

# The BMW ActiveHybrid 3. Contents.



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# 1. Intelligence breeds efficiency. The BMW ActiveHybrid 3 (Short version).

**Enhanced efficiency coupled with increased dynamics in the BMW ActiveHybrid 3 thanks to the combination of an award-winning combustion engine and an innovative electric drive.**

**BMW TwinPower Turbo technology working in tandem with an eight-speed automatic hybrid transmission and intelligent energy management.**

**All-electric operation up to 75 km/h (46 mph). All-electric driving range up to four kilometres (approx. 2.5 miles).**

**System output 250 kW/340 hp.**

**Outstanding ratio of driving performance to fuel consumption: 5.3 seconds from zero to 100 km/h (62 mph). 5.9 litres per 100 km (47.9mpg imp) and 139 g CO<sub>2</sub>/km in the EU test cycle.**

**Latest-generation BMW ActiveHybrid technology: six-in-line engine, electric motor, lithium-ion battery.**

The 225 kW/306 hp six-cylinder in-line engine with BMW TwinPower Turbo technology in the BMW ActiveHybrid 3 is the same unit renowned for its free-revving capability, pulling power and efficiency in the BMW 335i. The electric motor, meanwhile, develops 40 kW/55 hp and is supplied with energy by a high-voltage lithium-ion battery integrated underneath the luggage area.

Power from the two drive systems is transferred to the rear wheels by the eight-speed automatic transmission. In addition to its full-hybrid construction, which enables purely electric and therefore local emission-free driving in urban conditions or when coasting, the BMW ActiveHybrid 3 boasts not just highly sporty performance but also a double-digit percentage improvement in fuel economy over the BMW 335i/335iA.

### **Superior efficiency thanks to ECO PRO mode including coasting and intelligent energy management.**

In order to exploit the potential of the BMW ActiveHybrid technology, the intelligent energy management of the power electronics uses a host of innovative functions to ensure the drive system runs efficiently.

Charging of the high-performance battery primarily takes place during coasting or braking, the electric motor performing the role of a generator feeding energy into the high-voltage battery. By contrast, under acceleration the electric motor takes on a boost function. Here, it assists the petrol engine by generating an ultra-dynamic burst of power, lending the Sedan's sporty driving experience a sharper edge.

Moreover, while coasting at speeds of up to 160 km/h (100 mph) in ECO PRO mode, the combustion engine can be switched off and fully decoupled. This coasting mode combines comfortable driving with optimum utilisation of the kinetic energy already generated. To avoid periods with the engine running at idle at junctions or in traffic tailbacks, the BMW ActiveHybrid 3 deploys its hybrid start-stop function. Plus, the power electronics can be intelligently linked up with the navigation system Professional (optional on the ActiveHybrid 3). This allows for proactive analysis of the driving situation, enabling the drive components to be primed to deliver maximum efficiency (the effect may vary according to the quality of the available navigation data).

### **Design: sporty elegance with individual accents.**

The BMW ActiveHybrid 3 sees the sporty yet elegant body design of the BMW 3 Series Sedan complemented by bespoke touches which highlight its innovative drive technology. The "ActiveHybrid 3" lettering on the C-pillars and at the rear, along with the matt chrome exhaust tailpipes, set the exterior apart from the other models in the range. Further accents come courtesy of the standard satin-finish window surrounds and the BMW Individual High-gloss Shadow features in the side graphic.

Available as an option, meanwhile, are 18-inch Streamline light-alloy wheels displaying exceptional aerodynamic efficiency.

The BMW ActiveHybrid 3 also stands out visually with door sill strips bearing “ActiveHybrid 3” lettering, an aluminium plate on the gearshift lever knob with the same ID, and a bespoke engine cover. In addition, all three Sport, Modern and Luxury lines as well as the M Sport package are available for the ActiveHybrid 3.

**High-grade standard fittings, wide-ranging options.**

The selection of interior colours, upholstery and interior trim elements reflects the range offered for the other BMW 3 Series Sedan variants.

Added to the standard-fitted array of comfort-enhancing features is also a 2-zone climate control system with stationary air conditioning.

A wide range of driver assistance systems and BMW ConnectedDrive mobility services, as well as virtually all the other optional extras available for the conventionally powered BMW 3 Series Sedan, can also be optionally specified for the BMW ActiveHybrid 3.

