

# The all-new BMW M4 CSL. Contents.



## Model variant:

**BMW M4 CSL:** Six-cylinder in-line engine with M TwinPower Turbo technology, eight-speed M Steptronic transmission, rear-wheel drive, 405 kW/550 hp at 6,250 rpm, 650 Nm (479 lb-ft) at 2,750 – 5,950 rpm, acceleration: [0 – 100 km/h / 62 mph]: 3.7 seconds, [0 – 200 km/h / 124 mph]: 10.7 seconds, top speed: 307 km/h / 191 mph (electronically governed), lap of Nürburgring-Nordschleife: 7 min. 20.207 sec. (20.8 km [12.9 miles]) / 7 min. 15.677 sec. (20.6 km [12.8 miles]), fuel consumption combined: 10.1 – 9.9 l/100 km (28.0 – 28.5 mpg imp); CO<sub>2</sub> emissions combined: 227 – 224 g/km in the WLTP cycle; figures in the NEDC cycle: –.

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# Vehicle concept and design.

## Intelligent lightweight design, purity of purpose.

A legend is reborn. As its 50th birthday celebrations gather pace, BMW M GmbH is unveiling a special-edition car based on its most successful ever high-performance model. The new BMW M4 CSL fuses old-school racing passion with innovative technology to create an inimitable performance experience. Its standalone character profile is rooted in two core features: a power hike of 30 kW/40 hp over the current BMW M4 Competition Coupé (fuel consumption combined: 9.8 l/100 km [28.8 mpg imp]; CO<sub>2</sub> emissions combined: 224 – 223 g/km in the WLTP cycle; figures in the NEDC cycle: –) to 405 kW/550 hp and a 100-kilogram reduction in weight.

The new BMW M4 CSL represents a highly concentrated showcase for the racing craft of BMW M GmbH and its expertise in powertrain and chassis development and lightweight design. For example, the company can call on many years of experience in working with carbon-fibre-reinforced plastic (CFRP) for body, chassis and interior components. The M engineers have managed to restrict the special edition's DIN kerb weight to 1,625 kilograms. A standout power-to-weight ratio of 2.95 kilograms per horsepower (4.01 kg/kW) provides the ideal platform for a dynamically masterful driving experience. The new BMW M4 CSL can sprint from 0 to 100 km/h (62 mph) in 3.7 seconds, while the top speed is an electronically limited 307 km/h (191 mph).

With its next-level power and intelligent lightweight design, two-seater configuration, model-specific chassis upgrades and equipment features selected specially for the job at hand, the new BMW M4 CSL has track driving as its *raison d'être*. Never before has the overall vehicle concept of a production model been so close to that of the related BMW M GmbH racer. The genes the new BMW M4 CSL shares with its competition-spec sibling, the BMW M4 GT3, are also reflected in its performance attributes. In a record-breaking run on the Nürburgring's Nordschleife circuit, which represents the ultimate yardstick for brand-typical dynamics, agility and handling precision for all BMW M cars, it posted an official and notarised lap time of 7 min. 20.207 sec. for the 20.832-kilometre / 12.943-mile circuit (the complete lap) – the best figures ever for a series-produced BMW car. On the version of the track traditionally used for comparison purposes – which is 20.600 kilometres / 12.8 miles

in length (it doesn't include the straight at section T13) – it recorded 7 min. 15.677 sec. The fastest ever road-legal BMW is therefore also the new Nürburgring lap record holder in the midsize segment.

### **The next chapter in an enthralling story begins in the anniversary year of BMW M.**

Lap times aside, the new BMW M4 CSL also offers the everyday usability for which high-performance sports cars from BMW M are renowned. This means drivers can enjoy an intense racing-car feeling on the road as well as on the track. The M4 CSL is therefore following in the tyre tracks of illustrious special-edition models from earlier generations of the BMW M3/M4. Like the legendary BMW M3 CSL of 2003 and the BMW M4 GTS unveiled in 2016, the new special edition from BMW M GmbH delivers a driving experience as bewitching as it is exclusive.

The new BMW M4 CSL continues the tradition of special-edition models displaying the racing expertise of BMW M GmbH with an extra degree of richness and intensity. For the BMW Group subsidiary founded in 1972 as BMW Motorsport GmbH, the arrival of the M4 CSL represents one of the highlights of its 50th anniversary year. The new BMW M4 CSL will make its first public appearance worldwide at the Concorso d'Eleganza Villa d'Este (20 – 22 May 2022). Its Germany premiere will take place on 28 May 2022 at the 24-hour race at the Nürburgring, followed by its British debut at the Goodwood Festival of Speed on 23 – 26 June 2022.

Production of the new BMW M4 CSL will begin – in a strictly limited run of 1,000 examples – at BMW Group Plant Dingolfing in July 2022. All other variants of the BMW M4 are also made at Dingolfing. The most important sales markets for the special-edition model will be the USA, Germany and Great Britain.

