The new BMW X6
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1. The new BMW X6
Introduction

In 1999 BMW broke the four-wheel-drive mould when it launched the X5 Sports Activity Vehicle. With a bias towards excellent on-road performance combined with a dynamic design and a premium interior, the BMW X5 was an instant success. And it's a winning formula that has, unlike most other models, led to increasing sales during its lifecycle with the biggest annual UK sales coming in its penultimate year. The timing of the BMW X5 was perfect and it reflected buyers' lifestyles and their desire for something unique in the marketplace.

The introduction of the BMW X6 is a logical next step in the process of anticipating customer demand. The BMW X6 sets a new performance benchmark with the world debut of its innovative Dynamic Performance Control rear differential and advanced stability systems to ensure a new dimension in 4x4 car-like driving capabilities. The drivetrain, incorporating BMW EfficientDynamics technologies, ensures the X6 delivers excellent emissions and fuel consumption figures in conjunction with impressive output and acceleration figures. All that in a dynamic coupe-like body shape and interior that is unique in the premium segment. The BMW X6 is a bespoke proposition, but one that competitors look set to copy…just like the BMW X5.

Model	Price OTR	Power (hp)	Torque (Nm)	0 – 62mph (secs)	Top Speed (mph)	Combined mpg	CO_2 (g/km)	VED Band
BMW X6 xDrive30d	£41,965	235	520	8.0	137*	34.4	217	F***
BMW X6 xDrive35d	£44,145	286	580	6.9	147	34.0	220	F***
BMW X6 xDrive35i	£42,730	306	400	6.7	149	25.9	262	G
BMW X6 xDrive50i	TBC	408	600	5.4	155**	22.6	299	G

*Fitted with dynamic package. ** Electronically-limited. ***VED Band F vehicles qualify for £8-a-day London Congestion Charge.

The concept of the new BMW X6 is best considered in relation to the link between the BMW 3 Series Saloon, Touring, Coupé and Convertible. People buy all four versions of the 3 Series depending on their circumstances and needs. The same will be the case for the BMW X6 compared to other BMW X models.

The BMW X6 is undeniably a niche car with BMW UK expecting to sell approximately 1,600 X6s in its first year - by comparison an average of 7,000 X5s are sold every year. Research has shown that three key buyer profiles exist:

- Buyers who want the command driving position an X product provides, but who also aspire to the sporting style of a Coupé.

- Early adopters. BMW broke the mould when it launched the X5 and the interest for that model came from early adopters looking for something unique in the market. Early BMW X6 customers are expected to come from a similar demographic.

- The BMW X5 or other Sports Activity Vehicle owner whose family has left home and still desires a similar car, but one that doesn't scream 'family'.

Klaus Kibsgaard, the new Managing Director of BMW (UK) Ltd, said: "People have questioned why we should launch such a car, but these doubters are the same who said a BMW X5 wasn't a true BMW and that we shouldn't produce that. The BMW X5 3.0d has gone on to be the third biggest selling new car in our portfolio* and is one of the most searched for used cars too.

"While we intend the X6 to be a niche product, BMW is leading the way in introducing new vehicles that challenge convention but are borne out of evolving customer demands. The BMW Z4 Coupé, the BMW 635d and the BMW 1 Series Coupé are all examples of this. The BMW X6 caters for a more discerning sector of the market which wants a specific product and won't compromise."

A quartet of turbocharged engines

For the first time in BMW's history a model range has been launched solely powered by turbocharged engines. The BMW X6 xDrive35i is powered by the twin-turbocharged 2007 and 2008 International Engine of the Year winner that produces 306hp. This powerplant is capable of propelling the X6 xDrive35i from zero to 62mph in 6.7 seconds and on to a top speed of 149mph. The 2,979cc-engined X6 is still capable of achieving a combined 25.9mpg and a CO_2 figure of 262g/km.

The BMW X6 xDrive30d and the BMW X6 xDrive35d also both have award-winning powerplants under their bonnets. The former, a single turbocharged unit produces 235hp from its 2,993cc block, while the latter ups the ante by offering 286hp from the same capacity engine but aided by twin-turbochargers.

The BMW X6 xDrive30d, which is likely to become the biggest selling X6 variant over time, reaches 62mph from zero in 8.0 seconds before going on to a top speed of 137mph*. Emissions and economy figures are equally impressive, recording 217g/km and 34.4mpg respectively. The low CO_2 output is enough for the car to qualify for a lower Vehicle Excise Duty band, compared to rival products, and continue to be an £8-a-day Congestion Charge vehicle in London should current proposals become statute.

*Note: In 2007 the BMW 320d Saloon accounted for 12,015 sales, BMW 520d Saloon 8,365 sales and the BMW X5 3.0d 6,233 sales.

The BMW X6 xDrive35d sprints from zero to 62mph in 6.9 seconds before going on to a top speed of 147mph. It too sits under the 225g/km higher Vehicle Excise Duty and Congestion Charge strata. The twin-turbocharged diesel records an emissions figure of 220g/km, while also being capable of 34.0mpg.

Completing the awesome foursome of powerplants is a new twin-turbocharged, high-precision direct injection, 4.4-litre V8 engine producing 408hp. This all-new engine, not seen in any other BMW product before, is the most powerful production non-M BMW V8 engine ever and makes the flagship X6 the most powerful production X product. It can reach 62mph from standstill in 5.4 seconds – quicker than a Porsche Boxster – before going on to an electronically-limited top speed of 155mph.

All four X6 models utilise facets of BMW EfficientDynamics technologies. Brake Energy Regeneration is standard across the range and combines with active aerodynamics and low viscosity fluids in the steering and transmission systems. Third-generation common-rail technology diesel-engined cars and high-precision direct injection on the petrol models both serve to optimise the combustion process.

*Note: In conjunction with dynamic package.

A new high in dynamic capability

The power of the BMW X6 is harnessed by an advanced chassis that incorporates Dynamic Performance Control for the first time on a BMW. Dynamic Performance Control offers drivers class-leading cornering ability courtesy of a complex multi-clutch differential that, effectively, helps drive the vehicle around a bend.

A conventional differential wastes power through wheelslip during cornering. A limited-slip differential locks out an unloaded wheel to transfer drive to the wheel with most grip – but the locked wheel can act as a drag on performance. However, Dynamic Performance Control improves on the traditional, performance oriented limited-slip differential. It allows an inside wheel to still deliver power and provide drive, while at the same time sending more drive to the outside wheel that has more grip. The result, combined with one of the most advanced stability control systems available, is a vehicle that out performs the current benchmark BMW X5 and some sports cars in terms of dynamic capability.

The BMW X6 range goes on sale on 31 May, 2008. The diesel-engined models and the X6 xDrive35i will initially be offered with the xDrive50i going on sale in November 2008.

Did you know?

The BMW X6 xDrive30d has a better aerodynamic drag co-efficient than a Smart fortwo: 0.33Cd vs 0.37Cd.

The BMW X6 accelerates faster from zero to 62mph than a Porsche Boxster: BMW X6 xDrive50i 5.4secs vs Porsche Boxster 6.1secs.

The BMW X6 has more headroom on the second seat row than a Mercedes C Class: 946mm vs 942mm.

The BMW X6 has a larger boot than a VW Touareg: 570-litres vs 555-litres.

The BMW X6 laps the Nürburgring Nordschleife faster than a Maserati 3200 GT:

BMW X6 xDrive50i 8.35mins vs Maserati 8.37mins.