**Production at BMW Plant Munich.**

The BMW ActiveHybrid 3 will be produced at BMW Plant Munich alongside other BMW 3 Series models.

The integration into the production process of BMW ActiveHybrid technology is underpinned by the efficient combination of state-of-the-art automated process engineering and the skilled craftsmanship of specially trained employees.



## 2. Powertrain: New-generation BMW ActiveHybrid technology.

**Hybrid components developed specifically for this model:**

**40 kW/55 hp synchronous electric motor, power electronics, lithium-ion high-voltage battery.**

**Award-winning six-cylinder in-line engine as part of  
BMW ActiveHybrid technology.**

**Electric motor and eight-speed automatic transmission share the  
same housing.**

BMW has developed its intelligent hybrid drive technology to the next level with a further ActiveHybrid production model. Again, a petrol engine is combined with an electric motor to enhance both efficiency and the brand's hallmark driving pleasure.

In the BMW ActiveHybrid 3, a BMW TwinPower Turbo six-in-line engine is coupled with an electric motor and an eight-speed automatic transmission which sends combined power of 250 kW/340 hp to the rear wheels.

The BMW ActiveHybrid 3's synchronous electric motor is powered by a lithium-ion high-voltage battery housed under the luggage compartment between the wheel arches.

The latest-generation BMW ActiveHybrid technology also adds precisely controlled – and therefore extremely efficient – energy management to the mix.

All the hybrid-related powertrain and energy management components were developed specifically for the BMW ActiveHybrid 3. The result is an extremely well-integrated overall system which convincingly showcases the benefits of BMW ActiveHybrid technology out on the road. Needless to say, all the new hybrid components are designed to last the lifetime of the vehicle.

### **Powerful and efficient: the award-winning BMW TwinPower Turbo six-in-line engine in the BMW ActiveHybrid 3.**

The BMW ActiveHybrid 3 is the second hybrid model from BMW – after the BMW ActiveHybrid 5 – to use a six-cylinder in-line engine in its powertrain.

Also featured in the BMW 335i, this petrol engine develops maximum power of 225 kW/306 hp at 5,800 rpm and maximum torque of 400 Newton metres (295 lb-ft) between 1,200 and 5,000 rpm, and has gained wide recognition as offering outstanding driving enjoyment and efficiency.

It has already won the international “Engine of the Year” award two years in a row. The six-cylinder powerplant’s BMW TwinPower Turbo technology comprises a twin-scroll turbocharger, High Precision Direct Injection and VALVETRONIC fully variable valve timing. This technology package improves throttle response and revving ability as well as refinement and efficiency, while an aluminium crankcase also optimises weight.

### **Electric motor: eager power delivery, compact design.**

The BMW ActiveHybrid 3’s synchronous electric motor develops a maximum output of 40 kW/55 hp. As well as supporting all-electric operation around town, it can also provide a performance-boosting function for more powerful acceleration. In either case, the drive power is supplied instantly and without lag. Like all electric motors, this one develops its full torque – of 210 Newton metres (155 lb-ft) – from a standing start.

The electric motor is compactly integrated in the housing of the eight-speed automatic transmission, and is connected to the transmission by a clutch. Its operating temperature is controlled by the cooling system of the internal combustion engine. Thanks among other things to its high internal efficiency and low weight, the eight-speed automatic transmission contributes to the efficiency of the powertrain as a whole.

With its eight speeds, it combines a wide gear range with close ratio spacing. It also allows more use to be made of top gear, for a fuel-efficient, low-rpm driving style. The direct downshift capability and exceptionally short shift times can support very sporty driving, too. Throughout, the high-performance transmission controller ensures that gear changes are always closely matched

to the driver's demands and the driving situation.

Optionally, the BMW ActiveHybrid 3 can be supplied with a quick-shifting sports automatic transmission, whose dynamic characteristics are emphasised by a customised selector lever and steering wheel-mounted paddle shifts.

### **Lithium-ion high-voltage battery housed underneath the boot.**

The electric motor is powered by a lithium-ion high-voltage battery, which again was developed specifically for the BMW ActiveHybrid 3. The battery is encased in a special high-strength housing and positioned between the wheel arches in the boot. This provides optimal protection for the battery and helps to ensure a well-balanced weight distribution. The battery cooling system is integrated into the air conditioning cooling circuit. The battery comprises 96 cells and has an effective energy capacity of 675 Wh.