### **Fundamental and detailed: intelligent lightweight design in the BMW M4 CSL.**

The key factors in the standout performance attributes of the new BMW M4 CSL can be found in its name. Lightweight design has played a central role at BMW M GmbH from day one. In 1973 the BMW 3.0 CSL developed by BMW Motorsport GmbH won the European Touring Car Championship at the first attempt – thanks in no small measure to its commitment to cutting the weight of its series-produced donor model. Today, the CSL designation stands for "Competition, Sport, Lightweight" and marks out high-performance models with particularly high output, rigorously reduced weight and a character honed purposefully for driving on the track.

Intelligent lightweight design was a fundamental strategy in the development of the new BMW M4 CSL, one that was applied on a detailed level. A focus on the attributes considered essential for an elite sports car was accompanied by the selective use of materials which match, if not exceed, the standards of conventional options in terms of design, functionality, safety and durability – but at the same time add significantly less weight to the car.

For example, conventional components for the exterior and interior, powertrain and chassis were replaced with particularly lightweight model-specific alternatives. Fitting M Carbon full bucket seats reduced weight by 24 kilograms on its own, while 21 kilograms were saved by removing the rear seats and seat belts, integrating a partition and making the associated modifications to the luggage compartment. Chassis changes, including the addition of extra-lightweight M Carbon ceramic brakes and special light-alloy wheels, springs and struts, reduced weight by around another 21 kilograms. And paring back the amount of soundproofing plus switching to ultra-lightweight sound insulation saved around 15 kilograms. The use of CFRP components on the outside and inside of the car deducts some eleven kilograms. And a titanium rear silencer cuts more than four kilograms from the weight of the exhaust system. Detail modifications shave another four kilograms from areas including the BMW kidney grille, rear lights, floor mats and automatic climate control.

### **Roof, bonnet and boot lid in carbon fibre.**

The BMW M4 Competition Coupé already features as standard a roof made from CFRP. The use of this lightweight yet hugely robust high-tech material at the highest point of the body not only cuts the car's overall weight, it also lowers its centre of gravity, which in turn enhances agility and cornering dynamics. The bespoke body of the BMW M4 CSL also includes the use of carbon fibre for the bonnet and boot lid.

The CFRP bonnet is approximately 1.2 kilograms lighter than the BMW M4 Competition Coupé's aluminium item. Its carbon-fibre structure is clearly revealed by two chiselled indents extending in line with the BMW kidney grille elements to the edge of the bonnet as it approaches the windscreen. The surfaces of the indents – which are not painted in the body colour – are highlighted additionally by red outlines. Red accent lines also bring extra visual emphasis to the two fins on the CFRP roof of the new BMW M4 CSL and the contours of its powerfully extended side sills.

The red accents and exposed carbon-fibre surfaces team up to most prominent effect with the exclusive Frozen Brooklyn Grey metallic exterior paint finish to create a high-impact visual proposition. Alternatively, customers can also specify their new BMW M4 CSL in the exterior paint shades Alpine White solid or Sapphire Black metallic. Classical "BMW Motorsport" emblems for the bonnet, boot lid and wheel hub caps are also available as an option to mark the 50th anniversary of BMW M GmbH. Their design recalls the blue/purple/red logo first seen on the BMW Motorsport GmbH racing cars in 1973.

Also in CFRP are the splitters fitted to the lower edge of the front apron to generate additional downforce and the inserts in the air curtains at its outer edges. The splitters likewise have red accents and "CSL" lettering. The model-specific, weight-minimised BMW kidney grille has a stripped-back design for extra purity of purpose and features red contour lines and "M4 CSL" badging. The grille, like the side air inlets, has wide open spaces, optimising air inflow to the radiators positioned behind it and to the brakes. The central air inlet of the new BMW M4 CSL is subdivided by just two horizontal kidney grille bars in addition to the bumper element. This bespoke construction brings a weight reduction of 0.5 kilograms over the kidney grille on the BMW M4 Competition Coupé.

The CFRP boot lid of the BMW M4 CSL provides a 6.7-kilogram weight saving over the BMW M4 Competition Coupé. The carbon-fibre structure of this section is clearly visible on its inner side through the unpainted clearcoat sealing. The boot lid also sports an integral and extremely pronounced spoiler. This eye-catching aero element references a similar design feature of the 2003 BMW M3 CSL – and likewise noticeably increases rear-axle downforce in the latest-generation lightweight sports car in dynamically exacting driving situations. The diffuser integrated into the rear apron of the new BMW M4 CSL and the exterior mirror caps are also made from CFRP.

**BMW Laserlight: yellow headlights optional, innovative rear lights fitted as standard.**

The optionally available BMW Laserlight headlights bring a visually arresting touch of the race track to the front end of the new BMW M4 CSL. Both in the welcome effect triggered when unlocking the doors and when the low and high beam are switched on, these headlights illuminate in yellow rather than white, bringing to mind the look of successful GT racing cars.

