



Media Information  
9-13 June, 2014

## **The new BMW M3 Saloon and BMW M4 Coupé.**

- Characteristically aggressive M design combines sporting intent with the latest aerodynamic optimisation.
- High-revving six-cylinder M TwinPower Turbo engine with 431hp and impressive 550Nm torque across a very wide rev range.
- Extensive use of lightweight materials, including carbon-fibre, for substantial weight loss over the outgoing model.
- Dynamic driving technologies include Active M Differential, Adaptive M suspension and optional M Double Clutch Transmission.
- Extensive standard equipment and connectivity; wide range of options.
- Launches 21 June 2014 at £56,175 OTR for the M3 Saloon and £56,635 OTR for the M4 Coupé.

The launch of the new BMW M3 Saloon and new BMW M4 Coupé heralds the arrival of the fifth-generation of the iconic high-performance sports car from BMW M. For the first time the Coupé and Saloon models receive individual model names, in deference to the different model series that provide their basis.

Another first is the adoption of a turbocharged engine for this BMW M model: the high-revving, 3.0-litre six-cylinder in-line engine with M TwinPower Turbo technology has been specifically developed for this purpose, and produces a maximum output of 431hp. Its peak torque of 550Nm is available across a very wide rev range starting at just 1,850rpm, and exceeds the figure recorded by the outgoing BMW M3 by roughly 40 per cent. In spite of this, the new engine also achieves a reduction in fuel consumption and emissions of around 25 per cent.

To maximise dynamic ability and ensure excellent efficiency, a weight loss of over 80kgs has been achieved compared to a comparably equipped predecessor model. Specific weight-saving measures include the increased use of lightweight materials: both models now feature a carbon-fibre reinforced plastic roof.

BMW M engineers have paid particular attention to the car's aerodynamic performance, and incorporated the latest Active M Differential amongst numerous other technical highlights. During the development process the engineers worked closely with BMW Motorsport's professional racing drivers,



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 2

Model	Power (hp)	Torque (Nm)	0-62mph (secs)	Top speed (mph)	Combined (mpg)	CO <sub>2</sub> emissions (g/km)
BMW M3 Saloon	431	550	4.3 (4.1)	155* (155*)	32.1 (34.0)	204 (194)
BMW M4 Coupé	431	550	4.3 (4.1)	155* (155*)	32.1 (34.0)	204 (194)

with extensive testing and set-up work carried out on the Nürburgring Nordschleife circuit.

**The balance of the overall concept: high power, low weight, driving pleasure.**

The new BMW M3 Saloon and new BMW M4 Coupé are formed from a host of finely blended elements, all working in perfect harmony to deliver outstanding performance, precision and agility on road and track.

With the new BMW M3 Saloon and M4 Coupé, the engineers sought to optimally channel the air around the car in the quest for ultimate performance, while also ensuring the engine, powertrain and brakes receive the requisite cooling. Even when operating under heavy loads on the racing circuit. The aggressively styled front apron, smooth under-body and the clearly defined lip spoiler at the rear of the M3 Saloon (or integrated bootlid spoiler at the rear of the BMW M4 Coupé) reduce lift by an equal amount at the front and rear axle, to the benefit of handling.

Albert Biermann, Head of Development at BMW M GmbH, said: "The way in which we channel the inflowing air through the engine oil cooler creates a venturi effect, which reduces front axle lift and, in so doing, improves the steering."

The Aero Curtain and M side gills, the latter with integrated Air Breathers minimise turbulence in the front wheel arches. These elements, together with the aerodynamically optimised side mirrors in familiar M twin-stalk style, are not only distinctive design features, they also help to reduce drag.

**The new six-cylinder in-line engine: high-revving, turbocharged unit combines the best of both worlds.**

The new BMW M3 Saloon and new BMW M4 Coupé mark a return to the classic six-cylinder in-line engine configuration, as used on the second and third-generations of this iconic sports car.



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 3

The new engine sees a slight power upgrade over the previous V8 to 431hp, now delivered between 5,500 and 7,300rpm, with maximum revolutions set at an unusually high figure for a turbocharged engine: 7,600rpm. Peak torque has been increased by roughly 40 per cent to 550Nm, and is maintained over a very wide rev range (1,850–5,500rpm). The standard sprint from 0-62mph takes both cars just 4.3 seconds with manual transmission, or just 4.1 seconds with the optional M DCT, while the top speed is 155mph (electronically limited). The new powerplant also boasts excellent fuel economy: the combined consumption in the EU cycle is as high as 34mpg and CO<sub>2</sub> emissions are as low as 194g/km, an improvement of more than 25 per cent over the previous model's figures.