In addition to its conventional 14V electrical system, the BMW ActiveHybrid 3 is also equipped with a high-voltage electrical system with a rated voltage of 317V. Linked by a voltage transformer, these two systems provide maximum electrical power throughout the operating range, for improved performance and comfort. Both the electric motor and the air conditioning compressor are powered exclusively by the lithium-ion high-voltage battery, via the high-voltage electrical system. This allows the desired interior climate to be maintained even when the internal combustion engine is switched off – i.e. when the car is at a standstill, operating purely on electric power or in coasting mode.



### **3. Driving experience: Innovative functions for maximum performance and efficiency.**

**All-electric operation up to a speed of 75 km/h (46 mph). Coasting mode can be activated up to 160 km/h (100 mph).**

**Hybrid start-stop function with stationary climate control reduces fuel consumption with no compromises on comfort.**

**Integration of power electronics and navigation system for unique proactive energy management.**

In the BMW 3 Series hybrid model, BMW ActiveHybrid technology again combines a significant boost in driving enjoyment with a substantial reduction in fuel consumption and emissions. The precisely controlled power splitting between the internal combustion engine and the electric motor makes for an exhilarating hybrid driving experience. The BMW ActiveHybrid 3 is a full hybrid, which means that it is capable of operating solely on electric power, for zero-emission driving around town. At the same time it is also capable of very sporty performance – yet combines this with a double-digit percentage improvement in fuel consumption over the BMW 335i and 335iA. Developed specifically for this model, the BMW ActiveHybrid technology reduces average fuel consumption to 5.9 litres per 100 kilometres (47.9mpg imp) and CO<sub>2</sub> emissions to 139 grams per kilometre (figures according to EU test cycle).

To make the most of the ActiveHybrid technology in the BMW ActiveHybrid 3, the power electronics incorporate a range of innovative intelligent energy management functions whose aim is to ensure that the powertrain operates as efficiently as possible. In addition to the hybrid start-stop function, ECO PRO mode and the coasting mode (available at any speed up to 160 km/h / 100 mph), these functions also include a unique proactive powertrain control system. All these systems help to ensure that the energy supplied by the fuel is used as efficiently as possible.



**Full-hybrid capabilities for zero tailpipe emissions, boost function for extra-dynamic performance.**

Up to a speed of 75 km/h (46 mph), the BMW ActiveHybrid 3 can operate in all-electric mode for zero emissions when coasting and in city traffic. Fully charged, the lithium-ion high-voltage battery provides an all-electric driving range of up to four kilometres (approx. 2.5 miles) at an average speed of 35 km/h (22 mph).

The internal combustion engine is only started when the driver requires more power; it is then engaged automatically. Its performance can be boosted by the electric motor to provide extra power when accelerating. Maximum combined power is 250 kW/340 hp, with maximum torque of 450 Newton metres (332 lb-ft). Under combined ICE/electric power, the BMW ActiveHybrid 3 delivers a 0 to 100 km/h (62 mph) acceleration time of 5.3 seconds. The Sedan's governed top speed is 250 km/h (155 mph).

**Hybrid-specific auto start-stop function and coasting mode.**

The specially designed hybrid auto start-stop function ensures that comfort is not affected even when the vehicle is stopped in traffic for longer periods – because the automatic climate control and the on-board electrical system are powered by the lithium-ion high-voltage battery. On moving off again, when the driver releases the brake, the vehicle will restart on either the electric motor alone or the electric motor and the petrol engine, depending on the high-voltage battery's current charge level and on how much power the driver wants.

ECO PRO mode, which can be activated via the Driving Experience Control switch, supports a particularly fuel-efficient driving style in the BMW ActiveHybrid 3 and makes more frequent use of all-electric mode.

ECO PRO mode modifies the characteristics of the powertrain, including the transmission, while the electrically powered convenience functions are programmed for optimal energy efficiency.

