



ASTON MARTIN

The Aston Martin V8 Vantage S

- The driver-focussed V8 Vantage featuring enhanced dynamics
- Increase in power and torque to 430 bhp and 490 Nm
- New ground-up developed seven speed Sportshift™ II transmission
- Dramatic V12 Vantage-inspired looks available as coupe and Roadster
- Compelling package of agility, balance, engagement and everyday practicality

The Aston Martin Vantage range comes of age with the new V8 Vantage S characterised by a host of new driver-focussed features all designed to push the honed dynamics of the standard Vantage to a new benchmark level.

Aston Martin's own 4.7 litre V8 engine has been engineered to deliver peak power of 430 bhp (436 PS / 321 kW) at 7300 rpm and torque of 490 Nm (361 lb.ft) at 5000 rpm and is coupled with a Sportshift™ II transmission specifically designed for the Vantage S with seven short ratio gears to deliver the most engaging and intense driver involvement.

"The Vantage S epitomises every attribute of the V8 Vantage and pushes the driver experience beyond what we have offered before," says Dr. Ulrich Bez, CEO of Aston Martin, "It combines dynamic exhilaration with all the charming finesse, beauty and practicality already associated with the Vantage range."

Dynamic revisions are central to the Vantage S, with a quickened steering rack ratio of 15:1 compared to 17:1 on the standard car and a larger diameter front brake disc with new six-piston front brake calipers. New springs and dampers, and wider rear wheels also contribute to chassis revisions. A new dynamic stability control (DSC) system specifically tuned to the Vantage S along with a new brake module providing features such as Hydraulic Brake Assist (HBA) which provides assistance in emergency braking situations, and Hill Start Assist (HSA). Bespoke tyres have been developed with Bridgestone to optimise road holding enhancing dynamic feel.

At the core of the Vantage S is the seven speed Sportshift™ II automated manual transmission, offered as standard and delivers exceedingly rapid gear changes, twenty per cent quicker than Sportshift™. The extra gear permits shorter well-spaced ratios taking

advantage of the optimum torque, which combined with a shorter final drive ratio of 4.182:1 delivers quicker acceleration and an enhanced sporting feel. The inherent benefits of a single clutch system reduces complexity and significant weight over a dual clutch solution. Sportshift™ II allows the driver to take an increased level of control, modulating the throttle pedal to achieve the desired type of gear change. In addition, the Vantage S features a 'Sport' button which quickens the gear changes and gives the driver a more aggressive throttle response while also opening the exhaust bypass valves across most of the engine speed range perfectly characterising the 'S' variant.

As with every Aston Martin, the Vantage S benefits from its own unique sound with a new exhaust muffler and bypass valve map, creating a very distinctive and highly vocal exhaust note.

The Vantage S is instantly recognisable as a true Aston Martin, characterised by its purposeful stance conveying its agility and performance capability. From the front, a new lower front bumper finished in perfectly-aligned carbon fibre houses a larger air intake feeding the engine and front brakes. The splitter combined with the extended deck lid 'flip' work in harmony to provide increased down force at speed. New 19 inch 'V' spoke wheel styles are available as standard, while an optional 10-spoke lightweight forged wheel option, reduces unsprung mass further. A new rear bumper and side sills optically widen the car.

Bridging the gap between road car and race car, the Vantage S is heavily influenced by the 2011 Vantage GT4 race car. The GT4 takes advantage of the Vantage's immensely rigid bonded aluminium chassis, providing the ideal platform for a race car. Minor racing safety modifications including an FIA approved roll cage and racing 'bag' petrol tank along with weight saving measures are made to the standard road car to convert it into a class winning race car. In 2010, it won its class at the Dubai 24 Hours following this up with further endurance race wins at the Nürburgring 24 Hours, Silverstone 24 Hours and Spa 24 Hours. It also won its first major international championship victory in the European GT4 Cup.

The Vantage S is available to order now from Aston Martin's global dealership network.

- Ends -

For further information and images please use the contact details below or alternatively visit: www.astonmartinmedia.com.

