

# The all-new BMW 5 Series. Contents.



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# The all-new BMW 5 Series Sedan. Model variants from launch.



**BMW 530i:** Four-cylinder petrol engine, eight-speed Steptronic transmission.

Capacity: 1,998cc.

Output: 185 kW/252 hp at 5,200 – 6,500 rpm.

Maximum torque: 350 Nm at 1,450 – 4,800 rpm.

Acceleration (0–100 km/h): 6.2 sec.

Fuel consumption, combined: 15.56 kmpl

CO2 emissions, combined: 152.92 g/km

**BMW 520d:** Four-cylinder diesel engine, eight-speed Steptronic transmission

Capacity: 1,995cc.

Output: 140 kW/190 hp at 4,000 rpm.

Maximum torque: 400 Nm at 1,750 – 2,500 rpm.

Acceleration (0–100 km/h): 7.5 sec.

Fuel consumption, combined: 22.48 kmpl

CO2 emissions, combined: 117.34g/km

**BMW 530d:** Six-cylinder diesel engine, eight-speed Steptronic transmission.

Capacity: 2,993cc.

Output: 195 kW/265 hp at 4,000 rpm.

Maximum torque: 620 Nm at 2,000 – 2,500 rpm.

Acceleration (0–100 km/h): 5.7sec.

Fuel consumption, combined: 18.59 kmpl

CO2 emissions, combined: 141.6 g/km

## **Design and equipment.**

### **A stylish appearance and record-breaking aerodynamics.**



The design of the all-new BMW 5 Series Sedan exudes athletic prowess, elegance and stylistic assurance. The new model therefore remains the quintessential sporting business sedan. The exterior dimensions of the new car are only slightly larger than those of its predecessor. The all-new BMW 5 Series Sedan is 36 millimetres longer than the outgoing model (at 4,935 millimetres), six millimetres wider (1,868 millimetres) and two millimetres taller (1,466 millimetres). Its wheelbase measures 2,975 millimetres (+7 millimetres).

#### **The front end: a more striking face, LED headlights as standard.**

The familiar BMW kidney grille, flanked by twin circular headlights, lends the front of the all-new BMW 5 Series a more eye-catching appearance. The glass headlight covers now connect seamlessly with the kidney grille, emphasising the car's width.

The standard LED headlights already make the all-new BMW 5 Series a captivating prospect, its concentrated gaze locked onto the road. Adaptive LED Headlights alter the light graphic and with BMW Selective Beam anti-dazzle high beam with a range of up to 500 metres. The LED tubes of the daytime driving lights are hexagonal and extend up to the kidney grille element, creating a stylistic connection which accentuates the wide, low-to-the-road appearance of the front end.

#### **The side view: short overhangs, elongated silhouette.**

The all-new BMW 5 Series Sedan cuts a dynamic figure before it has so much as turned a wheel. The passenger cell is set back when viewed in relation to the long wheelbase and leads the eye over a flowing roofline to the rear end, while a short front overhang underscores the car's sporting appearance. For the first time, the all-new BMW 5 Series Sedan brings together two traditional BMW design elements which are normally separate from one another. The swage line turns up as it heads rearwards, moving from shadow to light and sweeping up the Hofmeister kink in its path rather than continuing into the rear. This upwards motion lends the car a forward-surging character, and the expressive, swooping surface imbues it with an undeniable muscularity.

### **The rear: a visually lower centre of gravity.**

The low-slung, expressive and width-accentuating design of the rear end points to the dynamic, direct handling of the all-new BMW 5 Series Sedan. The rear lights reach deep into the sides of the car, creating a visual connection between its flanks and rear end. Cutting-edge LED bars enable a slim interpretation of the hallmark BMW “L” shape and underline the width of the new sedan. Other defining elements of the rear end include the exhaust tailpipes, which are now arranged symmetrically on both sides on all model variants. Depending on the engine and equipment package specified, the tailpipes will be circular or trapezoidal.

### **Significantly lower drag coefficient sets the sedan benchmark.**

The BMW engineers carried out a large number of detail optimisations to reduce the drag coefficient of the all-new BMW 5 Series Sedan by 10 per cent compared to its predecessor and set a new sedan benchmark of  $C_d = 0.22$ . For example, all-new BMW 5 Series models will now come with active air flap control for the radiator. This system opens the louvres in the kidney grille elements and lower air intakes when more cooling air is required, but otherwise keeps them closed to optimise aerodynamic efficiency.

The Air Curtains in the front apron team up with Air Breathers to cut air turbulence in the wheel arches significantly and channel the onrushing air effectively as the car pushes through it. A further improvement in the drag coefficient comes courtesy of optimised trim and airflow-channelling elements fitted across the whole of the underbody; these provide a considerable degree of underbody sealing. Another consequence of these measures is a reduction in lift, which enhances dynamics.

### **A total of 6 colours, wheels in 18 inch sizes.**

One non-metallic and five metallic colour shades are available for the all-new BMW 5 Series.

### **Distinctive looks: the Sport Line and Luxury Line.**

BMW offers the Sport Line, Luxury Line and M sport equipment packages for the all-new BMW 5 Series, allowing it to be tailored as closely as possible to the customer's personal wishes.

Sport Line shines the spotlight on the car's dynamic character and stands out with numerous trim elements in high-gloss black and line-specific 18-inch light-alloy wheels in a bi-colour polished finish. Opening the doors reveals illuminated aluminium door sill strips with a BMW logo and Sport Line badge. For the interior, Sport Line adds BMW sports seats with leather covers in the front, a BMW sports leather steering wheel and specific trim strips.

Luxury Line emphasises the car's elegant character with features such as chrome kidney grille bars, Air Breathers and window surrounds. Line-specific 18 inch light-alloy wheels underscore its exclusive looks. The aluminium door sill strips with BMW logo bear Luxury Line lettering. Leather covers with contrast stitching and special decorative inlays shine an even brighter light on the high-class character of the interior. The instrument panel is covered in Sensatec leather.

**M Sport package adds extra dynamic allure.**

The M Sport package will be available from launch for the all-new BMW 5 Series. It includes the M aerodynamic package (front apron with larger air intakes, side skirt trim, a diffuser-style rear apron and an exhaust system with two rectangular tailpipes), and M light-alloy wheels in 18-inch format. Inside the car, comfort seats with Leather covers highlight its sporting focus and are joined by the new M Sport leather steering wheel, exclusive floor mats, interior trim strips. The instrument panel is covered in Sensatec leather.

## Interior and controls. The very latest in ease of use.



The interior of the all-new BMW 5 Series Sedan strikes a fine balance between sporty driver focus on the one hand and sophisticated elegance on the other. Top-class materials, supreme build quality and attention to detail, a great feeling of spaciousness and new technologies in abundance combine to offer both driver and passengers comfort and driving pleasure of the highest order.

### **Luxury travel: more freedom of movement, low noise levels.**

The low roof line flows smoothly into the tail end, but the all-new BMW 5 Series nevertheless offers noticeably more headroom in the rear as well as boot capacity of 400 litres. The car feels much roomier inside, something which can be attributed not just to the lowered instrument panel and free-standing display, but also to the cabin's enlarged dimensions, particularly in terms of elbow and shoulder room. Passengers in the rear now have more space to spread out, thanks to the increased knee room and extended legroom, while the optimised design of the door cut-outs makes getting in easier than ever.