Regulated pollutant emissions are EU6-compliant.

The M TwinPower Turbo technology comprises two fast-responding mono-scroll turbochargers, High-precision direct injection, VALVETRONIC variable valve timing and Double-VANOS continuously variable camshaft timing. VALVETRONIC and Double-VANOS work in tandem to seamlessly control intake valve lift. The result is a smooth and efficient power delivery, with very sharp response and reduced fuel consumption and emissions.

The six-cylinder engine features a closed-deck crankcase design, which is very rigid and allows cylinder pressures to be increased for improved power output. And instead of liners, the cylinder bores feature a twin-wire arc-sprayed coating, which results in a significant reduction in engine weight.

A further technical highlight is the forged, torsionally rigid crankshaft which, as well as providing increased torque-carrying capacity, is also lighter in weight. This significantly reduces rotating masses, resulting in improved throttle response and acceleration.

A sporting engine sound, in keeping with BMW M tradition, is ensured thanks to the lofty rev range of the new engine and an innovative flap arrangement in the twin-pipe exhaust system. The electrically-controlled flaps just before the rear silencer minimise exhaust backpressure and produce a sound that is striking and unmistakable over the entire engine speed range, as well as giving precise feedback on engine load.

The different selectable drive modes, programmable with the MDrive Manager and activated via the iconic steering wheel 'M' buttons, offer drivers a choice of



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 4

preconfigured, perfectly balanced vehicle set-ups which also feature different engine sound profiles.

### **Track-ready engine oil supply system for outstanding performance**

On the track, the exceptional driving dynamics of the BMW M3 Saloon and BMW M4 Coupé place extra demands on the engine oil supply system, the design of which reflects the extensive motorsport experience of BMW M. The low-weight magnesium oil sump, for example, features a special cover to limit movement of the oil under the effects of strong lateral acceleration. Under extreme longitudinal acceleration and deceleration, an oil extraction pump and sophisticated oil return system situated close to the turbocharger also help to maintain stable oil circulation. Oil is therefore supplied continuously to all engine components in all driving situations – whether in everyday motoring or during hard driving on the track.

### **Sophisticated cooling concept for maximum performance**

The exceptional performance potential of the BMW M3 Saloon and BMW M4 Coupé places exacting demands on temperature management, in not only the engine but also the peripheral assemblies. In order to ensure optimum operating temperatures across all types of usage, BMW M engineers have developed an extremely effective cooling system.

For example, alongside the two sophisticated turbocharger units, the air intake system of the six-cylinder engine also includes an indirect intercooler, maximising charge pressure and engine output. Moreover, as well as a main radiator, the cooling system also comprises a water cooler repositioned to the side for the high and low temperature water circuits, and the engine and transmission oil (if the M Double Clutch Transmission is specified). An additional electric coolant pump cools the turbocharger bearing mounts when the car is stationary.

### **Six-speed manual gearbox with new throttle blipping function:**

The standard transmission specified is a six-speed manual gearbox with a robust double-plate clutch. This unit is considerably more compact than its predecessor and also 12kgs lighter. To increase shift comfort, the manual gearbox uses innovative new carbon friction linings in its synchroniser rings. The gearbox blips the throttle on downshifts - previously a feature reserved for the M Double Clutch Transmission - improving the smoothness of the driving experience and helping to enhance stability.



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 5

### **Seven-speed M Double Clutch Transmission with Drivelogic and Launch Control**

The optional transmission for the new BMW M3 Saloon and M4 Coupé is the third-generation M Double Clutch Transmission (M DCT). As well as changing gear automatically, in manual mode it enables ultra-fast gear changes with no interruption in the flow of power. The integrated Launch Control function ensures optimum sprinting performance off the line, producing acceleration figures that would be simply unattainable with the manual gearbox. In addition, the system allows for a range of extra features, including Stability Clutch Control, which opens the clutch when the car is understeering to bring it back into line, and also the selectable Drivelogic modes that give the BMW M3 and BMW M4 more comfortable, more economy-focused or even sportier characteristics depending on driver choice. The additional seventh gear over the manual gearbox allows longer gear ratios – and delivers the efficiency gains you would expect as a result.

Taking advantage of the extremely light yet impressively durable properties of CFRP (carbon-fibre reinforced plastic), the engineers have been able to construct the driveshaft from this material.

