

# The new BMW X5. Contents.



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# 1. Perfect Combination of Driving Dynamics, Function, and Exclusivity. The new BMW X5. (Short Version)



Its predecessor was the trendsetter creating a brand-new segment in the market. And now the new BMW X5 is raising the driving experience in a Sports Activity Vehicle (SAV) to an even higher level.

Powerful eight- and six-cylinder engines, BMW xDrive permanent all-wheel drive once again enhanced to an even higher standard, and a brand-new suspension optimised from the ground up give the new model supreme agility and driving dynamics. The new V8 power unit develops maximum output of 261 kW/355 hp, the new six-cylinder inline engine with its magnesium/aluminium composite crankcase offers 200 kW/272 hp, and the new all-aluminium straight-six diesel with third-generation common rail fuel injection churns out a superior 173 kW/235 hp.

The large and highly versatile interior of the new BMW X5 offers maximum function and space for up to seven occupants. And at the same time, thanks to innovative features and equipment as well as high-class finish, the interior ensures exclusivity of the same calibre and standard as a luxury performance saloon.

The new BMW X5 is the first SAV in the world available with Active Steering, AdaptiveDrive (anti-roll stabilisation and adaptive dampers) as well as a Head-Up Display, and comes as standard on runflat safety tyres.

Offering enhanced dynamics and an even higher standard of all-round supremacy, the new BMW X5 is continuing the victorious success of a truly exceptional vehicle concept. When introducing the former model, the first X5, BMW set up and established the brand-new segment of the SAV Sports Activity Vehicle. As a spacious, luxurious, versatile and, at the same time, robust premium car offering excellent qualities through its electronically controlled all-wheel drive and superior driving dynamics for venturing out on rough terrain, the BMW X5 hit the headlines right from the start. And the success of this strategy is clearly reflected by more than 580,000 units sold worldwide in the meantime.

## **Driving dynamics typical of BMW – unique in the SAV segment.**

Throughout its entire production cycle, the first SAV in the world was able to maintain its status as a benchmark in driving dynamics. Now, introducing the new BMW X5, BMW's drivetrain and suspension specialists have lifted the yardstick for performance, agility, dynamics and suspension comfort to an even higher level.

The driving experience is characterised, as before, by significant ride height and a commanding seating position. Further fortes also maintained in the new model are the unitary bodyshell, independent suspension, and permanent, electronically controlled, variable all-wheel drive.

Both the gasoline and diesel engines with eight and, respectively, six cylinders have been significantly optimised to an even higher standard of excellence, now offering even more superior performance and motoring culture. And the suspension, finally, is brand-new from the ground up, conveying the power of the engine in superior style to the road or, as the case may be, to a rough track.

A feature quite unique in the SAV segment is the combination of a double wishbone front axle with the integral-IV rear axle in the new BMW X5. This cutting-edge configuration allows a particularly high standard of lateral acceleration, extremely good directional stability, and exemplary roll comfort all at the same time. Yet another innovation is rack-and-pinion steering with its variable transmission ratio facilitating a precise style of motoring in its middle position while offering the driver a more direct response in bends with a larger steering angle.

The new BMW X5 is the first vehicle in its class available as an option with Active Steering including Servotronic. This unique steering system adjusts the steering transmission ratio additionally to the road speed of the vehicle in the interest of an even higher standard of agility. At high speeds Active Steering provides even safer directional stability, while when parking or manoeuvring all the driver has to do is turn the steering wheel twice from its extreme left to its extreme right position.

A further benefit of Active Steering in the new BMW X5 is the active contribution it makes to stabilising the vehicle. When applying the brakes on different surfaces, for example, that is with a different frictional coefficient on either side, Active Steering provides an appropriate but discreet counter-steering effect to prevent the vehicle from swerving out of control.

**World debut: AdaptiveDrive with data transfer via FlexRay.**

The new BMW X5 is the first SAV in the world available as an option with AdaptiveDrive providing carefully coordinated interaction of the anti-roll bars and dampers. Incorporating the vehicle's sensors, AdaptiveDrive permanently monitors and calculates data on the speed of the vehicle, the steering angle, longitudinal and lateral acceleration, body and wheel acceleration, as well as ride height. Using this information, the system then masterminds both the sway motors in the anti-roll bars and the electromagnetic valves on the dampers, thus adjusting the side angle and damping of the new BMW X5 appropriately at all times.

The bottom line, therefore, is that AdaptiveDrive gives the new BMW X5 a standard of supremacy on the road never seen before in this segment. And simply by pressing a button, the driver is able to choose either a sporting or a comfort-oriented set-up in the AdaptiveDrive mode.

To ensure fast and reliable coordination, AdaptiveDrive for the first time uses the FlexRay high-speed data transmission system. Developed by a consortium of specialists under the guidance of BMW, this system offers a level of data transfer capacity never seen before, now exchanging vehicle data even faster between the individual suspension control systems and ensuring even greater precision in the process.

The new BMW X5 is the first vehicle in the world to feature FlexRay technology.

### **Even greater precision: intelligent BMW xDrive all-wheel drive technology.**

Electronically controlled, variable BMW xDrive offers an even higher standard of precision than before in the new BMW X5. The particular strength of this intelligent all-wheel-drive system introduced by BMW is its ability to significantly enhance traction on rough terrain as well as driving dynamics under all conditions.

In a normal driving situation, permanent all-wheel drive distributes engine power 40 : 60 front-to-rear. The system then responds quickly, precisely and variably to any change in surface conditions or the driving situation, instantaneously varying the distribution of drive forces as required: Via a power divider with an electronically controlled multiple-plate clutch, BMW xDrive feeds the power of the engine precisely to the wheels where it can be used best and most efficiently.

As a result, xDrive enhances driving dynamics in the new BMW X5 by counteracting even the slightest trend to over- or understeer in bends at the earliest point. A further advantage is that BMW xDrive supports the vehicle's traction and performance off the beaten track, ensuring maximum traction also on rough terrain by feeding drive power instantaneously and variably to the wheels currently enjoying a higher frictional coefficient.

### **Integrated Chassis Management with optimised control quality.**

To ensure fast and precise distribution of drive forces, the xDrive all-wheel-drive system, DSC Dynamic Stability Control, engine management and Active Steering all interact with one another via BMW's Integrated Chassis Management. As a result, the distribution of drive forces, individual intervention in wheel brakes, and engine management are all fully coordinated with one another.

Again, this all-round suspension control philosophy ensures the highest conceivable standard of both driving dynamics and active safety.

### **DSC with additional functions.**

The new BMW X5 comes with enhanced DSC Dynamic Stability Control offering optimised comfort and functions. Indeed, the addition of numerous new functions makes a particular contribution to safe and active motoring at all times.

Apart from driving stability control, the basic functions of DSC comprise ABS anti-lock brakes, ASC Automatic Stability Control, Trailer Stability Control, HDC Hill Descent Control, DBC Dynamic Brake Control automatically maximising brake pressure whenever required in a forceful braking manoeuvre, as well as CBC Cornering Brake Control preventing the vehicle from oversteering whenever the driver applies the brakes lightly in a bend.

The ADB Automatic Differential Brake electronic differential, finally, acts as a transverse lock between the wheels, automatically applying the brakes on a wheel about to spin.

Over and above all these features, the new DSC system optimises the efficiency of the high-performance brakes through a number of functions and features: First, it sets off any decrease in brake power under extremely high temperatures by increasing brake forces appropriately in order to avoid fading (anti-fading function). A further advantage is that the system builds up brake pressure moderately whenever appropriate in order to keep the brakes on standby in all situations which might require spontaneous deceleration. The regular Dry Braking function, on the other hand, optimises brake performance in the wet. And last but certainly not least, the Start-Off Assistant helps the driver set off on an uphill gradient, without the vehicle rolling back.

The new BMW X5 also boasts a parking brake with both electromechanical and hydraulic functions activated or released simply by pressing a button.

### **DTC for greater slip and more dynamics.**

The new BMW X5 also comes with DTC Dynamic Traction Control reflecting the supreme dynamic driving potential of BMW's SAV. Indeed, DTC is a special mode of DSC tailored specifically to the new BMW X5 and activated by pressing a button on the centre console.

To meet the needs of offroad motoring, DTC raises the threshold for intervention by the engine and brakes, enabling the BMW X5 to set off smoothly on surfaces such as loose snow or sand, with the drive wheels intentionally spinning slightly. And a further advantage of DTC is the sporting and even more active style of motoring it allows on hard tarmac.

### **First SAV with runflat tyres fitted as standard.**

The new BMW X5 is the first vehicle in its class fitted as standard with runflat tyres. These safety tyres come on extended-hump rims, the new BMW X5 boasting the fourth generation of runflat tyre technology. Thanks to their stiffer flanks, these special tyres prevent the risk of tyre damage also when driving off the beaten track. And should the driver suffer a complete flat all the same, he can still continue with runflat tyres for a distance of up to 150 kilometres or 90 miles and at a maximum speed of 80 km/h or 50 mph with the vehicle fully laden – and if the vehicle is carrying a lower weight, the driver is able to go on a lot further.

The new BMW X5 comes as standard with 18-inch light-alloy rims and 255/55 tyres. Light-alloy rims measuring 19 and 20 inches running on 275/40 tyres at the front and 315/35 tyres at the rear are also available as an option – and naturally also come with runflat technology.

Yet a further feature is the Tyre Defect Indicator warning the driver of a gradual loss of air in the tyres. Any deviation in tyre pressure is determined by comparing the speed of the wheels, the warning then being provided by a graphic symbol in the display of the instrument cluster.

### **Superior at all times: the V8 gasoline engine.**

Clearly, a premium-segment SAV requires a power unit able to provide impressive thrust and performance combined with supreme motoring refinement. And precisely this is why the new BMW X5 comes with a choice of two gasoline engines and one diesel all meeting this high standard.

Particularly the thoroughly renewed eight-cylinder gasoline engine in the BMW X5 4.8i offers a new level of performance: As the top engine in the range, this V8 displaces 4,799 cubic centimetres and develops maximum output of 261 kW/355 hp, with peak torque of 475 Newton-metres or 350 lb-ft between 3,400 and 3,800 rpm. This, clearly, means efficient dynamics of the highest standard.

Accelerating from 0–100 km/h in 6.5 seconds, the BMW X5 4.8i also reaches a new standard of performance likewise borne out by its top speed limited electronically to 240 km/h or 149 mph.

Despite this improvement in performance by 11 per cent over the former model, fuel consumption is down by 5 per cent to just 12.5 litres/100 kilometres in the EU test cycle, equal to 22.6 mpg Imp. And it almost goes without saying that the new V8 power unit in the BMW X5 4.8i fulfils the emission regulations imposed by both the Euro 4 standard as well as ULEV II in the USA.

**Fast-revving and light: the straight-six gasoline engine.**

The straight-six gasoline engine in the new BMW X5 3.0si also reflects the state-of-the-art in engine technology: This 3.0-litre power unit combines supreme fast-revving performance with equally supreme smoothness and harmony on the road. Maximum output is 200 kW/272 hp, peak torque is 315 Newton-metres or 232 lb-ft at 2,750 rpm.

Benefiting from its magnesium/aluminium crankcase, the new six-cylinder weighs just 161 kilos or 355 lb, making it 10 kilos lighter than its predecessor – an advantage which benefits the vehicle's harmonious axle load distribution and agility, and helps to reduce fuel consumption at the same time.

The BMW X5 3.0si accelerates to 100 km/h in 8.1 seconds and has a top speed of 225 km/h or 140 mph. Running on H-rated tyres, top speed is limited by the factory to 210 km/h or 130 mph.

Average fuel consumption in the EU cycle is 10.9 litres/100 km, equal to 25.9 mpg Imp (provisional figure). Again, this is 14 per cent more economical than on the former model, despite the increase in engine power by 18 per cent.

**Muscular and refined: the all-aluminium six-cylinder diesel with third-generation common rail and piezo fuel injection technology.**

The diesel version of the new BMW X5 also offers all the fortes of a premium SAV through its exemplary power and performance. Weighing 25 kilos or 55 lb less than the former engine thanks to its all-aluminium crankcase, this superior straight-six develops maximum output of 173 kW/235 hp from engine capacity of 3.0 litres. Peak torque of 520 Nm or 383 lb-ft, in turn, comes all the way between 2,000 and 2,750 rpm.

The superior build-up of power from low engine speeds is attributable to the newly developed exhaust gas turbocharger featuring variable turbine geometry and electrical adjustment. And boasting the third generation of common rail technology, the six-cylinder in the BMW X5 3.0d features the most advanced fuel injection system available for the diesel engine, with piezo fuel injectors feeding fuel efficiently and precisely into the six combustion chambers at a pressure of 1,600 bar.

This ensures not only a particularly powerful and economical, but also a clean combustion process. And last but not least, a particulates filter positioned close to the engine as well as an oxidation catalyst housed in the same unit ensure efficient emission control in accordance with the Euro 4 standard.



The new BMW X5 3.0d accelerates to 100 km/h in 8.3 seconds, and has a top speed of 216 km/h or 134 mph (210 km/h or 130 mph on H-rated tyres). Fuel consumption in the EU test cycle is a mere 8.7 litres of diesel fuel on 100 kilometres, equal to 32.5 mpg Imp, meaning a reduction in fuel consumption by 7 per cent despite the increase in engine output by 8 per cent.

### **New six-speed automatic transmission with even faster gearshift and enhanced shift comfort.**

Power is transmitted in the standard configuration of the new BMW X5 by a six-speed automatic transmission likewise enhanced to an even higher standard. This new six-speed automatic shifts gears with incomparable speed, precision, and efficiency, new converter technology and particularly efficient software reducing reaction and shift times versus a conventional automatic transmission by up to 50 per cent. And the direct gear detection function enables the transmission to shift down just as quickly when skipping one or several gears, thus not taking up any additional time in the process.

With its exceptional gearshift dynamics and extremely direct link to the engine, the new six-speed automatic transmission helps to give the new BMW X5 an even higher standard of sporting and active performance. At the same time it enhances the thrill of comfortable, relaxed and fuel-efficient cruising at low engine speeds.

### **New electronic gear selector.**

The automatic transmission is shifted by an electronic gear selector also featured for the first time in the new BMW X5. The gearshift pattern as such is the same as on a conventional automatic transmission, but the parking position is activated by a button in the gear selector lever moving back after use to its original position.

Transmission management is not mechanical, but rather by electrical signals. To activate the manual gearshift, therefore, all the driver has to do is move the selector lever to the left, then shifting gears sequentially by hand.

A further advantage of the new gear selector is short and ergonomic shift travel, while a final benefit over and above superior comfort is that the new selector lever leaves sufficient space on the centre console for additional storage boxes and cupholders.

### **Presence and elegance: the design of the new BMW X5.**

Compared with its predecessor, the new BMW X5 is 18.7 centimetres or 7.4" longer and 6.8 centimetres or 2.7" wider.

Inside the vehicle, this growth means a significant enhancement of both comfort and functionality, while from outside BMW's five-door SAV continues to boast a high standard of powerful elegance. Indeed, BMW's body designers have succeeded in carefully enhancing the proportions of the new SAV, in the process giving even greater emphasis to the overall impression of the vehicle with its particular touch of agility.

This impression is clearly borne out not only by the short body overhangs front and rear, but also by the larger wheels. And at the same time the optical balance of the front and rear section helps to give the new X5 even more harmonious proportions referring directly to the vehicle's four-wheel-drive technology.

With its longer wheelbase, the new BMW X5 exudes a far higher standard of stability and presence. The stretched side look of the vehicle is limited by the muscular D-pillars, with the merging lines of all pillars helping to provide an appropriately shortened roofline again enhancing the overall look of slender elegance.

Yet a further classic feature of BMW design is the contour line rising up slightly to the rear and coming out most distinctly on the level of the door opener. Starting out behind the front wheel arches, this characteristic contour line embraces the entire rear end of the vehicle, without being interrupted even by the rear light clusters.

### **Powerful face, muscular rear.**

The powerfully curved contours of the engine compartment lid, the three-dimensional configuration of the rods in the BMW kidney grille, and the headlight units fully integrated in the side panels all help to give the front end of the new BMW X5 a particularly powerful and dynamic look. At the top, the dual round headlights would appear to be slightly cut off, giving the new BMW X5 a clear and consistent focus.

The rear end also exudes a powerful touch of elegance, the high edge of the rear bumper accentuating the width of the vehicle and, accordingly, its strong and stable stance on the road. This impression is then further enhanced by the horizontal structure of the rear light clusters in typical BMW L-design extending far into the rear lid as such. And last but certainly not least, four light conductor rods give the new X5 a striking and refined look also at night.

The combination of concave and convex surfaces combines the powerful flair so typical of a BMW Sports Activity Vehicle with the elegant presence of an outstanding premium car. These contours create dynamic light and shadow

lines symbolising the agility of the vehicle and giving the surfaces a clear structure. The muscular wheel arches, in turn, stand for superior stability and, together with the powerful and wide track, contribute to the individual look of the new BMW X5.

**Aerodynamic, safe, and spacious: the body of the new BMW X5.**

Exceptionally good aerodynamics is one of the particular quality features of the new BMW X5 and its special body design. Low lift forces benefit both driving dynamics and safety on the road, the drag coefficient of just 0.33 (BMW X5 3.0si) placing the new model right at the top of its segment also in this respect.

The new BMW X5 measures 4,854 millimetres or 191.10" in length and 1,933 millimetres or 76.10" in width. This increase in size versus the former model means much more space and greater variability within the interior, the new BMW X5 offering five full-size, really comfortable seats perfectly suited for long distances.

**Maximum flexibility: two additional seats in the third row.**

A further sign of the high standard of flexibility offered by the new X5 is the option to have a third row of seats fitted at the rear right from the start at the factory. This provides two additional seats comfortably accommodating passengers up to a body height of approximately 1.70 metres or 5'7".

Both of these rear seats are equipped with three-point inertia-reel seat belts and headrests adjustable for height. To ensure easy access to the third-row seats, the second row of seats may be tilted completely to the front, even with their backrests still upright. Grab recesses inside the C-pillars also facilitate access to the rear. Whenever these additional seats are not required, they may be folded down individually or together completely into the floor of the luggage compartment.

