

**Media**Info



## Audi R8 LMS



## Foreword

Audi treads new ground in motorsport. The company demonstrates its "Vorsprung durch Technik" with the R8 LMS for GT racing in the future also in customer hands.

The sportscar was developed for the GT3 class which is increasing in popularity worldwide.

The Audi R8 LMS will spice up an already fascinating starting grid. The racing car is based on the successful road going car. It resembles its production counterpart closely. The distinct sporting design of the R8 is also fully apparent in the race car.

The race version will celebrate its premiere at the start of 2009 already. In parallel Audi builds up a customer sport

centre which will expertly support and advise all race teams and R8 LMS owners. Audi is prepared for a new chapter in its successful motorsport history.



**Jürgen Pippig**  
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## Content

Audi and customer sport.....	4
The Audi R8.....	6
The Audi R8 LMS .....	8
Technical data.....	13
The cockpit.....	14
The engine .....	16
Chassis and suspension.....	18
Bodywork and aerodynamics.....	20
Development and test programme .....	22
GT3: philosophy, regulations, race series .....	24
Audi Sport / Who is who.....	32
quattro GmbH .....	34
The Audi R8 LMS partners.....	36
Audi in motorsport.....	39
Audi Communications Motorsport.....	42

## Customer service with tradition

Audi has run factory based top-level motorsport programmes since 1981. Audi has given its "Vorsprung durch Technik" to customers for almost as long, and in fact not only to end users. The legendary Audi quattro did not only win World Championship titles for Audi. In customers' hands the model rapidly established itself as regular winner at domestic level or in international championships. Reason enough to give the successful models to interested drivers, teams and importers in the subsequent programmes as well.

### Heydays since the 1990s

Touring car racing in the 1990s offered a popular worldwide platform for the next generation of customer racing cars. For instance, in 1996 Audi won seven titles with its importers around the world with the first generation of the A4 as Super Touring Car.

The now legendary wins recorded by the Audi R8 racing sportscar in the 24 Hours of Le Mans also singled out the sports prototype for further competitive outings. In 2004

Customer sport projects based on cars such as the Audi Coupé and Audi 80 already emerged in the 1980s and 1990s





**Customer sport projects like the Audi A4 Super Touring Car, the RS 6 or the Audi R8 regularly harvested single race wins and titles**

and 2005 customer teams even won the 24 Hours of Le Mans twice in succession with the sports prototype R8. In the same way, the private teams contributed to the sportscar's exceptional winning record of 63 wins from 80 starts by adding many single victories.

### **New customer sport era in Ingolstadt**

The development of the Audi R8 LMS for GT3 racing marks the beginning of a new era. For the first time Audi develops a car specifically for customer sport use and not primarily for a factory programme. For the first time a unique customer sport centre, conceived as profit centre, is built in Ingolstadt. Audi started with the initiation of an infrastructure in 2008 in a new wing of the premises.

Responsibility for development of the GT3 programme lies in Ingolstadt, the sites at Győr/Hungary (engine), Neckarsulm (chassis construction and car build) and Ingolstadt (Audi Sport) are integrated.

As a result of the racing car's enormous similarity with its production counterpart a close cooperation arises with other departments within the AUDI AG, including the Technical Development (TE). The perfect customer support and component supply chain is also aided by use of the current pan-European distribution channels used by logistics for production cars. The global distribution channels will be integrated in the future.



*Audi operates top motorsport projects since **1981** – and gives the racing cars to customers*

## The winner's genes

Its name is no coincidence: The Audi R8 unveiled in 2006 does not only carry the name of its motorsport role model but also many genes from the Le Mans winner.

### First mid-engine Audi sportscar

As first mid-engine sportscar from Audi the R8 combines the experience from innumerable motorsport victories with ground-breaking design and Audi's technological expertise. Expertise for which "Vorsprung durch Technik" has become a synonym both on the race track and the road.

### Motorsport in the genes

After the success in rallying with the revolutionary Audi quattro and the touring car's victories, Audi has written a further chapter in motorsport history with the R8 sports

prototype which won, among other things, the 24 Hours of Le Mans five times.

As a result, the regular winner is the perfect inspiration for the new production sportscar. With the model name R8 the winner's genes were also passed on to the street car – which of course also feels perfectly at home on the race track: The mid-engine concept is as integral to this genetic make-up as the high-revving V8 engine with FSI direct fuel injection or the sequential gearbox with steering wheel control whereas the use of permanent four-wheel drive in the race car was and still is prohibited by the regulations. The new R8 is of course equipped with four-wheel drive for superior handling and safety in all conditions. Even the exterior design displays parallels. The design team that had previously



The Audi R8 is the first thoroughbred mid-engine sportscar from Audi

The Audi R8 puts itself  
at the top with high-  
quality technology



sculptured the race car was also given the task of styling the R8 road going sportscar.

#### **A distinguished car**

Innumerable awards underline the claim made by the Audi R8 in its ongoing young career in sportscar design. Whether voted as “World Performance Car 2008” by an

international jury or in numerous surveys in German and foreign specialist magazines – the sportscar has already received many awards since 2006 and left renowned sportscar icons in its wake. Space in Audi’s trophy cupboard could get even more scarce when the sister model for GT3 racing collects its first trophies as a result of the excellent base inherited from the production car.

**>>** Exactly **301** kph is the maximum speed of the Audi R8

## From motorsport to the street and back

The name of the R8 is legend: The R8 sports prototype won the 24 Hours of Le Mans five times between 2000 and 2005 and celebrated 63 wins from 80 starts. The first thoroughbred production sportscar from Audi with the same name, the Audi R8 unveiled in 2006, carries the genes of the triumphant racing prototypes.

