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May 2018

MOTORSPORT INFORMATION

Audi R8 LMS GT4 (2018)

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Audi Sport in GT4 racing

Growth spurt with the Audi R8 LMS GT4

The Audi R8 LMS GT4 is the most recent addition to Audi Sport customer racing's program. Following its debut at the New York International Auto Show in April 2017 and subsequent initial testing it is available to customers around the world for the 2018 racing year. In January, the new race car managed a brilliant start to the season: Team Phoenix Racing celebrated a one-two result in the GT4 class in the 24-hour race in Dubai.

The GT4 category has all the prerequisites for becoming the next crowd-pleaser. Just like the GT3 class has been thrilling fans around the globe for more than ten years, the "little brothers" defined as GT4 cars deliver equally fascinating racing. Production-based sports cars from notable manufacturers, a great diversity of brands, thrilling races and full fields are the success formula of this up-and-coming category.

With the R8 LMS GT4 Audi commits to this growth category that is attracting more and more enthusiasts. Around the world, these race car models are admitted to 21 series, plus they participate in major individual races such as the 24 Hours of Nürburgring.

Their success in racing is based on the production model which offers optimum genes for use in motorsport. The mid-engine concept, the 5.2-liter V10 aspirated engine, the Audi Space Frame featuring a mixed multi-material construction, the double-wishbone suspensions front and rear and the S tronic seven-speed double-clutch transmission embody the DNA from racing. Some 60 percent of all components have been adopted directly in the GT4 model. As well as for the Audi R8 Coupé V10 RWS (combined fuel consumption in l/100 km: 12.4, combined CO₂ emissions in g/km: 283) the production of the GT4 race car starts at the Böllinger Höfe site before Audi Sport customer racing completes the racing version in a dedicated factory.

Additional synergies result from the GT3 program Audi launched in 2009. Customers, for example, benefit from a worldwide service network supported by four satellites – two in Asia and one each in Australia and in the United States. For the price of only 198,000 euros (excluding VAT), customers acquire ready-to-race car that is suitable for sprint as well as for endurance racing competitions. Long service intervals for central assemblies such as the engine and transmission keep cost of ownership within an economical range as well.

Since December 15, Audi Sport has been delivering the Audi R8 LMS GT4 with power output of up to 364 kW (495 hp) to customers around the world. "The strong international interest confirms our concept," says Chris Reinke, Head of Audi Sport customer racing. "Thanks to its diverse fielding opportunities the GT4 class is an international growth category and, consequently, an important pillar of our program." As early as in February, Audi produced the 50th R8 LMS GT4.

In 2018, the many established series in North America, Europe and Asia are expanded by additional ones: In Europe, the GT4 Nordic European Cup, the GT4 Central European Cup and the GT4 Belgium are covering new attractive markets starting this year. In Australia, drivers are now allowed to field their GT4 race cars in the popular Australian GT.

Audi's customers are able to participate in two one-make cups as well. The Audi R8 LMS Cup with races in Australia, Germany, China and Malaysia reserves a dedicated class for the GT4 race cars with the four rings. In Europe, the Audi Sport Seyffarth R8 LMS Cup with rounds in Germany, Hungary, the United Kingdom and Italy offers a field exclusively for the Audi R8 LMS GT4.

The combination of economical fielding conditions, effective marketing of the GT4 racing series, high competitiveness with quality fields and the fascination exuded by production-based sports cars paves the way for a prospering future of this class. As in GT3 racing and in the TCR class, Audi intends to establish itself with the R8 LMS GT4 as one of the leading manufacturers to offer race cars in this segment.

Interview with Chris Reinke

"GT4 is our next important pillar"

Chris Reinke has been Head of Audi Sport customer racing since 2016. The GT4 category is an important pillar of the program.

The Audi R8 LMS GT4 is the most recent addition to Audi Sport customer racing's portfolio. What are your expectations of the new model?

Following our success with more than 200 Audi R8 LMS cars delivered for GT3 racing, we see worldwide potential in the GT4 class as well. It is the best field for gentlemen, amateurs and up-and-coming drivers for whom GT3 racing is too complex or costly. The new Audi R8 LMS GT4 perfectly fills the gap between the Audi RS 3 LMS for entry into touring car racing and our Audi R8 LMS sports car.

To what extent does the production-based Audi R8 LMS GT4 benefit from the road-going version?

