

The new BMW X1 xDrive28i with BMW TwinPower Turbo. Contents.



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At a glance.

- World debut of a new generation of BMW 2.0-litre petrol engines; new BMW X1 xDrive28i is the first model to feature this innovative combination of hallmark BMW driving pleasure and efficiency.
- The first four-cylinder petrol engine with BMW TwinPower Turbo technology offers a substantial power upgrade as well as a significant efficiency improvement; rated power: 180 kW/245 hp, rated torque: 350 Newton metres.
- Closely modelled on the BMW in-line six-cylinder engines, the all-new 2.0-litre engine with all-aluminium crankcase comes with BMW TwinPower Turbo technology featuring high-performance twin-scroll turbocharging system, High Precision Injection direct petrol injection with innovative solenoid injectors, and the latest further enhanced version of the BMW-patented VALVETRONIC variable valve control system.
- New engine generation constitutes the latest innovative highlight of the BMW EfficientDynamics strategy, 2.0-litre engine with torque upgrade compared to the previous engine and exceptionally low fuel consumption and emissions.
- Equipped as standard with six-speed manual transmission or optionally with eight-speed automatic; extensive BMW EfficientDynamics features, including Auto Start-Stop function (manual transmission models).
- New BMW X1 xDrive28i combines even more agility with significant reduction in fuel consumption and emissions; average fuel consumption in the EU test cycle: 7.9 litres/100 km or 35.7 mpg imp (an improvement of 1.5 litres / 5.7 mpg), CO₂ emissions: 183 g/km (down by 38 g), acceleration from standstill to 100 km/h (62 mph) in 6.1 seconds (manual transmission) or 6.5 seconds (automatic transmission, down by 0.3 seconds).
- Standard-fitted intelligent BMW xDrive all-wheel-drive system calibrated for optimised driving dynamics; Performance Control optionally available.
- M Sports package available as an option for all BMW X1 model versions.
- Unique vehicle concept in the premium compact segment, typical BMW X styling features and driving qualities, extensive interior adaptability, uncompromising premium quality including outstanding build and materials, upscale interior trim, and innovative BMW ConnectedDrive options that include apps to receive internet radio stations and for in-car Facebook and Twitter use.

A new dimension in driving pleasure and efficiency: The new BMW X1 xDrive28i with BMW TwinPower Turbo.



With its powerful, sporty and elegant styling, supreme agility, luxurious functionality and innovative equipment features, the BMW X1 is a trailblazer in the premium compact segment in terms of driving pleasure. Yet again premium carmaker BMW has successfully transplanted the BMW X model concept to a new vehicle segment to create a unique product. Now the BMW X1 is breaking new ground, this time in terms of the BMW EfficientDynamics programme. The new BMW X1 xDrive28i is the brand's first four-cylinder petrol model with BMW TwinPower Turbo technology, which comprises High Precision Injection direct petrol injection, a charge system based on the twin-scroll principle, double-VANOS variable camshaft timing and VALVETRONIC variable valve control.

BMW has timed the introduction of this technology package in the new BMW X1 xDrive28i to coincide with the launch of a new generation of BMW 2.0-litre petrol engines. The new 180 kW/245 hp powerplant combines a power and torque upgrade over the previous engine with substantially reduced fuel consumption and emissions. This twofold improvement is reflected in some impressive performance specifications. The 0 to 100 km/h (62 mph) sprint time is 6.1 seconds (automatic: 6.5 seconds), an improvement of 0.7 seconds (automatic: 0.3 seconds) over the previous model, which was only available as an automatic. At the same time, average fuel consumption in the EU test cycle has been cut by 16 per cent to 7.9 litres/100 km (35.7 mpg imp), with CO₂ emissions of 183 grams per kilometre.

The new BMW X1 xDrive28i comes with a six-speed manual transmission as standard. The standard-fitted BMW EfficientDynamics technology includes – amongst other features – Brake Energy Regeneration, an Optimum Shift Indicator, the Auto Start-Stop function and on-demand control of auxiliary units. An optional eight-speed automatic version is also available. Thanks to its exceptionally high internal efficiency, models with this transmission offer identical fuel consumption and emissions performance to those with the manual version.

