

The BMW X5 M. The BMW X6 M. Contents.



1. The BMW X5 M. The BMW X6 M. Description in Brief.	2
2. High Performance Re-Defined: The BMW X5 M. The BMW X6 M. (Short Version)	7
3. High Performance Re-Defined: The BMW X5 M. The BMW X6 M. (Long Version)	15
4. Specifications.	39
5. Power and Torque Diagrams.	40
6. Exterior and Interior Dimensions.	41

1. The BMW X5 M. The BMW X6 M. Description in Brief.



- The BMW X5 M and the BMW X6 M for the first time carry over the high-performance character of those very special cars from BMW M GmbH into the segment of BMW X models. Indeed, the combination of BMW's M philosophy with this innovative concept paves the way for a truly exclusive driving experience, both models setting new standards in their class in terms of dynamic performance borne out by supreme acceleration, lateral dynamics, steering behaviour, short stopping distances and efficiency, that is all the criteria so crucial to motorsport.
- The superior driving qualities of the BMW X5 M and the BMW X6 M are clearly visualised by specific BMW M design: The BMW X5 M offers the convincing look of power and exclusivity, the BMW X6 M, through its design, reflects outstanding dynamism and athletic performance. Common design elements at the front of each model bear clear reference to the dynamic driving potential shared by both cars, while within the interior a truly luxurious ambience forms a perfect symbiosis with the cockpit design so typical of a BMW M Model. The fundamental message in creating the interior design in each case is to reflect the truly outstanding dynamism of both models in superior style.
- Both the BMW X5 M and the BMW X6 M come with a new V8 high-performance power unit boasting performance features precisely tailored to the character of each model. Displacing 4,395 cubic centimetres, the engine delivers maximum output of 408 kW/555 hp from 5,750–6,000 rpm. The new M TwinPower Turbo engine is indeed the world's first power unit with a common exhaust emission manifold joining both rows of cylinders as well as Twin Scroll Twin Turbo Technology. The turbocharger and the catalytic converters are positioned in the V-section between the two rows of cylinders ensuring the spontaneous and direct response so typical of BMW M as well as a linear surge of power for a consistent flow of torque at all times. As a result, peak torque of 680 Newton-metres or 501 lb-ft is maintained consistently all the way from 1,500–5,650 rpm.

- Over and above their superior driving dynamics, both models offer by far the highest level of efficiency in their respective segments. In addition to the power unit optimised for efficiency by means of High Precision Injection, proven and newly developed BMW EfficientDynamics technologies serve to ensure this superiority in practice. These cutting-edge technologies comprise Brake Energy Regeneration as well as on-demand control of the electrical fuel pump, the detachable a/c compressor and the volume flow-controlled supply of hydraulic fluid to the anti-roll system introduced for the first time on the new BMW 7 Series. And last but not least, both models naturally comply with the EU5 and, respectively, the LEV II emission standards.
- The M Sports Automatic transmission with six gears, optimised gearshift dynamics and outstanding gearshift comfort confirms the sporting orientation of both models. The innovative torque reduction concept is achieved by briefly cancelling out fuel injection and ignition for extremely short gearshift times. The driver himself shifts gears either via an electronic gear selector lever or, if he prefers, through aluminium shift paddles on the steering wheel again specific to BMW M. At the same time he can spontaneously intervene into the gearshift process whenever he wishes by operating one of the paddles also in the D Mode. The Launch Control function for maximum acceleration, in turn, may also be activated in the M Mode, while in the Power Mode, finally, the driver may vary the engine and transmission control, using either the Sport or the Efficiency driving programs.
- Performance and fuel consumption of the BMW X5 M and BMW X6 M:
Acceleration 0–100 km/h: 4.7 seconds
Top speed: 250 km/h (155 mph) (275 km/h (171 mph) with optional M Driver's Package)
Average fuel consumption in the EU cycle: 13.9 litres/100 kilometres (equal to 20.3 mpg imp), CO₂ emissions in the EU cycle: 325 g/km.
- The BMW X5 M and the BMW X6 M are the first all-wheel-drive models built by BMW M GmbH, combining BMW xDrive and Dynamic Performance Control with all the specific requirements and qualities of a high-performance vehicle in typical M style. The characteristic highlight of both models is their outstanding driving dynamics combined with supreme driving stability and excellent traction. Driving pleasure is further enhanced by a level of agility unparalleled in this segment and the unusually neutral steering behaviour.

- Intelligent all-wheel drive ensures variable distribution of drive power front-to-rear. Dynamic performance control, in turn, varies the distribution of power between the two rear wheels and allows particularly dynamic acceleration when leaving a bend. BMW xDrive, Dynamic Performance Control, Dynamic Stability Control (DSC), Servotronic and Adaptive Drive are all coordinated by Integrated Chassis Management (ICM) as the central control unit. The result is an unusually high standard of driving dynamics and motoring safety in terms of agility, traction and driving stability.
- The Servotronic steering developed specifically for the BMW X5 M and the BMW X6 M provides individual steering assistance related to the speed of the car and varied by two control maps. Substantial steering support at low speeds, for example, allows comfortable parking manoeuvres, while exact feedback through higher control forces at higher speeds ensures a superior style of motoring and greater steering precision when travelling fast. Apart from the standard configuration of the Servotronic steering, the driver is also able to call up the Sports Mode by means of the EDC or M Drive button, activating an uncompromisingly sporting control map for particularly dynamic requirements.
- The suspension with its double-track control arm front axle and the integral IV rear axle comes with elastokinematics again boasting all the features of BMW M. Both the BMW X5 M and the BMW X6 M come as standard with air suspension and self-levelling on the rear axle as well as Adaptive Drive with electronically adjustable dampers (EDC) and active anti-roll control. The newly developed three-way support mounts give both the suspension and dampers a particularly sensitive response, and pressing either the EDC or the M Drive button the driver is able to choose either the Normal or Sports damper setting as well as the Servotronic control map. The special configuration of EDC and anti-roll control tailored again to BMW M ensures a linear build-up of lateral forces in fast and dynamic bends. And the high-performance brake system in lightweight technology, to mention yet another example, offers superior stopping power with virtually no fading and optimum control of the brakes.
- The M Dynamic Mode (MDM) activated by the DSC button raises the control thresholds for intervention by the brakes and the reduction of engine power and provides that typical steering behaviour so characteristic of BMW M by shifting drive power to the rear in the xDrive setting and interacting appropriately with Dynamic Performance Control. MDM therefore allows maximum speeds in bends plus unrestricted safety when driving to the extreme. In the process the car remains absolutely neutral in following the steering, allowing the driver to take even fast bends in a controlled drift under maximum load in the bend apex.

- Both the BMW X5 M and the BMW X6 M come with a special body structure designed and built for maximum occupant safety. The occupants are protected among other things by three-point inertia-reel seat belts on all seats, six airbags – frontal, side and head airbags – as well as crash-activated headrests at the front. Bi-xenon dual headlights including a daytime driving light function, adaptive brake lights and 20-inch light-alloy rims with different-sized runflat tyres front and rear all come as standard.
- Innovative driver assistance systems raise the superior driving experience in the BMW X5 M and the BMW X6 M to an even higher level of perfection. These systems include, as an option, BMW's Head-Up Display again tailored to BMW M, Adaptive Headlights, and a High-Beam Assistant. And to supplement Park Distance Control featured as standard, there is also an optional back-up camera complete with a Top View function.
- The driver-oriented interior of the BMW X5 M and the BMW X6 M comes with M seats, an M leather steering wheel and an M footrest, as well as the M-specific cockpit including an instrument cluster with a variable pre-warning field in the rev counter, specific vehicle function displays, and white illumination of the display units.
- The BMW X5 M and the BMW X6 M both feature the latest generation of BMW iDrive control serving to mastermind the navigation, infotainment, air conditioning and communication functions as well as the M Drive menu. The latter – the M Drive menu – comprises the various EDC settings including Servotronic, DSC, the Power Mode, and the optional Head-Up Display enabling the user to save his favourite configuration then retrieved by the M Drive button on the steering wheel.
- High-quality materials and upholstery from the wide range of BMW Individual, numerous comfort functions and innovative entertainment options all underline the exclusive, M-specific character of both models. Standard features include electric seat adjustment complete with a memory function and seat heating at the front, two-zone automatic air conditioning, the BMW Individual instrument panel with leather padding, Merino leather covering additional surfaces and trim features, M entry trim, the M footrest, interior trim bars in brushed Aluminium Shadow, as well as automatic operation of the tailgate on the BMW X6 M. Optional features include the Professional navigation system, the BMW Individual High End audio system, four-zone automatic air conditioning, the M-specific Head-Up Display, Merino leather all round, active seat ventilation as well as a panorama glass roof (BMW X5 M) or, respectively, an electrically operated glass roof (BMW X6 M). And last but not least, the

BMW X5 M is available with a towbar including an electrically swivelling ball head, while the BMW X6 M comes as an option with a towbar incorporating a removable ball head. Maximum trailer load in each case is a significant three tonnes.

2. High Performance Re-Defined: The BMW X5 M. The BMW X6 M. (Short Version)



Now the discerning customer has the opportunity to enjoy the unique high-performance character of a BMW M car also in the segment of BMW X models: The BMW X5 M and the BMW X6 M are the first all-wheel-drive models to offer the supreme performance, dynamic driving features, athletic design, and premium quality of a typical BMW M Car.

Both models are powered by a newly developed V8 high-performance engine delivering 408 kW/555 hp at an engine speed range between of 6,000 rpm from an engine capacity of 4,395 cc. The new M TwinPower Turbo engine is indeed the world's first power unit with a common exhaust manifold encompassing both rows of cylinders and featuring Twin Scroll Twin Turbo Technology.

BMW's intelligent xDrive all-wheel-drive system is naturally geared to the specific power and performance characteristics of the BMW X5 M and the BMW X6 M, just like Dynamic Performance Control also standard on both models. Interacting with the cars' special M suspension including Adaptive Drive and the newly developed Servotronic power steering, this ensures the driving behaviour so characteristic of a BMW M Car, combining unique driving stability with precisely controlled steering qualities all the way to the highest level of driving dynamics.

