

Aston Martin V8 Vantage Roadster

CLASSIC

Like all Aston Martin sports cars, the V8 Vantage Roadster is simple, understated and beautiful, with elegant lines that hint at controlled aggression. Perfectly proportioned, with a low purposeful stance, the Roadster is uncompromisingly modern yet also incorporates classic Aston Martin design cues. And like all Aston Martin sports cars, its beauty is more than skin deep. The design team's brief was to give the Vantage Roadster the look of a well-toned athlete wearing a skin-tight suit. With taut, almost stretched surfaces, the car achieves a muscular, close-cut look.

Outside, the Vantage Roadster displays beautiful sports car lines, while maintaining a unique identity. Inside, its traditional craftsmanship is matched to striking 21st century style. Hand-trimmed in the finest materials, the cabin is that of an authentic sports car. Driver and passenger sit low, close to the car's centre of gravity, where they can feel it reacting to the input of the driver – it's a special sensation, usually only experienced in racing cars. The connection between car and driver is direct, sporting and instantaneous.

The Vantage Roadster is a sports car with a simple goal – to provide maximum exhilaration – yet it is also one of the world's most beautiful cars. The side profile is an elegant, simple sweep, creating a curved line rather like a bow under tension, while the rear haunches are wide and muscular, like those of a powerful animal. The fabric hood closely follows the line of the coupé when closed; when folded, the flow from front to rear is unbroken and supremely elegant. The hood stows neatly beneath the rear tonneau cover, deploying in just 18 seconds, and at speeds of up to 50 km/h (30 mph). When raised, the hood complements perfectly the curvaceous bodywork.

Aston Martin's engineers focused on preserving the light weight of the Vantage Coupé to ensure that the Roadster makes the most of its compact size, agility and power. At just 4.38 metres (172.5 in) long, not only is it the smallest model in the Aston Martin range and one of the leanest cars in its class, but it is light too, and very nimble. Hand-finished

body panels provide delectable shapes and perfect fit, while an all-alloy underbody structure – derived from aerospace technology – incorporates bonded aluminium extrusions and castings for superb rigidity and minimal weight. The bonnet and roof are also constructed from lightweight alloy, while the front wings and sills are produced from advanced composites.

The Vantage Roadster could not be anything else but an Aston Martin. It is a modern shape, but with a lineage that can be traced back to some of the great Aston Martin models of the past. The marque's 14th convertible model since 1950, the Roadster is the direct ancestor of iconic open-top models such as the DB2, DB5, DB6 and DB7. It is a pure sports car that heightens the sensations and provides a driving experience that is synonymous with Aston Martin, offering both high performance and thrilling dynamics.

DESIGN

From the moment you first sit in the Vantage Roadster, you connect with it. It's a bond created partly by the natural agility of the car, but also by the embrace of the authentic sports car cabin. Hand-trimmed in the finest materials, it is simple, logical and beautifully designed; everything you and your passenger touch is unique to Aston Martin.

The instrument pack is beautifully crafted from aluminium and has a three-dimensional profile for easy reading. To create a clear, simple design, most of the warning lights are hidden behind the aluminium faces, becoming visible only when illuminated. The central message displays, meanwhile, are organic electroluminescent (OEL) – a process pioneered by Aston Martin – making them easier to read than conventional LCDs.

A synthesis of high technology and hand-crafted elegance, the interior features an optional pop-up satellite navigation screen, class-leading audio system and Aston Martin's trademark glass starter button.

Like all Aston Martins, the Vantage Roadster is hand-assembled and hand-finished, allowing its designers freedom to produce the perfect form, without the constraints and inflexibility of mass production. Only craftsmen can deliver the design details and level of finish that Aston Martin engineers and designers demand. For instance, the bonnet of

the Vantage Roadster has shut lines that travel all the way to the front of the car, without the need for a separate nose cone, creating a cleaner, crisper design. Furthermore, the Roadster uses metal mesh grilles and trims instead of the typical plastic alternatives: integrity is a cornerstone at Aston Martin and we believe that everything has to be right.

True, there is a certain cachet to a car being both hand-built and modern – it is rare these days and getting rarer all the time – but there are a host of sensible engineering and design reasons why Aston Martins are still hand-assembled. Expert craftsmen can perform the complicated, labour-intensive work that robots on production lines cannot. They can craft designs and finishes that defeat machines. Take, for instance, the single aperture cuts for the headlamps in the front wings; this design can be achieved only because the Vantage Roadster is painstakingly built by hand.