The rear lights of the new BMW M4 CSL are equipped as standard with innovative technology making its debut in a series-produced car. All of the light functions use LED units. In addition, the glass covers have intricate light threads woven into them. These are illuminated using laser technology, bringing a vibrant structure to the surface of the rear lights and creating a highly distinctive light signature that, during the hours of darkness, is recognisable from a long distance. The arrangement of the three threads, which run parallel to one another across the inner section of the light units and overlap each other in the outer area, creates a visually stunning interpretation of the hallmark BMW L-shaped rear light contour. Additionally, the illuminated "BMW Laser" lettering on the light covers hints at the innovative light technology below the surface.

The model badges on the rear, front side panels and BMW kidney grille also have a new design. With their black surfaces and red outline, they identify the car's sporting potency with visually understated style.

**The ideal combination of dynamics and lightweight design: strut braces in the engine compartment, titanium rear silencer.**

In the engine compartment, a composition of front-end strut braces developed entirely from scratch takes the body rigidity of the new BMW M4 CSL up another level. This cast aluminium element connects the individual spring strut towers both with one another and with the front end. Using numerical models, the geometry of the individual strut braces has been adapted precisely to the forces exerted in different driving situations. In this way, agility and steering precision can be optimised to maximum effect while minimising materials use and weight.

The exhaust system of the new BMW M4 CSL has a rear silencer made from titanium, which cuts the weight of a conventional steel equivalent by 4.3 kilograms. The M-typical pair of twin tailpipes have matt black trim with a stripe-patterned perforation on its inner surface. The model-specific exhaust system comes with electronically controlled flaps, its emotionally stirring soundtrack in the hallmark style of the high-performance models from BMW M GmbH generating an intense racing aura both outside and inside the car.

**Model-specific light-alloy wheels and M Carbon ceramic brakes as standard.**

The forged M light-alloy wheels in cross-spoke design have been designed exclusively for the new BMW M4 CSL. Minimised weight and a distinctive appearance are the standout characteristics of the 19-inch (front) and 20-inch (rear) matt black wheels. The precise arrangement of

the super-slim spokes gives the wheels exceptional rigidity. Their weight-optimised design also helps to reduce unsprung mass, further enhancing the agile driving characteristics of the special-edition model.

The new BMW M4 CSL is fitted as standard with M Carbon ceramic brakes. Their red-painted callipers team up with 400-millimetre-diameter, 38-millimetre-thick discs for the front wheels and 380-millimetre-diameter, 28-millimetre-thick discs at the rear. The significantly reduced unsprung mass of the M Carbon ceramic brakes provides a further boost to the car's agility and dynamic performance. They are around 14.3 kilograms lighter on the scales than the M Compound brakes fitted as standard on the BMW M4 Competition Coupé.

### **Two very special seats.**

The interior of the new BMW M4 CSL is also geared firmly to maximum performance and an emotionally engaging driving experience. The lightweight coupé only has seats for the driver and one passenger alongside them – but these are no normal seats. The M Carbon full bucket seats were developed exclusively for the BMW M4 CSL with the focus firmly on the demands of track driving. Their self-supporting carbon-fibre structure and purposeful rejection of comfort features for everyday journeys or longer trips – such as seat heating and lumbar support – allowed weight to be reduced by 24 kilograms compared with the standard seats fitted in the BMW M4 Competition Coupé.

With their pronounced contours, the M Carbon full bucket seats offer an extremely high level of lateral support through dynamically taken corners and an integrated side airbag. Cut-outs in the side bolsters, back area and below the head restraints enable the use and individual adjustment of a six-point harness. The seats have a fixed backrest angle. The seat height can only be adjusted in a workshop using a three-stage screw linkage. The forward/back adjustments can be made manually using a lever on the front edge of the seat. The head restraints can be disassembled for track use when the driver and, if applicable, the co-driver are wearing a helmet.

The seating surfaces and backrests of the M Carbon full bucket seats are trimmed in black leather. The outer surfaces of the backrests and head restraints have red Alcantara inserts. Contrast stitching in the colours of BMW M GmbH adorn both the seat bolsters and the seat belts.

M Carbon bucket seats with extended comfort-enhancing properties are available as a no-cost option for the new BMW M4 CSL. These seats are 9.6 kilograms lighter than the standard-fit seats in the BMW M4 Competition Coupé. The M Carbon bucket seats also have head restraints that can be dismantled when super-fast laps of the track are the name of the game. These optional seats combine racing functionality and lightweight design with a noticeably higher level of comfort over long journeys, notably through features such as electrically operated adjustment, seat heating and an Easy-Entry function allowing easy access to the rear.

The stowage area behind the seats for the driver and co-driver provides space for two helmet storage compartments. Removing the rear seat bench cuts weight by around 21 kilograms.