Its many prizes awarded by juries and readers' polls, in which the young R8 pulled away from reputable competitors, confirm its status as dream sportscar.

Now, the name R8 returns to the race track: Bearing a close resemblance to the production car and derived from a chassis taken from the production line the Audi R8 LMS arises. "The R8 is the first production Audi to carry the name and genes of a successful racing sportscar and is, as

a result, an outstanding base from which to build up our first large customer sport programme," explains Head of Audi Motorsport Dr Wolfgang Ullrich. "Since the R8 was introduced we have received many enquiries for a race version. With the Audi R8 LMS we will offer customers a racing car incorporating high-quality technology and the typical Audi qualities but which is, however, also easy to handle."

### New field of activity for Audi

For the first time Audi develops a race car specifically for customer sport use which carries the project name R16 internally. The car is developed according to the FIA GT3 regulations, a sportscar class which made its breakthrough in many countries and internationally in 2006, where the most fascinating sportscars from Europe and the USA



**Its allegiance to the production car is perfectly clear, however, the R8 LMS possesses all the attributes of a race car**

compete against one another. Audi respects the spirit of the class – to offer production based, low-cost but powerful racing cars – in all aspects of the vehicle conception.

The development has been carried out since January 2008 in close cooperation with Abt Sportsline, the team with which Audi has won the DTM title three times since 2004 with factory programmes.

#### **Advantages of the extreme production design**

The road going sportscar based on the lightweight aluminium Audi Space Frame (ASF) with its conceptual roots in racing provides the perfect basis for motorsport. Whether chassis structure, engine position, suspension or brakes – many elements could be carried over entirely

from the production line or with small modifications. quattro GmbH takes a standard production chassis from the production line in Neckarsulm as base for every R8 LMS. After the roll-cage is fitted the R8 LMS is completed at the quattro GmbH. The Audi Hungaria Kft. production line in Győr provides the 500 hp plus V10 engine. Audi Sport in Ingolstadt assumes absolute responsibility for project development.

#### **Many active safety elements**

Like every Audi the Audi R8 LMS also guarantees first-class safety. The sportscar designed for customer sport offers exceptional active safety. The range starts with the most prominent external features, the standard lighting system with Xenon plus headlights and LED tail lights. A race



*The Audi R8 LMS was created in less than **7** months after the Board's decision*



ABS, the minutely adjustable traction control (ASR) and the specially tuned suspension take every demand into consideration.

“The car is extremely well balanced,” stresses Frank Biela who has won the 24 Hours of Le Mans five times with Audi since 2000. He shares the set-up work with Nordschleife expert Frank Stippler and Christian Abt, the German Super Touring Car Champion in 1999. “The R8 LMS can be driven easily on the limit in a drift and won’t spring any nasty surprises on the GT3 customer. The ABS is ideal to prevent the driver from sliding off and flat spotting tyres.”

The steering and seat are further active safety elements. The steering column length and angle can be adjusted, and the Recaro bucket seat moves longitudinally to allow

drivers of different statures sharing a car to sit perfectly. During a race, drivers must never remove their hands from the steering wheel since the production six-speed gearbox adapted for racing purposes is activated by shift paddles. For this purpose Audi successfully transferred technology from professional racing: The pneumatic system required for such gear-shift procedures originated from the R10 TDI race car. Finally, the complex rapid refuelling system from Stäubli ensures splash-free fuelling and helps to prevent possible burn injuries. The standard production all-wheel drive quattro – another active safety feature – is however unfortunately prohibited by the regulations.

### Passive safety for optimum protection

The passive safety elements of the R8 LMS are also exemplary. Starting with the strength of the aluminium



The Audi R8 LMS uses many production components – improved by development for racing



The Stäubli refuelling system and the LED rear lights are active safety elements

frame ASF via the standard door design with high safety reserves in the event of a side impact to the motorsport specific additional equipment: The Audi R8 LMS exceeds the demands of the regulations by far. The steel roll-cage is manufactured from tube with greater wall-thickness than specified in the regulations.

The R8 LMS is also fitted with a new motorsport 120 litre tank located in an optimum position behind the cockpit. The extremely complex fire-extinguisher system completes the excellent occupant protection.

#### Technology transfer from other projects

The pneumatic gearbox control from the Audi R10 TDI is not the only technology to have found its way from professional projects into the customer sport programme.

The petrol direct injection – originally tested by Audi for the first time in the R8 sports prototype in 2001 – is a characteristic feature of the Audi R8 LMS and many Audi road going cars. The rear-wing profile of the R8 LMS is almost identical to the corresponding R10 TDI aerodynamic component.

Indispensable for Audi, even if not specified by the regulations, are the two race catalytic converters fitted to the R8 LMS.

#### Preparation for delivery

The R8 LMS has undergone diverse tests and set-up cycles in preparation for its homologation since August 2008. This type approval goes hand-in-hand with an extensive initial categorisation in which the

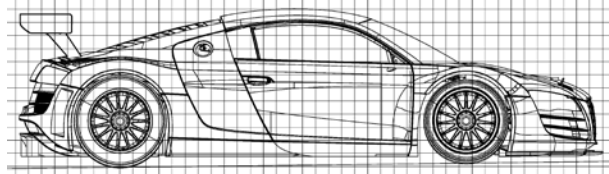
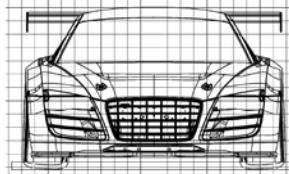
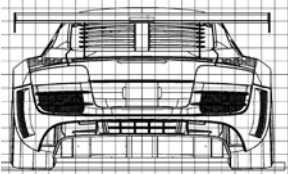
## The Audi R8 LMS

FIA test driver tests the R8 LMS and data is recorded. After consideration of all subjectively and objectively determined values the minimum weight and other parameters are fixed.

