



FIA WORLD ENDURANCE CHAMPIONSHIP 2024.

BMW M MOTORSPORT MEDIA GUIDE.



STATEMENTS.

This is an interactive brochure.
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Franciscus van Meel,
CEO of BMW M GmbH

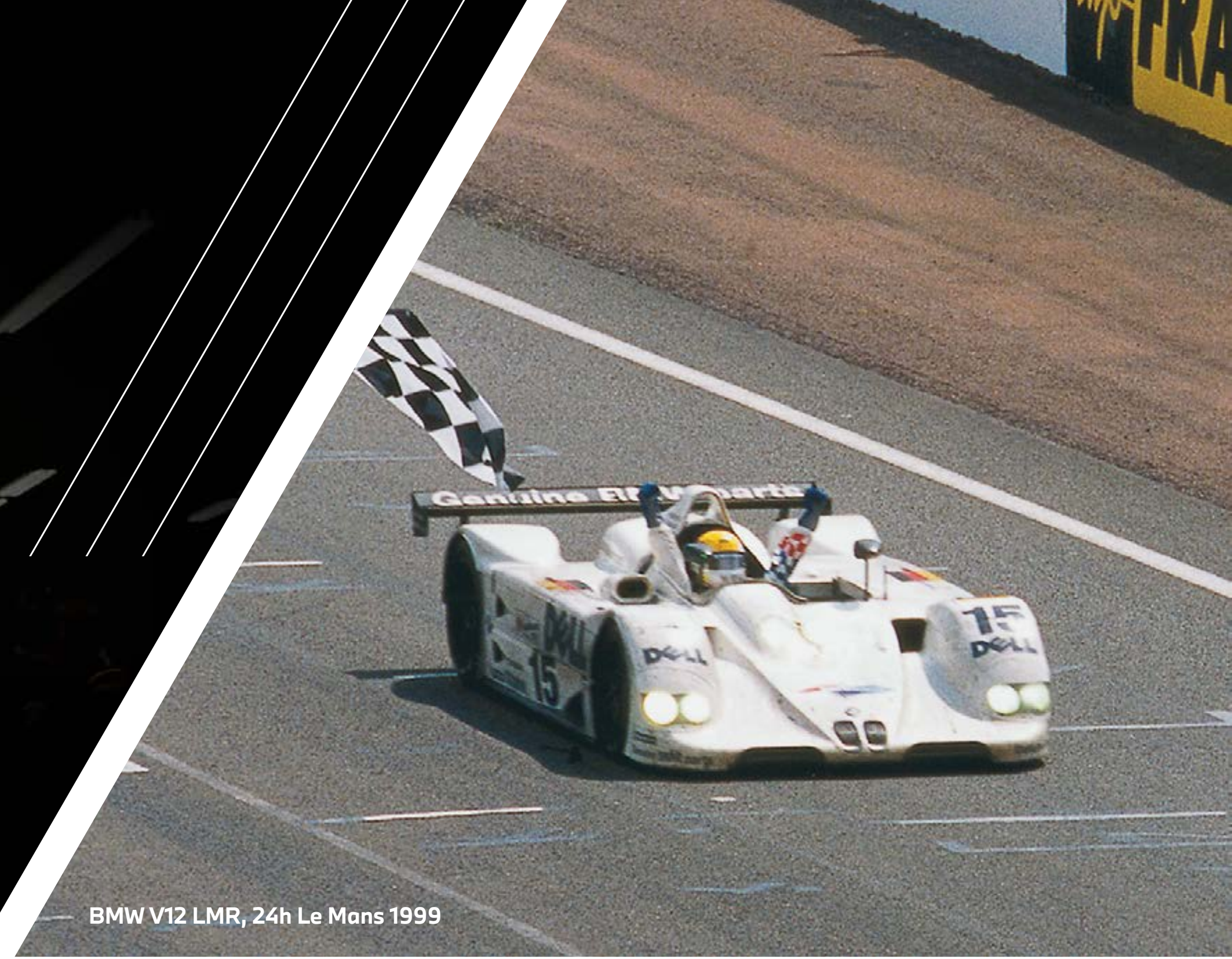
"I sampled and marvelled at the extraordinary flair of the 24 Hours of Le Mans during my first term as CEO of BMW M so I am very excited to be challenging for overall victory as BMW M Motorsport again at this classic and in the whole World Endurance Championship for the first time for decades. The BMW M Hybrid V8 represents a turning point towards electrification for BMW M. The FIA WEC, which takes place all over the world, and the IMSA series in North America are the perfect platforms, on which to use our prototype to show how exciting electrified BMW M cars will be in the future."

"The successes and extensive experience make the BMW M Team WRT the ideal partner for our return to the FIA WEC and Le Mans. They are among the best teams globally in both the prototype and GT3 segments. For sporting and logistical reasons, Vincent Vosse's team was the logical choice to field both the BMW M Hybrid V8 and the BMW M4 GT3. We compete in the 2024 season with a very strong selection from our high-class works driver squad both in the Hypercar and LMGT3 class. I congratulate Vincent Vosse and his colleagues for securing excellent amateur drivers to complete the BMW M4 GT3 line-ups. With these crews, I see a very good chance to play a leading role in this category."



Andreas Roos,
Head of
BMW M Motorsport

BMW M MOTORSPORT IN THE FIA WEC.