**Carbon-fibre centre console: reduced weight, unrestricted functionality.**

Adherence to the principle of intelligent lightweight design is also evident more widely inside the cockpit. The centre console of the new BMW M4 CSL is made entirely from CFRP. The material's distinctive structure is clearly recognisable in the surfaces of the control panel around the gear selector, the iDrive Controller and the buttons for activating various vehicle settings and functions. The use of carbon fibre more than halves the weight of the centre console in conventional guise, which equates to a saving of around four kilograms. At the same time, it offers a familiar range of functionality, with features including an armrest with leather surface and a smartphone tray enabling wireless charging of compatible mobile phones.

The new special-edition model shares the BMW M4 Competition Coupé's signature interior design, which is focused entirely on a concentrated performance experience. M-specific displays, ergonomically optimised controls with red accents, the M-specific gear selector and the anthracite-coloured headliner create an intensive racing aura even before the car has turned a wheel. Putting the finishing touches to the racing-car-style cockpit ambience of the new BMW M4 CSL are the Carbon Fibre interior trim strip (also standard) and "CSL" badging below the head restraints, on the centre console and on the rear panel. The first touch of the M Alcantara steering wheel, another standard feature of the new BMW M4 CSL, stokes the appetite for ultra-dynamic driving. Indeed, the grippy surface of the steering wheel rim, a red centre marker in the 12 o'clock position, carbon-fibre inlays on the three spokes and CFRP



shift paddles create a genuine race-car feel in terms of both visuals and functionality.

## **Powertrain.**

# **Modified six-cylinder in-line engine, eight-speed M Steptronic transmission and rear-wheel drive for the ultimate performance experience.**

A base engine designed using racing expertise, high-revving characteristics and latest-generation M TwinPower Turbo technology make the six-cylinder in-line power unit from the BMW M4 Competition Coupé the perfect starting point for the high-performance engine in the most powerful road-legal M4 variant to date. Detail modifications for the new BMW M4 CSL give maximum output of 405 kW/550 hp when the rev counter hits 6,250 rpm – an increase of 30 kW/40 hp over the BMW M4 Competition Coupé. Peak torque of 650 Nm (479 lb-ft) is on tap from just 2,750 rpm and sustained all the way up to 5,950 rpm. As a result, the unmistakable performance attributes of BMW M models – instantaneous response to every movement of the accelerator, an enthralling appetite for revs and relentless power delivery into the upper echelons of the rev range – take to the stage in even more heightened form. A bespoke engine mounting and exceptionally rigorous application of lightweight design principles ensure the new BMW M4 CSL achieves an even bigger gain in dynamic prowess than this extra dose of M power would suggest. The result is an unbeatable performance experience.

The engineers at BMW M GmbH were able to draw on the very latest motor racing know-how to upgrade the six-cylinder in-line engine specifically for track use. This is because the drive unit powering the new BMW M4 GT3 endurance racing car is also directly derived from the engine fitted in previous production models, which offered sufficient potential for a major hike in power without having to make any concessions in terms of stability or durability. Power was boosted by increasing charge pressure at the same time as making model-specific tweaks to the engine management. What is more, this exceptionally potent version of the 3.0-litre engine is also extremely fuel efficient, which allows drivers to put in extra laps between refuelling stops on the track. The WLTP-calculated fuel consumption of the M4 CSL is 10.1 – 9.9 litres per 100 kilometres [28.0 – 28.5 mpg imp] in day-to-day motoring and CO<sub>2</sub> emissions are 227 – 224 grams per kilometre (figures in the NEDC cycle: –).

### **A design principle focused on extracting maximum power.**

The design principle for the straight-six engine has been adapted from racing car machinery and is focused squarely on high rev speeds and

maximum power delivery. This approach is the reason the production and racing car engines share so many similarities and is also responsible for the increase in power output for the new BMW M4 CSL. The crankcase's sleeve-free, closed-deck construction helps to make it extremely rigid, paving the way for very high combustion pressures that optimise power output. The power unit's free-revving performance is aided by a twin-wire-arc-sprayed iron coating for the cylinder bores. The forged lightweight crankshaft also feeds the engine's high-revving instincts, while its torsional resistance enables it to handle extremely high levels of torque.

The M-specific components also include the cylinder head with 3D-printed core. This additive manufacturing process enables geometric forms to be created that are beyond the capability of conventional metal casting techniques. As a result, the coolant duct routing could be optimised while also reducing weight.

Two mono-scroll turbochargers supply compressed air to cylinders 1 – 3 and 4 – 6 respectively. The turbocharger's power output is further enhanced by the use of an indirect intercooler supplied by a low-temperature circuit and specially designed compressors. The system fitted under the bonnet of the new BMW M4 CSL operates at a maximum charge pressure carefully upped from 1.7 to 2.1 bar to bring about the increase in power over the BMW M4 Competition Coupé. Engine management has been modified accordingly to guarantee the constant power delivery up to the top end of the rev range that has come to be expected of BMW M models.