“The impressive stiffness and low weight of the CFRP tubing allow the driveshaft to be constructed as a single-piece unit with no centre bearing. As well as a weight-saving of 40 per cent over its predecessor, we have achieved a reduction in rotating masses and therefore improved drivetrain dynamics.” explains Albert Biermann.

### **The rear-wheel drive chassis with Active M Differential**

The Active M Differential makes a considerable contribution to the superb dynamics of the new BMW M3 Saloon and BMW M4 Coupé. With further weight-savings thanks to hollow, and hence lighter, output shafts, the Active M Differential uses an electronically controlled multi-plate limited-slip differential to optimise traction and directional stability. Working precisely and rapidly, the control unit links up with the DSC (Dynamic Stability Control) system and also takes into account the position of the accelerator pedal, the rotational speed of the wheels and the car's yaw rate.

Every driving situation is therefore precisely analysed and an impending loss of traction on one side of the car identified at an early stage. The degree of



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 6

differential lock – which may be anywhere between 0 and 100 per cent – is adjusted as required within a fraction of a second, enabling wheel spin to be prevented on slippery surfaces, in instances where the right and left rear wheel have widely differing friction coefficients or in tight bends and when changing direction with particular vigour.

The M Dynamic Mode – a sub-function of the Dynamic Stability Control (DSC) system – allows enthusiastic drivers to probe the limits of the new cars while retaining an electronic safety net at all times. The system tolerates greater wheel slip and therefore easy drifting, although DSC will still step in if the car ventures over the limits – unless it is switched off completely.

### **Aluminium suspension elements ensure sharper dynamics**

The core expertise of BMW M resides in developing cars that offer superb driving dynamics and real driver satisfaction, yet not at the expense of everyday usability. In order to achieve these aims with the significantly increased performance capability of the new BMW M3 Saloon and new BMW M4 Coupé, the suspension of the outgoing BMW M3 has been redesigned with painstaking attention to detail.

In the front suspension the use of lightweight aluminium construction for components such as control arms, wheel carriers and axle subframes saves 5kgs over a conventional steel design. Play-free ball joints and elastomer bearings developed specially for the cars ensure an optimum and direct transfer of forces both laterally and longitudinally, while an aluminium stiffening plate, CFRP engine strut brace and additional bolted joints between the axle subframe and the body structure all help to increase the rigidity of the front end.

Also lighter is the new five-link rear axle. All the control arms and wheel carriers are manufactured using forged aluminium, which reduces the unsprung masses of the wheel-locating components by around 3kgs compared with the previous model generation. The rigid connection between the rear axle subframe and the body – without the use of elastic rubber elements – is borrowed from motorsport and serves to further improve wheel location and therefore directional stability.

Tyre development was critical from the outset, and both cars feature 19-inch wheels as standard for the UK market, in either Ferric Grey or optionally Jet Black. These specially developed forged wheels make a significant contribution to the reduction in the cars' unsprung masses. BMW M engineers have taken



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 7

great care to ensure all the components between the steering wheel and tyres work together harmoniously and therefore provide maximum driving precision and lateral stability, while retaining good ride comfort.

### **Electric Power Steering with three settings**

The electromechanical steering system in the new BMW M3 Saloon and new BMW M4 Coupé represents a new development from BMW M. The integrated M Servotronic function electronically adjusts the level of steering assistance according to the car's speed. The system offers the driver three settings as standard, which can be selected at the touch of a button: COMFORT, SPORT and SPORT+ modes allow the level of steering assistance to be adapted to suit any given situation and the driver's personal tastes.

The Adaptive M suspension, fitted as standard for the UK market, also provides COMFORT, SPORT and SPORT+ modes, enabling the driver to choose between a more comfortable damper setting for urban driving, for example, or a stiffer set-up for dynamic driving on country roads. A third option minimises body movements and maximises dynamic performance for use on the track.

The standard new BMW M Compound brakes boast impressive feel, outstanding stopping power and a high resistance to fade. Far lighter than conventional equivalents, they contribute to a substantial reduction in unsprung masses. Even lighter BMW M Carbon ceramic brakes can be specified as an option - gold callipers denote their fitment.

### **Lightweight engineering: shedding weight in all the right places.**

Intelligent lightweight design was a top priority in the development of the BMW M3 Saloon and BMW M4 Coupé. The goal was to minimise kerb weight in order to give both models outstanding driving dynamics and exemplary efficiency. These measures have delivered impressive results, with the BMW M4 Coupé (manual transmission) weighing 1,497kgs, around 80kgs lighter than a comparably equipped predecessor model – with all the benefits that reduction brings.

