

Technical specifications. BMW M5.



BMW
Media
Information

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BMW M5		
Body		
No. of doors / seats		4 / 5
Length/width/height (unladen)	mm	5096 / 1970 / 1510
Wheelbase	mm	3006
Track, front/rear	mm	1684 / 1660
Ground clearance	mm	115
Turning circle	m	12.6
Fuel tank capacity	approx. l	60
Engine oil ¹⁾	l	13.2
Weight, unladen, to DIN/EU	kg	2435 / 2510
Max. load to DIN	kg	505
Max. permissible weight	kg	2940
Max. axle load, front/rear	kg	1475 / 1550
Max. trailer load		
braked (12%/unbraked)	kg	2000 / 750
Max. roofload/towbar download	kg	75 / 100
Luggage comp. capacity	l	466
Air resistance	c _x x A	0.32 x 2.55
Drive System		
Drive concept		Full hybrid drive, drive torque from one or both sources (petrol engine/electric motor) sent to all four wheels via M xDrive
Max. system output ²⁾	kW/hp	535 / 727
Max. system torque ²⁾	Nm	1000
System power-to-weight ratio (DIN)	kg/kW	4.6
Petrol Engine		
Config./No. of cyls./valves		V / 8 / 4
Engine technology		M TwinPower Turbo technology with cross-bank exhaust manifold: two M TwinScroll turbochargers, indirect charge air cooling, High Precision Injection (max. injection pressure: 350 bar), VALVETRONIC fully variable valve timing, Double-VANOS variable camshaft timing
Effective capacity	cc	4395
Stroke/bore	mm	88.3 / 89.0
Compression ratio	:1	10.5
Fuel		Min. RON 95
Output	kW/hp	430 / 585
at	rpm	5600 – 6500
Torque	Nm	750
at	rpm	1800 – 5400
Output per litre	kW/l	97.8
Electric Motor		
Motor technology		BMW eDrive technology: permanently excited synchronous electric motor with pre-gearing, integrated into eight-speed M Steptronic transmission; generator function for recuperating energy for the high-voltage battery
Max. output	kW/hp	145 / 197
at	rpm	6000
Torque	Nm	280
at	rpm	1000 – 5000
Effective torque resulting from pre-gearing	Nm	450
High-voltage Battery		
Storage technology / Installation		Lithium-ion / Underfloor
Voltage	V	347.5
Energy capacity (gross / net)	kWh	22.1 / 18.6
Max. charging rate	kW	7.4
Charging time, 0–100% charge		3:15 h at 7.4 kW (32 A / 230 V, 1ph.)

BMW M5

Driving Dynamics and Safety

Suspension, front	Adaptive M suspension with double-wishbone axle in lightweight aluminium construction, M-specific kinematics and elastokinematics
Suspension, rear	Adaptive M suspension with five-link axle in lightweight aluminium/ steel construction, M-specific kinematics and elastokinematics
Brakes, front	Six-piston fixed-calliper disc brakes, vented
Brakes, rear	Single-piston floating-calliper disc brakes, vented
Driving stability systems	Standard: DSC incl. ABS and M Dynamic Mode (MDM), can be switched off; near-actuator wheel slip limitation, CBC (Cornering Brake Control), DBC (Dynamic Brake Control), Performance Control, Dry Braking function, drive-off assistant, M xDrive all-wheel-drive system and Active M Differential networked with DSC
Safety equipment	Standard: airbags for driver and front passenger, side airbags for driver and front passenger, head airbags for front and rear seats, three-point inertia-reel seatbelts on all seats with belt stopper, belt tensioner and belt force limiter in the front, crash sensors, tyre pressure indicator
Steering	Electric Power Steering (EPS) with M-specific Servotronic function, Integral Active Steering
Steering ratio, overall	14.2
Tyres, front/rear	285/40 ZR20 111Y XL / 295/35 ZR21 110Y XL
Rims, front/rear	10.5J x 20 light-alloy / 11J x 21 light-alloy

Transmission

Type of transmission	Eight-speed M Steptronic transmission		
Gear ratios	I	:1	5.000
	II	:1	3.200
	III	:1	2.143
	IV	:1	1.720
	V	:1	1.297
	VI	:1	1.000
	VII	:1	0.833
	VIII	:1	0.640
	R	:1	3.968
Final drive		:1	3.308

Performance

Acceleration	0–100 km/h	s	3.5
Acceleration	0–200 km/h	s	10.9
Acceleration	80–120 km/h	s	
	in 4th/5th gear		2.2 / 2.9
Top speed		km/h	250 / 305 ³⁾
Top speed on electric power		km/h	140
Electric range (WLTP)		km	67 – 69

BMW EfficientDynamics

BMW EfficientDynamics standard features	BMW eDrive technology, Electric Power Steering, hybrid-specific Automatic Start/Stop function, Proactive Driving Assistant, BMW EfficientLightweight, optimised aerodynamic attributes, active air flap control, on-demand operation of ancillary units, map-regulated oil pump, efficiency-optimised all-wheel drive
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Petrol/Electric Power Consumption ECE

Petrol cons., weighted combined (WLTP)	l/100 km	1.7 – 1.6
CO ₂ emissions from petrol (WLTP)	g/km	39 – 37
Electric power consumption, weighted combined (WLTP)	kWh/100 km	25.5 – 25.0
Petrol cons. w. discharged batt. (WLTP)	l/100 km	10.3 – 10.2
Emission rating		Euro 6e
CO ₂ class(es) weighted combined		B
CO ₂ class(es) w. discharged batt.		G

Specifications apply to ACEA markets/data relevant to homologation applies in part only to Germany

All figures are provisional

¹⁾ Oil change with filter

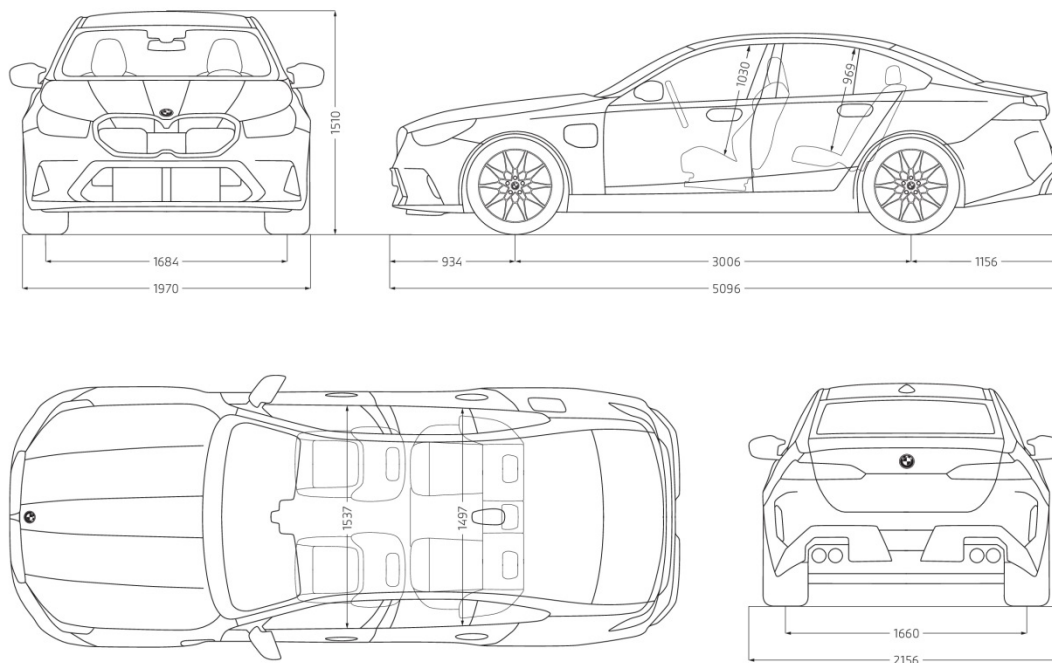
²⁾ Developed by the combination of the combustion engine (stated nominal figure) and the electric motor (up to stated nominal figure)

³⁾ Limited / with optional M Driver's Package

Fuel consumption, CO₂ emission figures and power consumption as well as electric range were measured using the methods required according to Regulation VO (EC) 715/2007 as amended. Where a range is shown, the WLTP figures take into account the impact of any optional extras.

Further information on the WLTP measurement procedures is also available at www.bmw.de/wltp can be found.

Exterior and interior dimensions. BMW M5.



The dimensions of the technical drawing are in millimetres and may vary depending on the model and optional equipment specified.

The all-new BMW M5. Highlights.



