

1. The new BMW 3 Series Saloon: Unique Dynamics, Product Substance and Efficiency. Short Story.

Car fans and aficionados everywhere have something great to look forward to next spring: The new BMW 3 Series is making its world debut at the Geneva Motor Show.

Now entering its fifth generation, the BMW 3 Series is once again pushing up the benchmark. Acknowledged for 30 years as the best car in its class, the 3 Series comes with a wide range of innovative, hands-on progress on the engine and suspension, and in terms of motoring comfort.

World debut with four new engines.

The new BMW 3 Series is entering the market with three petrol engines and one diesel. All four of these power units offer a significant increase in output, performance, motoring refinement, and economy. And each of them is a highlight in itself.

Six-cylinder with extra-light magnesium crankcase.

Developing maximum output of 190 kW/258 bhp, the six-cylinder in the top-of-the-range model outperforms its predecessor by a significant 20 kW/27 bhp. Maximum torque of 300 Nm (221 lb-ft) comes consistently between 2,500 and 4,000 rpm. This is the most powerful and lightest six-cylinder in its segment.

To reduce the weight of the engine to an absolute minimum, BMW is using magnesium for the first time in volume production, with weight down by 30 per cent versus aluminium. Both the crankcase as well as the crankshaft bearings and the cylinder head cover are all made of this sophisticated ultra-light material.

Another new feature in the six-cylinder is VALVETRONIC masterminding the opening times and lift of the intake valves infinitely as a function of the gas pedal position. The result is even more efficient use of the fuel injected into the engine, with engine response being even more spontaneous than before. This technology comes hand-in-hand with double-VANOS variable camshaft adjustment for the intake and outlet valves. The new BMW 330i accelerates to 100 km/h in 6.3 seconds and its top speed is limited to 250

km/h or 155 mph. Fuel consumption in the composite EU cycle is 8.7 litres/100 km equal to 32.5 mpg Imp.

The BMW 325i is also making its debut in spring 2005: Maximum output is 160 kW/218 bhp at 6,500 rpm, maximum torque 250 Nm/184 lb-ft between 2,750 and 4,250 rpm. Engine displacement, as the model designation indicates, is 2.5 litres.

BMW 320i with high-performance four-cylinder power unit.

The new BMW 320i is the most powerful four-cylinder in the range. Based on the two-litre straight-four so far featured in the BMW 318i, this power unit is also equipped with VALVETRONIC and dual-VANOS variable camshaft adjustment, developing maximum output of 110 kW/150 bhp at 6,200 rpm and maximum torque of 200 Nm/147 lb-ft at 3,600 rpm. This accelerates the BMW 320i from 0–100 km/h in 9.0 seconds and gives the car a top speed of 220 km/h or 136 mph. Fuel consumption in the composite EU cycle is 7.4 litres/100 km or 38.2 mpg Imp. This increase in performance over the previous engine already acknowledged as very dynamic is attributable to detailed optimisation of the intake and exhaust ducts.

The range of petrol engines in the BMW 3 Series will naturally be enlarged step-by-step, a “basic” four-cylinder supplementing the line-up in autumn 2005.

The 320d continuing the successful story of the Sports Diesel.

In the BMW 320d diesel turns into pure dynamics. Featuring BMW's second-generation common-rail technology as well as an exhaust gas turbo-charger with variable turbine geometry, this outstanding four-cylinder develops supreme output of 120 kW/163 bhp and equally supreme torque of 340 Nm/251 lb-ft at 2,000 rpm. In terms of both drive comfort and dynamic performance, the 320d is definitely “best in segment”.

The car's acceleration obviously reflects this superior power, with acceleration from 0–100 km/h in 8.3 seconds. Top speed is 225 km/h or 140 mph, and fuel consumption in the composite EU cycle a mere 5.7 litres/100 km or 49.6 mpg Imp. And it goes without saying that the BMW 320d complies in full with the EU-4 emission standard.

Six-speed gearboxes on all models.

All models come as standard with manual six-speed transmission or, as an option, with six-speed automatic. Benefitting from the additional gear, the closer gear ratios, as well as the larger increment between the smallest

and largest gear, the driver is able to shift gears at exactly the right point for a smooth, ongoing surge of engine power. This is a particular advantage when setting off, with first gear being laid out for more muscle, traction and pulling force. In all, the new BMW 3 Series is more dynamic, accelerates more quickly, and offers an even higher top speed. And all this is on less fuel than before.

Starting the engine at the touch of a button.

A new feature in the midrange segment is that the driver, benefitting from the comfort start function, just has to briefly press the starter button in order to fire the engine. Everything else is automatic, all processes continuing by themselves until the engine is running smoothly.

Top technology for even greater driving dynamics.

