The new BMW 5 Series. Contents.



Model variants at launch. 2
Vehicle concept and design. Increased presence and exquisite sporting style
Interior and equipment. Shining a brighter spotlight on driving pleasure and comfort
BMW 5 Series M Sport Edition. Dynamic looks with a distinctive style
Drive systems, transmissions and BMW xDrive. Electrification and mild hybrid technology bring greater efficiency
Chassis technology. The finely judged balance of agility and ride comfort
Driver assistance systems. The next steps on the road to automated driving
Display and operating system, BMW Connected and ConnectedDrive.
BMW Operating System 7 opens up new digital services
BMW M Performance Parts. Enhancing agility and dynamism one specially tailored part at a time

05/2020 Page 2

The new BMW 5 Series range. Model variants at launch.



Plug-in hybrid models:

BMW 530e Sedan (BMW 530e xDrive Sedan):

Four-cylinder in-line petrol engine, plug-in hybrid system with synchronous electric motor, eight-speed Steptronic transmission, (BMW xDrive). Combustion engine: Capacity: 1,998 cc, output: 135 kW/184 hp at 5,000 - 6,500 rpm, max. torque: 300 Nm (221 lb-ft) at 1,350 – 4,000 rpm. Electric motor: Output: 80 kW/109 hp, max. torque: 265 Nm (195 lb-ft). Combined system output: 215 kW/292 hp, max. combined torque: 420 Nm (310 lb-ft). Acceleration [0 – 100 km/h (62 mph)]: 5.9 seconds (5.9 seconds), top speed: 235 km/h [146 mph] (235 km/h [143 mph]), top speed (electric): 140 km/h [87 mph] (140 km/h [87 mph]). Electric range: 62 – 67 km (56 – 58 km). Fuel consumption, combined: 1.8 – 1.7 l/100 km [156.9 – 166.2 mpg imp] (2.1 – 2.0 l/100 km [134.5 – 141.2 mpg imp]), electric power consumption, combined: 14.8 - 13.7 kWh/100 km (16.4 – 15.9 kWh/100 km), CO_2 emissions from fuel, combined: 42 - 39 g/km (49 - 46 g/km), exhaust standard: Euro 6d.

BMW 530e Touring (BMW 530e xDrive Touring) (from 11/20):

Four-cylinder in-line petrol engine, plug-in hybrid system with synchronous electric motor, eight-speed Steptronic transmission, (BMW xDrive). Combustion engine: Capacity: 1,998 cc, output: 135 kW/184 hp at 5,000 – 6,500 rpm, max. torque: 300 Nm (221 lb-ft) at 1,350 – 4,000 rpm. Electric motor: Output: 80 kW/109 hp, max. torque: 265 Nm (195 lb-ft). Combined system output: 215 kW/292 hp, max. combined torque: 420 Nm (310 lb-ft). Acceleration [0 – 100 km/h (62 mph)]: 6.1 seconds (6.1 seconds),

05/2020 Page 3

top speed: 225 km/h [140 mph] (225 km/h [140 mph]), top speed (electric): 140 km/h [87 mph] (140 km/h [87 mph]). Electric range: 58 - 62 km (53 - 56 km). Fuel consumption, combined: 2.1 - 1.9 l/100 km [134.5 - 148.7 mpg imp] (2.3 - 2.1 l/100 km [122.8 - 134.5 mpg imp]), electric power consumption, combined: 15.9 - 14.9 kWh/100 km (16.9 - 15.9 kWh/100 km), CO₂ emissions from fuel, combined: 47 - 43 g/km (52 - 49 g/km), exhaust standard: Euro 6d.

BMW 545e xDrive Sedan (from 11/2020):

Six-cylinder in-line petrol engine, plug-in hybrid system with synchronous electric motor, eight-speed Steptronic transmission, BMW xDrive. Combustion engine: Capacity: 2,998 cc, output: 210 kW/286 hp at 5,000 - 6,000 rpm max. torque: 450 Nm (332 lb-ft) at 1,500 – 3500 rpm. Electric motor: Output: 80 kW/109 hp, max. torque: 265 Nm (195 lb-ft). Combined system output: 290 kW/394 hp, max. combined torque: 600 Nm (442 lb-ft). Acceleration [0 - 100 km/h (62 mph)]: 4.7 seconds, top speed: 250 km/h [155 mph], top speed (electric): 140 km/h [87 mph]. Electric range: 54 – 57 km. Fuel consumption, combined: 2.4 – 2.1 l/100 km [117.7 – 134.5 mpg imp], electric power consumption, combined: 16.3 - 15.3 kWh/100 km, CO_2 emissions from fuel, combined: 54 – 49 g/km, exhaust standard: Euro 6d.

Petrol models:

BMW 520i Sedan:

Four-cylinder in-line petrol engine, mild hybrid technology, eight-speed Steptronic transmission. Capacity: 1,998 cc, output: 135 kW/184 hp at 5,000 – 6,500 rpm, max. torque: 290 Nm (214 lb-ft) at 1,350 – 4250 rpm. Acceleration [0 - 100 km/h (62 mph)]: 7.9 seconds, top speed: 235 km/h [146 mph]. Fuel consumption, combined: 5.5 – 5.3 l/100 km (51.4 – 53.3 mpg imp), CO₂ emissions from fuel, combined: 125 – 120 g/km, exhaust standard: Euro 6d.

05/2020 Page 4

BMW 520i Touring:

Four-cylinder in-line petrol engine, mild hybrid technology, eight-speed Steptronic transmission. Capacity: 1,998 cc, output: 135 kW/184 hp at 5,000 – 6,500 rpm, max. torque: 290 Nm (214 lb-ft) at 1,350 – 4250 rpm. Acceleration [0 – 100 km/h (62 mph)]: 8.3 seconds, top speed: 225 km/h [140 mph]. Fuel consumption, combined: 5.7 – 5.5 l/100 km (49.6 – 51.4 mpg imp), CO₂ emissions from fuel, combined: 131 – 126 g/km, exhaust standard: Euro 6d.

BMW 530i Sedan (BMW 530i xDrive Sedan):

Four-cylinder in-line petrol engine, mild hybrid technology, eight-speed Steptronic transmission, (BMW xDrive). Capacity: 1,998 cc, output: 185 kW/252 hp at 5,200 – 6,500 rpm, max. torque: 350 Nm (258 lb-ft) at 1,450 – 4,800 rpm. Acceleration [0 – 100 km/h (62 mph)]: 6.4 seconds (6.3 seconds), top speed: 250 km/h [155 mph] (250 km/h [155 mph]). Fuel consumption, combined: 5.5 - 5.3 l/100 km [51.4 - 53.3 mpg imp](6.1 – 5.9 l/100 km [46.3 – 47.9 mpg imp]), CO₂ emissions from fuel, combined: 126 - 121 g/km (140 - 135 g/km), exhaust standard: Euro 6d.

BMW 530i Touring (BMW 530i xDrive Touring):

Four-cylinder in-line petrol engine, mild hybrid technology, eight-speed Steptronic transmission, (BMW xDrive). Capacity: 1,998 cc, output: 185 kW/252 hp at 5,200 – 6,500 rpm, max. torque: 350 Nm (258 lb-ft) at 1,450 – 4,800 rpm. Acceleration [0 – 100 km/h (62 mph)]: 6.7 seconds (6.6 seconds), top speed: 250 km/h [155 mph] (250 km/h [155 mph]). Fuel consumption, combined: 5.8 – 5.6 l/100 km [48.7 – 50.4 mpg imp] (6.4 – 6.2 l/100 km [44.1 – 45.6 mpg imp]), CO_2 emissions from fuel, combined: 133 – 127 g/km (147 – 142 g/km), exhaust standard: Euro 6d.

BMW 540i Sedan (BMW 540i xDrive Sedan):

Six-cylinder in-line petrol engine, mild hybrid technology, eight-speed Steptronic transmission, (BMW xDrive). Capacity: 2,998 cc, output: 245 kW/333 hp at 5,500 – 6,250 rpm, max. torque: 450 Nm (332 lb-ft) at 1,600 – 4,800 rpm.

05/2020 Page 5

Acceleration [0 – 100 km/h (62 mph)]: 5.2 seconds (4.9 seconds), top speed: 250 km/h [155 mph] (250 km/h [155 mph]). Fuel consumption, combined: 6.5 – 6.3 l/100 km [43.5 – 44.8 mpg imp] (6.8 – 6.6 l/100 km [41.5 – 42.8 mpg imp]). CO₂ emissions from fuel, combined: 149 – 144 g/km (156 – 152 g/km), exhaust standard: Euro 6d.

BMW 540i xDrive Touring:

Six-cylinder in-line petrol engine, mild hybrid technology, eight-speed Steptronic transmission, BMW xDrive. Capacity: 2,998 cc, output: 245 kW/333 hp at 5,500 – 6,250 rpm, max. torque: 450 Nm (332 lb-ft) at 1,600 – 4,800 rpm. Acceleration [0 – 100 km/h (62 mph)]: 5.2 seconds, top speed: 250 km/h (155 mph). Fuel consumption, combined: 7.1 – 7.0 l/100 km (39.8 – 40.4 mpg imp), CO₂ emissions from fuel, combined: 164 – 159 g/km, exhaust standard: Euro 6d.