On the outgoing models, the CFRP roof was confined to the Coupé version. Now, for the first time, the four-door BMW M3 Saloon gets this striking design and functional feature as standard. The CFRP roof brings weight-savings of 5kgs in the case of the BMW M3 Saloon and more than 6kgs in the case of the BMW



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 8

M4 Coupé. It also lowers the vehicle's centre of gravity, which has a positive impact on driving dynamics.

Aluminium is used for the front wings and the bonnet, as opposed to conventional steel, and makes an important contribution to the low overall weight, while at the same time improving axle load distribution.

On the M4 Coupé, the shape of the new bootlid has been optimised for aerodynamic performance, while the use of a carbon-fibre and plastic compound saves additional weight.

The new BMW M3 Saloon and new BMW M4 Coupé also feature a CFRP driveshaft. The high rigidity and low weight of the CFRP tube mean that the driveshaft can be produced as a single-piece component, without a centre bearing. This achieves weight-savings of 40 per cent over the previous model and a reduction in rotating masses, which in turn results in more dynamic powertrain response.

A further use of CFRP can be found in the engine compartment for the engine strut brace. Weighing only 1.5kgs it offers superior rigidity to a comparable aluminium component, and at the same time plays a key part in the excellent steering response and precision of both vehicles. The use of carbon-fibre in these models is a reminder that BMW is a global leader in high-strength, lightweight CFRP construction, and that it was BMW who brought out the first mass-production vehicle with a body consisting entirely of this material – the innovative BMW i3.

**Design: striking use of forms underlines standout performance capability.**

"The superior performance of the BMW M3 Saloon and BMW M4 Coupé should be obvious at first glance," explains Karim Habib, Head of Design at BMW Automobiles. "Indeed, the exterior design has a visual impact that elevates the BMW M design language to a new level of expression, highlighted by a purposeful character, emotional appeal and dynamic verve."

Viewed from the front, the BMW M3 Saloon and BMW M4 Coupé have a powerfully expressive 'face', with a modern take on the twin headlight arrangement and a distinctive double-slat kidney grille with M designation. The aggressive front apron, with its trio of large intakes, supplies cooling air to the





Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 9

engine and brakes. Among the other hallmark BMW M design features is the characteristic powerdome on the bonnet, which hints at the potential of the muscular M TwinPower Turbo engine and creates space for the intercooler. The twin-stalk side mirrors are another classic BMW M design feature.

The sides of both cars clearly show the hallmark BMW proportions of a long bonnet, long wheelbase, set back glasshouse and short front overhang, further emphasised by familiar M design elements. The new M side gills perform both a stylistic and a functional role: integrated into them are Air Breathers, which team up with the Aero Curtains in the front apron to help optimise the airflow around the wheel arches and therefore improve aerodynamics.

The dark colour of the CFRP roof (with its contoured roofline) gives both models a lower-slung and more compact appearance, as the eye perceives the roof pillars – painted in body colour – to be the uppermost point of the car. A flowing roofline then gains in momentum once again as it heads rearwards, increasing aerodynamic downforce and giving the rear a more muscular look at the same time.

At the rear, there are greater differences in the two models. The BMW M3 Saloon is fitted with a lip spoiler to reduce lift, while the tailgate of the BMW M4 Coupé features an integrated rear spoiler and is made from a carbon-fibre compound.

Both models feature prominently flared rear wheel arches, which, in combination with the wide track, give the cars a very purposeful stance. The high-gloss pair of twin exhaust tailpipes are framed by the sculptural rear apron with its integrated diffuser.

**Interior design: flawless ergonomics in a sporting ambience.**

Inside, drivers will be greeted by the interior architecture prioritising unimpeachable ergonomics and a clear driver focus. However, the emphasis has naturally been put on an even more sporting ambience. There are a host of traditional BMW M equipment details, including M door sill finishers, M gearshift lever, M design circular instruments with white graphics, M leather steering wheel (with M logo, chrome trim and iconic triple-colour contrast stitching) and metallic shift paddles (if the M DCT gearbox is specified). The BMW Individual headlining is finished in Anthracite.



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 10

The bespoke front seats take inspiration from the bucket seats fitted in racing cars, and feature a full-size single-piece back panel. This means the construction of the seats is very flat, while the high, width-adjustable side bolsters and low-set seat surface allow an ideal seating position and provide excellent support. Despite this, these BMW M seats also include electric adjustment and heating as standard. On the seat surface, the stitching, upholstery segmentation and perforation lend the seats a slim-fitting feel, whilst the BMW M logo on the seat is illuminated for the first time.