As standard specification, the new BMW X1 xDrive28i is equipped with the BMW xDrive all-wheel-drive system, whose electronically controlled multi-plate clutch continuously varies the drive power split between the front and rear axles. The intelligent all-wheel-drive system is integrated with Dynamic Stability Control (DSC) and responds quickly to the first signs

of oversteer or understeer. The result is improved traction in slippery conditions or away from surfaced roads, and improved cornering dynamics. xDrive is calibrated for optimised driving dynamics, which results in precise steering response when cornering. Additionally, the optional Performance Control system can be specified, which matches the drive torque at the rear wheels to driving conditions for even more agile performance.

To add to the agile driving qualities, from spring 2011 the BMW X1 will for the first time be available with an M Sports package. This option, which is available ex works for all engine versions, comprises a range of suspension, exterior and interior components which have been developed specifically for this compact BMW X model.

The engine: new benchmark in efficiency and dynamism.

BMW X models offer their own distinctive interpretation of typical BMW driving pleasure. The BMW X1 xDrive28i combines this special driving experience with efficiency that is unrivalled in this power class. As a result, this new BMW X1 model offers sporty power delivery of a kind that was previously confined to six-cylinder engines – but combines it with outstanding fuel consumption and emissions performance.

It's all down to the latest-generation 2.0-litre four-cylinder petrol engine, which sets new standards with its various innovative technologies.

The BMW X1 xDrive28i's powerplant achieves the twofold goal of BMW EfficientDynamics in impressive style: it continuously raises the bar on driving pleasure, while at the same time reducing fuel consumption and emissions. With a displacement of 1,997 cc and world-exclusive BMW TwinPower Turbo technology, incorporating twin-scroll turbocharging, High Precision Injection, double-VANOS and VALVETRONIC, it delivers maximum power of 180 kW/245 hp at 5,000 rpm – 55 kW more than the previous top-powered BMW 2.0-litre petrol engine.

Debut: first application of BMW TwinPower Turbo in a four-cylinder engine.

BMW TwinPower Turbo technology gives the new four-cylinder engine the sort of power which naturally aspirated engines can only achieve through more cylinders and substantially larger displacement. The four-cylinder engine with its all-aluminium crankcase, including a motor sport-derived bedplate, is lighter and more compact than a six-cylinder engine of equivalent power.

This has direct benefits for the efficiency of the BMW X1 xDrive28i and also, thanks to the reduced front axle load, for agility.

The new engine offers more torque, too, than the previous naturally aspirated engines. Rated torque of 350 Newton metres, which comes on stream at just 1,250 rpm, ensures very good low-end response. The vigorous power delivery, from only slightly above idling, is a very seductive feature of this new engine, and the power climbs steadily all the way to the upper area of the load range. The new BMW X1 xDrive28i has a 0 to 100 km/h (62 mph) sprint time of 6.1 seconds (6.5 seconds with automatic transmission). These times are an improvement of 0.7 seconds and 0.3 seconds respectively on those for the previous model with six-speed automatic transmission. The new BMW X1 xDrive28i hits a top speed of 240 km/h (149 mph).

The turbocharger is a twin-scroll system. The exhaust streams leaving the two pairs of cylinders are kept completely separate as they flow through the exhaust manifold and the turbocharger, taking a spiral path to the turbine wheel. This configuration results in very low exhaust back pressure at low engine rpm, and allows the energy of the exhaust gas pulses to be optimally managed and translated into powerful rotation of the turbine blades, without a response delay. The result is instant throttle reaction and typical BMW fast-revving performance.

More dynamic performance plus reduced emissions, thanks to VALVETRONIC, double-VANOS and direct injection.

The fully cylinder head-integrated VALVETRONIC variable valve control system, and the double-VANOS variable intake and exhaust camshaft timing, have a further positive impact on power development. The BMW X1 xDrive28i engine features assembled intake and exhaust camshafts and a latest-generation VALVETRONIC system which is even faster-acting thanks to an optimised stepper motor with integrated sensor.

