restraints	S	S
	Active climate seats in front, heated and ventilated	S	S
	Electric adjustment for driver's seat with 3 position memory and convenience function	S	S
	Lumbar adjustment for driver's seat, electrically adjustable	S	S
	Split folding rear seat backrest (40/60)	S	S
Steering wheel	3 spoke leather covered flat bottomed sports steering wheel with touch controls, metallic and blue inserts and blue decorative stitching	S	S
	Audio, voice control, driver assistance and Multi-Function Display controls	S	S
	Gearshift paddles, large	S	S
	Height and reach adjustable steering wheel	S	S
Storage	Centre console storage compartment under armrest	S	S
	Glove compartment with illumination	S	S
	Compartment in dashboard centre console with wireless charging pad	S	S
	Front door pockets with bottle holders, lined	S	S
	Front seat backrest storage pockets	S	S
	Net on front passenger side centre console	S	S
	Rear door pockets, lined	S	S
Transmission	7 speed Direct Shift Gearbox (DSG) with sport mode	S	S
Upholstery	Nappa leather appointed seat upholstery with blue decorative stitching Leather appointed seats has a combination of genuine and artificial leather, but are not wholly leather	S	S
Vanity mirrors	Driver's and passenger's side vanity mirrors in sun visor	S	S
	Illuminated on driver's and passenger's side	S	S
Windows	Power front and rear, with roll-back function and one-touch up-down	S	S
	Remote operated convenience close and open feature (programmable)	S	S
Wipers	2 speed aero windscreen wipers with wash/wipe	S	S
	Rain sensor	S	S
	Rear window with wash/wipe and intermittent wipe	S	S
12V socket	Centre console	S	S
	Luggage compartment	S	S
Options			
Audio	Harman Kardon 480W premium audio system with 8 speakers plus centre speaker, subwoofer and 12-channel amplifier	O	O
Sunroof	Panoramic glass sunroof, electrically slide and tilt adjustable (front half section Golf R Wagon) with integrated wind deflector and sunblind	O	O

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Colour Combinations

EXTERIOR COLOUR	Pure White	Lapiz Blue PM	Deep Black PE
INTERIOR TRIM			
Golf R			
Golf R Wagon			
Black Nappa leather appointed seat upholstery	**S**	**S**	**S**

Leather appointed seats has a combination of genuine and artificial leather, but are not wholly leather

S = Standard O = Optional Extra - = Not available

Volkswagen Golf R

Technical Specifications

Model	**R**	**R Wagon**
Engine	**2.0 litre TSI**	**2.0 litre TSI**
Type	4 cylinder inline turbocharged direct injection petrol with engine Start/Stop system and brake energy recuperation*	
Installation	Front transverse	Front transverse
Cubic capacity, litres/cc	2.0/1984	2.0/1984
Max power, kW @ rpm	235 @ 5600 - 6500	235 @ 5200 - 6600
Max torque, Nm @ rpm	400 @ 2000 - 5600	420 @ 2000 - 5550
Exhaust emission control	3-Way Catalytic converter	Petrol Particulate Filter
Emission level~	EU6	EU6
Fuel type (Recommended)	98RON	98RON
Transmission	**7 Speed Direct Shift Gearbox (DSG)**	**7 Speed Direct Shift Gearbox (DSG)**
Driven wheels	4MOTION all-wheel drive with R-Performance Torque Vectoring	
Performance		
0 – 100 km/h, seconds	4.8	4.9
Fuel Consumption **		
Combined, L/100km	7.8	7.4
Urban, L/100km	10.1	9.2
Extra Urban, L/100km	6.4	6.2
CO2 emission g/km~	177	168
Fuel tank capacity litres	55	55
Suspension		
Front Axle	Independent, MacPherson struts with lower A-arms. Anti-roll bar. Lowered sport suspension with adaptive chassis control	
Rear Axle	Independent, four-link with coil springs. Anti-roll bar. Lowered sport suspension with adaptive chassis control	
Steering		
Steering systems	Electro-mechanical power assisted rack & pinion steering. Progressive steering	
Turning Circle (m)	11.00	11.10
Brakes		
Front	Ventilated and cross drilled discs	
Rear	Ventilated discs	
Weights	**R**	**R Wagon**
Tare Mass kg	1501	1583