BMW V12 LMR, 24h Le Mans 1999

BMW M Motorsport will return to the grand stage of the FIA World Endurance Championship in the 2024 season, and thus to the legendary 24 Hours of Le Mans, with not just one but two cars. With the BMW M Hybrid V8, the BMW M Team WRT will compete in the Hypercar class for overall victories. With the BMW M4 GT3, the team led by Vincent Vosse will attack in the new LMGT3 category.

It has been exactly 25 years since BMW M Motorsport last won at Le Mans with a prototype – the BMW V12 LMR. In 1999, Yannick Dalmas, Pierluigi Martini, and Joachim Winkelhock triumphed. Now, six BMW M works drivers in two cars will compete to continue this glorious history. Like the winning car from 1999, one of the two BMW M Hybrid V8s will carry the starting number 15. The sister car will make art history at Le Mans. The #20 BMW M Hybrid V8 will join the ranks as the 20th BMW Art Car in a series of legendary race cars. The artist Julie Mehretu will ascend with her design into the ranks of famous predecessors such as Roy Lichtenstein, Andy Warhol, or Jeff Koons.



Artist Julie Mehretu



The competition in the Hypercar class of the FIA WEC will be as exciting and attractive as never before. 19 cars from nine manufacturers ensure a highly competitive starting field. In eight races across five continents, many of the most famous and successful car manufacturers will compete at the highest level. The BMW M Hybrid V8 also accumulates racing miles in the North American IMSA WeatherTech SportsCar Championship. There, the car already achieved one victory and four additional podium places in the 2023 season.

In the newly created LMGT3 category, the nine-time motorbike world champion Valentino Rossi will make his debut in the FIA WEC in the #46 BMW M4 GT3. A total of 18 GT3 cars from nine manufacturers are registered for the 2024 season. The regulations prescribe a mix of professional and amateur drivers in this class. Thus, in the two BMW M4 GT3s, one driver from each of the FIA categories Platinum, Silver, and Bronze will be used.

2024 RACE CALENDAR.

Location	Event	Date
Qatar	Qatar 1812 km	2 nd March 2024
Italy	6 Hours of Imola	21 st April 2024
Belgium	6 Hours of Spa-Francorchamps	11 th May 2024
France	24 Hours of Le Mans	15 th /16 th June 2024
Brazil	6 Hours of São Paulo	14 th July 2024
USA	Lone Star Le Mans (COTA)	1 st September 2024
Japan	6 Hours of Fuji	15 th September 2024
Bahrain	8 Hours of Bahrain	2 nd November 2024

BMW M TEAM WRT.



Team WRT was founded in 2009 and has won all the major endurance races and a host of prestigious titles in recent years. These include the FIA WEC overall standings and the 24 Hours of Le Mans in the LMP2 class, the team and drivers' titles in the European Le Mans Series, overall wins in the 24-hour races at Spa-Francorchamps, the Nürburgring and Dubai, as well as numerous title wins in the GT World Challenge Europe and the race series that preceded it. The team was created following the initiative of former racing driver Vincent Vosse and entrepreneur Yves Weerts. Today the team is run by the Co-CEO team Kathleen Schurmans and Vincent Vosse.

In the 2023 season, BMW M Motorsport and Team WRT joined forces. As BMW M Team WRT, the Belgian squad got used to the new BMW M4 GT3 very quickly and celebrated victories at the 24H Dubai, in the Intercontinental GT Challenge as well as in the Fanatec GT World Challenge Europe powered by AWS.

"What a privilege for us as a team to be able to enter both two BMW M Hybrid V8 and two BMW M4 GT3 cars for BMW M Motorsport in the FIA WEC! Although we have two separate crews for the two projects, it will still be a big challenge for WRT. But we love challenges!"



Vincent Vosse,
Co-CEO and Team Principal
BMW M Team WRT

HYPERCAR CLASS.



BMW M HYBRID V8.

CAR SPECIFICATIONS.



