

# The new BMW M550d xDrive\*. Table of contents.



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\* Provisional specifications.  
combined fuel consumption: 5.9 l/100 km\*, \*\* (Touring: 6.2 l/100 km\*, \*\*), combined CO2 emissions: 154 g/km\*, \*\*  
(Touring: 163 g/km\*, \*\*), exhaust emission standard: EU6.  
\* The fuel consumption figures were calculated based on the ECE test cycle, dependent on tyre format.

# 1. Highlights.

- New BMW M550d xDrive expands the extensive portfolio of the M Performance automobiles with a Sedan and a Touring model.
- The world's most powerful 6-cylinder diesel engine in the automotive area.
- Multi-stage turbocharging with four turbochargers for high output and powerful torque combined with impressive efficiency.
- BMW xDrive – intelligent all-wheel drive system with rear-wheel orientation for characteristic M Performance driving dynamics and supreme driving performance in all conditions.
- As standard with M sports suspension, Integral Active Steering, M aerodynamics package, exhaust system with M Performance specific twin tailpipe trims in dark chrome and M sports brake featuring brake calipers finished in blue metallic with M inscription.
- Exterior mirror housings, radiator grille frame, bumper design elements and side air breathers in Cerium Grey.
- 19-inch light alloy wheels Double Spoke 664 M in Cerium Grey (front 8J × 19, rear 9J × 19) and mixed tyres in the format 245/40 R19 at front and 275/35 R19 at rear as standard.
- 6-cylinder diesel engine with BMW TwinPower Turbo Technology including four turbochargers, engine output 294 kW/400 hp, maximum torque 760 Nm, **combined fuel consumption: 5.9 l/100 km\*, \*\* (Touring: 6.2 l/100 km\*, \*\*), combined CO<sub>2</sub> emissions: 154 g/km\*, \*\* (Touring: 163 g/km\*, \*\*), exhaust emission standard: EU6.**

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\* The fuel consumption figures were calculated based on the ECE test cycle, dependent on tyre format.



## 2. The new BMW M550d xDrive. Performance diesel combines top- level dynamic performance and efficiency (Short version)

BMW is now expanding the new generation of the world's most successful business sedan, the BMW 5 Series, with the addition of another M Performance model. The new BMW M550d xDrive is fitted with the most powerful diesel engine ever offered in a BMW 5 Series model. With this uniquely powerful engine, the BMW M550d xDrive – whether in the Sedan or the Touring version – offers a distinctive driving experience that combines supreme performance with unlimited everyday practicality and impressive efficiency.

### **The world's most powerful 6-cylinder diesel.**

The most powerful diesel engine in the segment is also the most powerful 6-cylinder diesel in any car worldwide. The in-line engine has a capacity of 3.0 litres as well as modern M Performance TwinPower Turbo Technology with four turbochargers. It has an output of 294 kW/400 hp at 4,400 rpm (combined fuel consumption: 6.6–5.4 l/100 km\*; combined CO<sub>2</sub> emissions: 173-142 g/km\*\*) and puts a maximum torque on stream of 760 Nm from 2,000 rpm. Power transmission is via a standard 8-speed Steptronic sports transmission. The intelligent all-wheel drive system BMW xDrive distributes the drive power to all four wheels according to the needs of the situation. Thus fitted, the BMW M550d xDrive fully meets the high dynamic standards of an M Performance automobile: it accelerates in 4.4 seconds\* (Touring: 4.6 s\*) from zero to 100 km/h, and its maximum speed is 250 km/h (electronically cut off).

### **Matching performance and appearance.**

The appearance of the BMW M55d xDrive reflects the car's high dynamic potential. The M aerodynamic package, the M sports suspension lowered by 10 millimetres, the Integral Active Steering and the exclusive 19-inch M light alloy wheels with mixed tyres visually convey the exceptional performance capacity of the sporty diesel model. In conjunction with the intelligent all-wheel drive system BMW xDrive, these ensure outstanding ride stability and the best possible power transmission in all road conditions. On the inside, such features as optional M sports seats with Dakota leather or fabric/Alcantara covers and an M sports leather steering ensure the exclusive sporty atmosphere that is characteristic of all M Performance automobiles. All the familiar technologies of the new BMW 5 Series are naturally available for

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the BMW M550d xDrive, too: these include BMW Connected – for a high degree of connectivity – and a wide range of assistance systems that provide maximum support for the driver and ultimately take the BMW 5 Series one step further towards automated driving.