The advantages and disadvantages of all competitors are compensated for by a system of vehicle specific

handicaps during the homologation. Also, the FIA acts throughout every season by initiating optional additional modifications to maintain performance parity.

The fully homologated Audi R8 LMS is available to customers from the 2009 season for a target price of 262,000 Euros plus VAT.



Chassis structure and suspension elements remain unchanged and are complemented with motorsport components



## Technical data Audi R8 LMS

Car	
Car model	Sportscar according to FIA GT3 regulations
Design	Audi Space Frame (ASF) made of aluminium with bolted steel roll-cage, carbon-fibre composite/ aluminium bodywork
Engine	
Type	V10 engine, 90 degree cylinder angle, 4 valves per cylinder, DOHC, petrol direct injection, emission control by two racing catalytic converters
Engine management	Bosch Motronic MED 9.1.2
Engine lubrication	Dry sump
Cubic capacity	5,200 cc
Power	Over 500 hp
Torque	Over 500 Nm
Drivetrain/transmission	
Type of transmission	Rear wheel drive, traction control (ASR)
Clutch	Sinter metal twin-plate clutch
Gearbox	Sequential, pneumatic activated 6-speed sport gearbox with shift-paddles
Differential	Locking differential
Driveshafts	Constant velocity joint driveshafts

Chassis	
Steering	Servo-assisted rack and pinion steering
Suspension	Independent front and rear double-wishbone suspension  Damper strut with coil spring (Eibach) and adjustable dampers (Bilstein) as well as adjustable front and rear anti-roll bars
Brakes	Dual circuit hydraulic brake system; ceramic brake discs front and rear, race ABS
Wheels	O.Z. cast magnesium wheels
Tyres	Michelin radial, front: 27/65-18; rear: 31/71-18
Dimensions/weight	
Length	4,470 mm
Width	1,984 mm
Height	1,195 mm
Minimum weight	Ca. 1,250 kg
Tank capacity	120 litres (Shell V-Power)
Equipment	
Race seat	Recaro Pro Racer SPG HANS
Refuelling system	Stäubli SAF 45
Fire extinguisher system	Audi Sport
Harness system	Sabelt



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## Race technology in production cockpit

The Audi R8 LMS cockpit effectively reflects that of the production car. Also integrated are typical racing systems and control elements.

- 01** Gear shift lights
- 02** Display with information about engine revs, pressures and temperatures of fluids, lap-times, gear engaged etc.
- 03** Gear shift paddles, left for downshifts, right for upshifts
- 04** Standard control stalk for lights
- 05** Control stalk for cruise control, which activates the pit-lane speed limiter in the R8 LMS
- 06** Radio (yellow)
- 07** On/off function switch for ABS system (red)
- 08** Standard control stalk for windscreen wipers and screen wash function
- 09** Regulation buttons to activate single programmes and individual fine adjustment of the traction control (ASR)



The steering wheel is adjustable in **2** dimensions – steering column length and angle can be changed

## Ten-cylinder power plant

The R8 LMS is powered by a 500 hp plus V10 engine. Derived from a production unit, the race engine is ideally suited for racing purposes. The normally aspirated unit is mounted longitudinally in front of the rear axle of the Audi R8 LMS.

### Production architecture

The production engine's architecture with its 90-degree cylinder bank angle is retained for racing purposes. The R8 LMS power unit is related to the aluminium V10 engine, which Audi customers are familiar with in the S6 and S8 models.

However, when fitted as mid-engine it requires a different layout to the front engine version used in the S6 and S8

models. The capacity is 5.2 litres. The two cylinder-heads each house a pair of camshafts operating the four valves per cylinder.

### Built for competition

The relatively compact and light engine is equipped with petrol direct injection FSI, a racing version of which booked wins from 2001 at Le Mans as power unit for the R8 sports prototype. It allows higher compression in the R8 LMS V10 power plant and guarantees an excellent power output.

At a capacity of 5.2 litres the production ten-cylinder power unit already has significantly lighter pistons and connecting rods than a V8 engine of comparable

**In its basic form the V10 unit fitted with dry sump lubrication already fulfils many motorsport requirements**







The 5.2 litre engine is located longitudinally in front of the rear axle

capacity. The comparably lower rotating masses allow a free-revving basic characteristic. Further engine details added to its suitability for racing use. Audi Sport tests showed that the production dry sump lubrication is more than a match for all racing conditions. The system reliably fed oil to all the necessary points in the engine even when subject to high centrifugal forces. There are significant differences between the basic production engine's peripheral devices and its racing counterpart where the devices are omitted. The engine is built at the Audi factory in Győr, Hungary.

#### **Huge effort for environment and sport**

In addition to other modifications Audi fundamentally re-worked the exhaust system for motorsport use. The lightened exhaust manifolds on the right and left cylinder banks are each fitted with race catalytic converter. As a result, Audi exceeds the requirements of the GT3 regulations which do not specify use of emission control.

However, with more than 500 hp and over 500 Nm torque the power plant will number among the more powerful engines in the GT3 sportscar field.