The headliner with built-in soundproofing forms part of the interior's acoustic design measures. The sound absorbers incorporated into the liner eliminate interfering sounds in the particularly sensitive area close to the occupants' heads. This results in greater comfort in general, but is particularly effective at allowing the driver and passengers in the rear to talk to each other more intelligibly.

The stowage pockets in the doors are now able to hold drink bottles up to one litre in size. The cup holders in the centre console are positioned more deeply, ensuring clear access to the controls above at all times, even when they are holding bottles. The extra storage compartment in front of the cup holders can be specified with a wireless charging function for mobile phones.

### **Seats with leather upholstery, room for up to three child seats in the rear.**

Even the standard front seats are electrically adjustable and offer tremendous safety and comfort together with a wide choice of materials, plus special decorative stitching and quilting for the Dakota and Nappa leather trims. The sports seats offered on the sport line feature adjustable side bolsters for

optimum lateral support through even quickly-taken corners. The multifunction comfort seats with nappa leather, offered on M sport, represent the pinnacle in comfort.

There is room for up to three adults on the rear seats. When the middle seat isn't occupied, passengers in the rear can make use of the centre armrest and its integral cup holders. A through-loading system, offered on the M sport, opens to reveal a boot offering 400 litres of load space and allowing extremely varied use. The rear seat is designed to allow room for up to three child seats (the two outer places have ISOFIX attachments).

### **Contact sensors for the seat control.**

Using the multitude of seat adjustment options has been made as easy as possible to allow the driver and front passenger to get as comfortable as possible. The new seat adjustment switches with touch-sensitive sensors are a major help here. When a finger touches the switch located on the outside edge of the seat, thereby activating one of its five sensors, the corresponding menu opens in the central display. Lightly pressing on the switch again then carries out the desired adjustment, all clearly illustrated by a matching animation in the display.

### **Gesture control, voice control, touchscreen and iDrive Controller.**

Gesture control for key functions was premiered last year in the BMW 7 Series, and the all-new BMW 5 Series now features the latest version of this system. Navigation, telephone, entertainment features and vehicle functions can be visualised on the high-resolution 10.25-inch screen and controlled not just in the usual manner using the iDrive Controller, but also by means of gestures, voice commands or simply touching the buttons on the display.

These buttons, which are clearly arranged in a total of six large pads over two screen pages, provide the driver with direct access to functions as well as a live display of the associated content. The button for the entertainment programme, for example, shows the song that's currently playing complete with album cover, and when the navigation function is active the driver can see the route the vehicle is taking in the main menu's navigation button pad. If the driver now touches this map section, the navigation screen opens, showing the detailed map view. Touching a pad's header line, on the other hand, opens the respective function's main menu, in this case the navigation menu. It is therefore possible to access the desired content swiftly and surely. The two sets of three pads can be rearranged as desired, allowing drivers to position the menus they use most in the first screen. One of the new button functions is a message centre, where all incoming SMS messages, emails and information about the car's operating state can be found.

Users select menu options and the associated functions in the usual way with the iDrive Controller or by simply tapping the button on the touch display with their finger.

The all-new BMW 5 Series can also be operated by means of gestures or voice control, as the driver prefers. BMW gesture control offers a particularly intuitive and easy way of operating commonly used infotainment system and telephone functions. All that is needed are simple movements of the hand or fingers, which are detected by a 3D sensor in the vicinity of the centre console and translated into commands: pointing at the screen with the index finger is all it takes to accept a phone call, for instance, while a swiping motion with the hand rejects it. The swiping action can also be used to open submenus. Tracing a circle with the index finger adjusts the audio system's volume, and the driver can pull their thumb and index finger away from the navigation map towards them to zoom in on that section of the map. And the two-finger victory sign can be used to carry out an individually selectable command, such as instructing the navigation system to start route guidance to the home address or skipping to the next track in a playlist.

More functions than ever before can be controlled using gestures in the all-new BMW 5 Series Sedan. The voice dialogue system can also be started and terminated in this way, for instance, and the navigation system option "Resume route guidance" confirmed or declined.

The Intelligent Voice Assistant offers the most advanced level of natural voice control currently available. Instead of having to use set spoken commands, the driver can formulate their request in everyday language and simply ask, for example, where the nearest Italian restaurant is.

### **Latest-generation multicolour Head-Up Display in M sport.**

In the new BMW 530d M Sport drivers can see the most pertinent information on current traffic conditions, warnings from the driver assistance systems, phone lists and the track currently being played by the infotainment system without having to avert their gaze from the road. This is thanks to the latest generation of the BMW Head-Up Display, which projects a wealth of information onto the windscreen as and when it is required. With a resolution of 800 x 400 pixels, the projection area is around 70 per cent larger than in the outgoing model, resulting in even more relaxed driving with complete concentration on the road ahead. The navigation instructions is also available in the M Sport package.

### **A good climate at all times, air ionisation and Ambient light.**

The all-new BMW 5 Series Sedan is equipped as standard with two-zone



automatic climate control featuring independent temperature control for driver and front passenger. It is also equipped with extended functionality offering features such as automatic activation of the air recirculation function, for instance when driving through a tunnel. Also, the Luxury Line and M Sport variant offers a four-zone climate control system that allows passengers in the rear to adjust the temperature, air distribution and airflow using a separate control console.

The Ambient light function also serves to enhance the occupants' sense of wellbeing. The coloured LED light provides harmonious illumination of the interior and accentuates its design contours, particularly around the instrument panel and the doors. There is a choice of eleven different lighting effects with six different light colours, and the brightness can also be adjusted individually.

### **Surround sound delivers flawless listening pleasure.**

The Luxury Line and M Sport variant of the all-new BMW 5 Series is equipped with a nine-channel surround sound system with 16 speakers and a total output of 600 watts from Harman Kardon, as well as an eight-channel system with 12 speakers and an output of 205 watts in the Sportline.

The Rear-seat entertainment Professional system, available in M Sport variant, offers occupants in the rear the luxury of two independently controlled, high-resolution 10.2-inch screens with DVD player, which also include connections for MP3 players, USB devices, games consoles and headphones. Passengers can also access the vehicle's entertainment functions, such as the TV, radio or the DVD changer, as well as surf the internet or use their phone.

### **Luggage compartment: ample proportions and easy loading.**

The all-new BMW 5 Series boasts 400-litre boot. The boot sill has been lowered compared to its predecessor, which combines with the larger boot opening and the substantial increase in width to ensure that even bulky items can be loaded more easily than ever. Luggage capacity can be increased with the through-loading facility, which allows the rear backrest to be folded flat with a 40:20:40 split. A further option is Comfort Access, which includes hands-free opening and closing of the boot lid. Activated by moving a foot under the rear apron, this facilitates loading and unloading bulky items. There is also the option of the Automatic Soft Close function for the doors as well as a trailer tow hitch with electrically swivelling tow ball.

# Powertrain and EfficientDynamics. More driving pleasure, less fuel consumption.



The seventh model generation of the all-new BMW 5 Series places the focus firmly on driving pleasure. This is in no small part down to its state-of-the-art engines, which form the basis for both sharper performance and lower fuel consumption figures. Not only does the all-new BMW 5 Series Sedan surpass its predecessors in both of these disciplines, it leads the way in the segment as a whole. A choice of one petrol and two diesel power units with four and six cylinders (only in diesel) will be available from launch.

