



ASTON MARTIN

Aston Martin unveils its new hero: the Vanquish

Sitting proudly at the pinnacle of the luxury British car maker's sports car line-up, this breath-taking new super grand tourer represents the zenith of current Aston Martin design and engineering. Vanquish points to an exciting and confident future for the historic brand.

Vanquish is a new Aston Martin featuring the next generation of the renowned VH architecture, as well as a significantly upgraded 6.0-litre V12 engine that is considerably more potent than before.

The design represents the latest take on Aston Martin's iconic visual language. Vanquish unquestionably sees the brand continue its enviable tradition of producing some of the most beautiful sports cars in the world. Styling cues such as the elegant waist, elongated side strakes and LED rear light blades are derived from the One-77 supercar.

Unmistakably an Aston Martin, the design shows a clear and coherent lineage from its heritage while providing an equally clear pointer to the luxury car brand's vibrant future. Closer inspection reveals details such as the stunning new Aero Duct on the rear boot lid. This elegantly devised passive engineering feature, which counteracts lift at the car's rear when travelling at speed, is a triumph of both design and technical ability.

Performance, presence, style and great British craftsmanship – the Vanquish has all these traits in abundance.

Aston Martin Chief Executive Officer, Dr Ulrich Bez said: "Today's Vanquish is the ultimate expression of Aston Martin design ethos, engineering innovation and technical ability. It offers luxurious, continent-crossing capability and pure driving excitement without compromise.

“Bearing the same name as the iconic original Vanquish that did so much to cement Aston Martin’s reputation as a maker of great GT cars in the modern era, I believe the car unveiled today once again puts this great British brand at the top of its class.

“The new Vanquish mixes beautiful design with impressive technology such as the superb new infotainment system. This is the latest incarnation of everything we know, informed and developed from One-77. It is the ultimate Super Grand Tourer – confident and assured – and is the newest representation of Power, Beauty and Soul.”

As happy on the streets of a bustling city as it is carving through the countryside or long distance motorway touring, the Vanquish offers a thoroughbred British luxury sports car that’s also suited to everyday use.

Powered by a significantly revised naturally aspirated 6.0-litre V12 petrol engine mated to the proven Touchtronic 2 six-speed automatic gearbox, the car offers suitably impressive performance figures. The V12’s power peak of 565 bhp (573 PS) makes it Aston Martin’s most potent production model yet, outmuscled only by the strictly limited edition £1.2m One-77 supercar.

The raw statistics speak for themselves: 573 PS at 6,750 rpm, 620 Nm of torque at 5,500 rpm, 0-62 mph in 4.1 seconds and a top speed of 183 mph place the Vanquish firmly into supercar territory. Yet the brand’s team of engineers have worked towards economy and emissions improvements, too.

The latest engineering methods, innovative technologies and typically understated classic British design come together to make the muscular new Vanquish a true super GT. For instance, each body panel on the car is constructed from carbon fibre because of its high strength-to-weight ratio and flexibility of form. Meanwhile torsional rigidity is improved by more than 25%.

Practical improvements such as a newly designed and significantly more spacious cabin and a boot that, at 368 litres, is more than 60% larger than that of the DBS, ensure the new Vanquish can carry sufficient luggage for even the most ambitious grand tourist.

Designed and hand-built at Aston Martin's global headquarters at Gaydon in Warwickshire the new Vanquish, available as a 2+2 or 2+0, sits atop a broad line-up of world-class sports cars including the exquisite DB9, sporty V8 Vantage and luxurious four-door Rapide.

Dr Bez said: "The Aston Martin range is stronger now than at any time in our 100-year history. The Vanquish represents the perfect way to signal the beginning of our centenary celebrations."

Priced from £189,995 RRP first deliveries began in the UK and Continental Europe late in 2012.