Then there is the beautiful stitching of the leather seats. Automated machines can stitch leather, but they cannot do it with the same lively care, or quality, as craftsmen. The same is applicable to the finish of the bodies. Mass-produced cars frequently need plastic finishers to hide awkward production line joins, but cosmetic remedial work is unnecessary at Aston Martin, where each car is expertly hand-finished and tended by craftsmen. There are aluminium alloys used for switches, instruments and the facia; fabric and leather in myriad colours and finishes – including many different stitching treatments – and a special piano black wood trim.

Engines, too, are individually hand-assembled, just as they always have been at Aston Martin, although now at a dedicated, high-technology facility in Cologne, Germany. There is no rush with hand-assembly; the over-riding concern is always quality. That is why Aston Martins – all Aston Martins – are built by hand, and it is why all the world's finest luxury goods, from suits to watches, are still hand-made. When low volumes are desirable, and exclusivity is demanded, it is quite simply the best way – a mix of technology and tradition that results in an exclusive, advanced and uniquely desirable sports car.

DYNAMICS

The Vantage Roadster is a high-performance sports car. With 0-100 km/h (62 mph) in 5.0 seconds (0-60 mph in 4.9 seconds) and a potential maximum speed of 280 km/h (175 mph) its performance figures are as heady as you would expect of an Aston Martin.

Although there are many reasons for this excellent performance – light weight and efficient aerodynamics among them – the key is the engine, the heart of any great sports car. This new V8 has been specifically designed and developed for the Vantage Roadster and Vantage Coupé. Hand-assembled at Aston Martin's purpose-built engine facility in Cologne, Germany, it is a light, compact, all-alloy unit – high-performance yet ultra-responsive even at the lower end of the rev range. Its maximum torque is an impressive 410 Nm (302 lb ft) @ 5000 rpm, 75 per cent of which is delivered at just 1500 rpm – barely more than idle – making the Roadster extremely tractable and great fun to drive. Push harder, and that V8 engine revs freely, delivering refined, exhilarating pace.

True to Aston Martin tradition, it is as musical as it is muscular, an engine that entertains in every sense. The bore and stroke dimensions are optimised to provide an excellent balance between outright power and torque, while a resonance induction system improves tractability and performance, and contributes to that inspired engine note. The inlet camshaft timing also varies, improving low-end throttle response and mid-range torque in particular. The exhaust system is highly effective. Each bank of cylinders features a four-into-two-into-one manifold – an arrangement more usually found on racing cars – which improves breathing and therefore performance. Special bypass valves provide a quieter exhaust note at low speed, opening at higher engine speeds to reduce the pressure in the exhaust system, raise the power output and provide a more rousing accompaniment.

The advanced body structure of the Vantage Roadster is the key to its superb handling and responsiveness. Developed alongside the Vantage Coupé, the Roadster shares the all-alloy VH (Vertical Horizontal) architecture that is unique to Aston Martin and which provides an excellent backbone. The use of sophisticated materials such as lightweight alloys, magnesium and advanced composites for the body further contributes to the car's low weight and high rigidity.

The immense strength and rigidity of this structure has a number of benefits: it provides a stable platform from which the suspension can control the car, it gives the driver enhanced feel, it increases the strength and safety of the passenger cell and it improves build quality. None of these advantages are undermined by the Roadster's convertible bodyshell. As ever, Aston Martin's no-compromise approach ensures the driver gets not only a safer, sounder car, but improved performance and sharper responses, too.

The light, strong body structure of the Vantage Roadster is perfectly matched to the specially designed double wishbone suspension, resulting in outstanding handling and excellent ride quality. Fundamental to its handling capabilities is the fact that the Roadster is naturally well balanced. The suspension wishbones are aluminium, as are the dampers, to save even more weight. The steering rack is solidly mounted forward of the front wheels – common on racing cars but rarely seen on road cars – for better control and to provide the driver with greater feedback and response.

If a car is to have natural agility it must also have a low polar moment of inertia and excellent weight distribution. In order to achieve this, the Vantage Roadster is designed to concentrate as much weight as possible within the wheelbase, with minimal front and rear overhangs.