BMW M550i xDrive Sedan:

V8 petrol engine, eight-speed Steptronic transmission, BMW xDrive. Capacity: 4,395 cc, output: 390 kW/530 hp at 5,500 – 6,000 rpm, max. torque: 750 Nm (553 lb-ft) at 1800 – 4600 rpm. Acceleration [0 – 100 km/h (62 mph)]: 3.8 seconds, top speed: 250 km/h (155 mph). Fuel consumption, combined: 10.0 – 9.7 l/100 km (28.3 – 29.1 mpg imp), CO₂ emissions from fuel, combined: 229 – 221 g/km, exhaust standard: Euro 6d-TEMP.

Diesel models:

BMW 520d Sedan (BMW 520d xDrive Sedan):

Four-cylinder in-line diesel engine, mild hybrid technology, eight-speed Steptronic transmission, (BMW xDrive). Capacity: 1,995 cc, output: 140 kW/190 hp at 4,000 rpm, max. torque: 400 Nm (295 lb-ft) at 1,750 – 2,500 rpm. Acceleration [0 - 100 km/h (62 mph)]: 7.2 seconds (7.2 seconds), top speed: 235 km/h [146 mph] (232 km/h [144 mph]). Fuel consumption, combined: 4.3 – 4.1 l/100 km [65.7 – 68.9 mpg imp] (4.5 – 4.3 l/100 km [62.8 – 65.7 mpg imp]),

05/2020 Page 6

 CO_2 emissions from fuel, combined: 112 - 108 g/km (118 - 114 g/km), exhaust standard: Euro 6d.

BMW 520d Touring (BMW 520d xDrive Touring):

Four-cylinder in-line diesel engine, mild hybrid technology, eight-speed Steptronic transmission, (BMW xDrive). Capacity: 1,995 cc, output: 140 kW/190 hp at 4,000 rpm, max. torque: 400 Nm (295 lb-ft) at 1,750 – 2,500 rpm. Acceleration [0 - 100 km/h (62 mph)]: 7.6 seconds (7.6 seconds), top speed: 225 km/h [140 mph] (222 km/h [138 mph]). Fuel consumption, combined: 4.5 – 4.3 l/100 km [62.8 – 65.7 mpg imp] (4.7 – 4.6 l/100 km [60.1 – 61.4 mpg imp]), CO₂ emissions from fuel, combined: 119 – 113 g/km (124 – 120 g/km), exhaust standard: Euro 6d.

BMW 530d Sedan (BMW 530d xDrive Sedan):

Six-cylinder in-line diesel engine, mild hybrid technology, eight-speed Steptronic transmission, (BMW xDrive). Capacity: 2,993 cc, output: 210 kW/286 hp at 4,000 rpm, max. torque: 650 Nm (479 lb-ft) at 1,500 – 2,500 rpm. Acceleration [0 – 100 km/h (62 mph)]: 5.6 seconds (5.4 seconds), top speed: 250 km/h [155 mph] (250 km/h [155 mph]). Fuel consumption, combined: 4.6 – 4.5 l/100 km [61.4 – 62.8 mpg imp] (5.0 – 4.8 l/100 km [56.5 – 58.9 mpg imp]), CO_2 emissions from fuel, combined: 122 – 118 g/km (131 – 125 g/km), exhaust standard: Euro 6d.

BMW 530d Touring (BMW 530d xDrive Touring):

Six-cylinder in-line diesel engine, mild hybrid technology, eight-speed Steptronic transmission, (BMW xDrive). Capacity: 2,993 cc, output: 210 kW/286 hp at 4,000 rpm, max. torque: 650 Nm (479 lb-ft) at 1,500 – 2,500 rpm. Acceleration [0 – 100 km/h (62 mph)]: 5.7 seconds (5.6 seconds), top speed: 250 km/h [155 mph] (250 km/h [155 mph]). Fuel consumption, combined: 4.9 - 4.7 l/100 km [57.7 – 60.1 mpg imp] (5.2 – 5.1 l/100 km [54.3 – 55.4 mpg imp]), CO₂ emissions from fuel, combined: 128 - 123 g/km (137 – 133 g/km), exhaust standard: Euro 6d.

05/2020 Page 7

BMW 540d xDrive Sedan:

Six-cylinder in-line diesel engine, mild hybrid technology, eight-speed Steptronic transmission, BMW xDrive. Capacity: 2,993 cc, output: 250 kW/340 hp at 4,400 rpm, max. torque: 700 Nm (516 lb-ft) at 1,750 – 2,250 rpm. Acceleration [0 – 100 km/h (62 mph)]: 4.6 seconds, top speed: 250 km/h (155 mph). Fuel consumption, combined: 5.1 – 5.0 l/100 km (55.4 – 56.5 mpg imp), CO₂ emissions from fuel, combined: 135 – 131 g/km, exhaust standard: Euro 6d.

BMW 540d xDrive Touring:

Six-cylinder in-line diesel engine, mild hybrid technology, eight-speed Steptronic transmission, BMW xDrive. Capacity: 2,993 cc, output: 250 kW/340 hp at 4,400 rpm, max. torque: 700 Nm (516 lb-ft) at 1,750 – 2,250 rpm. Acceleration [0 – 100 km/h (62 mph)]: 4.8 seconds, top speed: 250 km/h (155 mph). Fuel consumption, combined: 5.4 – 5.3 l/100 km (52.3 – 53.3 mpg imp), CO₂ emissions from fuel, combined: 142 – 138 g/km, exhaust standard: Euro 6d.

All figures relating to performance, fuel/electric power consumption and emissions are provisional.

The fuel consumption, CO₂ emissions, electric power consumption and operating range figures are determined according to the European Regulation (EC) 715/2007 in the version applicable. The figures refer to a vehicle with basic configuration in Germany. The range shown considers the different sizes of the selected wheels/tyres and the selected items of optional equipment, and may vary during configuration.

The values are based on the new WLTP test cycle and are translated back into NEDC-equivalent values in order to ensure comparability between the vehicles. With respect to these vehicles, for vehicle-related taxes or other duties based (at least inter alia) on CO₂ emissions, the CO₂ values may differ from the values stated here (depending on national legislation).

Further information on official fuel consumption figures and specific CO₂ emission values of new passenger cars is included in the following guideline: 'Leitfaden über den Kraftstoffverbrauch, die CO2 Emissionen und den Stromverbrauch neuer Personenkraftwagen' (Guide to the fuel economy, CO₂ emissions and electric power consumption of new passenger cars), which can be obtained free of charge from all dealerships, from Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str. 1. 73760 Ostfilderm-Scharnhausen and at https://www.dat.de/co2/.

05/2020 Page 8 Vehicle concept and design.

Increased presence and exquisite sporting style.



A heightened sense of outward authority, an interior brimming with detail refinements, the efficiency-enhancing influence of electrification and cuttingedge innovations in the areas of driver assistance, control/operation and connectivity help the new BMW 5 Series to cement its leading position at the premium end of the executive class.

Over 600,000 units of the BMW 5 Series Sedan and BMW 5 Series Touring have been sold worldwide since the market launch of the current model generation. Their eye-catching design aesthetic, hallmark BMW driving pleasure, trailblazing semi-automated driving technologies and unmatched digital services imbue the two models with standout appeal. And now, with a new wave of carefully judged optimisations carried out in these key areas, all the necessary pieces are in place to extend the illustrious history of the sporty business sedan and equally dynamic Touring all-rounder.

The market launch of the new BMW 5 Series range will get underway in July 2020.

A success story dating back to 1972.

The BMW 5 Series has the richest tradition of any model produced by the Munich-based premium carmaker. Presented for the first time in 1972, the BMW 5 Series Sedan is now in its seventh model generation and enjoys global popularity as an executive model for discerning customers. Meanwhile, the BMW 5 Series Touring – which has been around since 1991 and is now in its fifth generation – blends a perfect balance of dynamic sharpness and comfort with a larger interior capable of turning its hand to a variety of usage scenarios.

A long list of accolades, including Car of the Year, class winner in the Best Cars Award, Executive Car of the Year and winner of the Connected Car Awards, reflects the outstanding qualities of the current model generation.

From BMW Plant Dingolfing to the world.

The new BMW 5 Series, like every one of its predecessors since 1973, has been produced primarily at BMW Plant Dingolfing in Bavaria – the Group's centre of excellence for the production of large BMW models. Among the other cars manufactured here are the BMW 7 Series and BMW 8 Series

luxury sports car. The new BMW 5 Series Sedan will also be built by production partner Magna Steyr in Graz, Austria. The long-wheelbase version of the Sedan is made exclusively for the Chinese market at joint venture BMW Brilliance Automotive's Dadong plant in Shenyang.

Stepping up the road presence: the new exterior.

The exterior design of the BMW 5 Series is headlined by sporting grace and clean surfaces. Precise modifications showcase the Sedan and Touring's presence and exquisite sporting style even more vividly. Large, tautly drawn surfaces at the front and rear, the bold BMW kidney grille and new headlights and rear lights ensure the 5 Series exudes considerable visual impact.

Slight increase in vehicle length, but proportions otherwise unchanged.

With their long bonnet, set-back passenger compartment, short overhangs, a long wheelbase and wide tracks, the familiar BMW proportions of the new BMW 5 Series Sedan and new BMW 5 Series Touring make no secret of the cars' dynamic character. Their width, height and wheelbase are unchanged, but the extra 27 millimetres (BMW 5 Series Sedan) / 21 millimetres (BMW 5 Series Touring) of exterior length – both models now measure 4,963 millimetres – underscore the sweeping elegance on display.

Leading the way once again for aerodynamic drag.