## **New engine family with BMW TwinPower Turbo technology.**

All members of the newly developed, modular BMW EfficientDynamics engine family feature an extremely lightweight, thermodynamically optimised all-aluminium construction. Thanks to their unrivalled BMW TwinPower Turbo technology, they meld maximum power with exemplary efficiency, and all comply with the BS4 emission standard.

The petrol units employ TwinScroll turbocharging, High Precision Injection, Double-VANOS variable camshaft control and Valvetronic fully variable valve timing. The diesel models, meanwhile, feature a turbocharger with variable turbine geometry and latest-generation common-rail direct injection, which generates injection pressure of up to 2,500 bar.

## **BMW 530i: new four-cylinder petrol engine.**

The new two-litre four-cylinder in-line engine in the BMW 530i supersedes the petrol unit previously fitted in the BMW 528i. The turbocharged direct injection engine delivers its peak output of 185 kW/252 hp (up 5 kW/7 hp on its predecessor) between 5,200 and 6,500 rpm, and puts its maximum torque of 350 Nm on tap from 1,450 rpm all the way up to 4,800 rpm. Average fuel consumption works out at 15.56 kmpl, equating to CO<sub>2</sub> emissions of 152.92 g/km. The BMW 530i sprints from 0 to 100 km/h in 6.2 seconds and reaches a top speed of 250 km/h.

## **BMW 520d and BMW 530d: four and six-cylinder diesel engines.**

The four-cylinder diesel unit powering the BMW 520d has an output of 140 kW/190 hp at 4,000 rpm and unleashes its maximum torque of 400 Nm between 1,750 and 2,500 rpm. Gearshifts are made with an eight-speed Steptronic transmission. Fuel consumption with the eight-speed Steptronic comes in at 22.49 kmpl, resulting in CO<sub>2</sub> emissions of 117.34 g/km. The

sedan accelerates from 0 to 100 km/h in 7.5 seconds and clocks a top speed of 235 km/h (148 mph).

The ongoing development of BMW TwinPower Turbo technology has endowed the new BMW 530d with added dynamism and efficiency. With output peaking at 195 kW/265 hp at 4,000 rpm (+5 kW/7 hp) and formidable maximum torque of 620 Nm (+60 Nm) from 2,000 – 2,500 rpm, the straight-six engine outstrips the model it replaces by some margin. Yet despite its impressive performance figures, the BMW 530d gives 18.59 kmpl on average, equating to CO<sub>2</sub> emissions of 141.62 g/km. The new BMW 530d completes the 0 to 100 km/h sprint in 5.7 seconds, and its top speed is electronically limited to 250 km/h.

### **SYNTAK: cutting-edge acoustic capsule for engine and transmission.**

BMW has used the SYNTAK (Synergy Thermoacoustic Capsule) technology in the all-new BMW 5 Series to reduce powertrain noise. The lightweight soundproofing materials encapsulating the engine and transmission team up with a series of inventive touches to lower volume levels, while also producing considerable weight and fuel savings. SYNTAK improves the powertrain's heat retention, which in turn leads to reduced fuel consumption.

### **Navigation-assisted shift strategy.**

Besides the fuel-efficient power units, various other efficiency-enhancing details have been included to make sure that the new business sedan doesn't just stand out for its dynamic performance, but also leads the way in fuel economy and emissions.

This is exemplified by the ECO Pro mode, which can be activated with the Driving Experience Control switch. It is interlinked with the Navigation system Professional, enabling it to detect braking situations in advance – such as when entering built-up areas, speed limit zones, corners and filter lanes – and prepare the drive system accordingly. Such measures are accompanied by intelligently controlled energy and climate management, with the active air flap system in the new BMW 5 Series allowing even more variable control of the cooling air for the engine, brakes and air conditioning to suit the situation. Aside from its aerodynamic benefits, the system also shortens the engine's warm-up phase and makes sure that heat is retained for longer after the engine has been switched off.

The Auto Start Stop function is a perfect example of the advanced degree of connectivity in the new BMW 5 Series, as it uses information from the navigation system, stereo camera to prevent the engine from being switched

off in situations where that would be inefficient or unwarranted, such as at roundabouts or T-junctions. The result is a clearly noticeable increase in driving comfort in real-world use. The coasting function also does its bit to lower fuel consumption, particularly when travelling at higher speeds.

Ultimately, however, the Driving Experience Control switch (more details of which can be found in the “Chassis and assistance systems” chapter starting on page 17) always lets drivers decide whether they want to adopt a sportier driving style or focus more on fuel efficiency for the journey ahead.

# Chassis and driver assistance systems. The highest standards in driving dynamics and safety.



With a redesigned chassis, intelligent lightweight engineering, BMW's renowned even weight distribution and a highly torsion-resistant body, the seventh generation of the BMW 5 Series combines superb driving enjoyment with a new dimension in driver assistance technology, while once again setting a new class benchmark in driving dynamics. The BMW engineers have succeeded in making the car's handling even more agile and precise, yet without compromising the comfort which is a hallmark of this business sedan. At the same time, an extensive range of driver assistance systems take the BMW 5 Series Sedan a big step further down the road to automated driving.

## **Double-wishbone front suspension and five-link rear suspension.**

The wheelbase of 2,975 millimetres (+7 mm), and front and rear track width of 1,605/ 1,630 millimetres (+5 mm/+3 mm), show a slight increase over the previous 5 Series. The new double-wishbone front axle's kinematics are perfectly configured for a long-distance sedan. Extensive use of light-metal components keeps unsprung mass as low as possible, while separating the construction into an upper and a lower control arm level gave the engineers considerable freedom to fine-tune the balance between dynamics and comfort. The spring struts are not required to perform wheel location functions, so only have to handle minimal transverse forces. The suspension therefore delivers finely judged responses to bumps in the road. With small kinematic lever arms that minimise disturbance torque around the steering axis, the all-new BMW 5 Series Sedan offers the driver excellent steering feel with clear feedback. The rear suspension and double-wishbone front suspension work together to provide excellent anti-roll control when cornering, but never at the expense of ride comfort.

Light-metal components are also used extensively in the new five-link rear suspension, which is even lighter and stiffer than in the previous model and provides precise wheel location and excellent tracking stability in all driving situations. The specially calibrated elastokinematics, the large axle subframe mounting and supporting system, the thrust arms connecting the suspension and body and the high structural stiffness combined with low unsprung masses create an excellent overall balance between agility and comfort. The large mounting and supporting system also plays an important part in ensuring good acoustic insulation between the powertrain and suspension.

Thanks to this efficient decoupling, the new rear axle also contributes to the excellent acoustic comfort on board the BMW 5 Series Sedan.

### **Tailored dynamics and comfort for suspension and brakes.**

The all-new BMW 5 Series is fitted with optimised lightweight brakes featuring single-piece four-piston fixed aluminium callipers at the front, with lightweight discs, and single-piston fixed callipers with an integrated electromechanical parking brake at the rear. All the key driving dynamics systems are standard specification. The business sedan rides on 18 inch light-alloy wheels as standard,

The Dynamic Damper Control system, which is equipped with new valves and an optimised control algorithm, matches the damping characteristics to the road surface and driving situation. At the same time, the Driving Experience Control switch allows drivers to choose between a sportier or more relaxed basic suspension setting.