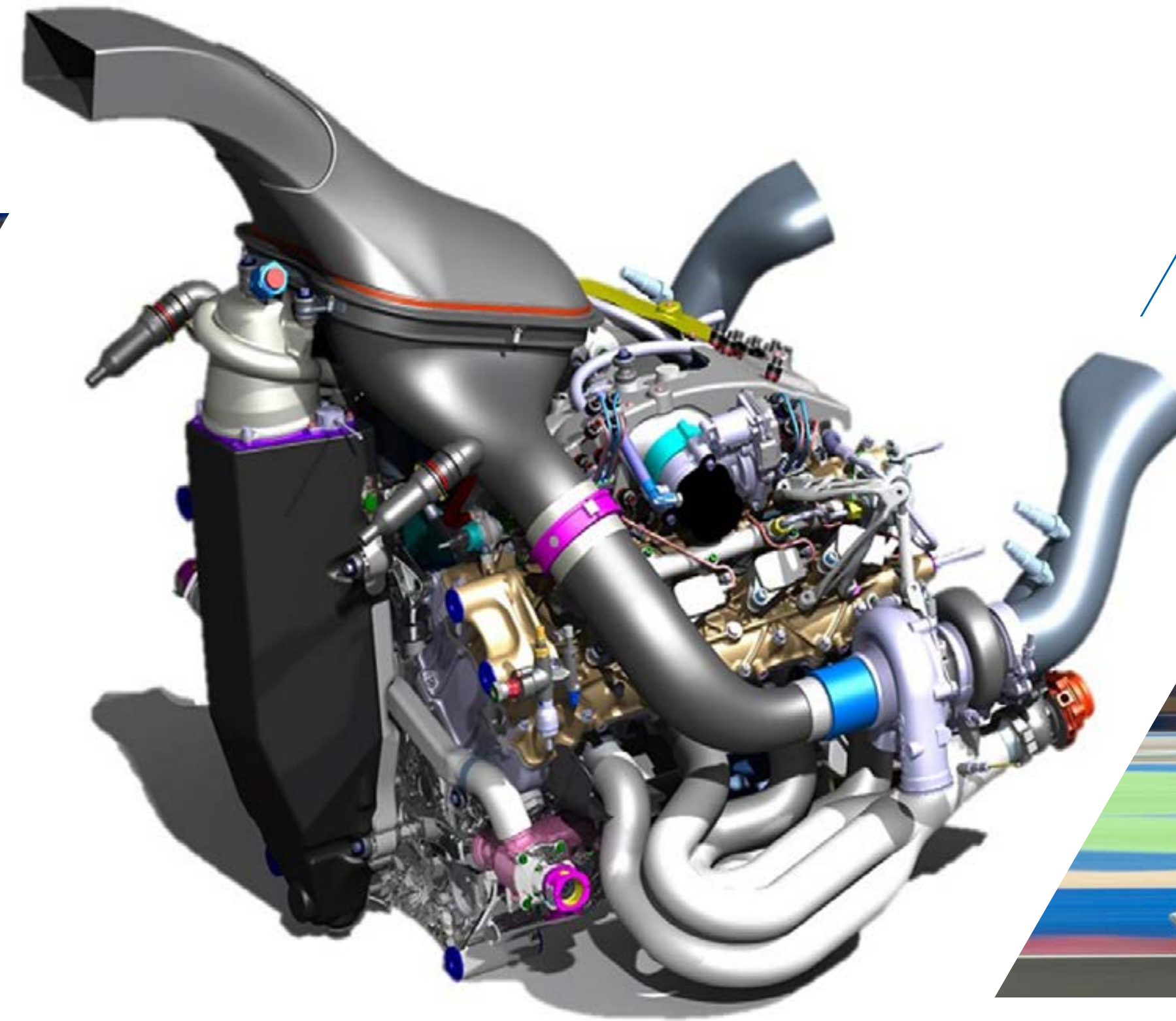
Dimensions

Length	4,991 mm
Width	1,994 mm
Height	Approx. 1,200 mm
Minimum weight	1,030 kg (without driver)

Chassis	CFRP monocoque with integrated fuel cell and high voltage battery compartment; CFRP crash elements at the front and rear
Front/Rear axle	Double wishbone axle with pushrod and fully adjustable shock absorbers; 3 rd element front and rear for ride height control, torsional suspension springs at the front and coil springs at the rear axle
Brakes	Hydraulic dual-circuit braking system with brake by wire system for rear axle; monoblock light alloy brake callipers; internally ventilated carbon fibre brake disks front and rear
Wheels	Aluminium forged wheels; 18" x 12.5" front, 18" x 14" rear
Tyres	Michelin; front: 29/71-18, rear: 34/71-18

BMW M HYBRID V8.

THE P66/3 ENGINE.