The BMW X5 M and the BMW X6 M set new standards in this segment of high-performance models in terms of acceleration, lateral dynamics, steering behaviour, stopping power, and efficiency. Both models accelerate to 100 km/h from a standstill in 4.7 seconds and stand out not only through the truly impressive delivery of power by the V8 turbo engine providing maximum torque of 680 Newton-metres or 501 lb-ft in the broad speed range between 1,500 and 5,650 rpm, but also through the likewise smooth and consistent build-up of lateral forces meeting the highest requirements and the most dynamic level of performance in bends.

The exclusive character of both the BMW X5 M and the BMW X6 M results to a large extent from a level of driving performance never seen before even in this particular segment. Both models offer the ultimate in their segment in every respect, providing performance and dynamic driving reserves quite unique versus the competition and ensuring an experience of unlimited supremacy in everyday traffic.

Design: features typical of BMW M for supreme dynamics and exclusivity.

The truly outstanding potential of both models comes out clearly in their looks and design, their joint DNA borne out by supreme performance on the road presented convincingly by the common design of the front end with its large air intakes.

The engine compartment lid, the front air dam and the headlight graphics carried over from the BMW X6 are identical in both cases. The proportions of the two cars, on the other hand, clearly differ through the variability of the BMW X5 M Sports Activity Vehicle as opposed to the dynamic qualities of the BMW X6 M Sports Activity Coupé.

Both the BMW X5 M and the BMW X6 M feature special gill intakes in the front side panels tailored to each model as well as individually designed 20-inch light-alloy rims.

The signs of distinction so typical of BMW M are likewise presented in individual style at the rear, in both cases confirming the outstanding dynamism of each model: The rear air dam on the BMW X6 M demonstrates particularly powerful presence, while the two dual tailpipes in the exhaust system surrounded in both cases by the rear air dam are again typical of BMW's M philosophy.

Compared with the "regular" BMW X5 and the BMW X6, the share of black plastic surfaces around the lower section of the body is reduced on both new models, giving even greater emphasis to the road going-orientation of the BMW X5 M and the BMW X6 M. Particularly the body elements fulfilling major functions in terms of aerodynamics and the flow of cooling air are clearly accentuated on both models.

Beyond these common features, both of these all-wheel-drive high-performance sports cars stand out clearly as unique models in their own right: The BMW X5 M clearly boasts its superior power and exclusivity at very first sight, while the BMW X6 M, in its unique design, alludes to fascinating driving dynamics and the car's athletic charisma.

The M TwinPower Turbo: Twin Scroll Twin Turbo Technology with a joint exhaust manifold for both rows of cylinders making its debut in the market.

Power and performance typical of BMW M is delivered by the power unit in both the BMW X5 M and the BMW X6 M by a new design and construction principle: The new M TwinPower Turbo with Twin Scroll Twin Turbo Technology and the exhaust manifold extending over both rows of cylinders patented by BMW offer absolutely extreme response and spontaneity, a linear build-up of engine power, and an unusually consistent torque curve.

The two turbochargers are positioned together with the catalytic converters in the V-section between the two rows of cylinders. The position of the intake and exhaust ducts provided in this way serves to reduce the length of the pipes and manifolds and increase their cross-section, with pressure losses on the exhaust side being significantly minimised in the process.

The joint flow of exhaust gas provided by the common manifold system connecting two cylinders at a time also ensures optimum gas throughput. The separation of exhaust flow is continued until the exhaust gas reaches the turbine wheel, building up ongoing pressure on the two Twin Scroll Turbochargers not impaired by any kind of counter-pressure.

With maximum charge pressure amounting to 1.5 bar, the use of Twin Scroll Twin Turbo Technology with its inter-cylinder exhaust manifold makes unique use of the turbocharging potential.

Immediate, direct response to the gas pedal and truly exceptional pulling force from the engine starting at low speeds and continuing consistently to the highest load level characterise the new M TwinPower Turbo from BMW M GmbH. The truly impressive development of power ensured in this way is accompanied by fascinating engine sound accentuating the fast-revving engine characteristics and the linear build-up of power by a supreme acoustic effect typical of a BMW M Car.

Reflecting the superior power of the engine, the V8 power unit comes with a cooling system developed specifically for the two new models. One special feature in this context is the indirect intercooling effect serving to optimise performance under particularly dynamic driving conditions.

The new M TwinPower Turbo develops its outstanding output and performance with equally outstanding efficiency. In addition to direct High Precision Injection, both the BMW X5 M and the BMW X6 M are equipped with a wide range of technologies from BMW EfficientDynamics. Apart from Brake Energy Regeneration, these also include on-demand control of the electrical fuel pump, a detectable a/c compressor, as well as a volume flow-controlled supply of hydraulic fluid to the anti-roll system also operating specifically on demand.

Both models offer average fuel consumption in the EU test cycle of 13.9 litres/100 kilometres, equal to 20.3 mpg imp. Their CO₂ rating is 325 grams per kilometre. And last but not least, the engine naturally fulfils all the requirements of the US LEV II standard as well as the EU5 requirements in Europe.

M Sports Automatic with electronic gear selector lever and shift paddles on the steering wheel.

Featured for the first time on a BMW M Model, the six-speed automatic transmission enhances the high-performance character of the BMW X5 M and the BMW X6 M through its spontaneous gearshift, direct connection to the engine, and the high standard of shift comfort. The new M Sports Automatic is controlled by an electronic gear selector lever on the centre console and offers the driver not only the D Mode, but also an S and M Mode for an even more sporting gearshift.

Aluminium gearshift paddles on the steering wheel exclusive to BMW M allow a manual gearshift significantly shortening gearshift times by the new technology reducing torque in the transmission through the deactivation of individual cylinders.

This significantly enhances the sporting character of the car, the gear in mesh being held in position in the M Mode up to maximum engine speed in order to give the driver optimum control of his vehicle also under the most dynamic driving conditions. In other words, the transmission does not shift up automatically at a certain engine speed in this mode.

A further option in the M Mode is to activate the Launch Control function enabling the driver to accelerate from a standstill with maximum performance: With the driver pressing the gas pedal fully down, M Sports Automatic shifts gears automatically at the ideal point and with optimum wheel spin control. An aluminium oil sump again exclusive to BMW M with a special finned or ribbed structure on the surface guarantees optimum cooling at all times even with an extremely sporting style of motoring.

BMW xDrive and Dynamic Performance Control with a special set-up for optimum dynamics.

The outstanding success of BMW's intelligent xDrive all-wheel-drive technology is based on the fact that the system not only improves traction on rough terrain, but also enhances driving dynamics on the road. Electronically controlled, variable power distribution to the front and rear axle prevents even the slightest tendency to over- or understeer right from the start, before DSC Dynamic Stability Control is even required to cut in.

Dynamic Performance Control presented for the first time in the BMW X6 and now featured also in the BMW X5 M and the BMW X6 M enhances driving stability in demanding situations. Variable distribution of drive power between the right and left rear wheel significantly improves steering precision and tracking stability at all speeds, with DSC being required to stabilise the vehicle only under high lateral acceleration.

Ultimately this offers the driver an unparalleled standard of dynamic performance, agility and traction re-defining all existing benchmarks in drivetrain and suspension technology.

In the BMW X5 M and the BMW X6 M the potentials of both systems are again used in that special style of BMW M, with the driver able to activate the M Dynamic Mode (MDM) by means of the DSC button on the centre console. This mode raises the DSC control thresholds for intervention in the brakes and the reduction of engine power and ensures the steering behaviour typical of BMW M by shifting the xDrive control features more to the rear wheels and interacting with Dynamic Performance Control in the process.

As a result, MDM allows maximum speeds in bends and on winding roads with the system cutting in very late when the vehicle reaches the absolute limit. Even under maximum load in the apex of a bend, therefore, the vehicle follows the steering with utmost precision, giving the driver very high speed when leaving the bend in the interest of optimum performance. And last but not least, the DSC-Off Mode may be activated at the touch of a button.

Special M suspension with Adaptive Drive featured as standard.

The suspension developed specifically for the BMW X5 M and the BMW X6 M with its double-track control arm front axle and Integral IV rear axle offers M-specific elastokinematics thanks to stiffer track control arm mounts and hydraulic tiebar mounts at the front as well as stiffer axle support mounts at the rear.

Both models come as standard with air suspension featuring self-levelling on the rear axle as well as Adaptive Drive with electronically controlled dampers (EDC) and active anti-roll stability. The special version of Adaptive Drive tailored to the requirements of BMW M also serves to lower the entire vehicle by 10 millimetres or 0.39" versus the "regular" BMW X5 and BMW X6 and incorporates stiffer carrier springs, modified auxiliary springs, three-way support mounts and damper control with reinforced connection to the body.

The special Servotronic steering developed for the BMW X5 M and the BMW X6 M provides individual steering assistance geared to the actual road speed of the vehicle. This allows comfortable parking manoeuvres with lower operating forces as well as exact feedback and a high standard of steering precision at higher speeds.

The degree of power assistance is defined by two control maps. Apart from the standard configuration, the driver is able, through the EDC and, respectively, the M Drive button, to call up the Sports Mode activating an uncompromisingly sporting control map with higher control forces for particularly dynamic driving conditions.

Changing from the Normal to the Sports Mode, the system alters not only the Servotronic control map, but also the damper setting, with the connection of the dampers to the body of the vehicle being significantly reinforced in the Sports Mode. In conjunction with anti-roll stability this allows an exceptionally high standard of linear lateral forces in dynamic bends and on fast, winding roads.

The high-performance brake system guarantees supreme stopping power and high resistance to fading under all conditions. The brakes come with four-piston fixed callipers at the front and swing callipers at the rear, combined in each case with inner-vented lightweight brake discs.

The BMW X5 M and the BMW X6 M are the only vehicles in their segment to come as standard with different-sized tyres front and rear, running in each case on 20-inch light-alloy rims. The choice of 275/40 R 20 tyres at the front and 315/35 R 20 tyres at the rear is a further result of the special set-up characteristic of both models, with the emphasis on rear-wheel power. The choice of this combination of tyre sizes ideal in terms of driving dynamics promotes both the exceptionally good transmission of power to the rear axle and the precise, exactly dosed steering behaviour of both models.