Like the front seats, the distinctively contoured backrests of the rear seats also offer exceptional lateral support: they are made from a lightweight composite material and can be folded in a 60:40 split. This gives the BMW M3 and BMW M4 a level of everyday usability that is well beyond the norm for high-performance sports cars.

**Dimensions BMW M4 Coupé vs. predecessor:**

**F82 vs. F32 vs. E92 M**

**Length** 4,671 mm + 33 mm + 56 mm

**Width** 1,870 mm + 45 mm + 66 mm

**Height (incl. aerial)** 1,383 mm + 21 mm - 41 mm

**Wheelbase** 2,812 mm + 2 mm + 51 mm

**Track front** 1,579 mm + 34 mm + 39 mm

**Track rear** 1,603 mm + 9 mm + 64 mm

**Dimensions BMW M3 Saloon vs. predecessor:**

**F80 vs. F30 vs. E90 M**

**Length** 4,671 mm + 47 mm + 91 mm

**Width** 1,877 mm + 66 mm + 60 mm

**Height (incl. aerial)** 1,430 mm + 1 mm - 17 mm

**Wheelbase** 2,812 mm + 2 mm + 51 mm

**Track front** 1,579 mm + 36 mm + 39 mm

**Track rear** 1,603 mm + 20 mm + 64 mm

**Equipment: extensive standard equipment joined by a host of options that enhance dynamics and comfort.**

The new BMW M3 Saloon and new BMW M4 Coupé possess an extensive list of standard equipment, which reflects their performance-oriented character but also their excellent everyday usability. The UK specification has been enhanced substantially from the predecessor model with a number of additions; these



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 11

include technical features such as Adaptive M suspension, 19-inch M light alloy wheels and front and rear PDC; comfort items such as the heated and electric BMW M seats and exterior-folding mirrors; aesthetic features such as High-gloss Shadowline exterior trim and finally the full BMW Professional Media package with upgraded Bluetooth system.

In addition, customers can choose from a broad range of optional equipment to give the cars either an additional sporting edge, or boost comfort levels further still. For those buyers wishing to personalise their cars yet further, the wide-reaching spectrum of BMW Individual – including BMW Individual paint finishes, BMW Individual Merino leather and BMW Individual interior trim elements – will be available later in 2014.

#### **Further options for comprehensive driver information**

For track drivers BMW M has developed a free BMW M Laptimer app, which allows owners to analyse their personal driving style. Once their smartphone is hooked up to the car – via USB cable or the car's snap-in adapter – customers can operate the BMW M Laptimer app easily using the iDrive Touch Controller. The app then records speed, longitudinal and lateral acceleration, engine revs, the gear engaged, steering angle, accelerator position and fuel consumption. The data can subsequently be analysed via graphic displays on the customer's smartphone, including the driver's reactions. Another feature allows two recordings on the same circuit to be compared corner-by-corner: the readings can be either the driver's own or data shared via email.

Naturally, the BMW M3 Saloon and BMW M4 Coupé are also available with the wide variety of driver assistance systems and mobility services introduced under the BMW ConnectedDrive banner, some of which will already be familiar from the BMW 3 Series and BMW 4 Series. Among the highlights are the latest-generation of the Professional Navigation system, offering extra capability, sharper graphics and 3D elements for the map display; Driving Assistant Plus, which warns the driver of a looming collision with a pedestrian; Adaptive full LED headlights with an intelligent anti-dazzle High-beam Assistant and a further developed version of Active Cruise Control with Stop & Go function.

The optional M Head-up Display comes with additional, M-specific functions such as a gear display, rev counter and Optimum Shift Indicator.

# BMW

## United Kingdom Corporate Communications



Media information

Datw: 9-13 June, 2014

Subject: The new BMW M3 Saloon and BMW M4 Coupé.

Page: 12

### **Sales and History**

Model	2006	2007	2008	2009	2010	2011	2012	2013
BMW M3 Coupé	222	823*	1,228	686	711	789	809	525
BMW M3 Convertible	395	28	653*	384	256	255	205	306
BMW M3 Saloon	N/A	N/A	253*	144	110	85	N/A	N/A

\*New model

BMW UK expects to sell 1,000 BMW M4 Coupés and 180 M3 Saloons in their first full year of sales.

**Ends**