Last but not least, the new BMW X5 offers passengers in the second row of seats 40 millimetres or 1.6" more kneeroom than in the former model.

Opening in two sections, the tailgate provides access to a generously dimensioned loading compartment now 100 millimetres or almost 4" longer than before. An additional compartment beneath the luggage compartment as such on models without the third row of seats offers an extra 90 litres or 3.15 cubic feet of storage space, while overall capacity of the luggage compartment is up under the VDA standard by 110 litres (3.85 cubic feet) or 22 per cent to 620 litres (21.7 cubic feet) on the five-seater version of the new BMW X5.

Folding down the asymmetrically split second row of seats completely, luggage capacity increases to a most significant 1,750 litres or 61.25 cubic feet (+ 200 litres or + 13 per cent over the former model). And even with the third row of seats moved up into position, the driver and his passengers still enjoy 200 litres or 7.0 cubic feet luggage capacity.

**Intelligent lightweight technology: even stronger on almost the same weight.**

Despite the larger exterior dimensions of the new BMW X5, BMW's engineers have succeeded in keeping the weight of the new model almost unchanged, while making the body even stiffer than before. In order to reach the goal of combining extra space with greater stability while avoiding any significant increase in weight, BMW's specialists have focused consistently on lightweight technology. Both the choice of materials and the arrangement as well as the geometry of load-bearing elements, bars and supports are based on an overall concept designed from the start for maximum safety in a collision combined with superior agility on the road.

Torsional stiffness compared with the former model is up by approximately 15 per cent from 23,500 to 27,000 Nm/degree.

Low-slung support arms around the wheel arches firmly connected to the engine support arms and angled in towards the middle of the vehicle serve to optimise front-end stiffness without adding extra weight. Around the C-pillars, a complete torsion ring likewise serves to increase stiffness to an even higher level than before. A further effect is provided by wedge contours firmly clamping the tailgate between the two D-pillars. Positive interconnection of the wedge elements resting at medium level when closed on the two D-pillars is ensured by the soft-close function of the tailgate featured as standard.

High- and ultra-high-strength steel is used above all at the rear of the new BMW X5 in order to maximise stiffness and impact resistance in a collision from the rear while still using a minimum amount of material for this purpose. At the front a cast aluminium spring support likewise helps to reduce weight while at the same time optimising body stiffness.

The special configuration of the front side panels and their support modules made of plastic also serves to meet several objectives in development, not only saving weight and providing greater freedom in design, but also ensuring enhanced pedestrian safety and protection.

### **Stable passenger cell, wide range of safety features.**

The most significant passive safety element in the new BMW X5 is the stable passenger cell. Forces acting on the vehicle in the event of a collision are diverted through the engine support arms and the chassis down several load paths in order to prevent extreme loads acting on individual structures.

Inside, the new BMW X5 features not only frontal and hip/thorax airbags, but also curtain head airbags at the side as standard. These curtain airbags inflate whenever required out of the covers on the A-pillars and roof lining, efficiently protecting the occupants in the first two rows of seats from injury should the worst come to the worst.

The new BMW X5 comes with three-point inertia-reel seat belts on all seats. A further highlight in all cases is the belt force limiter plus a belt tensioner on the front seats. And last but certainly not least, ISOFIX child seat fastenings are featured as standard on the second row of seats.

In the event of an imminent rollover, the rollover sensor in the new BMW X5 ensures immediate activation of the curtain airbags and belt latch tensioners. And being networked to DSC Dynamic Stability Control, these sensors will always respond not only in good time, but exactly in line with current requirements.

The bottom line, therefore, is that the new BMW X5, through its body structure and wide range of safety features, offers all the qualities for achieving best marks in all crash tests relevant the world over.

### **The interior: functional and refined.**

The unique driving experience in the new BMW X5 is clearly borne out from the start through the characteristic commanding position enjoyed in particular by the driver. This higher seating position and the arrangement of the instrument panel slightly angled towards the driver create the impression of unrestricted control over the vehicle.

The comfort zone on the dashboard in the middle between the driver and the front passenger comprises all functions and displays also for convenient use and scrutiny by the front-seat passenger. A particular highlight directly in the line of vision of both occupants at the front is the iDrive Control Display positioned in the instrument panel at the same level as the circular dials.

Through its slender design and harmonious transition to the door linings, the instrument panel looks both powerful and elegant all in one. In conjunction with the load-bearing element on the centre console tapering out towards the bottom, it creates the impression as if the entire dashboard were hovering freely in space.

Apart from this attractive design, sophisticated materials, tasteful colour combinations, comfortable seats and padded armrests all act together to provide a truly stylish ambience. The sheer generosity of space available, numerous storage options and perfect finish all go together to reflect the typical character of a high-quality, multi-purpose Sports Activity Vehicle.

The interior of the new BMW X5 combines the exclusive style of a luxury performance saloon with all the variability and functionality of a modern SAV. Four interior colour worlds, six equipment and trim colours and five different versions of trim strips, combined with no less than nine exterior colours, provide a wide range of options in customising the vehicle. And galvanised trim strips in Pearl Gloss Chrome featured as standard interact perfectly with the trim panels to add an extra touch of style, value and elegance.

### **BMW iDrive with eight favourite buttons.**

The new BMW X5 is equipped with BMW's trendsetting iDrive control concept to mastermind the Navigation, Air Conditioning, Entertainment, and Communication functions. Comfort and communication settings are controlled by the iDrive Controller on the centre console, the functions and settings chosen are displayed on the Control Display. This new, anti-dazzle monitor automatically adjusting in brightness to ambient light is positioned at exactly the right point within the instrument panel, enabling the driver to take in the information displayed at any time without turning his head and only very briefly moving his eyes away from the road.

Eight favourite buttons for individual choice of functions by the driver serve to further simplify control of the system. So simply pressing one button, the driver is able in this case to call up particularly frequent functions such as important telephone numbers, regular destinations, or a favourite radio station.

As an option information relevant to the driver may also be presented on the Head-Up Display quite unique in the SAV segment and again placed at a particularly convenient point on the windscreen. This ensures that the speed of the vehicle, navigation instructions, speed control data as well as warnings from the Check/Control are all properly presented in the driver's direct line of vision.

### **Optimum visibility: xenon headlights, adaptive and bending lights.**

In conjunction with xenon headlights available as an option, the new BMW X5 offers an attractive and highly functional daytime light function provided by the light rings in the dual round headlights. In this case the rings in the two inner headlights transmit a particularly intense light about 100 times brighter

than the parking lights, ensuring much better recognition of the car also from a greater distance and making sure that the new X5 is recognised immediately as a BMW due to its particular light design.

Additional comfort when driving at night is provided by High-Beam Assist also available as an option on the new BMW X5. This system automatically switches back to the low-beam headlights as soon as other vehicles are approaching or the distance to a vehicle ahead drops below a certain point. And yet another function is the foglamps serving as bending lights when taking a turn.

Cruise control complete with activation of the brakes when necessary is yet another attractive option available in the new BMW X5. This system acts on engine management, the selection of gears and the brakes in order to consistently keep the speed originally chosen by the driver. Permanently monitoring the vehicle's lateral acceleration, cruise control with its automatic brake function also recognises the risk of inadequate safety or comfort in bends and responds immediately by reducing the speed of the vehicle. To ensure a controlled process of driving downhill, finally, the system may even activate the brakes in order to keep the driver in full control, especially when towing a trailer.

### **Innovative options.**

High-grade navigation and audio systems serve to enhance grand touring comfort in the new BMW X5 to an even higher standard. A DVD video system for the second row of seats, a CD or DVD changer in the glove compartment, as well as the innovative multi-channel audio system, are among the highlights offered in mobile entertainment.

Even the standard audio system comes with six loudspeakers, while BMW's HiFi system Professional specially conceived for the reproduction of multi-channel audio sources comes with no less than 16 loudspeakers.

Thanks to the AUX-IN bush fitted as standard, music from external audio sources such as an MP3 player may be fed directly into the vehicle's loudspeakers.

Further systems naturally also available are the BMW Online mobile internet portal as well as the BMW Assist telematics service.

BMW TeleServices are a new amenity now available in the BMW X5: Using the BMW Teleservice Call, the vehicle, whenever required, sends all information important for the workshop automatically to the driver's BMW Service Partner.

The customer then receives a call from his Service Partner in order to agree on the date of the car's next service and the work to be done on the occasion.

Soon BMW TeleDiagnosis will even be able to provide an "X-ray" image of the vehicle at the request of the customer, with entries recorded in the control units being read out upfront of the next inspection to give the driver's BMW Service Partner a good overview of the vehicle and its status in advance. The customer, in turn, will then receive his personalised service offer right from the start before driving to the service station.

In the event of an electronic malfunction, BMW TeleDiagnosis not only allows a remote advisory service for the customer, but even provides direct assistance from a distance. At the request of the customer, for example, defect entries in the control units may be deleted or a control unit may be re-set over the air, serving in many cases to immediately remedy a malfunction.

Supplementing PDC Park Distance Control, the new BMW X5 is also available with a back-up camera significantly facilitating the process of parking and manoeuvring in confined spaces with poor visibility.

To activate the back-up camera, all the driver has to do is press a button or shift to reverse, in which case the camera is activated automatically together with PDC. And apart from providing a wide-angle, colour video image in exactly the right perspective on the Control Display, the back-up camera offers a number of additional functions such as interactive trace lines in the picture helping the user find the ideal trajectory in manoeuvring or when parking.

Yet another innovative function serves to colour-mark any obstacles detected by the PDC ultrasound sensors in the camera image, generating a quasi-three-dimensional graph. And to provide further assistance when hooking up a trailer, the back-up camera offers a zoom function with yet another interactive graph allowing the driver to dock on to the trailer towbar without the slightest problem.

Innovative technology, premium ambience with all the qualities of a luxury performance saloon, powerful elegance in body design and outstanding driving dynamics – all these features make the new BMW X5 a truly outstanding performer in its segment. And so the new model continues the tradition of its predecessor, the world's first Sports Activity Vehicle setting the foundation for a brand-new segment in the market. Now the engineers and designers developing the new BMW X5 have further enhanced these proven strengths, adding additional qualities in the process to once again create an absolutely unique vehicle unparalleled the world over.



In a segment now subject to keen competition, the new BMW X5 once again sets the standard in driving dynamics and agility. No other vehicle combines the features so typical of a BMW with the fascinating qualities of a truly versatile Sports Activity Vehicle stylish and full of presence in its look. This makes the new BMW X5 the ideal vehicle for the discerning motorist seeking, through the choice of his or her automobile, to express active, individual and independent lifestyle and at the same time enjoy a new dimension of driving experience.

## 2. Description in Brief.



- Second edition of BMW's highly successful SAV Sports Activity Vehicle accounting for sales of some 580,000 units and establishing the SAV segment in the first place; all-new development retaining the proven body and drivetrain concept and raising the standard of driving dynamics, functionality and exclusivity to an even higher level.
- Significantly enhanced driving dynamics and agility: even more powerful and efficient engines, torsionally-stiff bodyshell, optimised aerodynamics, unique double wishbone front axle and integral-IV rear axle, low centre of gravity, enhanced BMW xDrive all-wheel-drive technology.
- First vehicle in its segment with Active Steering for even greater agility and driving pleasure, sporting performance thanks to AdaptiveDrive with anti-roll and adaptive dampers, only vehicle in the segment with runflat tyres featured as standard.
- Six-speed automatic transmission featured as standard with an even faster gearshift, enhanced shift comfort, greater fuel efficiency, and an electronic gear selector.
- Interior with significantly upgraded functions, more room for the occupants, optional third-row seats, generous loading capacity (maximum capacity from: 620–1,750 litres/2.17–61.25 cubic feet).
- Upgraded, enhanced iDrive control with eight favourite buttons for direct selection of navigation destinations, telephone numbers and audio sources at the touch of a button, only vehicle in the SAV segment with an optional Head-Up Display.
- Exterior design with harmonious proportions, elegant and slender lines, sporting and muscular overall appearance.
- Exclusive interior ambience with high-quality materials, excellent quality of finish, innovative options: BMW Online, multi-channel audio system, DVD video system, back-up camera.

● Engine variants:

- BMW X5 4.8i: V8 gasoline engine, capacity 4,799 cc,  
max output 261 kW/355 hp (+ 11 per cent),  
max torque 475 Nm/350 lb-ft (+ 8 per cent),  
acceleration 0–100 km/h in 6.5 sec (– 7 per cent),  
top speed 240 km/h (149 mph)  
average fuel consumption to the EU standard  
12.5 litres/100 kilometres (22.6 mpg Imp) (– 5 per cent)
- BMW X5 3.0si: Six-cylinder gasoline engine, capacity 2,996 cc,  
max output 200 kW/272 hp (+ 18 per cent),  
max torque 315 Nm/232 lb-ft (+ 5 per cent),  
acceleration 0–100 km/h in 8.1 sec (– 8 per cent),  
top speed 225 km/h (140 mph)  
(210 km/h or 130 mph with H-rated tyres),  
average fuel consumption to the EU standard  
(preliminary figure)  
10.9 litres/100 kilometres (25.9 mpg Imp) (– 14 per cent)
- BMW X5 3.0d: Six-cylinder diesel engine, capacity 2,993 cc,  
max output 173 kW/235 hp (+ 8 per cent),  
max torque 520 Nm/383 lb-ft (+ 4 per cent),  
acceleration 0–100 km/h in 8.3 sec (– 3 per cent),  
top speed 216 km/h (134 mph) (210 km/h or 130 mph  
with H-rated tyres)  
average fuel consumption to the EU standard  
8.7 litres/100 kilometres (32.5 mpg Imp) (– 7 per cent)

### 3. **Concept: The Pacemaker for a New Class of Vehicles.**



- **Superior driving dynamics in the SAV segment.**
- **Maximum functionality combined with luxury performance ambience.**
- **Exclusive driving experience thanks to innovative special equipment.**

The all-round superiority of the new BMW X5 results from a multitude of qualities never seen before in this combination on any other vehicle: The second generation of BMW's Sports Activity Vehicle (SAV) offers all-road qualities ensuring unique dynamism on the road and unleashed power and performance off the beaten track.

The new BMW X5 combines generous space and superior function in every situation with powerful and elegant body design, supreme quality of finish, as well as a stylish, high-class interior. And the exclusive character of BMW's new X5 is clearly borne out by a wide range of innovative features and equipment benefiting the vehicle's driving dynamics, function, and all-round comfort.

Significant ride height, all-wheel drive, and a commanding seating position giving the driver a complete overview of traffic conditions are typical characteristics of vehicles in this segment in general. But with its permanent, electronically masterminded all-wheel xDrive technology, the new BMW X5 provides a particularly outstanding rendition of these versatile driving characteristics. BMW xDrive optimises not only the vehicle's traction but also the overall standard of driving dynamics in a truly unique manner, moving the new BMW X5 into new dimensions also in this respect.

The interior of the new BMW X5 also offers versatility of the highest calibre: The new BMW X5 is comfortable, spacious, and flexible, combining superior function with the ambience of a luxury performance saloon. Within the new BMW X5, diversity of the highest calibre comes together with unique appeal. As a result, the new BMW X5 meets all kinds of different demands and offers entirely new dimensions of mobility.

### **Driving dynamics: increasing the lead.**

Moving into a new world of driving dynamics, the new BMW X5 is taking up a proven tradition. For when the first generation of the BMW X5 was presented in 1999, it immediately marked the dawn of a brand-new segment in the market, for the first time combining the driving dynamics so characteristic of a BMW with superior all-road qualities. While permanent all-wheel drive, significant ground clearance and an elevated seating position had already been typical before of the SUV Sports Utility Vehicle, the BMW X5 offered all this plus outstanding driving dynamics on the road. So quite appropriately, it created and opened up a new, unprecedented and absolutely unique vehicle concept: the SAV Sports Activity Vehicle.

The great appeal of this concept is clearly borne out by the fact that in the meantime the BMW X5 has become the role model for a whole range of other vehicles introduced by other manufacturers, spawning keen competition in the SAV segment. And at the same time the first-generation BMW X5 has retained its benchmark status in the area of driving dynamics throughout its entire production cycle.

Now the new BMW X5 pushes up the benchmark once again in the SAV segment: The new BMW X5 offers truly effortless handling for a vehicle of its size, combined with impressive performance and speed in bends. This superior dynamics is further enhanced by convincing supremacy promoted, inter alia, by even more precise xDrive all-wheel-drive technology, the innovative functions of DSC Dynamic Stability Control, as well as optional AdaptiveDrive with anti-roll stability and adaptive dampers quite unique in this segment.

### **Combing supreme function with the ambience of a luxury performance saloon.**

The new BMW X5 offers convincing all-round qualities also within its interior, providing a wide range of functions and flexibility in use as well as an optional third row of seats offering ample space for two passengers up to approximately 1.70 metres (5'7") in height.

Should the customer require more loading space instead of these additional seats, the third-row seats fold down individually into the floor of the new BMW X5 within a matter of seconds. The same applies to the second row of seats, which may be folded down either individually or in their entirety.

Flexibility of this kind within the interior offers all options for truly unique mobility, activity, and spontaneity, providing optimum transport capacity not only when going on vacation, but also in the pursuit of all kinds of leisure time activities taking along bulky sports equipment. And at the same time the BMW X5 is virtually predestined for towing even a heavy trailer.

The new BMW X5 combines this superior function with unique refinement. The ambience of the interior reflects all the style and quality of a luxury performance saloon. The powerful and elegant interior design, the use of carefully selected, top-quality materials, and quality of finish clearly noticeable in every detail underline the premium character of BMW's new SAV. The wide range of standard equipment and options comprises a host of innovations quite unique in the SAV segment, such as the optional Head-Up Display, Active Steering, as well as the multi-channel audio system, to mention just a few examples. Added to this there are new developments now being presented in a BMW for the first time, such as the iDrive control system with eight favourite buttons and a new Control Display as well as the electronic gear selector for the automatic transmission featured as standard in all versions of the new BMW X5.