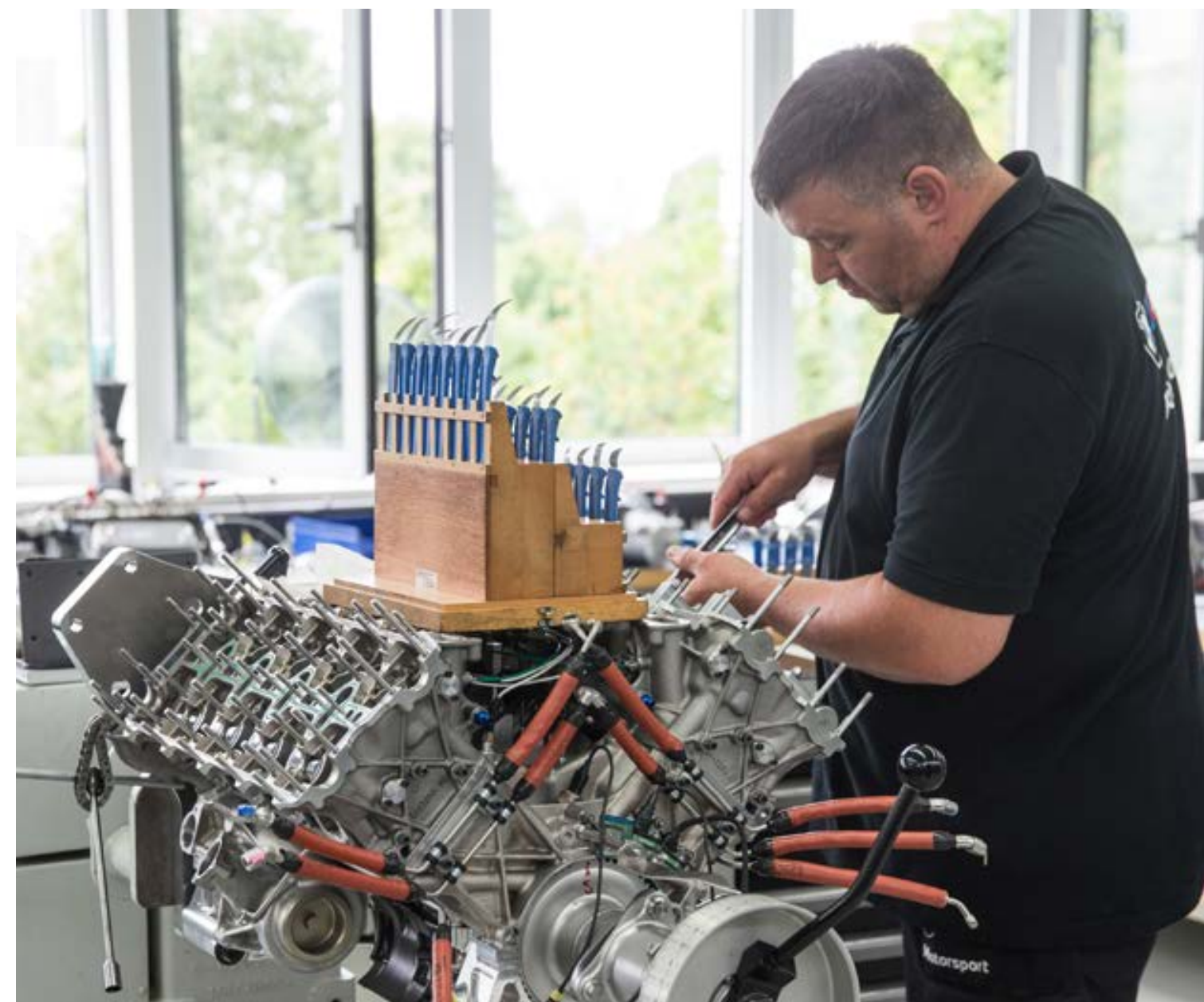


The BMW M Hybrid V8 is powered by the P66/3 eight-cylinder turbo engine with supplementary electric drive. The combustion engine is based on the DTM unit used in the BMW M4 DTM in 2017 and 2018. During two phases of reconstruction, it underwent comprehensive adjustments to meet the stringent requirements of the LMDh hybrid drive system. Ulrich Schulz, Head of Drivetrain Design at BMW M Motorsport, and his group had initiated an evaluation to determine which race engine would be best suited for conversion into a high-performance hybrid drive system, even before the BMW Group Board

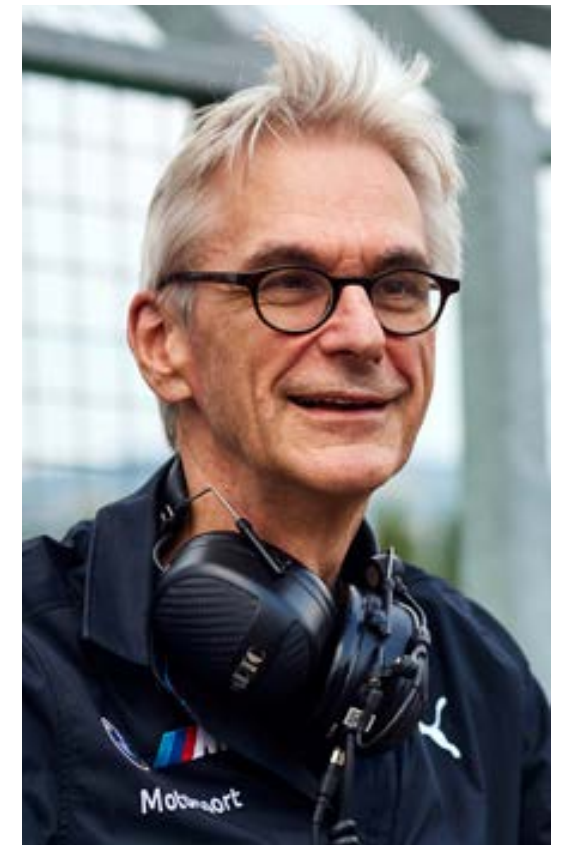
of Management had given the green light to the BMW M Motorsport entry in the LMDh category in June 2021. Time constraints and the need to consider sustainability aspects that are playing an ever more critical role in motor racing, as well as the automobile industry in general, meant that returning to the drawing board to design a completely new engine and building it at great cost was not an option. Consequently, the question was to establish which proven race engine would best meet the stringent requirements and specifications of the LMDh regulations.

The normally-aspirated P66/1 eight-cylinder engine used in the 2017 and 2018 seasons in the BMW M4 DTM was the one that got the nod. As a fully load-bearing component in the BMW M Hybrid V8, it had the advantage that it could be used in a monocoque chassis without an additional subframe and it was also the one that most closely corresponded to the regulatory requirements after conversion to a hybrid turbo engine. The first phase saw the normally-aspirated P66/1 DTM engine converted into an intermediate engine, named P66/2, primarily by adapting two turbochargers and adjusting the crank drive. The focus was on durability, increased performance and temperature management for the engine.

The P66/2 completed numerous testing units, including complete racetrack simulations, on the test bench. The next step was the creation of the P66/3 race engine, including a twin-turbo version, adjustments to the specific requirements of the Dallara chassis, final exhaust system, oil tank, cabling and integration of the high-voltage environment. The cylinder block and cylinder heads were recast in the BMW Group foundry in Landshut and the injection system was rebuilt for direct injection. Engineers who already boasted plenty of experience with electric drive systems from the Formula E project were testing and integrating the electric motor in parallel. The unit that forms the hybrid drive system in the car consists of the e-motor, the inverter and the high-voltage battery. There is a separator clutch between the electric and combustion engines, enabling fully-electric driving – in the pit lane, for example. The two drive components were connected in the car for the first time at the end of June 2022.



