



# FOREWORD.



#### Dear Media Representative,

With this Media Guide, it is a great pleasure for me to present our new BMW M4 GT3, which, over the past few months, we have been able to develop to the point at which it is race-ready, despite the adverse circumstances.

The new BMW M4 Competition (fuel consumption combined: 10.2 – 9.9 I/100 km acc. WLTP, 10.2 I/100 km acc. NEDC;  $CO_2$  emissions combined: 233 – 227 g/km acc. WLTP, 234 g/km acc. NEDC) provides the perfect basis for the BMW M4 GT3, whose engine was designed from the outset for use at the racetrack. This underlines how road car and race car development always go hand in hand at BMW M GmbH.

Development work on the BMW M4 GT3 is now on the finishing straight, and the 24-hour race at the Nürburgring is the perfect stage, on which to present the car in its BMW M Motorsport livery and thus to herald the final run-in to the first race outings.

We can all hardly wait to see our teams in action at racetracks all over the world with the BMW M4 GT3 from 2022. We want to provide our racing customers with a car, with which they can seamlessly build on the success they enjoyed with the BMW M6 GT3 – and to impress more customers and acquire more teams with the BMW M4 GT3.

The new car offers state-of-the-art technology, thanks to our technology partners. They are among the best in their respective fields, and we are delighted to have them supporting us on the development of the BMW M4 GT3 with their specific know-how and areas of expertise. That is the perfect basis for a successful new race car.

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Markus Flasch CEO BMW M GmbH



## INTRODUCTION. BIRTH OF A NEW ICON.

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At 09:40 on 18<sup>th</sup> July 2020, the wait was over: the BMW M4 GT3 completed its first kilometres at the roll-out at the BMW Group plant in Dingolfing. The moment when BMW works driver Augusto Farfus left the garage for the first time was a very emotional one for everyone involved at BMW M Motorsport. At the same time, it also represented a milestone and, at that time, highlight of a development process that began in early 2019 with CFD computer simulations.

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In February, the 590-hp P58 engine hit the test bench. From the middle of the year, the first tests were performed in the BMW Group wind tunnel, using a 60-percent scale model of the car. The first test chassis for the BMW M4 GT3 was produced at the start of 2020 at the BMW Group plant in Regensburg. After this, the test car, which was used for the roll-out, was assembled within about six weeks in the BMW Motorsport workshop. This was followed in 2020 and 2021 by many test sessions, during which the car was constantly optimised on its way to being race-ready. The new car already has over 14,000 test kilometres under its belt – meaning greater driveability and reliability. The goal: to significantly reduce lifecycle costs and maintenance expenditure compared to its predecessor. Together with BMW Team RMG, BMW M Motorsport will continue its intensive test work over the course of the year, adding initial test races to the programme. The BMW M4 GT3 will make its race debut on 26<sup>th</sup> June 2021 at round four of this season's Nürburgring Endurance Series (NLS). From 2022, the car will then be in action in the hands of BMW M Motorsport teams in top GT racing series and endurance races around the world.

The purchase price of the BMW M4 GT3 begins at  $\in$  415,000 net – that is  $\in$  4,000 less than the price of its predecessor, the BMW M6 GT3, and similar to that of its competition. The "Competition Package" is available as an option ex factory for an additional charge. This includes useful optional features, integrated and tested specifically for use in endurance races. For example, additional headlights, spring travel sensors, a rear radar/camera system and a system for measuring tyre pressure/temperature. As a special extra, the package includes an exclusive training day in an in-house BMW M4 GT3 simulator.

The close collaboration between BMW M Motorsport and the production developers at BMW M GmbH also plays an important role in the progress of the BMW M4 GT3: the cars are assembled directly at BMW M GmbH in Garching, near Munich. The use of the BMW Group's test facilities also has key advantages. For example, various whole-car and component test benches can be used to measure performance, vibrations, efficiency and roll resistance. The BMW M4 GT3 has undergone tests on the engine test bench and roller dynamometer. On top of this came intensive work in the wind and climate tunnel, as well as a test in the acoustic channel, in order to promote the noise measurement set-up and silencer development with noise emission for the BMW M4 GT3. But this state-of-the-art channel can do far more. In series production it is used, among other things, for sound development and to configure driving and interior noise.