## Light and easy as target

The Audi R8 has an Audi Space Frame (ASF) as standard. The pioneering aluminium frame to which double-wishbone suspension is mounted at the front and rear also forms an ideal base for motorsport and helps the R8 LMS to achieve a total weight of 1,250 kilograms.

### Light and safe

The Audi R8 body shell, which complies with all crash tests, only weighs 210 kilograms and is made entirely of aluminium: Extruded sections, panels and vacuum cast nodes are manufactured from light-alloys. The chassis is joined together with 99 metres of weld, 782 punch rivets and 382 self-tapping screws and checked by computer tomography. It is then removed from the quattro GmbH production assembly line in Neckarsulm before undergoing small modifications for motorsport.

### Production components with motorsport qualities

In spite of the considerable performance potential of the R8 LMS many production functions also prove themselves in motorsport. For instance, the ceramic brakes, available ex-works, which only have new brake pads for racing are carried over.

The double wishbone suspension parts produced almost completely from forged aluminium are retained as production parts or differently machined production blanks. The lower front and upper rear wishbones are attached to higher mounting points in order to reduce the ride-height. In the same way, Audi adapted the steering position.

The six-speed gearbox, which uses a twin-plate clutch, is also production based, while the quattro four-wheel





The three-point air-jack is designed for pit stops in racing

drive is prohibited by the regulations. A gear-dog ratio set from Australian supplier Holinger replaces the standard production, fully-synchronised gear ratio set in the paddle-controlled, pneumatically activated gearbox.

### Ingredients for competition

The roll-cage must be made, as specified by the regulations, of steel and is therefore bolted to the aluminium chassis. The three pneumatically operated air jacks to lift the car are also

new. The anti-roll bars fitted are genuine racing parts. The Eibach coil springs and the Bilstein dampers adjustable in bump and rebound were also developed for motorsport.

The hubs used on the R8 LMS also differ from the production part and have a centre-lock wheel nut.

Audi also adapted a race ABS brake system and the traction control ASR for perfect handling and control.

## In the spirit of the series

The production car's fascinating bodywork form is styled by the same design team as the outer skin of the R8 sports prototype that won the 24 Hours of Le Mans five times between 2000 and 2005.

### Adaptation of dimensions and material

Apart from its enormous rear wing the R8 LMS is almost identical to the R8 at first glance. However, the squat appearance of the race car can be put down to many factors. To achieve a lower centre of gravity the R8 LMS, at a height of 1.19 metre, crouches low above the road –

another 5.4 centimetres lower than the low production sportscar. To accommodate the voluminous 18 inch Michelin race tyres (270 millimetres wide at the front, 310 millimetres on the rear axle) the bodywork width grew from 1.90 to 1.98 metres. The overall length also increased with the addition of the front splitter and rear wing – by four centimetres to 4.47 metres.

Since modifying the production aluminium components or pressing new metal bodywork panels would generate far greater costs Audi Sport decided to manufacture

Rear wing, diffuser, wheel arch vents and the height and width of the car distinguish the R8 LMS to the production Audi R8





The bodywork preserves the fascinating appearance of the production car, but is made mainly of carbon fibre

almost the entire outer skin from carbon-fibre composite (CFC). Only the doors, which fulfil the most stringent safety standards, remain completely as production parts. The aluminium roof panel also originates from the production line. To maintain the look-and-feel of the production car the original body panel split lines were retained.

### Functional features in motorsport

The function of the R8 and R8 LMS outer skins differ in many details. Unlike the production design the front bonnet and engine cover are located with quick-release fasteners for racing. Different demands are also made of the aerodynamics. The two, smaller production water

coolers located at the outer extremities of the front end would be exposed to unnecessary danger in the hustle of competition so the central water cooler also assumes their job and vents the air through a larger aperture in the front bonnet. With the ratio between lift and drag the R8 LMS benefits from the perfectly balanced production car aerodynamics. The R8 is one of the few production cars to generate downforce. The front splitter and the rear wing on the R8 LMS complete the racing aero-kit together with the diffuser below the rear of the car. The homologation only allows three rear wing positions with which to adjust the car to the circuits. Vents in the wheel arches and the engine bay panel improve the aerodynamic performance still further.

## The race before the race

At the end of January 2008 the AUDI AG Board decided to build the Audi R8 LMS. The first drivable prototype made its first foray in August.

On the agenda after an extensive test and development programme are the homologation and delivery to customers in 2009.

### Assembly of the first prototype

The Kempten based company and race team Abt Sportsline, with which AUDI AG won the DTM titles in the years 2004, 2007 and 2008, was contracted as development partner. Absolute responsibility for development of the R8 LMS lies with Audi Sport in Ingolstadt.

### Test procedures in the laboratory and on track

Preparation for the engine set-up proved to be extremely complex and time consuming. The V10 engine is controlled by the highly developed Bosch Motronic system MED 9.1.2. The production based electronic unit and the standard production wiring loom required a complex application procedure for motorsport. Comfort and safety functions integrated in the standard electronic (such as the immobiliser system) were superfluous. Instead totally new requirements for different parameters were developed for motorsport applications.

Five-time Le Mans winner Frank Biela, Nürburgring expert Frank Stippler and Christian Abt, former Super Touring Car Champion, shared testing duties at the EuroSpeedway

Tests at the EuroSpeedway Lausitz and other tracks characterise the R8 LMS test and development phase





The experienced racing drivers Frank Biela (above), Frank Stippler and Christian Abt were involved from the first shakedown to the final test

Lausitz, Oschersleben and around the Nürburgring Nordschleife. Audi fed the suspension forces recorded on the Nordschleife into the hydraulic test bench computer. The simulation resulted in a damage-free service life of 40,000 kilometres – an extraordinary long distance for

such a high-performance production based car subject to racing conditions. In addition to suspension and aerodynamic testing, regulation of the ABS and ASR functions and set-up of the pneumatic gear-shift are also on the engineers' and drivers' job list.