Taking up a great BMW tradition, the new BMW 3 Series naturally comes with all the characteristic features so typical of the brand – that is the engine fitted lengthwise, power going to the rear wheels, and perfect axle load distribution of 50:50. Clearly, all this makes a significant contribution to the superior agility of the new BMW 3 Series.

The double-joint front axle newly developed for the 3 Series and made completely of aluminium ensures an optimum balance of driving dynamics and motoring comfort. Two of its strongest points are superior tracking stability and particularly low roll noise. And despite its low weight, the aluminium front axle is very stiff and stable.

The five-arm lightweight-steel rear axle is the optimum guarantee for supreme agility and sports handling, ensuring precise wheel guidance and a very high standard of roll comfort.

Active Steering: unique in this segment.

For the first time in the midrange segment, the customer has the choice of BMW Active Steering in the six-cylinder models of the new BMW 3 Series as an option. The big advantage of this modern concept is a more direct steering transmission ratio at low speeds and a more indirect ratio at high speeds, thus providing the ideal solution to the old conflict of interests with a conventional steering between agility, stability, and motoring comfort. In the new

BMW 3 Series this superiority is further enhanced by a significant everyday benefit: Applying the brakes on surfaces varying in their frictional coefficient, such as roads with patches of ice, snow and asphalt, Active Steering,

intervening actively in the car's steering mechanism, stabilises the vehicle more quickly and precisely than a normal driver in such a situation.

Latest-generation DSC.

DSC Dynamic Stability Control featured here in its latest generation also ensures extra safety on the road. In addition, DSC on the six-cylinder models comes with further useful functions such as dry-braking the brake discs on wet roads or brake standby by pre-setting the brake linings for a quick, smooth and firm response. And now the system also prevents the car from rolling

back when setting off on an uphill gradient and avoids that usual "dive" effect when braking shortly before the car comes to a standstill.

As a result, BMW's Sports Saloon now offers even greater leadership in driving dynamics.

ACC Active Cruise Control: the sheer pleasure of being driven.

ACC Active Cruise Control is far more than just a conventional cruise control system, since it is able to consistently monitor traffic conditions and respond accordingly: Featuring a radar distance sensor, ACC monitors the distance to the vehicle ahead and adjusts the car's speed as well as its distance in specific, pre-selected levels. This makes ACC simply ideal in traffic flowing along at a consistent speed with moderate vehicle density, ACC automatically accelerating the car to the driver's desired speed regardless of external factors and without requiring the driver to intervene.

This speed

is then consistently maintained and, when necessary, reduced accordingly.

To benefit from this superior comfort, all the driver has to do is set the speed he would like to have by pressing the appropriate control button.

This saves and maintains the speed desired until the driver intervenes by giving gas or applying the brakes.

Distinctive design profiling the 3 Series as a dynamic and elegant saloon.

In its design language, the 3 Series makes a powerful statement as a unique, self-confident, dynamic and elegant sports saloon. The new car comes

right in the middle of BMW's modern design spectrum, matching the design language of the BMW Z4 or the BMW 1 Series, on the one hand, with the elegance of the 5 and 7 Series, on the other. Characteristic features are the short overhangs, the greenhouse moved far to the back, as well as the long engine compartment lid. Significantly larger both outside and inside, the

interior is bright, spacious and generous, reflecting the lifestyle of its target group. In facts and figures, the overall length of the new 3 Series is 4,520 millimetres or 180.0" (+ 49 mm/1.9" over the former model), width is 1,817 millimetres or 71.5" (+ 78 mm/3.1") and height 1,421 millimetres/55.9" (+ 6 mm/0.2"). Wheel base measures 2,760 millimetres/108.7" (+ 35 mm/1.4").

Shaping up the body: lighter, stiffer, safer.

Even stiffer but at the same time lighter than before, the body of the new model makes a significant contribution to the perfect concept harmony of the BMW 3 Series. In this case, "intelligent" lightweight construction means the specific use of enhanced steel and steel-forming technologies. The support bar concept for the car's load-bearing structure increases body stiffness by 25 per cent overall, without increasing the weight of the new model over that of its predecessor.

In collisions from the side: the safest 3 Series the world has ever seen.

Through its design and configuration, the new BMW 3 Series is built for best results in the EuroNCAP crash test. And it is one of the first cars fully prepared for the extremely strict side-impact requirements in the USA as well as the US high-speed rear-end crash test.

Apart from the optimised belt systems, the occupant safety system comes as standard with no less than six airbags: the driver, front passenger, hip, thorax, and curtain head airbags.

Proven technology for extra safety.

Apart from dual halogen headlights featured as standard, the customer also has the choice of bi-xenon headlights with or without the adaptive headlight function with the lights able to "look round" a bend: Boasting this adaptive lights concept, the bi-xenon headlights ensure optimum illumination of the road ahead by consistently and dynamically adjusting the headlight beam to the course of the road and current driving conditions, offering the driver a significant improvement in visibility. This is a particular benefit in bends, with the headlights dynamically following the road and, quite literally, "showing the driver the way", as if by magic.