The engine is positioned ahead of the cabin but well behind the front axle line, making the Vantage Roadster a front mid-engined car. Dry sump lubrication, normally a motorsport application, enables the engine to sit lower in the car, which further improves handling by lowering the centre of gravity. Dry sump lubrication also helps to minimise the likelihood of g-forces denying oil supply to the engine under hard cornering. Improving weight distribution still further, the transmission is mid-rear mounted – forward of the rear 'axle' line – and connected to the engine by a rigid, cast aluminium torque tube, which houses the immensely strong and light carbon-fibre propeller shaft.

Dynamically, the Vantage Roadster has enviable credentials: a high-performance, advanced, lightweight V8 engine, one of the most lightweight, rigid body structures available, fully independent double wishbone suspension and optimum weight distribution. Put them together and it's little wonder that the result is a supremely agile and entertaining open sports car that offers an invigorating ride.

On-road communication and feel are essential to a sports car, for any elasticity between the driver and the contact point of the tyre diminishes the driving experience. The driver needs to know exactly how the car is behaving. That's why the body structure of the Vantage Roadster is so rigid: it ensures maximum communication between road and hand, between tyre and torso. The car's behaviour is relayed faithfully and accurately, ensuring an undiluted driving experience, yet it remains tractable and easy to drive.

The flexibility of the engine and the easy-to-use controls make everyday town or city driving simple and uncomplicated. Electronic safety controls provide further reassurance. Braking power is awesome, with massive disc brakes – 355 mm diameter at the front, 330 mm at the rear – that are both ventilated and grooved. For the Vantage Roadster, grooving is a better solution than conventional cross-drilling of the discs, as they work more effectively with the brake pads and do not fill with brake pad dust. There's a choice of two alloy wheel styles – 18 inch or 19 inch in diameter – fitted with specially tuned high-performance tyres.

The fast-shifting, six-speed Graziano manual gearbox, with ratios perfectly matched to the performance of the V8 engine, is joined by Aston Martin's new Sportshift automated manual transmission. This ultra-quick system provides the driver with Formula 1-style fingertip control of gear changes, using steering wheel-mounted paddles to progress smoothly and swiftly through the ratios. To adapt to all driving conditions, an additional 'Comfort' setting offering a more relaxed gear change is also available – it is selected via a single button on the centre console. Sportshift also benefits from enhanced low-speed functionality: a special 'crawl' feature inches the car along at parking speeds, allowing you to concentrate on positioning the vehicle rather than feathering the throttle for control. Sportshift includes a user-selected Auto Drive mode where the system takes care of the speed and timing of all gear changes.

USABILITY

The Vantage Roadster is a high-performance sports car, yet the engine is so tractable, the handling so predictable, the visibility so good and the controls so easy to use that it is as comfortable in town or city as it is on country roads or even the track. Combine this

with high safety standards providing reassurance whatever the driving conditions, and the Roadster delivers the sensational feel of open-air motoring with ease, making it both a weekday working car and the ultimate weekend treat.

This is a car that will thrill you on the track, yet serve you just as well in town. It's an exhilarating drive on the world's most demanding race circuits, yet is quite happy on motorways, in traffic or across country. One of the world's most inspiring after-hours sports cars, it is nonetheless quite happy labouring from nine to five.

As you would expect of an Aston Martin, it has been thoroughly – and painstakingly – tested. The V8 Vantage Coupé and Roadster have endured the most extensive testing and development programme in the company's long history: no fewer than 50 prototypes were vigorously tested over more than half a million miles. Over 12,000 miles of testing, including maximum speed runs, were carried out in Dubai, where the ambient temperature regularly hit 48 °C and the bodywork of the cars reached 87 °C. High-speed testing was also carried out at the Nardo test track in Italy, where the car ran for a total of 37,000 miles. Further extensive testing was carried out in Germany at the Nürburgring's Nordschleife, the world's most daunting racing circuit, and cold weather testing, in temperatures as low as minus 30 °C, was undertaken in Sweden.

The Vantage Roadster is a compact design with a spacious and beautifully appointed cabin. The large fuel tank and efficient engine mean that long stretches between refuelling are easy: up to 560 km (350 miles) of touring is possible.

