





The all new Morgan Aero 8 is the world's first all aluminium coach-built car.

An open two seater with breathtaking performance, the Aero 8 holds true to the Morgan tradition of 'no compromise' coachbuilt construction yet brings the world's oldest family owned car manufacturer to the very leading edge of automotive design and construction technology.

The Aero 8's lightweight aluminium chassis, based on the works team GT2 racecar, is now fully developed into a strong, lightweight chassis that gives excellent torsional rigidity and exceptional handling characteristics. Retaining elements of Morgan's traditional styling, the Aero 8's high-grade aluminium body has been freshly sculpted with bold and purposeful looks and highly developed aerodynamics.

The development of the Aero 8 powerplant and drivetrain has given rise to a partnership with one of the world's premier engine and vehicle manufacturers, BMW. Under the provocative curves of the Aero 8 lies BMW's latest 4.4-litre V8 engine mated to a six-speed Getrag gearbox. Exhilarating performance is the result of a torque to weight ratio that rivals any other production sportscar. Extensive testing, using some of Europe's most advanced vehicle research and development facilities, has fine tuned the Aero 8's positive handling and smooth ride.

Working with suppliers from the world of Formula One racing, Morgan has insisted on the use of high quality, lightweight materials and components throughout the entire car. As a result, the Aero 8 employs leading edge technology in many of its unique features.

Above all, the Aero 8 is hand-made to order, built by the skilled craftsman at Morgan's Malvern factory with the same attention to each individual customer's personal tastes as ever. The Aero 8 is a two-seater sportscar combining innovation and heritage. It is functional but dynamic and spirited to drive...



...this is without doubt the birth of a thoroughbred.







Progressive chassis design...

The Aero 8 chassis uses the latest coated aluminium produced in Germany by Alcan specifically for vehicle manufacture, and is the first car to use this material in Europe. Sections of the CAD-designed chassis are bonded together using a high performance Gurrit Essex adhesive and rivetted with Bollhoff rivets for added strength and durability. The result is a lightweight aluminium chassis with exceptional torsional stiffness that has been tested to meet the latest European crash test standards.

...with advanced drivetrain technology.

The Aero 8 is powered by BMW's 32-valve, 4.4-litre V8 with a bespoke engine management system. This advanced powerplant features the VANOS variable inlet valve timing system, cruise control, on-board diagnostics, an immobiliser and drive by wire technology. The Aero 8's emission levels are just 30% of the levels permitted by the latest Euro 3 regulations.

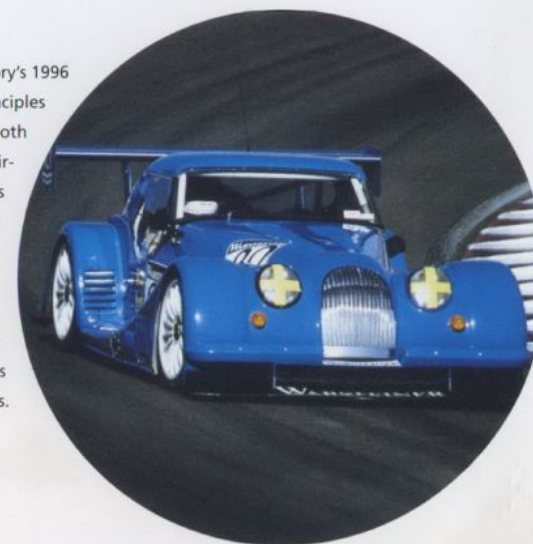


Race-bred engineering...

The Aero 8 is an evolution of the Morgan factory's 1996 and 1997 GT2 racecars and the design principles behind its chassis and suspension have been both conceived and proven on the world's race circuits. The innovative packaging of the Aero 8's independent suspension system allows for long wishbones. These, plus an equal weight distribution front to rear, low centre of gravity and low unsprung weight combine to keep the maximum amount of tyre surface area in contact with the road during cornering. Roll is minimal, eliminating the need for anti-roll bars.