The patented BMW VALVETRONIC system with seamlessly variable intake valve lift control dispenses with the throttle valve system typical of earlier engine generations. Instead, combustion air mass is controlled inside the engine, resulting in much faster response. Pumping losses are kept to a minimum, so making the engine more efficient.

The new engine's unusually high efficiency, for a turbocharged unit, is also down to the High Precision Injection petrol direct-injection system. Centrally positioned between the valves, solenoid injectors with a maximum injection pressure of 200 bar precisely control the supply of fuel. The fuel is injected very close to the spark plug, resulting in clean and homogeneous combustion. The cooling effect of the injected fuel also results in a higher compression ratio than on turbocharged naturally aspirated engines. This results in further efficiency improvements.

The efficiency theme continues with a computer-controlled oil pump and an on-demand electric coolant pump. Also, the new BMW X1 xDrive28i is specified as standard with a six-speed manual transmission with Auto Start-Stop function. This system automatically switches off the engine when the vehicle stops at crossroads or is sitting in stationary traffic in order to prevent unnecessary idling and wasteful use of fuel.

The new engine technology and extensive, standard-fitted BMW EfficientDynamics features achieve an exceptionally good balance between performance and fuel consumption. The new BMW X1 xDrive28i has average fuel consumption in the EU test cycle of 7.9 litres /100 km (35.7 mpg imp), a 16 per cent improvement on the previous model. CO₂ emissions are rated at 183 grams per km.

Features based on award-winning six-in-line engine result in new efficiency benchmark.

A number of key design features of the new engine are based on the latest-generation BMW six-in-line engine with BMW TwinPower Turbo technology. This 225 kW/306 hp unit, fitted in models such as the new BMW X3 xDrive35i, is internationally regarded as a benchmark in dynamic performance and impressive efficiency.

Amongst other tributes, these special qualities earned the six-cylinder engine the Engine of the Year Award 2010. No other 3.0-litre engine offers anything like such a good balance between driving pleasure and fuel economy. And now, the engine of the new BMW X1 xDrive28i has achieved a similar benchmark position in the 2.0-litre engine class.

Optional eight-speed automatic transmission – greater driving comfort with no increase in fuel consumption over manual transmission.

The BMW X1 xDrive28i is equipped as standard with a six-speed manual transmission. Optionally, the power can be managed by an eight-speed automatic transmission. Innovative gear train design makes this transmission comparable in size and weight to the previous six-speed automatic transmissions. The additional ratios provide an appreciable improvement in driving comfort, sporty performance and efficiency. Also optional are a sports leather steering wheel and an M leather steering wheel, which both come with shift paddles which allow the driver to operate the transmission manually yet still keep both hands on the wheel. In typical M style, the right-hand paddle is used for changing up and the left-hand paddle for changing down.

Further features of the eight-speed automatic are short shift times, minimal torque converter slip, which only occurs at launch, reduced friction losses, since no more than two clutches are ever open at once, and a wide ratio spread, which has benefits both for sprinting performance and for low-rpm cruising. The result is very dynamic acceleration, smooth gear changes and at the same time a further reduction in fuel consumption. On the new BMW X1 xDrive28i, this means that models with automatic transmission offer identical fuel consumption and emissions performance to the manual version.

The BMW X1: best-in-segment agility, thanks to BMW xDrive.

A variable drive power split between the front and rear wheels, courtesy of the new BMW X1 xDrive28i's standard-fitted BMW xDrive all-wheel-drive system, results in improved agility – and confident traction away from unsurfaced roads. Via a transfer case with electronically controlled multi-plate clutch, xDrive finely controls the drive power in line with changing conditions, always sending the right amount of power to the axle whose wheels have the best grip.