Dynamic performance according to the driver's personal choice and available at the touch of a button: the M Drive button on the steering wheel.

Apart from the DSC Mode and the specific set-up of both the dampers and the steering, the driver is also able to configure the set-up of the drivetrain on the BMW X5 M and the BMW X6 M according to his personal requirements. Activating the Power Mode which influences both engine and transmission control, the driver has the choice of both the Sports and Efficiency driving programs.

The Sports program allows precise dosage of engine power also under the most dynamic driving conditions specifically through the linear build-up of the power delivered.

The Efficiency program, in turn, shifts up gears at an early point in time not only to significantly reduce fuel consumption under practical driving conditions, but also to allow a relaxed style of motoring using the supreme torque and pulling force of the engine available from low engine speeds. The result, therefore, is an ideal combination of efficient motoring and supreme driving qualities.

In the M Drive menu the driver is able to pre-configure both the Power Mode and the set-up of DSC and EDC, the combination of settings chosen providing the set-up preferred by the driver under all conditions. The driver is even able to save his favourite set-up and subsequently retrieve it at any time simply by pressing the M Drive button on the steering wheel.

The M Drive menu is yet another specific M feature supplementing the vehicle, infotainment, navigation, air conditioning and communication functions already controlled by BMW iDrive. Both the BMW X5 M and the BMW X6 M are equipped with the latest generation of iDrive and come as an option with a Head-Up Display again specific to BMW M. Indeed, this function even enables the driver to vary the type and scope of the data projected on to the windscreen in accordance with the M Drive menu.

M-specific cockpit and sophisticated driver assistance systems for even greater supremacy at the wheel.

The philosophy so typical of BMW M naturally continues into the design and configuration of the driver's "workplace": Both of these all-wheel-drive high-performance sports cars come with a special M cockpit with the instrument cluster featuring a variable pre-warning field in the rev counter, specific vehicle function displays, and white display illumination. And both the BMW X5 M as well as the BMW X6 M boast M seats and an M leather steering wheel.

The driver's superior style of motoring is enhanced additionally by innovative driver assistance systems, both models fitted as standard with cruise control incorporating its own brake function. The wide range of optional features, in turn, includes Adaptive Headlights and a High-Beam Assistant.

Supplementing BMW Park Distance Control naturally featured as standard, there is also an optional back-up camera including its own very special Top View function.

The wide range of standard features includes electrical seat adjustment complete with a memory function and seat heating at the front, two-zone automatic air conditioning, extended Merino leather, a HiFi audio system with 12 loudspeakers and 230 Watt amplifier output, M entry trim, an M footrest, interior trim in brushed Aluminium Shadow on both models as well as a BMW Individual instrument panel finished in leather and automatic operation of the tailgate on the BMW X6 M. The optional comfort features available on both the BMW X5 M and the BMW X6 M include BMW's Professional navigation system, four-zone automatic air conditioning, active seat ventilation, full leather upholstery in Merino leather, a panorama glass roof on the BMW X5 M and an electrically operated glass roof on the BMW X6 M as well as the BMW Individual High End audio system.

3. High Performance Re-Defined: The BMW X5 M. The BMW X6 M. (Long Version)



Now the discerning connoisseur is able to enjoy the unique high-performance character of a genuine BMW M Car also in the segment of BMW X Models: The BMW X5 M and the BMW X6 M are the first all-wheel-drive models to combine the superior power and performance, the highly dynamic driving features, the athletic design and the premium quality of a BMW M Car with all the features of an X Model.

Introducing this new concept, BMW M GmbH is setting a new standard for driving dynamics and exclusivity in yet a further vehicle segment, at the same time re-defining the options to enjoy the characteristic features of a high-performance sports car.

In the BMW X5 M the thrill of technology based on comprehensive know-how in motorsport comes together with the sheer generosity of a truly outstanding Sports Activity Vehicle, in the BMW X6 M the same features are combined with the challenging dynamics of a Sports Activity Coupé.

The BMW X5 M and the BMW X6 M are both driven by a newly developed V8 high-performance power unit delivering maximum output of 408 kW/555 hp from 4,395 cubic centimetres at an engine speed of 6,000 rpm. The new M TwinPower Turbo is indeed the first engine unit in the world to feature a common exhaust manifold for both rows of cylinders as well as Twin Scroll Twin Turbo Technology.

BMW's intelligent xDrive all-wheel-drive system is standard on both models just like BMW's Dynamic Performance Control, both tailored to the specific power and performance characteristics of the BMW X5 M and the BMW X6 M. Interacting with the special suspension specific to a BMW M Car and including both Adaptive Drive and BMW's newly developed Servotronic power steering, these superior technologies provide the driving behaviour characteristic of a BMW M Model, with unique driving stability and precisely controlled steering behaviour all the way to the most dynamic driving conditions.

The dynamic driving potential of both models follows criteria acknowledged as elementary success factors also in motorsport: Both the BMW X5 M and the BMW X6 M offer the highest standard of acceleration, lateral dynamics, steering behaviour, stopping power and efficiency against their most powerful competitors. Both models accelerate from a standstill to 100 km/h in 4.7 seconds, both models offer not only an extremely spontaneous and direct response to the gas pedal as well as the huge but consistently distributed power delivery of the V8 turbo engine developing maximum torque of 680 Newton-metres or 501 lb-ft within the wide speed range from 1,500–5,650 rpm, but also a linear build-up of lateral forces even in the fastest bends under extreme loads. Superior control even under the most demanding driving conditions is therefore a joint quality shared by both the BMW X5 M and the BMW X6 M.

Concept harmony typical of a BMW M Car for successful entry into a new dimension of driving dynamics.

Introducing the BMW X5 M and the BMW X6 M, BMW M GmbH is for the first time expanding its supreme competence in the development and production of high-performance sports cars fully suitable for everyday use acquired in motorsport to the segment of all-wheel-drive vehicles in the BMW X market. The result is a breakthrough into a new dimension of driving dynamics.

The drivetrain and suspension technology of both models stands out in particular not just through supreme power and performance, but also, in conjunction with appropriate aerodynamic and design elements as well as the configuration of the driver's cockpit, provides a carefully coordinated all-round package. Indeed, this concept harmony typical of a BMW M Model enables the driver to use the outstanding potential of both models with utmost convenience and without the slightest effort.

The exclusivity characteristic of both the BMW X5 M and the BMW X6 M is borne out in particular by driving characteristics never seen before in a vehicle of this calibre and in this segment. Both models offer the ultimate achievable standard in their respective classes, providing power and dynamic performance reserves quite unique versus the competition as well as a standard of unlimited supremacy unparalleled in everyday motoring.

Design: typical features of BMW M for supreme driving dynamics and exclusivity.

The BMW X5 M and the BMW X6 M are the first all-wheel-drive cars to offer the features and driving characteristics typical of a BMW M Model – qualities also borne out clearly by the cars' design. The common DNA also reflected by truly outstanding performance is visibly displayed by the joint design of the front end with strikingly large air intakes on both the BMW X5 M and the BMW X6 M: The engine compartment lid, the front air dam and the headlight graphics carried over from the BMW X6 are identical on both models. A further common feature lies in the twin-tone exterior mirrors again in specific M design. And finally, both the BMW X5 M and the BMW X6 M come with gill elements in the front side panels tailored to each model as well as individually designed 20-inch light-alloy wheels.

Compared with the BMW X5 and the BMW X6, the extent of black plastic surfaces along the lower section of the body is reduced on both models, clearly accentuating the roadgoing orientation of the BMW X5 M and the BMW X6 M to an even higher standard than before. Both models are clearly characterised in particular by those special body elements which fulfil significant functions in terms of aerodynamics and the supply of cooling air.

Over and above these common features, BMW's two new all-wheel-drive high-performance sports cars stand out as truly unique characters in their own right. The BMW X5 M at very first sight demonstrates all its power and exclusivity, while in its design the BMW X6 M spells out fascinating dynamics and truly athletic charisma.

The rear end of each model also offers a unique interpretation of those typical M features as clear signs of outstanding sportiness. This also applies to the rear air dam finished on both models in body colour and in the styling finish of the wheel arch air outlets again differing from one model to the other. In each case the bumper panel surrounds the two dual tailpipes already well-known as genuine signs of distinction on a BMW M car.

Joint front-end design, individual proportions.

The low contour of the dual headlights "cut off" optically at the top, the upright position of the kidney grille with its bar elements finished in black, and the powerful sculpture of the front air dam painted completely in body colour accentuate the clear orientation to the road of both the BMW X5 M and the BMW X6 M.

At the same time the large air intakes bear clear testimony to the dynamic drive units within the engine compartment, with the shape and size of the openings tailored precisely to the cooling requirements of the M TwinPower Turbo as well as the high-performance brake system. Precisely this is why the two new models, like BMW's other M Cars, intentionally do not come with foglamps integrated in the front air dam.

The dark honeycomb grid on the air intakes is moved far back into the body of the car, with the grid surrounds extending powerfully to the outside. The three-dimensional effect provided in this way underlines the dynamic and self-confident look of both the BMW X5 M and the BMW X6 M.

Strong and muscular bars separate the central from the two outer air intakes. Extending towards the V-shaped arrow on the engine compartment lid and continuing all the way to the numberplate support, these beautifully designed bars emphasise the particular stability of both models in dynamic bends and on fast winding roads. Flaps beneath the side air intakes carried over from motor-sport, finally, optimise the aerodynamic balance of both models at high speeds.

BMW X5 M: upright proportions demonstrating superior presence and function.

Notwithstanding its similarities and common features shared with the BMW X6 M, the BMW X5 M is clearly identifiable also from the front. This clear identity is ensured by the car's unique proportions, the more upright windscreen looking larger than on the BMW X6 M and giving the BMW X5 M even greater presence.

Looking more closely, the beholder will also recognise the low BMW Individual roof railing available as an option only on BMW's Sports Activity Vehicle. From the side he will gain a clear impression of the proportions of the vehicle bearing testimony to the high level of functionality. Through its upright stature, large window areas and very long roofline, the BMW X5 M is full of presence and visual power.