## Clubsport racing with dream cars

Amidst a densely populated sportscar world of GT cars and sport prototypes the GT3 series managed a coup in 2006: Forty-four cars started the FIA GT3 European Championship in its inaugural season, a year later the number increased to 50 cars. Worldwide there are now national and international GT3 series. The success of the GT3 formula is based on several pillars.

### Production-based dream sportscars

The GT3 race cars are based on production cars although the regulations are essentially very liberal. With the help of handicap rules the International Automobile Federation

FIA can, however, restrict the development speed at any time. An escalation of costs is thus avoided. The goal: Large variety of brands, low development costs and easy handling for drivers and teams. Eleven race cars from ten manufacturers are homologated at the end of 2008, the Audi R8 LMS is one of the next models. The publicly visible prices of the cars vary between 150,000 and 400,000 Euro.

Variety is guaranteed by stipulating a specific number of cars per homologation in each series – from 2009 four cars. The range spans from small constructors to the world's largest manufacturers. The GT3 models are

**GT3 cars like the Audi R8 LMS (left) closely resemble their production car counterparts (Audi R8 on the right) for reasons of manageability**





almost as fast on a lap as GT2 cars. However, GT2 cars cost between two and three times more than GT3 cars.

#### **Experienced drivers and gentlemen at the controls**

The GT3 race cars are not aimed at factory teams or factory drivers. In principle, drivers are assigned one of four categories subject to career experience and success.

Only drivers of specific categories can share a car as a pair in a race. As a result, 'young guns' compete against experienced sportscar drivers and gentleman drivers without a professional background.

#### **Compact race format**

Two one-hour races per event guarantee everybody plenty of action. Two drivers take turns at the wheel, a mandatory

pit-stop increases the strategic excitement in the race and the distance suits television-friendly time formats.

#### **Attractive markets**

The GT3 series' represent attractive markets in Europe and worldwide. The European Championship calendar does not clash with any of the national GT3 series which are coordinated in Europe by the SRO (Stéphane Ratel Organisation).

In this way, drivers and teams can both compete in a national series and the European Championship.

The guaranteed variety of cars and the levelling of car performance open a broad field of competition for drivers, tuners and teams alike.





## Fair regulations for spectacular grids

Four technical and sporting aspects are highlighted in the GT3 regulations: Technical variety and a broad range of brands combined with performance parity, manageable purchase and maintenance costs, lowest possible development costs as well as technology and sport for ambitious amateurs and not for professional factory drivers.

### Equalised performance range

GT3 race cars are not conceived for factory programmes but for customer sport projects. Well-thought out technical regulations allow great conceptual freedom in the areas of chassis (basic concept, modifications), engine (cylinder number, mounting position, capacity) and bodywork (material, aerodynamics) instead of the usual definitions stipulated for other motorsport classes. Only four-wheel

drive systems like the successful Audi quattro drive, available as standard in the R8, are prohibited by the regulations.

Levelling the performance of the eleven types of cars currently competing is made by basic homologation weight and by handicaps at regular intervals – both car specific. With the handicap rules the GT office of the FIA reserves the right to continually adjust the lap times of single cars by the addition of ballast weight, adjustment to the front and rear ride-heights, air intake restrictors, rev-limits and other possible measures. In this way it is possible for many brands to win despite the broad range of power between 440 and 550 hp seen across the grid. Costly developments – the norm in many other series – are quite simply superfluous in the GT3 class.



Visible performance parity: The most different GT3 concepts fight for centimetres



The tyres are supplied by a single brand

### High calibre sport for an affordable price

The predominant use of production-based technology means initial costs of between 150,000 and 400,000 Euro per car. It makes low-cost and nevertheless exciting sport possible for drivers and teams operating below factory level. Maintenance costs are also moderate: The FIA GT

European Championship promoter lists costs of between 120,000 and 150,000 Euro per driver and season. Within the overall classification of the various series and the single races the best drivers of each brand are honoured as well on the podium and receive points for each manufacturers' trophy competitions.



The power spectrum in the GT3 class ranges from **440** to **550** hp

# Young discipline on the ascent worldwide

The International Automobile Federation's FIA GT3 championship debuted in Europe in 2006. Meanwhile around the world many national championships and single events inspire owners and fans of GT3 cars.

Five series (in Germany, Belgium, Great Britain, France and Brazil) are coordinated and promoted by the 1995 established SRO (Stéphane Ratel Organisation). On top of this comes the FIA GT European Championship.

In addition, other series exist around the world in which GT3 cars are allowed to start. Furthermore, single events like 24-hour races popular in many countries are a particularly attractive field. In Germany in 2009 GT3 cars are also allowed to start in the 24-hour race at the Nürburgring where they have a fair chance of taking overall victory.

## FIA European GT3 Championship (Europe)

Like last year the FIA GT3 European Championship is comprised of six races in 2009, five in Europe and one in the United Arab Emirates.

### Provisional 2009 calendar

2–3 May	Silverstone (GB)
23–24 May	Adria (I)
27–28 Juni	Oschersleben (D)
12–13 September	Algarve (P)
3–4 October	Paul Ricard (F)
14–15 November	Dubai (UAE)

### Information

[www.fiagt3.com](http://www.fiagt3.com)

The GT3 regulations guarantee colourful starting grids and a large base of drivers



### **ADAC GT Masters (Germany)**

Since 2007 the GT3 scene has established itself in Germany as the ADAC GT Masters. The series has seven races in 2009, six in Germany and one in the Netherlands.