The permanent all-wheel-drive system is integrated with Dynamic Stability Control (DSC) and with the engine management. Wheel slip is detected at the very first signs by sensors at the wheels. The system then responds with split-second speed by varying the drive split to efficiently correct under- and oversteer at the earliest possible stage. During cornering, more drive power is sent to the rear axle to improve manoeuvrability and prevent understeer. The DSC system includes integral ABS, Dynamic Brake Control (DBC), Cornering Brake Control (CBC) and also Dynamic Traction Control (DTC). DTC raises the stability control response thresholds, making it easier to move off on snow or sand. Amongst other features, the DSC system also includes a Brake Drying function – for wet-weather driving – and Fading Compensation.

Either as a stand-alone option, or in conjunction with the likewise optional sports suspension, Performance Control applies precisely controlled braking pulses, with torque compensation, as an efficient corrective measure at the very first signs of understeer on slippery surfaces and under very dynamic cornering.

Maximum agility and all-round safety through state-of-the-art suspension technology and robust body structure.

The agile, precise, confident handling of the BMW X1 xDrive28i is a direct result of its high-performance suspension technology and a very robust body structure. The double-joint spring-strut thrust bar axle at the front and the five-arm rear axle provide an optimal combination of ride quality and sporty

handling. The hydraulic rack-and-pinion steering system comes with precise power assistance.

In part, the BMW X1 owes its extreme torsional rigidity to intelligent use of high-tensile and ultra-high-tensile steels. Material choices, and the positioning and geometry of struts, braces and other supporting members, are designed for maximum crashworthiness, while also optimising weight and agility. Front and side airbags along with side curtain head airbags for the front and rear rows of seats are standard specification. Three-point inertia-reel belts are standard on all seats, with belt force limiters and belt latch tensioners at the front.

The BMW X1's standard twin round headlights also feature daytime running lights. The optional bi-xenon headlights incorporate sidelights and daytime running lights. They are combined at the rear with LED fibre optic technology which makes the L-shape of the tail-light clusters stand out even more strikingly. Further options for the BMW X1 include High-Beam Assistant, a rain sensor and Adaptive Headlights, which swivel in line with the steering angle.

Confident styling, state-of-the-art interior functionality.

The BMW X1 delivers unfiltered driving pleasure, all-round sporty performance and extreme agility both in urban traffic and out of town. The styling is marked by confident elegance, upscale functionality and trendsetting modernity. The unique vehicle concept combines typical BMW driving pleasure with a level of interior adaptability which is quite unusual for the compact segment and will appeal to customers with an active and varied lifestyle. Both the versatility and the sporty, agile driving qualities are closely echoed in the body styling, with its seamless transitions between front, sides and rear, and well-defined lines which create fluent connections between the different elements of the body.

The five-door X1 measures 4.45 metres (175") in length, but despite the smaller dimensions compared with the BMW X6, BMW X5 and BMW X3, it is clearly identifiable as a BMW X model from every angle. Square-contoured wheel arches, increased ground clearance, narrow guard strips along the lower edges of the body and the upright BMW kidney grille all point to robust design. The long bonnet, short front overhang, a long wheelbase of 2.76 metres (108.6") and the steeply sloping rear windscreen accentuate the sense of length and confirm the sporty credentials of the BMW X1.

The higher seating position and driver-centric cockpit design add to the intense driving experience. This layout also provides convenient entry and gives the driver a commanding view of the road. High-quality materials and striking surface textures, plus iDrive for models equipped with an optional

navigation system, all reflect the premium-class quality of the BMW X1. Expressive graphic elements, extensive trim panelling and dynamic styling create a sporty, youthful aura in the BMW X1. Horizontal lines give the instrument panel a layered look which continues into the door trim, accentuating the width of the instrument panel as well as the general sense of spaciousness. The centre control styling creates a clear demarcation between the driver's and front passenger's areas.

The rear offers three full-size seats. One or more sections of the 40:20:40 split-folding rear seatback can be lowered to increase luggage capacity from 420 right up to 1,350 litres (14.8 to 47.6 cu. ft). At the detail level, functionality is further enhanced by a wide range of trays, cupholders and stowage compartments.

Practical, innovative, high-quality optional equipment.