The new BMW X5 fulfils all the demands of the truly discerning motorist fascinated by the exclusive qualities of an uprange vehicle while at the same time regarding mobility as part of his – or her – individual and active lifestyle. Through its all-road qualities and supreme function, the new BMW X5 gives particularly such a demanding individualist a truly unique experience of freedom on four wheels – with outstanding style, elegant presence, and supreme comfort at all times and in all cases. And the particular driving experience in the BMW X5 also means enjoying all the benefits of the vehicle's superior drive power and technical innovations wherever you go.

**All-round qualities paving the way for global success.**

The concept of a vehicle with above-average qualities in an unusually wide range of areas has made the BMW X5 an outstanding success the world over. Accounting for sales of more than 580,000 units, the first-generation BMW X5 has clearly proven its great appeal and desirability in all markets. Overwhelmingly positive response both in the USA as the world's leading SAV market and in Europe and other parts of the world proves that superior driving dynamics and premium qualities are acknowledged also in this segment as extremely attractive product features.

At the same time the BMW X5 has strengthened the position of the brand as a manufacturer of upmarket all-wheel-drive vehicles. In the meantime intelligent BMW xDrive all-wheel-drive technology is available also in a number of BMW Saloons and Touring models, as well as the new BMW 3 Series Coupé, offering its significant enhancement of driving dynamics in all of these cars. This alone confirms the particular qualities of BMW xDrive making BMW the most successful manufacturer of all-wheel-drive vehicles in the premium segment in 2005.

The outstanding thrill of a vehicle combining all-wheel drive with substantial ground clearance and supreme driving dynamics remains undaunted to this day. And the option to combine supreme function with the ambience of a luxury performance saloon is also just as appealing as before. So with this in mind, the new BMW X5 is now setting out on the road to new success the world over.

## 4. Driving Dynamics: Incomparably Agile, Uniquely Superior.



- **Unique double wishbone front axle.**
- **World's first SAV with Active Steering and AdaptiveDrive.**
- **DSC with additional functions for enhanced driving dynamics.**

Right from the start in developing the new BMW X5, the guiding force was to enter new dimensions in driving dynamics. Accordingly, powerful engines acting with enhanced precision are the major factors raising the high standard of the former model to an even higher level of performance, agility, dynamics, and suspension comfort.

An all-new development, for example, is the suspension conveying the power of the engine to the road – or to rough terrain – with impressive supremacy. This unique suspension is then supplemented by numerous innovations featured for the first time in an SAV Sports Activity Vehicle – such as optional Active Steering with Servotronic as well as optional AdaptiveDrive with anti-roll stabilisers and adaptive dampers.

### **Wide track, long wheelbase – simply ideal for superior driving dynamics.**

The new BMW X5 naturally retains the basic principles of a unitary bodyshell, independent suspension, and permanent all-wheel drive. And while the exterior dimensions of the new model are larger than before, the fundamental proportions remain the same and the overall weight of the vehicle has hardly changed.

These factors alone give the new BMW X5 ideal dimensions for a further enhancement of driving dynamics borne out in particular by the wider track and longer wheelbase: This applies particularly to the even wider track of the new BMW X5 now measuring 1,644 millimetres or 64.72" (+ 68 millimetres or 2.68") at the front and 1,650 millimetres or 64.96" (+ 74 millimetres or 2.91") at the rear. Wheelbase, in turn, is up by 113 millimetres or 4.45" to 2,933 mm or 115.47".

The new BMW X5 is the first BMW to boast a double wishbone front axle offering ideal conditions for outstanding supremacy at all times combined with the further enhancement of driving dynamics. The result is truly outstanding lateral acceleration, superior directional stability all the way to high speeds, minimisation of bumps and impact forces acting on the steering wheel as well as body roll of the entire vehicle, with the front axle offering outstanding smoothness and ride control.



Given this wide range of qualities, the new double wishbone front axle guarantees not only sheer driving pleasure of the highest calibre, but also a high standard of safety, excellent qualities in everyday motoring, and a relaxed style of driving also on long distances.

**Perfect road contact for high lateral acceleration.**

Several interacting features and technologies serve to provide these benefits. The kinematic configuration of the double wishbone front axle, for example, keeps front wheel camber exactly right at all times, with the tyres maintaining optimum ground contact in every situation. This, in turn, enables the tyres to convey higher lateral forces for significantly greater lateral acceleration than in the case of a conventional front axle. A further positive effect is that the double wishbone front axle helps to enhance the vehicle's directional stability all the way to top speed, the specific configuration of the axle's kinematic levers minimising the transmission of impacts to the steering wheel when crossing dividing lines on the road, passing over potholes or bumps.

On the double wishbone front axle the dampers are not required to guide the wheels and are therefore not exposed to any lateral forces, thus showing particular smoothness and sensitivity in responding to bumps on the road surface.

A further decision taken by the development engineers was to attach the anti-roll bar directly to the wheel mounts for a significant increase in smoothness and performance. Indeed, the combination of these improvements gives the new BMW X5 very supple spring and damper response, reducing body roll to a minimum even in dynamic bends.

**Integral-IV rear axle for superior transmission of power.**

The integral-IV rear axle in lightweight construction patented by BMW and enhanced to an even higher standard in the BMW X5 also makes its contribution to optimum driving dynamics. Indeed, the entire configuration of the rear axle has been specifically tailored to the dimensions of the new BMW X5 and the extra power of the engines.

Through its concept and configuration, the new integral-IV rear axle benefits both driving dynamics and motoring comfort, the wheel mounts, rear axle subframe and four track control arms taking up the dynamic and drive forces flowing into the suspension. This reduces any elastic tension acting on the wheel mounts, while at the same time the soft swing-arm supports provide exactly the right kind of longitudinal wheel guidance crucial to superior roll comfort.

This optimum longitudinal spring action is highly effective in isolating roll and drive noise, making a particularly significant contribution to superior smoothness and noise control in the new BMW X5. Self-levelling controlled by the air springs on the rear axle maintains consistent ride height and driving characteristics at all times, regardless of the load the new model is carrying. This self-levelling suspension is standard on the BMW X5 4.8i and is available as an option on the six-cylinder models.

### **Making its debut in the SAV segment: Active Steering with Servotronic.**

The new rack-and-pinion steering with its variable transmission ratio (between 55 and 62 millimetres/2.17 and 2.44" on each turn of the steering wheel) as a function of the steering angle caters for all requirements and driving conditions. When driving straight ahead, the steering helps the driver through its intentionally more indirect transmission ratio to handle the vehicle in superior style all the way to very high speeds, while in bends it is more direct in support of a dynamic style of motoring.

The new BMW X5 is the first vehicle in its class optionally available with Active Steering. Specially configured for BMW's SAV, Active Steering helps in a large number of driving situations to capitalise even more than before on the dynamic potential of the BMW X5.

The first factor to be mentioned in this context is optimisation of the transmission ratio for all speeds: At speeds of up to approximately 90 km/h or 55 mph, the steering transmission ratio is very direct, providing a significant advantage particularly for a sporting and active style of motoring and hardly requiring the driver to cross over his arms on the steering wheel. In parking manoeuvres, for example, all the driver has to do is turn the steering wheel twice when moving from the extreme left to the extreme right lock.

At high speeds, on the other hand, the steering becomes increasingly indirect in the interest of precise directional stability and superior motoring comfort.

### **Active Steering for enhanced driving stability.**

Active Steering in the new BMW X5 is combined with Servotronic. While Servotronic determines the steering forces required at any given point in time, Active Steering specifies the steering angle required, in each case as a function of road speed.

Both of these systems supplement each other in an ideal manner, not only in terms of driving dynamics, but also in the interest of enhanced safety. For apart from benefits in driving dynamics, Active Steering also makes an important contribution in stabilising the vehicle when oversteering in bends,

quickly and precisely countersteering and stabilising the vehicle in the process. The same countersteering effect serves when braking on different surfaces (with the wheels subject to different frictional coefficients) to prevent the vehicle from swerving out of control, thus maintaining driving stability at all times.

### **AdaptiveDrive for unique supremacy in the SAV segment.**

Yet another unique feature in the SAV segment is coordinated control and management of the anti-roll bars and dampers by AdaptiveDrive available as an option. Combining active anti-roll stability with variable damper control, AdaptiveDrive gives the new BMW X5 a standard of safety, comfort and agility quite unprecedented in its class. The system prevents body roll and dive in fast bends or dynamic manoeuvres when evading an obstacle or in similar situations.

AdaptiveDrive also serves to reduce the steering angle required and improves roll comfort while at the same time enhancing driving dynamics to an even higher level. And simply by pressing a button, the driver can opt for a more sporting or a more comfortable setting.

Using sensors specifically conceived for this purpose, AdaptiveDrive permanently measures and calculates the vehicle's current lateral and longitudinal acceleration, road speed, the position of the steering wheel, body and wheel acceleration, as well as the ride height of the body. Then, applying this data, AdaptiveDrive determines the appropriate commands for the swivel motors in the anti-roll bars and the electromagnetic valves in the dampers. Interacting with one another, these two control units serve instantaneously to prevent any imminent body roll of the vehicle. A unique feature in this context is the coordinated interaction of the anti-roll bars and dampers, with the two halves of the anti-roll bars being disconnected from one another while driving straight ahead in order to prevent any undue harshness of the suspensions caused by spring action on one side only.

### **World debut: data transfer via FlexRay.**

The new high-speed FlexRay data transmission system developed under the leadership of BMW controls the sensors and control units to transmit and process large amounts of data within fractions of a second. And now the new BMW X5 is the world's first vehicle to feature this technology.

The FlexRay transmission system is used exclusively on the new BMW X5 to mastermind AdaptiveDrive and operates in parallel to the proven structure of the on-board network. The particular potential of the FlexRay system is its ability to transmit an unusually large volume of data within an extremely short time, thus making FlexRay absolutely excellent for networking the satellites used within the system of vertical and dynamic vehicle management.

To optimise the effect of AdaptiveDrive at all times, changes in driving and road conditions are monitored and registered by an enormous number of data, body and wheel acceleration as well as ride height all being registered parallel to one another and compiled in a central computer to provide one overall picture. This serves to determine the appropriate reaction in each case, transmitting the right signals to the anti-roll bars and dampers.

Determination of such a multitude of data all at the same time requires a particularly efficient, high-performance transmission system. And therefore FlexRay now offers BMW precisely the technology needed for even greater precision and superiority in dynamic driving control.

### **DSC with additional functions.**

The additional functions of BMW's optimised DSC Dynamic Stability Control also bear clear testimony to the progress made in this area, enhancing motoring comfort, driving dynamics and safety to a level never seen before.

The basic functions of DSC include stabilisation of the vehicle by intervention of the brakes and the reduction of engine power, efficient operation of the ABS anti-lock brake system, ASC Automatic Stability Control, HDC Hill Descent Control, Trailer Stability Control, DBC Dynamic Brake Control automatically maximising brake pressure whenever required for significant deceleration, as well as CBC Cornering Brake Control preventing any undesired oversteer of the vehicle when applying the brakes slightly in a bend.

A further function is the electronic ADB Automatic Differential Brake acting as a differential lock whenever required by automatically applying the brakes on a wheel threatening to spin.

### **Driving downhill with extra comfort thanks to HDC.**

HDC Hill Descent Control, BMW's intelligent system for driving downhill with absolute ease and comfort, offers significant advantages above all on rough terrain. Since driving down a steep gradient on loose or slippery ground may become a problem even for a vehicle with all-wheel drive, HDC activated at the touch of a button enables the new BMW X5 to successfully master even a challenge of this kind. So without requiring the driver to intervene in any way, the vehicle automatically applies the brakes as required on all four wheels, proceeding downhill at a steady, constant speed. And since this intervention by the brakes takes place within milliseconds, the occupants do not feel any discomfort of any kind.

HDC Hill Descent Control may be used at speeds of up to 35 km/h or 22 mph, the system switching over to the standby mode as soon as the driver exceeds this speed. At 60 km/h or 37 mph, in turn, HDC is automatically deactivated.

The driver himself is able to determine how fast the BMW X5 is to proceed when driving downhill, with automatic speed adjustment from 7–25 km/h (4.5–15.5 mph). And to terminate the HDC function, all the driver has to do is touch the brake pedal.

### **Maximum safety when towing a trailer.**

A four-wheel-drive vehicle such as the new BMW X5 is simply perfect for towing a trailer. And to ensure maximum safety also under such conditions, BMW's SAV is equipped with innovative Trailer Stability Control suppressing any dangerous instability and preventing any uncontrolled roll or pendulum motion of the tractor and trailer.

Recognising the risk of the vehicle and trailer starting to sway relative to one another at an early point, Trailer Stability Control re-stabilises the driving vehicle and trailer by quickly applying the brakes on both the vehicle itself and the trailer being towed, at the same time briefly reducing engine power to a minimum. Both of these steps are taken automatically by the system, without requiring any intervention on the part of the driver.

Trailer Stability Control is activated automatically as soon as the trailer is connected to the vehicle by the power cable. The minimum speed at which the system is able to intervene is 65 km/h or 40 mph.

The new BMW X5 is homologated for towing a trailer of up to 2,700 kilos or 5,954 lb. And as an option, maximum trailer load may even be increased to 3,500 kg or 7,718 lb on the BMW X5 3.0d and the BMW X5 4.8i.

### **Optimum brake effect in every situation.**

A further advantage of BMW's new DSC Dynamic Stability Control is optimisation of the brake system in various ways and through a number of functions: First, DSC compensates any drop in brake power under extremely high brake temperatures by specifically increasing brake pressure as required and thus counteracting any kind of fading effect (anti-fading function). The second function is additional build-up of moderate brake power for enhanced brake standby in any kind of situation likely to require spontaneous deceleration. Regular Dry Braking, in turn, optimises brake performance under wet conditions as a function activated automatically as soon as the rain sensor registers such wet conditions or the driver switches on the windscreen wipers.

Last but not least, the new BMW X5 features a parking brake with both electromechanical and hydraulic operation activated or released easily and conveniently by means of a button on the centre console.

Since even an all-wheel-drive vehicle can only capitalise on its enhanced traction when the power of the engine is really able to reach the wheels, the Start-Off Assistant is an ideal match for the new BMW X5, this additional DSC function holding the vehicle briefly in position after the driver has released the brake and thus avoiding the risk of rolling back when setting off on an uphill gradient.

### **DTC for enhanced slip and extra dynamics.**

Reflecting its high level of driving dynamics, the new BMW X5 also comes with DTC Dynamic Traction Control, a special DSC mode tailored to the new BMW X5 and its specific requirements and activated simply by pressing a button on the centre console. Ideal for driving off the beaten track, DTC raises the response threshold for intervention by the engine and brakes, enabling the BMW X5 to set off smoothly and easily, for example, on loose snow or sand, with its drive wheels spinning slightly. And at the same time DTC allows an even more sporting and active style of motoring on the road, even with a slight, controllable powerslide in bends.

Supported by the many functions of BMW's new Dynamic Stability Control, the high-performance brake system in the new BMW X5 allows excellent deceleration in all situations, inner-vented discs on all four wheels reliably taking up brake energy. Disc diameter on the BMW X5 3.0si is 348 millimetres or 13.70" at the front and 320 millimetres or 12.60" at the rear. On the BMW X5 4.8i, in turn, the brake discs measure 365 and, respectively, 345 millimetres (14.37 and, respectively, 13.58") in diameter.

### **Cruise Control with brake function.**

As an option, the new BMW X5 is also available with cruise control incorporating a special brake application function. The big advantage of this system is that it does not only maintain the speed preselected by the driver, but also reduces road speed whenever necessary under specific driving conditions.

Cutting in as of 30 km/h or 20 mph, cruise control with its brake function serves to maintain the speed preselected by the driver at all times, regardless of the route he is taking. To do this, the system either increases engine power automatically or, by cutting off engine power and shifting down the transmission, uses the brake force of the engine to reduce speed. Should this reduction of speed not be sufficient, say, when driving downhill or towing a trailer, the system intervenes additionally in the brakes.

This advanced system of cruise control complete with its brake function comes in addition with a Curve Speed Limiter reducing the speed of the vehicle in bends to a lower level than desired whenever this is necessary on account of dynamic driving conditions. To determine when this necessity arises, the Curve Speed Limiter covers lateral acceleration data provided by the sensors, adjusting the speed of the vehicle whenever driving conditions become critical. Then the Curve Speed Limiter accelerates the BMW X5 again to the desired speed when leaving the bend.

The driver masterminds the cruise control function by means of a stalk on the steering column. As soon as the vehicle reaches the minimum speed required of 30 km/h, therefore, all the driver has to do is pull or press the control stalk to adopt his current speed at the desired level and then change such speed whenever he wishes.

Cruise control with its brake function is deactivated either via the control stalk or by pressing down the brake pedal. Then, pressing the Resume button, the driver is able to activate the system again at the final speed saved in the system.

The Comfort Dynamic function enables the driver to use the control stalk for accelerating in the handgas mode, increasing the speed of the vehicle whenever he wishes in two dynamic stages and in an absolutely constant process, without pressing down the gas pedal.

## 5. All-Wheel Drive: More Precision for Greater Driving Pleasure.



- **Even more precise: intelligent BMW xDrive all-wheel-drive technology.**
- **Permanent all-wheel drive with variable power distribution.**
- **Optimised control quality for Integrated Chassis Management.**

Superior driving qualities in every situation and on all kinds of roads are among the outstanding fortes of the new BMW X5. This superiority is ensured above all by intelligent, permanent BMW xDrive all-wheel-drive technology.

Allowing variable distribution of drive power between the front and rear axles, this electronically controlled all-wheel-drive system not only ensures optimum traction at all times, but also enhances driving dynamics to an unprecedented standard. BMW xDrive thus benefits the vehicle's agility, driving stability and motoring comfort through its fast and precise reactions to any change in driving and surface conditions, combining the dynamic benefits of rear-wheel drive with the traction advantages of all-wheel-drive.

Indeed, thanks to the many advantages and features of BMW xDrive, BMW has now become the world's most successful manufacturer of all-wheel-drive vehicles in the premium segment.