With a drag coefficient as low as Cd = 0.23 in the case of the Sedan and Cd = 0.26 for the Touring, the new BMW 5 Series models continue to set the standard for aerodynamics in their respective segments. Among the key contributors here are the sophisticated design of the cars' trim mouldings and the active air flap control system for the radiator.

Newly designed front end: taut surfaces, bold kidney grille, focused look.

The most distinctive features of the revised front end include the bold BMW kidney grille with modified contouring and the headlights with new light graphic. Generously sized, tightly sculpted surfaces in body colour and vertical air intakes on either side of the front apron underscore the exterior's elegant interplay of lines and give the car an even more expressive appearance.

Modern evolution of the iconic BMW kidney grille.

The prominent kidney grille immediately catches the eye with a new, octagonal form. This modern interpretation of the BMW icon adds extra width and height, drops down further into the front apron and is framed by a singlepiece surround. Also playing their part in the grille's arresting appearance are the vertical bars, the top sections of which jut further out. The larger

dimensions of the BMW kidney grille provide an attractive contrast against the now slimmer headlights.

New headlights with L-shaped daytime driving lights create a focused look.

LED headlights with automatic headlight range control are again fitted as standard on the new 5 Series. The two daytime driving light sources – arranged next to one other – are U-shaped, the turn indicators are located in special light modules at the outer edge of the headlights.

The two new optional LED headlights create a totally new appearance. The two L-shaped light tubes arranged next to one another in each light unit have a precise and modern graphic. The new contouring of the headlights and the structure of the light sources at their heart bring a modern twist to the focused look familiar from BMW's past and present. With these units, the outer daytime driving lights also perform the role of turn indicators.

All of the light functions use LED technology as standard.

Adaptive LED Headlights, now with matrix function.

New full-LED headlights including adaptive cornering function, BMW Selective Beam non-dazzling high beam with matrix technology, and the High-beam Assistant are offered as an option.

The matrix function of the BMW Selective Beam high beam system allows range to be increased while preventing other road users from being dazzled. Here, high beam is divided into four LED segments, which can be activated and deactivated independently of one another as the situation on the road demands. The instant the front-mounted camera detects an oncoming vehicle or a vehicle in front, low beam only will be used to illuminate the area around the vehicle, while the remaining high-beam segments continue to improve road visibility.

The cornering light and high beam are proactively adjusted using GPS. The dynamic light distribution (city, motorway and country road light) function generates different types of illumination, optimised to the driving situation at hand.

05/2020 Page 11

BMW Laserlight now available as an option for all BMW 5 Series models.

In 2019, BMW Laserlight was introduced into some top-of-the-line 5 Series models. And now all variants of the new BMW 5 Series Sedan and new BMW 5 Series Touring can be ordered with BMW Laserlight as an option.

This system adds a dynamic Laserlight module to the Adaptive LED Headlights with matrix function. At speeds over 60 km/h (37 mph), this strengthens the non-dazzling high beam and follows the course of the road. At up to 650 metres, range is almost double that of the conventional headlights available for the new 5 Series. Added to which, the extremely bright and strong BMW Laserlight achieves a significantly higher level of light intensity. As part of the dynamic light distribution and BMW Selective Beam non-dazzling high beam systems, it also boosts the effectiveness of low beam on country roads and motorways.

Blue inlays at the upper edges of the headlights and "BMW Laser" lettering in the headlight glass are the visual calling cards of this advanced technology.

An eye-catching design option for cars ordered with the Adaptive LED Headlights and BMW Laserlight is **BMW Individual Shadowline headlights** with darkened inlays at the upper edges of the headlights.

The optional **BMW Individual High-gloss Shadowline** comprises features such the window surrounds, Air Breathers and elements of the exterior mirrors in High-gloss Black.

The new **BMW Individual High-gloss Shadowline with extended features** adds a High-gloss Black surround and bars for the kidney grille and exhaust tailpipe finishers in Black Chrome (only on cars with the M Sport package) to the options list.

New rear end accentuates car's width to elegant effect.

The gracefully sporting, modern appearance of the new BMW 5 Series is enhanced at the rear of both the Sedan and Touring models by clear surfacing with minimalist lines.

Trapezoidal tailpipe finishers now standard on all BMW 5 Series models.

Regardless of the equipment line and engine specified, all models of the new BMW 5 Series come with trapezoidal tailpipe finishers, which are now integrated to the left and right in the rear apron inlay. The top of the grey-

coloured inlay has black trim edging as standard (trim edging is electroplated on Luxury Line cars).

Three-dimensional sculpted rear lights with new graphic.

A new L-shaped light graphic gives the BMW 5 Series its own clear identity. Black edging lends the rear lights a slimmer appearance. The rear lights and brake lights are integrated into a single light fixture. An overhang in the outer edge of the graphic's upper section brings a fresh interpretation of the familiar BMW L shape. The prominently three-dimensional external lens now houses the light fixture directly, creating an iconographic showcase for the main light functions.

M Sport package with powerful new design.

The newly developed M Sport package stands out with its new, dynamically proportioned aerodynamic features. These include an all-new front apron, whose surfaces are split up by a U-shape structure pointing towards the road. The gratings of the significantly enlarged air intakes now have a modern mesh structure. The BMW kidney grille bars have Aluminium matt faces. If BMW Individual High-gloss Shadow Line with extended features is specified, the bars are painted all-black and the exhaust tailpipe finishers come in Black Chrome. And a new diffuser element in the rear apron uses more pronounced contours to optimise airflow.

New BMW M550i xDrive Sedan with model-specific design features.

The new BMW M550i xDrive Sedan has the bespoke looks to match its standout sporting character. Its model-specific design cues have been coordinated precisely into a harmonious composition and optimise the car's handling dynamics, supply of cooling air and aerodynamic properties. Complementing the aerodynamically optimised body elements included in the M Sport package, the new BMW M550i xDrive Sedan also features a rear spoiler on the boot lid. The exterior mirror caps, BMW kidney grille surround, inlays in the front air intakes and Air Breathers, and the model lettering in Cerium Grey metallic add exclusive visual flourishes. BMW Individual High-gloss Shadowline brings adornments including High-gloss Black for elements such as the window surrounds, Air Breathers and exterior mirror edging. The M car also comes as standard with 19-inch M light-alloy wheels in Y-spoke design. The BMW M550i xDrive Sedan has dual trapezoidal tailpipe finishers in Black Chrome and a four-branch look.

05/2020 Page 13

New paint finishes for the BMW 5 Series range.

The exterior paintwork of the new BMW 5 Series Sedan and new BMW 5 Series Touring is available in two non-metallic and eight metallic colour shades. New additions include the **Phytonic Blue metallic** and **Bernina Grey amber effect metallic** variants. The BMW Individual range for the new BMW 5 Series comprises new **Aventurine Red metallic** and **Tanzanite Blue metallic**, alongside the familiar **Alvit Grey metallic**.

Extensive selection of wheel variants available; customers can now also specify Air Performance Wheels.

In customary BMW 5 Series fashion, the new model is also available with a large selection of light-alloy wheels in 17- to 20-inch formats, some with new styles and colours.

The unique, aerodynamically and weight-optimised **20-inch BMW Individual Air Performance Wheels** are making their debut appearance. The innovative light-alloy wheels bring about a reduction in drag coefficient of around 5 per cent compared to the same car with conventional light-alloy wheels. As a result of this extra efficiency and the lower weight, combustionengined variants of the new BMW 5 Series achieve a cut in CO₂ emissions of up to 3 g/km in the WLTP test cycle. Plug-in hybrid models lower CO₂ output by up to 2 g/km, with electric range increasing by an average of one kilometre (0.62 miles). High-quality precision-fit inlays are fitted to the aluminium Yspoke base wheel to optimise aerodynamic efficiency by judiciously managing airflow management and cutting turbulence. The BMW Group is the world's first carmaker to combine cast aluminium with aerodynamically optimised inlays.

M Sport braking system with blue or now also red painted callipers.

Specifying the optional M Sport braking system brings additional stylistic touches. Customers can now choose to have the brake callipers with M logo painted in blue or red.

05/2020 Page 14

Interior and equipment.

Shining a brighter spotlight on driving pleasure and comfort.



Hallmark features of the BMW 5 Series include an interior which blends contemporary elegance with driver-focused cockpit design – and therefore provides the ideal environment for driving pleasure and comfortable progress over long distances. High-quality materials and precise workmanship bring a modern, premium ambience to the new 5 Series' cabin. The iDrive control and operation system comprises a freestanding Control Display, which now has a 10.25-inch screen diagonal as standard. If the optional BMW Live Cockpit Professional is specified, the monitor's diameter increases to 12.3 inches.

Two other factors in the customary long-distance driving qualities of the BMW 5 Series are the generous feeling of space in all five seats and the superbly engineered acoustics. As well as effective body sealing and the sound insulation integrated into the headliner, acoustics-related measures also include soundproofing for the load compartment of Touring models.

New additions to standard equipment.

Standard specification for all 5 Series models now also encompasses **automatic climate control with extended functions**, separate controls for the driver and front passenger, and the SYNC function.

And the **buttons on the centre console** now have surfacing in High-gloss Black.

Sophisticated premium ambience, enhanced comfort.

In addition to the familiar electrically adjustable standard seats and optional sports seats and comfort seats, customers ordering the M Sport package will also be able to specify new **M multifunction seats** – previously reserved for the BMW M5 – with integral head restraints and optimised side and shoulder support. Their range of functions includes electric adjustment of the seat position, backrest angle and width, thigh support and head restraint height.