Interaction of the striking contour line on the level of the door openers and the powerful sill-line creates a subtle wedge shape, precise transitions between convex and concave surfaces also characterising the dynamic look of the vehicle.

This interaction is carried over to the special M-style rear-view mirrors identical in design on both models. The elaborately chiselled mirror housings finished largely in body colour are subdivided horizontally by precise lines, with the lower section finished in black bordering on to a sweeping line at the bottom.

The BMW X5 M comes with uniquely designed front side panels bearing the gill intake unit typical of BMW M together with an integrated side indicator and the M logo. Featured as standard, the 20-inch light-alloy wheels also come in the typical design of BMW M, with widely extending V-spokes.

At the rear the BMW X5 is likewise characterised by powerful horizontal lines giving the entire vehicle a truly superior look and emphasising its greater width. The lower section of the body is formed by the discreetly contoured rear air dam boasting numerous features inspired by motorsport and with horizontal lines additionally emphasising the wide track of the vehicle.

BMW X6 M: dynamic look with a clear focus on road use.

With its extremely sporting proportions, the BMW X6 M offers a particularly powerful and dynamic look. The low-slung transition from the long engine compartment lid into the low-raked windscreen, the roofline moving down distinctly to the rear, and the typical wedge shape from the side give the BMW X6 M that unmistakable appearance introduced for the first time on the BMW X6 Sports Activity Coupé.

The contour line rising up to the rear and the sill-line running parallel to the road beneath symbolise the forward-pushing motion of the vehicle.

Distinctive areas of light and shade bordering on precise lines generate an exciting contrast clearly emphasising the agility of the vehicle. The gill elements in the front side panels likewise accommodate the direction indicators and the M logo on the BMW X6 M, with the logo chiselled in particular style in this case, coming in even larger dimensions and even more dynamic design than on the BMW X5 M. A further highlight is provided by the 20-inch light-alloy wheels with their high-gloss surfaces and the rim hump finished in Anthracite.

The coupé roofline of the BMW X6 M merges into a distinctive air spoiler at the rear integrated in the tailgate of the vehicle. At the same time the flat rear window and the roof pillars wrapped around to the inside generate a very dynamic look highly impressive at very first sight.

The entire rear view is subdivided by horizontal lines giving the rear end even more width in optical terms and emphasising the powerful stance of the vehicle on the road. The rear section reaches its full width around the wheel arches, with the extremely sporting character of the BMW X6 M borne out in particular by the M rear spoiler finished in body colour.

The joint separating the rear section and the bumper cover gives additional dynamism to the rear view of the vehicle, its contours reflecting the line between the tailgate and the rear lights. And last but not least, the aerodynamically optimised air guides at the lower end of the bumper panel add a classical feature of motorsport also to the BMW X6 M.

The M TwinPower Turbo: Twin Scroll Twin Turbo Technology with the joint exhaust manifold on both rows of cylinders making its debut.

With the model portfolio being enlarged through the addition of two all-wheel-drive BMW M Cars, the engine range is likewise being enhanced through spectacular new technology: Both the BMW X5 M and the BMW X6 M come with a truly outstanding power unit ranking right at the top in the current engine range of BMW M GmbH in terms of both output and torque.

In this case the power and dynamism so typical of BMW M is provided by a new and truly unique construction principle, the new M TwinPower Turbo with Twin Scroll Twin Turbo Technology and a common exhaust manifold for both rows of cylinders ensuring extremely spontaneous and direct behaviour, linear build-up of power and an unusually consistent torque curve.

The V8 power unit develops maximum output of 408 kW/555 hp at an engine speed of 6,000 rpm. Peak torque of 680 Newton-metres or 501 lb-ft, in turn, is maintained consistently throughout a wide speed range from 1,500 to 5,750 rpm.

With its displacement of 4,395 cc, the new M TwinPower Turbo delivers its exceptional power through particularly sophisticated turbocharger technology. Indeed, the V8 power unit with Twin Scroll Twin Turbo Technology and an exhaust manifold spanning both rows of cylinders represents the absolute state of the art in turbocharging. No other turbocharged engine offers a comparable combination of spontaneous torque and pulling power, a steadily rising power curve typical of BMW M, and maximum efficiency all in one.

Further outstanding features to be admired on the new M TwinPower Turbo are the special BMW M pistons and camshafts as well as the cooling system almost completely new from the ground up. To optimise the cooling circuit in accordance with the exceptionally high output per litre of the engine, the technology already featured on the V8 power unit in the BMW X6 xDrive50i and the new BMW 750i has been significantly modified and upgraded to an even higher standard. Dropping the water reservoir in the V-section between the two rows of cylinders, for example, the responsible engineers have succeeded in reducing not only the amount of coolant, but also the weight of the system.

Together with other features, a second low-temperature radiator with an additional electrical coolant pump improves the intercooling function on the new M TwinPower Turbo. This optimises the performance of indirect intercooling in particularly dynamic driving cycles. And last but not least, an additional electrical coolant pump with an after-running function serves to cool the bearing mounts on the turbochargers after switching off the engine.

Turbochargers and catalytic converters in the V-section between the two rows of cylinders.

The highly innovative turbocharging system results from both the arrangement of the turbochargers and the supply of air. Together with the catalytic converters, the two turbochargers are positioned in the V-section between the two rows of cylinders at a 90° angle. This special position already to be seen on the eight-cylinder power units featured in the BMW X6 xDrive50i and the new BMW 750i allows unusually compact dimensions and arrangement. At the same time it requires intake and outlet ducts in a new position, reducing the length of the pipes and allowing larger cross-sections significantly minimising pressure losses on the exhaust side.

A further advantage of this arrangement is the shorter distance between the combustion chambers and the primary exhaust gas management systems. As a result, the catalytic converters reach their optimum operating temperature even more quickly after starting the engine.

Perfect guidance of gas flow: the dual-cylinder exhaust gas manifold.

Patented by BMW, the common flow of exhaust gas for both rows of cylinders ensures optimum gas throughput under all conditions. BMW's new M TwinPower Turbo is indeed the first power unit in the world to feature such an unprecedented exhaust manifold.

This particular configuration is made possible by arranging the exhaust gas turbochargers and the catalytic converters in the V-section between the two rows of cylinders. The unique principle of the dual-row exhaust gas manifold thus provides the basis for the exceptionally spontaneous and direct response of the M TwinPower Turbo.

The system features no less than four completely separated exhaust gas pipes to provide this new technology. Two pipes on each side flow into each of the two Twin Scroll Turbochargers, merging together shortly before they reach the turbine. This provides a consistent and intense supply of exhaust gas ensuring a spontaneous and direct response and maintaining consistently high turbocharger pressure.

Functioning independently of the respective row of cylinders, the four exhaust gas ducts are allocated to those two combustion chambers which have a firing interval of 360° ideal for a V8 power unit in the efficient use of exhaust energy. This provides a steady and constant rhythm of gas flow in each of the two exhaust ducts, an effect further enhanced by the identical length of each duct on the exhaust gas manifolds linked to one another. The result is a consistent level of pressure acting on the two turbochargers, without any kind of counter-flow or adverse pressure.

The Twin Scroll Turbochargers specially developed for the new M turbo engine excel through their particularly high level of compressor and turbine efficiency, with the system operating at maximum charge pressure of 1.5 bar.

The Twin Scroll Twin Turbo power unit with its dual-cylinder exhaust gas manifold uses the potential of turbocharger technology in a unique manner. The extremely spontaneous and direct response of the system and the unusually high level of torque and pulling power extending all the way up from low engine speeds and constantly maintained up to a high load level are the characteristic features of the new M TwinPower Turbo. This truly impressive development of power is accompanied by fascinating engine sound highlighting the free-revving characteristics and the linear build-up of power through that typical, thoroughbred sound effect so characteristic of a BMW M Car.

Standing out clearly from the conventional sound of a V8 with its low frequencies, the M TwinPower Turbo develops a completely different and absolutely unique sound pattern with its sporting characteristics borne out in particular by the dual-cylinder exhaust gas manifold.

The introduction of map-controlled exhaust gas flaps in the exhaust system furthermore offers the option to clearly distinguish also in acoustic terms between the various settings in the Power Mode – the Sports and Efficiency driving programs, each standing out through their very distinctive engine sound.

The twin-chamber exhaust system on the new M TwinPower Turbo is characterised largely by straight pipes and a large cross-section. The two exhaust pipes merge into a common silencer at the rear leading on to the two dual tailpipes so typical of BMW M with their chrome trim right at the end.

Acceleration in the BMW X5 M and the BMW X6 M is ultra-powerful and dynamic right from the start, with huge thrust from the ground up. Both models reach 100 km/h from a standstill in just 4.7 seconds, continuing to accelerate at a fascinating pace all the way to top speed.

Top speed of both models is limited electronically to 250 km/h or 155 mph. As an option, however, this self-imposed speed limit may be raised to 275 km/h or 171 mph in conjunction with the optional M Driver's Package. This also includes BMW Driver Training on a race track giving the discerning motorist the final qualifications for such outstanding performance.

Supreme efficiency in the segment thanks to High Precision Injection and BMW EfficientDynamics.

The new M TwinPower Turbo develops its outstanding performance not only through supreme power and muscle, but also with a degree of efficiency unparalleled in this segment.

This superiority is attributable largely to the fuel supply system, High Precision Injection with piezo-injectors positioned between the valves ensuring a particularly precise supply of fuel.

High Precision Injection uses injectors positioned directly next to the spark plugs in the cylinder head and supplying fuel to the combustion chambers at a pressure of 200 bar. The cooling effect provided through the direct injection of fuel allows a higher compression ratio than on a turbocharged engine with conventional manifold injection. This increases the efficiency of the engine accordingly, providing more power on less fuel.

Another important factor contributing to such greater fuel economy is double-VANOS infinite camshaft adjustment typical of BMW power units. An important advantage of double-VANOS is that it helps to develop high torque at low engine speeds for powerful acceleration from the ground up.