To distribute drive power quickly and with optimum precision, xDrive, DSC Dynamic Stability Control, and engine management are all networked with one another through BMW's ICM Integrated Chassis Management. This ensures a perfect balance at all times of drive power, individual intervention by the brakes on each wheel, and engine management, with the optionally available Active Steering also being integrated in this network.

When oversteering in bends and in brake manoeuvres on varying surfaces with a split frictional coefficient, Integrated Chassis Management is able to countersteer smoothly and precisely to prevent the vehicle from swerving out of control and regain stability on the road. The result of this intelligent network in practice is a supreme standard of both driving dynamics and active safety.

### **New ICM control concept for even greater precision.**

The network linking BMW xDrive and DSC Dynamic Stability Control serves, inter alia, to provide infinite and variable distribution of engine power between the front and rear axles, at the same time allowing forced power distribution among the two wheels on each axle and therefore acting as a transverse lock.



Should, therefore, one of the wheels start to spin without transmitting power to the surface, it is automatically slowed down by DSC intervening on the appropriate brake, the differential in the final drive feeding more power to the opposite wheel.

The new control structure in Integrated Chassis Management ensures even faster and more precise interaction of xDrive and DSC. While so far engine and brake management were largely independent of longitudinal force management in influencing the steering behaviour of the vehicle, the three control circuits on the new BMW X5 now act parallel to one another: With longitudinal force management controlling the distribution of drive power between the front and rear axle, brake management is able to intervene individually in the brakes in the interest of enhanced traction and driving dynamics. As a further function, engine management is able, where necessary, to reduce or increase drive forces.

This precise network established with DSC allows the xDrive all-wheel-drive system in the new BMW X5 to respond quickly and precisely to changes in driving conditions and enhance driving dynamics in the process.

**Permanent all-wheel drive with variable distribution of drive power.**

Driving straight ahead under normal conditions, the new BMW X5 distributes drive power between the front and rear axle in a 40 : 60 ratio, thus retaining the dynamic benefits and the typical features of standard drive so characteristic of BMW.

Whenever necessary, however, this distribution of drive power may be varied significantly: Depending on individual requirements, the flow of torque between the front and rear axles may be changed infinitely and variably all the way from 0 : 100 to 50 : 50. So in an extreme case with the rear axle no longer being able to convey any power to the road, the BMW X5 will run briefly with fully locked all-wheel drive, establishing a rigid connection to just one axle in the same way as a 100 per cent longitudinal lock with a conventional all-wheel-drive system.

Instantaneous, variable and precise transmission of drive power is ensured by the control units in the power divider and by DSC control. DSC starts out by calculating the clutch distribution forces required as a result of various criteria such as the steering angle, the position of the gas pedal, engine speed and road speed. Then, via the power divider control unit, the system determines the desired clutch force just right in each situation, thus establishing the optimum distribution of power between the front and rear axles.

The power divider fitted directly downstream of the transmission first feeds drive forces through its main shaft to the rear axle on a rigid drivetrain. The electronically controlled multiple-plate clutch on this main shaft then diverts the appropriate amount of torque by way of a layshaft to the front axle, completing this entire operation within 100 milliseconds at the very most.

### **Optimum power distribution under all conditions.**

The driver of the new BMW X5 benefits permanently and consistently from the unique qualities and features of BMW xDrive. When setting off under normal conditions, the multiple-plate clutch remains closed up to a speed of 20 km/h or 12 mph, with power being distributed in a 50 : 50 split. Then, depending on driving conditions and road surfaces, the system distributes engine power variably as a function of requirements. And whenever the driver accelerates particularly fast or when the wheels on one axle start to lose their grip, power distribution is varied immediately in the interest of optimum traction and pulling force.

The system acts quite differently whenever the new BMW X5 sets off on winter roads or rough tracks. If, for example, when setting off from a snowbound car park on to a road already cleared of snow, only the front wheels are resting on a hard surface with suitable grip, almost 100 per cent of the drive power transmitted is diverted to the front axle within just 0.1 seconds, without the intervention on the rear-wheel brakes and its inherent loss of power typical of a conventional system. As a result, the BMW X5 sets off smoothly, quickly and safely even in such a case.

### **Agile and stable in bends and when accelerating.**

In bends xDrive in the new BMW X5 reduces both under- and oversteer by distributing engine power quickly and sensitively between the front and rear axle: Should the rear end of the vehicle start to move out (oversteer), for example, the multiple-plate clutch will close even harder, feeding more drive power to the front wheels. This allows the rear wheels to build up more side forces and the vehicle will be stabilised.

Being combined with DSC, BMW xDrive recognises any such oversteer at a very early point in time and intervenes before the driver even notices the change in conditions.

When understeering, the vehicle “pushes” over its front axle out of the bend – and again, any such tendency is recognised at an early point by DSC evaluating the data received. The system responds by immediately reducing drive power on the front axle, switching all the way in an extreme case to 100 per cent rear-wheel drive.

DSC will only intervene in the brakes to stabilise the vehicle when variable distribution of power alone is no longer sufficient to compensate any over- or understeer.

The new BMW X5 is particularly agile in quickly climbing a mountain pass, where the inner rear wheel in a bend will often tend to spin whenever the driver accelerates dynamically out of a hairpin. In such a case BMW xDrive immediately draws power from the rear wheels and feeds this extra “muscle” to the front axle, ensuring once again that all the power provided by the engine is actually used to drive the vehicle.

### **Homogeneous driving behaviour.**

BMW xDrive all-wheel drive is even able to handle an abrupt change in engine power without the slightest effort, the driver of a BMW X5 not even noticing a change in power distribution. For while the time-lag between pressing down the gas pedal and building up engine power is at least 200 milliseconds, the multiple-plate clutch will close or open completely within just 100 milliseconds, thus ensuring absolutely smooth and homogeneous driving behaviour in every situation.

On uphill gradients with a slippery surface such as ice or snow, locking action between the front and rear axles will prevent individual wheels from spinning. Accordingly, DSC is only required to cut in much later, reducing engine power or applying the brakes only under far more difficult road conditions. Then, when continuing on the road or track, the locking action built up in this way prevents the risk of losing longitudinal or lateral traction on individual wheels, again offering the driver safe and agile driving behaviour.

### **Manoeuvring and parking: easy and precise thanks to BMW xDrive.**

Last but certainly not least, BMW xDrive eliminates a well-known side-effect of rigid all-wheel-drive systems: By completely disconnecting the two axles, BMW xDrive changes when parking or manoeuvring into a 100 per cent rear-wheel drive system, again without the driver having to intervene in any way. All the driver will notice, as a pleasant side-effect, is that there is no torsion on the drivetrain or unwanted forces acting on the steering.

## 6. Power Units: Performers of the Highest Standard.



- **Engines even more powerful and efficient.**
- **Available right from the start: V8 gasoline engine, straight-six gasoline engine, all-aluminium six-cylinder diesel.**
- **Diesel engine with third-generation common rail fuel injection.**

A premium Sports Activity Vehicle (SAV) requires a first-grade power unit with impressive muscle and perfect motoring refinement – and the new BMW X5 fulfils these criteria in absolute perfection, boasting two gasoline and one diesel engine with a range of power from 173 kW/235 hp all the way to 261 kW/355 hp.

Despite this increase in engine power, fuel consumption of both the V8 and straight-six gasoline engine is lower than on the former models. And in the same way the new all-aluminium six-cylinder diesel also offers efficient dynamics in a new dimension.

The new BMW X5 leads the way also in its dynamic potential, with the vehicle responding smoothly and instantaneously to every movement of the gas pedal and offering the driver of BMW's SAV maximum driving pleasure when accelerating. The enhanced efficiency of the new power units, in turn, also has a positive impact on exhaust emissions reduced in the same way as the fuel consumption of the various models, and the new BMW X5 likewise goes straight into the premium class in terms of its supreme motoring refinement.

### **Supreme power and dynamics: the V8 gasoline engine.**

The V8 gasoline engine stands for a new level of power and performance in its class made possible by engine capacity of 4,799 cc and maximum output of 261 kW/355 hp. The top-of-the-range power unit in the BMW X5 achieves maximum torque of 475 Newton-metres or 350 lb-ft in the speed range between 3,400 and 3,800 rpm, the muscular eight-cylinder accelerating the new BMW X5 4.8i in just 6.5 seconds from 0–100 km/h. Top speed, in turn, is limited electronically to 240 km/h or 149 mph.

Despite the increase in engine output by 26 kW/35 hp (11 per cent) over the former model, fuel consumption is down by 5 per cent, making this outstanding power unit the most efficient performer among all comparable engines. In absolute terms, the BMW X5 4.8i consumes 12.5 litres/100 kilometres, equal to 22.6 mpg Imp. And at the same time the new V8 naturally fulfils emission regulations both in the Euro 4 standard and ULEV II in the USA.

This top-of-the-range engine has been thoroughly improved and updated for the new BMW X5 4.8i. Apart from variable double-VANOS camshaft adjustment and fully variable VALVETRONIC valve drive, the V8 now comes with even more efficient engine management. Yet another feature serving to give the BMW X5 4.8i its supreme performance and maximum efficiency is the new two-stage intake manifold, a further improvement being the optimisation of the intake ducts and valves for higher throughput. To minimise pressure losses on the intake side, air now flows through two manifolds.

The exhaust system with its 4-in-1 pipes is brand-new.

In all, the various improvements made to increase engine output also help to reduce fuel consumption. At the same time the engine has become even more responsive and dynamic, while retaining all its superior running smoothness and refinement at all times.

#### **VALVETRONIC for supreme running smoothness.**

Introducing fully variable VALVETRONIC valve drive, BMW's engineers have set a new milestone in engine construction – and in the meantime VALVETRONIC has become a distinctive technical highlight of BMW gasoline engines.

This fully variable valve drive allows throttle-free load management, meaning that engine output is controlled not by the throttle butterfly, but rather via the opening period of the valves serving, inter alia, to significantly reduce both fuel consumption and emissions particularly under part load and give the engine much better response.

BMW VALVETRONIC is featured both in the V8 and the straight-six power units driving the new BMW X5. The effect of this sophisticated technology is truly convincing in both models, with the engine responding perfectly to the gas pedal and thus following even the most moderate commands from the driver.

#### **Motoring refinement and reduced fuel consumption all in one: the straight-six gasoline engine.**

The new BMW X5 3.0si is powered by the latest version of BMW's straight-six world-famous for its fast-revving performance and refinement. Maximum output of the 3.0-litre power unit is 200 kW/272 hp, peak torque is 315 Newton-metres or 232 lb-ft at 2,750 rpm, enabling the new BMW X5 3.0si to accelerate to 100 km/h in just 8.1 seconds and continue up to a top speed of 225 km/h or 140 mph. Running on H-class tyres, on the other hand, top speed is limited by the factory to 210 km/h or 130 mph.

Average fuel consumption of the new BMW X5 3.0si in the EU cycle is 10.9 litres/100 kilometres, equal to 25.9 mpg Imp (preliminary figure). This makes the outstanding performer 14 per cent more fuel-efficient than its predecessor, despite an increase in output by 18 per cent.

The higher output of the new straight-six results, inter alia, from fully variable VALVETRONIC valve drive and variable double-VANOS camshaft control.

These improvements mean an increase in engine output over the former model by no less than 30 kW/41 hp. And at the same time the new straight-six excels above all through its impressive responsiveness together with smooth and harmonious motoring refinement, once again making the engine the absolute benchmark in style and performance in its segment.

Yet a further improvement is the reduction of engine weight versus the former power unit: Thanks to its magnesium/aluminium crankcase, the power unit is some 10 kilos or 22 lb lighter, weighing a total of just 161 kg or 355 lb.

The crankcase is made up of a magnesium shell outside and an aluminium insert inside complete with the cylinder liners and coolant ducts, providing ideal conditions for superior stiffness, smoothness and a long engine life. At the same time the reduction in weight around the front axle significantly benefits the agility of the new BMW X5 3.0si.

The water pump in the coolant system driven electrically and operating only when required makes an additional contribution to the all-round economy of the new six-cylinder.

### **Traction and efficiency combined: the straight-six diesel.**

The diesel version of the new BMW X5 stands out through exemplary power, traction and running smoothness, as well as its particularly efficient use of fuel: Maximum output of the 3.0-litre straight-six is 173 kW/235 hp, and peak torque of no less than 520 Newton-metres or 383 lb-ft comes between 2,000 and 2,750 rpm, guaranteeing powerful traction from low engine speeds.

This substantial power and torque from the ground up is attributable in particular to the newly developed exhaust gas turbocharger with variable turbine geometry and electrical adjustment. In addition, the rotor blades on the turbine side have been optimised, the efficiency of the compressor wheel enhanced to an even higher level. As a result, the turbocharger cuts in at an early point without the slightest delay, its efficient operation enhancing both engine torque and maximum output.

The new BMW X5 3.0d accelerates to 100 km/h in 8.3 seconds and has a top speed of 216 km/h or 134 mph (210 km/h or 130 mph with H-rated tyres). Fuel consumption, on the other hand, has been reduced to a mere 8.7 litres of diesel/100 kilometres in the EU test cycle (equal to 32.5 mpg Imp), and is therefore 7 per cent lower than on the former model – certainly a remarkable result considering the increase in engine output by 13 kW/17 hp (8 per cent).

A technical highlight of the straight-six diesel in the new BMW X5 3.0d is the all-aluminium crankcase replacing the previous grey-cast-iron engine block. Use of aluminium alone reduces the weight of the engine by 25 kilos or 55 lb, while engine stiffness and stability remains more than sufficient without requiring any reinforcing inlays or bolts. The cylinder liners are also made of aluminium and are inserted in a thermal process into the aluminium block.

**Maximum efficiency: common rail fuel injection with piezo-injectors.**

Featuring the third generation of common rail technology, the six-cylinder power unit in the new BMW X5 3.0d also boasts the most modern injection system available for a diesel engine: The piezo-injectors operate with maximum efficiency and precision in injecting fuel into the six combustion chambers at a pressure of 1,600 bar.

These new, very compact injectors allow exact dosage of the fuel supply, at the same time keeping pre-injection to a minimum. As a result, the combustion process is not only particularly dynamic and economical, but also clean, a particulates filter positioned close to the engine as well as an oxidation catalyst in the same housing ensuring exhaust gas management complying in full with the Euro 4 standard.

## 7. Automatic Transmission: Comfort Meets Spontaneity.



- **Six-speed automatic transmission shifting 50 per cent faster.**
- **Direct connection to the engine, optimum comfort, enhanced efficiency.**
- **Stylish ergonomics: the electronic gear selector lever.**

All versions of the BMW X5 come as standard with an optimised six-speed automatic transmission.

Equipped with elaborate electronic control, the new transmission stands out in particular through a level of reaction and gearshift speed never seen before: Setting standards in sporting terms, the reaction and gearshift times of the new transmission are up to 50 per cent faster than on a conventional automatic gearshift.

Direct connection of the transmission to the engine enhances the dynamic acceleration of the new BMW X5, while electronic gear path detection ensures utmost precision in shifting gears.

With smooth transitions from one gear to the next, the new automatic transmission offers not only a significant improvement in driving dynamics, but also the ultimate standard of motoring comfort. Gears are selected via an electronic selector lever ensuring optimised ergonomics and truly fascinating, stylish design. The automatic transmission features new torque converter technology avoiding any unnecessary slip which might possibly cause a loss of power. The transmission itself comes in two variants tailored specifically to the torque potential of the six-cylinder gasoline engine, on the one hand, and the six-cylinder diesel and V8 gasoline engine, on the other. A feature shared by both variants is their improved standard damper systems.

The transmission combined with the eight-cylinder and the diesel engine is able to handle torque of up to 650 Newton-metres or 479 lb-ft, the transmission on the six-cylinder gasoline engine is able to cope with peak torque of 400 Newton-metres or 295 lb-ft.

The new automatic transmission alone is able to reduce fuel consumption in the EU cycle by approximately 3 per cent and offers manual operation when required with a sequential gearshift. Indeed, there is even a sports program for the particularly dynamic and ambitious driver.



### **New electronic gear selector lever.**

The automatic transmission is controlled by an electronic gear selector lever featured for the first time in the new BMW X5. Through its straightforward elegance in design combined with ergonomic ease of control, the selector lever not only pampers the eye and feeling of the beholder, but also offers secure and firm grip in every situation. The gearshift pattern, in turn, is the usual configuration with automatic transmission, the only difference being that now the selector lever returns to its initial position each time after use.

A further highlight is that transmission management is now no longer mechanical, but rather follows electrical signals.

The driver switches to Park by pressing the P-button on the top of the selector lever. And to activate the manual gearshift, all he has to do is push the lever to the left, then shifting gears sequentially by hand, pulling the lever back to shift up and pressing it forward to shift down.

A display in the selector lever itself as well as a further indicator in the instrument cluster show which gear is currently in mesh.

This innovative gear selector lever allows short and ergonomic gearshift travel, a further advantage over and above the comfortable gearshift being the additional space left on the centre console for storage trays and cupholders.

### **High-performance control electronics for fast reaction.**

The new automatic transmission shifts gears smoothly and quickly, responding instantaneously to the driver's commands. Gears are shifted electronically in the shift-by-wire mode, providing a truly unique, sporting style of motoring. And a further advantage is that this technology does not require any mechanical contact with the transmission, replacing the former Steptronic gearshift.

Elaborate electronic control ensures that the new automatic transmission responds perfectly to the position of the gas pedal, allowing the driver to control the gearshift even better in the automatic mode, for example when accelerating dynamically by pressing down the accelerator hard and forcefully.

When cruising in relaxed style, on the other hand, the automatic transmission will automatically choose the highest possible gear, the pressure exerted by the driver on the gas pedal being evaluated by means of a computer and translated precisely into the acceleration desired.

To ensure exact analysis of the driver's commands and the driving situation, the control system also uses data on road speed, engine speed and the vehicle's steering angle, likewise considering whether the vehicle is driving straight ahead, uphill or downhill.