- Seventh generation of the **BMW M5**. High-performance executive-class sedan has an electrified drive system for the first time. Model-specific M HYBRID system combines V8 engine with an electric motor. System output of 535 kW/727 hp (developed by the combination of the combustion engine with up to 430 kW/585 hp and the electric motor with up to 145 kW/197 hp), acceleration 0 – 100 km/h [62 mph]: 3.5 seconds, 0 – 200 km/h [124 mph]: 10.9 seconds, top speed: 250 km/h [155 mph] (305 km/h [189 mph] with optional M Driver's Package), energy consumption, weighted, combined: 1,7 – 1,6 l/100 km [166.2 – 176.6 mpg imp] and 25,5 – 25,0 kWh/100 km according to WLTP; CO₂ emissions, weighted, combined: 39 – 37 g/km according to WLTP; fuel consumption with discharged battery: 10,3 – 10,2 l/100 km [27.4 – 27.7 mpg imp] according to WLTP; CO₂ classes: weighted, combined B, with discharged battery G.
- M-typical performance elevated to a new level by consistent electrification. Drive system derived from BMW M Hybrid V8 endurance racer. Electric motor has instantaneous power delivery; high-revving V8; peak system torque of 1,000 Nm [737 lb-ft] (developed by the combination of the combustion engine with up to 750 Nm [553 lb-ft] and the electric motor with up to 280 Nm [206 lb-ft]).
- M HYBRID system plus power transmission and chassis technology tuned to the specific performance characteristics of the combustion engine/electric motor combination deliver longitudinal and transverse dynamics unparalleled in this market segment. Outstanding elasticity at the heart of a richly engaging performance experience.
- New BMW M5 has expressive appearance thanks to M-specific design features. Sculptural front end, prominently flared wheel arches and model-specific C-pillar design differentiate it clearly from the new BMW 5 Series Sedan. Unusually high proportion of surfaces painted in body colour create a puristic appearance. Embossed "M5"

logo for the Hofmeister kink. Illuminated M kidney Iconic Glow and dynamic light carpet.

- Latest version of the 4.4-litre V8 engine with cutting-edge M TwinPower Turbo technology, cross-bank exhaust manifold and optimised oil separation provides the basis for the M HYBRID system. Track-optimised cooling and oil supply systems. Sports exhaust system with electrically controlled flaps and characteristic dual tailpipes.
- Model-specific electric motor integrated into the transmission. Unique pre-gearing stage increases effective torque of the electric motor at the transmission input to a maximum 450 Nm [332 lb-ft]. Eight-speed M Steptronic transmission with Drivelogic offers three shift programs, can be operated using new selector lever and shift paddles on the steering wheel.
- High-voltage battery with 18.6 kWh of usable energy, enabling an electric range of 67 – 69 kilometres (42 – 43 miles) in the WLTP cycle, which is unmatched by any rival. AC charging at up to 7.4 kW as standard.
- Optimised traction, directional stability and dynamic potency thanks to further developed all-wheel-drive system M xDrive and Active M Differential at the rear axle. Rear-biased setup, three modes selectable via the M Setup menu: 4WD, 4WD Sport and 2WD, which sends drive exclusively to the rear wheels with the DSC (Dynamic Stability Control) system switched off. Launch Control provides acceleration with optimal traction and maximum dynamic flair in all M Setup settings, with the exception of the M xDrive system's 2WD mode.
- M-typical, performance-oriented overall vehicle concept. New BMW M5 has significantly longer wheelbase and wider tracks than the predecessor model. Engine and rear axle support mounts have increased rigidity. Model-specific strut braces in the rear section; tower-to-bulkhead stiffening profile, tower-to-frontend struts and other bracing elements in the front-end structure. Optional M Carbon roof reduces weight.
- Extensively upgraded chassis technology tuned precisely to the M HYBRID drive system. Double-wishbone front axle and five-link rear axle with bespoke kinematics and elastokinematics, plus model-

specific components. M Servotronic steering with variable ratio has a rigid connection to the front axle subframe.

- Adaptive M suspension with electronically controlled dampers and Integral Active Steering as standard. Transverse dynamics management setup links control systems for the chassis, steering and braking system, as well as near-actuator wheel slip limitation, M xDrive and Active M Differential. Well-resolved balance of hallmark M performance and smooth long-distance comfort at all times. Integrated braking system with two pedal feel and response settings. M Carbon ceramic brakes optional. M light-alloy wheels (20-inch at the front axle, 21-inch at the rear).
- Large selection of systems for automated driving and parking. Front collision warning, Lane Departure Warning, Evasion Assistant, Speed Limit Info, manual Speed Limit Assist, plus Parking Assistant with Reversing Assistant and Reversing Assist Camera as standard. Driving Assistant Professional with Steering and Lane Control Assistant, Active Cruise Control, automatic Speed Limit Assist, traffic light detection and Active Navigation, plus Parking Assistant Professional for controlling parking manoeuvres via a smartphone optional.
- Highly customisable driving experience using familiar M operating concept. Setup button gives direct access to settings for the engine, Drivelogic, chassis, steering, brakes, M xDrive and brake energy recuperation. Users can configure two overall setup variants, which can then be called up using M buttons on the steering wheel. M Dynamic Mode and full DSC deactivation also possible at the touch of a button. M Mode button allows individual configuration of display content and driver assistance system interventions. Driver can select ROAD, SPORT and optionally also TRACK mode. Optional M Drive Professional also includes M Laptimer and Boost Control to maximise longitudinal dynamics when executing mid-range sprints.
- Up to five operating modes for the drive system can be selected using the M HYBRID button. Basic HYBRID setting for intelligently controlled interplay between the combustion engine and electric motor to maximise either efficiency or performance, depending on the mode selected in the M Setup menu. All-electric driving in ELECTRIC mode at up to 140 km/h [87 mph]. eCONTROL mode for effective brake energy recuperation and maintaining battery charge at a constant level. Optional DYNAMIC and DYNAMIC PLUS modes

prime the cooling system and drive system to keep performance at a constantly high level or generate short bursts of maximum power on the track.

- Progressive sports car cockpit with new M leather steering wheel and M multifunction seats. BMW Curved Display has M-specific content. Exclusive interior ambience created by standard Merino leather trim, BMW Interaction Bar, M-specific interior lighting with Welcome Animation, and panoramic glass sunroof.
- Upgraded BMW iDrive based on BMW Operating System 8.5. BMW Live Cockpit Professional includes BMW Head-Up Display, Augmented View and BMW Maps navigation system as standard. BMW Intelligent Personal Assistant and BMW Curved Display for intuitive, multimodal interaction between the driver and car using natural speech and touch control. Personalisation using BMW ID and My BMW App. Smartphone integration for Apple CarPlay® and Android Auto™. Personal eSIM can be used in the car. 5G-enabled aerial system provides optimised connectivity. Video streaming and in-car gaming on the control display. Digital payment option for parking fees and fuel.
- Exclusive standard specification includes four-zone air conditioning, heated front seats, ambient lighting, Bowers & Wilkins Surround Sound System, wireless charging tray, Comfort Access, an alarm system and automatic tailgate operation. Charging cable Professional also standard. Options include M Carbon exterior package, an Alcantara headliner, steering wheel heating, active seat ventilation and a trailer tow hitch.
- Extensive selection of model-specific BMW M Performance Parts available from launch. Selection includes M Performance forged light-alloy wheels and exterior components made from carbon fibre-reinforced plastic (CFRP).
- World premiere of the new BMW M5 at the Goodwood Festival of Speed in England in July 2024. Production at BMW Group Plant Dingolfing starts in July 2024; worldwide market launch from November 2024. New BMW M5 Touring set to join line-up; production starts and launch gets underway in November 2024.

All figures relating to performance, fuel/electric power consumption, emissions and range are provisional.

All of the stated model variants, equipment features, technical data and fuel/electric power consumption and emissions figures relate to the offering in the German market, if the respective vehicle is available there. These may vary for other markets. Dimensions and measurements refer to vehicles with basic configuration in Germany. These may vary depending on the wheel/tyre size and items of optional equipment selected.

The all-new BMW M5. Contents.



Model variant:

BMW M5: M HYBRID system consisting of a V8 engine with M TwinPower Turbo technology and a highly integrated electric drive unit; fifth-generation lithium-ion battery; eight-speed M Steptronic transmission and M xDrive; system output: 535 kW/727 hp; 1,000 Nm (737 lb-ft); acceleration [0 – 100 km/h (62 mph)]: 3.5 seconds; energy consumption weighted, combined in the WLTP cycle: 1.7 – 1.6 l/100 km (166.2 – 176.6 mpg imp) and 25.5 – 25.0 kWh/100 km; CO₂ emissions weighted, combined in the WLTP cycle: 39 – 37 g/km; fuel consumption with discharged battery, combined in the WLTP cycle: 10.3 – 10.2 l/100 km (27.4 – 27.7 mpg imp); exhaust emissions standard: Euro 6e; CO₂ class(es) weighted, combined: B, with discharged battery: G.

Powertrain.