Operating at a maximum pressure of 350 bar, the High Precision Injection system ensures efficient mixture preparation and clean combustion. VALVETRONIC variable valve timing and Double-VANOS fully variable camshaft timing likewise form part of the M TwinPower Turbo technology. The straight-six engine is also fitted with a petrol particulate filter to improve its emissions performance.

**Exhaust system with titanium rear silencer and distinctive soundtrack both inside and outside the car.**

The optimum routing of the dual-branch exhaust system's pipes and their large cross sections serve to reduce backpressure. The system's two electrically controlled flaps and bespoke titanium rear silencer additionally enable it to produce a distinctive engine note created especially for the new BMW M4 CSL.

As a result, the engine's electrifying build-up of power is backed by some dramatic and extremely resonant aural accompaniment that draws its inspiration from the race track. Thanks to the reduced use of insulating materials, which also minimises weight, and the titanium rear silencer's specific resonance properties, the drive unit's vibrant soundtrack with its dominant low frequencies can be fully appreciated inside the cabin, where it provides the driver with accurate acoustic feedback in response to movements of the accelerator and clearly conveys the engine's performance traits. Gear changes are accompanied by precisely defined engine speed overshoot, while distinctive, low-frequency sound sequences can be heard on the overrun. The M Sound Control button on the centre console lets the driver switch to a more restrained soundtrack when driving through a residential area, for instance.

The cooling system aboard the new BMW M4 CSL comprises a high-temperature and a low-temperature circuit. The indirect intercooler works using an electric coolant pump in the low-temperature system. The main module in the high-temperature circuit and two remote coolers in the wheel arches supply coolant to the engine block and turbochargers with the help of a mechanical water pump. An electric water pump and an electric fan can also cut in as and when required. The large openings in the front apron additionally channel the oncoming air to a dedicated engine oil cooler as well as a transmission oil cooler. This serves to maintain optimum operating temperatures for all powertrain components at all times, both in everyday use and during high-speed outings on the track.

The engine's weight-minimised oil sump has two separate chambers and an integrated suction channel. An additional suction stage allows the map-controlled oil pump to draw lubricant from the smaller chamber, which steps in when extra capacity is needed. This ensures a reliable supply of oil at all times, even under extreme lateral and longitudinal acceleration on the track.

### **Bespoke engine and transmission mountings for instantaneous response.**

Model-specific mountings for the powertrain ensure the increased engine power of the new BMW M4 CSL is channelled to the road via the rear wheels in exceptionally rapid and direct fashion. The firmer connection of engine and transmission to the car's structure is clearly perceptible, especially in extremely dynamic driving situations.

A firmer engine mounting with equal settings on both sides of the vehicle produces an exhilarating, wonderfully precise sensation when driving the new BMW M4 CSL that is reminiscent of a racing car. For this purpose, the mounts' spring rates – which are set at 580 N/mm on the left side and 900 N/mm on the right in the BMW M4 Competition Coupé – were both increased to 1,000 N/mm. The transmission mounting in the special-edition model has also been modified and now features a mount with a Shore hardness value that has been increased from 49 to 55.

**Power channelled to the rear wheels via an eight-speed M Steptronic transmission with Drivelogic.**

The drive torque produced by the straight-six engine is relayed to the rear wheels of the new BMW M4 CSL via an eight-speed M Steptronic transmission with Drivelogic. The M-specific version of this automatic transmission features ratio spacing that is precisely attuned to the engine's characteristics and an extremely sharp shift action that has also been matched to the power unit's performance. This enables gear changes to be performed even faster than in the BMW M4 Competition Coupé. Each change of gear is clearly communicated to the driver, even when the transmission is operating in automated mode. Manual shifts with sequential gear selection can be performed using either the selector lever or the carbon-fibre shift paddles on the steering wheel.

Nudging either paddle allows the driver to temporarily switch from automated to manual mode in an instant. It is also possible to execute multiple downshifts to the lowest available gear in manual mode and thus inject a sudden burst of acceleration from a steady speed. The driver simply pulls on the left shift paddle while summoning maximum power by pressing the accelerator to the floor. M Steptronic does not force upshifts under acceleration in manual mode – even when the engine's revs hit the limiter. When driving in automated mode, automatic adjustment of engine speed on downshifts aids dynamic braking into corners. Blipping the throttle in this way reduces the undesirable engine braking effect when the car is being pushed hard.

The driver can use the Drivelogic button integrated into the selector lever to alter the shift characteristics with a choice of three clearly distinguishable modes, including a special track-optimised setting.

The exceptionally powerful six-cylinder in-line engine in the new BMW M4 CSL combines with the eight-speed M Steptronic transmission with Drivelogic, the powertrain's extremely firm mounting and the rear-wheel

drive to deliver an emotionally rousing and puristic performance experience laced with thrilling acceleration. The special-edition model takes just 3.7 seconds to reach the 100 km/h (62 mph) mark from rest and can sprint to 200 km/h (124 mph) from a standing start in just 10.7 seconds – 1.8 seconds quicker than the BMW M4 Competition Coupé.