X6 key facts:

- Coupé-inspired styling and handling meets Sports Activity Vehicle driving position, practicality and safety.
- First BMW to feature Dynamic Performance Control.
- BMW EfficientDynamics features across the range - diesel powered X6s are both sub 225g/km vehicles.
- BMW's first ever all turbocharged model range. All-new 4.4-litre V8 petrol engine most powerful production non-M V8 BMW has ever offered.
- Faster, yet cleaner than a Porsche Cayenne and Range Rover Sport.
- To hear more about the BMW X6 from Adrian van Hooydonk, Head of BMW Design, log on to www.bmw-web.tv/en/channel/new

2. Drivetrain

BMW's heritage of producing class-leading, high performance and efficient engines is unrivalled. To highlight this fact, no other manufacturer has won the overall honour at the International Engine of the Year awards more times than BMW. 2008 sees BMW retain the title through the 3.0-litre twin-turbo petrol engine in the X6 xDrive35i meaning that BMW has scooped the outright title six times in the last 10 years, winning more categories than any other manufacturer.

The BMW X6 is the latest model to benefit from BMW engineers' technological prowess. The all-new range is offered with a quartet of turbocharged engines – the first time an entire BMW model range has been turbocharged. Three of these are award-winning powerplants, while the 4.4-litre twin-turbocharged V8 petrol engine is new to BMW. All four variants come as standard with a sport-oriented six-speed automatic transmission and all models use elements of BMW EfficientDynamics to achieve impressive performance, economy and emissions statistics.

BMW X6 xDrive30d
Powered by a 2,993cc engine, the BMW X6 xDrive30d offers the driver the optimum combination of performance and economy which is unmatched by any other performance-oriented Sports Activity Vehicle.

The in-line six-cylinder diesel powerplant comes with a single turbocharger and third-generation common-rail injection system with piezo injectors for efficient fuel combustion. This latest incarnation of common-rail diesel operates at 1,600bar pressure. Such an arrangement helps the unit produce 235hp at 4,000 rpm. With peak torque of 520Nm available from 2,000rpm through to 2,750rpm, the BMW X6 xDrive30d provides effortlessly smooth, swift acceleration. It accelerates from zero to 62mph in 8.0 seconds before going on to a top speed of 137mph.

The BMW X6 xDrive30d's unique balance of economy, emissions and performance is why BMW expects the model to become the biggest selling variant in the UK. The vehicle records a CO_2 emissions figure of 217g/km - low enough for the vehicle to qualify for Band F Vehicle Excise Duty and to remain classed as an £8-a-day London Congestion Charge vehicle in the future if current proposals become statute. It also records 34.4mpg on the combined cycle. An all-aluminium engine block, the weight of which has been reduced by 25kgs compared to the previous, similar 3.0-litre BMW diesel engine, aids the overall performance statistics.

Compared to conventional 4x4 competitors, none can offer the all round capability of the BMW X6 xDrive30d. While the Audi Q7 records marginally higher horsepower and torque output, this advantage is not translated to on-road performance as the table below indicates. Meanwhile, the Audi, the Range Rover Sport and the Mercedes fall short on all other counts.

Model	Power (hp)	Torque (Nm)	0 – 62mph (secs)	Top Speed (mph)	Combined mpg	CO_2 (g/km)	VED Band
BMW X6 xDrive30d	235	520	8.0	137	34.4	217	F
Range Rover Sport TDV6	190	440	11.9	120	28.3	265	G
Audi Q7 3.0TDI S line	240	550	8.5	134	28.8	260	G
Mercedes ML 320CDI Sport	224	510	8.6	134	29.4	254	G

BMW X6 xDrive35d

With its twin turbochargers and third generation common-rail diesel technology, the 3.0-litre engine that propels the xDrive35d is the most powerful six-cylinder production diesel engine in the world. Weighing just 210kgs, this high-performance diesel weighs some 50kgs less than a comparable eight-cylinder engine with a similar output. This weight and power advantage serves to maximise the dynamic driving qualities of the BMW X6 xDrive35d, which accelerates from zero to 62mph in 6.9 seconds before going on to a top speed of 147mph.

It achieves these benchmark performance figures, in part, due to the unique way its brace of turbochargers operate. The first, small turbocharger functions at low engine speeds, developing superior power and torque with the slightest movement of the accelerator. Then, with engine speed increasing, the second, larger turbocharger spools into action. At higher engine revolutions a flap in the exhaust system closes off the smaller turbocharger so that the larger one can operate alone. This process delivers a seamless wave of acceleration and power from low revs with one turbocharger passing the performance baton to the other at the point its peak operational capability falls away.

The technology means the BMW X6 xDrive35d produces 286hp at 4,400rpm, while peak torque of 580Nm is available from 1,750rpm to 2,250rpm. Despite this impressive performance and like the X6 xDrive30d, this model falls below the 225g/km higher Vehicle Excise Duty and London Congestion Charge tiers. The 2,993cc engine records an emissions figure of 220g/km while also being capable of 34.0mpg on the combined cycle. So, not only is the xDrive35d rapid transport it also makes financial sense for the personal and company car buyer, and challenges the environmental assumptions of the anti-4x4 brigade.

Model	Power (hp)	Torque (Nm)	0 – 62mph (secs)	Top Speed (mph)	Combined mpg	CO2 (g/km)	VED Band
BMW X6 xDrive35d	286	580	6.9	147	34.0	220	F
Audi Q7 4.2TDI S line	326	760	6.4	146	25.4	294	G
Range Rover Sport TDV8 HSE	271	640	9.2	130	25.5	294	G

BMW X6 xDrive35i

The twin-turbocharged petrol engine that powers the BMW X6 xDrive35i has retained its International Engine of the Year award in 2008. This 2,979cc unit is capable of propelling the X6 from zero to 62mph in 6.7 seconds and on to a top speed of 149mph. It achieves this through a combination of twin-turbocharger technology and a high-precision direct injection system.

Compared to the twin-turbocharged diesel engine in the X6 xDrive35d, the forced-induction technology operates in a different way. It is more efficient for the engine to operate with two same-sized turbochargers with each one helping to supply three cylinders due to the characteristics of petrol power. This sees the X6 xDrive35i produce a diesel-engine style flat torque curve courtesy of its variable vane turbo technology. The engine's output is 306hp at 5,800rpm while peak torque is attained at just 1,300rpm through to 5,000rpm.

The advanced turbocharging system on the BMW X6 xDrive35i enables it to deliver class-leading performance figures. The 2,979cc-powered X6 is still capable of achieving 25.9mpg and a CO_2 figure of 262g/km.

Model	Power (hp)	Torque (Nm)	0 – 62mph (secs)	Top Speed (mph)	Combined mpg	CO_2 (g/km)	VED Band
BMW X6 xDrive35i	306	400	6.7	149	25.9	262	G
Porsche Cayenne	290	385	8.5	141	21.9	310	G

BMW xDrive50i

Completing the quartet of forced-induction engines is an all-new twin-turbocharged, high-precision direct injection 4.4-litre V8 powerplant. This engine makes its debut in a BMW product and is the most powerful non-M V8 engine the marque has ever offered. It is also unique as the two turbochargers and the catalytic converter are located within the vee of the engine for the first time. This reduces the length of the ducts while also allowing for a wider cross-section, so pressure loss is significantly minimised both on the intake and exhaust side. This enhances engine performance and benefits packaging too.