Standout performance from M TwinPower Turbo V8 engine, fifth-generation BMW eDrive technology, eight-speed M Steptronic transmission and M xDrive all-wheel-drive system. 2

Chassis and driving experience.

Exceptional poise and assurance over long distances and on the track. 11

Exterior design.

Expressive, distinctive and more puristic than ever. 18

Interior design and equipment.

Progressive sporting appeal with an aura of exclusivity. 21

Display and control/operation system, connectivity.

New BMW iDrive and innovative digital services with BMW Operating System 8.5. 26

All figures relating to fuel/electric power consumption, emissions and electric range are provisional.

All of the stated model variants, equipment features, technical data and fuel/electric power consumption and emissions figures relate to the offering in the German market. Dimensions and measurements refer to vehicles with basic configuration in Germany. These may vary depending on the wheel/tyre size and items of optional equipment selected.

Official fuel consumption, CO₂ emissions, electric power consumption and electric range figures were determined based on the prescribed measurement procedure in accordance with European Regulation (EC) 2007/715 in the version applicable. Where a range is shown, the WLTP figures take into account the impact of any optional extras.

Further information on the WLTP measurement procedure can also be found at www.bmw.de/wltp.

Powertrain.

Standout performance from M TwinPower Turbo V8 engine, fifth-generation BMW eDrive technology, eight-speed M Steptronic transmission and M xDrive all-wheel-drive system.



The BMW M5 is powering into a new era. With 40 years of history having passed under its wheels, the legendary high-performance sedan has reached its seventh model generation. And the executive model from BMW M GmbH now has an electrified drive system for the first time. A model-specific version of the M HYBRID system gives the new BMW M5 maximum output of 535 kW/727 hp and peak system torque of 1,000 Nm (737 lb-ft). The combination of a high-revving V8 engine with M TwinPower Turbo technology and an electric motor, plus power transfer courtesy of an eight-speed M Steptronic transmission with Drivelogic and the M xDrive all-wheel-drive system gives drivers a new experience of the performance with which M models have made their name.

The new edition of the high-performance sedan sees BMW M GmbH taking another committed step in its transformation to locally emission-free mobility. The combination of combustion engine and electric motor in the new BMW M5 adheres to the same principle as the drive system in the BMW M Hybrid V8 endurance racing machine. The intelligently controlled interplay of the engine and motor, and power transfer and chassis technology tuned perfectly to the resultant performance characteristics, provide the latest example of progress achieved with established racing-car expertise.

The world premiere of the new BMW M5 will take place at the Goodwood Festival of Speed in England in July 2024, with production at BMW Group Plant Dingolfing beginning the same month. The worldwide market launch of the new BMW M5 will start in November 2024 and be accompanied by the introduction of the new BMW M5 Touring at the same time. The most important sales regions for the high-performance sedan are North America and Europe. The USA is the single biggest individual market by some distance, followed by Great Britain, Germany, South Korea, China, Japan and Canada.

M HYBRID system in the new BMW M5: signature M performance characteristics in a new form.

The electrified drive system powering the new BMW M5 enriches the driving experience on board the high-performance sedan with another

sprinkling of fresh ingredients. As with the introduction of eight- and ten-cylinder engines, turbocharging and the M xDrive all-wheel-drive system in earlier model generations, so the new plug-in hybrid system represents a new dimension in hallmark M performance.

The latest-generation electric motor integrated into the eight-speed M Steptronic transmission brings an immediacy to the power delivery of the new BMW M5 that none of its predecessors can match. Teaming up with a V8 petrol engine boasting M TwinPower Turbo technology that develops exceptional power and benefits from a wealth of detail upgrades, the result is unparalleled performance characteristics. The instantly available thrust from the electric motor and the V8 engine's power delivery – sustained into the upper reaches of the load and rev ranges in the finest M tradition – dovetail in particularly compelling style. Add the M HYBRID system's similarly outstanding elasticity to the mix and the new BMW M5 achieves a level of dynamic prowess unsurpassed by any rival.

Owners of the new BMW M5 will also be able to explore its newfound ability to cover longer distances and hit speeds of up to 140 km/h (87 mph) in its drive system's all-electric operating mode. Its electric range in the WLTP test cycle is 67 – 69 kilometres (42 – 43 miles). The breadth of the driving experience allows the new BMW M5 to handle any situation with poise and assurance. It also captures the imagination with vast reserves of power that can be summoned at any time. Kept discreetly in reserve during relaxed, locally emission-free cruises, this performance comes vividly to the fore as the M5 reveals the "sporty sedan" side to its personality over longer distances – and is unleashed in full during sessions on the track.

The new BMW M5 harnesses the instantaneously initiated and relentlessly building power delivery of its engine and electric motor to accelerate from 0 to 100 km/h (62 mph) in 3.5 seconds. 0 to 200 km/h (124 mph) takes 10.9 seconds. In addition, the maximum system torque of 1,000 Nm (737 lb-ft) gives the M HYBRID drive system outstanding elasticity, which is reflected in a time of 2.9 seconds for the sprint from 80 to 120 km/h (50 – 75 mph) in fifth gear. In fourth gear, this figure drops as low as 2.2 seconds. And that even undercuts the times recorded by the previous-generation BMW M5 CS special edition by 0.1 seconds in fourth gear and 0.3 seconds in fifth. The top speed of the new BMW M5 is limited to 250 km/h (155 mph) as standard, but the limiter can be raised to 305 km/h (189 mph) if the optional M Driver's Package is specified.

Extremely powerful V8 engine with traditional high-revving character.

The M HYBRID drive system of the new BMW M5 is based on a 4.4-litre V8 engine with a classically high-revving nature. The engine has gained extensive updates over the previous version of the unit and stands out with its further improved response, thirst for revs and optimised efficiency. It utilises the thermodynamic benefits of a cross-bank exhaust manifold, while a reinforced crankshaft drive, newly developed turbochargers – mounted close to the exhaust manifold and with adapted indirect charge air cooling and an electrically controlled blow-off valve – plus a new vane-type oil pump and a weight-minimised plastic oil sump pan, all play their part in increasing the engine's efficiency and reducing its weight. An optimised oil separation process with variable impactor enhances the engine's emissions performance. In addition, a newly designed dual air intake duct ensures reduced pressure losses and enhanced acoustics thanks to noise dampers positioned near the engine.

As well as the two twin-scroll turbochargers and High Precision Injection working with maximum pressure of 350 bar, the latest version of M TwinPower Turbo technology also comprises VALVETRONIC fully variable valve timing and Double-VANOS variable camshaft timing.

The combustion engine in the new BMW M5 blends its classically high-revving nature with emphatic power delivery sustained across a wide engine speed range. The eight-cylinder unit is the largest contributor to the M HYBRID's system output of 535 kW/727 hp and system torque of 1,000 Nm (737 lb-ft). Its peak torque of 750 Nm (553 lb-ft) is on tap across an extremely wide rev band – between 1,800 and 5,400 rpm. The V8 delivers its maximum output of 430 kW/585 hp from 5,600 to 6,500 rpm and has a rev limit of 7,200 rpm.

The likewise newly developed and model-specific sports exhaust system of the new BMW M5, with its electronically controlled and continuously adjustable flaps, conjures an emotionally rich and energy-charged aural accompaniment to the engine's power delivery. The engine note is therefore very distinctive, as is the appearance of the two pairs of dual tailpipes – each with a 100-millimetre diameter – integrated into the rear apron.

Electric motor with instantaneous power delivery and high torque.

The V8 engine in the new BMW M5 is complemented by an electric motor which, like the power electronics and high-voltage battery of the plug-in-hybrid system, are the product of the current, fifth generation of BMW eDrive technology. The permanently excited synchronous motor is

integrated into the eight-speed M Steptronic transmission together with its power electronics and responds to even slight movements of the accelerator with instantaneous power delivery, in the manner now familiar from electric motors.

The electric motor contributes up to 145 kW/197 hp to maximum system output and up to 280 Nm (206 lb-ft) to maximum system torque. Its nominal torque is boosted to as much as 450 Nm (332 lb-ft) at the transmission input via a pre-gearing stage patented by BMW. This innovation enables the electric motor, which is integrated into the transmission housing in a compact, weight-saving design, to generate effective propulsive power that could normally only be achieved using a far larger unit.

Providing an acoustic accompaniment to the power delivery of the electric motor is BMW IconicSounds Electric. This M-specific electric drive sound provides authentic responses to movements of the accelerator when the car is operating in all-electric mode. With the relevant drive system configuration, it also generates an engaging track to highlight the arrival of extra electric power on top of the output from the V8 engine.

High-voltage battery, power electronics and Combined Charging Unit with intelligent energy and heat management.