When developing the BMW M4 GT3, BMW M Motorsport can count on the support of some proven and strong technology partners: Akrapovič, BMW M Performance Parts, Endless, FANATEC, H&R, KW Automotive, Schaeffler and Shell. One extraordinary project is the world's first steering wheel that can be used in both a real race car and a race simulator, which was developed together with FANATEC. It was demonstrated to the public at the end of 2020 at the BMW SIM Live Event in Munich.

# DEVELOPMENT OF AN ICON.



# CAR DATA. COMPARISON: BMW M4 GT3 VS. BMW M6 GT3. M Idotorsport 3 Motorse 0

### DIMENSIONS.

	BMW M4 GT3	BMW M6 GT3
Length	5,020 mm	4,975 mm
Width	2,040 mm	2,046 mm
Height	1,308 mm (variable)	1,308 mm (variable)
Wheelbase	2,917 mm	2,901 mm
Wheel size	12.5 x 18 inch, front	13 x 18 inch, front
	3 x 18 inch, rear	13 x 18 inch, rear

## TECHNICAL DATA.

	BMW M4 GT3	BMW M6 GT3
Engine	P58 3.01 straight six M TwinPower Turbo	P63 4.4I V8 engine M TwinPower Turbo
Capacity	2,993 cm³	4,399 cm <sup>3</sup>
Output	up to 590 hp	up to 580 hp
Specific Output	197 hp/l	132 hp/l
Transmission	Xtrac 6-speed gearbox	Ricardo 6-speed gearbox
Clutch	Electro-hydraulic	Hydraulic

# FACTS ON THE BMW M4 GT3.

Already completed more than **14,000** kilometres of testing. Goal by end of 2021: more than **20,000 test** kilometres – including under race conditions. Straight six-cylinder engine roughly **40 kilograms lighter** than the V8 engine in the BMW M6 GT3 => Lighter engine, better weight distribution. **Engine:** Modifications compared to S58 engine in the BMW M4 Competition in the following areas: installation angle, dry sump, engine-mounted oil tank with integrated oil/water exchanger, intake system with charge cycle split and two throttle valves, exhaust system with charge cycle split, engine mount and attachment adapted to GT3, rear torsional vibration dampers.

### Purchase price: from € 415,000 net.

Significant improvements: driveability, cost efficiency, operation

- Driveability: Driving behaviour and cockpit equipment more comfortable, including for amateur drivers, lower tyre wear, greater consistency.
- Cost efficiency: Far lower lifecycle costs than its predecessor, significantly longer maintenance intervals for engine and transmission.
- Operation: Many basic settings are possible directly via the steering wheel, no need to connect a laptop.

**Clutch:** Electro-hydraulic, thus lower wear, operated via paddles on steering wheel, no need for clutch pedal, stall prevention, partially-automated start up possible. rcle **Transmission**: Trans-axle design, sequential, straight-toothed 6-spee gearbox, further development of the

sequential, straight-toothed 6-speed gearbox, further development of the gearbox in the BMW M8 GTE with improvements regarding increased runtime, cost efficiency and performance.

**BMW M Track Cockpit:** Allows many basic configurations of the systems in the car **without connecting a laptop** or special software, e.g. preselection of charging pressure graph, selection of series-specific functions, adjustment of pit speed, selection of fuel type, system diagnosis, sensor calibration.

**Steering wheel:** Adjustment and activation of essential settings for driver in race mode, e.g. traction control, radio, ABS, engine mapping, windscreen wipers, drink system. Produced in cooperation with FANATEC for use in both real car and race simulator.

**Cockpit:** BMW M safety seat in accordance with latest FIA standard, new air conditioning concept with cockpit air circulation for significantly greater efficiency and vastly improved driver comfort, air conditioning system easy to maintain and twice as powerful as in the BMW M6 GT3, steering wheel, pedals and centre console can be adjusted, dimmable illumination of controls, display and switch arrangement for best possible ergonomics => maximum comfort in interior, particularly important in endurance races.

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**Tyres:** The BMW M4 GT3 has been tested on tyre types from different manufacturers, in order to be optimally prepared for the conditions faced in a wide range of racing series.