A further function developed for the BMW ActiveHybrid 3 – the coasting mode – boosts efficiency by shutting the internal combustion engine down not only when the vehicle is stationary, or when driving in town, but also on overrun. Coasting mode switches off the petrol engine and disconnects it from the drive shaft. From this point on, the BMW ActiveHybrid 3 coasts soundlessly, with zero emissions and with no engine braking effect. The efficiency improvements are further enhanced by reduced rolling resistance tyres.

In ECO PRO mode, the coasting function is available at any speed up to 160 km/h (100 mph), while in Comfort mode it operates between 60 and 80 km/h (37 and 50 mph) when the brakes are applied lightly. In Sport and Sport+ mode the coasting function is not available.

Even in coasting mode, all safety and comfort functions remain fully operational. When the combustion engine is shut down at a standstill, as well as during all-electric operation and in coasting mode, the electrically powered stationary climate control continues to maintain a pleasant interior climate. The stationary climate control can also be used to cool the interior before getting into the vehicle.

### **Intelligent energy management with proactive analysis of the driving situation.**

In the BMW ActiveHybrid 3, the advanced-design power electronics have been developed a stage further. In addition to coordinating the operation of the internal combustion engine and electric motor with precise reference to the current driving situation, they also support proactive, forward-thinking analysis of the driving situation for even more efficient energy management. To achieve this, the power electronics can be linked up to the optional navigation system Professional. When destination guidance is switched on, the electronics can then access and analyse data that gives early warning of an upcoming change in external conditions or driver requirements. Based on this analysis, and subject to the quality of the navigation data, the vehicle can be prepared in advance for imminent requirements so that all powertrain systems and the on-board electronics can be managed appropriately and in such a way as to make the most efficient possible use of the available energy.

Factors that may cause a change in powertrain operating strategy include the topography of the route and speed limits. For example, if the system knows that a downhill stretch is coming up soon, the BMW ActiveHybrid 3 can invest all the high-voltage battery's electrical energy in providing supplementary driving power, since the battery will be recharged during the forthcoming descent at no cost in terms of fuel consumption.

On longer downhill sections the electric motor's generator function, too, can be enlisted to recharge the high-voltage battery with no loss of speed. The operating strategy can also be managed so as to achieve, as far as possible, optimal charging of the high-voltage battery when nearing the end of the journey, thereby increasing the electric driving range on the "last lap".

The operating status of the powertrain components is shown in intuitive, model-specific displays in the instrument cluster and in the Control Display of the BMW ActiveHybrid 3. As well as the energy flow and energy recuperation display, these include a further gauge next to the rev counter which shows the boost effect being provided by the electric motor during acceleration.

A model-specific menu in the iDrive operating system provides a variety of information – for example on the lithium-ion high-voltage battery's charge level and the power sharing between the internal combustion engine and the electric motor in the course of a journey. A fuel consumption history can also be displayed, which not only shows fuel consumption history for the previous 15 minutes but also the extent to which the electric motor of the BMW ActiveHybrid 3 has been used.

### **Typical BMW 3 Series: highest standards of driving dynamics and comfort.**

The chassis specifications of the BMW ActiveHybrid 3 include a double-wishbone spring-strut front axle and five-arm rear axle, as well as the Electric Power Steering with Servotronic familiar from the new BMW 3 Series Sedan.

Adaptive Suspension is optionally available, while the Dynamic Stability Control (DSC) system, which stabilises the vehicle by applying braking pressure and reducing engine power, also incorporates functions such as Dynamic Traction Control (DTC), the Anti-lock Braking System (ABS), Cornering Brake Control

(CBC), Dynamic Brake Control (DBC), Brake Assist, Fading Compensation, a Brake Drying function and Start-Off Assistant.

In addition to ECO PRO mode, the standard-fitted Driving Experience Control switch also offers SPORT+, SPORT and COMFORT set-ups.

These different modes allow the driver to alter the accelerator response characteristics, engine response, power steering characteristics, DSC settings, shift characteristics of the automatic transmission and, if the vehicle is equipped with Adaptive Drive, the damping characteristics as well.