- Ends -

Attachment 1

Aston Martin Vanquish Specification

Body

- Two-door coupe body style with 2+0 or optional 2+2 seating
- New generation bonded aluminium and carbon fibre VH structure
- Aluminium, magnesium alloy and carbon-fibre composite body
- Extruded aluminium door side-impact beams
- Bi-xenon headlamps
- LED light blade rear lamps and LED side repeaters

Engine

- All-alloy, independent quad variable camshaft timing, 48-valve, 5,935 cc V12
- Compression ratio 11.0:1
- Front-mid mounted engine, rear-wheel drive
- Fully catalysed stainless steel exhaust system with active bypass valves
- Six three-way catalytic convertors
- **Max power:** 573 PS (565 bhp) at 6,750 rpm
- **Max torque:** 620 Nm (457 lb ft) at 5,500 rpm
- **Acceleration:** 0-100 km/h (0-62 mph) in 4.1 seconds
- **Max speed:** 295 km/h (183 mph)

Transmission

- Rear-mid mounted, six-speed Touchtronic 2 automatic/sequential manual gearbox
- Alloy torque tube with carbon fibre propeller shaft
- Limited-slip differential

Wheels and Tyres

- Front: 9J x 20" Pirelli P Zero 255/35 ZR20
- Rear: 11.5J x 20" Pirelli P Zero 305/30 ZR20

Steering

- Speed-dependent electronically controlled rack and pinion power-assisted steering, 2.62 turns lock-to-lock. Column tilt and reach adjustment

Suspension

- Lightweight aluminium front subframe with hollow castings
- Front: Independent double wishbone incorporating anti-dive geometry, coil springs, anti-roll bar and monotube adaptive dampers
- Rear: Independent double wishbones with anti-squat and anti-lift geometry, coil springs, anti-roll bar and monotube adaptive dampers
- Three-stage adjustable Adaptive Damping System (ADS) with Normal, Sport and Track modes

Brakes

- Front: Ventilated carbon ceramic discs, 398mm diameter with six-piston calipers
- Rear: Ventilated carbon ceramic discs, 360mm diameter with four-piston calipers
- Dynamic Stability Control (DSC) with Track mode
- Anti-lock Braking System (ABS)
- Electronic Brakeforce Distribution (EBD)
- Emergency Brake Assist (EBA)

- Positive Torque Control (PTC)
- Traction Control
- Launch Control

Dimensions

Length:	4720mm (inc. front number plate plinth)	Wheelbase:	2740mm
Width:	2067mm (inc. mirrors)	Fuel tank capacity:	78 litres (17.2 Imp.galls, 20.5 US galls)
Height:	1294mm	Weight:	1739 kg

Standard specification

- Full-grain leather interior
- Alcantara headlining
- Electrically operated front seats
- Memory front seats and exterior mirrors (three memory positions)
- 2+0 seating configuration with flexible rear environment storage
- Powerfold exterior heated mirrors
- Front and rear parking sensors
- Cruise control
- Tyre pressure monitoring
- Alarm and immobiliser
- Remote-control central door locking and boot release
- Automatic temperature control
- Heated front seats
- Curtain side head airbags
- Dual Stage Driver and Passenger Front Airbags
- Pelvis and thorax seat mounted airbags
- Seat belt dual-pretensioners and digressive load limiters
- Trip computer
- Tracking device (UK only)
- Laminated windscreen with clear noise-insulation layer
- Glass ECU
- Titanium bonnet and side strake meshes
- Bright aluminium front grille
- Chrome side strakes and tailpipe trim
- Heated rear screen

In-car entertainment

- New infotainment system with capacitive switching
- 1000W Bang & Olufsen BeoSound 13-speaker audio system
- Garmin satellite navigation system**
- 6.5" LCD Screen
- iPod® and iPhone® Integration and USB playback
- Satellite radio system (USA only)
- AM/FM radio¹