The BMW X6 xDrive50i produces 408hp from 5,500rpm to 6,400rpm from its 4,395cc engine. Peak torque is an impressive 600Nm and this is attained from 1,750rpm to 4,500rpm. The breadth of the engine's flexibility and power ensures the flagship in the X6 range reaches 62mph from standstill in 5.4 seconds and can hit an electronically-limited top speed of 155mph.

This is the first time that the use of two turbochargers has boosted output on a BMW eight-cylinder petrol engine. Each of the two turbochargers supplies compressed air to four cylinders, ensuring unparalleled spontaneity and an instantaneous response to the accelerator. A further, important, point is that the engine develops its high torque from low speeds and then maintains this superior torque plateau over an unusually broad speed range.

The new V8 is the most efficient power unit in its class. Combined with a wide range of BMW's EfficientDynamics features, it gives the BMW X6 xDrive50i a standard of fuel economy and emission management far better than rivals. Average fuel consumption is 22.6mpg and CO_2 emissions are 299g/km. The table below underscores the competitive advantage this BMW X6 model enjoys. Neither the Porsche Cayenne nor the Range Rover Sport can match the BMW X6's all round capability.

Model	Power (hp)	Torque (Nm)	0 – 62mph (secs)	Top Speed (mph)	Combined mpg	CO_2 (g/km)	VED Band
BMW X6 xDrive50i	408	600	5.4	155	22.6	299	G
Porsche Cayenne GTS	405	500	6.5	156	20.3	332	G
Range Rover Sport Supercharged	396	550	7.6	140	17.8	374	G

EfficientDynamics

All four BMW X6 models utilise facets of BMW's award-winning EfficientDynamics technologies. Brake Energy Regeneration is standard across the range in conjunction with active aerodynamics and low viscosity fluids in the steering and transmission systems. Third generation common-rail systems for the diesel-engined vehicles and high-precision direct injection on the petrol models serve to optimise the combustion process.

On-demand management of ancillary units likewise serves to further optimise the efficiency of the BMW X6. The power required to drive the fuel and steering assistance pumps has been significantly reduced by matching the uptake to current driving conditions, saving substantial energy in the process. In addition, the clutched air-conditioning compressor automatically disconnects the compressor as soon as the air conditioning is switched off to save energy.

The X6's aerodynamics also serve to enhance efficiency, with the cooling air flaps behind the BMW kidney grille and air intake open and close electronically as required in all but the X6 xDrive50i. The flaps reduce air resistance when closed and open only in response to a greater demand for cooling air.

Transmission

Power in the BMW X6 is transmitted to the road via a standard fit six-speed automatic transmission with an emphasis on sporting gear change characteristics. Gear changes can be delivered using the ergonomically designed gear selector or by the gearshift paddles behind the steering wheel.

The gearbox's default setting is a fully automatic drive mode. However, manual gear changes can be instigated by either moving the gear selector to the left or using the steering wheel paddles. Pulling one of the paddles backwards serves to shift up gears and pressing the paddle forwards changes to a lower gear. Using this paddle gearshift is the quickest way for the driver to change gears.

3. Chassis

The BMW mantra of 'the ultimate driving machine' is delivered, in most part, by class-leading drivetrains and innovative chassis technologies. Award-winning engines, BMW's intelligent xDrive four-wheel-drive technology, Dynamic Stability Control + and optional equipment such as Active Steering and Adaptive Drive, set the foundation for benchmark driving dynamics. Adding to this already impressive line-up on the BMW X6 is the world debut of Dynamic Performance Control – a highly advanced differential that enhances the performance of the X6 as standard across the range.

Dynamic Performance Control
New to BMW, Dynamic Performance Control marks the introduction of a new standard in drivetrain capability. Available only in the BMW X6, Dynamic Performance Control is unique in its ability to make a four-wheel-drive vehicle, with its inherently mild understeer characteristic, to perform with the responsiveness of a rear-wheel-drive car.

It works by switching power between the left and the right rear wheels to stabilise the vehicle within milliseconds to help increase traction and lateral acceleration. Handling is lighter and more precise as a consequence during all driving conditions.

To visualise how it works, the mechanics of canoeing provides a good analogy. If you want to turn right when canoeing, you can brake the paddle on the right side of the canoe. This is how most common electronic stability programmes work. Alternatively, you could use the left-hand paddle powerfully to deliver more control in moving forwards and turning right. This is the principle behind Dynamic Performance Control.

The new system links the standard rear differential with a mechanical planetary gear set and an electronically-controlled multi-plate clutch for each rear wheel. This system combines advanced electronics and precise mechanics to process complex data such as the yaw rate, wheel speeds, steering angle and engine torque so it can react immediately. When required, the system ensures that drive power distribution to the rear wheels can be freely varied and increased on either side as needed.

Dynamic Performance Control increases directional stability when accelerating out of bends and provides the driver with extra support in difficult driving conditions. Before under- or oversteer can take place, lateral guided force is used to keep the vehicle on track.

The system is also effective when the vehicle is coasting. If the rear wheels are on different types of surface, Dynamic Performance Control improves traction by supplying more power to the wheel with more grip. This increases driving stability and allows for much faster acceleration should it be needed. A wheel torque difference of up to 1,800Nm can be actively created between the left and the right rear wheels.

As a logical addition to the xDrive all-wheel-drive system, Dynamic Performance Control can be matched to all drive concepts and engines. Whereas xDrive variably controls the power distribution between the front and rear axles, Dynamic Performance Control intelligently distributes power between the two rear wheels for precise handling, whatever the driving conditions.

The power distribution can be displayed on the onboard computer screen located between the speedometer and the rev counter.

Integrated Chassis Management

To allow Dynamic Performance Control to work it has to be co-ordinated by the Integrated Chassis Management (ICM) system. This high-performance electronic control network uses high capability computing power to control the drive and suspension functions of the X6 to deliver maximum dynamic capability regardless of driving condition. ICM controls the xDrive, Dynamic Stability Control + and Dynamic Performance Control actuators and, when fitted, the Active Steering and Adaptive Drive functions.

To enable ICM to function to the desired level, FlexRay technology, the fastest method of data transmission currently available in a production car, is employed. Through the use of more powerful computer processors, offering what is essentially a greater bandwidth, FlexRay is able to cope with far greater amounts of data than previous car electronic systems.

The result of ICM featuring FlexRay technology is that all the technological features of the BMW X6 respond near instantaneously to inputs to deliver a large Sports Activity Vehicle with sportscar-like handling and performance.

Suspension

The BMW X6 front suspension consists of a double wishbone arrangement similar to that of an open-wheeled racing car. This allows engineers to fine-tune the suspension for the best kinematic configuration which, in turn, delivers outstanding lateral acceleration and directional stability. At the same time, it minimises the impact forces transmitted back through the car. The rear suspension of the new X6 features BMW's patented Integral IV rear axle.

The standard sport suspension configuration can be enhanced by specifying Adaptive Drive. This optional system uses active hydraulic anti-roll bars to counteract the cornering forces of the car to keep the body from leaning too heavily in a corner and unsettling the occupants. In addition to this, Adaptive Drive incorporates Electronic Damper Control (EDC) that uses sensors to continuously adjust the damper setting for the optimum comfort. The driver can adjust EDC to one of two settings, Normal and Sport, dependent on required ride performance.