The everyday practicality, driving pleasure and comfortable touring qualities which are hallmarks of the BMW X1 can be expanded even further by a range of top-quality optional equipment features. Roof rails, a storage compartment package and a tow bar with removable ball head provide additional transport capacity. Interior customisation options include sports seats, seat heating, an interior lights package and the large panorama glass roof. The powerful and efficient automatic climate control system offers a choice of five different climate control modes and maintains a pleasant temperature inside the vehicle at all times of year and in all weather conditions. The standard-fitted audio system includes six speakers, a CD drive and an AUX-IN connection for external audio devices. Optionally, MP3 players and other data or music storage devices can be integrated in the in-car entertainment system via a USB interface.

BMW X1 models equipped with the Business or Professional navigation system also feature the new-generation iDrive operating system with centre console-mounted Controller and direct selection buttons, functional bookmark buttons below the climate control panel and a 6.5- or 8.8-inch Control Display. A wide range of driver assistance systems and mobility services from BMW ConnectedDrive are also available. To supplement the optional sensor-equipped Park Distance Control system, a further manoeuvring aid can be specified – the optional rear-view camera. BMW ConnectedDrive also offers in-car internet access and innovative solutions for the integration of smartphones and external music players.

The optional apps from BMW ConnectedDrive offer an attractive extension of the range of infotainment features in the BMW X1 as well. With this special option Apple iPhone users can download free software from the Apple App

Store that allows them to select internet radio stations from around the world using the iDrive system or to have the latest posts from their personal Facebook or Twitter account shown on the car's Control Display. In addition, the online services allow standardised messages to be sent from the car. Additional apps and functions are set to follow in the future.

Debut: M Sports package for the BMW X1.

Simultaneously with the market launch of the new BMW X1 xDrive28i in spring 2011, an M Sports package will make its debut in this series. It will be available for all engine versions of the compact BMW X model and comprises suspension, exterior and interior components specially developed for this model. These features further enhance the vehicle's sporty and agile driving qualities and give them a distinctive visual dimension as well. They include sports suspension calibration and 17-inch double-spoke M alloy wheels for even sharper driving dynamics. Alternatively, the M Sports package can be supplied with 18-inch double-spoke M alloy wheels.

The M Sports package for the BMW X1 also features an M Aerodynamics package, door sills with the "M" logo and BMW Individual High Gloss Shadow Line trim for the side window surrounds and roof rails. Also available in conjunction with the M Sports package are the metallic exterior paint colours Alpine White, Le Mans Blue, Sapphire Black, Space Grey, Vermillion Red and Mineral White.

Sports seats upholstered in cloth/alcantara, an M leather-trimmed steering wheel with multifunction buttons and an M footrest for the driver add to the driving pleasure when the BMW X1 is equipped with the M Sports package. The high-end sporty theme is capped off by a BMW Individual roof liner in Anthracite, dark cross-brushed aluminium interior trim, the M gearshift lever for vehicles with six-speed manual transmission and a leather handbrake lever gaiter.

Specifications.

BMW X1 xDrive28i.