The surfaces of the standard seats are trimmed in **cloth** – or in **cloth/Alcantara** if the M Sport package box is ticked.

Alternatively, the new BMW 5 Series Sedan and new BMW 5 Series Touring are now available **for the first time** with synthetic **Sensatec perforated** trim. This high-quality material can be ordered in three colours, and its

contrast stitching and quilting create an extremely stylish feel. Sensatec can be specified for both the standard seats and optional sports seats.

A wide selection of **Dakota leather** and **Nappa leather** upholstery variants are still available. And customers can also plump for **BMW Individual Merino full leather trim** in a choice of three colours.

The familiar **active seat ventilation** feature, which is offered in conjunction with several of the leather trim variants for the comfort seat option, has achieved an even higher level of effectiveness.

The level of **seating comfort** provided by the comfort seats and M multifunction seats has been enhanced significantly by a host of modifications. And both seat variants can still be ordered with the **massage functions** providing mobilisation, relaxation and vitality.

The black surfaces of the **instrument panel** trimmed in optional **Sensatec** are now enriched by contrast stitching in a classy shade of brown.

The selection of available **interior trim strips** is likewise more extensive than before. The **Aluminium Rhombicle Smoke Grey** variant **with accent trim strip in Pearl-effect Chrome** is new to the M Sport package for the BMW 5 Series. And the array of variants included on the options list has increased further with the addition of **ash open-pore** fine-wood interior trim **with accent trim strips in Pearl-effect Chrome**.

The individualisation options for the interior also include the **BMW Individual** headliner in anthracite-coloured Alcantara.

Exclusive interior for the new BMW M550i xDrive Sedan.

Inside the new BMW M550i xDrive Sedan, exclusive equipment features over and above those in the M Sport package include model badges on the front/rear door sill plates and in the instrument cluster display. As in the predecessor model, the M leather steering wheel comes as standard with shift paddles, so drivers can toggle through the gears of the eight-speed Steptronic Sport transmission manually.

Functionality at the usual high level, intelligent storage concept.

With its large storage compartments and door pockets, two drinks holders in both the front and rear compartments, plus 40:20:40 split/folding rear-seat backrests, the new 5 Series brings modern functionality to everyday driving and longer journeys in customary style. The optional Comfort Access teams up with automatic tailgate activation (standard on the BMW 5 Series Touring)

05/2020 Page 16

to provide hands-free opening and closing of the boot lid/tailgate. The enhanced versatility of the BMW 5 Series Touring is also evident in the rearseat backrest sections, which can be released from their locked position using buttons inside the boot and then fold down automatically. The luggage compartment cover and partition net are now contained in separate cartridges that can be stowed away in matching recesses underneath the luggage compartment floor. The separately-opening rear window in the tailgate of the 5 Series Touring is a BMW brand signature – and not offered by any rival in the marketplace.

The **load capacity** of the **BMW 5 Series Sedan** remains 530 litres (plug-in hybrid models: 410 litres), while the **BMW 5 Series Touring** allows owners of petrol and diesel models to increase boot space from 560 to 1,700 litres. The size of the load compartment in the new plug-in hybrid Touring models is likewise only slightly restricted by the space-saving positioning of the high-voltage battery underneath the rear seat bench. Folding down the 40:20:40 rear-seat backrests increases capacity from 430 to a maximum 1,560 litres.

05/2020 Page 17

BMW 5 Series M Sport Edition. Dynamic looks with a distinctive style.



The new BMW 5 Series employs finely judged exterior design modifications to showcase its muscular presence and infectious sporting appeal more vividly than ever. And the **M Sport Edition** – available from the market launch of the new BMW 5 Series Sedan and new BMW 5 Series Touring – radiates even greater dynamic potency.

Exclusive design features and a specification geared squarely to delivering sporty driving pleasure imbue the special-edition model with its distinctive character. The M Sport Edition is available in conjunction with all four- and six-cylinder variants of the new BMW 5 Series. The special-edition models will be produced in a limited run of 1,000 units for sale to customers worldwide.

Exclusive paint finishes and 20-inch BMW Individual Air Performance Wheels.

Eye-catching body paint finishes emphasise the exclusive character of the new BMW 5 Series M Sport Edition. This special-edition model is also available in **Donington Grey metallic**. Previously, the only 5 Series model offered with this paint option was the BMW M5 high-performance sedan. Alternatively, customers can also opt for the BMW Individual shade **Tanzanite Blue metallic**, which is available for the first time for the BMW 5 Series.

The exclusive 20-inch **BMW Individual Air Performance Wheels** in **bicolour design** also highlight the dynamic looks of the special-edition model. In a model-specific feature, the inlays positioned close to the air pressure valve bear "M Sport Edition" lettering.

05/2020 Page 18

The highlights of the limited-run M Sport Edition:

- Limited to 1,000 units.
- BMW M5 Donington Grey metallic paint finish.
- BMW Individual Tanzanite Blue metallic paint finish.
- 20-inch BMW Individual Air Performance Wheels in bi-colour design, Edition inlay with "M Sport Edition" lettering.
- M Sport package.
- M Sport suspension incl. lower ride height.
- M Sport braking system incl. red-painted callipers with M logo.
- BMW Individual headlights Shadowline.
- BMW Individual High-gloss Shadowline with extended functions.
- M multifunction seats for driver and front passenger (Sedan).
- Sports seats incl. electric backrest width adjustment (Touring).
- Dakota Black leather upholstery with blue contrast stitching.
- M seat belts with stripes in BMW M GmbH colours.
- BMW Individual headliner in Anthracite.
- M leather steering wheel.
- M footrest.
- M-specific pedals.
- M door sill plates.
- Interior trim strips in aluminium Rhombicle Smoke Grey with accent trim strip in Pearl-effect Chrome.
- M badge for front side panel, on left and right in chrome.

05/2020 Page 19

Drive systems, transmissions and BMW xDrive.



Electrification and mild hybrid technology bring greater efficiency.

An ongoing commitment to electrification: far wider choice of plugin hybrid models in the new BMW 5 Series range.

The BMW Group is pressing ahead with its electrification strategy for the new BMW 5 Series range, as elsewhere in its portfolio, by expanding the number of plug-in hybrid models significantly. The new **BMW 530e Sedan** and **BMW 530e xDrive Sedan** both combine latest-generation eDrive technology with a four-cylinder petrol engine, XtraBoost as standard and model-specific sound tuning. From autumn 2020, the range will welcome the arrival of the first plug-in hybrid options for the 5 Series Touring, starting with the **BMW 530e Touring** and **BMW 530e xDrive Touring**. Also joining the plug-in hybrid line-up in autumn 2020 will be a new range-topper in the form of the **BMW 545e xDrive Sedan** with six-cylinder petrol engine. Further models are set to follow.

In the BMW 530e Sedan and BMW 530e xDrive Sedan, the newly improved 135 kW/184 hp four-cylinder petrol engine is partnered by an electric drive unit – producing maximum output of 80 kW/109 hp – that is integrated into the eight-speed Steptronic transmission. For an added dose of sporting flair under particularly keen acceleration, the joint output of the two power sources can be increased by an additional 30 kW/40 hp to a maximum 215 kW/292 hp for up to 10 seconds. This XtraBoost feature, included as standard, is available when the Driving Experience Control switch is set to SPORT, when the selector lever is moved into the M/S position and in response to kickdown. The plug-in hybrid powertrain can deliver maximum combined torque of 420 Nm (310 lb-ft). The new BMW 530e Sedan and BMW 530e xDrive Sedan plug-in hybrid models have an electric range of 62 – 67 kilometres (39 – 42 miles) and 56 – 58 kilometres (35 – 36 miles) respectively. Active Sound Design brings an authentic drive track to the car's interior via its audio system and hits a particularly exhilarating note when the Driving Experience Control switch is in SPORT mode. The acoustic protection for pedestrians generates an artificially generated driving sound to protect other road users when the car is travelling on electric power at up to 30 km/h (19 mph).

A pair of Touring models delivering the hybrid-specific blend of sportiness and efficiency are scheduled to join the new BMW 5 Series line-up from autumn 2020. For the first time, the **BMW 530e Touring** and

05/2020 Page 20

BMW 530e xDrive Touring will combine the versatile functionality and impressive passenger comfort characteristic of their genre with advanced hybrid powertrain technology and the ability to drive with zero local emissions. The five seats in the new plug-in hybrid Touring models afford their occupants exactly the same levels of space as in the conventionally powered variants, while the space-saving installation of the high-voltage battery under the rear seat unit means there is only a slight reduction in boot capacity. With an electric range of 58 – 62 kilometres (36 – 39 miles) for the new BMW 530e Touring and 53 – 56 kilometres (33 – 35 miles) for the new BMW 530e xDrive Touring, a substantial proportion of everyday driving can be done with zero local emissions.

Another plug-in hybrid representative is also set to be added to the range in autumn 2020, further broadening the array of electrified model variants. The **BMW 545e xDrive Sedan** features a 210 kW/286 hp straight-six petrol engine and an 80 kW/109 hp electric motor, and their combined power is directed to all four wheels, as required, by BMW xDrive intelligent all-wheel drive. In the process, the powertrain's overall output of up to 290 kW/394 hp is converted into high-end dynamic performance. The torque generated by the plug-in hybrid system peaks at 600 Nm (442 lb-ft), and the new BMW 545e xDrive Sedan achieves an electric range of 54 – 57 kilometres (34 – 35 miles).

