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# **The BMW M3 CS: Top performance meets everyday practicality.**

## **Modifications dedicated to providing that extra edge.**

The new BMW M3 CS special-edition model (fuel consumption combined: 8.5 l/100 km [34.0 mpg imp]\*; CO<sub>2</sub> emissions combined: 198 g/km\*) delivers a finely judged blend of high performance and complete everyday practicality. At the same time, the engineers at BMW M GmbH have succeeded in further intensifying the dynamic, emotion-packed character of the BMW M3 with a carefully crafted ensemble of modifications.

The extensive use of carbon fibre-reinforced plastic (CFRP), for example, has kept the new BMW M3 CS extremely light; indeed, its kerb weight is just 1,585 kilograms (acc. to EU, excl. driver). Large sections of the body are also made from CFRP, including the bonnet, which is around 25 per cent lighter than that of the regular BMW M3 as a result. BMW's many years of experience in the manufacture of carbon-fibre components and carbon fibre-reinforced plastics has paid dividends with the new BMW M3 CS. The CFRP roof alone is more than six kilograms lighter than a conventional steel version. Another benefit of this extremely light and yet highly robust composite material is the corresponding lowering of the car's centre of gravity, which endows the BMW M3 CS with even more agile handling.

The rear end sports a redesigned Gurney in exposed carbon fibre. This aerodynamic spoiler lip running across the trailing edge of the boot lid significantly reduces rear-axle lift. In the interests of everyday practicality, the M3 CS forgoes a roll cage.

The excellent dynamics of the new BMW M3 CS are rooted not only in a fresh round of suspension revisions over the M3 with Competition Package (in terms of spring/damper settings), but also in a moderate increase in power for the six-cylinder in-line engine. Fitted in the M3 CS, it develops 460 hp – that's 10 hp more than in the M3 with Competition Package. Peak torque increases by 50 Nm (37 lb-ft) to 600 Nm (442 lb-ft). The task of emitting the M power unit's unmistakable sound falls to an M sports exhaust system that has been specially tuned for the CS and whose quartet of stainless-steel tailpipes blend perfectly into the CFRP rear diffuser.

\* Fuel consumption and CO<sub>2</sub> figures are provisional, based on the EU test cycle and may vary depending on the tyre format specified..

Generous use of Alcantara and two-tone full leather in Silverstone/Black has allowed the development engineers and designers at BMW M GmbH to conjure up an interior with an enviably sporting feel. It is therefore only fitting that the engine in the new BMW M3 CS is fired up with the push of a new red start/stop button. Paring down the passenger compartment to the essentials and, in so doing, achieving significant weight savings was the declared aim. And yet, despite the rigorously sporty mindset embodied by the cabin of the BMW M3 CS and also expressed in the presence of lightweight M sports seats, its passengers need not go without niceties such as automatic climate control and a high-quality, specially adapted version of the Harman Kardon surround sound system.

Orders for the special-edition BMW M3 CS can be placed from January 2018. The high-performance sedan – which will be limited to a run of approximately 1,200 units due to production factors – will be built at BMW Plant Regensburg from March 2018.



# High-revving concept and turbo technology.

## Straight-six engine delivers even higher performance.

The six-cylinder in-line engine has a long tradition at BMW, and in the new BMW M3 CS it is once again responsible for delivering performance from the top drawer. Compared to the M3 with Competition Package, maximum output has been increased by ten horsepower to 460 hp, which is on tap at 6,250 rpm. Peak torque of 600 Newton metres (442 lb-ft) is around ten per cent higher (M3 with Competition Package: 550 Nm / 405 lb-ft) and can be summoned over an extremely wide rev range – from 4,000 rpm up to 5,380 rpm.

These power reserves endow the new BMW M3 CS with performance worthy of a super sports car. The 0 to 100 km/h (62 mph) sprint takes just 3.9 seconds, while the top speed of the BMW M3 CS, which comes with the M Driver's Package as standard, is an electronically limited 280 km/h (174 mph).

The high power output of the 3.0-litre engine can be attributed to its free-revving design, as well as the inclusion of two turbochargers and extremely effective charge air cooling. The M TwinPower Turbo technology at work in the BMW M3 CS employs two very responsive mono-scroll turbochargers, which combine with High Precision Injection, VALVETRONIC variable valve timing and Double-VANOS fully variable camshaft control to ensure the six-cylinder unit delivers its power to maximum effect. Charge pressure is built up continuously from just above idling speed, while the fully variable valve and camshaft timing help to maintain a high efficiency factor. This not only enables the engine to generate its power continuously over a very wide rev band, it can do so extremely economically, too. All of which means fuel consumption and therefore exhaust emissions are kept low (fuel consumption combined: 8.5 l/100 km [34.0 mpg imp]\*; CO<sub>2</sub> emissions combined: 198 g/km\*). The high-revving ability of this exceptionally refined six-cylinder unit likewise benefits from VALVETRONIC and Double-VANOS technology. As a result, the straight-six under the bonnet of the new BMW M3 CS has an impressively high rated engine speed for a twin-turbocharged unit (7,600 rpm).