Specification

Body:

- Two-seat, two-door coupe or soft-cover convertible top body style
- Extruded bonded aluminium VH body structure
- Aluminium, magnesium alloy, composite and steel body
- Extruded aluminium door side-impact beams
- Halogen projector headlamps (main beam)
- High Intensity Discharge headlamps (dipped beam)
- LED rear lamps
- Clear rear lamps
- Carbon fibre front splitter and rear diffuser

Engine:

- All-alloy quad overhead camshaft, 32-valve 4735 cc V8
- Front mid-mounted engine, rear-wheel drive
- Fully catalysed stainless steel exhaust system with active bypass valves
- Compression ratio 11.3:1
- **Maximum Power** 321 kW (430 bhp / 436 PS) at 7300 rpm
- **Maximum Torque** 490 Nm (361 lb.ft) at 5000 rpm
- **Acceleration** 0-60 mph in TBC seconds; 0-62 mph (0-100 km/h) in TBC seconds (predicted)
- **Maximum Speed** 189 mph (305 km/h)

Transmission:

- Rear mid-mounted 'Sportshift II' 7-speed single clutch automated manual transmission
- Alloy torque tube with carbon fibre propeller shaft
- Limited slip differential
- Final Drive Ratio 4.182:1

Steering:

- Rack and pinion, power-assisted steering, 2.6 turns lock-to-lock
- Column tilt and reach adjustment.

Wheels & tyres

- 19" V-Spoke cast alloy silver painted wheels with diamond turned finish
- **Front** 8.5J x 19" Bridgestone Potenza RE050 245/40 R19
- **Rear** 10.0J x 19" Bridgestone Potenza RE050 285/35 R19

Suspension:

- **Front** Independent double wishbones incorporating anti-dive geometry, coil springs, anti-roll bar and monotube dampers
- **Rear** Independent double wishbones with anti-squat and anti-lift geometry, coil springs, anti-roll bar and monotube dampers

Brakes:

- **Front** Ventilated and grooved two-piece floating discs, 380mm diameter with six piston calipers
- **Rear** Ventilated and grooved steel discs, 330mm diameter with four piston calipers
- Dynamic Stability Control (DSC)
- Anti-lock braking system (ABS)
- Electronic Brakeforce Distribution (EBD)
- Emergency Brake Assist (EBA)
- Hydraulic Brake Assist (HBA)
- Positive Torque Control (PTC)
- Hill Start Assist (HSA)
- Traction Control

Interior:

- Full grain leather interior
- Weave Alloy facia trim
- Iridium Silver centre console outer finish and Graphite inner finish
- Leather-trimmed sports steering wheel
- Embroidered 'Vantage S' seat logo
- Embroidered 'Vantage S' carpet logo
- Electrically operated Sports seats with side airbags
- Dual-stage driver and passenger front airbags
- Heated rear screen
- Automatic temperature control
- Organic Electroluminescent (OEL) displays
- Trip computer
- Cruise control
- Bluetooth telephone preparation¹
- Glass ECU
- LED map lamps
- Rear parking sensors
- Powerfold exterior heated mirrors
- Tyre-pressure monitoring
- Alarm and immobiliser
- Remote-controlled central door locking and boot release
- Tracking device (UK only)³
- Anodised black 'S' theme tread plates

In Car Entertainment:

- 160 W Aston Martin audio system with six-CD autochanger
- Integrated Apple iPod® connector⁴
- USB connector with Waveform Audio Format (WAF), Windows Media Player (WMA) and MPEG (MP3) audio file compatibility

Exterior Options:

- V-Spoke cast alloy graphite painted wheels with diamond turned finish
- 10-Spoke forged alloy silver painted wheels with diamond turned finish
- 10-Spoke forged alloy graphite painted wheels with diamond turned finish
- Bright finish grille
- Carbon fibre side strakes
- Magnum Silver bonnet and side stake meshes
- Alternative brake caliper finish – black, red, silver
- Front parking sensors
- Delete 'Vantage S' model badging
- Delete protective tape

Interior Options:

- Lightweight seats with six-way electrical adjustment (does not include side airbags; not available in USA or Canada)¹
- Memory front seats and exterior mirrors (three positions)
- Heated seats (included as standard with Lightweight seats)
- ISOFIX and fixed height passenger seat (Sports seats only)
- Alternative facia trim finishes – Prism Alloy, Piano Black, Piano Black Interior Pack
- Alcantara trimmed steering wheel
- Auto-dimming interior rear-view mirror
- Auto dimming interior rear view mirror with garage door opener¹
- Hard Disk Drive (HDD) satellite navigation system^{1,2}
- 700 W Aston Martin Premium Audio system with Dolby® Pro Logic II®
- 1000 W Bang & Olufsen BeoSound audio system with ICEpower® technology
- Satellite radio system (USA and Canada only)
- Alarm upgrade (volumetric and tilt sensor)
- Tracking device^{1,3}
- Second glass ECU
- Delete embroidered 'Vantage S' seat logo
- Delete embroidered 'Vantage S' carpet logo
- Personalised sill plaques
- Wind deflector (Roadster only)
- First aid kit
- Ashtray and cigar lighter
- Boot mounted umbrella