Technical Specifications (cont'd)

	R	R Wagon
Exterior Dimensions		
Overall length mm	4290	4644
Width mm	1789	1789
Height mm	1458	1466
Wheelbase mm	2631	2681
Track mm		
Front	1541	1541
Rear	1516	1516
Luggage Area Dimensions		
Volume, rear seat upright L	374	611
Volume, rear seat folded L	1230	1642
Length, rear seat upright mm	787	1062
Length, rear seat folded mm	1545	1845
Width between wheel arches mm	1003	1003

~ Emission level according to European Regulation (EC) No. 715/2007 and Regulation (EC) No. 692/2008, UN ECE R83/06 and later amendments.

*The Start/Stop system is designed to reduce fuel consumption and CO2 emissions. It achieves this by automatically switching off the engine while the vehicle is stationary and then starting it again automatically when the driver wants to drive off. There are certain operating conditions where the Start/Stop system is deactivated (e.g. during engine warm-up), please refer to the owner's manual for full operating information.

Please note figures are sourced from overseas data where equipment levels by model variant may vary.

** Fuel consumption figures according to ADR 81/02 derived from laboratory testing. Factors including but not limited to driving style, road and traffic conditions, environmental influences, vehicle condition and accessories fitted, will in practice in the real world lead to figures which generally differ from those advertised. Advertised figures are meant for comparison amongst vehicles only.

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4MOTION with R-Performance Torque Vectoring

The 4MOTION all-wheel drive system with R-Performance Torque Vectoring is the new control centre that distributes the engine's output to the four driven wheels.
A new rear final drive distributes the drive power of the turbocharged petrol engine in the Golf R not just between the front and rear axles, but also variably between the two rear wheels. This makes it possible to significantly increase the agility particularly when cornering.
The all-wheel drive is also networked via the Vehicle Dynamics Manager (VDM) with other running gear systems such the Extended Electronic Differential Locks (XDL) and Adaptive Chassis Control.
Thanks to this close integration of the different systems, the new Golf R offers optimum traction characteristics and neutral handling with the utmost level of precision.

Adaptive Cruise Control (ACC)

Adaptive Cruise Control (ACC) is an extension of the conventional cruise control system with advanced capabilities based on a radar sensor. When ACC is activated, the vehicle automatically brakes and accelerates to a speed and distance set by the driver.

If the Golf approaches a slower vehicle, the ACC brakes the car to the same speed and maintains the pre-selected distance. Even when a vehicle pulls into the same lane in front of you or slows, your vehicle is automatically decelerated to the pre-selected distance. If the vehicle ahead moves out of your lane, the Golf then accelerates up to the pre-set desired speed.
Deceleration of the vehicle may take place via intervention in the engine management system. If deceleration via engine torque is not sufficient, brake intervention takes place, braking the vehicle to a standstill if the traffic situation necessitates in vehicles equipped with an automatic transmission. ACC can be reactivated automatically by depressing the accelerator pedal.

The dynamics of the ACC system can by individually varied by selecting one of the driving programs from the driving profile selection.

Adaptive Cruise Control (ACC) cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and must monitor the speed and distance in relation to other vehicles. The ACC system should not be used on winding roads or in adverse weather conditions such as heavy rain.

Anti-lock Braking System (ABS)

When braking, wheel speed sensors measure the road wheel speed and should one or more wheels start to lock the ABS system reduces brake pressure to that wheel. This prevents the wheels from locking during heavy or emergency braking, enabling the vehicle to remain steerable.

Anti-Slip Regulation (ASR)

ASR is a traction control system that prevents the wheels from spinning under acceleration by reducing engine torque.