Efficiency is enhanced to an even higher level by the volume flow-controlled oil pump, with the oil level being measured by sensors showing the data recorded whenever required in the instrument cluster.

Greater innovation for greater efficiency: volume flow-controlled supply of hydraulic fluid for anti-roll stability.

In addition to all the features mentioned, both the BMW X5 M and the BMW X6 M come with a wide range of BMW EfficientDynamics technologies all offered as standard. Brake Energy Regeneration, for example, concentrates the generation of electric current for the on-board network on the car running in overrun and during application of the brakes. This concept of intelligent energy management within the car restricts the conversion of primary energy into electricity to exceptional cases and conditions, with more engine power being provided for extra driving dynamics.

The use of an on-demand electric fuel pump, to mention another example, serves to further reduce the uptake of energy, with the power required by the pressure-controlled pump being reduced by more than 50 per cent under driving conditions in which the engine requires only a small amount of fuel. And last but not least, detachment of the a/c compressor from the belt drive also serves to enhance the vehicles' efficiency, reducing drag forces from the engine as long as the air conditioning is switched off.

Volume flow-controlled supply of hydraulic fluid exactly as required on the BMW X5 M and the BMW X6 M is a new development serving to enhance the efficiency of the anti-roll stability system featured as standard. An additional valve in the hydraulic pump of the anti-roll stability unit supplies the delivery pistons with exactly the right amount of hydraulic fluid at any given point in time, reducing the uptake of power by the pump by up to 70 per cent when driving straight ahead at a steady speed. And thanks to the precise control technology, the hydraulic pressure required under specific conditions is always provided in good time.

Thanks to the high efficiency of the engine and the wide range of technologies serving to reduce fuel consumption, the BMW X5 M and the BMW X6 M offer not only the highest standard of driving dynamics in the segment of extra-powerful all-wheel-drive cars, but by far also the highest level of efficiency: Both models average fuel consumption in the EU test cycle of just 13.9 litres/100 kilometres, equal to 20.3 mpg imp. Their CO₂ rating, in turn, is 325 grams per kilometre.

BMW High Precision Injection also has a positive impact on both emissions and the sound of the engine, both models fulfilling the US LEV II emission standard as well as the EU5 classification in Europe.

M Sports Automatic with electronic gear selector lever and shift paddles on the steering wheel.

Featured for the first time on a BMW M Model, six-speed automatic transmission enhances the high-performance character of the BMW X5 M and the BMW X6 M through the spontaneous gearshift, a direct connection to the engine, and the high standard of gearshift comfort. To achieve extremely short gearshift times the system incorporates an innovative torque-reducing function in the manual mode, switching off individual cylinders by cancelling out the fuel injection and ignition. This allows an extremely fast gearshift and at the same time confirms the particularly sporting character of both models.

BMW's new M Sports Automatic also incorporates integrated two-damper systems serving to minimise the degree of slip on the converter clutch. Compared with a conventional automatic transmission, the modern torsion damper technology also serves to significantly reduce fuel consumption. To optimise the cooling effect, in turn, the surface of the oil sump made of aluminium again in typical M style comes in a fine ribbed structure.

The new M Sports Automatic is controlled by an electronic gear selector lever on the centre console. Gearshift paddles on the steering wheel made of strong aluminium and again in special M design allow the driver in addition to shift gears manually. In the constellation typical of an M Car, the driver merely pulls the right gearshift paddle to shift up and the left gearshift paddle to shift down.

Apart from the D Mode, the driver also has the choice of the S and M Mode, each offering an even more sporting gearshift set-up. In the M Mode the gear in mesh is kept in position up to maximum engine speed, giving the driver optimum control of the vehicle even under the most dynamic driving conditions. Hence, the transmission does not shift up automatically in this mode.

Moving one of the paddles, the driver is able to shift gears manually at any time in a most spontaneous process. As soon as he does so, the transmission immediately leaves the automatic program and changes automatically to the manual mode. If the driver does not use the paddles again after making such a change, the transmission will move back by itself to the automatic mode after a certain period.

In the M Mode the driver is also able to activate the Launch Control function for maximum acceleration from a standstill. To activate Launch Control, all the driver has to do with the car at a standstill is move the gear selector lever into the M/S lane and call up the Sports Power Mode as well as the M Dynamic Mode or, respectively, the DSC-Off function.

With the transmission in stage M1, the driver then presses down the brake pedal and moves down the gas pedal at least 60 per cent of its full travel in order to set Launch Control to standby. This status is presented by a starter flag symbol in the instrument cluster.

As soon as the driver lets go of the brake pedal, the car will accelerate with full power in genuine racing style. In the process M Sports Automatic automatically shifts gears at the ideal point, with the fastest possible shift times and optimum slip control. Then, taking back the gas pedal, the driver is able to terminate the Launch Control process whenever he wishes.

BMW xDrive with optimum dynamics.

The outstanding success of BMW's intelligent xDrive all-wheel-drive technology is based on the fact that this sophisticated system conveys traction in a unique manner not only on rough terrain, but also on hard road surfaces, offering outstanding driving dynamics in the process. Electronically controlled, variable power distribution front-to-rear interrupts even the slightest tendency to over- or understeer at the earliest conceivable point, before DSC Dynamic Stability Control is required to cut in.

BMW xDrive also stands out as an intelligent all-wheel-drive system by guiding drive power through a distributor transmission with an electronically controlled multiple-plate clutch in an exact dosage precisely to the right axle where the wheels have the best grip on the road.

To ensure this superior traction sensors constantly measure wheel slip both front and rear. Within fractions of a second, the system is able to vary the distribution of drive power, BMW xDrive, unlike conventional all-wheel-drive systems, looking ahead and acting in advance, without waiting until a wheel starts to spin. This stabilises the vehicle before any slip is able to build up and the driver feels the need to act.

Both the BMW X5 M and the BMW X6 M feature a special xDrive set-up developed specifically for these two vehicles in the interest of greater drive power at the rear, offering significant benefits under highly dynamic driving conditions and thus fulfilling the demands made of a typical M Car.

Dynamic Performance Control enhancing the driving behaviour typical of BMW M: precise steering response and dynamic acceleration out of bends and on winding roads.

The combination of BMW xDrive optimising traction and pulling force in terms of both stability and driving dynamics, on the one hand, and Dynamic Performance Control in the BMW X5 M and the BMW X6 M, on the other, provides an even higher standard of excellence than before, with the distribution of power being further differentiated between the right-hand and left-hand rear wheel.

Variable distribution of drive power between the rear wheels significantly enhances both steering precision and tracking stability at all speeds, the car following the steering with a much higher degree of precision right from the start even at moderate speed. Dynamic Performance Control then adds further supremacy in highly dynamic steering manoeuvres.

BMW xDrive and Dynamic Performance Control interact most efficiently also in maintaining the vehicle's driving stability on slippery surfaces. As soon as the vehicle starts to understeer, xDrive reduces the flow of power to the rear wheels "pushing" to the outside and Dynamic Performance Control cuts back drive forces on the outer rear wheel in a bend subject to particularly high centrifugal loads, diverting that drive power to the inner rear wheel.

Possible understeer is prevented in exactly the opposite manner, xDrive reducing the flow of power to the front wheels "pushing" to the outside, Dynamic Performance Control shifting drive power to the outer rear wheel for optimum stability. As a result, the vehicle enters a bend even more precisely, following the course taken by the driver with greater agility and tracking stability, regardless of road speed.

The difference in drive power acting on the two rear wheels established by Dynamic Performance Control may be anything up to 1,800 Newton-metres. For the driver this means a significant improvement of agility, traction, and driving stability. He also recognises the effect of Dynamic Performance Control by the significant reduction of DSC Dynamic Stability Control cutting in. This enables the driver to use the power of the engine in full longer than before, with DSC slowing down individual wheels or reducing engine power only when driving to the physical limit.

Dynamic Performance Control also develops its stabilising effect as soon as the driver takes his foot off the gas pedal in a bend. Within the final drive an additional superimposed gear unit made up of a double planetary gearing and a multiple-plate brake operated by an electric motor maintains the variable distribution of drive power also in overrun.

In its specific BMW M set-up, Dynamic Performance Control serves furthermore to give the vehicle most dynamic acceleration qualities at the end of a bend: Under high load the distribution of drive forces seeks to convey lateral forces to the highest possible degree, giving the vehicle the highest conceivable level of acceleration.

Looking at the Control Display, the driver is able to monitor the activity of Dynamic Performance Control and xDrive also through a clear visual message. A graphic display available in the vehicle function menu provides clear information on the current distribution of drive forces, a symbolic presentation of the four drive wheels using arrows to show the driver how much power is being spread out to each wheel.

M Dynamic Mode for maximum speed in bends.

Both the BMW X5 M and the BMW X6 M use the potential of both systems in specific M style. Pressing the DSC button on the centre console, the driver is able to activate the M Dynamic Mode (MDM) as an alternative to the basic setting. This special mode raises the DSC control thresholds for intervention by the brakes and the reduction of engine power and, setting up a special xDrive function with more power on the rear wheels while interacting with Dynamic Performance Control, provides the steering behaviour again typical of BMW M.

As a result MDM allows maximum speeds in bends with the control systems intentionally cutting in very late, close to the physical limit. Even under the highest conceivable loads at the apex of a bend, therefore, the vehicle follows the steering and the driver's commands with absolute precision. And last but certainly not least, the driver is also able to activate the DSC-Off Mode at the touch of a button.

Over and above the stabilising effect provided by intervention in the brakes and the reduction of engine power, DSC in the BMW X5 M and the BMW X6 M comes with a wide range of additional functions promoting both safe and dynamic motoring. These include features such as ABS anti-lock brakes, ASC Automatic Stability Control, Trailer Stability Control, HDC Hill Descent Control, DBC Dynamic Brake Control automatically maximising brake power whenever required, CBC Cornering Brake Control, and Cruise Control with its own brake function.

The electronic Automatic Differential Brake (ADB-X) serves additionally to provide a differential function automatically applying the brakes on a wheel about to spin and thus enabling the opposite wheel on the same axle to keep on running under the same power and with the same drive force.