Dimensions:

- **Length** 4385 mm (172.6")
- **Width (excluding mirrors)** 1865 mm (73.5")
- **Width (including mirrors)** 2025 mm (80.0")
- **Height (Coupe)** 1260 mm (49.6")
- **Height (Roadster)** 1270 mm (50.0")
- **Wheelbase** 2600 mm (102.5")
- **Front Track** 1570 mm (62.0")
- **Rear Track** 1590 mm (62.6")
- **Turning Circle** 11.38 m (37.3 ft) (kerb to kerb)
- **Boot Capacity (Coupe)** 300 litres (10.6 cu ft)
- **Boot Capacity (Roadster)** 144 litres (5.0 cu ft)
- **Fuel Capacity** 80 litres (17.6 UK gal/21.1 US gal)
- **Kerb Weight (Coupe)** 1610 kg (3549 lb)
- **Kerb Weight (Roadster)** 1690 kg (3726 lb)

Fuel Consumption⁵ litres/100 km (mpg):

- **Urban** 19.2 (14.7)
- **Extra-urban** 9.3 (30.4)
- **Combined** 12.9 (21.9)

Gas Mileage (North America only)

- **City** 14 mpg
- **Highway** 21 mpg

CO2 Emissions⁵

- 299 g/km

¹Not available in all markets

²Includes Traffic Messaging Channel (TMC) in Continental Europe

³Complies with UK Thatcham Category 5 requirements. Excludes subscription. Standard in UK

⁴iPod® is a trademark of Apple Inc., registered in the US and other countries

⁵Data not applicable to North American market

Aston Martin V8 Vantage S: Performance

The rationale behind the V8 Vantage S was to push the boundaries of the already acclaimed V8 Vantage with the highest levels of driver involvement possible. Aston Martin engineers set about enhancing nearly every dynamic element of the car to create a highly distinctive driving experience.

“With every new model we continue to evolve and enhance our VH architecture,” said Aston Martin Product Development Director, Ian Minards. “The engineering team at Gaydon looked at every single performance attribute of the V8 Vantage, from engine and transmission to suspension, steering, brakes and tyres and considered what was required to make this car deserving of the coveted ‘S’ badge. The result is a pure driver-focussed package that, in both the coupe and Roadster form, exploits and emphasises the sporting nature of the iconic Vantage.”

The 4.7 litre V8 engine has been modified to deliver peak power of 430 bhp (436 PS / 321 kW) at 7200 rpm and torque of 490 Nm (361 lb.ft) at 5000 rpm representing an increase of 10 bhp and 20 Nm respectively and is signified with a black engine plenum. The increase has been achieved through a valved air intake system and an aggressive spark strategy. The air intake system valve opens above 3500 rpm to allow more air to flow into the engine, which helps optimise performance at precisely the right part of the torque curve. Aggressive spark strategy uses sophisticated electronics to ignite the fuel in the engine at precisely the right time allowing it to run at its most powerful. It can also recognise higher octane fuel and extract the optimum performance from the increased rating.

The power and torque delivery on the Vantage S is delivered at the most frequently used mid-range engine speeds which creates tractable and effortless acceleration. Most demand for power and torque is in the mid-range which on the V8 Vantage S is where the greatest torque is delivered at 5000 rpm.

Sportshift™ II is an automated manual transmission featuring a new seven speed Graziano gearbox which is positioned at the back of the Vantage S on the transaxle contributing to 49:51 near perfect weight balance. The system benefits from a single manual clutch mated with electronic switching gear to change ratios and was designed from the ground-up exclusively for the V8 Vantage S. Aston Martin specifically chose to develop the Sportshift™ system owing to its inherent sporting benefits including mass saving, low complexity of moving parts, and real tangible gear changes. This contributes, along with other weight saving parts, to a total vehicle weight reduction of 30 kg.

Electro-hydraulic controls are actuated via two steering column mounted magnesium paddles allowing the driver to shift up or down. Quicker than a conventional manual system, and at least 50kg lighter than a dual clutch system, Sportshift™ II offers the inherent benefits of being able to drive in automatic mode as well as shifting manually. Sportshift™ II is 24kg lighter than Sportshift™ featured on the standard Vantage.

Sportshift™ II features seven ratios allowing the first six gears to sit closer together taking advantage of the engine's torque characteristic; this enhances the acceleration feel and gives the driver increased control. The seventh gear is a longer ratio delivering a quieter, more refined cruising gear for motorway stretches and also delivers increased fuel economy.

Driver interaction with Sportshift™ II is made as simple as possible to allow the driver to concentrate on the road ahead. Two magnesium paddles allow an up or a down shift through the gears. The controls are column-mounted so that the driver can always locate them with ease no matter what position the steering wheel is in.