- A2DP Bluetooth® audio and phone streaming
- Wi-Fi Hub5

Options

- Ten-spoke alloy wheel in a Graphite finish
- 20-spoke alloy wheel in a Liquid Silver, Silver finish with diamond turning, Graphite finish with diamond turning, Gloss Black with diamond turning and Satin Black with diamond turning
- Black-vened grille
- Magnum Silver or Black Mesh finish
- Matt black textured tailpipe
- Black, blue, yellow or red calipers
- Exposed carbon fibre roof panel
- Exposed carbon fibre door mirror caps
- Exposed carbon fibre side strakes
- Exposed carbon door handles
- Protective tape
- Black Luxmil Leather and part-Alcantara steering wheel
- Colour-Keyed Luxmil Leather steering wheel
- Black One-77 leather steering wheel with black Alcantara Inserts
- Colour-Keyed One-77 Luxmil leather steering wheel with black leather inserts
- Centre stack facia in carbon fibre 2x2 twill, carbon fibre 2x2 fishbone, Piano Red, Piano Black or Piano Ice mocha.
- Headrest embroidery – Aston Martin wings or Vanquish logo
- Black hardware pack
- Full carbon fibre gearshift paddles
- Personalised sill plaques
- Rear parking assist camera
- Auto-dimming mirror with garage door opener
- Heated and ventilated seats
- Smoker's Pack
- Second glass key
- Tracking device**1
- Alarm upgrade (volumetric and tilt sensors)
- Option toolkit
- Six-CD auto-changer
- First-aid kit

*+ Includes Traffic Messaging Channel (TMC) in Continental Europe

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

1 Not available in all markets

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

Attachment 2

Aston Martin Vanquish: Design

Aston Martin is renowned in the motor industry for the supreme beauty of its cars. The visual language of a modern Aston Martin is highly distinctive, yet timelessly attractive.

The design team at the company's global HQ in Gaydon, Warwickshire, is led by Design Director Marek Reichman and, together, they have developed an unmistakable visual interpretation of the brand's ethos.

When the commission for new Vanquish arrived Marek and his team set about working to hone the flowing exterior lines of a classic Aston Martin GT and to create a modern day interpretation of the Vanquish.

Drawing inspiration not least from the iconic One-77 supercar, the team worked to evolve that design language and create a 21st Century successor worthy of sporting the Vanquish moniker.

They worked to stay faithful to the original Vanquish inspiration – so beloved of Aston Martin fans worldwide – while introducing new aspects that debuted in the One-77.

The result is a new Vanquish that very clearly retains the presence of its forebear, yet offers it in a much more refined and functional package. Sporting the assertive body language for which the previous Vanquish was renowned, today's GT is more lean and elegant – highlighting its improved agility and dynamics.

With the exception of the now sold-out One-77 supercar, and limited edition V12 Zagato, the new Vanquish sits atop Aston Martin's model range. Understandably, therefore, it boasts design language derived from the One-77 such as the elegant and flowing waistline, elongated side strakes, curvaceous, taut, form and LED light blade rear clusters, as well as entirely new design ideas such as the remarkable rear Aero Duct. Blending the aggressive lines of the One-77 with the elegant shape of the DB9 and Rapide, the new Vanquish sets the visual standard for today's luxury GT cars.

It has amplified gestures – in the form of bonnet vents, side strakes and a sculpted roof – that accentuate the car's extra performance and edgier character. The car has a more assertive stance, yet is not overtly aggressive.

A near-continuous ring of exposed carbon fibre features at the base of the car in the form of a carbon fibre splitter, light-catching carbon fibre side skirts and imposing carbon fibre rear diffuser. This accentuates the car's sporting dynamics, as well as making it appear more planted.

Each body panel on the new Vanquish is also constructed from carbon fibre, because of its high strength-to-weight ratio and flexibility of form. This not only reduces mass but means that fewer individual body panels are required. For instance, the panel gap on the C-pillar joint is no longer necessary.

The designers have worked hard to pay attention to the finer details of all the materials used, with the carbon fibre weave direction a good example of this. It has been designed, and is constructed, to flow precisely with the car's elegant shape.

Just as with the exterior, the design team were tasked with redesigning the Vanquish's interior to give it a more complete and high quality finish. The result is an all-new interior that is more roomy, comfortable and luxurious than ever.