Anti-fading is ensured when driving under dynamic conditions and with the brakes at extremely high temperatures by increasing brake pressure to maintain the same stopping power as before. Regular Dry Braking, in turn, optimises the performance of the brakes in the wet. And last but not least the Start-Off Assistant makes it much easier for the driver to set off on an uphill gradient, without the vehicle rolling back.

Both the BMW X5 M and the BMW X6 M come with a parking brake combining electromechanical and hydraulic operation. The parking brake is activated or released by means of a separate button and comes with an Autohold function holding the vehicle in position as soon as it comes to a standstill at a road junction or in stop-and-go traffic, without requiring the driver to press down the brake pedal. Then, as soon as the driver starts out again, the brake is automatically released.

Special M suspension with newly developed Servotronic steering and Adaptive Drive featured as standard.

The suspension developed especially for the BMW X5 M and the BMW X6 M with its double-track control arm front axle and Integral-IV rear axle comes with special M elastokinematics provided by stiffer track control mounts and tiebar hydraulic bearings at the front as well as stiffer axle subframe mounts at the rear. Both models come as standard with air suspension featuring self-levelling on the rear axle, newly developed Servotronic steering as well as Adaptive Drive with electronically adjustable dampers (EDC) and active anti-roll stabilisation.

The Servotronic steering developed specifically for the BMW X5 M and the BMW X6 M provides appropriate steering assistance geared to the actual speed of the car. This ensures comfortable parking with steering forces reduced to a minimum as well as exact feedback and a high level of steering precision at higher speeds.

The degree of steering assistance is defined by two control maps: Apart from the standard configuration, the driver is able, pressing the EDC or, respectively, the M Drive button in the Sports Mode, to activate an uncompromisingly dynamic control map with higher operating forces for very dynamic and sporting driving conditions. This ensures particularly clear feedback from the steering to the driver for superior and sports motoring at all times.

The M set-up of Adaptive Drive also lowers the entire vehicle by 10 millimetres or 0.39" compared with the "regular" BMW X5 and BMW X6, further features being stiffer carrier springs, modified auxiliary springs, a three-way support mounting, and damper configuration with improved connection to the body. All this adds up to provide maximum driving dynamics, motoring comfort and safety at all times. Side sway and body movement are reduced, steering behaviour and the load change response are optimised.

Through its sensors, Adaptive Drive permanently monitors and calculates data on road speed, steering angles, longitudinal and lateral acceleration, body and wheel acceleration, as well as ride levels. Using this information, Adaptive Drive controls and masterminds both the swivel motors in the anti-roll bars as well as the electromagnetic valves on the dampers, thus regulating side sway and the damping effect at all times according to current conditions.

To quickly and reliably process data, Adaptive Drive uses the high-speed FlexRay data transmission system. BMW is indeed the first carmaker in the world to use FlexRay in its cars as a regular technology.

Pressing the EDC button, the driver is able to vary not only the Servotronic control map, but also the set-up of the dampers. Compared with the Normal Mode, this change in set-up reinforces the connection between the dampers and the body in the Sports Mode. Interacting with anti-roll stability, this then provides a very linear build-up of lateral forces in dynamic bends, keeping the driver in superior control all the way to the absolute limit in driving physics.

Intelligent management of driving dynamics: Integrated Chassis Management.

The drive and suspension systems are perfectly orchestrated in their joint network by ICM Integrated Chassis Management. This highly efficient electronic control system coordinates the drivetrain and suspension functions of the BMW X5 M and the BMW X6 M within fractions of a second, ensuring maximum stability and supreme performance at all times and in every situation.

Even under suddenly changing conditions – for example on changing surfaces, with the driver spontaneously turning the steering, when accelerating or applying the brakes abruptly – Integrated Chassis Management responds by controlling the xDrive, DSC, Dynamic Performance Control, Servotronic, and Adaptive Drive actuators with supreme precision. The type and extent of such intervention is consistently masterminded to ensure not only maximum driving stability, but also optimum dynamics at all times.

Powerful, reliable, and light: high-performance brake system.

Outstanding stopping power with fading reduced to an absolute minimum is guaranteed by the high-performance brake system combining four-piston fixed-calliper brakes at the front and swing-calliper brakes at the rear with inner-vented lightweight brake discs.

The brake discs themselves measuring 395 mm/15.55" in diameter at the front and 385 mm/15.16" at the rear feature a riveted connection joining the aluminium brake holder and the grey-cast-iron friction ring to effectively counteract any heat-induced deformation even under maximum loads.

The BMW X5 M and BMW X6 M are the only vehicles in their segments fitted as standard with different-sized tyres geared specifically to each model and running on 20-inch light-alloy rims all round. The choice of 275/40 R 20 tyres up front and 315/35 R 20 tyres at the rear is yet another result of the set-up of the two vehicles giving greater emphasis to extra power on the rear wheels.

With this ideal combination of tyre sizes in the interest of driving dynamics, both models optimise the transmission of power to the rear wheels as well as the precise and exactly controllable steering behaviour ensured in each case.

Dynamic and stable: bodysell and safety equipment.

Like the BMW X6 M, the BMW X5 M comes with an extremely stiff bodysell. To ensure maximum solidity on minimum weight, BMW's body engineers focused consistently in the development process on intelligent lightweight technology. Both the choice of materials as well as the arrangement and geometry of the support bars, braces and mounts on both models are based on an overall concept combining maximum crash safety with supreme agility in both models.

Forces acting on the body in the event of an accident are diverted through the engine carriers and the chassis along several load paths in order to avoid extreme loads acting on individual structures and keep impact energy away from the stable passenger cell.

Both the BMW X5 M and the BMW X6 M come as standard not only with frontal and hip/thorax airbags, but also with curtain head airbags at the side inflating out of the A-pillar and roof lining cover to protect the occupants both front and rear from injury.

Three-point inertia-reel belts come on all seats, with belt force limiters and, on the front seats, an additional belt tightening function.

To protect the occupants from cervical spine injury in the event of an impact from the rear, the front seats feature crash-activated headrests again as standard. ISOFIX child seat fastenings are likewise standard on the rear seats.

All the restraint systems are masterminded by the vehicle's central safety electronics taking the type and severity of a collision into account and activating the most effective safety elements in each case. The frontal airbags feature gas generators operating in two stages, allowing individual activation of the airbags in varying intensity as a function of accident severity.

In the event of an upcoming rollover, the rollover sensors activate both the curtain airbags and the belt latch tensioners. Networked with DSC Dynamic Stability Control, these sensors guarantee that the system will operate quickly and according to specific requirements. To avoid bumper-to-bumper accidents from the rear, finally, both models come with Adaptive Brake Lights providing an even better warning to drivers following from behind.

As yet a further feature, both models come as standard with runflat tyres enabling the driver to continue to the nearest workshop even with a complete loss of air pressure in the tyres. In addition, the Tyre Defect Indicator will inform the driver in good time of a gradual loss of air pressure.

Optimum visibility: bi-xenon headlights featured as standard.

Featured as standard, the bi-xenon dual headlights on the BMW X5 M and the BMW X6 M provide not only optimum illumination of the road ahead, but also, through their corona rings, ensure a very practical, safe and reliable daytime driving light function typical of BMW.

Both models come as standard with a lights sensor automatically activating the low-beam headlights as a function of ambient brightness. Two other features also fitted as standard are a rain sensor registering the intensity of precipitation and automatically adjusting screenwiper operation as well as a solar sensor providing information on the degree of sunshine in order to control the automatic air conditioning with utmost precision.

M-specific cockpit and sophisticated driver assistance systems for greater supremacy at the wheel.

The typical style of BMW M also comes out clearly in the design and configuration of the driver's cockpit. Both of these new all-wheel-drive high-performance sports cars boast a special BMW M cockpit featuring a variable pre-warning field in the rev counter, an oil temperature gauge, specific vehicle function displays and white display illumination all in the instrument cluster.

Both the BMW X5 M and the BMW X6 M come as standard with M seats and an M leather steering wheel as well as knee pads in the centre console offering the driver and front passenger additional stability under highly dynamic driving conditions.

Innovative driver assistance systems also promote the experience of supreme motoring. As an example, both models feature cruise control with a brake function as standard, acting on engine management, the selection of gears and the brakes in order to maintain the speed pre-set by the driver. The system permanently registers the vehicle's lateral acceleration and reduces the road speed of the car whenever necessary in order to prevent any loss of comfort in bends and on winding roads. And last but not least, cruise control with automatic application of the brakes also provides assistance in driving downhill in a controlled mode – even when towing a trailer – by intervening in the brakes wherever necessary.

Adaptive Headlights and a High-Beam Assistant are available as an option, together with other helpful features and technologies. And to supplement Park Distance Control featured as standard, the customer may also choose a back-up camera with a Top View function.

Dynamic performance at your fingertips:

M Drive button on the steering wheel.

Both the BMW X5 M and the BMW X6 M come with drivetrain and suspension technology offering outstanding supremacy at all times together with unparalleled performance whenever required. Choosing the DSC mode as well as the appropriate damper and steering set-up at the touch of a button, the driver is able to opt for either a most dynamic or a more comfortable suspension set-up, as he wishes. Similarly, the driver is also able to configure the drivetrain set-up of the BMW X5 M and the BMW X6 M individually according to his or her personal requirements: Opting for the Power mode acting on both the engine and transmission set-up, the driver has the choice of both the Sports and Efficiency driving programs whenever required.

The Sports driving program allows precise dosage of engine power specifically through the linear increase in output, providing the highly dynamic performance so typical of an M Car. The Efficiency program, in turn, shifts up gears at an early point not only to significantly reduce fuel consumption, but also to allow a relaxed style of motoring using all the engine torque and power available from low engine speeds. The combination provided in this case, therefore, brings together superior efficiency with a high standard of supremacy at the wheel.

In the M Drive menu the driver is able to pre-configure both the Power mode as well as the DSC and EDC set-up. The combination of set-ups chosen thus provides the overall balance of the vehicle preferred by the driver in each case. This combination may be saved conveniently and then retrieved at any time simply by pressing the M Drive button on the steering wheel. So pressing the button just once enables the driver to activate the ideal overall set-up whenever appropriate.