### **New modes and functions for Driving Experience Control.**

The Driving Experience Control switch allows drivers to choose between sporty, comfortable or extra-fuel-efficient vehicle settings, depending on the driving situation and personal preference. On the all-new BMW 5 Series, this system comes with a further expanded range of functions, offering an even wider spectrum of configurations and even greater differentiation of the driving experience.

These modes – Comfort, Sport, ECO PRO and Adaptive – can be selected at the touch of a button. Each mode activates a predefined set-up for the relevant powertrain and chassis components. The Sport and ECO PRO modes can be further differentiated using the iDrive Controller, which now allows the powertrain and chassis settings to be configured separately. In the new Adaptive Mode, the steering, Dynamic Damper Control and Steptronic transmission are automatically adapted to the driving style and, depending on vehicle specification, also to the route. The control logic reacts to inputs such as accelerator and steering commands, or gear selector position, to vary the powertrain and chassis characteristics between sporty and more relaxed. Also, data supplied by the Navigation system Professional is used to proactively adapt the settings to take account of upcoming bends and intersections, or different types of road, such as motorways or single-carriageway main roads.

### **Cruise Control for all driving situations.**

Dynamic Cruise Control (DCC), which is standard on the BMW 5 Series Sedan, maintains any selected speed between 30 and 250 km/h (19 - 155 mph). It also supports energy-saving coasting by decoupling the

engine from the powertrain when the driver lifts off the accelerator at higher speeds.

# BMW ConnectedDrive and business technologies.

## The intelligent car with total connectivity.



The all-new BMW 5 Series Sedan sets new standards for connectivity between the driver, vehicle and outside world: to this end, the already extensive portfolio of BMW ConnectedDrive Services has been expanded to include new products that are designed to bring added comfort and time savings for business travellers in particular.

### **Perfect parking: remote controlled or automatic.**

The all-new BMW 5 Series Sedan boasts an innovative technology first premiered in 2015 in the new BMW 7 Series: Remote Control Parking. This feature enables drivers to use parking spaces that are narrow enough to make getting out of the car very awkward. The parking manoeuvre is controlled using the Display Key. All the driver has to do is position their BMW 5 Series in front of the desired parking space, climb out and then manoeuvre the car into the space using the key. All acceleration and braking actions are monitored and controlled by the Park Distance Control (PDC), the Parking Assistant and the Surround View sensors, while the engine can be started and switched off by remote control.

The Parking Assistant, which enables automated parking with the greatest of ease in both parallel parking spaces and perpendicular or angled spaces, also comes with some extra functions. Potential parking spaces now only have to be around 80 centimetres longer than the vehicle itself to be eligible, meaning that the system can manoeuvre the car into even smaller spots than before. The ultrasonic sensors detect suitable parking spaces up to a speed of 35 km/h (22 mph). The system then takes care of the entire parking procedure, including all necessary steering inputs, gear changes, acceleration and braking. In the case of parking spaces that are perpendicular to or at an angle to the road, the system needs only around 40 centimetres of free space to each side of the car to trigger automated parking.

### **Three-dimensional images of the vehicle and its surroundings.**

Surround View and 3D View offer peace of mind to anyone who frequently finds themselves manoeuvring in awkward traffic situations in city centres by allowing them to keep an eye on the area surrounding their BMW 5 Series at all times. The system shows a bird's-eye view of the driver's car as well as a three-dimensional image of the traffic situation. Any obstacles or other road users that suddenly appear can be spotted even earlier in this way.



### **Display Key: door opener and information centre.**

Besides the facility for directing the BMW 5 Series into a parking space by remote control, the optional Display Key offers a host of other functions as well. Remote operation of the auxiliary ventilation systems is just one example. The smart key includes a colour display with touch control, which provides information on the most important vehicle parameters. This means drivers can quickly check – even while they're out and about – whether they closed the windows, sunroof and doors when they parked their car. The car's fuel level and remaining range are also shown on the key, along with any service information. It is charged by means of an inductive charger in the car or from a USB port.

### **Wireless charging**

Mobile phones with inductive charging preparation can be supplied with power wirelessly in the BMW 5 Series Sedan. The inductive charging tray required for this is located in the centre console in front of the cupholders. The charging tray furthermore establishes a wireless connection to the external aerial, which improves mobile phone reception substantially, particularly in areas with a weak signal.

### **The navigation system that keeps learning.**

The latest generation of the Navigation system Professional boasts quicker start-up, even faster route calculation and more realistic 3D graphics in cities. The navigation system is adaptive, too, meaning that if the driver keeps diverting from a suggested route, the system will in future propose the newly learned route as the standard route to the destination in question.

# Lightweight engineering and safety. Lower weight, better protection.



The BMW EfficientLightweight concept has been rigorously applied throughout the all-new BMW 5 Series Sedan. Using an intelligent multi-material mix consisting of aluminium, high-tensile steels and magnesium, up to 100 kilograms has been shaved off the weight of the previous model, while body strength and torsional stiffness have been increased. A low centre of gravity, a perfectly balanced axle load ratio and a further reduction in unsprung masses have benefits for both dynamics and comfort. The acoustics package too, with engine encapsulation and the use of superabsorbers, has been designed for reduced weight, while also setting new standards in interior noise reduction.

## **Intelligent multi-material mix reduces weight and increases strength.**

Large load-bearing members in the new BMW 5 Series, and strategic use of high- and ultra-high-strength steels in the roof, side members and rear, give the body high structural strength. The bonnet, boot lid, engine cross-member, rear side-members, roof and doors are constructed from aluminium. The doors, with laser-cut outer panelling, have an aluminium shell construction, which maximises the weight-reducing benefits of this material when used in combination with state-of-the-art production technologies. At only around six kilograms (including the hinges and door brake), these doors are currently the lightest in this segment.

The use of hot-stamped steels, aluminium alloys and multi-phase steels in the safety passenger cell provides high rigidity, for the best possible passive safety and low weight. The cast magnesium instrument panel support is up to two kilograms lighter than the steel version used on the previous model.

Big weight savings have also been achieved for the chassis components. To take just one of many examples, the integration of the electric parking brake into the rear brake callipers brings weight savings of approximately three kilograms. Altogether, the weight savings on the brakes, wheels and tyres add up to a reduction of more than nine kilograms in unsprung mass, with noticeable benefits for dynamics and ride comfort.

For the first time, the boot lid of the BMW 5 Series Sedan is made entirely of aluminium, bringing a weight saving of 4.2 kilograms. And a further half

kilogram has been shed thanks to use of the natural fibre kenaf in the inner lining of the boot lid. Kenaf's high recyclability means it is also has a high sustainability factor and is very eco-friendly.

**Unique body structure provides unbeatable occupant protection.**

The concept underpinning the body of the all-new BMW 5 Series Sedan is unique in its class as far as technology, structure and materials are concerned. The body structure offers optimised safety both for the vehicle's own occupants and occupants of other vehicles. It is also very light and was designed using state-of-the-art simulation techniques. Deformation spaces are optimally designed and utilised, courtesy of the latest technologies in body design. The aim was to split up the main load paths so that the impact forces are dispersed over as wide an area as possible by the time they reach the extremely rigid passenger cell. This ensures optimal deceleration of the passenger cell in an accident, allowing the front, rear and side impact restraint systems to provide the most effective protection possible.