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Auto Hold function

As soon as the vehicle comes to a complete stop, the ABS hydraulic unit stores the vehicles final braking pressure. So even when you take your foot off the brake pedal, all four wheels brakes remain applied, providing increased comfort in stationary traffic. This function is released automatically when you drive off again.

Brake Assist

During emergency braking, Brake Assist aids the driver by increasing the brake pressure automatically to a level exceeding the locking limit. The ABS is thus quickly brought into the operating range, which enables maximum vehicle deceleration to be achieved.

Driving Profile Selection

Driving profile selection provides the driver with a wide-ranging choice of settings that can be made to the vehicle according to the driver's preferences. The driver has the option of choosing between the following driving profiles:Comfort, Sport, Race and Individual.

The Comfort profile offers a comfortable but dynamic driving style with a softer suspension setting of the adaptive chassis control. Comfort mode has also been designed to enhance fuel efficiency by including coasting function and by adapting engine performance, earlier gearshift points and consumption-optimised control of the air conditioning system. Sport provides faster response of the accelerator pedal, sportier damping and steering. In Race mode, damping is increased (further reducing movements of the body structure) and shift points of the DSG are configured to be even more dynamic. The Race mode also provides access to two additional modes - the Drift profile for optimal driving dynamics away from public roads, distributing 100% of the rear torque to one wheel and the Special profile, in which the vehicle systems are adapted to the track characteristics of the legendary Nürburgring Nordschleife. The Individual setting allows the driver to separately set

Electronic Brake-pressure Distribution (EBD)

Electronic, more sophisticated means of regulating the ratio of front/rear brake pressure. Settings are varied according to driving and load conditions to ensure each wheel is braked to the optimum extent.

Electronic Differential Lock (EDL)

EDL improves driving and steering characteristics when accelerating on road surfaces where each wheel has a different degree of traction. The system operates automatically and is combined with the ABS system. Using the ABS wheel sensors, EDL monitors the speed of the individual driving wheels. When a difference in driving wheel speed is detected (i.e. when one wheel starts to spin due to differences in road surfaces, e.g. due to water or dirt) the system brakes the spinning wheel, transferring engine power to the wheel with the best traction.

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Electronic Stabilisation Program (ESP)

ABS and ASR traction control systems are integrated into the Electronic Stabilisation Program (ESP). In short, ESP helps ensure that the vehicle goes where you steer it even in extreme driving conditions. The ESP system constantly compares the actual movement of the vehicle with pre-determined values and should a situation arise where the vehicle starts to skid, ESP will apply the brakes to individual wheels and automatically adjust the engine’s power output to correct the problem. ESP prevents the vehicle from losing control when trying to avoid an accident, for example. It also reduces the effects of understeer or oversteer.

Emergency Assist

Emergency Assist monitors the driving characteristics and recognises, within the limits of the system, if the driver suddenly becomes incapable of driving (due to the vehicle not being controlled).

Emergency Assist detects a lack of activity on the part of the driver and issues repeated visual and acoustic warnings and initiates a quick jolt of the brakes and tensioning of the driver's seatbelt to request the driver to take control of the vehicle.

If the driver remains inactive, the system automatically controls acceleration, braking and steering to slow the vehicle down and keep it in the lane. If there is sufficient stopping distance, the system decelerates the vehicle to a complete stop and switches on the electronic parking brake automatically, parking position is engaged, the doors are unlocked and the interior lighting switched on.

When Emergency Assist is actively controlling the vehicle, the hazard warning lights are switched on and the vehicle horn may sound to warn other road users. Ideally this will prevent a collision, or at least reduce its severity.

Emergency Assist cannot replace the driver’s attentiveness. The driver is still legally responsible for the vehicle and must monitor the speed and distance in relation to other vehicles. Emergency Assist utilises both the Adaptive Cruise Control (ACC) and Lane Assist driver assistance systems. The ACC system should not be used on winding roads or in adverse weather conditions such as heavy rain. The system will not work if there are no recognisable lane markings. The camera vision can be reduced by rain, snow, heavy spray or oncoming lights. This and vehicles in front of you can lead to the lane markings not being recognised by the Lane Assist system.