The regulations are very strict and allow only few variations from the production model. The better the qualities of the road-approved sports car are the more this assists us. Even the car's basic concept of the chassis, powertrain and bodywork are perfect for racing. Retrofit components such as the Audi Sport Performance Parts are ideal as well because they improve the race car's aerodynamics. 60 percent of all assemblies of the road and racing version are identical. In addition, in the initial manufacturing stage of both sports cars at the Böllinger Höfe facility the same production equipment is used.

What other benefits do GT4 customers enjoy when they opt for an Audi?

We set standards in terms of safety. Be it the basic vehicle structure or the PS3 seat, and from ergonomic adjustment possibilities in the cockpit through to the safety nets, as well as dripless refueling or the rescue hatch in the roof: We've left no stone unturned to offer perfect protection. A wealth of experience from the GT3 race cars has been fed into the GT4 project as well. We also keep receiving feedback from our existing customers that expresses how valuable our worldwide support is to them. This is exactly what the GT4 teams now benefit from as well.

Audi R8 LMS GT4

Dynamic, customer-friendly and safe

The Audi R8 LMS GT4 stands for production-based racing. The race car that is directly derived from the road-approved Audi R8 Coupé V10 is powerful, offers a high level of safety yet remains economical in terms of purchasing cost and cost of ownership. It is the ideal race car for amateur campaigners, completely in line with the spirit of the GT4 regulations carrying on a great sports car tradition in which fascinating road-going sports cars were a popular base for GT racing more than half a century ago.

A veritable powerhouse: The V10 engine of the new Audi R8 LMS GT4 can deliver up to 364 kW (495 hp) – depending on the applicable Balance of Performance rating that is designed to ensure fair competition between all race cars. The 5.2-liter naturally aspirated engine is produced by Audi Hungaria at the Győr location and only receives a new exhaust system, the restrictor plate prescribed by the regulations and modified mapping of the production-level electronic control unit (ECU). Audi Sport has previously demonstrated the durability of this unit, which requires maintenance only after 10,000 kilometers and rebuild after 20,000 kilometers, in the GT3 model. Afterwards, many customers complete additional cycles in racing operation.

As quattro four-wheel drive is prohibited in the GT4 class, Audi Sport utilizes a 7-speed double-clutch transmission combined with rear-wheel drive. Two electrohydraulically operated wet-type multi-plate clutches ensure shortest shifting events without tractive force interruption. A mechanical limited slip differential is used on the rear axle.

The suspension of the road-going version featuring double wishbones on all four wheels offers perfect prerequisites for racing. Rebound and compression adjustable racing-specific dampers and springs, as well as adjustable stabilizers, complete the suspension system. A new steel disc braking system with modified brake calipers in combination with the production-level ABS control system ensures optimum deceleration. Special brake cooling ducts at the front and rear guarantee braking stability also in racing. For the steering system, Audi Sport has adopted the hydraulic rack-and-pinion unit from the GT3 model, albeit with an electrically operated pump. In spite of the cost benefits offered by the 5-hole cast aluminum wheels they have been specifically designed for racing purposes. Audi Sport also offers a tire pressure warning system as an option.

In terms of passive safety, Audi Sport again sets high standards. In addition to standard equipment such as a fire extinguishing system, safety nets for the driver and crash foam in the doors, Audi Sport exceeds the minimum requirements in many areas. The Audi Sport customer racing PS3 safety seat represents the most recent evolution of the PS1 model. It is standard equipment in the GT4 model as well as in the Audi customer racing models for GT3 and TCR racing. Like in the GT3 version of the R8 LMS the PS3 seat is mounted to the safety cage using the so-called 6-point fastening which results in additional safety. The safety nets are attached to the seats for optimum connection, and the 6-point harness corresponds to the GT3 standard. The axial and height adjustable steering wheel in combination with the seat are optimally suited for diverse body sizes. The team can fit the seat shell in various positions longitudinally, ensuring a safe and comfortable setup for each driving posture. A roof hatch facilitates rescue operations following an accident. To reduce the loads acting on the driver's spinal column, the helmet can be removed upward and a Kendrick Extrication Device applied. Inside the car, the steel safety cage is mounted at six points to the Audi Space Frame (ASF) featuring an aluminum-CFRP mixed-material construction, plus there are two connections to engine bay braces. The FT3 safety fuel cell is filled using a dripless rapid-refueling system for racing.