The airbags' integrated safety electronics ensure that they deploy in the right sequence and provide the right level of restraint at exactly the right time. Taking into account the number of passengers and the severity and nature of the accident, the intelligent control system prevents airbags from being triggered whenever they are not actually required. This way these airbags are still available for deployment in the event of secondary collisions.

# The model and the market.

## The seventh generation of a highly successful family.



The all-new BMW 5 Series turns the page on chapter seven in an enthralling story of success.

An overview of the six generations so far:

### **2010: The most successful business sedan (F10/F11/F18/F07).**

The sixth generation of the BMW 5 Series wasted no time in becoming market leader in its class after it was launched in January 2010. It featured an even more rigid body than its predecessor and was fitted with more safety and driver assistance systems. The BMW 5 Series Gran Turismo added a third body variant with a large tailgate to the line-up. And there was a broader spread of engine outputs than ever before, ranging from 105 kW/143 hp in the BMW 518d to 423 kW/575 hp for the BMW M5. In November 2011 the first BMW 5 Series with hybrid technology came onto the market in the shape of the BMW Active Hybrid 5 (system output: 250 kW/340 hp). With sales of over 2.2 million units, the sixth generation of the BMW 5 Series has outstripped its predecessor by close to 60 per cent and is the most successful premium business model worldwide. The wealth of honours and awards it has garnered over the last six years is further evidence of the high regard in which it is held.

### **2003: Entering a new age (E60/E61).**

The fifth generation of the BMW 5 Series impressed from day one with its progressive design and innovative technology. Available initially as a sedan and from 2004 also in Touring guise, it set new standards in the areas of active safety, driver assistance systems and efficiency, in particular. The engine line-up for this generation of the BMW 5 Series comprised six petrol units and four diesels, producing between 120 kW/163 hp (BMW 520d) and 373 kW/507 hp (BMW M5). From 2007 the BMW EfficientDynamics technology package was a standard feature. The BMW 5 Series was the highest-selling car in its segment for four years running (2005 – 2008), with a total of more than 1.4 million units handed over to their owners.

### **1995: Alloy chassis makes its 5 Series debut (E39).**

The fourth generation of the BMW 5 Series celebrated its premiere at the International Motor Show (IAA) in Frankfurt in 1995. The BMW 5 Series was the world's first volume-produced car to feature a chassis made almost

entirely from light metal. The newly developed all-aluminium engines added further to the weight savings. The output spectrum of the four diesel and six petrol engines ranged from the 100 kW/136 hp of the BMW 520d to 294 kW/400 hp in the BMW M5. The fourth generation of the BMW 5 Series also posted a new sales record; by the time production came to an end at the start of 2004 more than 1.47 million units had been sold.

### **1987: Premiere of the E34, BMW 5 Series Touring launched in 1991.**

The BMW design team led by Claus Luthe clearly took their cues for the styling of the third-generation BMW 5 Series from the appearance of the new BMW 7 Series launched shortly before it. The output of the 11 engines in the line-up – which included three diesels – stretched from 83 kW/113 hp in the BMW 518i to 250 kW/340 hp in the case of the BMW M5. All of the petrol engines were equipped as standard with a closed-loop catalytic converter and designed to run on standard unleaded petrol. And an all-wheel-drive variant was made available for the first time in the form of the BMW 525iX. The BMW 5 Series Touring celebrated its premiere in 1991. It came with a tailgate with a separately-opening rear window, which remains a distinctive feature of the car today. Production of the BMW 5 Series Sedan ended in September 1995, although the BMW 5 Series Touring continued to roll off the assembly line until June 1996. With total sales topping 1.3 million units, the third-generation model had elevated the success of the 5 Series into a new dimension.

### **1981: A modern update of a proven concept (E28).**

The second generation of the BMW 5 Series sported a two-section split kidney grille element and circular headlights with different diameters for main and dipped beam. The engine portfolio largely reflected that of its predecessor, which at launch meant petrol variants with 66 kW/90 hp (BMW 518) to 135 kW/184 hp (BMW 528i). A diesel variant was added to the line-up for the first time in 1983, in the form of the BMW 524td. In 1985 BMW Motorsport GmbH – the forerunner to today's BMW M GmbH – presented the quintessential large sports sedan: the BMW M5. Its six-cylinder in-line engine, derived from the unit powering the legendary BMW M1, developed 210 kW/286 hp. The second generation of the BMW 5 Series ended production in June 1988 having set a new sales landmark of more than 722,000 units over its eight-year lifespan.

### **1972: the first ever BMW 5 Series (E12).**

The successful history of the BMW 5 Series began more than 40 years ago with the first-generation sedan. It also heralded the introduction of a naming system for BMW model designations that is still in use today. The BMW 520 was the successor to the BMW 2000 "Neue Klasse" model and offered

customers noticeably more space and comfort. The petrol engines developed from 66 kW/90 hp in the BMW 518 to 160 kW/218 hp in the BMW M535i. Production of the first BMW 5 Series came to an end in July 1981 with getting on for 700,000 sedans sold.

## **Production and sustainability.** **Higher recyclability,** **reduced carbon footprint.**

As early as the development process, great importance was attached to the recyclability and pollutant-free nature of all materials used. That's why an increased percentage of secondary (i.e. recycled) materials is now used in production of the all-new BMW 5 Series. For example, the high-strength aluminium castings consist of 50 per cent secondary aluminium. These measures, in conjunction with the use of renewable energies, have offset the environmental impact of the significant increase in the use of lightweight materials for the new BMW 5 Series.

# Specifications.

## The all-new BMW 5 Series.

### 530i.



BMW 530i		
<b>Body</b>		
No of doors/seats		4/5
Length/width/height (unladen)	mm	4936/1868/1479
Wheelbase	mm	2975
Track, front/rear	mm	1605/1630
Turning circle	m	12.05
Fuel tank capacity	approx. ltr	68
Engine oil <sup>1)</sup>	ltr	5.25
Weight, unladen, to DIN/EU	kg	1689
Max load to DIN	kg	660
Max permissible weight	kg	2200
Max axle load, front/rear	kg	950/1250
Max trailer load, Braked (12%/unbraked	kg	2000/750
Max roofload/max towbar download	kg	100/90
Luggage comp capacity	ltr	400
Air resistance	C <sub>d</sub> x A	0.24 x 2.35
<b>Power Unit</b>		
Config/No of cyls/valves		In-line/4/4
Engine technology	BMW TwinPower Turbo technology: TwinScroll turbocharger, High Precision Direct Injection, VALVETRONIC fully variable valve control, Double-VANOS variable camshaft timing	
Effective capacity	cc	1998
Stroke/bore	mm	94.6/82.0
Compression ratio	:1	10.2
Fuel		min. RON 91
Max output	kW/hp	185/252
at	rpm	5200
Max torque	Nm/lb-ft	350/258
at	rpm	1450-4800
<b>Electrical System</b>		
Battery/installation	Ah/-	90/Luggage compartment
Alternator	A/W	n.b.
<b>Driving Dynamics and Safety</b>		
Suspension, front	Aluminium double track control arm axle with separate lower track arm level, small steering roll radius, traverse force compensation, anti-dive	
Suspension, rear	Five-link axle in aluminium lightweight construction	
Brakes, front	Four-piston fixed-calliper disc brakes / vented	
Brakes, rear	Single-piston floating-calliper disc brakes / vented	
Driving stability systems	Standard: DSC incl. ABS and DTC (Dynamic Traction Control), CBC (Cornering Brake Control), DBC (Dynamic Brake Control), Dry Braking function, Fading Compensation, Start-Off Assistant, Dynamic Damper Control, Drive Performance Control	
Safety equipment	Standard: airbags for driver and front passenger, side airbags for driver and front passenger, head airbags for front and rear seats, three-point inertia-reel seatbelts on all seats with belt latch tensioner and belt force limiter at the front seats, crash sensors, tyre defect indicator	
Steering	Electric Power Steering (EPS)	
Steering ratio, overall	:1	16.3
Tyres, front/rear	245/45 R18	
Rims, front/rear	8J x 18 light alloy	