The M Drive menu is the specific M feature supplementing the iDrive control system already masterminding a whole range of vehicle, infotainment, navigation, air conditioning, and communication functions.

Both the BMW X5 M and the BMW X6 M come with the new generation of BMW iDrive. The ergonomically optimised Controller, the direct selection buttons surrounding the Controller, the favourite buttons beneath the radio control panel, and the 8.8-inch Control Display with its high-resolution graphic presentation allow intuitive selection and activation of functions with the driver hardly taking his eyes off the road.

An M-specific Head-Up Display is also available as an option, projecting important information directly into the driver's field of vision on the windscreen. The type and scope of data presented may also be determined via the M Drive menu, with the driver simply pressing the M Drive button to obtain his or her special M-style presentation. In this case the Head-Up Display highlights the variable pre-warning field in the rev counter and, through its Shift Light function, specifies the optimum point for shifting gears. At the same time the display informs the driver of the gear currently in mesh and the current speed of the vehicle.

Use of the optional Professional navigation system is further simplified by the optimised technical features of BMW iDrive. Full-screen presentation of maps, for example, offers a very detailed overview of the region through which the driver is currently travelling. As an alternative the driver is able to activate an assistance window in the Control Display presenting further details independently of the main map.

When approaching a road junction, to mention another example, the system activates a High Guiding function supporting the driver with clear graphic signals in selecting the appropriate lane on the road.

With navigation data being saved on an 80 GB hard disc installed in the vehicle, access times are even shorter than before. And as a further advantage the data system may also be used as a 15 GB music archive.

Interior in typical M style, personalisation ensured by exclusive options from BMW Individual.

The interior of the BMW X5 M is characterised by generous luxury and the flexible use of space, while the ambience within the BMW X6 M offers a supreme standard of sporting exclusivity. In both cases the equipment and interior design proudly boast that unique style and class so typical of BMW M.

The BMW X5 M offers ample freedom of movement for up to five occupants, with a high standard of motoring comfort also on long distances. Even when using all seats, luggage compartment capacity is a substantial 620 litres or 21.7 cubic feet. And when the driver completely folds down the asymmetrically split rear seat bench, luggage capacity increases to a truly exceptional maximum of 1,750 litres or 61.3 cubic feet.

In the BMW X6 M the rear doors opening up to a wide angle facilitate access to the rear. This unique Sports Activity Coupé comes with single seats also at the rear providing superior side support and featuring integrated headrests. At 570 litres or almost 20.0 cubic feet, the luggage capacity available behind the rear seats exceeds that of a regular coupé by far.

The BMW X6 M comes with a strong, folding luggage compartment cover stowing away very practically beneath the floor of the luggage compartment for transporting bulky objects. To increase transport capacity, the driver and occupants may again fold down the asymmetrically split rear seat backrests, increasing luggage volume to a maximum of 1,450 litres or 50.8 cubic feet. And last but not least, the BMW X6 M comes as standard with an automatic opening and closing function on the tailgate.

Adjusting electrically to a wide range of different positions and featuring individual heating controls, the M seats in both models are finished as standard in BMW Individual Merino leather. The natural grain and soft surface of this high-class leather is particularly elegant and offers an unusually pleasant surface touch.

It almost goes without saying that all the leather used is free of even the slightest blemish or irregularity on the surface, just as it is treated naturally, without any artificial treatment of the surface structure.

The final surface effect is indeed provided by a special pigmentation process ensuring complete penetration of the desired colour in a very preserving and mild application maintaining the soft and supple surface of the leather with its active breathing effect and open-pore structure.

Leather upholstery comprising not only the seats, but also the centre console, the armrests, the door panels and door closing handles is available in either Black, Silverstone or Bamboo Beige. The seats feature special M seams in a particularly attractive pattern and the M logo is embossed in the headrests on the front seats.

Full leather upholstery in Merino quality is available as an option, with leather finish also on the back of the seat backrests and the door lining frame, plus the further choice of Cinnamon and Sakhir Orange as additional colours.

The BMW X6 M furthermore comes as standard with a BMW Individual instrument panel finished in leather, with the upper section in soft nappa and the lower section in Merino leather.

A wide range of high-class interior trim offers further options in emphasising one's personal style. As standard the BMW X5 M and the BMW X6 M feature interior trim in brushed Aluminium Shadow, and as an alternative both models are available as an option with BMW M interior trim in Carbon Structure leather finished in Black and genuine wood trim again from BMW Individual. The two colours available in this case are Piano Paint Black and Eucalyptus Bar Reddish Brown.

BMW ConnectedDrive with enhanced emergency call and new remote functions.

The BMW Assist telematics service forming part of the BMW ConnectedDrive philosophy with its wide range of individual functions is available for both the BMW X5 M and the BMW X6 M. Apart from personal enquiry services and the latest traffic information, BMW Assist now also includes an enhanced emergency call function with automatic detection of the car's location.

In the event of a collision reaching a certain level of severity, the system automatically delivers data on the car's current location as well as the vehicle itself, together with further data collected by the car's sensors providing more details on the type of collision and the occupants' risk of injury, which all goes to a BMW Call Center. From there this information is transferred immediately to the nearest rescue service.

BMW ConnectedDrive will in future also offer the customer support through the BMW Call Center in cases which so far required a breakdown service. Should the driver forget his key in the closed luggage compartment or if a young occupant in the car has locked the doors from inside, for example, all the customer has to do from now on is call the BMW Call Center. Then, once the customer's identity has been clearly determined, the Call Center is able to unlock the car through a remote function. Conversely, the BMW Call Center may also lock the car through the same remote function should the driver have forgotten to do so.

Extra comfort, fresh air and audio quality provided by four-zone automatic conditioning, the glass roof, and the BMW Individual High End audio system.

Both the BMW X5 M and the BMW X6 M come as standard with a HiFi audio system featuring 12 loudspeakers and 230 Watt amplifier output, M door entry strips, an M footrest, BMW Individual roof lining in Anthracite, and a Lights Package.

As an alternative to the two-zone automatic air conditioning featured as standard, the customer also has the choice of four-zone automatic air conditioning providing individually adjustable temperatures at the rear. Further options include active seat ventilation, a panorama glass roof for the BMW X5 M, and an electrically operated glass roof on the BMW X6 M.

The BMW X5 M is also available with a towbar incorporating an electrically swivelling ball head, while the BMW X6 M comes as an option with a towbar using a removable ball head. Maximum towing capacity in each case is three tonnes.

A truly exceptional experience in dynamic sound is provided as an option by the BMW Individual High End audio system tailored exclusively to the respective model. No less than 16 high-performance loudspeakers with neodym magnetic drive and extremely stiff hexacone membranes, a digital nine-channel amplifier with maximum output of 825 Watt and precise frequency switches guarantee inimitable quality of sound.

Yet another feature quite unique in the automobile is Dirac Live technology for processing audio signals, correcting the loudspeaker pulse response whenever necessary for linear sound reproduction and exactly balanced playback within the vehicle. The quality of sound ensured in this way in playing back even the most demanding music will offer not only the driver, but rather all occupants a truly dynamic experience of sound absolutely faithful and true-to-life to the last detail.

Speed-related volume control and speed-related equalising likewise ensure an optimum experience in sound in every situation.

The BMW Individual High End audio system is masterminded by the iDrive Controller. The basic functions of the system, finally, are controlled by the audio switches on the centre console, in the same way as with all other entertainment systems.