Also featured as standard, the two-stage Brake Force Display enlarges the brake light area whenever the driver applies the brakes hard or when the ABS anti-lock brake function cuts in. Motorists following from behind will intuitively perceive this as an emergency braking manoeuvre, applying the

brakes

hard themselves and minimising their stopping distance in the process.

As a further highlight, the new BMW 3 Series comes as standard with runflat tyres enabling the driver to go on after a puncture for up to 250 kilometres or 155 miles at a speed of up to 80 km/h or 50 mph.

Clever solutions in the interior: premium-class space and comfort.

The interior is both modern and harmonious all in one, the generous ambience creating a feeling of controlled dynamics and lightness.

So the driver and his – or her – passengers clearly feel the two characters combined so harmoniously by the BMW 3 Series: that of a comfortable midrange saloon and that of a sports driving machine.

Harmonious integration of functions for the driver and passengers.

Reflecting that typical BMW standard, the cockpit is clearly structured and oriented to the driver. The driver zone presents all data and information required for driving purposes clearly and without the slightest risk of confusion. The central area, in turn, serves as the comfort zone within perfect reach for both the driver and front passenger.

Good seats mean good motoring.

The BMW 3 Series offers particularly the driver an absolutely excellent seating position with equally excellent side support. Available as an option, the sports seats come complete with backrest width adjustment like in the BMW M3, the backrests thus adjusting in width to the occupant's body, the standard of motoring comfort required, and the driver's style of motoring.

With the BMW 3 Series being a particularly versatile car, the storage and luggage compartment concept must be equally versatile and demanding. Even in standard trim, therefore, the 3 Series comes with practical storage boxes and compartments within easy reach of the driver and front passenger. An additional storage package offers the passengers at the rear all the space they need, and the luggage compartment has been enlarged in size to 460 litres or 16.1 cubic feet. A retracting drawer beneath the parcel shelf featured for the first time in a BMW can be easily removed within a matter of seconds, should the driver and his passengers ever require the full space available within the boot.

Optimum heating and climate comfort.

The new BMW 3 Series has the fastest air conditioning throughout its entire segment, warming up and cooling the interior more quickly than in any other comparable car. Optimum comfort in controlling the system is offered

by automatic air conditioning available as an optional extra, providing exactly

the temperature desired very quickly and without the slightest draught, then maintaining this climate consistently and without any fluctuations. And last but certainly not least in this context, the new 3 Series is the first car in its class to feature both sunblinds on the rear side windows and an electrically operated sunblind on the rear window.

Easy control and high information density.

The new BMW 3 Series stands for optimum control and ergonomics.

Major features such as the air conditioning and radio are within convenient and easy reach for safe and comfortable control. Complex systems with a high level of information density, in turn, are masterminded by BMW iDrive linked directly to the navigation unit and featuring an easy-to-read display placed ideally beneath a binnacle in the middle of the instrument panel.

Presenting the functions of nearly all assistance and communication systems, the Display comes with a main menu subdivided into four functions: Communication, Navigation, Entertainment, and Climate Control. Depending on the car's level of equipment, the driver is able to operate the sub-functions within each of these areas on different levels, using the Controller to select

the individual function areas and navigate within the menus. And apart from the Controller, the driver also has the choice of voice entry with an enhanced communication dialogue as well as additional control functions all at his disposal.

Multifunction steering wheel with extra buttons for individual options.

The multifunction steering wheel is a separate assistance system with its own independent functions: Various buttons arranged ergonomically on the steering wheel allow the driver to control and activate major functions as required. And in conjunction with iDrive he is also able to freely program two extra buttons as a special feature never seen before in the midrange segment.

Opening the door and starting the engine without an ignition key.

With iDrive putting an end to the multitude of buttons and switches in the cockpit so typical of a conventional car, Comfort Access available as an option takes the place of a conventional ignition key: The straight-edged key referred to in this case as the 'ID sensor' allows the customer to access the car and start the engine without even having to hold the key in his hand. In conjunction with the Key Memory functions it serves furthermore to adjust the seat position, the mirrors, automatic air conditioning and even the

radio station chosen in advance according to pre-programmed driver wishes, to name just some of its functions.

Infotainment systems carried over from the luxury performance class.

The information and entertainment equipment featured by the new BMW 3Series comes straight from BMW's luxury performance range. As an example, the customer has the choice as an option of both the Business or Professional navigation systems, both based on DVD data. The optional Professional LOGIC7 HiFi system, in turn, offers audio quality with all surround sound features.

In conjunction with the telephone also available as an option, the driver is able

to use all BMW Assist services in the interest of extra comfort and safety: the emergency call function, BMW breakdown assistance, BMW Info, traffic information, as well as mobility-related enquiry services.