Careful consideration of all these factors ensures the use of exactly the right gear tailored to driving conditions and requirements, with the lowest engine speed range being automatically selected for optimum fuel economy. This direct gear detection process, as it is called, keeps the gearshift just as quick when skipping one or several gears in the process of shifting down, giving the automatic transmission its impressive precision and fast response at all times and in all situations.

### **New converter technology with reduced slip.**

The new six-speed automatic transmission in the BMW X5 offers a truly exceptional, highly dynamic driving experience not only through its superior spontaneity and precision, but also by the direct link to the engine capitalising even more directly on the power of the drive unit.

To provide this symbiosis, the engine and transmission are interconnected more directly than ever before, new torque converter technology also helping to provide the unique sensation of superior driving agility.

The torque converter incorporates high-performance two-damper systems ensuring optimum suppression of vibrations. As a result, the new converter technology is able to avoid unnecessary, power-wasting slip in the converter clutch in nearly all driving situations, at the same time making gearshift processes even more stable and comfortable.

The converter clutch is closed immediately after setting off, the six-speed automatic transmission thus guaranteeing a direct connection to the engine with a driving impression corresponding in its character to the transmission on a manual gearbox vehicle. An additional torsion damper on the torque converter effectively sets off any unsmoothness in the drivetrain, the turbine torsion damper enabling the vehicle to run with its converter clutch closed also at lower engine speeds than before. This serves to reduce any loss of efficiency on the automatic transmission and significantly enhance the dynamic performance of the entire drivetrain.

## 8. Design: Showing Class, Preserving Style.



- **Harmonious proportions demonstrating power, presence, and elegance.**
- **Horizontal lines underlining the dynamic performance of the new BMW X5.**
- **Stretched side section bearing testimony to larger dimensions inside.**

Power, elegance, and presence – these are the features characterising the look and appearance of the new BMW X5. Compared with its predecessor, the new five-door model is 18.7 centimetres or 7.36" longer and 6.1 centimetres or 2.40" wider. But thanks to the design of its body, the new dimensions maintain the stylish and superior look of the BMW X5 in every respect.

Indeed, the proportions of the former model have been carefully enhanced and harmonised to an even higher level of perfection, creating an optimum balance of size and dimensions in every respect. Wheelbase up by 11.3 centimetres or 4.45", for example, helps to provide a new visual balance of the front and rear sections, accentuating the overall look of the new X5 in its agility even more than on the former model.

The modern look of the new BMW X5 provides a perfect symbiosis of the powerful character of a Sports Activity Vehicle with the elegant appearance of a luxury performance car. In the interaction of proportions, surfaces and details, the vehicle's striking design language reveals not only superior onroad qualities, but also the potential for efficient and reliable motoring off the beaten track. Indeed, at very first sight the solid and dynamic stature of the BMW X5 symbolises a particularly attractive rendition of that sheer driving pleasure so typical of the BMW brand.

### **The front section: clear lines, clear focus.**

The characteristic look of the BMW family comes out particularly clearly and powerfully in the front end of the new BMW X5. The joints on the strikingly designed engine compartment lid move together more closely than before at the front, merging into the contour lines around the headlights, where they continue into the surface contours of the headlight lenses themselves.

The dual round headlights cut off at the top, in turn, create the impression of a particularly clear and focused look, underlining the powerfully forward-moving character of the BMW X5 through the design of the front section alone.

Another outstanding feature of the new BMW X5 is the newly designed double kidney grille, the robust kidney rods curved out like a muscle to demonstrate the power and strength of the vehicle. And the large foglamps positioned far to the outside help to give the BMW X5 an even more impressive look of broad dynamics, giving the vehicle an even more powerful stance.

The slender, black covers around the bumper and side-sills, in turn, symbolises the specific character of this Sports Activity Vehicle and at the same time gives the new BMW X5 an even lighter and more agile look.

### **Consistently horizontal lines creating a touch of stretched dynamics**

With its significantly longer wheelbase, the new BMW X5 even looks more stable and exudes an even greater impression of supreme presence.

The optical centre of gravity of the vehicle has been moved slightly further to the front, bearing testimony also in visual terms to four-wheel drive in the BMW X5. The extra space at the rear, in turn, is set off visually by the stretched and sleek side section limited at the rear end, in turn, by the steep D-pillar.

All roof pillars come at a greater angle and now move closer to one another at the top, giving the new X5 a compact look on account of its shorter roofline. Wheel arches appearing almost square and muscular wheel lips extending out of the vehicle, finally, round off this impression.

The new BMW X5 is powerfully characterised by its consistently horizontal lines, the long and slightly rising engine compartment lid continuing optically in the elegantly accentuated waistline at the side. As a classic BMW design element, the contour line rising slightly towards the rear of the car stands out in particular on the level of the door openers, starting behind the front wheel arches and encircling the entire rear section of the vehicle without being interrupted even by the rear light clusters.

These horizontal lines are continued in the rear-view mirrors with their twin-tone colour scheme remaining quite discreet in visual terms despite their increase in size as a result of legal requirements. And last but not least, the door handles themselves have also been harmoniously integrated into the design of the new model.

### **Best marks also in aerodynamics.**

The consistently horizontal lines of the new X5 also serve to make the entire vehicle look lower and even more dynamic. And indeed, this impression is confirmed in full by aerodynamic qualities quite unusual for a Sports Activity Vehicle, a drag coefficient of 0.33 (BMW X5 3.0si) placing the new BMW X5 at the top of its segment also in this respect.

The contour line slightly rising from front to rear, as seen from the side, is yet another feature of classic BMW design. Together with the powerful side-sill, this creates a wedge shape clearly confirming the powerful focus on driving dynamics in the BMW X5.

Another feature typical of the brand is the interplay of convex and concave surfaces on the body of BMW's new muscle machine, the characteristic light and shadow lines created in this way emphasising not only the muscular stature, but also the sheer presence of the BMW X5 as an outstanding premium vehicle.

The large windows almost flow into one another as one unit guaranteeing optimum visibility at all times and from every angle. And again, the glazed section of the passenger compartment – the greenhouse, as it is called – underlines the horizontal orientation of the BMW X5. At the front end, the same design theme of striking and horizontal lines is taken up again by two crossbars in the lower air intake scoop.

### **Powerful rear end.**

The rear view of the new BMW X5 again emphasises the horizontal structure of the entire vehicle in a particular impressive manner, the lines at the rear accentuating the width and stable position of the X5.

These horizontal lines are to be admired, first, in the high-up top edge of the rear bumper corresponding with the horizontal lines of the rear light clusters wrapped far around into the tailgate.

Four LED light rods ensure sophisticated night design behind clear glass covers, the rear light graphics in typical BMW L-design again underlining the presence and powerful look of the BMW X5 in this specific detail.

## 9. Body and Safety: Intelligent Concepts for Solidity and Optimum Weight.



- **High body stiffness for extra safety and driving dynamics.**
- **Stable passenger cell for first-class protection.**
- **First SAV with runflat safety tyres.**

First-class safety ensured by superior torsional stiffness and even more interior space – these are the particular advantages of the bodyshell and body design of the new BMW X5.

To obtain additional space also for a third row of seats and give the entire body even greater solidity, BMW's engineers have focused consistently on intelligent lightweight construction and consistent geometry of the vehicle's support bars, reinforcements and pillars. The result is truly outstanding torsional stiffness exceeding that of the former model by approximately 15 per cent, raising the benchmark in absolute terms from 23, 500 to 27, 000 Newton-metres/degree. And this greater stiffness not only ensures an even higher level of safety, but also helps to provide first-class driving dynamics.

BMW's engineers have also succeeded in optimising the standard of lightweight quality, a criterion defining torsional stiffness as a function of the vehicle's dimensions on the road and its weight. Again, this proves the particular qualities of the new BMW X5 as a vehicle offering the highest level of solidity and agility currently possible in consideration of its body dimensions. Even installation of the optional, extra-large panorama glass roof does not have any noticeable effects on the stiffness of the bodyshell as a whole.

Compared with the former model, the body of the new BMW X5 is larger in every respect – up in length by 18.7, in width by 6.1 centimetres (or, respectively, 7.36 and 2.40"). By comparison, however, unladen weight of the new BMW X5 3.0si is up by only 30 kilos or 66 lb, now amounting to 2,125 kg or 4,686 lb according to the EU standard. And the new BMW X5 3.0d even remains just as light as before, weighing in once again at 2,180 kg or 4,807 lb.

### **Intelligent lightweight technology and superior body stiffness.**

The excellent standard of body stiffness results, inter alia, from the installation of low-lying support arms in the wheel arches. Swinging in towards the middle of the vehicle, these arms from a torsionally rigid connection to the engine support arms.

Torsional stiffness is then further increased by additionally linking these support arms to the bumper crossbar by way of diagonal thrust rods. Both of these improvements optimise body stiffness at the front without requiring a larger number of components.

A good example of intelligent lightweight engineering is the cast-aluminium spring support featured for the first time in the front section of the new BMW X5 and reducing weight by approximately 50 per cent versus a conventional steel plate structure. Holding the spring strut and track control arm, the cast-aluminium spring support takes up forces from the suspension and transmits them to the body of the vehicle. The advantage of this construction is not only greater stability of the bodyshell as a whole, but also optimised driving dynamics.

Around the C-pillar a fully enclosed torsion ring made up of the roof support bracket, the C-pillar, the longitudinal arms at the side, and the crossbars in the floor panel again helps to enhance body stiffness. Positive engagement of the tailgate between the two D-pillars helps to further enhance torsional stiffness, direct contact between the wedge elements and the surrounds at medium height being ensured by a soft-close function automatically drawing the tailgate firmly into the lock.

### **Supreme aerodynamics for enhanced driving dynamics.**

Developing the bodyshell of the new BMW X5, BMW's engineers and designers focused in particular on good aerodynamics. Despite the larger exterior mirrors now offering even better visibility to the rear, the new BMW X5 3.0si sets a new standard also in terms of streamlining with its drag coefficient of 0.33. Indeed, the former model was already best-in-class in this respect right up to the end of its production life – and now low downforces make a significant contribution to enhanced driving dynamics and safety on the road.

This superiority results inter alia from the underfloor almost consistently smooth from front to end, ram lips upfront of the wheels, and specific aerodynamic improvements at the rear. In addition, the underfloor covers improve the level of noise control and protect pipes and other components from stone-throw and dirt.

The new BMW X5 is the first production car in the world to feature a roof spoiler with air flow contours integrated at the side to reduce both air drag and lift forces. Again, these components blend harmoniously into the sporting and elegant roofline of the vehicle, the rear clusters with their air flow contours also serving, together with the roof spoiler, to provide an aerodynamically optimised flow of air cut off at exactly the right point.

### **Perfect protection in the stable passenger cell.**

Optimum protection of the vehicle's occupants – this was the brief given to the development engineers in designing and configuring the passenger cell of the new BMW X5. And so, through its body structure and wide range of safety features, the new model offers all the requirements for achieving best marks in all crash tests relevant the world over.

The passenger cell thus offers the occupants passive safety of the highest standard, the engine support bars and the chassis itself diverting the forces encountered in an accident along several load paths in order to prevent extreme impacts on individual load-bearing structures.

A particular feature in this context is the innovative steering column crash safety concept made up of a crash adapter and a crash tube: In an accident impact energy is progressively absorbed in a defined process, the lower and middle steering column following a predetermined fracture pattern at the same time to prevent intrusion into the passenger compartment.

To protect pedestrians, the body structure is lowered at the front, the intermediate space provided in this way being filled up by a plastic load-bearing structure for the side wall also made of a special synthetic material. As a result, the new BMW X5 meets all requirements in terms of resilience crucial to pedestrian safety and body stiffness through an ideal combination of components and materials.

### **Rollover sensor for extra safety when rolling over.**

The most advanced safety technology inside the new BMW X5 ensures effective safety and protection of all occupants. Apart from front and side airbags, these safety systems also include curtain head airbags at the side inflating out of the panels on the A-pillar and roof lining to protect the occupants in the first two rows from injury.

The new BMW X5 is fitted with three-point inertia-reel belts on all seats including the third row, as well as headrests adjustable for height. Further safety features also to be mentioned in this context are belt force limiters and belt tensioners on the driver's and front passenger's seats. And a final highlight is the ISOFIX child seat fastenings in the second row of seats.

In the event of an imminent rollover, the rollover sensors again enhance safety to an even higher level, automatically detecting critical driving situations which might lead to a rollover and then automatically activating the curtain airbags and belt latch tensioners.



Being networked to Dynamic Stability Control (DSC), the rollover sensors guarantee quick activation whenever required.

The rollover sensors determine the angle of the vehicle around its longitudinal axis as well as angle speed and acceleration. Applying this data and various other figures obtained from DSC stability control, the rollover sensor system determines whether the vehicle is in a critical situation and activates both the curtain airbags and belt latch tensioners whenever this is the case.

To avoid a collision from behind, the new BMW X5 features two-stage brake lights: Whenever the driver applies the brakes particularly hard or when ABS is activated, the area covered by the brake lights becomes larger, generating a clear optical signal inducing motorists following from behind to brake harder, too.

### **Runflat safety tyres premiering in the SAV segment.**

The new BMW X5 is the first vehicle in its class fitted as standard with runflat tyres. Benefiting from their reinforced flanks, these tyres are particularly robust and prevent the risk of a puncture particularly off the beaten track.

Even when completely empty, that is under zero pressure, runflat tyres allow the driver to go on safely, avoiding the risk of an accident or the need to change the tyre under dangerous conditions in the dark next to the road.

The maximum range still remaining after a complete loss of pressure is between 50 (with full load) and 250 (with minor load) kilometres, or 30 and 155 miles, respectively, with the vehicle not exceeding a speed of 80 or 50 mph.

With a gradual loss of pressure, as is the case in 80 per cent of all punctures, the remaining range the driver is still able to cover is an even more significant 2,000 kilometres or 1,200 miles, ABS and DSC remaining fully functional also under these circumstances.

A further important feature is that in such a case optional AdaptiveDrive automatically shifts the weight of the vehicle to the wheels still maintaining optimum tyre pressure, thus taking maximum load off the flat tyre and again allowing extra mileage.

The runflat system is made up of the tyre itself, the extended-hump rim, and a tyre defect indicator. The runflat qualities of the tyres are ensured by reinforced side walls and heat-resistant rubber compounds, the special shape and contours of the wheel rims preventing the tyres from jumping off the rim even under sudden loss of pressure.

Clearly, all this means extra safety particularly at high speeds or on winding roads.

The tyre pressure indicator monitors tyre pressure at all times by consistently comparing the speed of wheel rotation. Then, as soon as wheel speed deviates from the ideal figure by more than 30 per cent, the driver is informed accordingly by a warning light.

In addition to extra safety, the runflat safety system also helps to save weight and space, since there is no longer any need for a spare wheel.

The new BMW X5 comes as standard on 18-inch light-alloy rims running on 255/55 tyres. Larger 19- and 20-inch light-alloy rims as well as tyres measuring up to 275/40 at the front and 315/35 at the rear are also available as an option.

**Intensive test programme preparing the vehicle for all eventualities.**

The entire bodyshell of the new BMW X5 has been subjected to the toughest tests on dynamometers, test rigs and endurance trials on road and track. Particular significance was given in all cases also to corrosion tests as well as insulation from water and dust. The dynamic corrosion test simulates the loads typically encountered in practice by spraying salt mist on to the body and subjecting the body structure to high air humidity in a climate chamber. And then the entire body must also resist gravel, sand and stones as well as salt sludge and salt water under real-life driving conditions.

The dust test determines how well the ventilation system is protected from dust and how thoroughly the seals on moving parts resist dirt and contamination from outside.

The water drive-through test up to a depth of 50 centimetres or almost 20", finally, ensures that there is no damage to the underfloor of the vehicle even under such conditions and that no water is able to enter the passenger and luggage compartments.

Conducted over thousands of kilometres, these tests create conditions and challenges within a few weeks far greater than the demands facing the vehicle under normal conditions throughout its entire service life.

## 10. Interior: Flexible and Exclusive.



- **Greater functionality within an exclusive ambience.**
- **Room for seven thanks to the optional third row of seats.**
- **High-quality materials and maximum quality of finish.**

Perhaps the most outstanding feature characteristic of every BMW X model is the driving experience quite superior in a Sports Activity Vehicle (SAV). The cockpit of the new BMW X5 enhances this unique sensation through a successful combination of function, harmony and optimum structures, the primary point in developing the cockpit being intuitive use of all the instruments and controls by the driver.

Accordingly, all instruments and control units were conceived from the start for superior motoring in a powerful and versatile vehicle, the commanding seating position and the instrument panel angled slightly towards the driver offering a feeling of superior control and driving pleasure in all situations. And the orientation to the driver so typical of BMW is also enhanced by the new, ergonomically optimised electronic gear selector lever.

Checking out the comfort zone in the middle between the driver and co-driver, the latter is also able to read and control all information and displays of importance in his own particular case. A primary feature in the direct line of vision of both the driver and front passenger is the iDrive control system positioned in the instrument panel on the same level as the circular dials for road and engine speed.

### **Elegant cockpit and significantly enlarged glove compartment.**

The interior elements all follow that unique design language so typical of BMW, the discreet flair of a “twisting” band within the instrument panel and its harmonious transition to the inner door panels giving the cockpit a unique ambience of power and elegance.

Acting as a significant load-bearing element, the centre console literally dives deep beneath the instrument panel, creating a distinct contrast of light and shade and evoking the impression as if the instrument panel were literally hovering above the centre console.

The glove compartment is integrated smoothly and harmoniously into the upper half of the cockpit, its two lids opening like a butterfly in one coordinated motion – quite automatically at the touch of a button in the integrated electrical system.

Closing the glove compartment, in turn, is a manual operation, the glove box then being locked automatically as soon as the driver locks the car. In its volume, the glove compartment is far larger than on the former model, an improvement made possible, inter alia, by the higher position of the front passenger's airbag optimised in its protective function.

As an option, the new BMW X5 comes either with a six-DVD or a six-CD changer, both of which are integrated in the upper half of the glove compartment for easier use and control.