BMW X1 xDrive28i		
Body		
No. of doors/seats		5 / 5
Length/width/height ¹⁾ (unladen)	mm	4454 / 1798 / 1545
Wheelbase	mm	2760
Track, front/rear	mm	1500 / 1529
Turning circle	m	11.8
Tank capacity	approx. l	63
Cooling system incl heating	l	8.2 (8.5)
Engine oil ²⁾	l	5.75
Weight, unladen, to DIN/EU	kg	1580 (1595) / 1655 (1670)
Max load to DIN	kg	550
Max permissible weight	kg	2130 (2150)
Max axle load, front/rear	kg	1015 / 1175
Max trailer load, braked (12%/unbraked)	kg	2000 / 750
Max roof load/towbar download	kg	75 / 80
Luggage comp capacity	l	420 – 1350
Air drag	c _x x A	0.33 x 2.34
Engine		
Configuration/No of cyls/valves		R / 4 / 4
Engine technology	BMW TwinPower Turbo technology with twin-scroll charging, High Precision Injection direct petrol injection, VALVETRONIC fully variable valve control, double-VANOS fully variable camshaft control	
Effective capacity	cm ³	1997
Bore/stroke	mm	90.1 / 84.0
Compression ratio	:1	10.0
Fuel grade		min RON 91
Output	kW/hp	180 / 245
at	min ⁻¹	5000
Torque	Nm	350
at	min ⁻¹	1250
Electrical system		
Battery/Installation	Ah/–	80 (70) / luggage comp
Alternator	A/W	170 / 2380
Driving dynamics and safety		
Suspension, front	Double-joint spring-strut thrust bar axle	
Suspension, rear	Five-arm axle with longitudinal control arm and double wishbone	
Brakes, front	Single-piston frame calliper disc brakes	
Diameter	mm	330 x 24 / vented
Brakes, rear	Single-piston swing calliper disc brakes	
Diameter	mm	330 x 20 / vented
Driving stability systems	Standard: DSC incl ABS and DTC (Dynamic Traction Control), CBC (Cornering Brake Control), DBC Dynamic Brake Control, Dry Braking function, Fading Compensation, DSC integrated with xDrive all-wheel drive, HDC (Hill Descent Control); optional: Performance Control	
Safety equipment	Standard: Airbags for driver and front passenger, side airbags for driver and front passenger, head airbags front and rear, three-point inertia-reel seatbelts on all seats with belt latch tensioner and belt force limiter in the front, crash sensors, Tyre Defect Indicator	
Steering	Rack-and-pinion power steering, optional: Servotronic	
Steering ratio, overall	:1	18.5
Tyres, front/rear	225/50 R17 94H	
Rims, front/rear	7.5J x 17 LM	

BMW X1 xDrive28i

BMW ConnectedDrive

Comfort	Optional: BMW Assist incl inter alia Enquiry Service, remote-control functions and V-Info+ (Traffic Info plus), BMW TeleServices, integration of mobile devices
Infotainment	Optional: internet access, BMW Online incl inter alia Park Info, National Info, Google Local Search, News, Realtime Weather, BMW Routes, Office functions, Bluetooth Audio Streaming and Online Update Music Tracks
Safety	Optional: Adaptive Headlights with cornering lights, High-Beam Assistant, Park Distance Control, rear-view camera, Cruise Control with braking function, Automatic/Advanced Emergency Call

Transmission

Type of gearbox	Six-speed manual (optional: eight-speed automatic with Steptronic)		
Gear ratios	I	:1	4.110 (4.714)
	II	:1	2.315 (3.143)
	III	:1	1.542 (2.106)
	IV	:1	1.179 (1.667)
	V	:1	1.000 (1.285)
	VI	:1	0.846 (1.000)
	VII	:1	– (0.839)
	VIII	:1	– (0.667)
	R	:1	3.727 (3.295)
Final drive		:1	3.385 (3.154)

Performance

Power-to-weight ratio	kg/kW	8.8 (8.9)
Output per litre	kW/l	90.1
Acceleration	0–100 km/h	6.1 (6.5)
	0–1000 m	26.4 (26.8)
in 4th/5th gear	80–120	6.0 / 7.1 (– / –)
Top speed	km/h	240 (240)

Offroad specifications

Overhang angle, front/rear	°	18.0/21.5
Ramp angle	°	16.8
Ground clearance unladen	mm	194

BMW EfficientDynamics

BMW EfficientDynamics standard features	Brake Energy Regeneration, Optimum Shift Indicator and Auto Start-Stop function (manual gearbox), on-demand operation of ancillary units, final drive with optimised warm-up running qualities, intelligent lightweight design, map-controlled oil pump
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Fuel consumption EU

Urban	l/100 km	9.9 (10.4)
Extra-urban	l/100 km	6.7 (6.4)
Combined	l/100 km	7.9 (7.9)
CO ₂	g/km	183 (183)
Emission rating		EU5

Insurance group

KH / VK / TK	3 ¹⁾
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Specifications apply to ACEA markets; data relevant to homologation applicable in part only to Germany (weights, top speed)
Figures in brackets apply to automatic transmission

- 1) Height including roof antenna
- 2) Oil change
- 3) Data not yet available