The energy for the electric drive system is stored in a high-voltage battery, which is installed in the underbody of the new BMW M5 to save space. The positioning of the battery here helps to lower the car's centre of gravity, which has a positive effect on handling agility. The integration of the battery also avoids restricting cabin or load compartment space in any way. The lithium-ion battery stands out with its high energy density at a cell and battery-pack level. It has a usable energy content of 18.6 kWh and provides a constant flow of power across a wide temperature range and even under the heavy loads brought by a particularly sporty driving style.

The power electronics of the M HYBRID system optimise the interplay between the combustion engine and electric motor. Depending on the situation and the driver's preferences, the drive system can be set up to maximise either dynamic performance or efficiency. As well as providing an electric boost effect under acceleration, the electric motor of the new BMW M5 also performs a supporting role under steady loads, helping to significantly reduce the fuel consumption of the engine. In the same way, intelligent energy management allows the battery's charge level to be

regulated so that the final stretch of a longer journey through a built-up area can be covered using only electric power.

The M HYBRID system's Combined Charging Unit coordinates the flow of electricity both when charging the high-voltage battery and when supplying energy to the electric motor. It also acts as a voltage transformer to supply the 12V electrical system. The Combined Charging Unit supports both single-phase and three-phase AC charging at up to 7.4 kW. This means the high-voltage battery in the new BMW M5 can be charged from 0 to 100 per cent in 3 hr 15 min.

Its predictive heat management allows the Combined Charging Unit to reduce charging times by judiciously warming or cooling the battery. The system uses data on the outside temperature, predicted charging power, charge stroke between the current actual value and the target value, the car's remaining range and the distance to the destination to calculate the target temperature at which the high-voltage battery can be charged at maximum power for the longest possible time.

In addition, the charging socket on the front side panel on the left-hand side of the new BMW M5 has a sensor that measures the temperature at the plug contacts and can therefore detect a possible instance of overheating at an early stage. The charging socket comes with the handy feature of locator lighting so that customers can also hook up their car to a power source in the dark without a problem.

Integrated cooling system, model-specific engine and transmission mounts.

The M HYBRID drive system of the new BMW M5 features an integrated cooling system adapted to the demands of both track driving and everyday use. Extremely large air intakes in the front end ensure the inflow of cool air is maintained as required at all times. Generously sized heat exchangers and an integrated system for controlling the temperature of the combustion engine, the transmission including electric motor and the high-voltage battery ensure ideal operating temperatures for the drive system technology under sustained high power demand, on short journeys and in city driving.

The air flowing into the central section of the BMW kidney grille initially encounters the low-temperature radiator, then the air conditioning condenser and finally the high-temperature radiator. The low-temperature circuit supplies both the indirect intercooler for the V8 engine and the electric motor's power electronics. The high-voltage

battery and the climate control system for the cabin are connected to an extremely large coolant condenser. The high-temperature circuit comprises a mechanical water pump, a main radiator and two remote ones to the sides in the wheel arches. Together, these elements supply coolant to the engine block and the two turbochargers. A separate, horizontally arranged radiator directly controls the temperature of the engine oil. Transmission oil cooling is by upstream air heat exchanger.

Water-carrying components have been flow-optimised to achieve maximum cooling power while keeping pumping rates low. All the heat exchangers are sealed against the surrounding structure using soft materials to enable optimal airflow. Using an electric water pump ensures cooling of the turbochargers can continue for a certain time after the engine has been switched off.

A model-specific powertrain mount makes an additional contribution to the performance-focused driving properties of the new BMW M5. With their extremely rigid design, the two hydraulic engine mounts and the conventional transmission mount integrated into the cross member play their part in the M HYBRID system's extremely rapid response and the direct transmission of its power to the road. The powertrain mount's specially developed concept also enhances the car's precision when turning into corners and its vibration characteristics.

Eight-speed M Steptronic transmission with Drivelogic, Launch Control function and integrated electric motor.

The eight-speed M Steptronic transmission with Drivelogic channels not only the power generated by the combustion engine, but also the drive torque from the integrated electric motor as required to enhance either efficiency, comfort or dynamism. As well as fully automatic gear changes, it also enables manual shifting with sequential gear selection. Fitted as standard for the job in hand are gearshift paddles on the steering wheel. The transmission's shift characteristics can be varied via the Drivelogic settings selectable using the M Setup menu. Three clearly distinguishable stages can be selected in both automated and manual mode – ranging from comfort-focused to extremely dynamic.

The eight-speed M Steptronic transmission also has a Launch Control function to enable traction-optimised acceleration off the line with maximum dynamism. The engine control unit governs both the release logic of the Launch Control and the slip-optimised limitation of drive torque. The optimally set shift points help to ensure the best possible acceleration for all ambient conditions, e.g. the outside temperature and

road surface at hand. In the BMW M5, the Launch Control function can now be utilised in conjunction with all the settings available through the M Setup menu. The only exception is the M xDrive all-wheel-drive system's 2WD mode, which also deactivates the DSC system.

A feature not offered by any rival, the Boost Control function enables extremely rapid bursts of speed when travelling at between 30 and 150 km/h (19 – 93 mph). Pulling on the left-hand shift paddle for more than one second prompts all the powertrain and chassis systems to be switched to their sportiest setting. An alert on the information display indicates that this function has been initiated. When the driver then pushes down hard on the accelerator, the car accelerates without delay and with great force and dynamic flair.

The automatic transmission with integrated electric motor is distinguished by its weight-minimised and compact construction. Its hybrid module acts as a drive-off element and allows the car to move at walking pace without the driver pressing the accelerator and bringing the combustion engine into play. A wet multi-plate separation clutch ensures the smooth engagement and disengagement of the combustion engine during a journey. Its low drag torque allows the clutch to be open when driving in pure-electric mode. Added to which, the separation clutch can take torsional vibrations generated by the combustion engine out of the equation using micro-slip control. In combination with the integrated torsional vibration damper system, this helps to ensure high levels of acoustic comfort at low revs in particular.

Up to five operating modes allow drivers to tailor the performance and efficiency of their car.

The interplay between the combustion engine and electric motor in the BMW M5 can be adjusted by selecting specific operating modes for the M HYBRID system. The driver can call up the relevant menu using the M HYBRID button on the control panel in the centre console and access it on the control display. Three driving modes are available as standard, or five as an option.

The default setting HYBRID gives the driver access to the full system output of the combustion engine and electric motor in tandem. The amount each drive source contributes to the performance experience depends on the drive configuration selected from the M Setup menu. In the Comfort setting, the electric motor is deployed to the full, optimising the efficiency of the new BMW M5. If the battery is at a very low state of charge, the generator function raises the engine's load point to feed

additional power into the high-voltage battery. This means the driver very often has the option of pure-electric driving. In the drive system's Sport and Sport Plus modes, the combustion engine is permanently active.

The ELECTRIC operating mode is for locally emission-free driving. In this mode, the V8 engine is only activated if the driver asks for a lot of power – i.e. by pushing the accelerator into kickdown – or switches to the transmission's manual mode using the steering-wheel shift paddles. Choosing the eCONTROL setting allows the charge of the high-voltage battery to be maintained at a constant level during a journey or increased by means of energy recuperation or by deliberately raising the combustion engine's load points. In this way, battery capacity can be saved for pure-electric driving in urban areas later in the journey, for example, or to make use of the full system output developed by the motor and engine.

Specifying the optional M Drive Professional adds DYNAMIC and DYNAMIC PLUS modes. These ensure the combustion engine and electric motor are both active and that the cooling system is conditioned for track driving. In DYNAMIC mode, the full system output is primed to deliver sustained high performance during sporty driving on country roads and mountain passes and on the track. And DYNAMIC PLUS mode is there for the driver to call on to deliver the M HYBRID system's maximum power for a brief period on a grand-prix circuit, for example.

Precise distribution of power with M xDrive and Active M Differential.

In all operating modes, the power from the combustion engine, electric motor or both is channelled to the road via M xDrive. With its electronically controlled multi-plate clutch, this intelligent all-wheel-drive system ensures fully variable distribution of power between the front and rear axle, which optimises both the traction and performance of the new BMW M5. Its transfer case is more efficient than in the predecessor model, it weighs less and it brings improvements in oil-level control and cooling. A special design for the underbody panelling ensures a highly effective flow of cooling air. In addition, the torque capacity of the transfer case has been increased to take into account the extremely powerful M HYBRID drive system in the new BMW M5.

The M xDrive system's responses can also be adapted via the M Setup menu. Beyond the default 4WD setting, drivers can choose from two other modes. In 4WD Sport mode, the characteristic rear-biased setup of the M-specific all-wheel-drive system is particularly pronounced. This

delivers the extremely sporting handling in dynamic driving situations for which M models are renowned. To activate the 4WD Sport setting, drivers will first need to switch to M Dynamic Mode or fully deactivate the DSC (Dynamic Stability Control) system. And only when DSC off mode has been activated can 2WD mode be selected. Sending drive exclusively to the rear wheels without interventions from the DSC system will appeal to experienced drivers who prefer a performance experience of the pure-bred variety, e.g. when executing drift manoeuvres on the track.