Exit Warning System

While the Golf is stationary, the exit warning system warns the occupants about a potential collision when a door is opened. The system uses the rear radar sensors to monitor the area behind and to the side of the vehicle. Where possible, it detects objects, such as cars and cyclists, as they approach the vehicle from behind. When you open the door, the warning lamp on the exterior mirror flashes if another road user in a critical situation is detected. At the same time an acoustic warning signal is heard. The corresponding warning lamps also flash if another road user is detected in a critical situation while the door is already open.

Exit warning system cannot replace the driver’s attentiveness. If the driver or passenger notices a risk that pedestrians, other vehicles or objects could be damaged or if they are uncertain of the risk, they will need to react accordingly.

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Extended Electronic Differential Lock (XDL)

XDL is an extension of the Electronic Differential Lock (EDL) function. When cornering, XDL responds to the load relief at the front wheel on the inside of a corner. The ESP hydraulics are used for the XDL to apply pressure to the wheel on the inside of the corner in order to prevent wheel spin. This improves traction and reduces the tendency to understeer. As a direct result of the one-sided and precise braking pressure, cornering is sportier and more accurate.

Fatigue Detection

The driver Fatigue Detection system automatically analyses the driving characteristics and if they indicate possible fatigue, recommends that the driver takes a break. The system continually evaluates steering wheel movements along with other signals in the vehicle on motorways and others roads at speeds in excess of 60 km/h, and calculates a fatigue estimate. If fatigue is detected, the driver is warned by information in the Multi-function Display and an acoustic signal. The warning may be repeated once if the driver has not taken a break.

Fatigue Detection cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and therefore determining whether or not they are fit to drive. The driving behaviour can be evaluated only when the speed is above approximately 60km/h. The functionality of the system is restricted given a sporty driving style, winding roads and poor road surfaces.

Front Assist with Pedestrian and Cyclist Monitoring functions

The Front Assist ambient traffic monitoring system uses a radar sensor and multi-function camera to detect critical distance situations and thus help to shorten the braking distance, reducing the risk of a rear-end collision.

If a vehicle is detected ahead of you in the lane, the distance and the speed relative to it are calculated. If the gap is closing too fast, Front Assist initially warns the driver by means of an audible as well as a visual signal. At the same time, the brake pads are brought into contact with the brake discs and the sensitivity of the Brake Assist is increased. This primes the braking system for a possible emergency stop. Furthermore, an automatic jolt of the brakes warns the driver of the danger. If the driver also fails to react to the warning jolt, Front Assist brakes automatically, helping to avoid a collision or reduce the severity of the accident.

At vehicle speeds below 30km/h, the system monitors the area ahead of the car for vehicles which might present a threat of collision. If a collision is likely, the brakes are first pre-charged and makes the Brake Assist system is made more sensitive: if the driver should notice the risk, the car is ready to respond more quickly to their braking action. However, if the driver still takes no action and a collision becomes imminent, emergency braking is independently applied. If the driver intervenes to try to avoid the accident, either by accelerating hard or by steering, the system will deactivate and allow the driver to complete the avoidance manoeuvre.

Pedestrian and Cyclist Monitoring is an extension of the Front Assist monitoring system. The system uses a radar sensor in the radiator grille and windscreen mounted multi-function camera to monitor the area in front of the vehicle and within the limits of the system, register certain situations, for example a pedestrian stepping onto the road suddenly. The system then gives an immediate acoustic and visual signal to warn the driver. If the driver does not brake, the system initiates a jolt of the brake as a warning about the critical situation, while at the same time preparing for hard braking. If the driver fails to react, the system automatically performs emergency braking, within system limits. Ideally this will prevent a collision, or at least reduce its severity.