As well as selecting gears manually with the paddle-shift, the driver is also able to select the 'D' button on the fascia to engage automatic mode which acts like a traditional automatic gearbox changing gear at precisely the right time, making light work of urban, traffic and motorway driving.

The new seven speed automated manual is standard on the Vantage S perfectly suiting the sporting nature of the car. Aston Martin has opted not to offer a manual transmission option owing to the high expected demand of Sportshift™ II.

The Vantage S' sporting character really comes into its own when the 'Sport' button on the fascia is depressed giving the driver faster gear changes in both manual and automatic (a decrease of 60 milliseconds) and prevents the car changing up to the next gear when the revolution limit is reached. The default 'normal' provides a more progressive, throttle response, suited to more everyday situations, such as driving in urban areas, heavy traffic, or in challenging weather conditions. Selecting 'Sport' mode delivers a sharper throttle response together with a sportier exhaust note. This mode is designed for use in more dynamic driving situations where sharper responses are required, extracting the maximum performance from the car.

The Vantage S weighs 1610 kg, (coupe), 30 kg lighter than the standard Vantage owing to weight optimisation of the new Sportshift™ II transmission and use of carbon fibre. Air cooled, rather than oil cooled, the Sportshift™ II system takes advantage through the

deletion of the oil pump and associated ancillaries saving 24 kg over the conventional six speed Sportshift™ system.

As with all Aston Martins, the Vantage S benefits from near perfect weight balance of 49:51 front to rear owing to the placement of the gearbox on the transaxle contributing to the excellent dynamics.

The Vantage S remains a practical day to day sports car featuring a 300 litre boot with convenient tail gate opening in coupe guise, while the Roadster has an automatically retracting fabric hood which can be operated up to 30 km/h.

The S variant features a unique exhaust muffler specifically tuned to aurally define its sporting intent. A revised map opens the bypass valves earlier in the rev range at 3500 rpm and even earlier in 'Sport' mode producing more crackle on the overrun.

Aston Martin V8 Vantage S: Control

The Vantage S bridges the gap between the V8 Vantage and the Vantage GT4 endurance race car offered by Aston Martin Racing. The standard components of the Vantage platform lend themselves perfectly to competition and produce a race-fit car with only minor modification. 2010 was the most successful year yet setting the Vantage as the benchmark GT4 competition car: it won its class at the Dubai 24 Hours following this up with further endurance race wins at the Nürburgring 24 Hours, Silverstone 24 Hours and the Spa 24 Hours. However, it was the car's first major international championship victory in the European GT4 Cup with Rhesus Racing that was the crowning of an excellent year for the car. In 2011, the Vantage GT4 was updated to take advantage of the increased aerodynamic benefits of the V12 Vantage and V8 Vantage S' body styling.

With knowledge from the track filtering into Aston Martin's road cars and the ease of driving them filtering onto the race track, the Vantage S benefits from having its handling characteristics honed by the marque's knowledgeable and talented engineers.

The steering rack has been modified with a ratio of 15:1 compared to 17:1 on the standard Vantage lowering the number of steering wheel turns lock-to-lock from 3.04 to 2.62. This results in greater precision and improved agility, response and fluidity of handling, and allows the driver to feel a closer connection to the car - delivering a more engaging and energetic drive.

An upgraded braking system plays a central role to the Vantage S' dynamics, with a new larger diameter front brake disc, 380mm compared to 355mm on the V8 Vantage, six piston front calipers and a new generation of brake control module.

The front brakes are a racing-inspired floating disc design. The discs are made from two materials: cast iron and aluminium; the cast iron is bolted via a floating bobbin system to the aluminium bell. The technology provides dynamic advantages in the form of reduced unsprung mass with a brake that is lighter than a standard cast iron brake, has better thermal stability, improved cooling and produces a more consistent pedal feel. Despite the front disc being of a larger diameter, the weight of each disc has been reduced by 0.4 kg. The Vantage S also features a new brake 'booster' reducing pedal effort and travel.

The system features a new braking module delivering more discreet interventions and provides improved functionality for existing features such as ABS, Dynamic Stability Control (DSC), Electronic Brakeforce Distribution (EBD), Traction Control (TC) and Positive Torque Control (PTC) as well as the new Hydraulic Brake Assist (HBA), which provides assistance

in emergency braking situations. The Hydraulic Brake Assist function identifies when the driver requires maximum braking performance, from the speed at which the brake pedal is depressed, and automatically boosts the brake pressure up to the ABS control threshold for as long as the driver keeps the brake pedal pressed down. As a result, stopping distances can be substantially reduced.