...delivers positive handling.

The Aero 8's exceptional road holding allows the car to pull 1G lateral acceleration on standard road tyres. This was measured during testing at BMW's advanced test facility in the South of France. The drag coefficient of the Aero 8 is 0.39, a 40% improvement over the existing Morgan Plus Eight. The new smooth shape, developed in MIRA's full size wind tunnel, incorporates flush-fitting headlights, a steeply raked windscreen and revised air ducting to create aerodynamics that generate negative lift at both the front and rear axles. A discreet Venturi tunnel at the rear completes a clean, flat under-tray that runs the complete length of the car.



The Aero 8's BMW manufactured V8 engine produces 286bhp and 430Nm of torque at 3700rpm (335lb/ft of torque)





Interior refinements...

The Aero 8 features a removable, Mulberry leather case, large enough to carry most models of portable computer, in place of a conventional glovebox and has a generous luggage space behind the seats. The lockable luggage compartment, with remote release, at the rear is large enough to accommodate a standard set of golf clubs. Blaupunkt has helped install the latest in-car audio systems including satellite navigation.

...with practical versatility.

The Aero 8 is the first Morgan to offer air conditioning, cruise control and electrically heated windows. Specially designed Connolly leather trimmed anti-submarine seats with integral headrest give excellent lateral support. A treble skinned hood, and cockpit soundproofing mean that interior cabin noise is a very acceptable 80dB at 70mph. The aerodynamics of the car are virtually unchanged whether the hood is raised or lowered, reducing wind buffeting when travelling with the hood down.



Pioneering innovations...

The Aero 8's windscreen, electrically operated side windows and glass rear window are all heated using invisible heating elements, a first for any production car, to give rapid all round demisting and defrosting. The car's 18" Dunlop all weather run-flat tyres eliminate the requirement for a spare. A tyre pressure monitor delivers an immediate visible and audible warning inside the cockpit should any tyre fall below 20psi.

...and traditional craftsmanship.

The Aero 8 is built in the traditional coachbuilt fashion, with its aluminium panels mounted on an ash hardwood frame. Built to order, the Aero 8 is available in any of 30,000 body colours with a choice of more than 40 colours of interior leather trim.



AP racing brakes, Koni dampers, Eibach springs, OZ Racing lightweight 18" cast magnesium wheels complete the Aero 8's high performance sports specifications



Testing and development

The four-year development programme to bring the Aero 8 into production has been the largest project ever undertaken by the Morgan Motor Company. A dedicated in-house team at Morgan's Malvern factory has brought together coachbuilt tradition with cutting edge technology, intensive engineering development and exhaustive testing in the evolution of a thoroughbred sportscar.

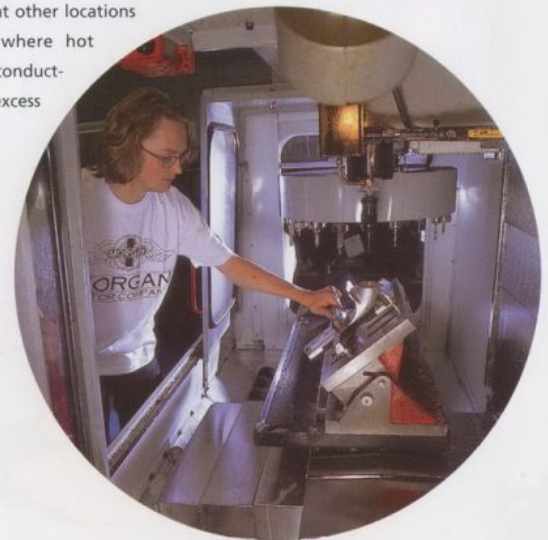
The development project began with the production of the works GT2 racer, which competed in the 1997 FIA GT Championship. The Aero 8's chassis, suspension and braking systems have been both conceived and proven on the world's race circuits.