4. Specifications.



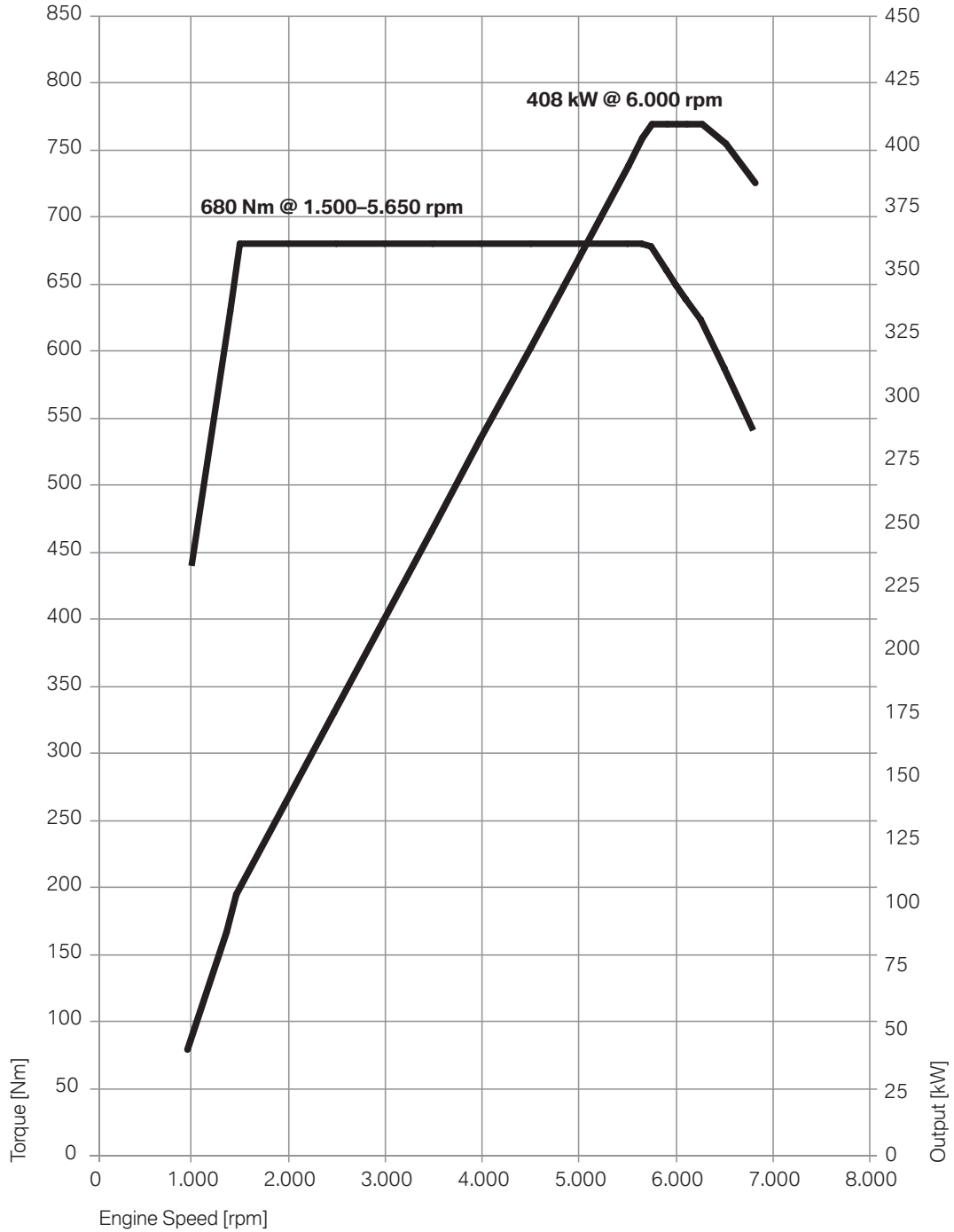
		X5 M	X6 M
Body			
No of doors/seats		5/5	5/4
Length/width/height (unladen)	mm	4,851/1,994/1,764	4,876/1,983/1,684
Wheelbase	mm	2,933	2,933
Track, front/rear	mm	1,660/1,672	1,660/1,672
Turning circle	m	12.8	12.8
Tank capacity	approx ltr	85	85
Cooling system incl heater	ltr	17.0	17.0
Engine oil	ltr	8,5	8,5
Transmission fluid		Lifelong	Lifelong
Final drive fluid		Lifelong	Lifelong
Weight, unladen, to EU (DIN)	kg	2,380 (2,305)	2,380 (2,305)
Max load	kg	600	600
Weight, max permissible	kg	2,905	2,905
Max axle load, front/rear	kg	1,400/1,560	1,400/1,520
Max trailer load, braked (12%/unbraked raked)	kg	3,000/750	3,000/750
Max roofload/max towbar downl	kg	100/120	100/120
Luggage comp cap DIN 70020	ltr	620–1,750	570–1,450
Air drag	C _x x A	0.38 x 2.90	0.38 x 2.85
Power Unit			
Config/No of cyls/valves		V/8/4	V/8/4
Engine management		MSD85.1	MSD85.1
Engine capacity	cc	4,395	4,395
Bore/stroke	mm	89.0/88.3	89.0/88.3
Compression ratio	:1	9.3	9.3
Fuel grade ¹⁾	RON	min RON 95	min RON 95
Max output	kW/hp	408/555	408/555
At	rpm	6,000	6,000
Max torque	Nm/lb-ft	680/501	680/501
At	rpm	1,500–5,650	1,500–5,650
Electrical System			
Battery/location	Ah/–	90/luggage comp	90/luggage comp
Alternator	A/W	210/2,940	210/2,940
Chassis and Suspension			
Suspension, front		Double track control arm; small, negative steering roll radius radius; dive reduction	
Suspension, rear		Integral axle; multi-dimensional with anti-squat and anti-dive	
Disc brakes, front		Four-piston fixed callipers	
Diameter	mm	395 x 36, vented	395 x 36, vented
Disc brakes, rear		Single-piston fixed callipers	
Diameter	mm	385 x 24, vented	385 x 24, vented
Driving stability systems		DSC III (HDC, DBC, ABS, ASC-X, ADB-X, DTC, Trailer Stability Control)	
Steering		Rack-and-pinion power steering	
Steering trans ratio, overall	:1	19.5	19.5
Transmission		Six-speed Sports Automatic with Steptronic, electronic gear select lever and shift paddles on steering wheel	
Gear ratios	:1	4.171	4.171
	:1	2.340	2.340
	:1	1.521	1.521
	:1	1.143	1.143
	:1	0.867	0.867
	:1	0.691	0.691
	:1	3.403	3.403
Final drive	: 1	3.909	3.909
Tyres, front		275/40 R20 106Y XL RSC	275/40 R20 106Y XL RSC
Tyres, rear		315/35 R20 110Y XL RSC	315/35 R20 110Y XL RSC
Rims, front		10J x 20 light-alloy	10J x 20 light-alloy
Rims, rear		11J x 20 light-alloy	11J x 20 light-alloy
Performance			
Power-weight ratio (DIN unladen)	kg/kW	5.6	5.6
Output per litre	kW/ltr	92.8	92.8
Acceleration	0–100 km/h	4.7	4.7
	0–200 km/h	16.9	16.9
	Standing-start km	23.5	23.5
In 4th/5th gear	80–120 km/h	4.3/5.1	4.3/5.1
Top speed	km/h	250 (275 ²⁾)	250 (275 ²⁾)
Fuel Consumption in EU Cycle			
Urban	ltr/100 km	19.3	19.3
Extra-urban	ltr/100 km	10.8	10.8
Combined	ltr/100 km	13.9	13.9
CO ₂	g/km	325	325
Miscellaneous			
Emission rating		EU 5	EU 5
Perm 4WD, power split		variable	variable

Specifications apply to ACEA markets. Some homologation data applies to Germany only (weight).

¹⁾ Power and consumption data with RON 98 fuel.

²⁾ With optional M Driver's Package.

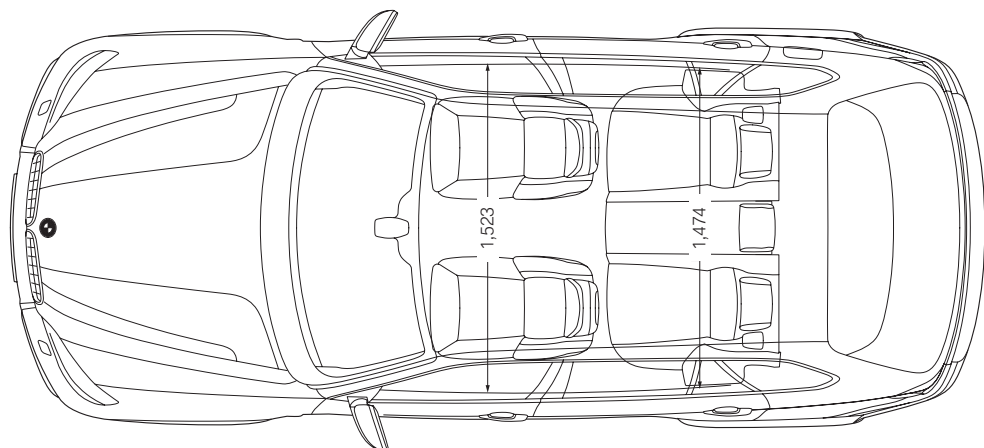
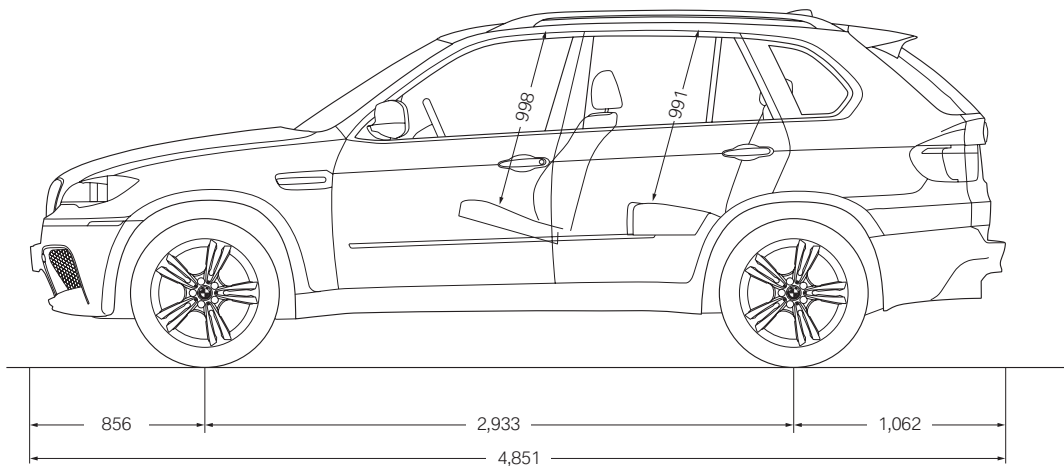
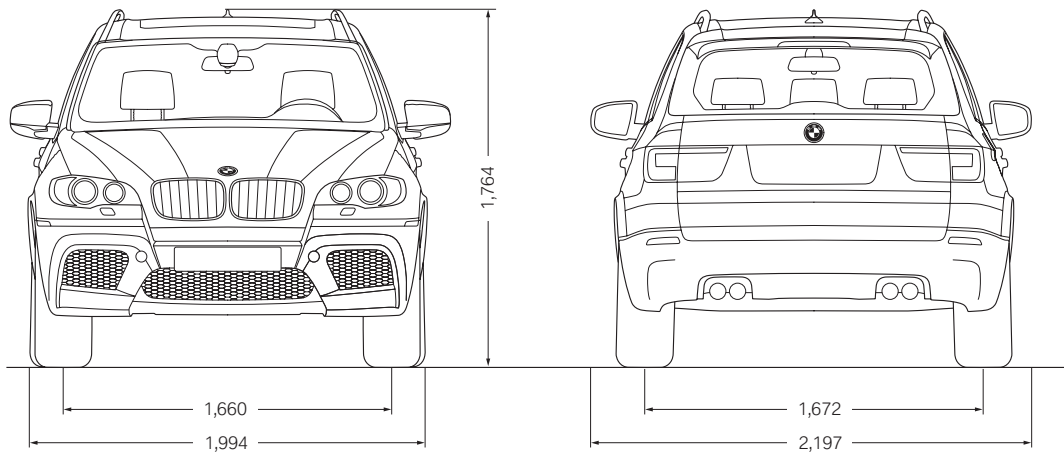
5. Power and Torque Diagrams.



6. Exterior and Interior Dimensions.



BMW X5 M.



BMW X6 M.