Front Assist with Pedestrian and Cyclist Monitoring cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and must monitor the speed and distance in relation to other vehicles.

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Lane Assist

Lane Assist is a lane departure warning system that is designed to help reduce the likelihood of the vehicle leaving the road or crossing into on oncoming lane and therefore the risk of accident as a result of driver distraction or a lapse in concentration.

The Lane Assist system monitors the road ahead with the aid of a camera (located near the interior rear-view mirror) which recognises lane markings and evaluates the position of the vehicle at speeds above 60km/h. If the vehicle starts to leave the lane, the Lane Assist system takes corrective steering action. If this is not sufficient the driver is warned about the situation by a steering vibration. Additionally, if no active steering movements by the driver are recognised, a message will appear in the Digital Cockpit in conjunction with a warning tone. The corrective steering function can be overridden by the driver at any time and the system does not react if the turn indicator is set before crossing a lane marking.

Lane Assist cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and therefore staying in the lane at all times. The system will not work if there are no recognisable lane markings. The camera vision can be reduced by rain, snow, heavy spray or oncoming lights. This and vehicles in front of you can lead to the lane markings not being recognised by the Lane Assist system.

Manoeuvre braking

Manoeuvre braking assists the driver to avoid or reduce damage in a potential collision by initiating emergency braking. It supports the driver during forward and reverse manoeuvring in a speed range of a maximum 10 km/h. If the risk for an accident is recognised, emergency braking is initiated to minimise possible damage.

Manoeuvre braking cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle. The object must be detected by the sensors. If the driver notices a risk that pedestrians, other vehicles or objects could be damaged they need to react accordingly and stop the vehicle.

Multi-collision brake

The multi-collision brake has been designed to provide effective assistance for the driver in the moments after an accident. Multi-collision brake triggers automatic controlled braking once an initial collision has been detected so as to reduce the intensity of further accidents after a collision and can help prevent follow-on collisions with oncoming traffic.

The triggering of the multi-collision brake is based on a collision being detected by the airbag sensors. The ESP control unit limits the deceleration of the vehicle by the multi-collision brake to a defined value and vehicle speed. The vehicle can still be controlled by the driver, even when automatic braking is taking place. The driver can interrupt the multi-collision braking at any time by accelerating or braking even more strongly.

Oncoming vehicle braking when turning

Oncoming vehicle braking when turning aims to prevent or reduce the impact of head-on collisions with vehicles when turning. The front radar sensor and windscreen camera are used to monitor the area in front of the driver's own vehicle. If a hazardous situation is detected – the driver turns into oncoming traffic, the vehicle is automatically braked and a warning issued to help prevent a collision.

Key variables for detection of the turning manoeuvre are the steering angle and the steering-angle speed. A turning manoeuvre is detected even if the turn signal has not been activated. The function is active up to a speed of approximately 15 km/h.

Oncoming vehicle braking when turning cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and must monitor the speed and distance in relation to other vehicles.

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Park Assist

The third generation Park Assist system actively helps the driver when entering or reversing into 90º parking bays, as well as reversing into and driving out of parallel parking spaces. The system works by using sensors mounted either side of the front and rear bumpers together with parking distance sensors front and rear. To park, the driver simply presses the Park Assist button to select the type of parking manoeuvre and uses the appropriate indicator as the car slowly passes the potential parking space. Sensors scan the size of the parking space as the car is driven past and the driver is alerted if the parking space is big enough. If there is sufficient space, the driver stops the car, selects the correct gear and lets go of the steering wheel.

Park Assist will alert the driver of the intended path and subsequently the appearance of obstacles in the Multi-Function Display, within the driver's field of vision. Park Assist then actively supports the driver by taking over the steering control and parks the vehicle in the available space using the ideal course, if necessary with several moves. The driver can however take over the control of the steering at any time and end the automatic parking procedure.