Again drawing inspiration from the One-77, the design team have emulated the flowing lines, quality and craftsmanship while introducing significant refinements over DBS to improve ergonomics and usability.

Showcasing the vast selection of materials and finishes that are now available on the Vanquish, the interior trim is available in a wide range of materials including fine Bridge of Weir Luxmil Leather, Semi-Aniline Leather and Alcantara, all expertly hand-stitched by some of the world's most experienced craftspeople.

Elsewhere inside, the new instrument panel is a refinement of the One-77's, with new detailing and improved ergonomics.

The new design is sleeker with a more elegant finish to complement the rest of the interior. It features new elements that convey a powerful and assertive attitude, and a new Driver Information Module (DIM) that the Vanquish shares with the One-77. The

new DIM retains the classic Aston Martin style, but with a more futuristic typeface. The digital displays have been revised following feedback from existing owners, now permanently showing a digital speedo and a trip computer, which details the remaining range and the odometer.

Perhaps one of the most striking new interior design elements, though, is the new centre stack with refinements providing a more elegant form that is also more intuitive and accessible for both driver and front seat passenger.

A direct descendent of the One-77 centre stack, the Vanquish set-up retains familiar elements such as the ECU engine start button and gear selection buttons, while introducing a new infotainment system and a significantly more user-friendly design.

The facia trim now stretches down the whole centre stack and is manufactured from a single piece of material, giving a uniform finish with, obviously, no panel gaps.

The user interface has been completely redesigned, with a more user-friendly and ergonomic layout as well as technological updates that make it one of the most advanced in-car systems available.

Aston Martin's trademark glass starter module and gear mode selection buttons have been retained while all-new capacitive glass buttons with illumination and haptic feedback have been introduced for the rest of the centre stack's switchgear.

Haptic feedback is more commonly found in touch-screen mobile phones and Aston Martin becomes among the first significant luxury car manufacturers in the world to use the technology in a series production model.

Importantly, of course, the new car has more space both for occupants, and their belongings in the cabin. In fact the interior of the Vanquish has 140% more storage space than the DBS. The cubby box has been redesigned with a stylish armrest lid and now offers more than three litres of storage space and an integrated USB and AC point for portable devices.

There is further storage space at the base of the centre stack, with more than two litres of storage, generously sized cupholders and a mobile phone holder, as well as

additional USB and AC points. Other storage spaces are dotted handily around the car, too, with more than three litres in the door bins and seat pouches alone.

Occupant space grows in all axes versus DBS with, in essence, the interior 'pushed' outward. Legroom is up 37 mm, shoulder room grows 25 mm, elbow room extends by 87 mm while knee room is boosted by 50 mm. All this, as the dash surface is moved forward 20 mm, too.

The Vanquish is available with either 2+0 or 2+2 seating configurations.

Attachment 3

Aston Martin Vanquish: Performance

As with all Aston Martin sports cars, the need for perfect balance, high-performance stability, nimble handling ability and minimised kerb weight define the new Vanquish. The comprehensive use of carbon fibre body panels for the first time in an Aston Martin underline the new Vanquish's credentials as a truly innovative model.

Strenuous efforts have been made to limit the new car's weight, contributing to its impressive performance, handling and significantly improved power to weight ratio. The combination of controlled weight, near-perfect 50:50 weight distribution, a powerful new V12 engine and a performance-honed six-speed transmission combine to make the Vanquish as rewarding and engaging on the move as it is elegant standing still.

At the heart of the new car is the latest iteration of Aston Martin's a 6.0-litre V12 engine. Significant re-engineering of this iconic V12 includes a revised block and new head including the debut of dual variable valve timing, uprated fuel pump, enlarged throttle bodies, a revised 'big wing' intake manifold and fully machined combustion chambers help the engine to a peak power output of 573 PS (565 bhp) at 6,750 rpm.