## 4. Design: Pointers to outstanding efficiency

**Hybrid model based on the BMW 3 Series Sedan with hallmark sporty and elegant body design.**

**Striking design touches: lettering on the C-pillars, at the rear and on the door sills, special exhaust tailpipes, 18-inch Streamline light-alloy wheels optionally available.**

Dynamic lines and precise surfaces give the body of the BMW 3 Series Sedan an unmistakable look. And that means the BMW ActiveHybrid 3 exudes a similar stylish elegance and athletic flair the first time you set eyes on it. However, the hybrid model stands apart from its siblings with the addition of subtle design features that hint at the pioneering drive technology of the BMW ActiveHybrid 3.

### **Model lettering on the C-pillars and at the rear.**

Viewed from the side, the hint of a wedge shape underlines the sporty, forward-surgingly character of the Sedan. Its silhouette radiates a fine sense of balance, reflecting the even distribution of weight between the front and rear axles.

Extra flaring around the rear wheel arches emphasises the presence of rear-wheel drive. High-quality details, such as the particularly tight line of the Hofmeister kink at the base of the C-pillar and the door openers recessed into the side swage lines, reinforce the Sedan's premium character. The modern look of the ActiveHybrid 3 is underlined by standard satin-finish window surrounds and BMW Individual High-gloss Shadow features in the side graphic. The hybrid variant can also be identified by the "ActiveHybrid 3" lettering on its C-pillars.

The powerfully formed rear end, with its dominant horizontal lines, likewise accentuates the sporting credentials of the Sedan, while the L-shaped LED rear lights ensure the car is instantly recognisable at night. Identifying features of the hybrid model include additional "ActiveHybrid 3" lettering on the boot lid and matt chrome exhaust tailpipes integrated into the far left and right of the

rear apron. In addition, 18-inch Streamline light-alloy wheels with optimised aerodynamic properties are available exclusively for this model.

The BMW ActiveHybrid 3 can also be ordered with the Sport, Modern or Luxury lines or the M Sport package.

### **Subtle design cues in the interior.**

In common with its BMW 3 Series siblings, the interior of the BMW ActiveHybrid 3 is characterised by its driver-focused cockpit design and impressive spaciousness. However, the hybrid model also contains a selection of bespoke touches, including “ActiveHybrid 3” lettering on the front door sills and on the gear lever knob in the centre console.

The BMW 3 Series hybrid model also stands apart from all the other variants of the Sedan with its specific engine cover.

The rev counter area includes graphics detailing the electric motor’s boost function as well as the energy flow and recuperation display, which is why the instrument cluster of the BMW ActiveHybrid 3 also comes as standard with a 6.5-inch screen for extended display capability.

In addition to the optionally available navigation system Professional, numerous other vehicle, entertainment and communications functions can be operated via the iDrive system, whose Control Display is integrated harmoniously into the Sedan’s instrument panel.



## **5. Body and safety: Intelligent systems, perfectly integrated.**

**High body strength and optimised weight thanks to intelligent lightweight design.**

**Integrated safety concept for hybrid components.**

**High carrying capacity thanks to compact integration of lithium-ion high-voltage battery.**

The body structure of the BMW ActiveHybrid 3 meets highest standards of strength and intelligent lightweight design. Using the right materials in the right places not only provides an excellent basis for passive safety but also results in optimised weight, and therefore in improved efficiency and driving dynamics. The safety components are all carefully synchronised within a comprehensive system that was developed specifically for the BMW 3 Series Sedan and delivers outstanding levels of occupant protection.

In addition, pedestrian protection is enhanced by special contouring of the front-end body components and by an active bonnet.

The BMW ActiveHybrid 3 has an extremely stiff passenger cell. Intelligent use of higher-strength multi-phase steels and hot-stamped ultra-high-tensile steel helps give the safety passenger cell maximum rigidity, combined with relatively low weight.

### **Comprehensive safety specification.**

In a collision, high-strength load-bearing structures and large deformation zones help to keep impact forces away from the passenger cell and also from the hybrid drive components. Standard safety features on the BMW ActiveHybrid 3 also include front and side airbags, side curtain head airbags for both rows of seats, three-point inertia-reel belts on all seats, front-seat belt force limiters, belt latch tensioners and active head restraints, as well as ISOFIX child seat attachments in the rear.

The optional Active Protection function helps to mitigate the risk of occupant injury in a collision. If an accident risk is detected, the system – which is controlled by the central safety electronics – automatically closes the side windows and the sunroof (if fitted). At the same time the front seatbelts are pre-tensioned.