Building on the work of the M xDrive system is an electronically controlled differential lock in the rear axle of the new BMW M5, which further enhances traction, agility and directional stability. Like the all-wheel-drive system, the Active M Differential is tailored specially to the performance characteristics of the M HYBRID drive system. It provides fully variable distribution of drive between the left and right rear wheel, adjusted to the situation at hand. If required, as much as 2,000 Nm (1,474 lb-ft) of torque can be redirected from the fast-turning rear wheel to the slow-turning one. This helps to plant drive power firmly on the road without any losses, especially when the car is being pushed hard or has less grip on one side. The Active M Differential also helps to enhance dynamic cornering. Shifting power to the wheel on the outside of the corner nips understeer in the bud without the need for any brake inputs. In order to regulate power transfer as precisely as possible, both the M xDrive all-wheel-drive system and the Active M Differential are networked with the central transverse dynamics management of the new BMW M5.

Chassis and driving experience. Exceptional poise and assurance over long distances and on the track.



The new BMW M5 continues the tradition of high-performance executive-class sedans projecting dynamism and elegance in equal measure – and offers a unique blend of extreme sporting potency and comfort. An overall vehicle concept unsurpassed in its harmony of purpose fits the established BMW M blueprint of intoxicating track performance fused with unrestricted everyday usability and long-distance capability.

The dynamic qualities of the new BMW M5 set new standards both compared to its predecessor and against its rivals. Key factors here alongside the drive system and a vehicle concept comprising a long wheelbase, wide tracks, a low centre of gravity and harmonious, almost perfect 50 : 50 weight distribution, are most prominently a body with improved rigidity and enhanced aerodynamics, and chassis technology with model-specific configuration and tuning.

The racing expertise and decades of experience amassed by BMW M GmbH in the creation of high-performance sports cars also played a role in the development of the new BMW M5. The integrated application of all drivetrain and chassis systems took place in test and tuning runs over public roads of various types, at the BMW Group's testing facilities and at the Nürburgring's Nordschleife circuit and other race tracks. The result is a well-resolved driving experience in every situation and with all setup configurations. The automated driving and parking systems included in the new BMW M5 as standard or available as options also have specialised functionality. They assist and relieve the workload on the driver in everyday use and on longer journeys, and their functions can be configured to personal preferences via the M-specific control/operation system and tailored to the performance-focused character of the new BMW M5.

Extremely stiff body structure with M-specific bracing elements.

An extensive package of precisely interlinked M-specific bracing elements focused on enhancing driving dynamics increases the longitudinal and torsional stiffness of the body structure. At the front of the car, this brings a shear panel that connects the spring strut towers with the bulkhead, as well as bespoke tower-to-frontend struts. Further

strengthening elements can be found in the centre and rear sections of the engine compartment.

In the rear section of its body, the new BMW M5 has model-specific underfloor bracing elements including a cross-bar and a shear panel as well as further stiffening elements for the load compartment. Added to which, the mountings connecting the chassis to the body and the steering to the front axle subframe also boast exceptional torsional rigidity.

Sophisticated chassis technology with bespoke tuning.

The advanced chassis technology of the new BMW M5 uses model-specific kinematics and elastokinematics to give the car exceptional dynamic potential. The design and setup of all components ensure the handling of the new M5 is characterised by precise response to movements of the steering wheel, neutral steering behaviour up to the limit and linear build-up of lateral forces across the full lateral acceleration range.

The double-wishbone front axle has optimised longitudinal and lateral rigidity, while the use of aluminium components brings about a reduction in unsprung mass. All the elements of the wheel carriers have been newly designed. The bespoke axle kinematics, extremely large castor and kingpin angles, a lowered roll centre and elastomer bearings developed specifically for the new BMW M5 enable a familiar M combination of compelling dynamic potency and finely judged comfort-focused characteristics in everyday driving and over longer journeys.

The five-link rear axle also employs components with a model-specific design to meet the highly exacting dynamic requirements of a high-performance sports car. The innovative sheet-steel construction of the forged links and wheel carriers – like the rear axle subframe, made from aluminium – reduce unsprung mass. The new track control arms, camber control arms and guide arms of the rear axle were developed specially for high longitudinal and transverse dynamics. The straight-line poise, load-change characteristics, directional stability when changing lanes and steering behaviour benefit from extremely precise wheel guidance. Exceptionally stiff mountings for the rear axle subframe, which also has very high structural rigidity, enhance the agility of the new BMW M5. The large supporting base of the rear axle subframe, which is used to damp powertrain vibrations, and model-specific elastokinematics, which

improve rolling comfort, have a particularly positive effect on comfort levels over long journeys.

Standard specification includes M Servotronic steering and Integral Active Steering.

The M Servotronic steering for the new BMW M5 gains detail upgrades and brings together the functionality of speed-sensitive power assistance and a variable steering ratio. This allows the M-specific version of the electrically assisted rack-and-pinion steering system (Electric Power Steering) to deliver exactly the right amount of steering torque in every situation. Accurate turn-in and finely judged communication of steering wheel movements enhance dynamic cornering, while also enabling effortless manoeuvring and parking at low speeds.

In familiar M style, the steering has a rigid – rather than elastic – connection with the front axle subframe to ensure optimal feedback from the road and an extremely high degree of directional accuracy. Drivers can choose from two settings for the steering assistance via the M Setup menu, allowing them to activate either a comfort-focused setup or one optimised for sporty driving.

The seventh-generation BMW M5 now also features Integral Active Steering. This system, which turns the rear wheels in either the same direction as or the opposite direction to the front wheels, depending on the car's speed, is fitted on the new high-performance sedan as standard. With a steering angle of up to 1.5° in each case, it increases comfort when manoeuvring and reduces the car's turning circle, as well as improving stability and comfort when changing lanes and boosting cornering dynamism at higher speeds. In addition, in particularly dynamic driving situations the system prompts the chassis control tech to make steering inputs to optimise directional stability and agility.

Adaptive M suspension with electronically controlled dampers.

The new BMW M5 also comes as standard with adaptive M suspension. Its electronically controlled dampers optimise road contact in all driving situations, reduce the body's tendency to roll through dynamically driven corners and enhance driving comfort in everyday conditions and on long-distance journeys. The dampers are controlled with the help of sensors that keep a constant eye on body movements, the condition of the road and steering adjustments. Plus, the vehicle load is also automatically detected and then factored in. Electromagnetically controlled valves

generate the optimum damping forces for each individual wheel in just a few milliseconds.

The adaptive M suspension optimises suppression of body vibrations at all speeds, as the highest damping forces are only ever triggered when required and for a few milliseconds. As a result, the suspension absorbs large bumps with a smoothness that keeps the body perfectly connected to the road at all times. Adjusting the damper forces as the situation demands also improves traction when pulling away and stopping power when braking sharply.

The basic damper setting can be altered by the driver in the M Setup menu. Here, the responses of the Integral Active Steering system are adjusted together with the dampers. Comfort mode brings balanced damper characteristics for relaxed driving. Selecting the Sport setting activates a firmer body setup that was fine-tuned in intensive testing on the Nürburgring's Nordschleife circuit. It is geared towards sporty driving via increased traction reserves and greater transverse dynamic capabilities. The damper setting in Sport Plus mode is designed to maximise performance on smooth race tracks. Reducing the amount of steering effort required and providing extremely direct response to direction changes fuel a dynamic driving style in both Sport and Sport Plus modes.

Integrated braking system with individually selectable settings fitted as standard; M Carbon ceramic brakes optional.

The M-specific version of the integrated braking system allows drivers of the new BMW M5 to choose from two pedal feel settings via the M Setup menu. In their own individual ways, Comfort mode and Sport mode alter the amount of pressure on the brake pedal required to slow the car. The driver can therefore choose between more comfort-oriented and particularly direct, instantaneous response when braking. In both modes and at all times, the driver enjoys superb pedal feel that is not adversely affected by factors such as wet road conditions, lateral acceleration and braking temperature.

The integrated braking system adjusts stopping power extremely quickly and precisely to the driver's requirements. To this end, it brings together the brake activation, brake booster and braking control functions within a single module. The brake pressure required is initiated using an electric actuator.

The driver's braking requests are executed by the standard-fitted M Compound brakes or optional M Carbon ceramic brakes. Both of these have six-piston fixed-calliper brakes at the front axle and single-piston floating-calliper brakes at the rear. Perforated brake discs with a diameter of 410 millimetres at the front wheels and 398 millimetres at the rear wheels are standard. The callipers are painted blue as standard or red or black as an option and carry the M logo. The M Carbon ceramic brakes stand out with their lower weight (they are around 25 kilograms lighter), even stronger braking power, a still greater ability to withstand fade, further enhanced thermal stability and extremely high resistance to wear. Other standout features of the brakes are the callipers painted in Gold metallic and 420-millimetre perforated discs for the front wheels.