“During the evaluation phase, we also took a look at the P48 four-cylinder turbo engine from the BMW M4 DTM and the P63 eight-cylinder turbo engine from the BMW M8 GTE, but potential problems with the durability of the P48 and the heavy weight of the P63 were negative considerations. It is a huge plus that we were able to make use of existing materials such as steel and aluminium from BMW’s time in Formula 1 for the basis of the engine, as well as for individual components – like shafts, housing and small parts. That saved us time and a lot of money and was therefore efficient and sustainable. Efficiency was a critical factor for this project, as we had a very short period of time available between getting started and the first racing appearance. Converting the normally-aspirated P66/1 engine into a bi-turbo and then working with the electric drivetrain colleagues to turn it into a hybrid drive system was very complex. Thanks to the expertise, the great collaboration and the high level of motivation of all departments, we managed to complete the fire-up of the complete drive unit just a few weeks before the roll-out of the car.”



Ulrich Schulz,
Head of Drivetrain Design
at BMW M Motorsport until 2023

BMW M HYBRID V8.

ENGINE SPECIFICATIONS.

Name	V-shaped Otto four-stroke twin-turbo engine
Capacity	3,999 cc
No. cylinders	8
Cylinder construction	Cast aluminium cylinder block and cylinder head, cylinder lining as iron layer in LDS procedure
V angle	90 °
Bore	93 mm
Stroke	73.6 mm
Cylinder spacing	102 mm
Valves per cylinder	4
Engine speed	max. 8,200 rpm
Output (regulated)	approx. 640 hp
Torque	approx. 650 Nm
Injection	High-pressure direct injection at 350 bar
Oil system	Dry sump system with six-cell oil drain pump and oil tank



BMW M HYBRID V8. FACTS AND FIGURES.

The BMW M Hybrid V8 without engine consists of approximately

1,900 single parts.

The P66/3 engine consists of a total of **4,306** parts,
1,006 of them are different parts.

More than **25** BMW M Motorsport people
have been directly involved in testing



In total, approximately **60** people were permanently
involved in testing and racing the BMW M Hybrid V8 in 2023.

LMDH COMMON PARTS FOR ALL MANUFACTURERS:

- Hybrid system (electric engine, high voltage battery, DC-DC, looms)
- Gearbox
- Scrutineering system

BMW DEVELOPMENT:

- Combustion engine
- Software / functions
- Overall vehicle performance (Driver in the loop simulator)
- Rims
- Exterior design (BMW Group Designworks in the lead)
- Signature lighting front and rear

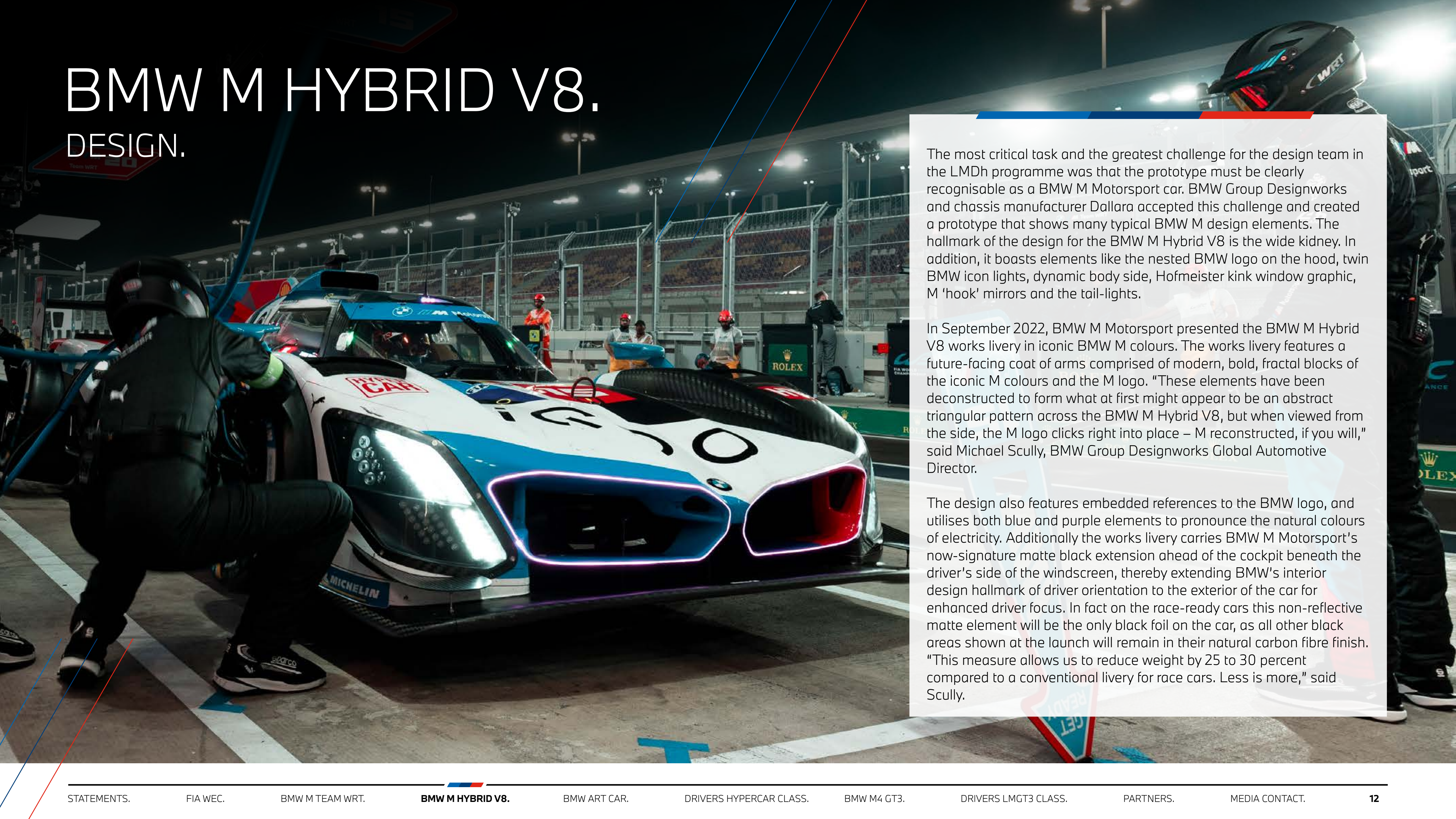
DALLARA DEVELOPMENT (by LMDh regulations):