The hybrid components are likewise protected by a comprehensive safety package. All elements of the high-voltage electrical system are protected by extensive insulation and specially designed connectors. The hybrid-related safety features protecting the lithium-ion high-voltage battery and the power electronics are integrated into the top-class comprehensive active and passive safety system featured on all BMW 3 Series models.

**Functionality remains virtually uncompromised.**

Since the lithium-ion high-performance battery is packaged under the boot, the load capacity (390 litres) of the BMW ActiveHybrid 3 is reduced by 90 litres compared with other BMW 3 Series Sedan models. The battery is encased in a special housing and is fitted in a protected position between the wheel arches, which also offers optimal security in a crash.

This space-saving integration under the boot allows for a completely level load floor and means the rear seat backrests with optional 40:20:40 split-folding remain fully functional. The positioning of the high-voltage battery near to the rear axle also contributes to the balanced weight distribution of the BMW ActiveHybrid 3.

**Optimised weight thanks to intelligent multi-material mix.**

Intelligent lightweight design is a further area in which the BMW ActiveHybrid 3 sets standards in its class. The hybrid-related components result in a weight penalty of just 135 kilograms compared with the BMW 335i. The hybrid model also benefits from the intelligent multi-material mix developed for the BMW 3 Series.



## 6. Equipment and BMW ConnectedDrive: Wide-ranging options, intelligent integration.



**High-quality standard equipment with 2-zone automatic climate control, stationary climate control and navigation system Professional.**

**Exclusive variety of driver assistance systems and mobility services: Head-Up Display, Parking Assistant, office functions, internet, Real Time Traffic Information, apps.**

The BMW ActiveHybrid 3 combines its pioneering drive technology with the customary comfort-enhancing properties of the new BMW 3 Series range.

It also comes with a particularly extensive range of standard equipment specific to this model, while almost all of the options available for the BMW 3 Series Sedan can also be specified to tailor the hybrid model to the owner's personal requirements and tastes.

The range of driver assistance systems and mobility services provided by BMW ConnectedDrive is likewise impressively wide-reaching. Based on the intelligent integration of the driver, car and outside world, they optimise the convenience, safety and operation of the car's infotainment functions.

**Climate control with individual controls and stationary function as standard.**

The 2-zone automatic climate control fitted as standard in the BMW ActiveHybrid 3 allows the ventilation and temperature to be controlled individually both for the driver and front passenger and in the rear. This system comprises, among other features, comfort air vents, additional outlets in the B-pillars and a separate control unit on the rear face of the centre console.

The BMW ActiveHybrid 3 sources the energy for its electric air conditioning compressor from the lithium-ion high-voltage battery. The standard-fitted stationary climate control function allows the on-board temperature to be controlled even when the combustion engine is switched off. In order to cool

the interior in advance, the system can also be activated from outside the car several minutes before the start of a journey by using the car key.

The optionally available navigation system Professional includes hard disk storage for maps and music collections. It is operated using the iDrive operating system which, in addition to the Controller with direct menu control buttons on the centre console, also comes with an 8.8-inch monitor integrated into the instrument panel. The iDrive system is also used to operate a host of vehicle, communications and entertainment functions.

**Exclusive options for tailor-made comfort, extensive range of BMW ConnectedDrive features.**

The selection of BMW ConnectedDrive systems available as an option for the BMW ActiveHybrid 3 includes Park Distance Control, rear-view camera, Surround View, Adaptive Headlights and High-Beam Assistant.

Other driver assistance systems on the options list are Speed Limit Info, BMW Parking Assistant, Lane Change Warning, Lane Departure Warning and the BMW Head-Up Display.

Innovative technologies allow both the integration of an Apple iPhone (or other smartphones) and music players and the use of the Real Time Traffic Information function and apps. Among other features, the apps option enables Apple iPhone owners to receive web radio stations and view Facebook and Twitter posts on the on-board monitor.