**The centre console: elegant design with even more functions.**

The iDrive controller button, the electronic gear selector lever and the parking brake switch are all positioned ideally on the centre console, where various storage trays and the large, covered cupholders are within easy reach.

The same applies to the optional ashtray and cigar lighter, the ventilation controls for the second row of seats and the likewise optional DVD system complete with a monitor for the rear-seat passengers.

The passengers sitting at the rear of the new BMW X5 also enjoy easier access to the storage box in the centre console, the new system with its butterfly lid in the console offering extra comfort and convenience as the most important asset: Both lids open and close separately from one another at the touch of a button, and even after opening one lid the other may remain closed as an armrest.

An AUX-IN bush for connecting an external audio system is featured as standard within the spacious centre console storage compartment, while a complete Storage Package with illumination and a 12-V power socket may also be integrated here as an optional extra. A further option is a telephone kit with an eject box opening to the top.

Extending right through at the sides, the trim bars on the centre console add a particular touch of class. In the standard version they are made of painted plastic and as an option they also come in wood or aluminium.

**Now on seven seats: more space and lots of comfort.**

Comfortable seats with padded armrests allow relaxed cruising and provide a stylish ambience within the new BMW X5. Longitudinal adjustment of the driver's and front passenger's seats is manual, while height and angle adjustment is electrical via a switch directly on the seat itself. All-electric seats complete with a memory function on the driver's seat come as an option, with electrically adjustable sports and comfort seats rounding off the range of optional features all the way to active seat ventilation including seat heating.

Passengers sitting in the second row of seats will enjoy far more space and comfort in the new BMW X5 than in the former model, with kneeroom for passengers in the second row increasing by 40 millimetres or almost 1.6". Tilting down and recessing the seats into the floor of the vehicle, finally, the driver obtains an extra-large, flat and uncluttered luggage area.

**Practical and flexible: two seats in the third row.**

The new BMW X5 is available for the first time with a third row of seats also moving down where required completely into the floor of the vehicle. In this case the size of the luggage compartment may be varied most flexibly by moving the second row of seats or adjusting their backrests.

Folding out individually as required, the seats in the third row are ideal for passengers up to about 1.70 metres or 5'7" in height. They naturally come with three-point inertia-reel seat belts and headrests adjustable for height, with armrests integrated in the wall panels. The belt systems and headrests in the third row, together with the crash-optimised D-pillars and the energy-absorbing structure of the inner panels, all serve to ensure optimum occupant safety.

The air vents for heating and cooling as well as two cupholders are integrated in the centre console.

In the seven-seater version of the new BMW X5, the second row of seats adjust 80 millimetres or 3.15" in length, with backrest adjustment in four steps by a maximum of 12°.

The Easy-Entry function ensures comfortable and convenient access all the way to the rear, a lever serving to release the rear edge of the second row of seats then tilting completely to the front and providing easy access to the third row. And last but not least, grab recesses in the C-pillars are also very helpful in moving to the rear.

Designing the inner door linings and grab recesses around the third row of seats, the development engineers were assisted by a very special kind of external support, checking out the first interior design concepts together with children on a prototype of the new BMW X5. The opinions of these young "passengers" on the optimum position of the armrests and grab recesses were then naturally taken into account in full in the ongoing development process.

### **Spacious and flexible: the luggage compartment.**

Regardless of the number of seats actually used, the new BMW X5 provides lots of space behind the tailgate opening in two sections. The first point is that the luggage compartment is 100 millimetres or almost 4" longer than in the former model, with luggage capacity increasing under the VDA standard by 110 litres (3.9 cubic feet) or 22 per cent to 620 litres (21.7 cubic feet) in the five-seater version of the new BMW X5.

An additional compartment beneath the floor of the luggage compartment as such on vehicles without the third row of seats offers another 90 litres or 3.2 cubic feet. And completely tilting down the asymmetrically split seat bench in the second row, luggage capacity increases to no less than 1,750 litres or 61.3 cubic feet, maximum luggage volume in the new BMW X5 thus increasing by 13 per cent or 200 litres (7.0 cubic feet) over the former model. Even with the third row of seats in use, finally, 200 litres or 7.0 cubic feet of luggage space still remains available.

### **New trim for a truly exclusive ambience.**

A well-balanced concept of materials and colours gives the new BMW X5 truly exceptional flair combining the style of a luxury performance saloon with all the versatility and functionality of a modern SAV. In combination with nine exterior paintwork colours, four equipment variants, six equipment colours and trim strips in five different versions offer a wide margin for individual choice.

These options in customising the new BMW X5 make a significant contribution to the vehicle's unique appeal. And this is quite appropriate, considering that these days an automobile is increasingly becoming an important element of modern life, and is therefore far more than just a mere means of transport. So it is only natural that the customer is making increasing demands of the ambience on board the vehicle he – or she – chooses.

Precisely this is why BMW offers high-grade wood trim for the first time made of brown-tinted and high-gloss-polished bamboo as a particularly decorative element within the interior and as an alternative to conventional wood finish. Bamboo is indeed particularly appropriate through its excellent material qualities, low weight, high resistance to pressure, tension and bending forces, as well as its very good finish. Processed the classic way with a very large share of craftsmanship, the thin bamboo trim strips featured within the new BMW X5 offer truly unique character.

### **Sophisticated materials, harmonious design.**

High quality and harmony of all components creates a truly unique ambience within the interior of the new BMW X5. The interior as a whole is open and generous, with the horizontal orientation of the instrument panel providing a particularly powerful and muscular touch. High-quality grain on the instrument panel and the striking seams on the interior components, in turn, bear distinct testimony to the elegant character of the vehicle. And finally, the combination with a two-piece trim bar featuring different surfaces gives even greater emphasis to the sophisticated style and flair of the dashboard.

In their design and configuration, the controls and instruments fit perfectly into this overall picture, careful use of metal in pearl gloss chrome providing consistent flair and appeal where appropriate. Indeed, this material extremely attractive in its looks and feel is used on the door openers, the rotary knobs, the trim surrounds, and the openings for the air ventilation system.

# 11. The iDrive Control System with Eight Favourite Buttons: Enhanced and Even More Intuitive.



- **Favourite functions activated at the touch of a button.**
- **Touch-sensitive, freely programmable buttons.**
- **Anti-dazzle and absolutely brilliant: the new Control Display.**

The iDrive control system now featured as standard in the new BMW X5 offers a significant improvement of both comfort and safety. Now optimised to an even higher standard, BMW iDrive facilitates the control and operation of various functions such as Air Conditioning, Navigation, Entertainment, and Communication and excels in particular through its intuitive control.

To make the settings desired, all the driver has to do is operate the iDrive Controller on the centre console, the optimum ergonomic position and touch feedback provided by the Controller enabling the driver to mastermind all the functions required without even looking down, especially since the functions and settings chosen are presented in high resolution and colour on the central Control Display.

Introducing the new iDrive system, BMW offers a supreme standard of convenience in use and ergonomics, perfectly combining simple handling with all-round functionality. And through the clear arrangement of various functions, iDrive is an important companion for the driver.

An innovation featured for the first time with iDrive on the new BMW X5 is the introduction of eight freely programmable favourite buttons beneath the CD drive unit, helping to make operation of the system even faster and easier. With these buttons, the driver is able to save functions frequently used – such as his favourite radio station, telephone numbers often dialled or frequent navigation destinations – simply by setting the appropriate buttons in advance. This also allows direct selection and retrieval of entertainment sources such as radio stations or CDs, enabling the driver to skip several steps in the operation process and access the function desired even more quickly.

## **Simply control for extra comfort.**

The new favourite buttons allow individual settings according to the driver's and passengers' personal wishes, thus providing rapid access to favourite functions while driving. Operation of the favourite buttons is very easy: All the user has to do to save a certain function is press the button somewhat longer than usual, then briefly pressing the button once again



to retrieve the function desired. A further advantage is that the buttons are touch-sensitive, meaning that the user merely has to touch a button in order to see in the preview which setting he is retrieving before the function as such is activated.

Considering the growing number of functions in a modern car, BMW iDrive avoids the need for an exaggerated number of switches and buttons, while nevertheless maintaining access the conventional way to functions used particularly often. Separate buttons and controls outside of the iDrive control unit are therefore still provided for the interior temperature, rear window heating, or volume control on the audio system, just as air distribution may now also be adjusted directly by a button on the air conditioning unit. And the eight freely programmable favourite buttons now allow the driver to select further functions for direct access according to his own preferences.

### **Control Display optimised to an even higher standard.**

The outstanding ergonomic qualities of BMW iDrive are further enhanced by the new 6.5-inch colour display specially developed for the new BMW X5. Compared with the former model, the ultra-modern monitor in the new BMW X5 is positioned higher up in the middle of the dashboard on the same level as the speedometer and rev counter, ensuring even better and clearer visibility. The big advantage is that the driver, when looking at the Display, automatically keeps his eyes on the road and the traffic around him, with any distraction being reduced to a minimum.

Graphic presentation on the Display has also been improved to an even higher standard, the colours and typography of the Display being perfectly matched to all kinds of surrounding conditions for optimum readability and contrasts.

The surface of this ultra-modern Display comes in transfective technology reflecting the incoming daylight which makes presentation on a conventional display hard to read. This passive reflection on the Control Display taking the daylight effect into account even serves to make the general quality of presentation more brilliant and distinct. And in poor light or in the dark, background illumination from inside also ensures very good clarity and readability.

Yet a further improvement on the new Control Display is a separate heating function quickly warming up the entire unit to its optimum operating temperature in extremely cold weather.

Maximum resolution is 640 x 240 pixels, colour resolution is 16bit. And as an option the Control Display is also available in 8.8-inch format in conjunction with the BMW Professional navigation system or with a TV receiver.

**BMW iDrive – s story of success.**

Following its introduction five years ago, the innovative BMW iDrive control concept has become an outstanding feature in automotive technology, paving the way for an entirely new generation of control systems now also used by other manufacturers in their vehicles. But to this day BMW iDrive remains the only control concept offering a perfect balance of easy operation and superior function.

## 12. Features and Equipment: Innovation and Luxury Class Style.



- **Xenon headlights, Headlight Assistant, Bending Lights.**
- **First SAV with Head-Up Display.**
- **Back-up camera with interactive track lines and zoom function.**

The fascinating experience offered by the new BMW X5 results not only from the actual process of motoring in supreme style. Rather, the mere looks of BMW's new model and the sophisticated ambience inside the vehicle clearly confirm that this is a superior premium model right at the top of the SAV segment, numerous features within the refined and functional interior boasting trendsetting solutions in ergonomically meaningful and comfort-oriented design.

Over and above these features outstanding from the start, the wide range of options comprises numerous innovations offered for the first time in an SAV. These include innovations in technology ensuring significant progress in motoring comfort, function, and safety. Indeed, this again underlines the unique character of the new BMW X5 as a vehicle setting new benchmarks in its segment in terms of both driving dynamics and exclusivity.

### **Xenon headlights with daytime, Adaptive and Bending Lights.**

In conjunction with xenon headlights available as an option, the new BMW X5 comes with a choice of several highly innovative light technologies, Adaptive Headlights, Bending Lights, and daytime operation of the lights ensuring optimum illumination of the road ahead and better recognition of the vehicle at all times.

The daytime driving mode uses the corona light rings in the dual round headlights, the rings on the two inner high-beam headlights providing a particularly intense light 100 times brighter than regular parking lights. When activated on the new BMW X5, however, the parking lights use all four rings in the dual round headlights with the same intensity.

The daytime lights enhance visibility of the vehicle particularly from a longer distance and thus improve driving safety in the process. Compared with normal low-beam headlights, energy consumption in the daytime lights mode is down more than 50 per cent. A further attractive point offered by the corona rings acting as daytime lights is that the vehicle is not only easier to see and more visible, but can also be identified at first sight as a BMW.

The Adaptive Headlights illuminate the road ahead as a function of the steering angle, the headlights following bends in the road and improving visibility precisely on the upcoming section ahead of the vehicle.

Yet a further function offered together with Adaptive Headlights is Bending Lights integrated in the foglamps: Whenever the driver takes a bend, the inner foglamp in the bend is automatically activated, an additional reflector then serving to illuminate the road in the direction the driver is taking. As a result, Bending Lights extend the 15° area of illumination covered by the Adaptive Headlights by enlarging the angle of illumination up to 90°.

### **High-Beam Assist for optimum visibility at night.**

High-Beam Assist, also available as an option in the new BMW X5 ensures additional comfort when driving at night, automatically switching off the high beam as soon as oncoming traffic is approaching, the distance to a vehicle driving ahead drops below a certain point, or the road is sufficiently illuminated, for example in a built-up area. Conversely, the system also switches automatically whenever appropriate from low to high beam.

High-Beam Assist is masterminded by a camera integrated in the interior mirror and monitoring both the level of brightness and traffic conditions. An evaluation unit then sends appropriate signals to a module switching the lights on or off as required.

High-Beam Assist is activated automatically when switching on the headlights, and is deactivated by the stalk on the steering column, with the driver still having the option to control the high and low beams manually as desired. Through its automatic operation, however, the High-Beam Assist guarantees a higher standard of safety, enabling the driver to concentrate fully on road traffic while the Assistant works efficiently on its own.

### **Making its debut in the SAV segment: Head-Up Display in the BMW X5.**

The new BMW X5 is available as an option with a Head-Up Display, information relevant to the driver such as the road speed of the car or navigation data being presented directly in the driver's line of vision and therefore in an ergonomically particularly favourable position on the windscreen.

Via the Control Display, the driver is to choose the information he would like to receive, saving personal settings such as the brightness of the Display or the position of the image in the Key/Car Memory, while the intensity of projection automatically adjusts to ambient light conditions.

Enabling the driver to take up important information without taking his eyes off the road, the Head-Up Display serves to enhance driving safety to an even higher standard. Indeed, the system makes the entire process of driving the car less tiring, since the driver is required far less often to re-focus his eyes.

**Back-up camera: everything in sight.**

Supplementing PDC Park Distance Control, the BMW X5 comes for the first time with a back-up camera fitted almost invisibly above the rear numberplate and providing a wide-angle view of the rear end on the Central Display within the BMW X5.

This system facilitates both parking and manoeuvring, particularly in confined spaces or areas difficult to see.

The back-up camera is activated automatically together with PDC by shifting to reverse or manually by pressing the Parking button in the cockpit, the Control Display then clearly showing the driver the area behind the vehicle in a coloured, optimised view providing the right perspective. Graphics superimposed on the video image facilitate the process of manoeuvring, interactive track lines, for example, presenting the space required in advance and the optimum trajectory in entering a parking space.

These graphic elements are permanently adjusted to the position of the steering wheel and the vehicle itself, additional static lines presenting the closest possible turning circle on the road as a particularly helpful feature when backing-up into a roadside parking space. Coloured obstacle markings in the camera image based on PDC ultrasound signals, in turn, make it easier for the driver to register obstacles and tight points.

A special function enlarges the image area to the full size of the screen as a function of speed: At low speeds this presents an area extending from the rear bumper all the way to the horizon, at high speeds the lower point of presentation is about 1 metre or 3.3 feet above the ground, the upper point is significantly above the horizon.

Using the back-up camera is particularly helpful when hooking up a trailer, the zooming function serving to enlarge the size of the image around the trailer hook. Special static lines in the image then assist the driver in properly assessing the distance from the trailer hook, an interactive docking line related to the position and angle of the steering wheel allowing a precise approach to the trailer hook itself. And in cold weather, finally, the camera lens is automatically heated to keep the entire system free of snow and ice.

### **Multifunction steering wheel for quick and convenient control.**

In every car, the steering wheel rim is the interface between man and machine, giving the driver spontaneous feedback on road conditions and the behaviour of his vehicle. So to make sure that the driver is not distracted from the primary process of driving his vehicle by having to operate the audio system or telephone, the new BMW X5 comes as standard with a multifunction steering wheel.

The “basic” steering wheel on the new BMW X5 is in three-spoke design and features a steering wheel rim in leather with an ergonomically optimised grab area, multifunction switches and two freely programmable buttons available for covering various functions over and above the telephone and audio system.

A sports steering wheel smaller in diameter is available as an option, featuring leather trim and a decal bar. And to provide the final touch, both steering wheels are available with a heated wheel rim.

### **Four-zone automatic air conditioning for enhanced personal comfort.**

Automatic air conditioning is yet another standard feature boasted in the new BMW X5 – and as an option two special versions with either two- or four-zone automatic air conditioning are available for an even higher level of comfort and motoring pleasure.

Two-zone automatic air conditioning allows individual temperature control for the driver and front passenger, with air distribution being controlled either automatically or manually on the left and right. A further feature is the choice of various levels of air conditioning – soft, medium, or intense.

Four-zone air conditioning enhances these settings by offering the same control at the rear, using a separate control panel for this purpose. In this case air vents in the B-pillars supplement the system, ensuring optimum distribution of air also on the rear seats.

To ensure the same standard of heating comfort on the diesel model as on the gasoline versions of the new BMW X5, heater output on board the BMW X5 3.0d is optimised by means of an electric air heater.

### **Active front-seat ventilation.**

Active ventilation of the front seats ensures additional comfort and well-being in hot weather, thus also helping to enhance the standard of safety, since an optimised seat climate keeps driver fatigue to a minimum.

Adjustment of ventilation intensity in three stages and appropriate distribution of air between the seat bottom and backrest is handled by BMW iDrive. Fans integrated in the foam sections of the seats distribute interior air throughout the seat surface and, from there, through the permeable seat heating layer and the perforated leather upholstery to the outside of the seats. To prevent any risk of under-cooling, the seat heating integrated in the system is automatically switched on when required.

### **Lights Package for an exclusive ambience inside the new BMW X5.**

A new interior lights concept makes sure that driving the BMW X5 in the dark is an equally unique experience the driver and passengers will enjoy in a truly pleasant and exclusive ambience. Two footwell lights at the front are fitted as standard, two additional lights at the rear are available as an option, and the four door handle recesses inside the BMW X5 are illuminated indirectly whenever the headlights are on. Even the areas around the door pockets are bathed in emotional, indirect light by a light bar integrated in the door lining.