The cabin has its everyday conveniences: as well as the good stowage space, there's an optional satellite navigation system with a 12 cm screen that retracts automatically when not in use, and an optional integrated Bluetooth preparation telephone (simply insert your SIM card into a drawer in the main instrument console). Everything is in place to ensure that time spent in the cabin of the Roadster is as efficient and pleasurable as possible. As well as the inherent strength of the car itself, the Vantage Roadster is full of advanced safety technology, including an array of electronic features. Its all-alloy structure makes for a very strong passenger cell and further protection is offered by deformable front and rear crumple zones, which help absorb crash energy and enhance driver and passenger protection. Excellent side impact protection is also in-built, thanks

to the large sills, strong A-pillars, door impact beams, and the substantial dashboard and footwell structures.

The fuel tank is mounted amidships – good not only for safety but also for balance and handling – and encased in its own aluminium compartment. Both driver and passenger benefit from dual-stage airbags (deployed in one of two stages depending on the severity of the accident) and side airbags. As in the DB9 Volante, sensors help detect the risk of a potential rollover and two roll-overs are deployed from the rear seat headrests.

In addition to all this, the Vantage Roadster incorporates a suite of electronic safety aids, including Dynamic Stability Control (DSC) designed to help prevent wheel slippage or loss of traction, Electronic Brakeforce Distribution (EBD) to help achieve optimal braking balance, and Emergency Brake Assist (EBA) which boosts pedal pressure when full braking is required in an emergency. Positive Torque Control (PTC) also acts to help minimise the likelihood of the rear wheels locking in an engine braking situation. Headlamps feature innovative LED (light-emitting diode) indicators and side lights, and optional xenon dipped beam headlights are available. The rear lamps employ 360 LEDs for lights, brakes and indicators. As a result, they illuminate 200 milliseconds faster than conventional brake lights, providing an additional full car length of stopping distance at 100 km/h (62 mph) for the following car. In real-life situations, that kind of detail can be critical, so it is reassuring to know that the Vantage Roadster pays as much attention to safety as it does to performance and handling.

TECHNICAL SPECIFICATIONS

Body

- Two-seat, two-door body with soft cover convertible top and heated glass rear screen
- Bonded aluminium structure
- Aluminium alloy, steel, composite and magnesium alloy body
- Extruded aluminium side impact bars and integral rollover bars
- Halogen projector headlamps

- LED rear lamps

Engine

- All-alloy, quad overhead camshaft, 32-valve, 4.3-litre V8
- Variable inlet camshaft timing
- Dry sump lubrication system
- Fully catalysed stainless steel exhaust system with active bypass valves
- Front mid-mounted engine, rear-wheel drive
- Maximum power: 283 kW (380 bhp) at 7000 rpm
- Maximum torque: 410 Nm (302 lb ft) at 5000 rpm
- Acceleration: 0-100 km/h (62 mph) in 5.0 seconds / (0-60 mph in 4.9 seconds)
- Maximum speed: 280 km/h (175 mph)

Transmission

- Rear mid-mounted, six-speed manual with optional Sportshift automated manual transmission
- Alloy torque tube with carbon-fibre propeller shaft
- Limited slip differential
- Final drive ratio 3.909:1

Steering

- Rack and pinion, power-assisted steering, 3.0 turns lock to lock
- Column reach and tilt adjust

Wheels & Tyres

- 18 in alloy wheels – 10-spoke design (standard):
 - Front 8.5J x 18 in / Rear 9.5J x 18 in
- Bridgestone Potenza tyres:
 - Front 235/45 ZR18 / Rear 275/40 ZR18
- 19 in alloy wheels – seven-spoke design (optional):
 - Front 8.5J x 19 in / Rear 9.5J x 19 in
- Bridgestone Potenza tyres:
 - Front 235/40 ZR19 / Rear 275/35 ZR19

- Optional Pirelli P-Zero Corsa sports tyres:
 - Front 245/40 ZR19 / Rear 285/35 ZR19

Suspension

- Front: Independent double aluminium wishbones incorporating anti-dive geometry, over aluminium monotube dampers and anti-roll bar
- Rear: Independent double aluminium wishbones incorporating longitudinal control arms, coil over aluminium monotube dampers and anti-roll bar