BMW 530i Sedan			
Transmission			
Type of transmission		8-speed Steptronic	
Gear ratios	I	:1	5.000
	II	:1	3.200
	III	:1	2.143
	IV	:1	1.720
	V	:1	1.314
	VI	:1	1.000
	VII	:1	0.822
	VIII	:1	0.640
	R	:1	3.456
Final drive		:1	2.929
Performance			
Power-to-weight ratio	kg/kW		9.1
Output per litre	kW/ltr		92.6
Acceleration	0–100 km/h	sec	6.2
In 5th gear	80–120 km/h	sec	--
Top speed	km/h		250
BMW EfficientDynamics			
BMW EfficientDynamics standard features		Brake Energy Regeneration, electromechanical power steering, Automatic Start/Stop function, ECO PRO mode, coasting function, intelligent lightweight construction, optimised aerodynamic attributes, on-demand operation of ancillary units, map-regulated oil pump, differential with optimised warm-up behaviour, tyres with reduced rolling resistance	
Fuel Consumption ECE <sup>2)</sup>			
Combined	km/ltr		15.56
CO <sub>2</sub>	g/km		152.92
Emission rating			BS4

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

<sup>1)</sup> Oil change

<sup>2)</sup> Fuel consumption and CO<sub>2</sub> emissions depend on the selected tyre format

# The all-new BMW 5 Series. 520d.

BMW 520d		
<b>Body</b>		
No of doors/seats		4/5
Length/width/height (unladen)	mm	4936/1868/1479
Wheelbase	mm	2975
Track, front/rear	mm	1605/1630
Turning circle	m	12.05
Fuel tank capacity	approx. ltr	66
Engine oil <sup>1)</sup>	ltr	5.0
Weight, unladen,	kg	1679
Max load to DIN	kg	566
Max permissible weight	kg	2245
Max axle load, front/rear	kg	1055/1280
Max trailer load, Braked (12%)/unbraked	kg	1800 /750
Max roofload/max towbar download	kg	100/90
Luggage comp capacity	ltr	400
Air resistance	C <sub>d</sub> x A	0.24 x 2.35
<b>Power Unit</b>		
Config/No of cyls/valves		In-line/4/4
Engine technology		BMW TwinPower Turbo technology: variable-geometry turbocharger, common-rail direct injection
Effective capacity	cc	1995
Stroke/bore	mm	90.0/84.0
Compression ratio	:1	16.5
Fuel		Diesel
Max output	kW/hp	140/190
at	rpm	4000
Max torque	Nm/lb-ft	400/295
at	rpm	1750-2500
<b>Electrical System</b>		
Battery/installation	Ah/-	90/Luggage compartment
Alternator	A/W	n.b.
<b>Driving Dynamics and Safety</b>		
Suspension, front		Aluminium double track control arm axle with separate lower track arm level, small steering roll radius, traverse force compensation, anti-dive
Suspension, rear		Five-link axle in aluminium lightweight construction
Brakes, front		Four-piston fixed-calliper disc brakes / vented
Brakes, rear		Single-piston floating-calliper disc brakes / vented
Driving stability systems		Standard: DSC incl. ABS and DTC (Dynamic Traction Control), CBC (Cornering Brake Control), DBC (Dynamic Brake Control), Dry Braking function, Fading Compensation, Start-Off Assistant, Dynamic Damper Control, Drive Performance Control
Safety equipment		Standard: airbags for driver and front passenger, side airbags for driver and front passenger, head airbags for front and rear seats, three-point inertia-reel seatbelts on all seats with belt latch tensioner and belt force limiter at the front seats, crash sensors, tyre defect indicator
Steering		Electric Power Steering (EPS)
Steering ratio, overall	:1	16.3
Tyres, front/rear		245/45 R18 100Y
Rims, front/rear		8J x 18 light alloy

**BMW 520d Sedan**

**Transmission**

Type of transmission	8-speed Steptronic		
Gear ratios	I	:1	5.00
	II	:1	3.2
	III	:1	2.14
	IV	:1	1.72
	V	:1	1.31
	VI	:1	1.00
	VII	:1	0.822
	VIII	:1	0.64
	R	:1	3.456
Final drive		:1	

**Performance**

Power-to-weight ratio	kg/kW	11.0 (11.1)
Output per litre	kW/ltr	70.2
Acceleration 0–100 km/h	sec	7.5
In 5th gear 80–120 km/h	sec	--
Top speed	km/h	238 (235)

**BMW EfficientDynamics**

BMW EfficientDynamics standard features	Brake Energy Regeneration, electromechanical power steering, Automatic Start/Stop function, ECO PRO mode, coasting function (automatic), intelligent lightweight construction, optimised aerodynamic attributes, on-demand operation of ancillary units, map-regulated oil pump, differential with optimised warm-up behaviour, tyres with reduced rolling resistance
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**Fuel Consumption IN**

Combined	km/ltr	22.48
CO <sub>2</sub>	g/km	117.34
Emission rating		BS4

Specifications apply to ACEA markets/data relevant to homologation applies in part only to Germany (weight)  
Figures in brackets apply to models with automatic transmission

<sup>1)</sup> Oil change

<sup>2)</sup> Fuel consumption and CO<sub>2</sub> emissions depend on the selected tyre format