M light-alloy wheels with axle-specific dimensions.

Standard specification for the new BMW M5 includes newly designed M light-alloy wheels in double-spoke design and with a bi-colour finish. Axle-specific dimensions of 20 inches at the front axle and 21 inches at the rear optimise the car's ability to transfer cornering forces to the road. The wheels are fitted with 285/40 ZR20 format tyres at the front and 295/35 ZR21 items at the rear. A larger wheel diameter than on the predecessor model and diamond polished rim edges emphasise the size of the wheels.

M light-alloy wheels in the same format in two other design and colour variants are offered on the options list. The M light-alloy wheels are fitted with high-performance tyres as standard.

Intelligent networking for enhanced dynamics, agility and precision.

The introduction of the integrated braking system for the new BMW M5 is accompanied by further updates for the DSC (Dynamic Stability Control) functions. As the braking control function is also integrated into the system's central module, corrective inputs are now applied with greater dynamism and precision. The anti-lock braking system (ABS) and Cornering Brake Control (CBC) are both enhanced by the integrated braking system, likewise the stability control system for preventing oversteer and understeer, and the Automatic Differential Brake (ADB-X), Brake Assist, Dry Braking function, Start-Off Assistant and Automatic Hold functions.

Just as the new control system enables even more pinpoint execution of braking inputs, it also brings extra precision to DSC's stabilising reductions of engine output. Meanwhile, the near-actuator wheel slip limitation tech fitted in the new BMW M5 enables particularly sensitive

acceleration control on wet, snow-covered or icy surfaces or on roads with inconsistent grip levels. The integration of this traction control system into the engine management eliminates the long signal paths to the DSC control unit. This allows corrective inputs to be applied up to ten times faster than in conventional systems. Because near-actuator wheel slip limitation nips any loss of traction in the bud, especially when accelerating hard or taking corners at speed, the DSC system has to intervene far less frequently to maintain composed and assured handling with selective applications of the brakes at individual wheels.

This function is networked with the central transverse dynamics management, as are Performance Control, the M xDrive all-wheel-drive system, the Active M Differential and the steering's control systems. This ensures that all the functions act in a coordinated manner to produce a well-resolved driving experience worthy of the M badge in all situations.

The driver can also activate M Dynamic Mode in the new BMW M5 using a button on the centre console. This mode allows a greater degree of wheel slip by pushing back the points at which the DSC system's various stabilising measures get involved – and thus enables an exceptionally sporty driving experience complete with controlled drifts through dynamically taken corners. Also selectable at the touch of a button is DSC off mode.

Driver assistance systems with individually adjustable functions.

The new BMW M5 is available either as standard or optionally with an even larger selection of driver assistance systems than was offered by its predecessor. These systems use carefully judged brake inputs and steering assistance to relieve the driver's workload in various everyday situations on the road and over longer journeys. Their functionality has also been further improved thanks to the integrated braking system and networked transverse dynamics management.

The standard-fitted systems designed to help increase comfort and safety levels include front collision warning with brake intervention, Lane Departure Warning with lane return, Cruise Control with brake function, and Speed Limit Info with no-overtaking indicator and pre-warning. The Driving Assistant including Lane Change Warning with active lane return, rear collision warning and Crossing Traffic Warning, manual Speed Limit Assist and exit warning also come as standard in the new BMW M5. One highlight of the options list is the Driving Assistant Professional, which comprises features including the Steering and Lane Control Assistant,

the Lane Change Assistant, cruise control and distance control with Stop & Go function, and automatic Speed Limit Assist.

The functions of the driver assistance system can be configured to personal preference using the M Mode button on the centre console. In the Sport setting, all interventions in the car's braking and steering systems are suspended, with the exception of those triggered by the front collision warning system and the Evasion Assistant. Instead, only warning alerts flagging up speed limits or overtaking restrictions, for example, are given. In cars with the optional M Drive Professional, Track mode – conceived for use on race tracks – can be selected. Here, all the comfort-enhancing and safety functions of the driver assistance systems are fully deactivated.

Drivers of the new BMW M5 can enjoy extensive assistance with parking and manoeuvring. The standard Parking Assistant takes over all acceleration, braking, steering and gear-change tasks when entering and exiting parking spaces. It also includes Park Distance Control Active PDC, the Reversing Assist Camera, the Reversing Assistant and the Trailer Assistant. The Panorama View, Surround View and 3D View functions offered with the optional Parking Assistant Plus provide an ideal overview of the area around the car in a variety of situations. And the optional Parking Assistant Professional also allows automated parking and manoeuvring over a distance of up to 200 metres to be controlled from outside the car by smartphone.

Exterior design. Expressive, distinctive and more puristic than ever.



With its M HYBRID drive system and performance attributes unmatched by its rivals, the new BMW M5 offers a driving experience of rare emotional power. At the same time, it embodies the combination of elite-level dynamic potency and exclusivity required for a truly authentic M feeling. The new BMW M5 signals this status with a fresh interpretation of design features familiar from M high-performance cars.

With its prominently flared wheel arches and side skirts, sculptural front apron and model-specific surface treatment around the C-pillar, the new M5 cuts an athletic figure – one that sets it apart from the regular BMW 5 Series Sedan more clearly than ever. In addition, an unusually high proportion of surfaces painted in body colour creates a puristic appearance with stylish references to the new high-performance sedan's superior dynamic talents.

Front end: a clear expression of presence and performance.

The front-end view of the new BMW M5 is shaped by a modern take on the signature BMW twin headlights and BMW kidney grille. The standard Adaptive LED Headlights bring a modern, pared-back look to the brand-typical four-eyed face. They include the cornering light function and matrix high beam with BMW Selective Beam non-dazzling High-beam Assistant. Featured here in standard M lights Shadow Line form, the headlights have black trim pieces on the inside of their housing. Added to which, blue design elements below the LED units show the light sources off to fine effect.

Bringing further impact to the imposing presence of the front end is the newly designed BMW M kidney grille, which is finished in Black high-gloss and almost entirely enclosed. A single M-typical double-bar bearing an M5 badge runs across the grille. The grille centre also houses the sensors for the driver assistance systems. In its lower section, two small, matt air intakes ensure optimum temperature control by efficiently channelling the onrushing air to the radiators. The puristic design approach here enables a fresh aesthetic, which is presented to characterful effect by the black surround and BMW Iconic Glow contour lighting fitted as standard.

Almost immediately below the BMW M kidney grille is the central lower air intake. The Black high-gloss aperture in the front apron ensures a particularly generous supply of cooling air. It is split into two by a central partition, which brings a new racing-car-inspired design cue to the M-specific front end. With their triangular contouring, the side air intakes painted in body colour accentuate the broad stance of the new BMW M5. Pronounced wheel arch extensions and the sculptural surfaces around the BMW M kidney grille, headlights and air intakes create a visually striking appearance.

Dynamic silhouette with powerful proportions and M-specific design features.

M-specific design features ensure the new BMW M5 is also immediately recognisable as a high-performance sports car when viewed from the side. It has an elegantly sporty silhouette, injected with extra dynamism by the model-specific surface treatment. The side frame of the body, including the front and rear wheel arches, has been completely redesigned for the high-performance model. This has resulted in an increase in the car's width – by 75 millimetres at the front wheels and 48 millimetres at the rear when compared to the new BMW 5 Series Sedan. This means no additional flaps are required to cover the wide tyres. The hunkered-down body and front/rear aprons extending down almost to the road surface lend additional emphasis to the high-performance sedan's physically imposing proportions.

The car's lines also emphasise the athletic surfacing of the wheel arches. A modified character line above the flush door handles brings an extra streak of agility to the side view; it fades out earlier than on the BMW 5 Series Sedan, accentuating the powerful surface above the rear wheel. Side skirts painted in body colour round off the car's body in muscular style at its lowest edge to the road, an additional, light-refracting edge strengthening the slim and athletic overall impression. The both aerodynamically and aeroacoustically optimised M exterior mirror caps can be specified as an option in carbon fibre.

The optional M Carbon roof lowers the car's centre of gravity and gives the silhouette of the new BMW M5 an even lower-slung look. The embossed M5 logo in the rearmost section of the side window surround with standard M High-gloss Shadow Line trim brings an extra touch of individuality. The matt recessing stands out clearly from the surface of the Hofmeister kink.

Broad, powerful rear end with monolithic surface treatment.

Prominently flared wheel arches also determine the character of the rear end. They accentuate the width and muscular stature of the new BMW M5, an impression reinforced by the vertical reflectors positioned at the outer edges of the rear. As at the front end, generously sized surfaces give the rear a monolithic appearance.