The closed-deck design of the six-cylinder engine's crankcase ensures it is remarkably rigid, paving the way for high cylinder pressures and very effective

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power output. The sleeveless cylinder walls, with their twin-wire, arc-sprayed coating, help to save weight. Another feature designed for top performance is the forged crankshaft boasting a lightweight design yet also high torsional strength. This keeps the rotating mass low and thereby gives the twin-turbo power unit even quicker response.

The engine's oil supply system is another technical highlight, while also showcasing the vast expertise in motor sport of BMW M GmbH. It has been designed with the tough demands of track racing in mind and sees to it that the six-cylinder in-line engine is kept supplied with lubricant under longitudinal and lateral forces of up to 1.4 g. The lightweight magnesium oil sump is fitted with an additional cover to limit the lubricant's surging movements, even in extreme driving manoeuvres such as abrupt changes of direction on a race track. An extra oil suction pump combines with a highly effective oil return system to ensure an unfailing supply of oil, even when executing extreme braking manoeuvres.

It goes without saying that an M power unit must come with the acoustics to match. The new M3 CS hands this task of a dual-branch sports exhaust system with a total of four tailpipes, which are neatly incorporated into the styling of the rear diffuser. Its exhaust back-pressure is as low as possible, helping to enhance power development, and it is governed by a system of flaps. Positioned directly upstream from the rear silencers, the flaps are controlled electrically and are designed to provide optimum feedback on the engine's load state throughout the rev range as well as generate that unmistakable, sporty M sound. The driver can alter the way the system of flaps works by preselecting a driving mode. The tailpipes are made from stainless steel and bear the M logo.

Power is transmitted to the rear wheels of the new BMW M3 CS via the proven seven-speed M Double Clutch Transmission (M DCT) with Drivelogic. Extremely fast gear changes mean there is no interruption in power flow, while the M Launch Control function ensures flawless acceleration from a standing start. The M DCT unit operates fully automatically, but there are also shift paddles on the steering wheel should manual gear changes be the order of the day. To cope comfortably with even the most demanding operating conditions, the seven-speed transmission comes with a dedicated oil cooler.

Further information on official fuel consumption figures, specific CO<sub>2</sub> emission values and the electric power consumption of new passenger cars is included in the following guideline: "Leitfaden über Kraftstoffverbrauch, die CO<sub>2</sub>-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Guideline for fuel consumption, CO<sub>2</sub> emissions and electric power consumption of new passenger cars), which can be obtained from all dealerships, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen and at <http://www.dat.de/en/offers/publications/guideline-for-fuel-consumption.html>.

# Driving dynamics perfected on the race rack.

## Supreme precision and superlative agility.



Cars created by BMW M GmbH have always stood out by virtue of their supreme agility, steering precision and handling stability. The new BMW M3 CS upholds this tradition, while also catering to the sports-minded driver with a variety of set-up options for the suspension, the M Servotronic electromechanical steering, the DSC stability control system and the seven-speed M Double-Clutch Transmission with Drivelogic.

The new BMW M3 CS is fitted as standard with Adaptive M suspension, offering the driver the choice between Comfort, Sport and Sport+ modes, including different damper settings in each of the three modes. Three different settings for the wonderfully precise electromechanical steering of the M3 CS can also be selected at the touch of a button.

The high-tech package of chassis technology for the new BMW M3 CS also includes the Active M Differential. This limited-slip differential's electronically controlled multi-disc locking action further enhances the car's already outstanding traction and driving stability, the control unit communicating with the DSC (Dynamic Stability Control) system, factoring in the accelerator position, rotational wheel speeds and yaw rate, and adapting to the changing driving situation with extreme precision and at lightning speed.

When the M3 CS is being put through its paces on a circuit, in particular, the driving stability features ensure optimum traction in all situations, such as when powering out of tight turns or on surfaces with differing levels of grip.

DSC normally counters understeer or oversteer by means of targeted intervention in the engine and brake control systems. In the case of the M3 CS, engaging M Dynamic Mode (MDM) allows a greater degree of wheel slip, making it possible to perform mild drifts. This is the sort of manoeuvre drivers seeking particularly sporty and dynamic responses will enjoy, especially on the track. In this mode, they are entirely responsible for stabilising the vehicle.

The new BMW M3 CS's chassis is largely the same as that of the BMW M3 with Competition Package, but it also includes exclusive modifications for the special-edition model to give an even sportier set-up. Notable features include its low weight – a result of the car's lightweight aluminium construction – and

the extraordinary rigidity of the axle systems. There is a lightweight double-joint spring strut axle at the front and a five-link axle at the rear. The links and wheel carriers are all made from forged aluminium.

The rear differential's double-elastic suspension and the rear axle subframe's rigid bolted connection with the body structure both demonstrate how thoroughbred motor sport technology has been engrained into the car.