The new BMW 545e xDrive Sedan likewise comes equipped with the very latest BMW eDrive technology available for plug-in-hybrid models. The electric motor stands out with its instantaneous power delivery, most notably when pulling away, but also as it progresses unabated into the upper echelons of rotational and road speed. Intelligent energy management ensures the engine and electric motor work together to optimum effect, in terms of both dynamic performance and efficiency.

48V mild hybrid technology for all four- and six-cylinder engines.

The mild hybrid technology with 48V starter-generator, first introduced in the BMW 520d and BMW 520d xDrive models in autumn 2019, will now offer enhanced performance combined with lower fuel consumption and improved driving comfort in all four- and six-cylinder variants of the new BMW 5 Series.

The **mild hybrid system** helps to both lighten the combustion engine's workload and boost its power, bringing a reduction in fuel consumption and emissions while sharpening performance.

Fitting an extremely powerful **48V starter-generator** and a **second battery** greatly increases the ways in which Brake Energy Regeneration

05/2020 Page 21

can be utilised. When the driver releases the accelerator, the generator transforms the kinetic energy into electricity to be stored in the 48V battery. Energy recuperation on the overrun is particularly intense when the Driving Experience Control switch is set to SPORT mode. The additional deceleration generated over and above the engine braking effect is also harnessed when the brakes are applied. A specially designed braking system previously only fitted in plug-in-hybrid models enables the combination of electrical and mechanical deceleration to be deployed as required and with maximum efficiency at all times.

The **recuperated** energy accumulating in the 48V battery is also supplied to the 12V electrical system and used for powering the associated vehicle functions, from the lights, steering and power windows to the ventilation, audio system and seat heating. In addition, the stored energy can be used for generating additional drive power when it is fed back to the 48V startergenerator.

The starter-generator then acts likes an electric drive unit that assists the engine, allowing it to operate within an efficiency-optimised load range as frequently as possible and ensuring there are fewer peaks in fuel consumption. When the car is accelerating, the 48V starter-generator is also able to offer the driver an **electric boost** effect that can instantly put an extra 8 kW/11 hp on tap for more dynamic power delivery. The result is even sharper response off the line and even quicker bursts of speed when already on the move.

One special feature of the mild hybrid system in the new BMW 5 Series range is the ability to charge the 48V battery from the generator while driving at a constant speed. This method of generating electricity by raising the engine's load point is only employed when the battery charge is low and during phases when it does not have a detrimental effect on engine efficiency.

The powerful 48V starter-generator has the additional benefit of allowing the engine to be switched off and started again very swiftly with remarkably little vibration. The result is improved **comfort when the Auto Start Stop** and coasting functions are in use. When the driver brakes as they approach a junction or the end of a queue of traffic, for example, the engine can be switched off as soon as the car's speed drops below 15 km/h (9 mph). And if the **coasting function** is activated, the engine is also completely shut off rather than just being decoupled from the drivetrain. This function is now operational at speeds between 25 and 160 km/h (16 – 99 mph) and, on the new BMW 5 Series, it is available not just in ECO Pro mode but also COMFORT mode.

Engines with optimised BMW TwinPower Turbo technology.

Heading the portfolio of conventional power units for the new BMW 5 Series is a V8 engine featuring latest-generation BMW TwinPower Turbo technology. The line-up is completed by three more petrol and three diesel engines with either four or six cylinders.

The choice of engines for the new BMW 5 Series is spearheaded by a **V8 unit** boasting the latest BMW TwinPower Turbo technology. Fitted in the **BMW M550i xDrive Sedan**, the engine's array of high-tech features includes two twin-scroll turbochargers with charge air cooling nestling in the V between the cylinder banks, High Precision Injection operating at a maximum pressure of 350 bar, VALVETRONIC fully variable valve timing and Double-VANOS variable camshaft timing. The V8 generates maximum output of 390 kW/530 hp and peak torque of 750 Nm (553 lb-ft). It delivers its prodigious power to the stirring acoustic accompaniment of the flap-controlled M Sport exhaust system fitted as standard.

The range of power units for the new BMW 5 Series Sedan and new BMW 5 Series Touring comprises **three other latest-generation petrol engines (two four-cylinder units and a straight-six)**, which incorporate a twin-scroll turbocharger, High Precision Injection, VALVETRONIC fully variable valve timing and Double-VANOS variable camshaft timing.

The High Precision Injection system's injectors are positioned centrally between the valves and operate at a maximum pressure increased from 200 to 350 bar. This allows the fuel to be metered with even greater precision, thereby raising efficiency and also ensuring remarkably clean combustion.

The exhaust manifold integrated into the cylinder head – with a water-cooled design that serves to aid thermal management – features on both the 135 kW/184 hp four-cylinder engine fitted in the **BMW 520i**, **BMW 530e** and **BMW 530e xDrive** models and the six-cylinder in-line units producing outputs of 245 kW/333 hp in the **BMW 540i** and **BMW 540i xDrive** and 210 kW/286 hp in the new **BMW 545e xDrive**. The second four-cylinder engine can be found under the bonnet of the **BMW 530i** and **BMW 530i xDrive**, where it has a maximum output of 185 kW/252 hp.

Two-stage turbocharging and the latest generation of common-rail direct injection provide the technological underpinnings for the **three diesel engines (one four-cylinder and two six-cylinder units)** in the new BMW 5 Series range. This is the first time that a two-stage system of turbocharging has been used for all the diesel variants in the BMW 5 Series,

05/2020 Page 23

the quick response of the smaller turbocharger enabling instantaneous power delivery.

The 140 kW/190 hp four-cylinder engine fitted in the **BMW 520d** and **BMW 520d xDrive** additionally comes with an updated version of the common-rail direct injection system. New solenoid injectors now deliver fuel to the combustion chambers at up to 2,500 bar, resulting in incredibly fine atomisation and a remarkably clean combustion process.

The six-cylinder in-line engine powering the **BMW 530d** and **BMW 530d xDrive** employs two-stage turbocharging for the first time and combines it with a direct injection system whose piezo injectors produce maximum pressure of 2,700 bar. The variable turbine geometry used in the turbocharging system's low-pressure stage lends itself to a continuous build-up of power. There is now 650 Nm (479 lb-ft) of peak torque on tap between 1,500 and 2,500 rpm, an increase of 30 Nm (22 lb-ft) on the previous engine. The maximum output of the new diesel unit stands at 210 kW/286 hp, 15 kW/21 hp more than before.

The second straight-six diesel engine for the new BMW 5 Series generates formidable power delivery with an even greater sense of urgency in this latest incarnation. The power unit in the new **BMW 540d xDrive** boasts maximum output of 250 kW/340 hp – an increase of 15 kW/20 hp – and peak torque of 700 Nm (516 lb-ft) between 1,750 and 2,250 rpm, an improvement of 20 Nm (15 lb-ft). To ensure exceptionally sharp turbocharger response, the system's high-pressure and low-pressure stages both feature variable turbine geometry. Engine response and efficiency also profit from an intake system with optimised air routing, whose redesign enhances acoustic performance too.

All four- and six-cylinder variants comply with the Euro 6d emissions standard.

Improvements have been made to the car's emission control systems with the addition of petrol particulate filters for the petrol engines and BMW BluePerformance technology – including an SCR catalyst with AdBlue injection for reducing nitrogen oxide emissions – for the diesel units.

Eight-speed Steptronic transmission as standard for all model variants.

The proven formula of fitting an eight-speed Steptronic transmission as standard has been employed once again for all model variants of the new BMW 5 Series. The latest version of the automatic transmission features a weight-reduced design, a newly developed control system and an increased

05/2020 Page 24

gear ratio spread. As a result, it is possible to achieve significant efficiency gains with reduced engine speeds, particularly when driving in higher gears. At the same time, the eight-speed Steptronic transmission now switches gears even more crisply – credit here to the optimised hydraulics control. A new generation of torsion dampers that reduce rotational irregularities within the powertrain helps to enhance both driving comfort and shift smoothness. Integral twin-damper systems for isolating vibrations reduce the degree of slip at the torque converter lock-up clutch.

The optional **eight-speed Steptronic Sport transmission** (standard on the new BMW M550i xDrive Sedan) lives up to its name, as usual, by offering even sportier shift characteristics and faster gear changes than the standard transmission. Shift paddles on the steering wheel allow remarkably rapid manual interventions in the gear selection process. The eight-speed Steptronic Sport transmission also includes a Launch Control function for powering off the line with optimal traction and imperious dynamic flair.

BMW xDrive delivers superior driving pleasure – in plug-in hybrids as well.

Intelligent all-wheel drive is available as an alternative to classical rear-wheel drive for the new BMW 5 Series Sedan and new BMW 5 Series Touring. The latest, remarkably efficient version of the BMW xDrive system can be fitted in conjunction with all engine variants with the exception of the BMW 520i.

The most powerful diesel models – the **BMW 540d xDrive Sedan** and **BMW 540d xDrive Touring** – are only available in all-wheel-drive format, meanwhile, as are the **BMW M550i xDrive Sedan** and **BMW 540i xDrive Touring**.

The exceptionally efficient BMW eDrive technology can also be combined with the BMW xDrive system, paving the way for the arrival of the new **BMW 530e xDrive Sedan** and, in autumn 2020, the new **BMW 530e xDrive Touring**. The even more powerful variant of the plug-in hybrid system comes in all-wheel-drive guise only in the new **BMW 545e xDrive Sedan**.