A unique four-wheel-drive system

xDrive is BMW's unique four-wheel-drive system which first appeared on the revised first-generation BMW X5 in 2003. xDrive works by ensuring that drive forces are instantly delivered to the axle that needs them most. The xDrive concept has two key ingredients – a centrally mounted, electronically activated, multi-plate clutch to distribute drive between axles, and the DSC+ system outlined below.

The electronically controlled clutch in the BMW X6 is superior in all but extreme off-roading to rival all-wheel drive systems, simply because it is able to respond more quickly. Many conventional four-wheel drive systems require the build-up of hydraulic pressure to change drive distribution. With xDrive being allied to the DSC+ system, it is more predictive. The DSC+ sensors constantly monitor individual wheel speed, steering angle, lateral acceleration, throttle input and yaw rate angles, and feed this back to enable xDrive's multi-plate clutch to switch power between axles.

The result of this class-leading technology, allied to Dynamic Performance Control, is a vehicle that offers predictable, safe handling but one that still feels as nimble as a sports car.

Dynamic Stability Control+

Dynamic Stability Control+ (DSC+) is standard on the new X6 and offers four additional functions for added safety and comfort:

- **Brake Pre-tensioning** shortens stopping distances during an emergency stop by priming the brakes should the car detect the driver lifting off the accelerator sharply in reaction to an incident ahead.

- **Brake Drying** improves braking performance in the wet by periodically applying the brake pads to scrub away the film of water that can build up on the brake discs.

- **Hill-start Assistant** allows a car to pull away smoothly on a steep gradient without rolling backwards. The brakes are held for the short time it takes the driver to apply the accelerator after releasing the foot or handbrake.

- **Brake Fade Compensation** applies additional braking without any extra effort from the driver should sensors detect that the brake pads are starting to lose ‘bite’ due to heat build up.

The driver of a BMW X6 is also able to select the Dynamic Traction Control (DTC) function of DSC+. DTC allows for a greater degree of wheel slip to enable a driver to pull away on loose surfaces such as snow or gravel without the DSC+ intervening through a loss of grip. DTC allows for more spirited driving in the dry without interruption and can be selected via a button on the centre console.

Steering

The BMW X6 comes as standard with a performance-oriented steering rack for precise, short steering inputs. Drivers wishing to build on this can opt for BMW's unique Active Steering system. This varies the steering ratio depending on road speed. It does this by way of an electronically operated planetary gear that intersects the steering shaft. The planetary gear, in conjunction with an electric motor, is able to add more lock than provided by the driver at slow speeds to make parking and slow speed maneouvres effortless. When driving at higher speeds the opposite occurs with Active Steering actually retarding the input from the driver ensuring a smoother, more composed, drive. It also makes a larger car feel more nimble than its outward dimensions might suggest.

Safety

A body structure conceived and designed for maximum occupant safety underpins the BMW X6. In combination with the car's passive safety systems, it fulfils all prerequisites for excellent results in all crash-tests. Occupant safety is ensured by front and side airbags, as well as head airbags all-round, and crash-activated headrests at the front. Bi-xenon dual headlights including a daytime light function, fog lamps, two-stage brake lights, and Run-flat tyres all come as standard.

4. Market

BMW broke the mould when it launched the X5 in 1999. The decision to break out of the 3, 5 and 7 Series cast has been subsequently justified by buoyant sales. The number of similar concept products now on offer, following the X5's market introduction to the large 4x4 arena that previously only offered hardcore off-roaders, is further flattering proof of the model's success. Step forward a decade and BMW has rewritten the 4x4 rule book once again. The BMW X6 is the first car of its type in the premium market and offers customers an enticing blend of coupé styling and four-wheel-drive capability and practicality.

The rationale for the BMW X6 is best appreciated when viewed in terms of the choice between the BMW 3 Series Saloon, Touring, Coupé and Convertible. People buy all four versions of the 3 Series depending on their circumstances and desires. The same will apply to the BMW X6 when compared with other BMW X models.

The BMW X6 is undeniably a niche car. However, research has shown that three key buyer profiles exist:

- Buyers who want the command driving position an xDrive product provides, but who also aspire to the sporting style of a coupé.
- Early adopters. BMW broke the mould when launching the X5 and the interest for that model came from early adopters looking for something different. BMW X6 customers will come from a similar demographic.
- The BMW X5 or other Sports Activity Vehicle owners whose families have left home and still want a similar car, but one that doesn't scream 'family'.

Historically, BMW X products have proved popular with new car buyers as the table overleaf indicates. The desirability of BMW X product is backed up by the knowledge that a BMW X5 3.0d is the third biggest selling new vehicle at BMW dealerships*. The BMW X3 2.0d is also popular being the ninth best selling new vehicle.

*Note: In 2007 the BMW 320d Saloon accounted for 12,015 sales, BMW 520d Saloon 8,365 sales and the BMW X5 3.0d 6,233 sales.

BMW UK expects to sell approximately 2,300 X6s in a full year, with the X6 xDrive30d and the X6 xDrive35d accounting for approximately 85 per cent of sales. To put this sales outlook into perspective the table below outlines the popularity of the other X models in the BMW range.

Model	2000	2001	2002	2003	2004	2005	2006	2007
BMW X5	469	5,650	6,665	8,536	8,421	10,808	6,254	7,202
BMW X3	N/A	N/A	N/A	N/A	6,711	7,536	7,616	4,888

The BMW X6 sits alongside these models to offer buyers something totally unique. The majority of buyers are expected to be conquest sales from rival manufacturers. High on customers shopping lists will be the bold styling and the advanced drivetrain and chassis.

Tim Abbott, Sales Director at BMW UK, said: "BMW sales have grown exponentially in the last decade from 64,013 in 1997 to 121,831 in 2007. Key to this growth has been our ability to introduce niche vehicles to cater for our growing and more demanding customer base. The BMW X6 is a logical progression. There is a market for this type of vehicle and BMW expects two thirds of buyers to be conquest customers from other manufacturers."

A new nomenclature

Given the proliferation of BMWs producing varying outputs from the same capacity engine, a new solution had to be found for the naming of a vehicle. New models will now adopt 'virtual capacity'. For example, the 325d, 330d and the 335d are all powered by a 3.0-litre diesel engine. When looking at the X6 xDrive30d and the xDrive35d both follow this path. The addition of xDrive to the vehicle name underscores the four-wheel-drive capability.

5. Design

The design and concept of the new BMW X6 sets a new course for Sports Activity Vehicles. Never before in the premium segment has the command driving position of a 4x4 model been combined with the sporting, elegant lines of a coupé. The reason? The same reason that the BMW 3 Series Coupé and Touring models can happily co-exist together to deliver a bespoke design solution to those with specific motoring requirements. Hence the birth of the Sports Activity Coupé.

In its design the BMW X6 showcases all the typical BMW design signatures while adding a new distinctive look. It has been crafted to be stylish, sporting and with a powerful presence. At 1,983mm, the BMW X6 is 50mm wider than a BMW X5 and it is 23mm longer at 4,877mm. Its dimensions give the model a dramatic footprint and create a striking appearance.

At the front, large air intakes positioned far to the outside clearly indicate the cooling requirements of the powerful engines. The air intakes are split horizontally by bars in aluminium colour surrounding the round fog lamps to visually enhance the width of the car. The traditional BMW kidney grille is the largest of any previous or current BMW, and needs to be to feed the engine with the required volume of air. This, combined with the pronounced contours on the bonnet and large, standard specification xenon headlights, enhances the imposing on-road presence.