In the ergonomically designed cockpit, the driver can activate and adjust various driving functions via the steering wheel and the center console. Like in the GT3 version of the R8 LMS the pedals by means of a pneumatic release system can be longitudinally adjusted in several steps. A central multi-function display within the driver's view and a data logger create transparency with respect to operating conditions and data analysis.

The body components are largely identical to those of the production car but have been optimized to support the race car's aerodynamics and thermal management of the cooling and braking systems. The production-based Audi Sport Performance Parts enhance the aerodynamics of the race car once more. The GT4 race car is closely oriented to the production model. Its chassis is produced at the same manufacturing facilities as the one of its road-approved sibling. Consequently, there are synergies for the Audi R8 LMS GT4 in terms of production and the Group-wide pool of components as well as service and maintenance – directly benefiting the customers.

Technical data

Model

Top speed Equipment

Seat system

Price

Refueling system Electrical system

Fire extinguishing system

Audi R8 LMS GT4

As of: February 2018

	7.44.1 NO 21 15 CT 1 (2020)
Vehicle	
Vehicle type	Sports car according to GT4 regulations (SRO)
Chassis	Audi Space Frame (ASF) featuring an aluminum CFRP composite
	design with weld-in and bolted steel safety cell
Bodywork	Fiber composite materials and aluminum
Engine	
Туре	90° V10 gasoline engine with combined multi-point and gasoline direct injection, 4 valves per cylinder, four double overhead
	camshafts, longitudinally mounted in front of the rear axle
Emission control system	Upstream oxygen sensor, metal catalytic converters
Engine management	2 x Bosch MED 17 (master-slave concept)
Engine lubrication	Dry sump
Cubic capacity	5,200 cc
Power output	Variable via restrictor up to 364 kW (495 hp) *
Torque	Over 550 Nm *
Drivetrain/transmission	
Type of drive	Rear-wheel drive, traction control
Clutch	Two electrohydraulically operated wet-type multi-plate clutches
Transmission	7-speed double-clutch S tronic transmission with paddle shifters
Differential	Mechanical limited-slip differential
Drive shafts	Constant-velocity joint shafts
Suspension/steering/brakes	
Steering	Electrohydraulic rack-and-pinion steering, height and length adjustable multi-functional steering wheel
Suspension	Double wishbones front and rear, 2-way gas pressure dampers, ride height, toe, camber and stabilizers adjustable
Brakes	Hydraulic dual-circuit braking system, GT3 steel brake discs front and rear, GT3 brake calipers, ABS, longitudinally adjustable pedals like GT3
Wheels	5-hole cast aluminum wheels, front: 11" x 18" offset 63; rear: 12" x 18" offset 56
Tires	Front: 305/645 R18; rear: 325/680 R18
Weight/dimensions	
Length/width/height	4,467 mm/1,990 or 2,037 mm **/1,240 mm
Wheelbase	2,650 mm
Homologation weight	1,460 kg
Fuel cell capacity	110 l minimum (FT3 safety fuel cell)
Performance	
0-100 km/h	Under 4 seconds *
	" " "

Audi R8 LMS GT4 (2018)

Over 250 km/h *

Acc. to FIA Standard 8865-2015

Audi Sport customer racing Protection Seat PS3 acc. to FIA Standard 8862-2009 with 6-point fastener like GT3 Refueling system for endurance racing, optional rapid refueling Production level, modified for racing purposes

EUR 198,000 (net)

^{*} depending on BOP (SRO Balance of Performance)

^{**} like Audi R8 Coupé: without/with side view mirrors

The GT4 category

A sports car class loaded with potential

The GT4 category was invigorated in 2017. Since then, the SRO Motorsports Group has been introducing this race car class that has existed since 2007 into new racing series and systematically marketing it around the globe.

The concept of the GT4 class clearly addresses privateer drivers. Minor modifications of the production model and affordable purchasing and ownership costs clearly distinguish this category from more complex, faster and more expensive GT3 models. As a result, the GT4 class lends itself as an attractive road-going sports car category that is ideally tailored to meet the needs of amateur drivers.