Crucially, too, the unit has been tuned specifically to deliver greater torque low down the rev range to make the car feel even more willing and muscular from very low revs. The result, predictably perhaps, is an improved 0-100 km/h time of 4.1 seconds. The top speed, where legal, is 295 km/h (183 mph).

As is the modern custom with all Aston Martin sports cars the engine is hand-assembled at the dedicated Aston Martin engine plant in Cologne, Germany.

The Vanquish uses the latest generation of Aston Martin's class-leading VH (Vertical Horizontal) architecture, a lightweight bonded aluminium structure that provides outstanding strength and rigidity. In this iteration, the Vanquish tub now includes the addition of significant carbon fibre components, as well as the use of bonding derived directly from the latest aerospace technologies.

The architecture has been re-engineered to control weight and improve packaging. With 75% new parts, the depth of re-engineering to achieve major packaging improvements cannot be overestimated.

Engineers have employed the extensive use of advanced materials and processes – some derived direct from the aerospace industry – to control weight and optimise the new car's driving experience.

For the first time in an Aston Martin, carbon fibre is used to make every external panel. The race car-inspired technology gives benefits for weight and body stiffness but, more importantly, has been essential in realising the design of Vanquish. Two notable components are the door skin and boot lid – neither of these unbroken surfaces would have been possible without the use of carbon fibre.

“There are no restrictions on form or shape when using carbon fibre,” says Marek Reichman, Aston Martin's Design Director, “and the material allowed us to wrap bodywork around the 20-inch wheels and maintain the precise relationship between the wheel and the bodywork.”

Each panel has been carefully sculpted to direct the airflow around the car, into the engine and to help cool the braking system. The carbon fibre elements are produced using advanced manufacturing techniques developed from the aerospace and motorsport industries.

The panel-making procedure also delivers an exceptional surface finish. The application of a 200 micron layer of epoxy and glass to the panel delivers a class-A surface that is in line with Aston Martin's tradition of high-quality finishes. Inside the car, the weave patterns on the exposed carbon fibre elements have been carefully selected to present the most harmonious surfaces.

Attachment 4

Aston Martin Vanquish: Control

As well as being light, strong and flexible in its application, the latest generation VH architecture is also extremely stiff. The new Vanquish is, in fact, 25% torsionally stiffer than the outgoing DBS making it highly resistant to flex and allowing for responsive and predictable handling.

This rigid and stiff structure also provides an ideal foundation from which the suspension can control the vehicle effectively, further highlighting the importance of the body structure and the effect it has on the dynamic performance of the car.

Aston Martin's engineering teams have worked particularly hard to minimise the weight outside the wheelbase of the new car to reduce yaw inertia. As a result, carbon fibre has been used extensively in the rear structure and the weight of the aluminium front structure has been reduced significantly.

The front chassis structure is a full 13% lighter than that of the DBS – a direct result of using hollow cast aluminium rather than solid cast aluminium. It has also been redesigned to allow for a lowering of the engine. Now 19 mm lower within the body, the repositioned engine improves both the Vanquish's agility and its handling.

The car's front-mid mounted engine and rear-mid mounted transaxle ensuring a near perfect weight distribution: 85% of the car's weight is positioned within its wheelbase.

To take full advantage of its precise and rigid new architecture, the Vanquish employs a battery of sophisticated technologies including, for the first time on an Aston Martin, a motorsport-derived Launch Control system. This works to deliver the optimum take-off from a standing start – balancing throttle, gearbox and various traction aids to deliver a perfect 'launch'.

Once on the move, the Vanquish boasts a plethora of dynamic aids including Dynamic Stability Control and Positive Torque Control to help harness its fearsome potential and deliver a rewarding, controlled, refined Grand Tourer experience.

The latest iteration of Aston Martin's Adaptive Damping System (ADS) allows the driver to switch between three distinct damping modes: Normal, Sport and Track, delivering instant adjustment of the car's ride and handling characteristics.