# Chassis.

## Signature M precision at its finest.

Like the engine in the new BMW M4 CSL, its chassis technology benefits from a wealth of detail upgrades tailored to the power unit's performance characteristics. The modifications also factor in the substantial reduction in vehicle weight at play here and the model-specific improvements to body rigidity, allowing the blend of handling agility, dynamism and precision for which BMW M cars are renowned to be taken to new heights. The focus is clearly on forming a close bond between driver and vehicle that translates into a sublimely accomplished performance experience, even when flat out on a track. The bespoke chassis technology expands the car's dynamic limits while ensuring precisely controllable handling characteristics – in hard track driving, too – thanks primarily to the linear build-up of lateral acceleration forces characteristic of M models.

Providing the ideal basis for the new BMW M4 CSL's chassis technology is the pairing of a double-joint spring strut front axle and five-link rear axle both in M specification. This design principle was developed specifically for the high-performance sports cars in this model range. Also to be found on the standard equipment list for the special-edition model are adaptive M suspension with electronically controlled dampers, electromechanical M Servotronic steering with variable ratio and an M-specific version of the integrated braking system.

The individually tuned axle kinematics and model-specific wheel camber settings, dampers, auxiliary springs and anti-roll bars optimise steering precision, transmission of lateral control forces when cornering, spring and damping response, and wheel location. These detail modifications and the integrated application of all powertrain and chassis systems in intensive testing on the Nürburgring's Nordschleife circuit have helped maximise the dynamic performance of the new BMW M4 CSL, while also enabling fingertip control in committed track driving.

### **Eight-millimetre drop in ride height, auxiliary springs and bespoke dampers.**

The model-specific wheel suspension is accompanied by a drop in ride height of eight millimetres compared with the BMW M4 Competition Coupé. This lowers the vehicle's centre of gravity, further enhancing the

agility and cornering dynamics of the new BMW M4 CSL. Auxiliary springs are also fitted at both the front and the rear axle and improve road contact in extremely dynamic driving situations. The anti-roll bars at both axles and their mountings have likewise been specially engineered for this model.

The front axle's forged swivel bearing has more camber, greatly increasing the car's ability to put down power through high-speed corners. On the rear axle, meanwhile, four additional ball joints with zero play have taken the place of the rubber mounts for the control arms on both the axle subframe and wheel carrier sides, thereby lowering the secondary spring rates. This has the effect of optimising not just wheel location and camber stiffness, but also damper response. The rear-axle subframe has a rigid bolted connection to the body without any flexible rubber elements. Typically used in racing cars, this type of mounting further improves wheel location and directional stability.

The damping forces are smoothly adjusted for each individual wheel to suit the changing road surface conditions and driving situation. This all happens in the space of a few milliseconds using electromagnetic valves. There is a choice of three modes in the M Setup menu for the basic damper setting. The setup in SPORT mode was fine-tuned during exhaustive testing at the Nordschleife. Damper force control in SPORT PLUS mode is designed for pushing the car to the limit on perfectly surfaced race tracks, while COMFORT mode is ideal for smoothing out road imperfections in everyday driving.

### **Standard M Carbon ceramic brakes and individually adjustable pedal feel.**

The M Carbon ceramic brakes fitted as standard in the new BMW M4 CSL work in unison with the integrated braking system to provide immense yet precisely controllable stopping power. Six-piston, fixed-calliper brakes at the front wheels and their single-piston, floating-calliper counterparts at the rear endow the car with remarkable braking abilities while ensuring enhanced fade resistance and thermal stability. The M Carbon ceramic brakes also stand out with their excellent resistance to wear.

The integrated braking system generates a degree of braking power adjusted precisely to the driver's inputs, while also providing feedback that is unimpaired by wet road surfaces, strong lateral acceleration or high brake temperatures. The result is superb pedal feel in all situations. The M-specific version of the integrated braking system presents the



driver with two pedal feel settings that can be selected from the M Setup menu. This innovative system brings together the brake activation, brake booster and braking control functions within a compact module, while an electric actuator is used to trigger the required brake pressure.

### **M Traction Control honed for the track.**

The inclusion of the integrated braking system enables the DSC (Dynamic Stability Control) system to intervene more swiftly and precisely than ever. Traction control duties have also been relocated from the DSC control unit to the engine management, allowing the engine's power to also be adjusted with exceptional sensitivity when accelerating on slippery surfaces. In addition, the new BMW M4 CSL lets the driver set individual intervention thresholds for wheel slip limitation. The standard M Traction Control function offers a choice of ten different stages for this, and there is also the option of fully deactivating the DSC system by engaging M Dynamic Mode.