#### **Provisional 2009 calendar**

12 April	Oschersleben (D)
10 May	Assen (NL)
7 June	Hockenheim (D)
16 August	EuroSpeedway (D)
23 August	1000 km Nürburgring (D)
20 September	Sachsenring (D)
18 October	Oschersleben (D)

#### **Information**

[www.gtmasters.org](http://www.gtmasters.org)

### **Mediagroep van Dyck Belcar (Belgium)**

The Belgian GT Championship has several divisions, including division 1 conceived exclusively for GT3 cars. Seven races were held in 2008.

#### **Information**

[www.belgiangt.com](http://www.belgiangt.com)

### **Avon Tyres British GT Championship (Great Britain)**

The British GT Championship has three divisions – the classes GT3, GT4 and a guest start group for differently homologated cars.

#### **Information**

[www.britishgt.com](http://www.britishgt.com)



*The national and international GT3 championships exist since* **2006**

**Super Série FFSA (France)**

The French GT Championship was held over the course of seven weekends during the 2008 season and differentiates between a GT class (for GT1 and GT2 models) and a GT3 class.

**Information**

[www.ffsa.org](http://www.ffsa.org)

**Telefônica Speedy GT3 Brasil (Brazil)**

The Brazilian GT Championship with eight races annually is organised, like the German series and European GT3 Championship, exclusively for competitors with GT3 cars.

**Information**

[www.gt3.com.br](http://www.gt3.com.br)

**Campeonato de España GT (Spain)**

The Spanish GT Championship was comprised of six races in 2008 and is organised for the categories GTA (GT2 cars), GTS (GT3 models) and GTB (GT Cup cars of different origin).

**Information**

[www.gtsport.es](http://www.gtsport.es)

**International GT Open (European)**

The eight rounds of the International GT Open series were held in five European countries in 2008. The series differentiates between the categories GTA (GT2 cars) and GTS (GT3 models).

**Information**

[www.gtsport.es](http://www.gtsport.es)



**Typical GT3: Many brands, performance parity and full grids**

### **Australian GT Championship (Australia)**

The Australian GT Championship with six rounds is split into three classes: GT Championship (for GT3 models and single special homologations), GT Challenge and GT Production (each for specific listed cars).

#### **Information**

[www.gtchampionship.com.au](http://www.gtchampionship.com.au)

### **Sara GT Campionato Italiano Gran Turismo (Italy)**

The Italian GT Championship, which was comprised of seven races in 2008, is open for cars of the classes GT2, GT3, GT4 and GT-Cup (for other models).

#### **Information**

[www.acisportitalia.it](http://www.acisportitalia.it)

### **Other possible races**

Many other interesting competitions are open for GT3 cars, including the 24-hour races at the Nürburgring (D), Spa (B), Silverstone (GB), Zolder (B) and the rounds of the Toyo Tires 24h Series. Audi also examines the chances of homologating the R8 LMS for the somewhat different regulations governing American race series (SPEED GT).

#### **Information**

[www.24h-rennen.de](http://www.24h-rennen.de); [www.total24hours.com](http://www.total24hours.com); [www.24u.be](http://www.24u.be);  
[www.britcar24hr.co.uk](http://www.britcar24hr.co.uk); [www.24hseries.com](http://www.24hseries.com)

## New customer sport centre in Ingolstadt

Approximately 200 employees at Audi Sport in Ingolstadt and Neckarsulm are responsible specifically for the development and testing of racing cars. Audi Sport is tied to the Technical Development (TE) of AUDI AG and, as result, reports to Michael Dick, Member of the Board in charge of Development. Head of Audi Sport since November 1993 is the Austrian Dr Wolfgang Ullrich. Audi Sport was restructured in preparation for the future in 2007. Audi Sport will complete the first phase of its customer sport centre in Ingolstadt by the end of 2009.

### New paths in customer sport

Development of the Audi R8 for GT3 racing requires the systematic expansion of the organisation. Absolute responsibility for development is in the hands of Audi Sport in Ingolstadt. At the same time two other sites are integrated in this project. The bodyshell is taken from the quattro GmbH production line in Neckarsulm. The engine for the racing car originates from Győr in Hungary. As before, Audi Sport implements the factory motorsport programmes.



Audi operates factory motorsport programmes with the A4 DTM touring car and the R10 TDI endurance prototype (left). Since 2008, a new customer sport centre in Ingolstadt is being built up



**Dr Wolfgang Ullrich**  
Head of Audi Motorsport,  
Head of Audi Sport



**Klaus-Dietrich Krieger**  
Head of Finance and  
Project Management



**Dr Martin Mühlmeier**  
Head of Technology



**Wolfgang Appel**  
Head of Vehicle Development



**Ulrich Baretzky**  
Head of Engine Development



**Joachim Hausner**  
Head of Complete Vehicle



**Romolo Liebchen**  
Project Leader R8 LMS



**Oliver Straube**  
Marketing R8 LMS



*No fewer than **3** fundamentally different racing cars are created at Audi Sport*



## Sporting, individual, exclusive

Since October 1983, quattro GmbH has represented a unique lifestyle under the sign of the four rings. This wholly owned subsidiary of AUDI AG offers an extensive range of high-tech products, customisation options and accessories. It adds a note of sporting dynamic, individuality and exclusivity to the Audi “Vorsprung durch Technik” philosophy. In the process, it supports Audi with sporting and individual products. The quest to justify the highest demands in a unique way is of the highest priority for quattro GmbH.