At the rear, the view is split by horizontal lines and broad shoulders giving the back of the BMW X6 a wider, hunkered down look. Even the rear lights highlight the unique character of the BMW X6, re-interpreting the typical L-shape of a BMW X model and adding a dynamic, flowing look. Extra ground clearance, strikingly-designed wheel arches, four doors, the large rear tailgate as well as the high waistline, bear a clear resemblance in style to BMW's other X models.

The unique proportions of the BMW X6 stand out particularly from the side. The short front body overhang emphasises the dynamic character of the vehicle, the roofline tapering out gently to the rear and the long body overhang at the rear end give the BMW X6 its stretched coupé silhouette. The roof is at its highest point directly over the front row of seats.

Inside, the coupé ethos is carried over with the BMW X6 having accommodation for the driver, front passenger and dedicated two seats for passengers in the rear. A storage compartment separates the two rear seat passengers. Like all BMW X models, the new Sports Activity Coupé offers an elevated, command seating position giving the driver an even better feeling of security and visibility.

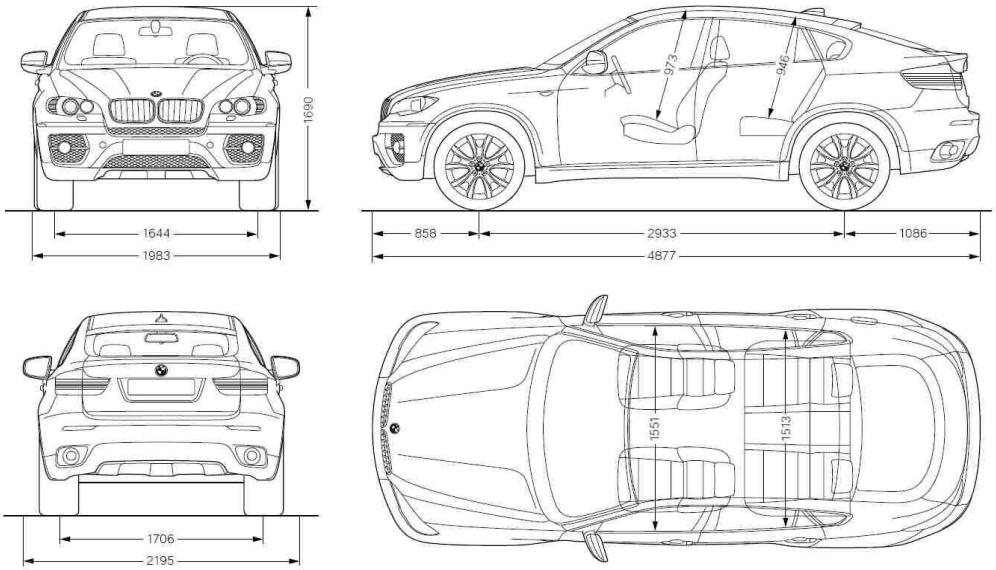
The BMW X6 offers a sports steering wheel with shift paddles as standard. Another interior sporting feature is the knee pads on the centre console that offer both the driver and front passenger additional support and stability.

The coupé lines might indicate a lack of interior headroom, but that assumption would be wrong. An unusually generous feature for a coupé is the substantial headroom at the rear of 946mm giving even tall passengers maximum comfort at all times. Part of the design teams' challenge was to ensure that BMW's Head of Design, Adrian van Hooydonk, could comfortably fit his 6ft 4inch frame into the rear seats. Incidentally, the BMW X6 has more headroom in the back seats than the Mercedes Benz C Class Saloon. (946mm vs 942mm).

The boot offers a capacious 570 litres, far more than the space usually available in a coupé and more than many conventional 4x4 competitors. This enables four passengers in a BMW X6 to each take along a set of golf bags in the boot. The boot contents are covered by a concertina cover to offer security and easy access. It can also be folded flat and stored if needed. To increase luggage capacity even further, the rear seat backrest folds down in a 60:40 split to offer a maximum of 1,450 litres.

A two-stage gas spring featured as standard allows the driver and his passengers to determine the final position of the tailgate when open according to their requirements. This avoids the risk of damage, for example, when opening the hatch in an indoor car park with a low ceiling.

Dimensions



6. Q & A

This is a new section to a BMW press pack, the content of which is based on an interview between a journalist and Martin Sloan, the Product Manager for BMW X products in the UK. The aim of the section is to provide you with the answers to pointed questions that may not be outlined elsewhere in the press pack and for quotes that can be used in your articles.

What is the point of the X6? An X3, X5, 3 Series Touring and 5 Series Touring between them cover off practicality, four-wheel-drive, dynamic driving and the high up driving position.

The sales growth at BMW in the last 10 years has been all about bringing to market new, niche vehicles that specifically target what certain customers are after. The BMW X6 is just another step in this philosophy. The models you mention all cater to different people even though there might be some cross over. The BMW X6 is aimed at customers who like the high up, command driving position, but appreciate the attributes of styling and performance that are synonymous with a coupé. The BMW X5 is closest to the X6 in terms of positioning, but the X6 has several unique selling points aside from styling – namely Dynamic Performance Control, a more sports-oriented gearbox and a full range of turbocharged engines, two of which don't feature on the X5.

Why does the X6 only have four seats?

The BMW X6 is part coupé and all of our coupés have four seats. The other main consideration is that the buyer profile is different too. For example, the BMW X5 can come with five or possible seven-seat configurations. The BMW X6 will be bought more by two person households so the number of seats is not a high factor in the purchasing decision. They are more like to be taking friends to the cinema, than ferrying children to football training.

The BMW X5 is a big car already, but the BMW X6 has an even bigger footprint. Is there really a need to build and sell such cars in the UK?

The BMW X6 might appear an imposing car but that is more down to the styling. By comparison it is smaller in length than an Audi A6 and occupies a footprint barely 500 cm^2 larger than that car.

You say this is the first time a range has been produced that is all powered by turbocharged engines. Why is this?

This is partly to do with packaging requirements, but the main reason is to achieve our targets for lowering emissions while still improving other performance figures. Additionally, BMW no longer regards turbocharging petrol engines with suspicion, having mastered the art using innovative technology such as high-precision direct injection to great critical acclaim.

Dynamic Performance Control makes an obvious difference to the performance of an X6. What is the weight penalty and will it appear on any other products?

The extra weight of the system is 12kgs and that includes all the extra wiring and control unit. This is a small price to pay for the on-road benefits achieved. We are rightly proud of this new differential, but there are no plans, as yet, for it to be introduced onto other models.

Is Dynamic Performance Control better than the variable M differential that is fitted as standard to all M cars and, if so, will these models get this feature in future?

The unique differential fitted to all M cars is still superior when it comes to pure traction as it can develop up to 100 per cent locking action. Dynamic Performance Control is nearly as good though in regards to this, but it performs better on a four-wheel-drive platform which has a natural tendency to understeer. Dynamic Performance Control eliminates this for a truly responsive feel.

7. Equipment
Standard and optional

See separate files for complete tables of standard and optional equipment for the BMW X6.