For further details on official fuel consumption figures, official specific CO<sub>2</sub> emissions and power consumption of new cars, please refer to the "Manual on fuel consumption, CO<sub>2</sub> emissions and power consumption of new cars", available at sales outlets, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Schamhausen and at <http://www.dat.de/angebote/verlagsprodukte/leitfaden-kraftstoffverbrauch.html>. ManualCO<sub>2</sub> (PDF - 2,7 MB)

### **3. The efficiency of dynamic performance. Apparent contradictions harmonised in thrilling style. (Long version)**

Founded in 1972, BMW Motorsport GmbH set standards in international automobile racing. In 1993 the fully-owned BMW AG subsidiary changed its name to BMW M GmbH. With its products and services today covering the five business areas of BMW M automobiles and BMW M Performance automobiles, BMW Individual, M equipment and packages, BMW Group Driving Experience and finally security, emergency and special vehicles, it targets customers with particularly high aspirations in terms of the performance, exclusivity and individuality of their automobile. In 2012 BMW M GmbH introduced the new product category of BMW M Performance automobiles to span the gap between the top BMW models and the M core models designed for the very highest level of performance and race track suitability. The new BMW M550d xDrive extends the model range of the M Performance automobiles by adding two enthralling variants as well as providing the top-of-the-range diesel model as part of the BMW 5 Series.

#### **High-performance engine for thrilling driving performance figures.**

The new BMW M550d xDrive is fitted with the most powerful 6-cylinder diesel engine in the world in the automotive area. The M Performance TwinPower Turbo in-line 6-cylinder diesel in the new BMW M550d xDrive has a capacity of 2,993 cc and features four turbochargers that operate on the principle of multi-stage turbocharging, as well as a common rail system that injects the fuel directly into the combustion chambers at a maximum pressure of more than 2,500 bar. The engine has an output of 294 kW/400 hp at 4,400 rpm and generates a maximum torque of 760 Nm which goes on stream between 2,000 rpm and 3,000 rpm, as well as being fitted with an auto start/stop function (combined fuel consumption of the Sedan: 5.9 l/100 km\*; combined CO<sub>2</sub> emissions: 154 g/km\* – combined fuel consumption of the Touring: 6.2 l/100 km\*; combined CO<sub>2</sub> emissions: 163 g/km\*)\*\*. It accelerates the Sedan in 4.4 seconds\* and the Touring in 4.6 seconds\* from zero to 100 km/h. The maximum speed for both body versions is electronically cut off at 250 km/h.

#### **Multi-stage turbocharging for incomparable engine characteristics.**

The output of the new BMW M550d xDrive is 14 kW/19 hp higher than that of the predecessor model – an increase of five per cent – while maximum torque

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has been increased by 20 Newton metres. At the same time, average consumption and emission values have been reduced by 11 per cent. As such, the most powerful BMW diesel engine offers a balance between output and fuel consumption that is unsurpassed in this engine segment.

The engine of the BMW M550d xDrive once again demonstrates the BMW Group's leading position in the drivetrain sector. Its modern multi-stage turbocharging with four turbochargers builds up boost pressure even more quickly, also in the lower engine speed range. This means torque is available early on and increases rapidly: a torque of more than 450 Nm goes on stream at just 1,000 rpm.

### **Four turbochargers for higher output and a more spontaneous response.**

The use of a fourth turbocharger further optimises the engine's efficiency and performance characteristics. As in the predecessor engine, the air flows into the combustion chambers by means of a multi-stage turbocharging process. At the high-pressure stage, two compact turbochargers are used with variable turbine geometry and integrated in a combined housing. The two low-pressure turbochargers are new and replace the previous large-sized third turbocharger: with their reduced dimensions they make for an even more direct engine response. The two low-pressure turbochargers and one of the two high-pressure chargers are permanently powered during travel. The second high-pressure turbocharger is only added at engine speeds of over 2,500 rpm. At high load requirement from idling, the two low-pressure turbochargers are briefly circumvented by means of a flap control system so as to build up boost pressure even faster.