Park Assist cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle. If the driver notices a risk that pedestrians, other vehicles or objects could be damaged or if they are uncertain of the risk, they will need to react accordingly and stop the vehicle, ending the function.

Proactive occupant protection system

The proactive occupant protection system incorporates active and passive safety elements. When the system detects a potential accident situation at speeds above approximately 30km/h, the occupants and the vehicle are prepared for a possible accident. Automatic reversible tensioning of the seat belts secures the driver and front passenger in their seats to attain the best possible protective potential of the airbag and belt system. The hazard warning lights are activated. In case of high transverse dynamics the side windows (and optional panoramic sunroof) are also closed, leaving just a small air gap. Closing of the windows offers optimal support to the head and side airbags which results in the best possible protection.

The latest generation of the Proactive Occupant Protection System can detect risks at the rear utilising the signals from the rear radar sensors for the Side Assist system. If the system recognises an immediate risk, the vehicle and occupants are prepared for a possible rear end collision by warning an approaching vehicle with fast hazard warning light frequency, closing the side windows (and optional panoramic sunroof), as well as tighten the front seat belts.

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Side Assist with Rear Traffic Alert

Side Assist with Rear Traffic Alert system supports the driver in assessing and avoiding dangerous situations, especially in critical situations, e.g. city and heavy traffic. Side Assist detects cars and motorcycles next to and up to 70m to the right and left behind your own vehicle and highlights these vehicles via a LED indicator in the door mirror at speeds above 15km/h. If you indicate to change lanes, the system calculates whether one of them could be dangerous due to position and speed and if deemed necessary will draw attention to this by flashing noticeably. In this instance, Lane Assist can also apply corrective steering to help avoid a collision.

Rear Traffic Alert monitors the traffic crossing behind the vehicle when reversing out of a parking space or manoeuvring. Utilising the Side Assist radar sensors in the rear bumper the system warns the driver of approaching traffic via an audible warning followed by a visual message in the Optical Parking System (OPS) and can also provide braking intervention if necessary to help avoid a collision.

Side Assist with Rear Traffic Alert cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and must monitor the speed and distance in relation to other vehicles.

Traffic Jam Assist

In congested traffic situations, Traffic Jam Assist makes driving significantly more comfortable and helps to avoid typical rear-end collision accidents. The Traffic Jam Assist function combines the driver assistance systems Adaptive Cruise Control (ACC) and Lane Assist with adaptive lane guidance.
In a speed range of 0-60km/h, the system automatically controls acceleration, braking, steering and if required, will decelerate to a stop behind a vehicle that is stopping.

Traffic Jam Assist cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and must monitor the speed and distance in relation to other vehicles. Traffic Jam Assist has been developed for use only on motorways. The ACC system should not be used on winding roads or in adverse weather conditions such as heavy rain. The system will not work if there are no recognisable lane markings. The camera vision can be reduced by rain, snow, heavy spray or oncoming lights. This and vehicles in front of you can lead to the lane markings not being recognised by the Lane Assist system.

Travel Assist

Travel Assist is an assistance system for partly automated driving. At the push of a button, Travel Assist can support the driver in monotonous and tiring driving situations commonly encountered on long motorway journeys. This system combines the functions of Adaptive Cruise Control (ACC), Lane Assist with adaptive lane guidance and Side Assist to accelerate, brake and maintain the vehicles position within its lane. The capacitive steering wheel can detect whether the driver's hands are on the steering wheel in readiness to steer the vehicle and will issue a visual and audible warning when not detected.

Travel Assist cannot replace the driver's attentiveness. The driver is still legally responsible for the vehicle and must monitor the speed and distance in relation to other vehicles. Travel Assist has been developed for use only on motorways. The ACC system should not be used on winding roads or in adverse weather conditions such as heavy rain. The system will not work if there are no recognisable lane markings. The camera vision can be reduced by rain, snow, heavy spray or oncoming lights. This and vehicles in front of you can lead to the lane markings not being recognised by the Lane Assist system.