## BMW WORKS DRIVERS ON THE / BMW M4 GT3.

Jens Klingmann

"The BMW M4 GT3 has retained the strengths of its predecessor, while at the same time ironing out any

weaknesses. As a driver, you feel right at home in the

BMW M4 GT3 from the word go. It is very easy and consistent to drive, which obviously has a positive

effect on tyre wear. It is great fun to drive."

"I felt very comfortable in the BMW M4 GT3 from the first moment. It is not only easy to drive, but also very user-friendly. All the buttons in the interior are exactly where you want them as a driver." Philipp Eng

the BMW M6 GT3 in recent years, I noticed immediately what a big step forward the BMW M4 GT3 will be. The car has been very good on all the tyre makes we have tested. That gives me a lot of confidence looking ahead to future races." **Nick Yelloly** 

"As someone who has done an awful lot of racing in

"For me, it is an honour to be so heavily involved in the development of the BMW M4 GT3. Thank you, BMW M Motorsport! The BMW M4 GT3 makes a very good impression. The driving experience is very good." Augusto Farfus

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"My first impression of the BMW M4 GT3 was very positive. The basis is very strong. The compromise in terms of driveability, on the one hand for us works drivers and on the other hand for amateurs, has been achieved very successfully."

Marco Wittmann

"I like the aggressive look of the BMW M4 GT3 with its big kidney grill. I drove the car relatively early on in the test phase and even then I noticed what an excellent basis it has. The balance is very good and it gives me a very good feeling as a driver. That is incredibly important."

Bruno Spengler

"The balancing act of developing a GT3 car that, on the one hand, is able to hold its own against the extremely strong competition in this segment and, on the other hand, works perfectly for both professional racing drivers and amateurs, is a huge challenge for a manufacturer. BMW has a vast wealth of experience in this regard, which I believe it has brought to play perfectly in the BMW M4 GT3. Quite simply, the whole package is good." Martin Tomczyk

## DESIGN. BMW M DESIGNTALK WITH MICHAEL SCULLY AND ANNE FORSCHNER.

From series production to the race track – and back: In a new video (see QR code), BMW M GmbH offers insights into the development of the new BMW M4 GT3 racing car and identifies some fascinating similarities between the new flagship model in the BMW M Motorsport line-up and the BMW M4 Competition production model.

In the BMW M Design Talk, Anne Forschner, Exterior Designer BMW M4 Competition, and Michael Scully, BMW Group Designworks Global Automotive Director, first talk about the most striking design feature of the two cars: the BMW kidney grille. "All BMW M cars have a polarising effect, which means they do not automatically appeal to everyone. Their impact on people is both physical and emotional," said Forschner. "The kidney grille retains the production car's perimeter geometry, while their interior surfaces have been opened-up and celebrate the care and feeding of the race engine's enhanced cooling requirements for the M4 GT3", explained Scully. At the front of the BMW M4 GT3, he points out more special details, with which his team was directly oriented towards the production model.



Viewed from the side, it is clear that the racing car implements the same constellation of design elements as the production car to define the bodyside. The roof, with its two longitudinal fins, and the heavily raked rear window are also identical in form on both the BMW M4 Competition and BMW M4 GT3. These elements enable an ideal flow of air to the racing car's rear wing.

The greatest differences between the two cars can perhaps be found at the rear. "The tail of the BMW M4 GT3 is familiar in some areas, but in others it looks very different," said Anne Forschner. "The racing car is 75 millimetres wider on each side, but we have carried over the rear lights from the production car and the rear contour of the boot lid is also the same," added Michael Scully.

Forschner points out how the many likenesses between the duo, which already give the standard model a very sporty appearance and provide an excellent basis for the race version, clearly reflect how the two cars were developed: "From the road to the race track and from the race track back to the road." Meanwhile, Scully is fulsome in his praise of his colleagues from series production. "The BMW M4 Competition production model represents a wonderful basis on which to make a racing car. It has iconic elements and geometry geared to delivering high performance and efficiency."



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## ENGINE. BMW M ENGINE TALK: BMW M4 MEETS BMW M4 GT3.

In the BMW M4 Engine Talk video (see QR code), Marcus Engelke, Project Manager Drivetrain BMW M4, and Ulrich Schulz, Head of Drivetrain Design at BMW Motorsport, highlight fascinating details of the six-cylinder in-line engine with M TwinPower Turbo technology, which was conceived from the outset for both the BMW M4 Competition and the BMW M4 GT3.