The M Traction Control function in the new BMW M4 CSL has been specially configured for track use. Traction control in stages 1 to 5 is regulated in the same way as in the BMW M4 Competition Coupé, with stage 5 allowing the least slip at the driven wheels and stage 1 the most. By striking the balance they desire between racing performance and handling stability on dry roads, drivers are able to carefully probe the car's dynamic limits and execute controlled drifts when cornering at speed.

M Traction Control stages 6 to 10, on the other hand, have been devised for the specific conditions encountered on the race track. They are based on the application developed for touring car racers and make allowance for both track surface conditions and tyre temperature. Instead of merely facilitating controlled drifts, these stages are geared towards optimising traction under any circumstances and therefore delivering quick lap times. The intervention thresholds for traction control are therefore set extremely high in stages 6 and 7, which are designed for driving on a dry track with the tyres at optimum temperature. If the tyres are cold or too hot, however, or the track is damp or wet, drivers are able to engage stages 8 to 10, which gradually lower the intervention thresholds with a view to maximising the performance capabilities of the new BMW M4 CSL even in very challenging driving conditions.

**Exclusive M light-alloy wheels and model-specific high-performance tyres.**

The new BMW M4 CSL rides as standard on forged M light-alloy wheels sporting an exclusive cross-spoke design. These weight-minimised wheels are fitted with high-performance tyres that measure 275/35 ZR19 at the front and 285/30 ZR20 at the rear axle and have been purpose developed for the special-edition model. The tyres are designed for extremely dynamic longitudinal and lateral performance on the track and enable highly effective transmission of both acceleration forces and lateral control forces when cornering.

The new BMW M4 CSL also brings customers the no-cost option of sports tyres in the same format. These, too, serve the cause of super-sporty driving, while enhancing comfort in everyday use and on long journeys.

# Equipment.

## Bringing the feeling of the race track to everyday driving.

The unwavering track focus of the vehicle concept behind the new BMW M4 CSL is also evident in the model-specific composition of standard and optional equipment provided for the job at hand. The balance between sports car purism, unrestricted everyday usability and exclusive premium substance has been comprehensively recalibrated for this special-edition model.

The new BMW M4 CSL comes as standard with a host of innovations fuelled by the racing know-how and ground-breaking endeavours of BMW M GmbH – and geared squarely to delivering an unparalleled performance experience. The M4 CSL also impresses with the coherence of its overall design, comprising cutting-edge digitalisation in control/operation and connectivity, a high level of build quality and finely balanced road comfort. This, then, is an exclusive sporting machine for performance enthusiasts looking to post fast laps on their favourite circuit but also enjoy an intense race-car feeling while driving there and home again.

### **Two-seater with exclusive sports car cockpit.**

The interior of the new BMW M4 CSL opens up the magical allure of a full-blooded high-performance sports car to the driver and their co-driver. The M Carbon full bucket seats, the M Alcantara steering wheel and the M-specific control panel on a centre console hewn from CFRP create the perfect setting for concentrated driving pleasure. Standard equipment includes Merino leather with extended features and M seat belts with contrast stitching in the colours of BMW M GmbH.

The CSL model badge is displayed in the information display of the standard BMW Live Cockpit Professional. This fully digital screen grouping comprises an instrument cluster with a 12.3-inch screen diagonal behind the steering wheel and a 10.25-inch control display. Depending on the situation, the intuitive and multimodal interaction between the driver and vehicle can take place via touch control on the control display, the familiar iDrive Controller, the multifunction buttons on the steering wheel or voice control. The BMW Live Cockpit Professional's range of functions also includes the BMW Intelligent Personal Assistant, cloud-based navigation system BMW Maps, telephony with wireless

charging, smartphone integration enabling the use of Apple CarPlay and Android Auto, two USB ports for data transfer, a Wi-Fi interface, and numerous advanced digital services. Standard equipment also includes a HiFi speaker system with 10 speakers and a 205-watt amplifier.

The BMW Head-Up Display available as an option for the new BMW M4 CSL helps the driver to focus fully on the task at hand, projecting relevant information onto the windscreen and therefore directly into their eye-line. The BMW Head-Up Display includes M-specific elements such as a colour rev counter, Shift Lights and M View. The likewise optional BMW Drive Recorder uses a camera integrated into the windscreen to record video sequences around the car of up to 40 seconds in length. Fascinating driving footage can therefore be captured and shared as desired.

### **Comfort-enhancing features and assistance systems focused on the essentials.**

In keeping with the intelligent lightweight design of the new BMW M4 CSL and the pure-bred vehicle concept that sets this special-edition model apart, the comfort-enhancing features and driver assistance systems included on board are focused on the essentials. For example, one-zone automatic climate control is fitted as standard, with two-zone automatic climate control for separate adjustment of the temperature and ventilation on the driver's and passenger side available as an option. Comfort Access and an alarm system are also on the options list.