- Survival cell
- Steering
- Suspension
- Fuel cell
- Cockpit (seat, pedals, ergonomics)

JOINT DEVELOPMENT BMW/DALLARA:

- Bodywork design and aerodynamics
- Combustion engine integration (bellhousing, engine studs and struts)
- Cooling system
- Brake friction assembly
- Overall electric and electronic layout

BMW M HYBRID V8. DESIGN.



The most critical task and the greatest challenge for the design team in the LMDh programme was that the prototype must be clearly recognisable as a BMW M Motorsport car. BMW Group Designworks and chassis manufacturer Dallara accepted this challenge and created a prototype that shows many typical BMW M design elements. The hallmark of the design for the BMW M Hybrid V8 is the wide kidney. In addition, it boasts elements like the nested BMW logo on the hood, twin BMW icon lights, dynamic body side, Hofmeister kink window graphic, M 'hook' mirrors and the tail-lights.

In September 2022, BMW M Motorsport presented the BMW M Hybrid V8 works livery in iconic BMW M colours. The works livery features a future-facing coat of arms comprised of modern, bold, fractal blocks of the iconic M colours and the M logo. "These elements have been deconstructed to form what at first might appear to be an abstract triangular pattern across the BMW M Hybrid V8, but when viewed from the side, the M logo clicks right into place – M reconstructed, if you will," said Michael Scully, BMW Group Designworks Global Automotive Director.

The design also features embedded references to the BMW logo, and utilises both blue and purple elements to pronounce the natural colours of electricity. Additionally the works livery carries BMW M Motorsport's now-signature matte black extension ahead of the cockpit beneath the driver's side of the windscreen, thereby extending BMW's interior design hallmark of driver orientation to the exterior of the car for enhanced driver focus. In fact on the race-ready cars this non-reflective matte element will be the only black foil on the car, as all other black areas shown at the launch will remain in their natural carbon fibre finish. "This measure allows us to reduce weight by 25 to 30 percent compared to a conventional livery for race cars. Less is more," said Scully.

BMW M HYBRID V8.

THE 20TH BMW ART CAR.

In June 2023, BMW announced a collaboration with internationally renowned New York-based artist Julie Mehretu to create the 20th BMW Art Car. Mehretu was unanimously chosen by an international jury of museum directors and curators, and will be given total creative freedom to design the next instalment in BMW's legendary collection of "rolling sculptures". BMW M Motorsport will enter Mehretu's BMW M Hybrid V8 Art Car in the 24-hour race of Le Mans in June 2024. This continues an almost 50-year tradition that has delighted not only motorsport enthusiasts but anyone into design or the arts, technology and mobility.



BMW M HYBRID V8. THE 20TH BMW ART CAR.

For the design of the 20th BMW Art Car, Mehretu uses the colour and form vocabulary of an existing large-format painting from a more recent series of works: obscured photographs, dotted grids, neon-coloured spray paint and Mehretu's iconic gestural markings give her design an abstract visual form. She transfers the resulting image motif as a high-resolution photograph onto the vehicle's contours using a 3D mapping technique. This creates the unique artistic foiling with which the BMW M Hybrid V8 will compete in the Le Mans race.

For the first time, Mehretu is working with BMW on a three-dimensional format. The interplay of the surfaces and geometry of the vehicle creates a remix of elements of her painting and opens up new perspectives for the artist in her creative process. In accordance with the regulations of the FIA, the 3D version of the artwork can only be applied to the BMW M Hybrid V8 with a film wrap. For this, Mehretu is working closely with the German Race Spirit team led by Manuel Eberl and Gertraud Brenninger to design the 20th BMW Art Car. Race Spirit was already involved in realising the design created by Jeff Koons for the 17th BMW Art Car.

"It wasn't until after going to the 24 Hours race in Daytona last year that the idea of how to approach the BMW Art Car really crystallised. I was thinking about Frank Stella's grid and how this could also be a shout-out to former BMW Art Car artists. And I kept thinking of this painting in my studio that I had just finished and the model of the Art Car was in my studio and I thought maybe we can try to have the car move through this painting. The creative play of what you can do in this new three-dimensional space and how many imaginations and inventions are played out to build it is highly instructive. It is not just the car itself but the designers and their deliberations as well as and foremost the drivers and their desires and aspirations which make it become this place of dreams where painting, conceptual art, aerodynamics, speed and aesthetics can participate."