### **Optimised efficiency due to modified exhaust-gas recirculation.**

The engine of the new BMW M550d xDrive is now fitted with exhaust-gas recirculation not just for the high-pressure stage but also for the low-pressure stage of the turbocharging system. This means that the turbochargers operate even more efficiently, thereby further improving exhaust emissions, too. The car's efficiency also benefits from an indirect charge air cooling system that has a higher capacity than in the predecessor engine, as well as additional compressor backplate cooling for the low-pressure turbochargers.

### **Pressure of more than 2,500 bar for optimised exhaust gas characteristics.**

The fuel supply is taken care of by the latest generation of common rail direct injection in the new BMW M550d xDrive. Here, piezo injectors operating at a maximum injection pressure of over 2,500 bar ensure particularly precise dosage and even finer atomisation of the fuel, further improving the engine's

efficiency and exhaust response. The new BMW M550d xDrive is also fitted with the essential technologies for modern exhaust gas treatment, including not just a diesel particulate filter and an NO<sub>x</sub> storage catalytic converter but also an SCR system (Selective Catalytic Reduction) with AdBlue injection.

### **Steptronic sports transmission as standard.**

For the purpose of power transmission, the most powerful diesel model of the BMW 5 Series is fitted with a modern 8-speed Steptronic sports transmission. The compact design, low weight and optimised efficiency of the transmission contribute to reducing fuel consumption and exhaust emissions. For use in the BMW M550d xDrive, the Steptronic sports transmission was adapted to the characteristics of the powerful 6-cylinder diesel engine and its very high level of pulling power. What is more, the shift programs feature a set-up that is specific to M Performance, offering sporty gearshifts as well as greater downshift spontaneity across the entire engine speed range. Shifts can also be activated manually using the paddles at the steering wheel, thereby supporting an active, sporty driving style.

### **Intelligent all-wheel drive system with rear-oriented configuration.**

In order to enable supreme driving performance in all conditions, the intelligent all-wheel drive system BMW xDrive distributes the drive forces to all four wheels as the situation requires. Its rear-oriented configuration supports the extremely precise handling of the BMW M550d xDrive, thereby emphasising the driving dynamics that are characteristic of an M Performance automobile. The M sports suspension with its body lowered by 10 millimetres likewise enhances the car's driving dynamics. In conjunction with 19-inch M light alloy wheels Double Spoke 664 M in Cerium Grey with mixed tyres in the format 245/40 R19 at the front and 275/35 R19 at the rear, it ensures outstanding mechanical traction, transparent feedback on bends and the appropriate level of comfort even over long distances. As an optional extra, the new BMW M550d xDrive can be fitted with 20-inch M light alloy wheels in Double Spoke Design 668 M or BMW Individual light alloy wheels with V-Spoke Design 759 in Bicolor – in both cases with mixed tyres of the size 245/35 R20 at the front and 275/30 R20 at the rear. The M sports brake system with M inscription on the brake calipers finished in blue metallic ensures excellent deceleration figures and outstanding dosage capacity.

Another optional feature for the new BMW M550d xDrive is the Adaptive M Suspension Professional, whose Dynamic Damper Control with M Performance specific set-up permanently regulates the response of the shock absorbers at each individual wheel and reduces body movement to a minimum by means of Dynamic Drive (active stabilisers on the front and rear axle). Fitted with these features, the new BMW M550d xDrive offers the very

highest level of driving dynamics without any restrictions in terms of ride comfort.

### **Integral Active Steering for supreme athletic flair.**

The BMW M550d xDrive is equipped as standard with the innovative Integral Active Steering. For this reason, a variable rack-and-pinion ratio is used. The more direct front axle steering transmission and the passive counter-steering or co-steering of the rear wheels means that the system reduces steering effort while enhancing both manoeuvrability in city traffic and ride stability when driving dynamically. The Integral Active Steering also guarantees a comfortable and supreme response on lane changes and bends. The varying characteristic curves of the steering electronics are directly linked to the driving experience switch and are activated by selecting the relevant driving program. In this way, the BMW M550d xDrive provides directionally precise support for every movement of the M leather steering wheel as well as sensitive feedback.