The new BMW M4 CSL takes a zero-compromise approach to providing the driver with an engaging, precisely customised and concentrated driving experience. This means that only a limited selection of driver assistance systems is offered for the special-edition model beyond standard specification – which includes Park Distance Control (PDC) with sensors at the front and rear of the car, Lane Departure Warning, Speed Limit Info with no-overtaking indicator and Front Collision Warning with brake intervention. The Driving Assistant and Parking Assistant systems can be found on the short options list, the highlight of which is BMW Laserlight with its yellow light sources inspired by endurance racing cars.

### **Individually configurable vehicle settings.**

M-specific control/operation elements that allow the driver to adapt the powertrain and chassis technology to their personal preferences also help to forge an even closer connection between the driver and their new BMW M4 CSL. The Setup button on the centre console provides direct

access to the setup options for the engine, shock absorbers, steering and braking system.

Two individually composed variants of the M Setup can be stored permanently with the driver's preferred settings for the engine sound, M Traction Control, Automatic Start/Stop function and the gearshift characteristics of the eight-speed M Steptronic transmission. The overall vehicle configuration can then be called up at any time by pressing one of the two red M buttons on the steering wheel.

### **Maximising the performance experience on the track:**

#### **M Drive Professional and M Mode button.**

With its range of functions developed specifically for track use, the likewise standard M Drive Professional is another important element in the control/operation armoury of the new BMW M4 CSL. It helps the driver to make constant improvements in their pursuit of the ideal line and faster lap times. For example, the driver's ability to pilot the car through corners with maximum dynamic drama by deploying judicious amounts of oversteer and opposite lock is recorded by the M Drift Analyser. This function notes down the duration (in time), line and angle of the driver's latest drift. The steering-on-the-throttle performance rating shown on the control display comprises a mark between one and five stars and a comparison against the driver's previous best showing in this discipline. A graphics-enhanced overall view also displays the number of drifts recorded, the distance covered while sideways and other facts and figures.

Other functions of M Drive Professional include the M Laptimer. Here, the far-reaching race performance analysis extends well beyond recording lap times and sends a variety of current information to both the instrument cluster and the BMW Head-Up Display during the drive. As well as checking their time so far for the lap in progress, the driver can also keep a constant eye on how much quicker or slower they are than their fastest lap of the circuit at hand. The control display shows the number of laps completed so far, the distance covered and the duration of the driver's current stint. The driver can also analyse the data recorded during their track outing in detail using the BMW M Laptimer app on their Apple iPhone – and share selected information with the online community.

The M Mode button located on the control panel on the centre console can be used to adjust the responses and characteristics of the driver assistance systems, and the displays in the instrument cluster and

Head-Up Display, to deliver a driving experience suited to the situation at hand and worthy of the M badge. As well as the basic ROAD setting and SPORT mode, the new BMW M4 CSL also puts TRACK mode at the driver's fingertips.

In SPORT mode, the instrument cluster and Head-Up Display switch to M View, which only presents information relevant to sporty driving. The information shown in the cockpit in this mode includes an M-specific rev dial and Shift Lights, plus a digital speed read-out and indication of the gear selected. A range of data including coolant temperature, charge pressure, tyre condition and lateral and longitudinal acceleration can be displayed in the right- and left-hand areas of the instrument cluster. Alongside the engine's revs, Shift Lights, the vehicle speed and the gear currently engaged, in this mode the Head-Up Display shows only navigation instructions and any speed and overtaking restrictions detected by the Speed Limit Info system.

TRACK mode, developed exclusively for driving on race circuits, is activated with an extended press of the M Mode button. The driver must then confirm their choice using the iDrive Controller. This setting fully deactivates all the comfort and safety functions of the driver assistance systems. The control display is also switched off to focus the driver's attention even more completely on the track. The instrument cluster and Head-Up Display switch to M View, with road sign detection also remaining hidden in the TRACK setting.

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

The fuel consumption, CO<sub>2</sub> emissions, electric power consumption and electric range figures are determined according to the European Regulation (EC) 715/2007 in the version applicable. The figures refer to a vehicle with basic configuration in Germany and the range shown considers the different sizes of the selected wheels/tyres and the selected items of optional equipment.

All values were calculated based on the new WLTP test cycle. WLTP values are taken as the basis for determining vehicle-related taxes or other duties based (at least inter alia) on CO<sub>2</sub> emissions as well as eligibility for any applicable vehicle-specific subsidies. Further information on the WLTP and NEDC measurement procedures can also be found at [www.bmw.de/wltp](http://www.bmw.de/wltp).

Further information on official fuel consumption figures and specific CO<sub>2</sub> emission values of new passenger cars is included in the following guideline: 'Leitfaden über den Kraftstoffverbrauch, die CO<sub>2</sub>-Emissionen und den Stromverbrauch neuer Personenkraftwagen' (Guide to the fuel economy, CO<sub>2</sub> emissions and electric power consumption of new passenger cars), which can be obtained free of charge from all dealerships, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Schornhausen and at <https://www.dat.de/co2>.