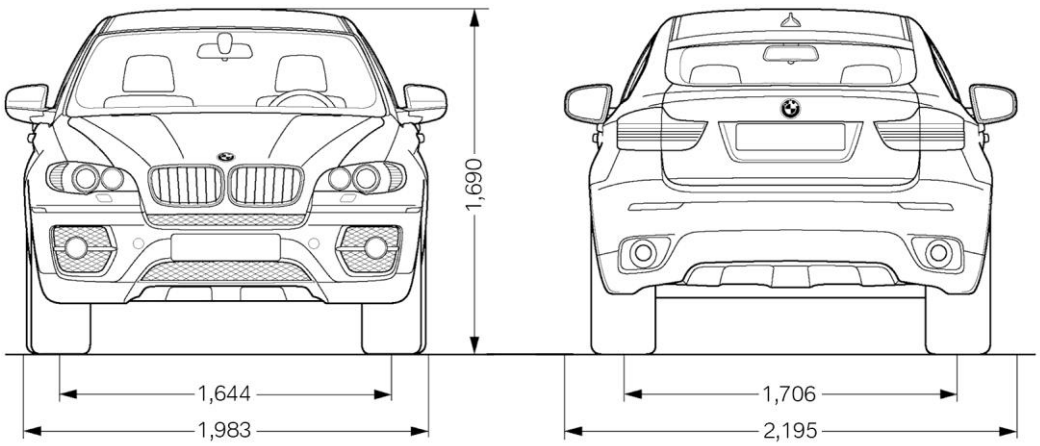
8. Technical specifications

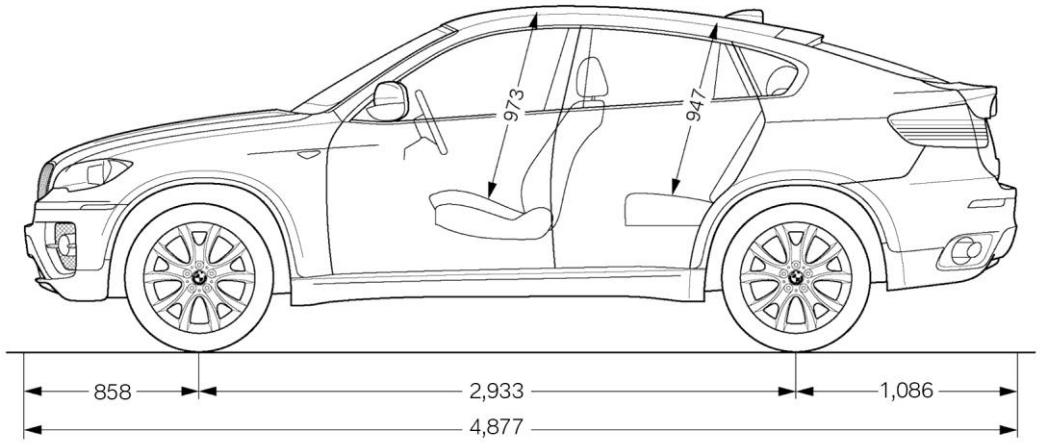
		X6 xDrive35i	X6 xDrive50i	X6 xDrive30d	X6 xDrive35d
Body					
No of doors/seats		5/4	5/4	5/4	5/4
Length/width/height	mm	4,877/1,983/1,690[1)]	4,877/1,983/1,690[1)]	4,877/1,983/1,690[1)]	4,877/1,983/1,690[1)]
Wheelbase	mm	2,933	2,933	2,933	2,933
Track, front/rear	mm	1,644/1,706	1,644/1,706	1,644/1,706	1,644/1,706
Turning circle	m	12.8	12.8	12.8	12.8
Tank capacity	approx	85	85	85	85
Cooling system incl heater	l	10.9	17.2	10.4	10.4
Engine oil[4)]	l	6.5	8.0	7.5	7.5
Transmission fluid	l	lifetime	lifetime	lifetime	lifetime
Final drive fluid	l	lifetime	lifetime	lifetime	lifetime
Weight, unladen to EU (DIN)	kg	2,145 (2,070)	2,265 (2,190)	2,150 (2,075)	2,185 (2,110)
Max load	kg	600 (650)[2)]	650	600 (650)[2)]	600 (650)[2)]
Max permissible load	kg	2,670 (2,720)[2)]	2,840	2,675 (2,725)[2)]	2,710 (2,760)[2)]
Max axle load, front/rear	kg	1,280/1,470 (1,290/ 1,510)[2)]	1,400/1,520	1,280/1,470 (1,290/1,510)[2)]	1,320/1,480 (1,330/1,520)[2)]
Max trailer load braked (12%)	kg	2,700/750	3,500/750	2,700/750	2,700/750
Max roofload/max download	kg	100/120	100/140	100/120	100/120
Luggage comp to DIN	l	570–1,450	570–1,450	570–1,450	570–1,450
Air drag	C_d x A	0.34 x 2.82	0.36 x 2.82	0.33 x 2.82	0.34 x 2.82
Engine					
Config/No of cyls/valves		in-line/6/4	V/8/4	in-line /6/4	in-line /6/4
Engine management		MSD81	MSD85	DDE6.2.6	DDE6.2.6
Capacity	cc	2,979	4,395	2,993	2,993
Bore/stroke	mm	84.0/89.6	89.0/88.3	84.0/90.0	84.0/90.0
Compression ratio	:1	10.2	10.0	17.0	17.0
Fuel grade		RON 95–98	RON 95–98	Diesel	Diesel
Max output	kW/bh	225/306	300/407	173/235	210/286
at	rpm	5,800–6,250	5,500–6,400	4,000	4,400
Max torque	Nm	400	600	520	580
at	rpm	1,300–5,000	1,750–4,500	2,000–2,750	1,750–2,250
Electrical System					
Battery/installation	Ah/–	90/luggage comp	90/luggage comp	90/luggage comp	90/luggage comp
Alternator	A/W	210/2,940	210/2,940	170/2,380	170/2,380
Chassis					
Suspension, front		Double track arm axle; small, negative steering roll radius; anti-dive			
Suspension, rear		Integral axle; space-effect suspension with anti-squat and anti-dive			
Disc brakes, front	mm	Two-piston floating calliper	Single-pist frame calliper	Single-piston floating calliper	Single-piston floating calliper
Diameter		365 x 36, vented	385 x 36, vented	348 x 30, vented	365 x 36, vented
Disc brakes, rear		Single-piston swing calliper			
Diameter	mm	345 x 24, vented	385 x 24, vented	320 x 20, vented	345 x 24, vented
Driving stability systems		DCS III (HDC, DBC, ABS, ASC-X, ADB-X, DTC, Trailer Stability Control)			
Steering					
Steering transmission, overall					
Type of gearbox		Six-speed automatic with Steptronic, electronic gear selector lever and shift paddles			
Gear ratios I	:1	4.171	4.171	4.171	4.171
II	:1	2.340	2.340	2.340	2.340
III	:1	1.521	1.521	1.521	1.521
IV	:1	1.143	1.143	1.143	1.143
V	:1	0.867	0.867	0.867	0.867
VI	:1	0.691	0.691	0.691	0.691
R	:1	3.403	3.403	3.403	3.403
Final drive	:1	3.909	3.636	3.636	3.636
Tyres, front/rear		255/50 R19 107V XL RSC	255/50 R19 107W XL RSC	255/50 R19 107V XL RSC	255/50 R19 107V XL RSC
Rims, front/rear		9J x 19 light-alloy	9J x 19 light-alloy	9J x 19 light-alloy	9J x 19 light-alloy