An M rear spoiler and a two-section diffuser are on hand to optimise airflow around the body. In addition, the familiar M twin exhaust tailpipes – here in Black Chrome – are integrated into the rear apron. The centre of the diffuser has a vertical divider. This design feature adapted from racing car design references the split in the centre of the front apron.

Expressive body colours; BMW Individual special paint finishes also available from launch.

Customers can choose from ten exterior paint shades for their new BMW M5. These include the exclusive M variants Isle of Man Green metallic and Marina Blue Bay metallic and the BMW Individual paint finishes Storm Bay metallic and Frozen Deep Grey metallic. A selection of BMW Individual special paint finishes will also be offered from the launch of the new high-performance sedan. Up to 150 of these particularly exclusive body shades will be available.

Interior design and equipment. Progressive sporting appeal with an aura of exclusivity.



The multi-layered character of the new BMW M5 – spanning track-oriented dynamics, locally emission-free cruising and the ability to cover long distances with consummate ease – is also reflected in its interior. Here, a cockpit designed for a focused performance experience and the M-specific operating concept for adapting the vehicle setup to personal preferences come together with an exclusive premium ambience featuring modern design elements, high-quality materials and luxurious equipment features.

A newly designed M leather steering wheel, the standard M multifunction seats and the BMW Curved Display convey a sense of cutting-edge sporting presence. The ergonomically optimal arrangement and design of the controls help the driver to focus on the task of piloting the car, as do the anthracite-coloured headliner, M pedals and M driver's footrest.

The M-specific interior illumination – including ambient lighting and the BMW Interaction Bar – creates an exclusive atmosphere across all five seats. Other highlights of the standard equipment roster that help to increase wellbeing on longer journeys in the new BMW M5 include BMW Individual Merino leather trim with extended features, a panoramic glass sunroof and the Bowers & Wilkins Surround Sound System.

New M leather steering wheel, centre console with M-specific control panel.

A newly designed M leather steering wheel in three-spoke design with a flat-bottomed rim, decorative stitching in BMW M GmbH colours and a red centre marker in the 12-o'clock position brings extra intensity to the racing car feeling of the cockpit in the new BMW M5. The horizontal spokes of the new steering wheel have narrow cut-outs and particularly classy multifunction buttons. Steering wheel heating can be ordered as an option.

The M buttons customers can use to call up their chosen configuration for the vehicle setup are trapezoidal in design, taking their cue from the contours of the M-specific displays. They are finished in M Red metallic and have locator lighting. The gearshift paddles on the steering wheel also have a new design. Their surfaces are finished in Black high-gloss,

while the cut-out plus and minus symbols have red contour lines. The actuation surfaces have a red rubber coating, giving them a pronounced non-slip quality to the touch. In cars specified with the optional M Drive Professional, the left-hand paddle is marked BOOST.

The control panel on the centre console houses the red start/stop button, the newly designed gear selector lever, the BMW Controller, the roller control for the audio and the M-specific buttons for the setup options. The BMW Controller has an M logo in "outline" design. Like the Black high-gloss gear selector lever and the audio system's roller, it also stands out from the control panel's background shade with the accent colour Dark Silver. The gear selection display uses the familiar M typography.

Individual vehicle configuration with the Setup button.

The control panel also has special buttons – in the signature style of high-performance cars from BMW M GmbH – for selecting the DSC system settings, the M HYBRID drive system's operating mode, the M Mode for the displays and driver assistance systems, and the overall setup of the new M5. Pressing the Setup button activates the M Setup menu, which is then clearly shown in the control display. Here, drivers can use touch control to select their desired settings for the drive system, transmission, suspension, steering, braking system and M xDrive, as well as for the intensity of energy recuperation.

Users can choose from three modes each for the drive system, the Drivelogic function of the eight-speed M Steptronic transmission, the damper response, the all-wheel-drive system, and energy recuperation on the overrun and under braking. These settings and the two available settings for both the steering and brake pedal feel allow drivers to create a character profile for their car that reflects their preferred choice of sports performance or finely balanced comfort.

Two individually configurable setup variants can be stored permanently together with the preferred settings for the M HYBRID system's operating mode, drive sound and DSC system. The desired overall vehicle setup can then be called up at any time by pressing one of the two M buttons on the steering wheel.

M multifunction seats in new Metallic Merino leather trim variant enhance both the race-car feeling and comfort over longer journeys.

Occupants in both the front and rear of the car can enjoy a noticeably higher level of seating comfort than that offered by the predecessor

model. The M multifunction seats for the driver and front passenger fitted as standard in the new BMW M5 offer a wide range of electric adjustment and a memory function. The fore/aft position, height and tilt of the seats can be adjusted at the press of a button, as can the length of their thigh supports, the width and angle of their backrests, the lumbar support provided and the height of the head restraints. The integral head restraints with illuminated model lettering retract back down to their lowest position when the occupants are getting out of the car. Active seat ventilation for the driver and front passenger and seat heating for the outer rear seats are available as options.

Customers can adapt the interior colour scheme of their new BMW M5 to their personal tastes thanks to four variants of the BMW Merino leather trim with extended features. The surfaces of the interior and seats come in Black as standard. The options list, meanwhile, contains three bi-colour variants, in which the head restraints and shoulder areas of the seats and the upper sections of the door panel trim come in Anthracite Pearl-effect and the other surfaces are in the colours Silverstone, Red or Kyalami. The darker colour for the upper area of the interior helps to maintain focus on the task of driving, while the lighter accents ensure a classy and inviting overall atmosphere.

BMW Individual Metallic Merino leather trim – specially developed for the new BMW M5 – is used for the Anthracite Pearl-effect surfaces for the first time. It creates a particularly striking effect for the head and shoulder areas of the M multifunction seats and brings an exclusive and at the same time technical flavour to the interior with surfaces that vary their look according to the incidence of light. In addition, BMW Individual Extended Merino leather trim in the bi-colour variants Black/Dark Violet and Taupe Grey/Deep Lagoon Pearl-effect will also be available as an option from spring 2025. With these trim variants, the head and shoulder areas in contrasting colour are accentuated even more boldly by an exclusive surface treatment. This is made possible by a refinement process called High Definition Design (HDD), which BMW is the world's first carmaker to use in one of its products. HDD creates a unique, three-dimensional ornamentation in the leather, featuring extremely clear contours and seamless transitions between areas higher up and those lower down. Combined with the lustre of the Metallic Merino leather also used for these variants, the HDD-generated structure comes particularly prominently to the fore.

Model-specific interior lighting, BMW Interaction Bar and standard ambient lighting.

Alongside the lighting for the smartphone tray, centre armrest and handle recess in the door panel trim, the model-specific interior lighting also comprises a bespoke Welcome Animation with light signals in the colours of BMW M GmbH. Also playing its part in creating the exclusive on-board ambience is the BMW Interaction Bar extending across the instrument panel and front door panel trim. Integrated into the instrument panel with a crystalline glass look, this combined light-bar/toolbar includes control surfaces for the ventilation settings, rear window heating and hazard warning lights.

The likewise standard ambient lighting provides atmospheric illumination for the footwells, the door pockets, the cup holders, the interior trim elements, the audio system's midrange speakers integrated into the door panel trim and the backs of the front seats. The colours used for the light effects vary depending on whether the M Mode Road or Sport is selected and on the colour chosen by the driver. In the optional Track mode, the lighting is fully switched off.

The new BMW M5 comes as standard with interior trim elements in Aluminium Rhombicle Dark Silver. The options list includes M Carbon Fibre with high-gloss silver threads and BMW Individual Dark Oak high-gloss fine-wood trim. All the interior trim variants are combined with an M accent in Dark Silver.

Luxurious standard equipment includes a Bowers & Wilkins Surround Sound System and a panoramic glass sunroof.

The exclusive status of the new BMW M5 is underlined by the array of luxurious equipment features fitted as standard to enhance comfort and driving pleasure. Highlights here include a Bowers & Wilkins Surround Sound System with 18 speakers and 655-watt amplifier. A digital seven-channel amplifier treats the driver and passengers in all seats to a soundscape of beguiling clarity. Illuminated metal covers for the door-mounted speakers underscore the exclusive character of the sound system.

Standard specification for the new BMW M5 also includes an alarm system, an auxiliary climate control system and a tray for wireless charging of compatible smartphones. Likewise standard is a panoramic glass sunroof, which is designed as a body-mounted module. It extends in a single section from just behind the windscreen almost as far as the rear window and floods the interior with light. Measuring 841 millimetres

in length and 818 millimetres in width, its view-through area is almost 90 per cent larger than that of the predecessor model's tilt/slide sunroof. A roller blind in the same colour as the headliner is on hand to provide interior shading.

Alternatively, customers can specify their new BMW M5 with the optional M Carbon roof, which reduces vehicle weight by more than 30 kilograms compared with models with the panoramic glass sunroof. The M Carbon roof is part of the M Carbon exterior package, which also includes exterior mirror caps and a rear spoiler made from the same lightweight, high-tech material.