With its fast, precise and fully variable distribution of drive torque between the front and rear wheels, the **BMW xDrive** system maximises traction and handling stability not only when driving in adverse road conditions, but in highly dynamic driving situations, too. Power is split as required using an electronically controlled multi-plate clutch interlinked with the powertrain and chassis systems. This results in extremely quick and exact response

to any changes in the driving situation. In this way, any tendency to oversteer or understeer is nipped in the bud. The xDrive system's rear-biased set-up, which is also notable in challenging driving situations, guarantees the type of driving experience for which BMW is renowned. When taking corners at speed, for example, just the right amount of extra drive force is transferred to the rear wheels to help the car turn into the bend with supreme accuracy.

To increase the system's efficiency, all of the engine's torque is directed to the rear wheels in situations where all-wheel drive is not needed, while an optimised system of oil supply also serves to increase internal efficiency.

As on the outgoing model, the rear-biased intelligent all-wheel-drive system teams up with the **M Sport differential** in the new

BMW M550i xDrive Sedan. The electronically controlled rear differential lock improves traction and power transmission when driving on road surfaces, offering differing levels of grip for the left and right rear wheels, by preventing a wheel from spinning when it is struggling for purchase. The locking effect produced by an electric motor in the M Sport differential is also helpful for powering out of bends in dynamically committed style.

E classification for plug-in-hybrid models.

The high energy capacity of the high-voltage lithium-ion battery pack and the electric motor's exceptional efficiency have a particularly beneficial effect on the plug-in hybrid models' electric range. Together with their low fuel consumption and CO_2 emissions, this allows the plug-in hybrid models in the new BMW 5 Series range to meet the criteria (depending on the equipment fitted) laid down in Germany's Electric Mobility Act for classification as an electric vehicle. This makes them eligible for special rights on public roads and also means they qualify for reduced company car tax in Germany, where only half the gross list price is taken as a basis in determining the benefit of kind for private use.

BMW eDrive Zone.

The new BMW eDrive Zone function included in the standard specification of all new plug-in hybrid BMW 5 Series models makes it possible to automatically detect urban "green zones" with the help of geofencing technology. This allows the car to automatically switch to all-electric mode when entering these areas. The addition of the eDrive Zone function ensures that even better use is made of the capabilities of plug-in hybrid vehicles. As well as helping to optimise efficiency and reduce emissions, increasing the proportion of electric driving ultimately results in lower running costs for the customer. This is particularly true in urban areas, where electric drive systems consistently prove more efficient than petrol or diesel engines.

05/2020 Page 26

Chassis technology.

The finely judged balance of agility and ride comfort.



The new BMW 5 Series models, like their predecessors, come with all the right qualities for offering supremely assured, sporty handling: a long wheelbase and wide tracks, minimised weight rooted in intelligent lightweight design, and perfect 50:50 weight distribution. The strong body structure and sophisticated, finely balanced chassis technology also contribute to the precise blend of agility and ride comfort that distinguishes the new BMW 5 Series Sedan and new BMW 5 Series Touring. The chassis has likewise been tuned with the specific aim of blending well-resolved everyday driving characteristics, long-distance comfort and driving pleasure of high dynamic intensity.

Sophisticated chassis technology featuring a double-wishbone front axle and five-link rear axle.

The proven design principle of the double-wishbone front axle makes it possible to separate the wheel guidance and damper functions. As a result, the steering remains largely unaffected by disruptive forces caused by irregularities in the road surface. At the same time, supreme levels of comfort and poise are maintained even when the car is being pushed hard.

Like the front axle, the five-link rear axle stands out with its high structural rigidity and reduced weight. Meanwhile, the dual elastic bearings and the rear axle subframe's high supporting base ensure effective decoupling of powertrain and suspension.

Integral Active Steering now offers greater assistance during lowspeed manoeuvring and is also available for plug-in hybrid models.

The retuned electromechanical steering system in the new BMW 5 Series is a paragon of precision and comfort. It makes the car feel even more enjoyable to pilot, thanks in no small part to the standard Servotronic speed-sensitive power assistance. As an alternative, all variants of the new BMW 5 Series, including the plug-in hybrids, can be specified with the likewise electric Integral Active Steering. This system can also be combined with BMW xDrive and makes it possible to corner with greater agility, change lanes more effortlessly and dart through city traffic more nimbly by turning the rear wheels by up to three degrees, as required. Steering effort is further reduced by the use of a variable steering rack ratio at the front axle.

05/2020 Page 27

With Integral Active Steering, the rear wheels are turned in the opposite direction to the front wheels when travelling at extremely low speeds – i.e. under 3 km/h (2 mph). As a result, the new BMW 5 Series Sedan and BMW 5 Series Touring can also be manoeuvred with even greater ease when entering and exiting parking spaces or slowly weaving through narrow channels.

Rear air suspension as standard for the BMW 5 Series Touring.

The new BMW 5 Series Touring continues to offer self-levelling air suspension at the rear axle as standard. This system makes allowance for the Touring model's increased load-carrying potential compared with the Sedan and keeps the car at a constant ride height under all driving and load conditions while at the same time controlling vibrations.

Wide choice of optional chassis systems – from the sporty to the super-comfortable.

The new BMW 5 Series models can once again be specified with a broad selection of proven chassis systems as an option, offering customers a variety of ways to bring either the car's sporty nature or its more comfort-oriented qualities to the fore.

M Sport suspension is available for all engine variants apart from the plug-in hybrid models and can link up with both rear-wheel and all-wheel drive. It forms part of the M Sport package and includes specially tuned spring and damper settings plus a 10-millimetre drop in ride height.

Available for all models, **Adaptive suspension** features electronically controlled dampers. By using continuously adjustable valves to meter the damping force at each wheel individually, it improves both the car's sporting abilities and its ride comfort. The **Adaptive Drive** chassis system available for all straight-six models with a conventional powertrain adds an active roll stabilisation feature to supplement the electronically controlled dampers. The system's electric swivel motors enable it to act swiftly and precisely, both to compensate for body roll and to absorb the disruptive forces triggered by bumps in the road surface on one side of the car.

The new BMW M550i xDrive Sedan is equipped with bespoke chassis technology to ensure the immense power of its V8 engine is translated into intoxicating performance on the road. One of the standard elements of its toolkit is **Adaptive M suspension**, whose specially configured spring and damping systems endow the car with superb poise, even when the driver is exploring the upper end of the car's dynamic repertoire.

05/2020 Page 28

There is also the option of **Adaptive M suspension Professional**, which adds active roll stabilisation and Integral Active Steering to the electronically controlled dampers.

M Sport brakes - now also with red-painted callipers.

The optional M Sport brakes (standard on the BMW M550i xDrive Sedan) are available with brake callipers painted in either blue, as before, or a new red finish.

05/2020 Page 29

Driver assistance systems.

The next steps on the road to automated driving.



The new BMW 5 Series continues to set the benchmark for cutting-edge standard and optional driver assistance systems in the business car segment. Driver assistance systems ease the driver's workload in monotonous situations – such as traffic jams or slow-moving traffic – and provide a helping hand when the driver does not have a clear view. They process images recorded by cameras and data collected by ultrasound and radar sensors.

And now new systems and an extended range of functions have arrived to further enhance comfort, safety and – through an anticipatory driving approach – efficiency as well.

The addition of new driver assistance system functions is accompanied by a new arrangement of the controls on the steering wheel.

The new BMW 5 Series is fitted as standard with features including **cruise control with brake function, manual Speed Limit Assist** and the **Attentiveness Assistant.**

As in the outgoing 5 Series, **Active Cruise Control with Stop&Go function** is available as an option. This camera- and radar-based driver assistance system consists of:

- Cruise control with distance control
- Speed Limit Info including no-overtaking indicator and display of upcoming speed restrictions
- Front collision warning with brake intervention, including collision warning with braking function, person warning with city braking function and adaptive brake assist (enables a reaction to vehicles ahead at speeds of 5 200 km/h [3 124 mph], to stationary objects at up to 85 km/h [53 mph], and to cyclists and pedestrians at 10 65 km/h [6 40 mph]).

When the system is activated, the new BMW 5 Series not only maintains the chosen cruising speed but also automatically keeps a **safety distance** from vehicles travelling ahead – with a choice of four proximity settings.

05/2020 Page 30

Active Cruise Control with Stop&Go function is operational at speeds of 30 – 210 km/h (19 – 130 mph) and can brake the vehicle to a standstill, if necessary. After short periods (1 – 3 seconds) at rest – e.g. in a traffic tailback – the vehicle will then set off again automatically.