Julie Mehretu,
artist



BMW M HYBRID V8.

BMW ART CARS IN LE MANS.

1976: BMW 3.0 CSL, Frank Stella



1977: BMW 320i Turbo, Roy Lichtenstein



1975: BMW 3.0 CSL, Alexander Calder



1979: BMW M1, Andy Warhol



1999: BMW V12 LMR, Jenny Holzer



2010: BMW M3 GT2, Jeff Koons



BMW M HYBRID V8 – DRIVERS.

#15 BMW M HYBRID V8.



RAFFAELE MARCIELLO.

Date of birth: 17th December 1994

Place of birth: Zürich (SUI)

BMW M works driver since: 2024

Major successes:

GTWC Europe overall champion 2022 & 2023, victory at the 24h Spa-Francorchamps 2022, victory at the FIA GT World Ctup Macau 2019 & 2023, Blancpain GT Series champion 2018



DRIES VANTHOOR.

Date of birth: 20th April 1998

Place of birth: Hasselt (BEL)

BMW M works driver since: 2023

Major successes:

Victory at 24h Nürburgring 2019 & 2022, GTWC Europe Sprint Cup champion 2020, 2021 & 2022, GTWC Europe overall champion 2021, victory at 24h Dubai 2022 & 2023, victory at 9h Kyalami 2023, victory at 8h Indianapolis 2023, victory at Bathurst 12H 2018, class win at 24h Le Mans 2017



MARCO WITTMANN.

Date of birth: 24th November 1989

Place of birth: Fürth (GER)

BMW M works driver since: 2012

Major successes:

DTM champion 2014 & 2016, victory at 24h Spa-Francorchamps 2023, 2nd place at 24h Nürburgring 2021 & 2023, 3rd place at 24h Daytona 2021

BMW M HYBRID V8 – DRIVERS.

#20 BMW M HYBRID V8.



ROBIN FRIJNS.

Date of birth: 7th August 1991

Place of birth: Maastricht (NED)

BMW M works driver since: 2024

Major successes:

Victory at 24h Nürburgring 2022, FIA WEC Champion (LMP2) 2021, victory at 24h Le Mans (LMP2) 2021, victory at Bathurst 12H 2018, Blancpain GT Sprint Champion 2017, Blancpain GT Series Champion 2015, Formula BMW Europe Champion 2010



RENÉ RAST.

Date of birth: 26th October 1986

Place of birth: Minden (GER)

BMW M works driver since: 2023

Major successes:

DTM champion 2017, 2019 & 2020, ADAC GT Masters champion 2014, victory at 24h Spa-Francorchamps 2012 & 2014, victory at 24h Nürburgring 2014



SHELDON VAN DER LINDE.

Date of birth: 13th May 1999

Place of birth: Johannesburg (RSA)

BMW M works driver since: 2019

Major successes:

DTM champion 2022, victory at 9h Kyalami 2020 & 2023, victory at 8h Indianapolis 2023, 2nd place at 12h Sebring 2023, 2nd place at 24h Nürburgring 2021 & 2023

LMGT3 CLASS.



BMW M4 GT3.

CAR SPECIFICATIONS.

Dimensions

Length incl. splitter & rear wing	5,020 mm
Width incl. mirrors	2,040 mm
Height	1,308 mm, variable
Wheelbase	2,917 mm