In addition, model-specific BMW M Performance Parts will be offered from launch for the new BMW M5. Among the items available will be M Performance forged light-alloy wheels and other exterior components made from carbon-fibre reinforced plastic.

Modern functionality for everyday use and longer journeys.

The standout performance attributes of the new BMW M5 are paired with a host of other equipment features that elevate levels of comfort and functionality in everyday driving and on longer journeys to a new level. The M5 comes as standard with the Professional (Mode 3) charging cable for topping up the high-voltage battery at public charging stations. The likewise standard four-zone automatic climate control enables separate control of temperature and ventilation for the driver's and front passenger side of the car, as well as for the left- and right-hand side of the rear compartment. Options include the Travel & Comfort System, sun protection glazing and roller sunblinds for the rear. In European markets, i-Size child safety seat fasteners will be integrated into the outer rear seats.

The backrests of the rear seats can be split 40:20:40 and folded down as standard to allow larger items of luggage, ski bags, golf bags and long sports equipment to be loaded from the boot area through to the rear compartment. With all the seats in use, the load compartment of the new BMW M5 offers capacity of 466 litres.

Automatic tailgate operation and Comfort Access are both part of standard specification. This makes it possible to open and close the boot lid hands-free. A trailer coupling that extends and retracts again electrically is available as an option. The maximum trailer load of the new BMW M5 is 2,000 kilograms.

Display and control/operation system, connectivity. New BMW iDrive and innovative digital services with BMW Operating System 8.5.



The BMW Curved Display in the cockpit of the new BMW M5 provides customers with the ideal platform to select their desired settings from the M Setup menu quickly and intuitively by touch on the control display. It also hosts the latest upgrade of BMW iDrive. The new display and control/operation is based on BMW Operating System 8.5, also offers M-specific readouts for all other vehicle functions such as navigation, communications and climate control, and enables use of a significantly increased selection of innovative digital services.

The latest generation of BMW iDrive is geared squarely to operation using a touchscreen and natural speech. As well as the control display with touch control and the BMW Intelligent Personal Assistant, it also comprises the multifunction buttons on the steering wheel, the BMW Controller on the centre console and the BMW Head-Up Display, which projects relevant driving information directly into the driver's field of vision on the windscreen, likewise with M-specific graphics.

The new generation of BMW iDrive also brings additional skills for the BMW Intelligent Personal Assistant. Naturally formulated spoken instructions can now be used in the new BMW M5 to e.g. adjust the seat position, start Park Assist or activate BMW IconicSounds Electric.

M-specific readouts and graphics on the BMW Curved Display.

Inside the cockpit of the new BMW M5, the BMW Curved Display impresses with modern graphics, dynamic light effects and expressive colour worlds. The fully digital screen grouping is made up of a 12.3-inch information display and a 14.9-inch control display.

The M-specific display of relevant driving content on the information display feeds into the focused and performance-centric driving experience. To this end, the vehicle speed is shown on the left of the display both as a figure and as a digital scale, along with further information such as the fuel gauge and the status of the driver assistance systems. The right-hand section indicates engine speed, current gear, the transmission's Drivelogic setting, as well as the charge level of the high-voltage battery and the setup selected using the M button on the steering wheel. The familiar M Shift Lights appear at the

top of the information display, while an indicator bar along the lower edge notifies the driver of the status of the driving stability systems, M xDrive and traction control, among other things.

The fully digital screen grouping provides a clear overview of the various menu options in the form of widgets on the control display's home screen, which can be arranged to suit personal preferences. A number of special widgets are also available in the new BMW M5 containing information on the current vehicle setup, as well as tyre pressure and temperature. Users can then return to the home screen from any of the submenus with a tap of the finger on the home icon at the lower edge of the control display. Icons for direct access to the climate control, audio system, communications and All Apps menus can also now be found here.

BMW Head-Up Display with M-specific readouts and BMW Maps navigation system as standard.

The BMW Head-Up Display is included with the standard-fitted BMW Live cockpit Professional in the new BMW M5. It projects information relevant to driving – including a multi-coloured rpm dial, Shift Lights and M View – onto the windscreen, again in an M-specific style.

The cloud-based BMW Maps navigation system is also part of standard equipment. It offers extremely fast and dynamic route calculation, based on precise real-time traffic data transmitted at short intervals. BMW Maps also enables charging-optimised route planning on longer journeys. If required, detailed information can be provided for the charging stops en route, for example on charging point availability, costs and the infrastructure in the vicinity of the charging station.

The Augmented View function can be added to the navigation system's map view as standard. Here, a live video stream from the driver's perspective can be shown on either the control or information display and augmented by supplementary information that matches the context.

Video streaming and AirConsole games on the control display.

BMW Operating System 8.5 offers a wide range of digital content for information and entertainment, shorter function update cycles and improved accessibility to a host of specific online services. The driver and passengers in the new BMW M5 can make use of video streaming offerings to enjoy a wide range of entertainment on the control display when the car is stationary. Available alongside YouTube is the video app (DTS AutoStage Video Service powered by TiVo™), which brings an

ever-expanding range of content, such as news, live and on-demand streaming.

Another way of passing the time while waiting for the vehicle to recharge or be refuelled, for example, is a new form of in-car gaming unique in the automotive sector – courtesy of the AirConsole* platform. The driver and passengers can play casual games in single-player or multi-player mode when the car is stationary. They only need their smartphone, which will serve as a controller, and the gaming experience on the BMW Curved Display is ready to go. The continuously growing portfolio of playable titles includes racing, sports and quiz games.

Optimal connectivity: Personal eSIM, BMW ID, My BMW App, 5G mobile communications and Remote Software Upgrades.

Standard specification for the new BMW M5 also includes optimised smartphone integration using Apple CarPlay® and Android Auto™. Plus, the Personal eSIM allows the customer to use the communication and connectivity functions covered by their mobile contract from their car with ease. The new BMW M5 is essentially turned into another digital and connected device in the customer's ecosystem. The Personal eSIM is not linked just to the car, but to the user's BMW ID.

Personalising the user experience with the BMW ID is particularly straightforward in the new BMW M5. All that's required is an initial sign-in from the customer inside the car using a smartphone and a QR code. Their personal profile is then imported and synchronisable settings are loaded. The vehicle is also added to the My BMW App in the relevant profile without further input from the customer. In selected countries, the BMW ID opens the door to automatic payment of parking fees from the comfort of the vehicle. This facility uses the customer's credit card details, which can be stored via the My BMW App.

The My BMW App provides information e.g. on the vehicle's status, its remaining range and any servicing and maintenance requirements. It also enables remote use of functions such as locating the vehicle, locking/unlocking the doors or monitoring the car's immediate vicinity and interior with Remote View. The My BMW App can also be used to control charging processes.

A 5G-compatible antenna system optimises reception for making telephone calls during a journey and to enable the data transfer required

* Availability by country of AirConsole for the BMW M5:
Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, South Korea, Malta, Netherlands, Norway, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, USA

for in-car gaming, video streaming and other online-based services. Up to ten devices can connect to the internet at any one time via a mobile hotspot.

The Remote Software Upgrades function keeps the new BMW M5 right up to date with the latest software at all times. Upgrades may include free quality improvements, updates or even additional features (availability depends on country, vehicle model, equipment and vehicle status). Plus, the BMW ConnectedDrive Store allows customers to test selected functions free of charge for a pre-defined time, after which they can add them from the Store for a specific period.

This optimised connectivity and innovative digital technology also underpin the new customer service Proactive Care. Taking centre stage here is its ability to recognise the vehicle's service requirements using artificial intelligence and proactively offer the customer solutions, which are then actioned via the most appropriate channel in each case, depending on urgency.

BMW Digital Key Plus, M-specific welcome scenarios.

The My BMW App can also be used to set up the BMW Digital Key Plus, which is available for the Apple iPhone and Apple Watch and compatible Android smartphones. The BMW Digital Key Plus enables customers to lock and unlock their new BMW M5 with a smartphone or smartwatch by means of security-enhanced ultra-wideband (UWB) radio technology – dispensing with the need for a conventional car key. The user does not need to take their smartphone out of their pocket as, if desired, the car will unlock itself as they approach.

The new BMW M5 features as standard a welcome scenario that consists of an orchestrated activation of the exterior and interior lights. It concludes with a dynamic Welcome Light Carpet with M-specific graphics projected from the vehicle sill onto the ground just outside the doors. The scenario is triggered as the driver approaches the car, and the car key or a smartphone or smartwatch with BMW Digital Key Plus is located. The M-specific Welcome Animation in the interior includes a display of the signature M colours in the form of a chaser light running from the driver's side to the front-passenger side. The Goodbye Animation involves a gradual dimming of the interior lighting.