# The all-new BMW 5 Series. 530d.

BMW 530d Sedan		
<b>Body</b>		
No of doors/seats		4/5
Length/width/height (unladen)	mm	4936/1868/1479
Wheelbase	mm	2975
Track, front/rear	mm	1605/1630
Turning circle	m	12.05
Fuel tank capacity	approx. litr	66
Engine oil <sup>1)</sup>	litr	6.5
Weight, unladen,	kg	1848
Max load to DIN	kg	497
Max permissible weight	kg	2345
Max axle load, front/rear	kg	1035/1310
Max roofload/max towbar download	kg	100/90
Luggage comp capacity	litr	400
Air resistance	c <sub>d</sub> x A	0.24 x 2.35
<b>Power Unit</b>		
Config/No of cyls/valves		In-line/6/4
Engine technology		BMW TwinPower Turbo technology: variable-geometry turbocharger, common-rail direct injection
Effective capacity	cc	2993
Stroke/bore	mm	90.0/84.0
Compression ratio	:1	16.5
Fuel		Diesel
Max output	kW/hp	195/265
at	rpm	4000
Max torque	Nm/lb-ft	620/457
at	rpm	2000–2500
<b>Electrical System</b>		
Battery/installation	Ah/–	105/Luggage compartment
Alternator	A/W	n.b.
<b>Driving Dynamics and Safety</b>		
Suspension, front		Aluminium double track control arm axle with separate lower track arm level, small steering roll radius, traverse force compensation, anti-dive
Suspension, rear		Five-link axle in aluminium lightweight construction
Brakes, front		Four-piston fixed-calliper disc brakes / vented
Brakes, rear		Single-piston floating-calliper disc brakes / vented
Driving stability systems		Standard: DSC incl. ABS and DTC (Dynamic Traction Control), CBC (Cornering Brake Control), DBC (Dynamic Brake Control), Dry Braking function, Fading Compensation, Start-Off Assistant, Dynamic Damper Control, Drive Performance Control
Safety equipment		Standard: airbags for driver and front passenger, side airbags for driver and front passenger, head airbags for front and rear seats, three-point inertia-reel seatbelts on all seats with belt latch tensioner and belt force limiter at the front seats, crash sensors, tyre defect indicator
Steering		Electric Power Steering (EPS)
Steering ratio, overall	:1	16.3
Tyres, front/rear		Fr-245/45 R18 Rr- 275/40 R18
Rims, front/rear		8J x 18 light alloy

**BMW 530d Sedan**

**Transmission**

Type of transmission	8-speed Steptronic		
Gear ratios	I	:1	5.000
	II	:1	3.200
	III	:1	2.143
	IV	:1	1.720
	V	:1	1.313
	VI	:1	1.000
	VII	:1	0.823
	VIII	:1	0.640
	R	:1	3.478
Final drive		:1	2.471

**Performance**

Power-to-weight ratio	kg/kW	8.4
Output per litre	kW/ltr	65.2
Acceleration 0–100 km/h	sec	5.7
In 5th gear 80–120 km/h	sec	--
Top speed	km/h	250

**BMW EfficientDynamics**

BMW EfficientDynamics standard features	Brake Energy Regeneration, electromechanical power steering, Automatic Start/Stop function, ECO PRO mode, coasting function, intelligent lightweight construction, optimised aerodynamic attributes, on-demand operation of ancillary units, map-regulated oil pump, differential with optimised warm-up behaviour, tyres with reduced rolling resistance
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**Fuel Consumption ECE<sup>2)</sup>**

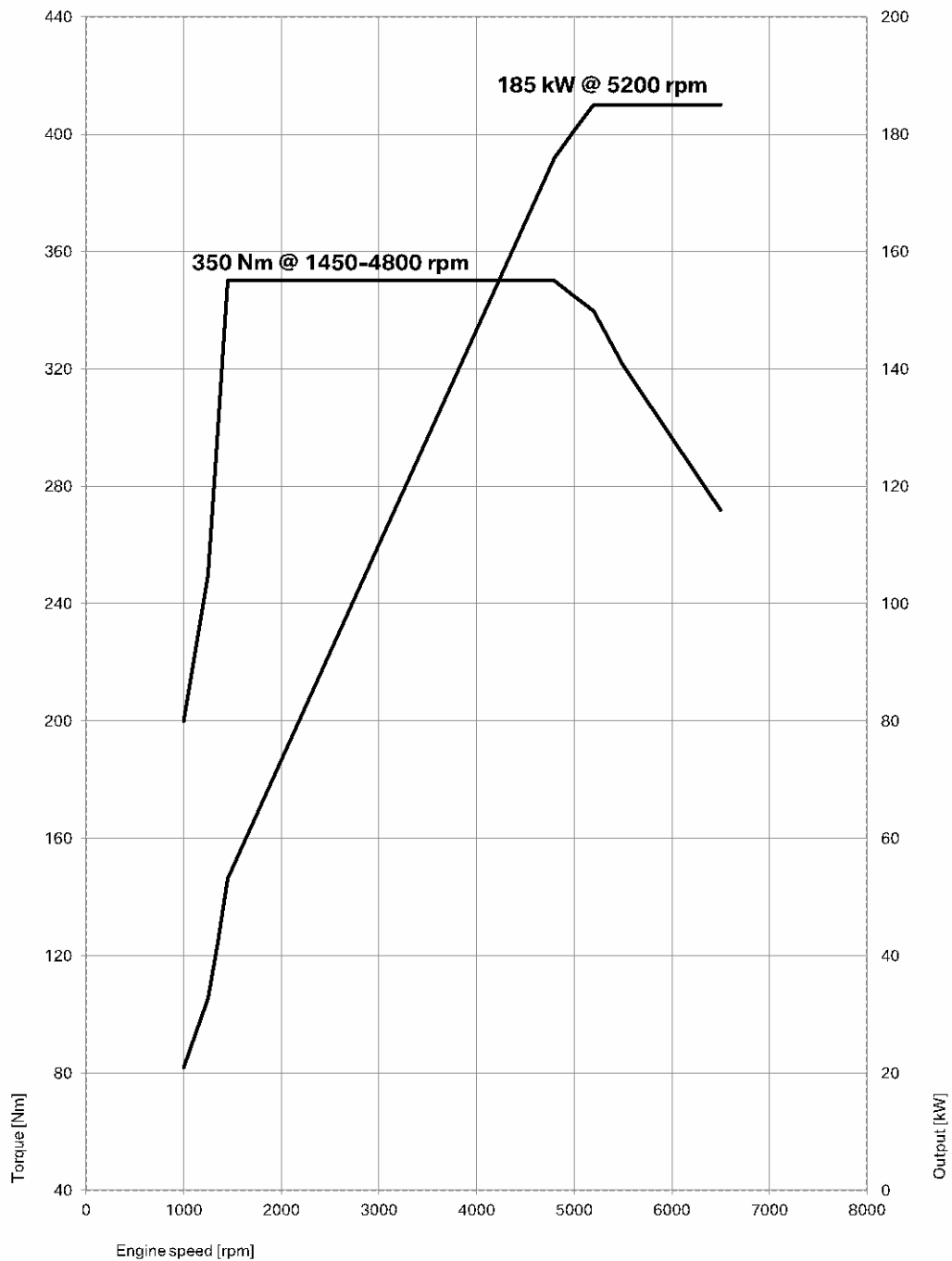
Combined	km/ltr	18.59
CO <sub>2</sub>	g/km	141.62
Emission rating		BS4