The limited-run BMW M3 CS special-edition model is fitted with forged light-alloy wheels in Orbit Grey Matt as standard. Their ten-spoke design takes its cue from the wheels of the successful M4 cars competing in the German Touring Car Masters (DTM) race series. The BMW M GmbH engineers have rigorously applied their lightweight design approach to the wheels as well. The 10 J x 20-inch wheels at the rear weigh no more than around ten kilograms each and their 9 J x 19-inch counterparts at the front a mere nine kilograms or so. That keeps the unsprung masses low, which is another factor in the exceptionally dynamic handling of the M3 CS. The M3 CS rides as standard on mixed-size Michelin Pilot Sport Cup 2 tyres (265/35 R 19 at the front and 285/30 R 20 at the rear). The cup tyres are designed to transfer the steering forces to the road surface with incredible precision, while also providing the driver with as much feedback as possible. They are eminently suited to track use and offer maximum grip. Drivers looking to keep their M3 CS mainly for everyday use, though, can opt for Michelin Pilot Super Sport tyres instead, which generate more grip on wet roads than the cup tyres.

Like the M3, the new M3 CS comes with BMW M compound brakes as standard. Four-piston callipers at the front and two-piston units at the rear are employed to deliver outstanding stopping power, high fade resistance and excellent controllability. Compound brakes are far lighter than conventional equivalents, meaning a further reduction in unsprung masses and therefore even sharper handling. The BMW M3 CS is optionally available with BMW M carbon ceramic brakes. These feature six-piston callipers at the front and four-piston callipers at the rear, are even lighter, can withstand the sort of extreme loads experienced in race action on a track and are even more durable.

## **Expressive design. Punchy use of forms and intelligent lightweight engineering.**



The new BMW M3 CS special-edition model leaves no doubt as to its performance capabilities with its looks alone. No matter which angle the M3 CS is viewed from, it appears as if cut from a single mould, has a muscular, athletic air and makes it perfectly clear – even when standing still – that here is a high-performance sports car. In other words, the M3 CS is another uncompromising expression of the BMW M design language that sets out to communicate its exceptional performance and exhibit all of its emotionally rich, intensely dynamic character at first glance.

The front end, with its pronounced three-dimensional contouring, oozes sportiness from every pore. Distinguishing features include the twin headlight units with their state-of-the-art LED technology and the slender kidney grille. The front apron is divided into three parts and highlights the dynamic nature of the new BMW M3 CS even more vividly, at the same time as performing its technical functions. The large air intakes provide highly efficient cooling for both the twin-turbo six-cylinder engine and the powerful braking system. The front splitter is made from lightweight exposed carbon fibre and reduces lift at the front axle to great effect. Carbon fibre-reinforced plastic (CFRP) has also been used for the restyled Gurney at the rear. As well as providing a sporty visual highlight, this aerodynamic spoiler lip also reduces rear axle lift. The CFRP rear diffuser is carried over from the BMW M4 GTS. It adds a visually stunning and sporty flourish to the rear end and seamlessly incorporates the four stainless-steel tailpipes of the dual-branch, CS-specific M sports exhaust system into its styling. The diffuser and front splitter also optimise the airflow along the vehicle's underbody and combine with the Gurney to keep the car in even firmer contact with the road. The use of multiple components made from CFRP is a further indication of BMW's firm commitment to intelligent lightweight engineering with the new M3 CS.

The BMW M3 CS special-edition model comes with BMW Individual High-gloss Shadow Line trim and darkened rear light units. BMW M GmbH is offering a total of five exterior colours for the high-performance sedan. The M3 CS is painted in Alpine White as standard, while customers may also opt for either San Marino Blue Metallic, Lime Rock Grey Metallic, Frozen Dark Blue II Metallic or Black Sapphire Metallic.



## **Exclusive specification.** **Sportiness and comfort coursing** **through every vein.**



The cabin of the new BMW M3 CS is awash with leather (in an exclusive two-tone Silverstone/Black finish) and Alcantara. Both the driver and front passenger settle into the same specially-designed lightweight M sports seats fitted in the M3 with Competition Package. The rear seats are likewise upholstered in Merino leather in an exclusive two-tone Silverstone/Black combination with grey contrast stitching. The sports seats in the new BMW M3 CS guarantee optimum lateral support, even when powering around a track, yet they are also very comfortable on long journeys. The familiar BMW M stripes have been incorporated into the front seat belts.

The most important accessory for drivers of the new BMW M3 CS is an M sports steering wheel. Wrapped in exclusive, anthracite-coloured Alcantara with a silver 12 o'clock marker, this cost option provides outstanding grip in all driving situations. Alcantara with grey contrast stitching adorns the handbrake lever gaiter.

In view of the rarefied sporting character of the new BMW M3 CS, it is only fitting that its six-cylinder in-line engine is fired up by pushing a new red start/stop button.

The interior's exclusive trim strips are covered with Alcantara and feature prominent CS identifiers. Alcantara – a wonderfully classy yet hard-wearing upholstery material – also graces the lightweight centre console. The door sills, meanwhile, feature special strips inscribed with M3 CS lettering.

Despite the intensely sporty focus of the new BMW M3 CS, drivers do not have to go without comforts such as automatic climate control. There is also a Harman Kardon surround sound system for the ultimate in listening pleasure, while the BMW Navigation system Professional is likewise part of the extensive standard specification for the new BMW M3 CS.