Installation of LED lights in the door panels and outer handles also serves to optimise the illumination of the area around the vehicle, the space required for getting into and out of the new BMW X5 being consistently and smoothly illuminated when opening the doors. And to facilitate the process of getting into the vehicle in the dark, the illumination may be activated from the start when unlocking the doors.

### **Comfort Access: starting the engine without even touching the key.**

Optional Comfort Access enables the driver of the new BMW X5 to unlock his vehicle and start the engine without even touching the key. All he has to do is carry the key to the car in, say, his pocket or briefcase, central locking then opening the door locks when the driver or one of the passengers pulls a door handle. This mechanism is activated as soon as a signal transmitter integrated in the key to the vehicle comes within a radius of 1.5 metres from the door handle operated by the driver or one of the passengers.

Then, once inside the vehicle, the driver is able to start the engine as soon as the key to the new BMW X5 is within the passenger compartment, without having to insert the transmitter key into the shaft next to the steering wheel. Instead, all he has to do is press down the brake pedal and press the start/stop button in order to start the engine. A further point is that the vehicle cannot be locked as long as the key is still within the passenger compartment.

### **Key preserving the driver's personal profile.**

Taking delivery of his or her new BMW X5, the owner receives two remote control keys able to save and retrieve the personal profiles and comfort settings of various users. For further convenience, a number of personal settings may be saved individually and retrieved when unlocking the vehicle: sound settings in the audio system, radio station settings, radio settings in general, programming of favourite buttons by BMW iDrive, language presented in the Control Display, air conditioning data (temperature, air distribution), seat, mirror and steering column settings, illumination, central locking, settings of the back-up camera, and configuration of the Head-Up Display.

When leaving the vehicle, the control units responsible for the respective functions automatically save the respective settings on the key used, then re-activating the settings memorised as soon as the vehicle is operated again with the same key. Settings modified while driving, on the other hand, are automatically saved when leaving the vehicle on the key used.

### **Panorama glass roof: fresh air and a new feeling of space.**

The optionally available panorama glass roof provides a particular experience of freedom in the new BMW X5, the unusually large roof opening giving the occupants both front and rear an entirely new thrill of wide open space. The panorama glass roof is a sliding/vent roof with two glass panels and two moving roof liners. The glass panels, roof liners and wind deflector are moved in their respective positions by an all-electrical control system and are operated by a switch in the control console above the interior mirror.

The supply of fresh air can be dosed exactly to the occupants' requirements, the wind deflector geared to road speed moving up to two different levels to counteract noise at low and high speeds on the road.

### **Entertainment systems: all programmes, supreme quality of sound.**

Cutting-edge audio systems serve to further enhance the joy of motoring in the new BMW X5. And as an option BMW's new SAV even comes with a DVD video system for the second row of seats, a CD or DVD changer fitted in the glove compartment, and a multi-channel audio system.

Even the "basic" system fitted as standard features six loudspeakers. The individual stereo system components are a CD player in the middle of the instrument panel, a central woofer beneath each of the front seats and a sub-woofer/tweeter in each of the four roof linings.



In the optional HiFi version, the audio system comes with no less than 12 loudspeakers, also featuring a digital equaliser to adjust the loudspeakers optimised in their sound effect to the configuration and set-up of the interior. The level of interference-free sound pressure achievable in this case is twice the level provided by the regular stereo system, and two additional centre speakers (tweeters and sub-woofers) are integrated in the instrument panel. The digital seven-channel amplifier, finally, comes with a total output of 205 Watt (5 x 25 Watt + 2 x 40 Watt).

**Yet another innovation: the multi-channel audio system.**

Also available as an option, the BMW Professional HiFi system designed for playing back multi-channel audio sources comprises no less than 16 loudspeakers, allowing playback of the surround information in the stereo signal in 7.2 format (seven sub-woofer/tweeter channels and two central base channels). A further feature to be found for the first time in a production vehicle is an equalising method carried over from professional sound studios.

Together with the loudspeaker system enhanced to an even higher level, signal processing exactly on time, interacting with the further improved loudspeakers, provides a sound pattern quite different from the sound generated by a conventional HiFi system.

To achieve this quality, the sound pressure available without interference has been doubled once again, the digital nine-channel amplifier providing maximum output of 600 Watt (7 x 50 Watt + 2 x 125 Watt).

Speed-related equalising in the woofer range sensitively compensates the influence of driving noise, the occupants enjoying this system through its high standard of playback quality and optimum acoustics perfectly matched to the occupant's individual seating position.

**All CD players MP3-compatible.**

The new BMW X5 is the first BMW in which all CD players offered are MP3-compatible. Additional connections for external audio sources are offered by the AUX-IN bush featured as standard in the centre console. Indeed, the bush may be selected via BMW iDrive as a source of entertainment, with programmes on an MP3 player or another external audio source being played via the vehicle's audio system.

### **DVD video system for the second row of seats.**

The new BMW X5 offers an optional DVD video system for the second row of seats, providing entertainment specifically for passengers sitting at the rear.

This video system is a separate unit operating on its own and controlled from the rear seats. It is made up of an 8-inch colour monitor positioned at the rear on the centre console and moving down conveniently whenever necessary, for example when transporting bulky objects.

The player for audio, video or photo-DVDs or CDs is integrated in the lower section of the centre console, and there is an interface for headphones connected to a cable, infra-red headphones and an AUX-IN bush for connecting external video sources (such as a game console or video camera). And last but not least, the entire system may also be operated by remote control.

### **BMW TeleServices: safe, secure and reliable mobility.**

The wide range of multimedia functions in the new BMW X5 is rounded off by the BMW Online mobile internet portal as well as the BMW Assist telematics service. And another feature available for the first time in the BMW X5 is BMW TeleServices through which the BMW Group offers its customers a universal range of services and amenities, provided the vehicle is equipped with a telephone and navigation system.

Using the BMW TeleService call, the BMW X5 automatically transmits all information important for service at the workshop to the customer's BMW Service Partner whenever necessary, the customer then receiving a telephone call in order to coordinate the date and the scope of service to be carried out.

This also sets the basis for BMW TeleDiagnosis providing the possibility in the near future to present an "X-ray image" of the vehicle at the customer's request. Then, with the entries in the control units being read out prior to service, the BMW Service Partner will be able to compile a comprehensive diagnosis before he even sees the car, the customer thus receiving his personalised service offer prior to the actual service date.

A further advantage is that in future minor electronic deficiencies may in many cases be remedied immediately over the air, one option being to reset a control unit without requiring the customer to even come to the workshop.

### **Navigation system Professional with an even larger display and full-word voice entry.**

The new BMW X5 is available as an option with a new generation of BMW's Professional navigation system: The navigation unit in the BMW X5 comes with an even larger Control Display (8.8 inches), and the Professional navigation system may be upgraded as an option by a voice entry function. Indeed, this even allows full-word voice entry in specifying a destination, with the user simply reading out the full name of one of the roughly 80,000 towns and cities throughout Germany.

### **Attractive accessories for truly individual style.**

The wide range of Genuine BMW Accessories rounds off the equally wide range of standard equipment and options available directly from the factory, offering freedom of choice in every respect. In particular, Genuine BMW Accessories serve to emphasise the unique character of the new BMW X5 by providing a truly individual look – for example with exclusive 21-inch light-alloy rims, strikingly designed and efficient underfloor protection, as well as a special Aerodynamics Package made up of add-on parts for the front and rear air dam finished in body colour and easy to fit within a short time.

The sophisticated ambience inside the new BMW X5 may be enriched and upgraded by a number of personal features. Illuminated entry strips made of polished stainless steel and embellished by hard-wearing electroluminescent film as well as a high-class wood decal bracket for the multifunction steering wheel provide an extra touch of elegance. Versatile transport and luggage compartment options, in turn, ensure even greater variability within the new BMW X5, allowing the driver to fasten and secure all kinds of objects within the luggage compartment. Just some of the features to be mentioned in this context are a moulded mat for the luggage compartment, luggage compartment tightening belts, and a folding box.

An easy-fitting roof rack taking up further items such as BMW ski and snowboard supports or BMW roof boxes, as well as a lockable bicycle support fitting on the towbar, round off the wide range of features available.

### **Better entertainment, greater safety.**

The Apple iPod interface available for the new BMW X5 allows an even more versatile range of entertainment options, with all versions of the popular MP3 player being connected quickly and easily to the on-board network and the audio system. Music on the iPod is then played back by the audio system and the iPod is charged at the same time.

The Advanced DVD system includes monitors on the back of the driver's and front passenger's seats, offering the passengers at the rear video entertainment on demand. As an alternative, models without the panorama roof may be fitted with the Portable DVD system incorporating a mobile DVD player, the docking station integrated in the roof lining then taking up the player safely and reliably while travelling.

Apart from a back-up camera, the new BMW X5 is available for the first time with Round Vision and Top View. Round Vision incorporates not only a back-up camera, but also a front-end camera for even better observation of traffic coming from the side, for example when leaving an exit or driveway, and provides enhanced visibility when manoeuvring. All of the cameras are controlled directly from the central iDrive Controller.

Top View facilitates the process of parking the vehicle by means of additional cameras integrated in the exterior mirrors, offering the driver a clear view of front side areas otherwise difficult to see.

All accessories are tailored perfectly in their material and look to the new BMW X5 and fulfil the BMW Group's high standards of quality and safety. They are available from BMW Retail Outlets and Service Partners, where they may be fitted on the spot.

### **Special encounter trips with BMW Driver Training.**

To offer the owner of a BMW X5 an even better experience of his or her vehicle, learning how to drive the X5 in even safer and more superior style and enjoy sheer driving pleasure in full, BMW offers special encounter trips with BMW Driver Training. This gives the discerning motorist the opportunity to enhance or even perfect his skills at the wheel of the new X5, and also takes the enthusiast to exotic places for an unforgettable adventure in the X5.

Guided by experienced and qualified instructors, participants learn in these courses how to handle their vehicle safely in various situations, then being able to act and react appropriately at any time in everyday traffic.

Two particular highlights in this event programme are addressed directly to owners of a BMW X5: winter training in the Swedish town of Arjeplog and an adventure tour through Namibia.

In spring 2006 the BMW Group opened up a new Test Centre in Arjeplog. About 55 kilometres or 34 miles from the Polar Circle, this Test Centre not only offers development engineers perfect conditions for intensive and fully integrated development of new vehicle components and models, but also provides ideal climatic conditions throughout the region for very special winter training, enabling participants to enjoy even extreme driving manoeuvres.

An eight-day adventure tour through the African country of Namibia also focuses on safe motoring under challenging conditions, participants crossing the Namib Desert and the Erongo Mountains on gravel and sand tracks in their BMW X5. And apart from safe offroad driving, they also focus in this adventure tour on navigating by means of a roadbook and GPS.

## 13. Production: Powerful Global Network.



- **More than 580,000 BMW X5s built in the USA sold since 1999.**
- **BMW Plant Spartanburg works for the world market.**
- **Production to BMW standards with the usual high level of quality.**

Like its predecessor, the new BMW X5 is built at BMW's Spartanburg Plant in South Carolina, USA, where the most advanced production technology ensures supreme precision and quality all round.

Production of the bodyshell alone involves more than 300 robots, with the welding process being almost 100 per cent automated.

The bodyshell of the BMW X5 is made of ultra-high-strength steel at all crucial points, obviously requiring supreme precision in the production process. Precisely this is why BMW Plant Spartanburg uses the most sophisticated robot technology, high-tech machines incorporating optical monitoring systems to apply the bonding material required for maximum stiffness with supreme precision. All welding and bonding seams are then checked in a non-destructive process by means of ultrasound testers. And to ensure absolute accuracy on all body dimensions of the BMW X5, the Plant uses inline laser and measuring cameras to reduce operating times and ensure absolute reliability in quality.

### **Robot technology – the foundation for absolute efficiency in the “wedding”.**

In the so-called “wedding”, the power unit and transmission are fitted into the body of the BMW X5 in a process now largely automated at BMW Plant Spartanburg. In this area alone, no less than 10 optical testing and monitoring systems ensure permanent, ongoing quality control, comparing predefined reference data with the actual data in the production process.

### **Installation of the windscreen largely automated.**

The windscreen in the BMW X5 is fitted in position by two robot workstations each able to handle two vehicles at a time. A camera-guided, high-precision measuring system masterminds application of the bonding material and ensures that the windscreen is fitted in position properly.

In the first step a robot applies the bond around the edges of the rear window and side windows, and fits the rear window in position. Then the second robot applies the bond on the windscreen and also fits it into the vehicle, meaning that only the side windows subsequently have to be fitted by hand. This shortens operating times in this specific process by more than 50 per cent.

**Ergonomics of the highest standard.**

Working conditions in production of the BMW X5 have been further improved to the highest standard of ergonomics. Numerous options to swivel and turn the vehicles being assembled to the best position significantly facilitate installation of the various components.

**The BMW X5 – an overwhelming success from America.**

The foundations for the BMW Plant in Spartanburg were laid in 1992, with production of the BMW Z3 Roadster in South Carolina starting in 1995.

So far the BMW Group has invested more than US \$ 2.7 billion in the Plant, which currently employs some 4,500 associates. BMW Group sales in the USA have almost quadrupled since the Spartanburg Plant started operating, from 84,501 units in 1994 to 307,020 units in 2005.

The first BMW X5 came off the production line at BMW Plant Spartanburg in September 1999, with production reaching the 500,000-unit mark in June 2005. In the meantime more than 580,000 units of the BMW X5 have been delivered to customers.

BMW's highly successful SAV is now exported to more than 120 countries the world over, and the new BMW X5 will also be built exclusively at BMW Plant Spartanburg strictly according to customer orders.

## Specifications BMW X5. 3.0si; 4.8i; 3.0d.

<b>Body</b>		<b>3.0si</b>	<b>4.8i</b>	<b>3.0d</b>
No of doors/seats		5/5 (7)	5/5 (7)	5/5 (7)
Length/width/height (unladen)	mm	4,854/1,933/1,766 <sup>5</sup>	4,854/1,933/1,766 <sup>5</sup>	4,854/1,933/1,766 <sup>5</sup>
Wheelbase	mm	2,933	2,933	2,933
Track, front/rear	mm	1,644/1,650	1,644/1,650	1,644/1,650
Turning circle	m	12.8	12.8	12.8
Tank capacity	approx ltr	85	85	85
Cooling system incl heater	ltr	10.6	14.7	10.4
Engine oil <sup>6</sup>	ltr	6.5	8.0	7.5
Transmission fluid	ltr	lifetime	lifetime	lifetime
Final drive fluid	ltr	lifetime	lifetime	lifetime
Weight, unladen, to EU <sup>1</sup>	kg	2,125 (2,205) <sup>3</sup>	2,245 (2,325) <sup>3</sup>	2,180 (2,260) <sup>3</sup>
Max load to DIN	kg	630 (770) <sup>3</sup>	615 (750) <sup>3</sup>	635 (770) <sup>3</sup>
Max permissible to DIN	kg	2,680 (2,900) <sup>3</sup>	2,785 (3,000) <sup>3</sup>	2,740 (2,955) <sup>3</sup>
Max axle load front/rear	kg	1,245/1,535 (1,250/1,735) <sup>3</sup>	1,345/1,540 (1,350/1,740) <sup>3</sup>	1,295/1,545 (1,300/1,745) <sup>3</sup>
Max trailer load <sup>2</sup> , braked (12%/unbraked)	kg	2,700/750	2,700 <sup>2</sup> /750	2,700/750
Max roofload/towbar download	kg	100/120	100/120	100/120
Luggage comp to VDA	ltr	620–1,750	620–1,750	620–1,750
Drag coefficient	cd x A	0.33 x 2.87	0.35 x 2.87	0.34 x 2.87
<b>Power Unit</b>				
Config/No of cyls/valves		Inline/6/4	V/8/4	Inline/6/4
Engine management		MSV80	ME 9.2.3	DDE 6.2.6
Capacity	cc	2,996	4,799	2,993
Stroke/bore	mm	85.0/88.0	93.0/88.3	84.0/90.0
Compression ratio	: 1	10.7	10.5	17.0
Fuel grade	RON	91–98	91–98	Diesel
Output	kW / hp	200/272	261/355	173/235
at	rpm	6,650	6,300	4,000
Torque	Nm/lb-ft	315/232	475/350	520/383
at	rpm	2,750	3,400–3,800	2,000–2,750
<b>Electrical System</b>				
Battery/installation	Ah/–	70/luggage comp	90/luggage comp	90/luggage comp
Alternator	AW	180/2,520	180/2,520	170/2,380
<b>Chassis and Suspension</b>				
Suspension, front	Double wishbone axle, small, negative steering roll radius; anti-dive			
Suspension, rear	Integral axle; multi-dimensional suspension with anti-squat and anti-dive			
Brakes, front	Single-piston swing-calliper disc brakes (4.8i twin-piston swing-calliper disc brakes)			
Diameter	mm	348, vented	365, vented	348, vented
Brakes, rear	Single-piston swing-calliper disc brakes			
Diameter	mm	320, vented	345, vented	320, vented
Driving Stability System	DSC III (HDC, DBC, ABS, ASC-X, ADB-X, DTC, Trailer Stability Control)			
Steering	Rack-and-pinion power-assisted			
Overall steering ratio	: 1	19.5	19.5	19.5
Transmission	Six-speed automatic with Steptronic			
Gear ratios	I	: 1	4.171	4.171
	II	: 1	2.340	2.340
	III	: 1	1.521	1.521
	IV	: 1	1.143	1.143
	V	: 1	0.867	0.867
	VI	: 1	0.691	0.691
	R	: 1	3.403	3.403
Final drive	: 1	4.44	3.91	3.64
Tyres, front/rear	255/55 R18 109V XLRSC4 255/55 R18 109V XLRSC 255/55 R18 109V XLRSC4			
Rims, front/rear	8.5 J x 18 LM 8.5 J x 18 LM 8.5 J x 18 LM			
<b>Performance</b>				
Power-to-weight ratio to DIN	kg/kW	10.3	8.3	12.4
Output per litre	kW/ltr	66.8	54.4	56.8
Acceleration 0–100 km/h	sec	8.1	6.5	8.3
Standing-start km	sec	28.9	26.6	29.4
In fourth gear 80–120 km/h	sec	–	–	–
Top speed	Km/h	225 (210) <sup>7</sup>	240 (242) <sup>3</sup>	216 (210) <sup>7</sup>
<b>Fuel consump in the EU</b>				
Urban	ltr/100 km		17.5	11.3
Extra-urban	ltr/100 km		9.6	7.2
Composite	ltr/100 km	10.9 (preliminary)	12.5	8.7
CO <sub>2</sub>	g/km	260 (preliminary)	299	231
<b>Miscellaneous</b>				
Emission standard		EU4	EU4	EU4
Wading depth (at 7 km/h)	mm	500	500	500
Embankment angle front/rear.	°	25.4/22.9	25.4/22.9	25.4/22.9
Ramp angle	°	19.7	19.7	19.7
Ground clearance, unladen	mm	212	212	212
Permanent all-wheel drive, power distribution		variable	variable	variable

Specifications applicable to Europe (ECE)/homologation data applicable in part to Germany only (weight).