## 7. Specifications BMW ActiveHybrid 3.



<b>BMW ActiveHybrid 3</b>		
<b>Body</b>		
No of doors/seats		4 / 5
Length/width/height	mm	4624 / 1811 / 1429
Wheelbase	mm	2810
Track, front/rear	mm	1531 / 1572
Ground clearance	mm	140
Turning circle	m	11.3
Fuel tank capacity	app ltr	57
Cooling system incl	ltr	9.3
Engine oil <sup>1)</sup>	ltr	6.5
Weight, unladen, to	kg	1655 / 1730
Max load to DIN	kg	530
Max permissible	kg	2185
Max axle load, front/rear	kg	1020 / 1230
Max trailer load (12%), braked/unbraked	kg	--- / ---
Max roofload/max	kg	75 / --
Luggage comp	ltr	390
Air drag	Cd x A	0.29 x 2.20
<b>Power Unit</b>		
Config/No of cyls/valves		In-line-six / 4
Engine technology		BMW TwinPower Turbo technology with twin-scroll turbocharging, High Precision Direct Petrol Injection and fully variable valve control (VALVETRONIC)
Capacity, effective	cc	2979
Stroke / bore	mm	89.6 / 84.0
Compression ratio	:1	10.2
Fuel		min RON 91
Max output	kW/hp	225 / 306
at	rpm	5800-6000
Max torque	Nm	400
at	rpm	1200-5000
Output electric motor	kW/hp	40 / 55
Torque electric motor	Nm	210
System output	kW/hp	250/ 340
System torque	Nm	450
<b>Electrical System</b>		
Battery/location	Ah/-	90 + 40 / luggage comp
High-voltage battery		1350
Alternator	AW	200 + 170 / 2800 + 2380
<b>Driving Dynamics and Safety</b>		
Suspension, front		Aluminium double-joint spring strut axle with displaced camber, small positive steering roll radius, transverse force compensation, anti-dive
Suspension, rear		Five-link axle in lightweight construction
Brakes, front		Single-piston swing-calliper disc brakes / vented
Brakes, rear		Single-piston fixed-calliper disc brakes / vented
Driving stability systems		Standard: DSC incl. ABS and DTC (Dynamic Traction Control), CBC (Cornering Brake Control), DBC (Dynamic Brake Control), Brake Drying function, Fading Compensation, Start-Off Assistant
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, crash-activated head restraints at the front, crash sensors, Tyre Defect Indicator
Steering		Electromechanical rack-and-pinion power steering (EPS)
Steering transmission, overall	:1	15.1
Tyres, front/rear		225/50 R17 94W
Rims, front/rear		7.5J x 17 light-alloy

**BMW ActiveHybrid 3**

**BMW ConnectedDrive**

Convenience	Optional: BMW Assist incl. Enquiry Service, remote-control functions and V-Info+ (Traffic Info plus), RTTI, BMW TeleServices, mobile device integration
Infotainment	Optional: internet access, BMW Online incl. Park Info, National Info, Google Local Search, News, Realtime Weather, BMW Routes, office functions, Bluetooth Audio Streaming and Online Update Music Tracks
Safety	Optional: Adaptive Headlights with cornering lights, variable light distribution and adaptive headlight range control, High-Beam Assistant, Park Distance Control, rear-view camera, Surround View incl. Side View and Top View, Head-Up Display, Parking Assistant, Lane Change Warning, Lane Departure Warning, Speed Limit Info, Advanced eCall

**Transmission**

Type of transmission	Eight-speed automatic transmission with Steptronic		
Gear ratios	I	:1	4.174
	II	:1	3.143
	III	:1	2.106
	IV	:1	1.667
	V	:1	1.285
	VI	:1	1.000
	VII	:1	0.839
	VIII	:1	0.667
	Reverse	:1	3.317
Final drive		:1	2.813

**Performance**

Power-to-weight ratio	kg/kW	7.4
Output per litre	kW/hp	75.5
Acceleration 0–100 km/h	sec	5.3
Standing-start km	sec	24.6
Top speed	km/h	250
Top speed electrical	km/h	75
Top speed coasting	km/h	160
Electrical range	km	3-4