The functions of the likewise optional **Driving Assistant** have been adapted and extended for the new BMW 5 Series. The camera- and radar-based driver assistance system comprises:

- Lane Departure Warning, now including lane return by means of steering assistance. This system detects lane markings at speeds of approx. 70 km/h (43 mph) upwards and uses steering wheel vibrations to warn the driver if they are leaving a lane unintentionally; when activating the relevant turn signal indicator for an intentional lane change, the driver overrides this function.
- Lane Change Warning including blind spot detection: intervenes between 20 km/h [12 mph] and the car's top speed to help the driver guide the car back onto the correct lane – likewise by means of steering inputs – after an obstacle has been detected; intervenes from 20 km/h [12 mph] with intentional lane changes (when a turn signal/one-touch turn signal is activated) via a haptic warning through the steering wheel (vibrations) and with a flashing symbol in the exterior mirror.
- Manual **Speed Limit Assist** including **no-overtaking indicator** and display of upcoming speed restrictions.
- Front collision warning with brake intervention, consisting of collision warning with braking function, person warning with city braking function and adaptive brake assist. Enables a reaction to vehicles ahead at speeds of 5 200 km/h [3 124 mph], to stationary objects at up to 85 km/h [53 mph], and to cyclists and pedestrians at 10 65 km/h [6 40 mph].
- **Rear crossing traffic warning** using the side-mounted radar sensors. Assists the driver e.g. when reversing out of a parking space and warns of possible collisions with crossing traffic in situations with poor visibility.
- **Rear collision warning**: uses rear-mounted sensors to detect imminent rear-end collisions and warns vehicles approaching from the rear using the hazard warning lights (flashing at double the usual

05/2020 Page 31

frequency). In addition, preventative protection measures are initiated when a crash is unavoidable – e.g. the seat belts are pulled tight, the windows are closed, etc.

An array of additional latest-generation driver assistance system come together in the new, optional **Driving Assistant Professional** for the BMW 5 Series. This camera- and radar-based system (only available in conjunction with **BMW Live Cockpit Professional**) comprises the features of **Active Cruise Control with Stop&Go function** and the **Driving Assistant** already referred to and adds:

- Steering and Lane Control Assistant: uses corrective steering inputs to help the driver stay in the centre of their lane at speeds of 0 210 km/h [130 mph], including when the lane narrows; with Active Navigation, the car now detects necessary lane changes ahead and helps the driver to keep to the route calculated by the navigation system on multi-lane roads. When approaching a motorway intersection or exit, a display in the instrument cluster indicates the need to change lane. The Lane Change Assistant then helps the driver to carry out this manoeuvre with ease. In preparation, the system adjusts the car's speed to make it easier to steer into a suitable gap in the adjacent lane; comfortable/automatic lane changes on motorways and roads with structurally separated carriageways can be initiated at speeds of 90 180 km/h [56 112 mph] by tapping the turn signal indicator lever; lane changes can be overridden at any time.
- Lane Keeping Assistant with active side collision protection: helps the driver at speeds of 70 – 210 km/h (43 – 130 mph) with corrective steering inputs to keep the car in its lane and actively avoid potential side-on collisions; includes Lane Change Warning, Lane Departure Warning and side collision warning.
- Automatic Speed Limit Assist: enables automated adoption of speed restrictions detected in advance and adjusts the car's speed to the route at hand when cruise control is activated.
- Front crossing traffic warning: warns of crossing traffic when exiting and entering parking spaces, and when joining crossing traffic in situations with poor visibility; active up to 7 km/h [4 mph].

- Evasion Assistant: helps the driver in situations with a critical danger of rear-end collision, but where it is still possible to evade an obstacle: now also reacts to pedestrians and cyclists; can intervene at 30 – 160 km/h [19 – 99 mph].
- Junction warning, now with city braking function: brake assistance with visible/audible warning incl. active brake input when a collision with crossing traffic is imminent; active at 10 – 85 km/h [6 –53 mph].
- Wrong-way driving warning: detects no-entry signs when about to drive onto motorways, roundabouts and one-way streets.

The new **3D visualisation of the surrounding area** (only available in conjunction with **BMW Live Cockpit Professional**) depicts all of the cars, trucks and motorcycles registered by the cameras and sensors in the driver's current lane as well as those in any adjacent lanes. They are shown in the central section of the instrument display. Vehicles within a critical distance are highlighted. Graphics indicate manoeuvres which can be carried out with the help of the assistance systems. This ensures the driver has an overview of the situation and relevant courses of action at all times. If route guidance is activated, the screen also shows a panel with navigation instructions above the 3D view.

Parking Assistant now with reversing assistant.

Further refinements have also been made to systems which make parking and manoeuvring easier in the new BMW 5 Series Sedan and new BMW 5 Series Touring. The optional **Parking Assistant** helps the driver to select and make use of parallel and perpendicular parking spaces and takes over control of the accelerator, brakes, steering and gearshifts (if required). The system can also be used to pull out from spaces parallel to the road and now includes the **reversing assistant** as well as a **rear view camera** and **Park Distance Control** with front and rear sensors. It offers the extremely convenient option of automated reversing in confined spaces or situations

05/2020 Page 33

where the driver does not have a clear view, such as multi-storey car parks or entrances to courtyards. To do this, it stores the steering movements for any section the car has just driven forward along at no more than 36 km/h (22 mph). The system is then able to reverse the vehicle for distances of up to 50 metres by steering it along the same line it took when moving forward. All the driver has to do is operate the accelerator and brake pedals and monitor the vehicle's surroundings. The reversing assistant can **back the car up automatically** at a maximum 9 km/h (5.5 mph).

Optional Parking Assistant Plus offers even greater comfort and precision when manoeuvring.

This feature includes the functions of the **Parking Assistant** described above – and adds **Park View, Panorama View and 3D Top View** to create a 360° image of the vehicle and its surroundings from different perspectives in the Control Display. Meanwhile, the **Remote 3D View** function also gives drivers the ability to call up a three-dimensional live image of their vehicle and its immediate vicinity on their smartphone.

Another element of **Parking Assistant Plus** is the **Drive Recorder**, a new addition to the BMW 5 Series. This function uses the cameras of the various driver assistance systems to record video footage from different points around the vehicle, before storing the recordings so they can be either watched later on the Control Display when the car is stationary or exported via the USB port.

Also on the options list is **Remote Control Parking**. This function enables the driver to trigger the process of entering and exiting parking spaces from outside the car using the BMW Display Key. In this way, the new BMW 5 Series can be manoeuvred forwards into tight parking spaces or garages and reversed out of them again. During these manoeuvres, the car's acceleration and braking are monitored by the sensors of the driver assistance systems and overseen by the driver.

Display and operating system, BMW Connected and ConnectedDrive.



BMW Operating System 7 opens up new digital services.

BMW Operating System 7 will be added to standard specification for the BMW 5 Series in July 2020, paving the way for a multitude of potential new applications and connectivity options. These will cement the reputation of both the new BMW 5 Series Sedan and BMW 5 Series Touring as an ideal choice that drivers can rely on in any situation. To strengthen the bond between driver and car, there is now a greater range of personalisation options, too. The driver is greeted by name, for instance, and is able to use their personal account to access a wide range of stored settings, such as the seat and exterior mirror positions or favourite navigating destinations.

Control of the vehicle, infotainment, communication and navigation functions is based on the proven approach of allowing customers to choose between the Control Display's touchscreen, the iDrive Touch Controller, the controls on the steering wheel, voice control using the BMW Intelligent Personal Assistant or optional BMW gesture control, depending on the situation. Intuitive, multimodal and fully customisable interaction between the driver and vehicle has been extended and enhanced once again for the new BMW 5 Series.

Premiere in the new BMW 5 Series: BMW Maps – the newgeneration navigation system.

When it comes to digital services, one of the standout new features in the BMW 5 Series is **BMW Maps**. This cloud-based system has significantly enhanced performance and boasts intuitive destination entry and excellent accuracy. The new-generation navigation system also offers extremely fast route calculation carried out dynamically and at short intervals, based on precise real-time traffic data. The route is worked out using an anticipatory approach, meaning upcoming traffic along the entire route is factored into the calculation of the expected arrival time. Complete traffic data is now available for more minor roads, too. Hazard warnings transmitted online from the BMW fleet now reach the car even faster thanks to connected navigation. These improvements help to produce a very accurate estimate of arrival time and improved route guidance.

As well as system performance, the destination input function has also been enhanced and now lets the driver enter any word. The search results are sorted by relevance with a high level of precision. Alternatively, the journey's

destination can be entered at any time simply by voice control. Plus, points of interest (POIs) along the route are described in greater detail, with reviews, opening times and photos all included.

Hazard warnings transmitted online from the BMW fleet now reach the car even faster thanks to connected navigation.

BMW Maps is also able to provide even more effective assistance when drivers are searching for a parking space close to their destination with **Connected Parking**. When drivers set their destination in the navigation system, they receive an indication of the parking situation at the destination for their estimated time of arrival. Shortly before arriving, the driver is given information on the nearest multi-storey car park as well as proposed routes offering a particularly good chance of finding a parking spot close to the destination. The familiar **On-Street Parking Information** and **ParkNow** services have been intelligently incorporated into the functionality of BMW Maps.

Upgraded standard equipment: BMW Live Cockpit Plus.

BMW Live Cockpit Plus remains part of standard specification for the new BMW 5 Series Sedan and BMW 5 Series Touring. However, it now combines a black panel instrument cluster with digital readouts, a 5.1-inch colour display between them and a 10.25-inch Control Display with touchscreen functionality.

Other Live Cockpit Plus features include the iDrive Controller with touchpad, a navigation system, a multimedia system, two USB ports, Bluetooth/WiFi interfaces, a hands-free facility with USB interface, a built-in SIM card with 4G LTE connectivity, plus a wide range of connected services such as overthe-air navigation map updates and Intelligent Emergency Call. The Connected Package included as part of BMW Live Cockpit Plus comes with a wider range of functions thanks to the addition of **Smartphone Integration, Remote Software Upgrade, Connected Music** and **BMW Maps** with **Connected Navigation** services including **Real Time Traffic Information RTTI with hazard warning, Connected Charging** and **Connected Parking.**

Owners will continue to enjoy the benefit of the popular **Concierge Service**, which offers swift, personalised assistance when searching for an address, for example, or making a restaurant or hotel booking. Another option ready to go is **Remote Services**, which enables drivers to control various vehicle functions – such as locking and unlocking the doors – or monitor the vehicle's immediate vicinity remotely using the **BMW Connected App**. In the plug-in-

hybrid models, it will also be possible to pre-condition the interior temperature remotely by activating the auxiliary heating or auxiliary climate control systems.