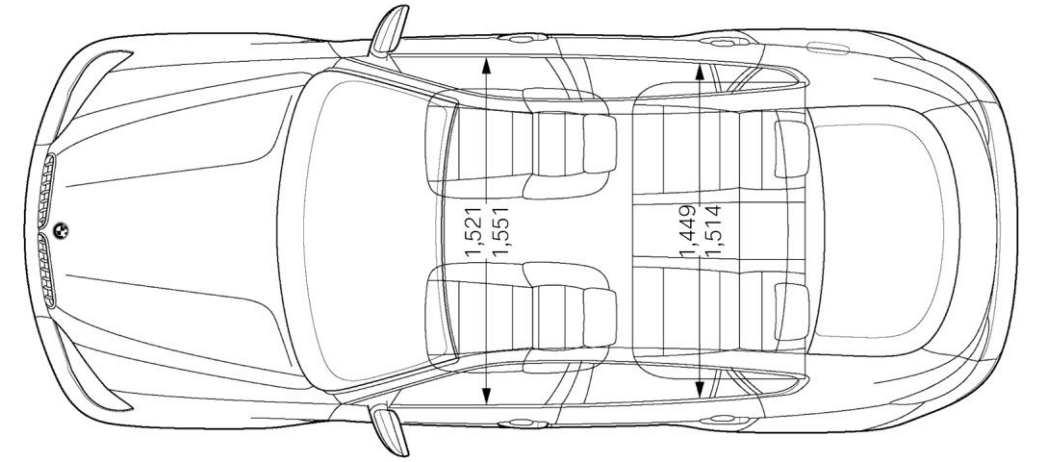
		X6 xDrive35i	X6 xDrive50i	X6 xDrive30d	X6 xDrive35d
Performance					
Power-to-weight ratio to DIN	kg/kW	9.2	7.3	12.0	10.0
Output per litre	kW/l	75.5	68.3	57.8	70.2
Acceleration 0–62mph	s	6.7	5.4	8.0	6.9
0–1000 m/h	s	27.2	24.6	29.1	27.3
In 4th/5th gear 50-75mph	s	–/–	–/–	–/–	–/–
Top speed	mph	149	155	130 (137)[3]	147
Fuel Consumption in EU Cycle					
Urban	mpg	19.0	16.0	27.2	26.9
Extra-urban	mpg	32.8	29.7	40.4	39.8
Composite	mpg	25.9	22.6	34.4	34.0
CO_2	g/km	262	299	217	220
Miscellaneous					
Emission rating		EU4	EU4	EU4	EU4
Embankment angle, front/rear	°	25.1/25.5	25.1/25.5	25.1/25.5	25.1/25.5
Ramp angle	°	19.1	19.1	19.1	19.1
Ground clearance, unladen	mm	212	212	212	212
Perm. all-wheel drive		variable	variable	variable	variable

Specifications in ACEA markets/data relevant to homologation in part for Germany only (weight)
[1] Height incl roof railing: 1,699 mm
[2] With Adaptive Drive and/or self-levelling with pneumatic suspension
[3] With high-speed set-up (market-specific)
[4] Oil change amount