The ADS automatically alters the suspension settings to ensure the driver has high levels of control at all times, with the ability to respond quickly to different driving conditions. The different damping modes available help significantly broaden the Vanquish's character, adapting its set-up to suit the driver's mood and requirements. Thus it can be a cruising GT car in Normal mode with the capacity to morph into an assertive sports car in Sport and Track modes.

The damper settings are determined by an electronic control unit which takes sensor readings from the car's systems, including throttle position, brake position, steering wheel rotation and vehicle speed. This data establishes the prevailing driving conditions and the demands the driver is making on the car.

The Vanquish is fitted with new generation Pirelli P-Zero tyres that have been developed especially for the car, along with new 20-inch lightweight alloy wheels.

The car's braking system features third generation Brembo Carbon Ceramic Matrix (CCM) brakes to deliver shorter stopping distances with resistance to fade in even the most demanding driving conditions. CCM brakes are also lighter than a conventional system, reducing the weight of the car overall and, in particular, the unsprung weight and rotational masses, further enhancing the performance of the suspension.

The front brakes use 398 mm x 36 mm CCM brake discs with larger front brake pads and six-piston brake callipers from the One-77, while the rear brakes use 360 mm x 32 mm CCM brake discs with a four-piston calliper.

Attachment 5

Aston Martin Vanquish: Quality

Craftsmanship, attention to detail and ingenious design and engineering techniques combine in the Vanquish to deliver a GT of exceptional quality.

It takes, for instance, more than 70 hours of expert handcraftsmanship to build and trim one interior. Seven leather hides are used in each Vanquish to create the sports car's luxurious ambience.

The new car also benefits directly from the experience of creating the One-77 supercar and features new design highlights such as quilted material as a result. The quilting uses detailing not seen on any other car and is delivered via a state-of-the-art machine developed specially for Aston Martin. It produces a finish of rare quality and complexity, with around one million separate stitches used in each new Vanquish quilted leather interior.

Designers at Aston Martin are renowned for paying attention to every minute detail on the brand's sports cars, with numerous examples of this on the Vanquish. One such case is the removal of the towing eye from in the bumper to improve aesthetics. Now positioned hidden away in the front grille, this results in a bumper with less clutter that gives the Vanquish a much cleaner face. And on US-spec cars, the side markers have also been incorporated into the head and tail lamps, again removing clutter from the bumper.

Quality and craftsmanship come together in the Vanquish's new Aero Duct on the deck (boot) lid. This elegantly devised passive engineering feature is included to counteract lift at the car's rear when travelling at speed.

The challenge from CEO Dr Ulrich Bez was to create a part that was "impossible to make". This naturally generated some huge headaches for the design, engineering and manufacturing teams, but the result is a look of unrivalled beauty, form and function. It takes one person two days to construct this one-piece carbon fibre moulding, while the Aston Martin paint team created unique paint guns and polishing tools to be able to finish the decklid to the same glass-like finish as the rest of the car.

The fact that this part has no joint lines is a true testament to the ingenuity, dedication and meticulous attention to detail of the car's designers, engineers and craftsmen.

Testing is, of course, fundamental to the quality and longevity of an Aston Martin and the Vanquish has undergone an exhaustive series of examinations. Digital modelling analysis, bench tests and, of course, thousands of hours of real-world testing around the globe have produced the most comprehensively engineered GT ever to leave Gaydon.

For instance the engineering team carried out more than 5,000 km of durability and high speed testing at the Nardo Ring in northern Italy alone. The circuit is one giant loop that stretches for 12.5 km (7.8 miles), so is perfect for high speed testing, allowing the driver to examine the car at high speed without having to brake for corners. This test puts high levels of stress on all systems and helps to prove out high speed durability.

Following this, a Vanquish prototype was sent to the Aston Martin test centre at the Nürburgring for yet more intense limit handling work. The notorious German track is an ideal place to test and refine the new Vanquish as it is regarded as the most demanding race circuit in the world. There the new car underwent more than 10,000 km of testing to prove-out the car's durability, brakes, DSC system, tyres and chassis set-up.