Brakes

- Radial-mounted, four-piston, monobloc calipers
- Dynamic Stability Control (DSC)
- Traction Control
- Anti-lock Braking System (ABS)
- Electronic Brakeforce Distribution (EBD)
- Emergency Brake Assist (EBA)
- Positive Torque Control
- Front: Ventilated and grooved steel discs, 355 mm diameter
- Rear: Ventilated and grooved steel discs, 330 mm diameter

Interior

- Full grain leather interior
- Gunmetal facia
- Graphite interior fittings
- Electrically adjustable seats
- Automatic temperature control
- Heated rear screen
- Reversing sensors
- Battery Disconnect Switch (BDS)
- Trip computer
- Dual-stage driver and passenger airbags
- Side airbags
- Alarm and immobiliser

- Tyre pressure monitoring¹

In-Car Entertainment

- 160 W Aston Martin Audio System with six-CD autochanger

Options

- Sportshift automated manual transmission
- Xenon (HID) headlamps including power wash
- Bright finish grille
- Piano black facia trim
- Alternative brake caliper finish (black, red, silver)
- Heated seats
- Cruise control
- Passenger seat height adjustment¹
- Memory seats (three positions)
- Battery conditioner
- Powerfold exterior mirrors
- Auto-dimming interior rear-view mirror¹
- Auto-dimming interior rear-view mirror with garage door opener¹
- Voice-activated Bluetooth telephone preparation¹
- Integrated GSM telephone¹
- Satellite navigation system with optional Traffic Messaging Channel (TMC)¹
- Tracking device^{1/2}
- Alarm upgrade (volumetric and tilt sensors)
- Smokers' pack
- Sports tyres
- 19 in alloy wheels – seven-spoke design with silver finish
- 19 in alloy wheels – seven-spoke design with anthracite finish
- Front wheel stone guards
- Personalised sill plaques
- First-aid kit¹
- Umbrella and holder
- 700 W Aston Martin Premium Audio System with Dolby Pro Logic II

- Wind deflector

Dimensions

- Length: 4380 mm (172.5 in)
- Width: 1865 mm (73.5 in) (excluding mirrors)
- Width: 2025 mm (80.0 in) (including mirrors)
- Height: 1265 mm (50.0 in)
- Wheelbase: 2600 mm (102.5 in)
- Front track: 1570 mm (62.0 in)
- Rear track: 1560 mm (61.5 in)
- Turning circle (kerb to kerb): 11.1 m (36.5 ft)
- Boot capacity: 144 litres (5.0 cu ft)
- Fuel capacity: 80 litres (17.6 UK gal), (21.2 US gal)
- Cd: 0.35
- Weight: 1710 kg (3770 lb)

Fuel Consumption³

- Urban: 12.6 mpg (22.5 litres/100 km)
- Extra urban: 26.6 mpg (10.6 litres/100 km)
- Combined: 18.8 mpg (15.0 litres/100 km)

CO2 Emissions³

- 358 g/km

¹ Not available in all markets.

² Complies with UK Thatcham Category 5 requirements. Excludes subscription. Standard in UK.

³ Data not applicable to North American market.

JAEGER-LECOULTRE REVERSO

The Reverso watch was developed in the 1930s in response to a very specific request. The brief was to create an elegant, sporting watch that could offer the wearer two modes within one simple package: open faced, showing a carefully crafted dial, or closed and protected to shield the movement and crystal from possible damage. The sport for which

the watch was required was polo – arduous, energetic and dangerous, but also an environment in which a well-tooled precision wristwatch is very useful.

The Vantage Roadster shares an essential characteristic with the Reverso watch. It is a car of two characters: open and visible, or closed and protective. The fully-lined fabric hood envelops the two-seater cockpit, providing unrivalled comfort and insulation from the outside world. Yet with the top down – in a matter of seconds – the character of the car is transformed. Like all Aston Martins, the Vantage Roadster is equally at home on the road or the track; it was developed on a racing circuit, but makes a refined and relaxed long-distance tourer.

The production version of the V8 Vantage was unveiled at the 2005 Geneva International Motor Show, joining the flagship Vanquish S and the DB9 models to complete Aston Martin's line-up. The Vantage Roadster offers the unique attributes of the sporting Vantage Coupé within a flexible package. It is a true driver's car that offers open-top motoring without compromising its excellent dynamics, performance and usability.

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