### **A sporty driving experience that can be customised.**

The driving experience switch can be used to activate a total of six driving modes. While ECO PRO mode supports a fuel-efficient driving style with early upshifting, COMFORT mode provides a balanced combination of comfort and the dynamic performance that is typical of BMW. The driving modes SPORT and SPORT+ feature characteristic curves for the Integral Active Steering that are specific to M Performance, further emphasising the precise handling and exact driving response of the BMW M550d xDrive. With a more direct connection on load shifts and an even more spontaneous response to accelerator pedal movements, both modes highlight the qualities of the new BMW M550d xDrive in terms of driving dynamics as well as providing a more emotional engine sound. In addition there is SPORT INDIVIDUAL mode, which allows the driver to select the preferred setting for the parameters of suspension, steering, engine and transmission from the two Sport modes – allowing configuration of an entirely individual driving experience mode. Finally, ADAPTIVE MODE offers an automatic selection of the driving mode that is most suitable in each individual case. Based on a driving style analysis combined with information from the navigation system – regardless of the driving program selected – all characteristic curves are adapted to the current driving style, road surface conditions and friction coefficient.

### **Exterior and interior visually convey the car's driving dynamics potential.**

As standard the new BMW M550d xDrive features an M aerodynamics package with enlarged air inlet, which in the Sedan also comprises an M rear spoiler ("Gurney"). This additionally optimises the air flow and supports engine



cooling, but it also visually conveys the car's exceptional driving dynamics potential – as do the M specific design elements in the front bumper, the frames of the radiator grille elements with their black glossy bars, the exterior mirror housings and the side air breather elements, all of which are finished in Cerium Grey. The exhaust system with the particularly distinctive, emotional M sound has tailpipe trims specific to M Performance on the left and right.

Sill trims with illuminated "M550d" inscription show the driver and passenger the way to excellently contoured sports seats, including electrical adjustment and memory function on the driver side. Like the rear seats they feature high-quality fabric/Alcantara covers in anthracite. Aluminium trim strips, the M pedals and the M footrest create a high-quality, technical atmosphere. The M leather steering wheel with shift paddles encourages an active sporty driving style, while after starting the engine a greeting specific to M Performance appears in the instrument cluster before changing to a special M Performance instrument display.

### **Excellent conditions for active, sporty drivers.**

As a member of the new generation of the BMW 5 Series, the new BMW M550d xDrive also offers a very broad range of driver assistance systems. These include the active lane change warning, which intervenes in steering when a collision is imminent, lane departure warning and Active Cruise Control (ACC), which comprises extended functions in the new generation of the BMW 5 Series. The intelligent Speed Limit Assist detects speed restrictions and adopts these automatically in the activated cruise control. The Remote Parking option allows the car to be marked remotely using the vehicle key, even tackling narrow parking spaces. All these systems relieve the driver of routine tasks, allowing them to focus even more closely on driving. All in all, they are ideas that move the new BMW M550d xDrive one step closer to the vision of automated driving.

### **BMW Connected – connecting people with their automobile.**

The latest development stage of the BMW Connected system enables a close connection between people, their car and the surrounding environment. By allowing mobile end devices such as smartphones, smart watches, computers, tablets and navigation systems to be connected to one another via BMW servers, it also incorporates a link to the outside world. The intelligent system is capable of detecting the driver's movement patterns and personal preferences in such a way that it can function as a personal mobility manager that provides simple yet comprehensive support for daily mobility – an increasingly complex task. The system also draws on real-time traffic information (RTTI) for route planning, even recommending an early start when

required. It provides access to ParkNow as well as showing the user how to get from the parked car to their ultimate destination address on foot.

### **Extensive range of M Performance automobiles.**

Currently the portfolio offers a choice of nine dynamic M Performance automobiles with the model variants BMW M140i 3 door, BMW M140i xDrive 3 door, BMW M140i 5 door, BMW M140i xDrive 5 door, BMW M240i Coupé, BMW M240i xDrive Coupé, BMW M240i Convertible, BMW M240i xDrive Convertible, BMW X4 M40i, BMW M550i xDrive, BMW X5 M50d, BMW X6 M50d and BMW M760Li xDrive.

The new M 550d xDrive expands the M Performance range with the addition of two extremely sporty automobiles, the Sedan being available from July and the Touring at the end of the year 2017.

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### **The BMW Group**

With its three brands BMW, MINI and Rolls-Royce, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. As a global company, the BMW Group operates 31 production and assembly facilities in 14 countries and has a global sales network in more than 140 countries.

In 2016, the BMW Group sold approximately 2.367 million cars and 145,000 motorcycles worldwide. The profit before tax was approximately € 9.67 billion on revenues amounting to € 94.16 billion. As of 31 December 2016, the BMW Group had a workforce of 124,729 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy.

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