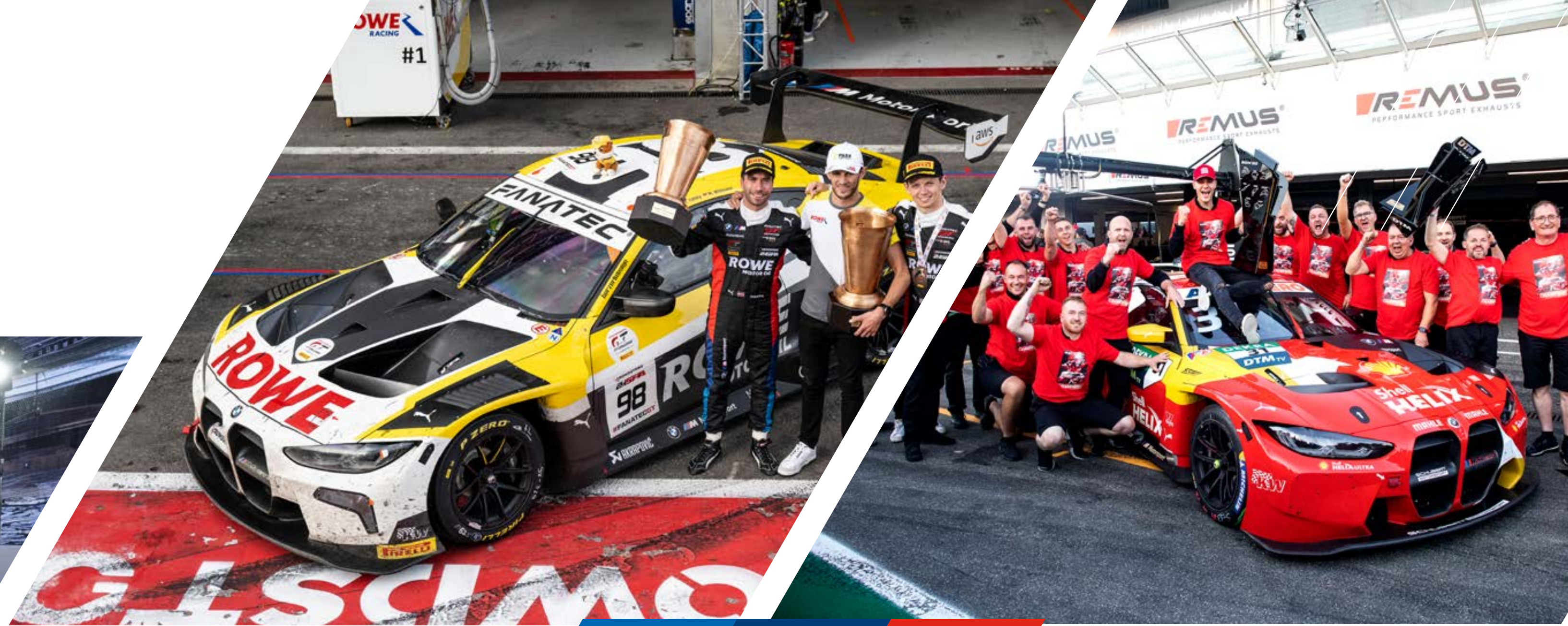
Engine & Transmission

Type	P58 3.0l straight six M TwinPower Turbo
Capacity	2,993 cm ³
Output	up to 590 hp
Specific Output	197 hp/l
Transmission	Xtrac 6-speed gearbox
Clutch activation	Electro-hydraulic



BMW M4 GT3.

FACTS AND FIGURES.



- Straight six-cylinder engine roughly **40 kilograms lighter** than the V8 engine in the BMW M6 GT3 => Lighter engine, better weight distribution.
- 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.

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.

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.

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.

MAJOR SUCCESSES.

2022	DTM driver and team championship
2022	IMSA GTD Sprint Cup championship
2023	24h Spa-Francorchamps overall victory
2023	IMSA GTD overall and Sprint Cup championship
2023	NLS Speed Trophy championship, seven BMW M4 GT3 wins in nine races
2023	Asian Le Mans Series GT championship
2023	24h Dubai overall victory
2023	Indianapolis 8 Hour victory
2023	Kyalami 9 Hour victory

BMW M4 GT3 – DRIVERS.

#31 BMW M4 GT3.



AUGUSTO FARFUS.

FIA driver category: Platinum

Date of birth: 3rd September 1983

BMW M works driver since: 2007

Major successes:

Victory at 24h Daytona 2019 & 2020, Intercontinental GT Champion 2020, victory at FIA GT World Cup Macau 2018, victory at 24h Nürburgring 2010



SEAN GELAE.

FIA driver category: Silver

Date of birth: 1st November 1996

Major successes:

2nd place FIA WEC overall standings (LMP2) 2021 & 2022, 2nd place (LMP2) 24h Le Mans 2021, 2nd place Asian Le Mans Series 2021



DARREN LEUNG.

FIA driver category: Bronze

Date of birth: 25th September 1987

Major successes:

British GT overall champion 2023, 1st place Silverstone 500 2023

BMW M4 GT3 – DRIVERS.

#46 BMW M4 GT3



MAXIME MARTIN.

FIA driver category:	Platinum
Date of birth:	20 th March 1986
BMW M works driver since:	2023 (2013-2017)

Major successes:

Victory at 24h Spa-Francorchamps 2016, class win at 24h Le Mans 2020, 2nd place 24h Nürburgring 2013, 2015 & 2023, 3rd place 24h Dubai 2023



VALENTINO ROSSI.

FIA driver category:	Silver
Date of birth:	16 th February 1979
BMW M works driver since:	2023

Major successes:

Nine-time motorbike world champion, Le Mans GT Cup win 2023, GTWC Europe win 2023, 3rd place 24h Dubai 2023



AHMAD AL HARTHY.

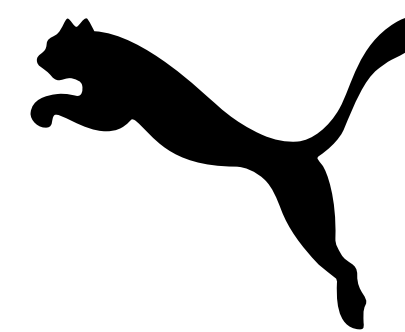
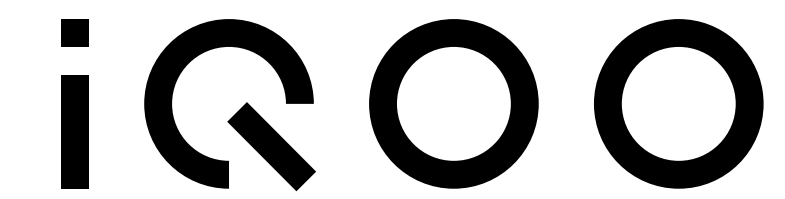
FIA driver category:	Bronze
Date of birth:	31 st August 1981

Major successes:

3rd place overall standings Asian Le Mans Series 2024, 2nd place (LMGTE Am) 24h Le Mans 2023, Pro-Am champion Blancpain GT Series Endurance Cup 2017 & 2019

FIA WORLD ENDURANCE CHAMPIONSHIP 2024.

BMW M MOTORSPORT PARTNERS.





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