9. Exterior and interior dimensions

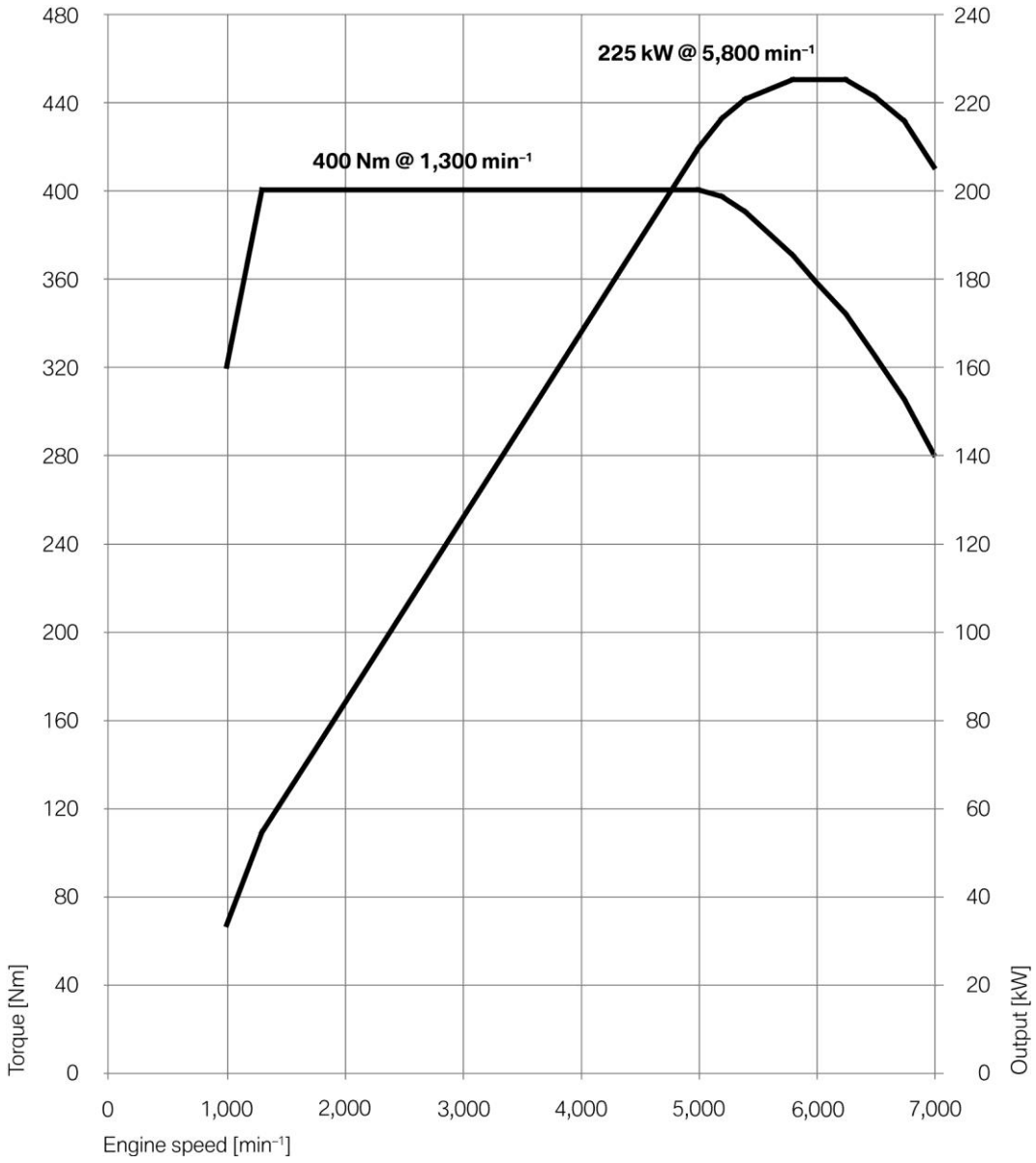




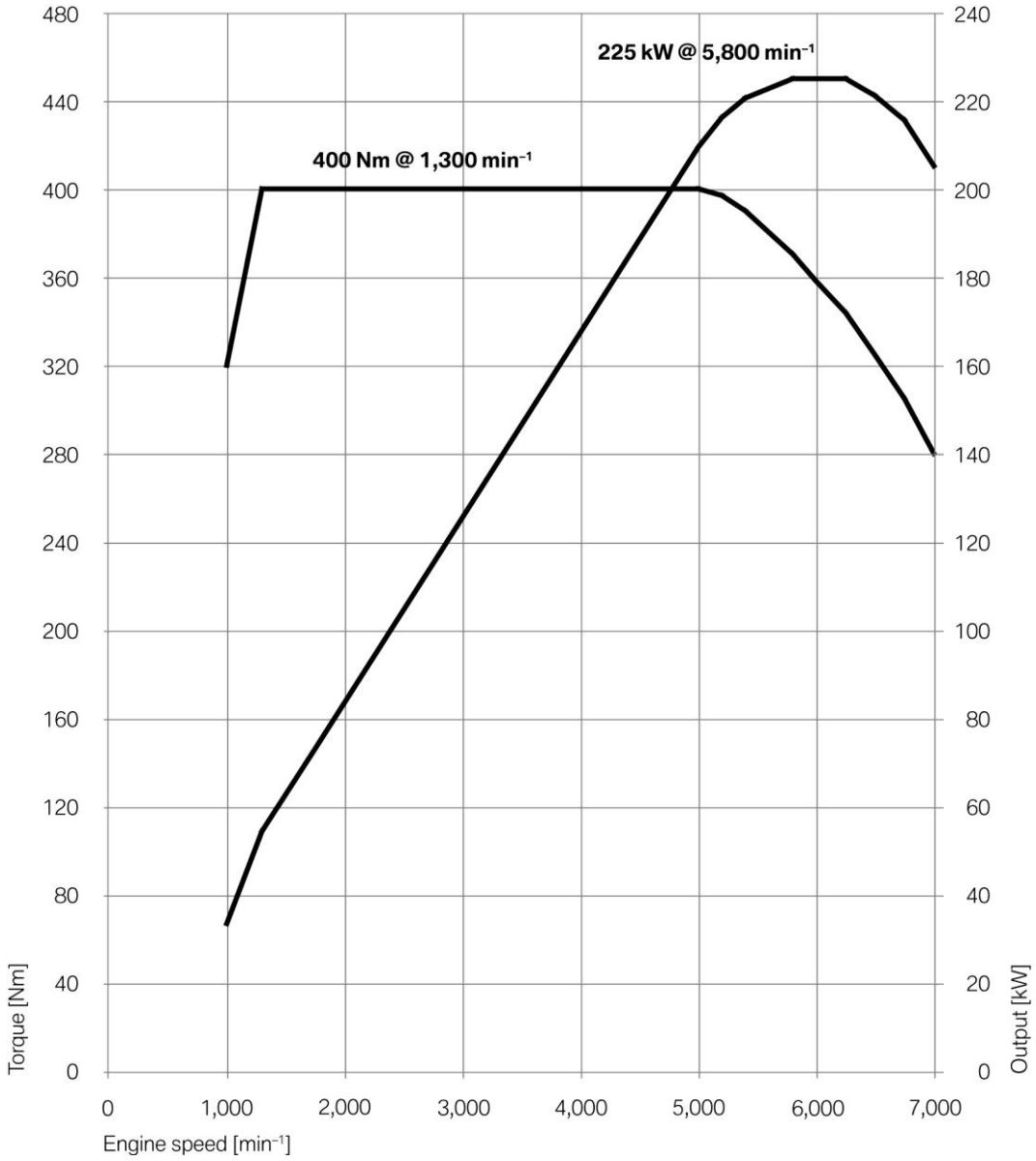


10. Power and torque diagrams

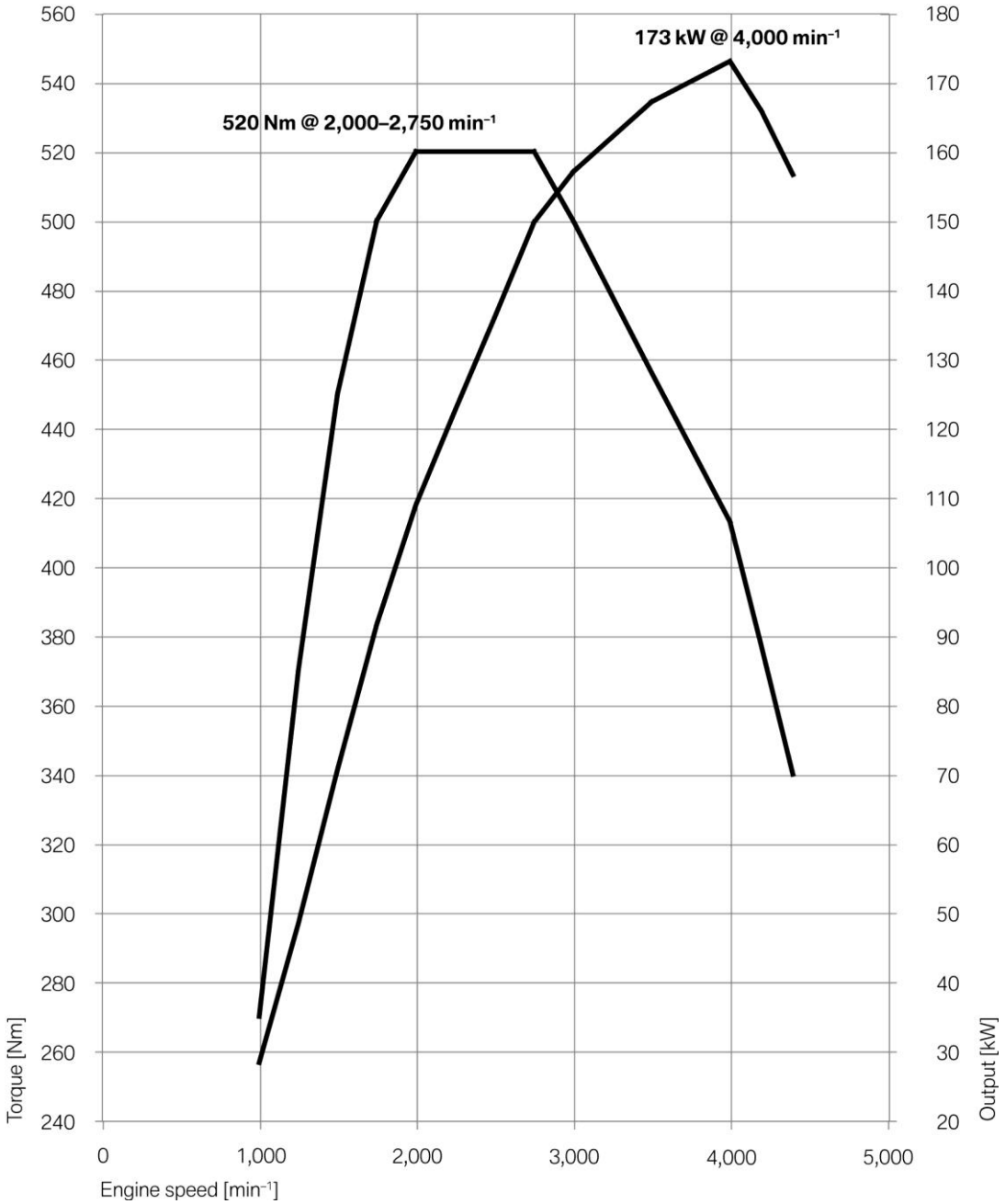
BMW X6 xDrive35i



BMW X6 xDrive50i



BMW X6 xDrive30d



BMW X6 xDrive35d