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

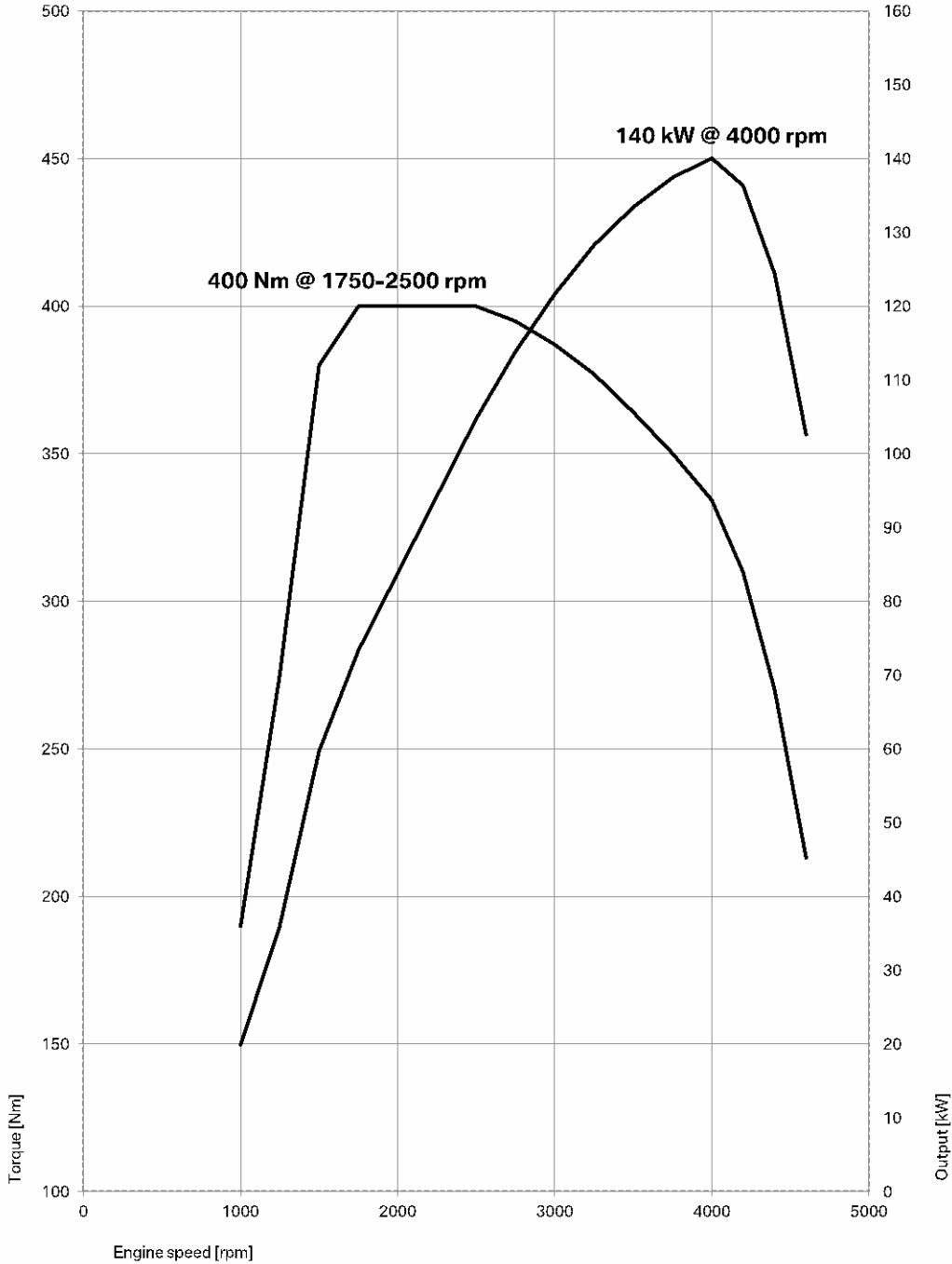
<sup>1)</sup> Oil change

<sup>2)</sup> Fuel consumption and CO<sub>2</sub> emissions depend on the selected tyre format

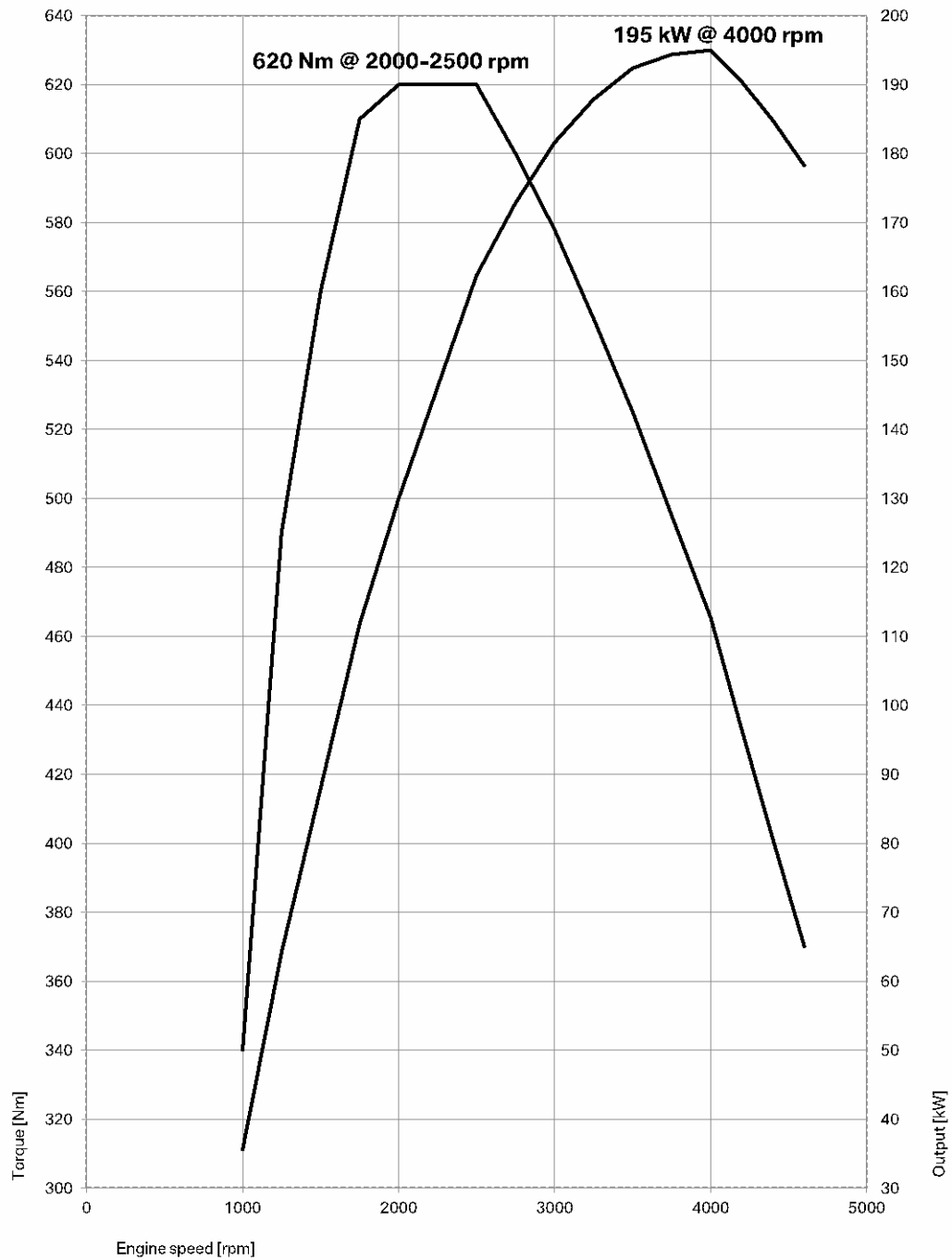
# Output and torque diagrams. The all-new BMW 5 Series. 530i.



# The all-new BMW 5 Series. 520d.



# The all-new BMW 5 Series. 530d.





# Exterior and interior dimensions. The all-new BMW 5 Series.