### Origins in rallying

One of the now most famous brand names emerged in 1980 when the Audi quattro debuted. The high-performance coupé did not only astound the rally world with its permanent all-wheel drive and underlined

emphatically the Audi brand claim “Vorsprung durch Technik”. The impressive quality of the new drive technology quickly elevated the term “quattro” to much more than a technical name: quattro developed into the brand name for accentuated quality from the premium manufacturer Audi.

### Customisation for every Audi

Founded in 1983, quattro GmbH became synonymous for a unique product range. With its long-standing experience it fulfils the desire for even more individuality and singular lifestyle with its label “Audi exclusive” and its optional equipment. The “S line sport kits” offered by quattro GmbH for almost every Audi model range more than satisfy the desire for more sporting dynamic.



The quattro GmbH manufactures sporting Audi models in Neckarsulm and offers diverse accessories



Individualisation elements like the “S line Sport kits” emphasise the premium claims

The extensive accessories range “Audi design accessories” rounds off the quattro GmbH offer. In addition, the Audi subsidiary has developed four absolute high-performance cars in the form of the Audi RS 4 (1st and 2nd generation) and the RS 6 (1st and 2nd generation).

In November 2006 production of the first thoroughbred Audi sportscar began in the assembly halls of quattro GmbH in Neckarsulm: The Audi R8 integrates Audi’s many years of motorsport experience, the brand’s

technical innovations and also an extremely progressive design into a single car, which is just as at home on the race track as it is on public roads.

quattro GmbH employs 814 people in 2008, 492 of which are directly employed in areas such as production, logistics or quality assurance. Administration, development and production are based at the site in Neckarsulm. Sales and marketing are located in Ingolstadt.



Bilstein Suspension represents innovation and high-tech in suspension technology worldwide. Bilstein delivers 2 million axles, 35 million coil springs, 12 million anti-roll bars and 8 million dampers annually. Bilstein has been in demand as partner for high-performance dampers in motorsport for 45 years.

#### ThyssenKrupp Bilstein Suspension GmbH

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Eibach enjoys a worldwide reputation as leading manufacturer of high-quality spring and suspension systems and also technical special springs for many critical applications. Eibach is exclusive suspension equipment partner for the Audi R8 LMS for GT3 racing.

#### Heinrich Eibach GmbH

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As one of the leading manufacturers of high-quality components for the automotive and engine industries, MAHLE has been a trusted partner of Audi Sport for many years. MAHLE supplies the pistons and the air intake components for the Audi R8 GT3 as well as additional components for the V10 drive unit.

#### MAHLE International GmbH

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As one of the world's largest tyre manufacturers Michelin has been involved for over 100 years in motorsport – and can claim eight Le Mans victories solely as Audi partner. Both companies extend this successful cooperation in the production based sportscar class with the R8 LMS.

#### Michelin Compétition

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OZ Racing is a market leader in the development and production of light-alloy wheels for both street and racing cars. Partners of the Italian company established in 1971 have won more than 100 motorsport titles in the most important competitions worldwide since 1984.

#### OZ SpA

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Professional RECARO motorsport seats are based on the know-how from over 100 years of company tradition and 40 years supplying the motorsport industry.

#### Recaro GmbH & Co. KG

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Since 1972, Sabelt has been a synonym for safety in the automotive and racing industries. Sabelt is worldwide leader in the development, research and manufacture of motorsport safety harnesses. The best teams of all times always trust Sabelt technology to be sure of reaching the finish line safely.

#### Sandtler GmbH

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Shell is a leading international company in the field of fuels and lubricants research. The commitment to high-level motorsport is an integral component in the development of fuels and lubricants like Shell V-Power and Shell Helix Ultra. A long-standing partnership unites Shell and Audi Sport.

#### Shell

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#### MOTORSPORT

Stäubli is an internationally operating company and market leader in the development and manufacture of quick-release couplings for any medium. Stäubli supplies no-splash fuelling systems, quick-release couplings for fuel and hydraulic brake circuits and air jack systems for motorsport applications.

#### Stäubli Faverges SCA

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## Winning tradition

Winning the 24 Hours of Le Mans, the American Le Mans Series, the Le Mans Series and the DTM during the 2008 season are a new highlight in Audi's winning record in motorsport. For the third decade in succession the brand is involved in a wide variety of programmes worldwide and nationally. Audi race and rally cars have been involved in single and championship victories since 1981. In the future the R8 LMS carries the brand's colours in GT3 racing.



The Audi 90 was one of the most powerful Audi cars ever with 720 hp

<b>1981</b>	3 wins in the World Rally Championship (Audi quattro)
<b>1982</b>	1st in Manufacturers World Rally Ch'ship (Audi quattro)
<b>1983</b>	1st in Drivers World Rally Championship (Hannu Mikkola, Audi quattro)
<b>1984</b>	1st in Manufacturers World Rally Championship (Audi quattro / Audi sport quattro) 1st in Drivers World Rally Championship (Stig Blomqvist, Audi quattro / Audi Sport quattro)
<b>1985</b>	1st in San Remo Rally (Walter Röhrl, Audi Sport quattro S1) 1st in Pikes Peak Hillclimb (Michèle Mouton, Audi Sport quattro)
<b>1986</b>	1st in Pikes Peak Hillclimb (Bobby Unser, Audi Sport quattro S1)
<b>1987</b>	1st in Safari Rally (Hannu Mikkola, Audi 200 quattro) 1st in Pikes Peak Hillclimb (Walter Röhrl, Audi Sport quattro S1)
<b>1988</b>	1st in TransAm Series (Hurley Haywood, Audi 200 quattro)
<b>1989</b>	7 wins in IMSA GTO Series (Audi 90 quattro)
<b>1990</b>	1st in DTM (Hans-Joachim Stuck, Audi V8 quattro)
<b>1991</b>	1st in DTM (Frank Biela, Audi V8 quattro)