Optional BMW Live Cockpit Professional with new 12.3-inch touchscreen Control Display and extended functionality.

The optional BMW Live Cockpit Professional (fitted as standard on the BMW M550i xDrive) comes with all the features of BMW Live Cockpit Plus. However, information is shown on a fully digital instrument display with a screen diagonal of 12.3 inches and a high-resolution Control Display with touchscreen functionality, now enlarged to 12.3 inches also.

With its **12.3-inch diagonal, the cockpit's instrument display** provides enough room to accommodate an excerpt from the navigation map, status indicators for the driver assistance systems or **3D visualisation of the surrounding area**. The display style for the remaining readouts varies according to either the mode selected with the Driving Experience Control switch or the plug-in hybrid system's operating mode. Drivers are also able to call up additional content, such as the sport displays for example, in the instrument cluster's right-hand section.

The **Control Display** above the centre console also has a **12.3-inch screen** and its main menu lets the driver configure up to ten pages, each showing two to four pads (tiles) with live content. Both the content and the graphics are now personalised to an even greater degree, as illustrated by the vehicle mock-up that matches the actual model colour and equipment line.

Smartphone Integration with Apple CarPlay (Available in Belgium, not in Luxembourg)

One of the most notable advances as far as connectivity is concerned is the enhanced Smartphone Integration feature that comes as standard.

The wireless WiFi connection between the smartphone and vehicle enables the operating system in question to be integrated directly into the fully digital

05/2020 Page 37

screen grouping in the new BMW 5 Series Sedan and BMW 5 Series Touring. All the key information from the apps made available there can be viewed both in the Control Display and – in a cleverly presented way – in the instrument cluster or optional Head-Up Display. And the new BMW 5 Series leads the way in showing the turn instructions from smartphone navigation apps in its instrument cluster and Head-Up Display.

BMW Intelligent Personal Assistant: even more natural voice commands plus additional functions.

The new BMW 5 Series comes as standard with the innovative voicecontrolled BMW Intelligent Personal Assistant, the latest generation of which takes the connection between driver and car to a new level – with immediate effect. Activated by a spoken prompt (for example **"Hey BMW"**) or at the touch of a button, this digital companion acquires new capabilities all the time.

Naturally formulated spoken instructions can now also be used to open and close the car's **windows** (partially or fully) or adjust the **air conditioning**.

In addition, the driver can set rules by which the BMW Intelligent Personal Assistant **learns routines** that increase both convenience and driving pleasure in specific situations. For instance, the driver's window could be opened automatically when the vehicle reaches a chosen location entered using GPS coordinates, such as the entrance to a garage or multi-storey car park.

The BMW Intelligent Personal Assistant is a bona fide **expert**, who is always on hand to answer the occupants' questions about the car, its functions or even about how to improve driving style.

When the BMW Intelligent Personal Assistant is in use, new graphics appear in the Control Display to underline the system's interactive character. The **graphic** now **"turns"** towards the speaker, visualising how the assistant is listening attentively to what is being said. The system recognises whether the driver or front passenger is speaking to it, and reacts accordingly by altering the climate control settings on one side of the interior, for example.

Always up to the minute: new Remote Software Upgrade function for over-the-air updates.

BMW Operating System 7 also brings the **Remote Software Upgrade** function to the BMW 5 Series, which will keep the new BMW 5 Series up to date with the latest software. The content of the upgrades ranges from new services to improved vehicle functions. All updates can be imported **over**

05/2020 Page 38

the air, either on a smartphone via **BMW Connected** or directly into the car using its built-in SIM card.

The intelligent connectivity technology on board the new BMW 5 Series now also makes it possible to incorporate additional vehicle functions at a later date. The optional features that can be retrofitted via this digital channel include the **High Beam Assistant**, which ensures the road ahead is illuminated as effectively as possible by automatically switching between low and high beam as the situation demands.

The **Drive Recorder**, which utilises the standard stereo camera fitted next to the rear-view mirror, can likewise be added to the car later. Also included as part of the Parking Assistant Plus, the Drive Recorder allows drivers to shoot videos while travelling through spectacular scenery or performing impressive manoeuvres on the race track, for example. These can then be transferred to their mobile device and shared. Recordings can be up to 40 seconds in length, allowing the 20 seconds of video shot before the Drive Recorder is activated and the following 20 seconds to be saved. In the event of a collision, a period of up to 20 seconds either side of the moment of impact is automatically recorded and saved.

The **IconicSounds Sport** option is available for over-the-air installation in the **Active Sound Design** category. Sure to appeal to drivers with a sporty streak, it generates an authentic drive sound in the car's cabin via the audio system and hits a particularly exhilarating note when the Driving Experience Control switch is set to SPORT mode.

Electric mobility meets connectivity: digital services for plug-in hybrid models.

The latest innovations in the fast-moving areas of electric mobility and digitalisation serve to enhance the pleasure of driving with zero local emissions served up by the plug-in-hybrid models in the new BMW 5 Series range. Various new digital services are available, designed to make charging the high-voltage battery as easy as possible or to maximise the proportion of electric driving – providing further evidence of the BMW Group's pioneering role in the field of sustainable mobility.

The new digital service **BMW eDrive Zone** is the only one of its kind worldwide and opens up new ways of using the plug-in hybrid models' potential for locally emission-free driving to optimum effect. This function automatically switches to the all-electric operating mode as soon as the car enters selected urban areas, such as "green zones". The BMW eDrive Zone service employs GPS-based geofencing technology to detect designated

05/2020 Page 39

areas of this kind. So far, BMW eDrive Zones have been earmarked for 58 cities and regions in Germany, as well as around 20 other cities elsewhere in Europe.

In addition, the **BMW Points** loyalty programme set to be rolled out over the remainder of 2020 will reward drivers of BMW plug-in hybrid models with attractive incentives. Drivers will collect points for every electric mile they clock up, with double points available in eDrive Zones.

BMW is offering drivers of **plug-in hybrid versions** of the new BMW 5 Series additional information and connectivity options through its **BMW Connected Charging** function, which allows the remaining range, charge level, charging timer and pre-conditioning status to be viewed and controlled with ease, either from the car or on a smartphone via BMW Connected.

The **Connected Charging** functionality of the navigation system in **plug-in hybrid models** also enables it to display not only filling stations, but also public **charging stations**. When the driver selects a particular charging station, they will be shown its predicted occupancy status together with recommendations for hotels, restaurants, cafés, attractions or cultural venues in the area. The **BMW i Wallbox** still offers convenient at-home charging.

Connected Parking is yet another new function. Available for all engine variants, it combines a wealth of intelligent solutions designed to facilitate stress-free parking, including the established functions **On-Street Parking Information** (showing potential places to park on the road) and **ParkNow** (for easily finding and booking spaces and cashless payment). These have now been joined by information on how long it might take to find a parking space at the destination.

05/2020 Page 40

BMW M Performance Parts Enhancing agility and dynamism one specially tailored part at a time.



The components and products from BMW M Performance Parts ensure the motor sport DNA of BMW makes its presence felt at all times off the track as well as on it. Exclusive materials and first-class quality guarantee not only visual highlights but perfect dynamics. BMW M Performance Parts can be ordered to enhance the aerodynamics, chassis or cockpit of a BMW, bringing a crucial extra touch of motor sport feeling to the customer's car.

BMW M Performance Parts for the BMW 5 Series:

- M Performance Front attachment carbon fibre left/right
- M Performance Front splitter in carbon fibre
- M Performance Kidney grille in carbon fibre
- M Performance Air Breather in carbon fibre left/right
- M Performance Exterior mirror cap in carbon fibre left/right
- M Performance Side skirt attachment in carbon fibre left/right
- M Performance Accent stripes in black/silver
- M Performance Side skirt films left/right
- M Performance Rear bumper trim in black high-gloss
- M Performance Rear diffuser in carbon fibre
- M Performance Rear diffuser in black matt
- M Performance Rear spoiler Pro in carbon fibre (only for Sedan)
- M Performance Rear spoiler in carbon fibre (only for Sedan)
- M Performance Rear spoiler in black matt (only for Sedan)
- M Performance 19-inch brake system
- M Performance Exhaust system diesel
- M Performance Tailpipe finishers in carbon fibre
- M Performance Fuel filler cap cover in carbon fibre
- M Performance Steering wheel
- M Performance Steering wheel cover in carbon fibre/Alcantara
- M Performance Steering wheel cover in carbon fibre/leather
- M Performance Shift paddles in carbon fibre
- M Performance Floor mats
- M Performance Logos for LED door projectors
- M Performance Key case in Alcantara/carbon fibre
- 20-inch M Performance forged wheel Double-spoke 669 M Bicolour (Jet Black matt, gloss milled), summer complete wheel set
- 20-inch M Performance forged wheel Double-spoke 669 M Orbit Grey, summer complete wheel set

05/2020 Page 41

- 20-inch M Performance forged wheel Multi-spoke 732 M Bicolour (Jet Black, gloss milled), summer complete wheel set
- 19-inch M Performance forged wheel Double-spoke 786 M Jet Black matt, summer complete wheel set