"510 hp, 650 Newton metres (479 lb-ft) – this is the most powerful straight-six engine we've ever fitted in a production car," said Marcus Engelke to kick off the video. "590 hp, 700 Newton metres (516 lb-ft) – this is the most powerful straight-six engine BMW has installed in a racing car since the days of the BMW M1 Group 5," added Ulrich Schulz. The two engineers go on to describe how incredibly similar the engine in the BMW M4 Competition is to its counterpart at the core of the new flagship model in the BMW M Motorsport line-up.

With components of the power unit in the production M model – including the crankcase, cylinder head, crankshaft drive, crankshaft and connecting rod – also designed to deliver maximum performance on the track, the perfect groundwork for the race-spec unit is

already in place. Engelke and Schulz explore in detail how the engine is positioned and installed in the different cars, and underline their points with easy-to-understand sketches on a flipchart. This paints a clear picture of where the specific demands on the production/racing car engine lie and how BMW M GmbH has risen to the task of meeting those challenges.

As well as presenting the two complete engines, the experts also use the video to delve into individual components in detail, e.g. the dry sump pan and throttle valves of the racing engine, and the intercooler in the BMW M4 Competition. They also single out components which are identical in the two units, such as the connecting rod with pistons and housing – which was transferred to the racing car in unmodified form.

## A WORLD'S FIRST: THE BMW M4 GT3 STEERING WHEEL.

FUSION: MOTORSPORT MEETS SIM RACING,

During the digital BMW SIM Live Event in December 2020, BMW SIM Racing presented a spectacular world first, which takes the transfer of technology between real and virtual motor racing to a totally new level: the steering wheel for the BMW M4 GT3, which was developed jointly by BMW M Motorsport and sim hardware producer FANATEC. What makes it so revolutionary? It is the first steering wheel of its kind that works in both a real car and a simulator. Made of carbon, it is a motorsport design with illuminated buttons and magnetic dual-action shift paddles, also made of carbon.

While the steering wheel is in use at all the tests with the real BMW M4 GT3 race car, and is permanently being optimised, it will go on sale to sim racers in the second quarter of 2021. Parallel to FANATEC commencing sales, a documentary film on the development of the hybrid steering wheel, which combines the worlds of real and digital motor racing, will be released on the Amazon Prime streaming platform.

"The first time I heard of the idea to design the BMW M4 GT3 steering wheel to be compatible with a simulator, I was flabbergasted – because I was thrilled by the concept from the word go," said BMW works driver Philipp Eng, who demonstrated the steering wheel at BMW SIM Live 2020 and plays a main role in the documentary. "You have to take your hat off to the pioneering role that BMW Motorsport and Fanatec have taken on here, and to the courage to implement a project of this kind. I know the people who were involved in the development at BMW Motorsport and at FANATEC, and never doubted that they would design a superb steering wheel. Compared to the steering wheel in the BMW M6 GT3, for example, the new wheel has extremely good ergonomics. It is very comfortable to hold. You can tell that real professionals have been at work in every area."

# PARTNERS.

## SIDE BY SIDE.



### AKRAPOVIČ.

Akrapovič is the leading manufacturer of premium exhaust systems for motorcycles and performance cars. Founded in 1991 by former motorcycle racer Igor Akrapovič, the brand has grown to international prominence through the successful support of leading racing teams **www.akrapovic.com** 



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www.endless-brake.info

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BMW M PERFORMANCE PARTS. With the components and products from BMW M Performance Parts, the motorsport DNA from BMW is clearly felt, even off the racetrack. Developed with motorsport expertise, perfectly tailored to the respective model, and combinable to meet individual requirements – that is the range from BMW M Performance Parts. The retrofit components for the drivetrain, chassis, aerodynamics and cockpit significantly improve driving dynamics and underline the sporty tone of both the exterior appearance and the interior ambience of the car in question.

## FANATEC

#### FANATEC.

Realistic simulation hardware, built by sim racers, for sim racers. While supporting famous real motorsport and esports championships, FANATEC is partnered with BMW Motorsport, developing products that close the gap between virtual and real racing, including the Podium Steering Wheel BMW M4 GT3, the first ever wheel developed simultaneously for sim hardware and a real race car.

www.FANATEC.com



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