Prototypes have completed thousands of miles of rigorous testing, both at BMW's advanced test facility in the South of France, and at other locations throughout Europe where hot weather testing was conducted at temperatures in excess of 40°C.

During the testing programme, prototypes were run extensively at maximum speed and tested to exacting standards in order to fine tune the Aero 8's positive handling, breathtaking performance and stability through cornering.

The Aero 8's dramatic looks have been designed in-house at Morgan using CATIA CAD software. Extensive testing in the full-size wind tunnel at MIRA has produced a smooth shape and proactive aerodynamics that give exceptional ride and handling characteristics.

With a kerb weight of around 1000kg the Aero 8 has perhaps the best torque to weight ratio of any production car







The smooth flow of air over the Morgan Aero 8 as tested at the full-sized wind tunnel at MIRA gives stability, balance at speed, and reduces wind noise.

Capable of a top speed of around 160mph, the Aero 8 will accelerate from 0-62mph (0-100kph) in less than five seconds.

ENGINE

Configuration	V8
Bore and Stroke mm	82.7 X 92
"Engine capacity, cc."	4398
"Max output EEC, kw/hp/rpm"	210/286/5500
"Max torque EEC, Nm/rpm"	430/3700
"Max. torque EEC, Lb ft/rpm"	322/3700
Power to weight ratio bhp/tonne	286
Torque to weight ratio lb/ft/tonne	322
Valve mechanism	4 cam 32 valve "VANOS" variable intake timing
Fuel system	Bosch fuel injection with full engine management
Exhaust system	Stainless steel
Compression ratio	10:1
Alternator output	140 amp max. water cooled

TRANSMISSION

Mph(kph)/1000 rpm	28.44 (45.8)
Mph at 2500 ft/min piston speed	117.8
Final drive BTR Limited slip	3.08:1
Indirect ratios:	
1st gear	4.227:1
2nd gear	2.506:1
3rd gear	1.669:1
4th gear	1.226:1
5th gear	1:1
6th gear	0.828:1

CHASSIS

Stiff CAD designed aluminium alloy chassis specially treated and bonded with Gurrit Essex adhesive and rivetted with Bollhoff rivets.

SUSPENSION

Front:	Independent - unique long cantilever upper arm with lower wishbone and inboard Eibach coil springs over Koni shock absorbers
Rear:	Rear independent long transverse wishbones with cantilever mounted, fully floating, inboard Eibach coil springs over Koni shock absorbers.

Linkages	Rose jointed suspension
Lubrication	7 Lubrication points
Anti Roll Bars	none

STEERING

Type	Morgan power rack with variable assistance Centre point steering
Turning circle ft	32
Turns lock to lock	3
Rake / Reach adjust (in)	2/2.5

PERFORMANCE (Unofficial test data)

Maximum speed	160
0-62 mph (0-100Kph)	under 5.0

BRAKES

Type	AP Racing to Morgan spec.
Disc diameter front	330 mm Cast Iron ventilated
Disc diameter rear	306 mm Cast Iron ventilated
Calipers Front	4 pot alloy
Rear	2 pot alloy
Fuel tank volume imp.	
Gallons (litres)	15.4 (70)

DRAW CO-EFFICIENT 0.39

WEIGHTS (Unofficial test data)

Kerb weight(Kg)	1000
Ground clearance in. (mm)	6 (150)
Weight distribution	50/50 (with one occupant)
Length in. (mm)	161 (4090)
Width in. (mm)	69 (1750)
Height in. (mm)	43 (1090)

WHEELS AND TYRES

5 spoke 18" OZ magnesium alloy wheels
9" rim size
Peg drive centre lock hubs
Dunlop SP SPORT 9000 225 40 ZR 18
Foam fill run flat system
Weight wheel and tyre 18 KG
Pressure sensors with internal visual/audible
low pressure warning

All weights and dimensions are average figures for standard vehicles. All specifications and availability are subject to change without warning but are correct at the time of going to press.







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