<b>1993</b>	1st in French Touring Car Championship (Frank Biela, Audi 80 quattro)
<b>1994</b>	1st in Italian Touring Car Championship (Emanuele Pirro, Audi 80 competition)
<b>1995</b>	1st in Italian Touring Car Championship (Emanuele Pirro, Audi A4 quattro) 1st in Touring Car World Cup Le Castellet (Frank Biela, Audi A4 quattro)
<b>1996</b>	1st in Australian Touring Car Championship (Brad Jones, Audi A4 quattro) 1st in Belgian Touring Car Championship (Jean-François Hemroulle, Audi A4 quattro) 1st in German Super Touring Car Cup (Emanuele Pirro, Audi A4 quattro) 1st in British Touring Car Championship (Frank Biela, Audi A4 quattro) 1st in Italian Touring Car Championship (Dindo Capello, Audi A4 quattro) 1st in South African Touring Car Championship (Terry Moss, Audi A4 quattro) 1st Spanish Touring Car Championship (Jordi Gené, Audi A4 quattro) 1st in Macau Guia (Frank Biela, Audi A4 quattro)

<b>1997</b>	1st in Central European Touring Car Championship (Josef Venc, Audi A4 quattro)
<b>1998</b>	1st in Australian Touring Car Championship (Brad Jones, Audi A4 quattro) 1st in Central European Touring Car Championship (Josef Venc, Audi A4 quattro)
<b>1999</b>	1st in German Super Touring Car Championship (Christian Abt, Audi A4 quattro) 1st in Swedish Touring Car Championship (Mattias Ekström, Audi A4 quattro) 1st in Macau Guia (Michael Bartels, Audi A4 quattro)
<b>2000</b>	1st in Le Mans 24 Hour race (Frank Biela/Emanuele Pirro/Tom Kristensen, Audi R8) 1st in American Le Mans Series (Allan McNish, Audi R8)
<b>2001</b>	1st in Le Mans 24 Hour race (Frank Biela/Emanuele Pirro/Tom Kristensen, Audi R8) 1st in American Le Mans Series (Emanuele Pirro, Audi R8) 1st in European Le Mans Series (Audi R8) 1st in Speedvision GT GT (Michael Galati, Audi S4 Competition) 1st in Swedish Touring Car Championship (Roberto Colciago, Audi A4 quattro)



Successful with four-wheel drive: Audi quattro, Sport quattro S1 and V8 quattro (from l to r)

<b>2002</b>	1st in Le Mans 24 Hour race (Frank Biela/Emanuele Pirro/Tom Kristensen, Audi R8)
	1st in American Le Mans Series (Tom Kristensen, Audi R8)
	1st in DTM (Laurent Aiello, Abt-Audi TT-R)
	1st in SPEED GT (Michael Galati, Audi S4 Competition)
	1st in Swedish Touring Car Championship (Roberto Colciago, Audi A4 quattro)
<b>2003</b>	1st in American Le Mans Series (Frank Biela/Marco Werner, Audi R8)
	1st in Swedish Touring Car Championship (Fredrik Ekblom, Audi A4)
	1st in SPEED GT (Randy Pobst, Audi RS 6 Competition)
<b>2004</b>	1st in Le Mans 24 Hour race (Seiji Ara/Dindo Capello/Tom Kristensen, Audi R8)
	1st in American Le Mans Series (JJ Lehto/Marco Werner, Audi R8)
	1st in DTM (Mattias Ekström, Audi A4 DTM)
	1st in Le Mans Series (Jamie Davies/Johnny Herbert, Audi R8)
	1st in SPEED GT Manufacturers (Audi RS 6 Competition)

<b>2005</b>	1st in Le Mans 24 Hour race (Tom Kristensen/JJ Lehto/Marco Werner, Audi R8)
	1st in American Le Mans Series (Frank Biela/Emanuele Pirro, Audi R8)
<b>2006</b>	1st in Le Mans 24 Hour race (Frank Biela/Emanuele Pirro/Marco Werner, Audi R10 TDI)
	1st in American Le Mans Series (Dindo Capello/Allan McNish, Audi R10 TDI)
	1st in Swedish Touring Car Ch'ship (Thed Björk, Audi A4)
<b>2007</b>	1st in Le Mans 24 Hour race (Frank Biela/Emanuele Pirro/Marco Werner, Audi R10 TDI)
	1st in American Le Mans Series (Dindo Capello/Allan McNish, Audi R10 TDI)
	1st in DTM (Mattias Ekström, Audi A4 DTM)
	1st in Italian Superstars (Gianni Morbidelli, Audi RS 4)
<b>2008</b>	1st in Le Mans 24 Hour race (Dindo Capello/Allan McNish/Tom Kristensen, Audi R10 TDI)
	1st in American Le Mans Series (Marco Werner/Lucas Luhr, Audi R10 TDI)
	1st in Le Mans Series (Mike Rockenfeller/Alexandre Prémat, Audi R10 TDI)
	1st in DTM (Timo Scheider, Audi A4 DTM)
	1st in Italian Superstars (Gianni Morbidelli, Audi RS 4)