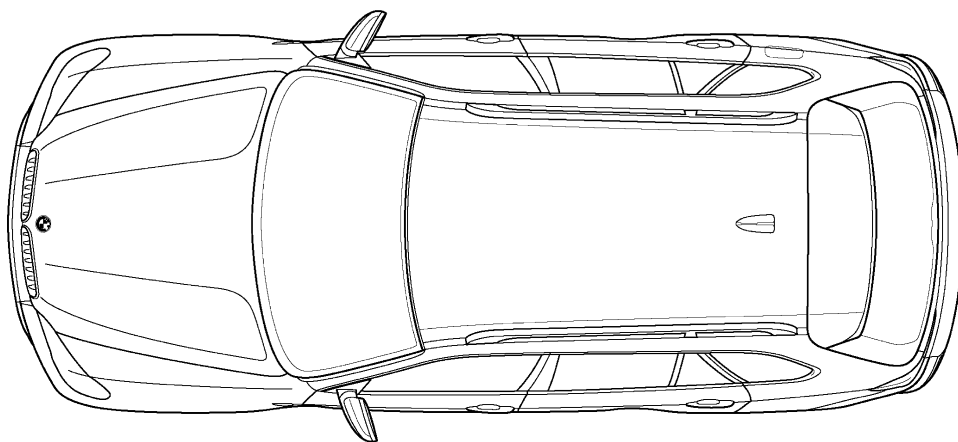
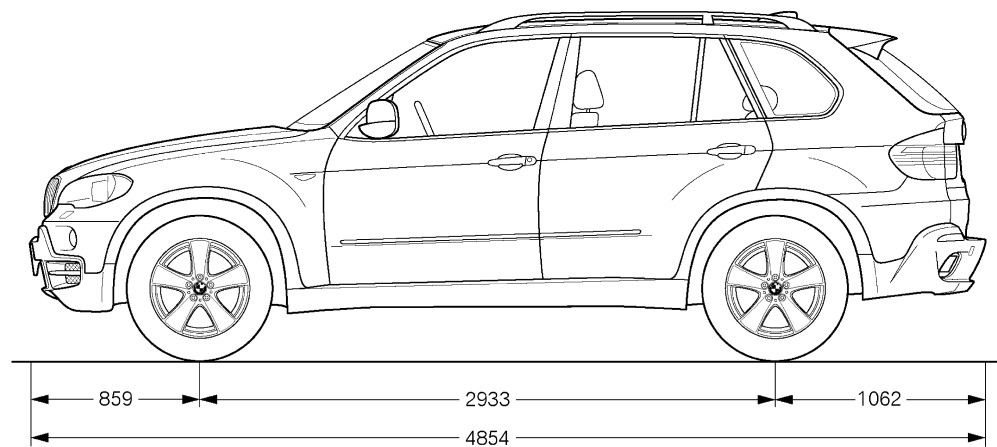
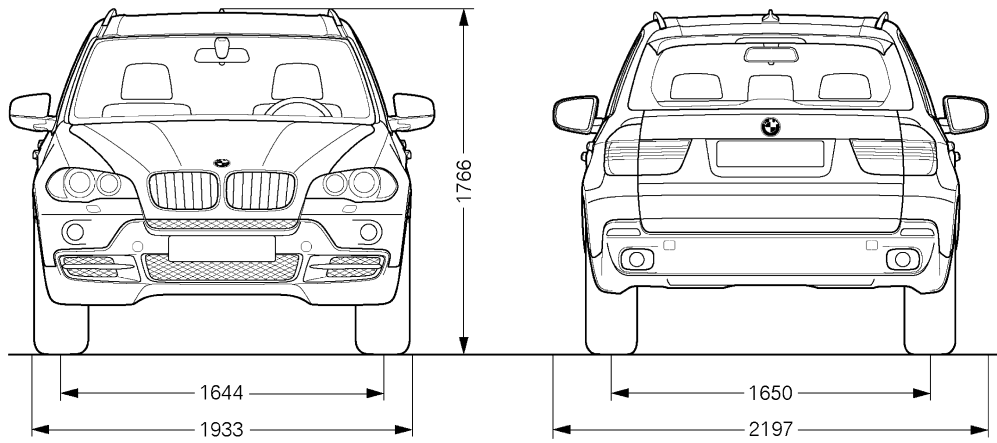
<sup>1</sup>Weight of vehicle in road trim (DIN) plus 75 kg for driver and luggage. <sup>2</sup>Optional up to 3,500 kg. <sup>3</sup>With third row of seats.

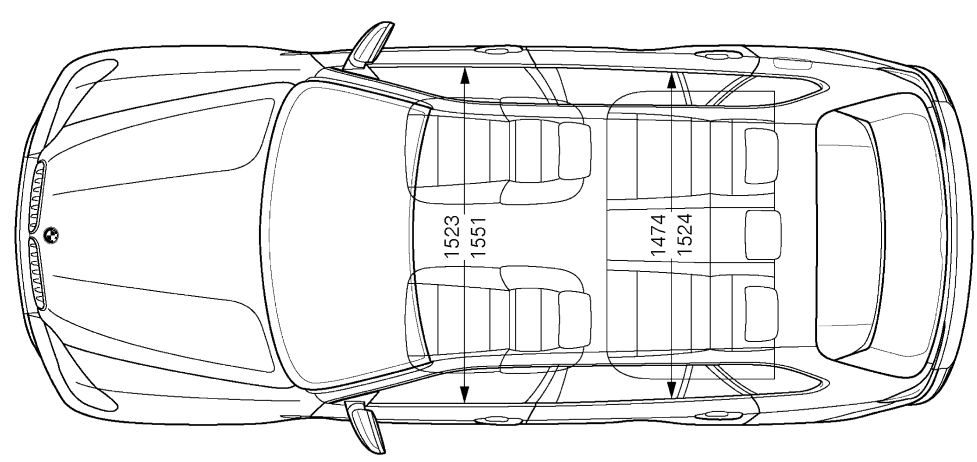
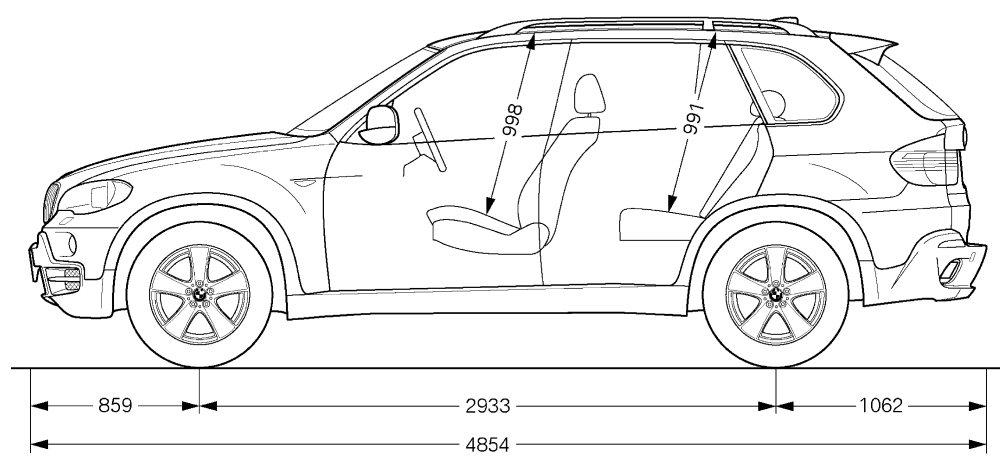
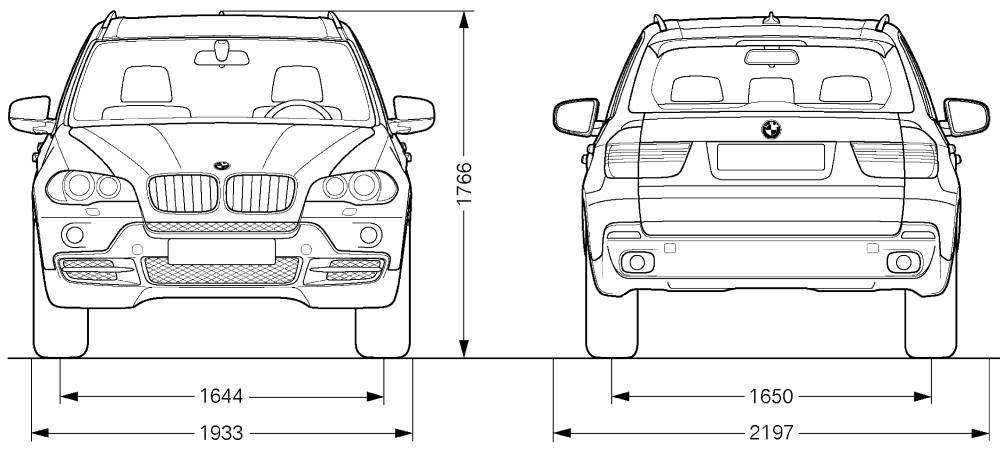
<sup>4</sup>Applicable to Germany (with H-rated tyres in some countries). <sup>5</sup>Height without roof aerial 1,729mm. <sup>6</sup>Oil change.

<sup>7</sup>With H-rated tyres. <sup>8</sup>With Sports Package.



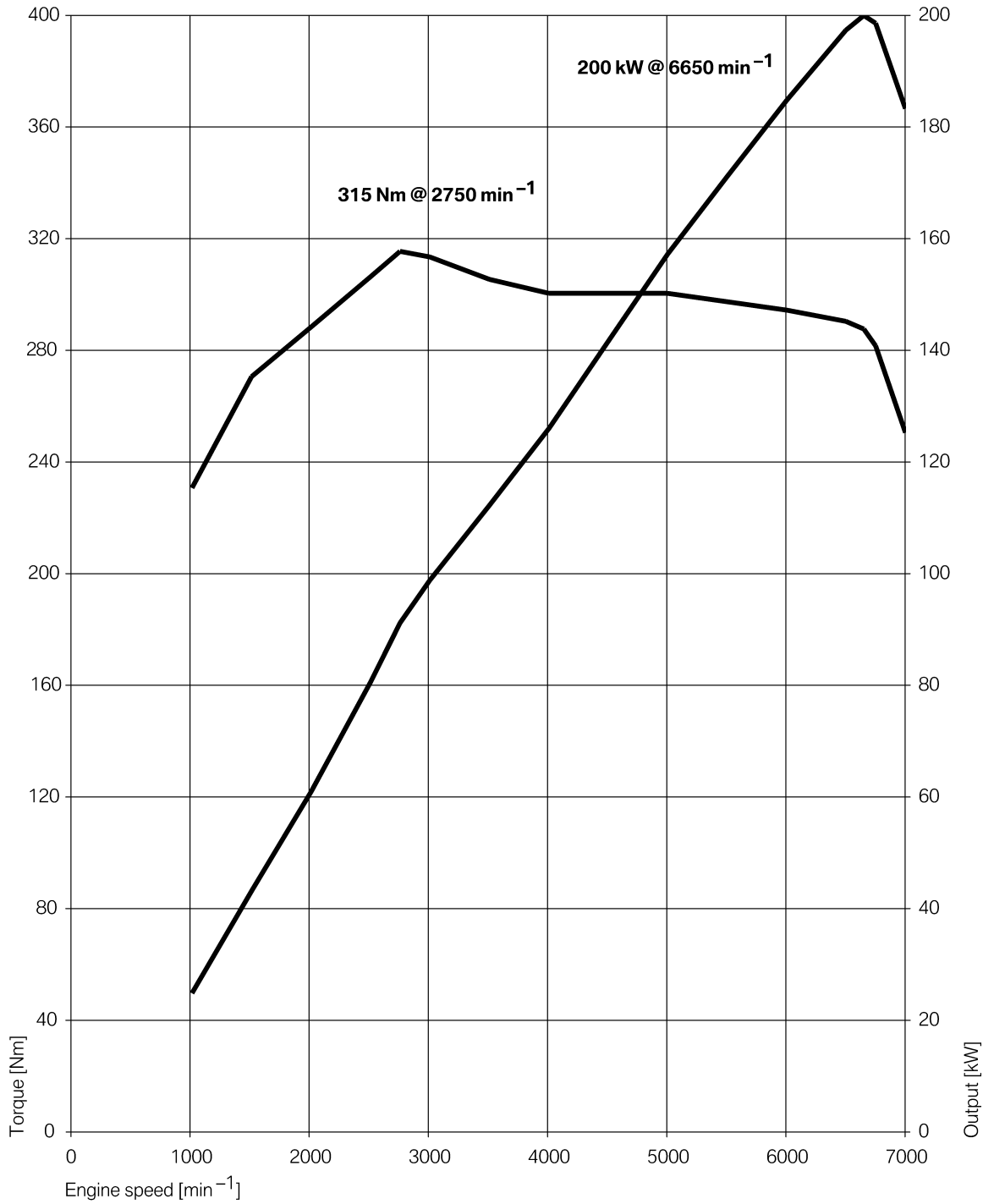
# 15. Exterior and Interior Dimensions.



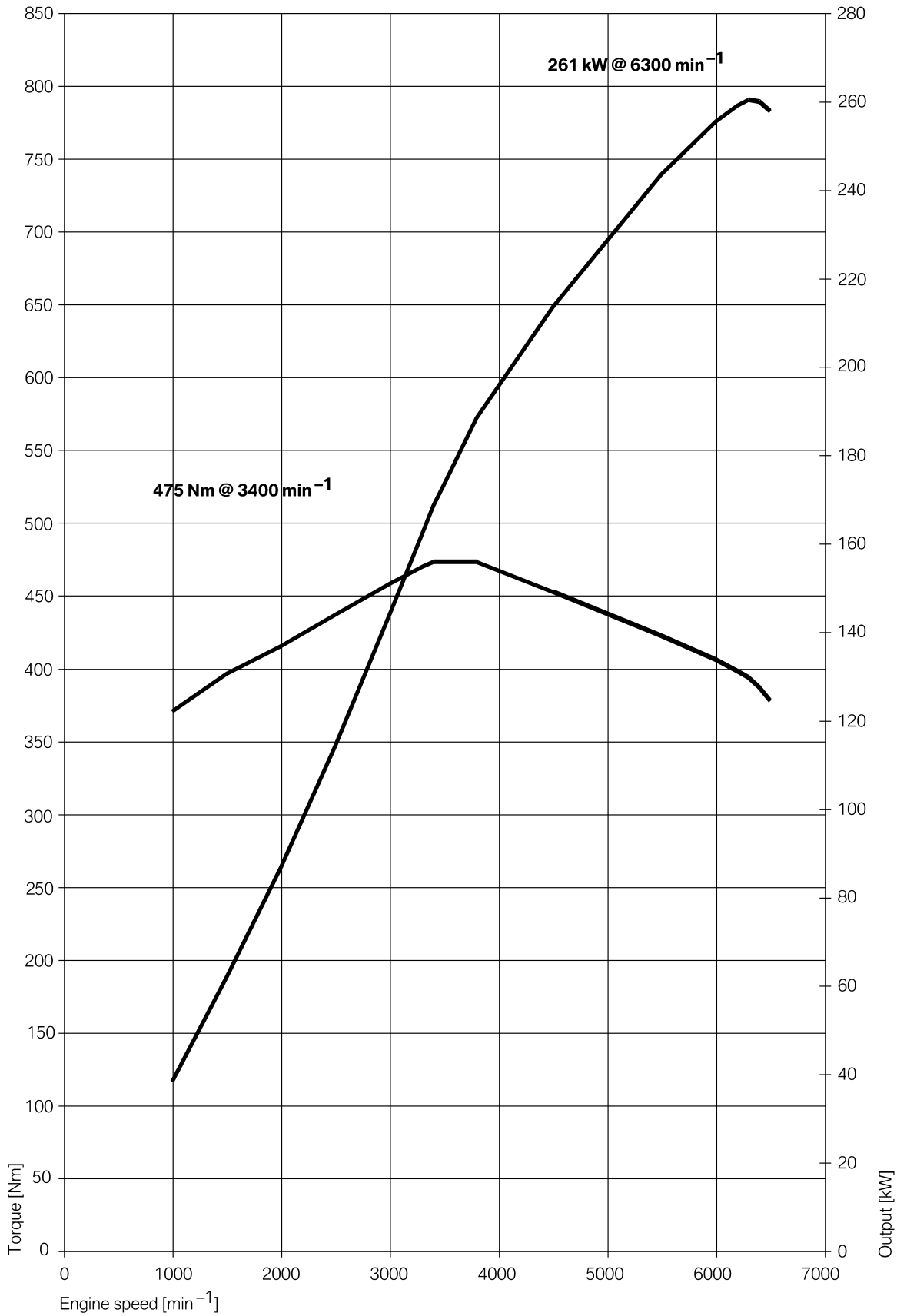


# 16. Output and Torque Diagrams.

**BMW X5 3.0si.**



**BMW X5 4.8i.**



**BMW X5 3.0d.**