In terms of technology, there are hardly any modifications permitted to the race cars compared with the base models, and the materials of the bodywork have to correspond to those used in the production-level components. There are only few areas for which the SRO grants waivers on request. This has two advantages. Only individual component assemblies may be optimized by racing-specific designs, which is a rule that supports a level playing field. At the same time, the race car's proximity to the production model prevents an escalation of costs, as the regulations prohibit the development and homologation of generally more complex technology. For instance, the manufacturers have to submit reference parts for various areas such as the electronic control units of the engine, transmission and ABS braking system. This ensures that a comparison with the production model can be made at any time.

The major breakthrough for the GT4 category in 2017 resulted from intensive marketing activities. The SRO Motorsports Group introduced this class in a large number of regions and countries, promoting existing GT4 competitions in the process, and has created global fielding opportunities through international agreements. For instance, several new series are launched in Central, Western and Northern Europe in 2018. In the United Kingdom, Italy, Australia and China, plus in the Blancpain GT Series Asia, they are part of a more comprehensive GT field. In North America, the two major sports car series, the IMSA Continental Tire SportsCar Challenge and the Pirelli World Challenge, are open to the GT4 models. Other series, such as the VLN in Germany and the 24H Endurance Series, complete the list.

GT4 fielding opportunities

GT4 gaining ground around the globe

The GT4 category is seeing rapid international growth. Be it exclusive GT4 series, one-make cups or separate classes – GT4 sports cars are increasingly coming into vogue.

International

GT4 Central European Cup www.gt4series.com
GT4 European Series www.gt4series.com
24H Endurance Series www.24hseries.com
24H TCE Series www.24hseries.com

America

IMSA Continental Tire SportsCar Challenge www.imsa.com

Pirelli World Challenge www.world-challenge.com

Asia

Audi Sport R8 LMS Cup www.audi-motorsport-asia.com
Blancpain GT Series Asia www.blancpain-gt-series-asia.com

China GT Championship www.chinagt.net.cn/en Super Taikyu Series www.supertaikyu.com

Australia

Bathurst 12 Hour www.bathurst12hour.com
Australian GT www.australiangt.com.au

Belgium

GT4 Belgium www.gt4series.com

Germany

Audi Sport Seyffarth R8 LMS Cup www.audi-r8-cup.de DMV GTC www.dmv-gtc.de

Spezial Tourenwagen Trophy www.spezial-tourenwagen-trophy.de

VLN www.vln.de

Nürburgring 24 Hours www.24h-rennen.de

France

FFSA GT4 Series https://ffsagt.gt4series.com

United Kingdom

British GT Championship www.britishgt.com

Italy

Campionato Italiano Gran Turismo www.acisport.it/en/CIGT/home

Scandinavia

GT4 Nordic European Cup www.gt4nordic.se

Swedish GT www.stcc.se

Audi Sport customer racing

A decade of customer racing

Audi's customer racing program was launched in 2009, so the anniversary year of 2018 marks the tenth full season of Audi Sport customer racing. Following the beginnings in the GT3 category and a race car concept for the VLN, the program, in 2015, expanded into the field of one-make cups. A race car for the TCR class followed at the end of 2016 and subsequently, in 2017, for the GT4 category. The customer program is firmly anchored on four continents and encompasses several hundred races per season.

Audi Sport customer racing's portfolio features greater variety than ever before. To teams and drivers in touring car racing, the Audi RS 3 LMS with output of up to 257 kW (350 hp) offers professional entry-level opportunities at moderate costs, both nationally and internationally. The Audi R8 LMS GT4 targets amateur drivers who wish to contest sprint or endurance races in an attractive, production-based sports car. Output of up to 364 kW (495 hp) guarantees sophisticated momentum appreciated by drivers and audiences alike. Finally, the GT3 model of the Audi R8 LMS marks the top of the line: overall victories in 12- and 24-hour races, title wins in the top national GT series, as well as in international or worldwide racing series, emphasize the qualities of the race car delivering up to 430 kW (585 hp).

"Audi Sport has evolved into one of the most attractive vehicle suppliers in international customer racing," says Michael-Julius Renz, Managing Director of Audi Sport GmbH since March 1. "Our product range thrills teams, drivers and fans around the globe. The commercial and racing successes confirm the focus of our program that is now able to celebrate its tenth anniversary."

More than 200 deliveries of the GT3 model, more than 100 TCR race cars and production of the GT4 model launched in December 2017 stand for an economically successful program that has become firmly established in the whole world. Four satellites – two in Asia, one in Australia and one in North America – cover regional support of the teams while Audi Sport customer racing based in Neuburg an der Donau takes care of the European markets.

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