**BMW EfficientDynamics**

BMW EfficientDynamics standard features	BMW ActiveHybrid, Brake Energy Regeneration with energy flow and efficiency display, Coasting and Green Driving Assistant, hybrid-specific auto start-stop function, ECO PRO mode, intelligent lightweight construction, air flap control, on-demand operation of ancillary units, climate compressor integrated in the high-voltage network, map-controlled oil pump, tyres with reduced rolling resistance
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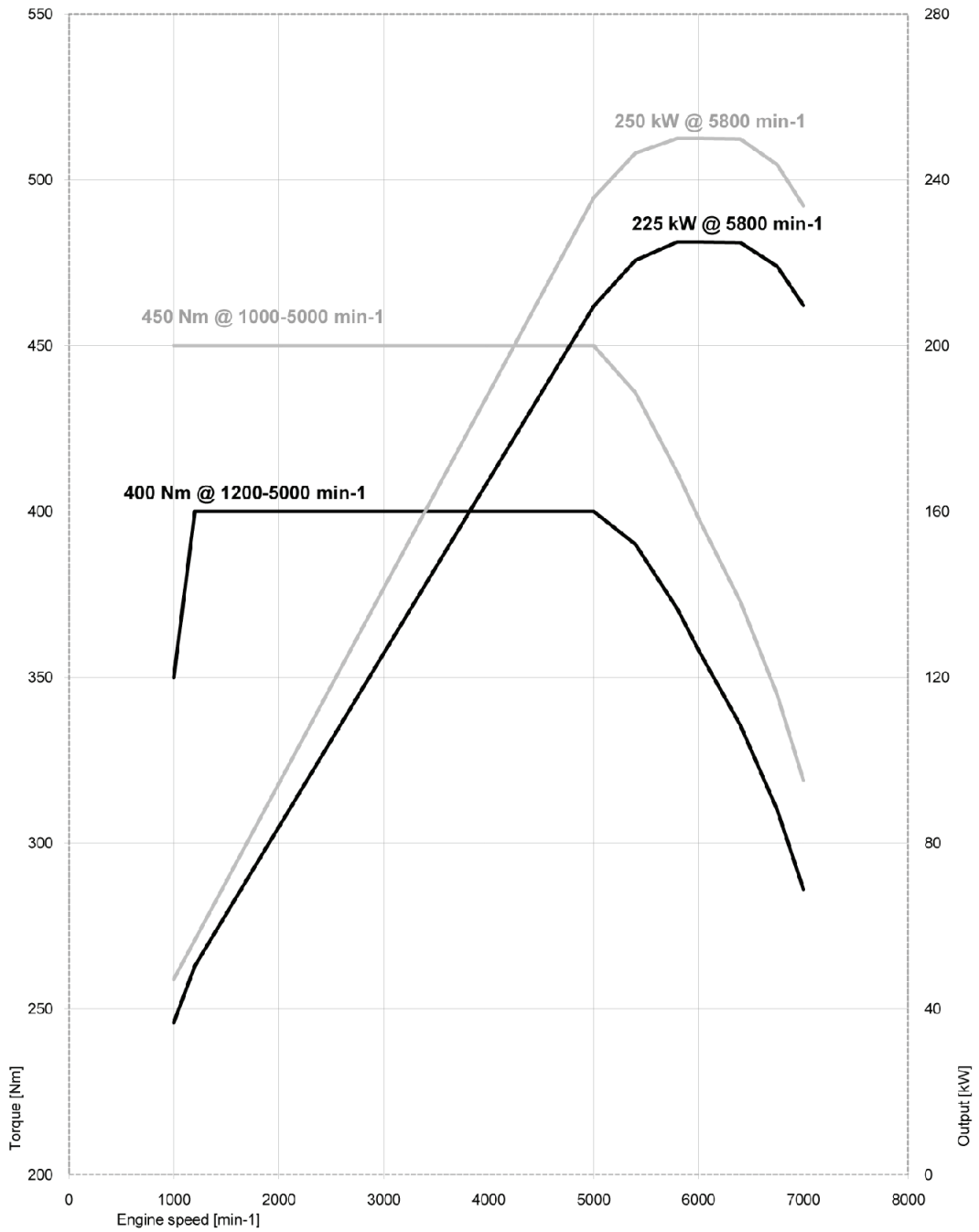
**Fuel Consumption in EU Cycle**

Urban	ltr/100	5.3
Extra-urban	ltr/100	6.4
Combined	ltr/100	5.9
CO <sub>2</sub>	g/km	139
Emission rating		EU5

Specifications applicable to ACEA markets / homologation data applicable in part only to Germany (weight).

1) Oil change

## 8. Output and torque diagrams.



## 9. Exterior and interior dimensions.