The Dynamic Stability Control (DSC) system has been specifically tuned for the Vantage S with emphasis on its sporting characteristics. A three-stage DSC system allows the driver to tailor the level of electronic intervention according to the type of driving. In default mode, the system is set to 'on' which will limit any tyre slip in difficult conditions, and provide the maximum amount of security possible without being intrusive. Holding the DSC button for four seconds will engage 'Track Mode' which delays the electronic intervention further, creating a safe yet purer experience. Depressing the button for a further five seconds will disengage the system completely.

V8 Vantage S sees the first introduction of the Hill Start Assist (HSA) function on an Aston Martin. If the driver applies the brakes to bring the car to a stop on a gradient, Hill Start Assist will hold the car stationary for up to two seconds to allow a smooth pull-away when the driver transfers their foot from brake to accelerator. HSA perfectly complements automated manual transmissions.

The suspension systems on the 'S' variant have been re-tuned to the more driver-focused nature of the car. The coupe features a revised rear spring coil rate and both body styles have retuned passive damper valves and revised bump stop rates and lengths. This results in greater levels of traction and stability, with the wheels maintaining better contact with the ground.

The Aston Martin engineers worked closely with Bridgestone during the development programme to create a bespoke tyre which has been optimised for the Vantage S. The Bridgestone Potenza RE050s are 10mm wider at the front and rear than the standard Vantage to ensure supreme levels of grip.

Aston Martin V8 Vantage S: Design

The Vantage has established itself as one of the world's most beautiful cars; distinctively Aston Martin, elegant yet with controlled aggression and perfectly proportioned with a low purposeful stance. The Vantage S capitalises on the beauty of the Vantage and fuses it with the taut design cues from the V12 Vantage which hint at the car's heightened performance potential.

Aston Martin Design Director, Marek Reichman said: "We have sent the V8 Vantage to the gym to give the 'S' more definition and muscularity resulting in a more toned form.

"It is the perfect machine with an aesthetic that is borne out of functionality and aerodynamics conveying its focussed nature. The whole car sits in tension while the interior remains beautifully hand crafted conveying excitement of the Vantage S from within."

The V8 Vantage S' styling largely follows form to provide a shape that caters for the additional needs of the 'S' performance variant. From the front, the hand-laid carbon fibre front splitter creates a ground hugging stance hinting at its agility while also providing an increased area to provide the engine and brakes with more air. The splitter works in conjunction with the more pronounced rear deck lid 'flip' to create increased down force at speed. From the side, the wider profile sills which are derived from the GT4 race-car programme, contribute to reduced rear lift, and therefore improved high speed stability, by preventing the air which flows along the side of the car from spilling underneath the car.

The rear bumper accentuates the powerful attitude and rear proportions of the car. On the coupe, the deck lid incorporates a more pronounced 'flip' which contributes to high speed stability by reducing rear lift.

The rear bumper features a hand-made carbon fibre diffuser aiding the flow of air exiting from the underside of the car to maintain an area of low pressure at the rear of the car which helps to reduce lift and improve high speed stability.

The new 19-inch standard wheels are unique to the Vantage S and feature a 'V' spoke design with a diamond turned finish providing a further clear differentiation to the standard car. An optional forged aluminium wheel is available saving half a kilo per wheel in unsprung mass improving comfort and handling further.

Complimenting the taut exterior, the tailored Vantage S' interior hints at the car's dynamic capabilities, defined by a distinctive three-track stitch detail on the inside of the doors and on the seats. A new folded leather design runs along the new stitched tracks echoing the gills of a shark hinting at the power and agility of the Vantage S.

The optional carbon fibre and Kevlar® composite seats cosset the driver providing support during spirited driving while remaining comfortable on long journeys. Saving 17 kg per car, the seats which are manufactured by a supplier to the motorsport and aviation industries are hand-trimmed by craftsmen and women at the Gaydon production facility.

Customers are able to specify an Obsidian Black full leather or Alcantara trimmed steering wheel with a contrasting (leather only) or matching stitch. Unique to the Vantage S is the option to specify the Piano Black Interior Pack option which includes a Piano Black fascia, centre console and surround door grabs and handles.

Both the Vantage S coupe and Roadster are hand built at Aston Martin's global headquarters in Gaydon, Warwickshire alongside the V8 Vantage and V12 Vantage. Each Vantage S takes in excess of 185 man-hours to build including 50 man-hours to paint and 70 man-hours to hand trim the interior. Each car undergoes meticulous attention to detail in not only the build phase but quality control and handover processes too.