

# Sales Leaflet for the European 1995 E34 M5



## The BMW M5



The particular strength of a modern, up-to-date solution lies in the particular interaction of the high-performance power unit, the outstanding suspension, and the new, revolutionary brake system. Where the performance of a sports car is combined in everyday motoring with the comfort of a luxury saloon.

The power unit of the BMW M5 proudly bears the heritage of the legendary M1 now improved even further by a wide range of technical modifications and the most advanced engine electronics. All this has already made the power unit of the BMW M5 a legend in the world of motorsport. The roots of this unique achievement in engine technology rest firmly in the world of motorsport.

A masterpiece in technology from BMW M GmbH: the intake system with three-stage resonance control. The air collector is split up into two chambers connected with one another by a butterfly adjusted electromechanically as a function of engine speed and load. This varies the length of the intake system, as if it consisted of several intake pipes changing in length according to individual requirements. The impressive result is extremely high torque from very low engine speeds.

Connoisseurs the world over are thrilled by what our engineers are able to get out of this 3.8-litre straight-six power unit. Developing a specific output of almost 66 kW or 90 bhp and more than 105 Nm or 77 lb-ft of torque per litre, the M5's high-performance power unit has set new standards in the world of natural-aspiration en-

gines. Two of the technologies which make this possible are the latest generation of Digital Motor Electronics and the middle system with six individual throttle butterflies. Four valves per cylinder with the spark plug positioned right in the middle ensure an optimum cylinder charge, excellent output and torque throughout the engine's entire speed range, and a standard of fuel economy quite amazing for a car of this calibre. Running smoothly is further refined by the solid-state high-tension ignition comprising no less than six individual coils. And BMW's special Stop-and-go control enables you to enjoy supreme smoothness and unique power even at very low speeds.

Controlled by DME, the solid-state distributor system, a separate coil for each spark plug. The result is even greater fuel efficiency thanks to the improved combustion process plus optimum reliability and freedom of maintenance of all energy-distribution components.

Hot-wire air mass metering ensures exactly the right fuel injection regardless of altitude and exterior temperature. And when the air volume is metered, this sophisticated system is even able to consider changes in air density caused by varying temperatures and different elevations. Even when driving high up in the mountains, therefore, the engine responds spontaneously to even the slightest movement of the accelerator and maintains all its superior power.

The M5 power unit features no less than six individual throttle butterflies each located as closely as possible to the intake valves to provide a rapid response to the accelerator pedal, a result, immediate engine response.

Technology Guide

The latest generation of Digital Motor Electronics (DME 3.3) ensures a virtually rigorous control of all primary functions such as the ignition and fuel injection as well as equally efficient control of numerous auxiliary functions. The result is a combination of extremely high torque and engine output with surprising fuel economy and highly efficient emission control.

On-board diagnosis is one of DME's virtually rigorous functions. Its job is to detect even the slightest deficiency immediately, before it can cause any damage. Defect reports are memorised electronically and can then be retrieved on the screen of the BMW Service Information system, thus reducing the cost of maintenance.

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Developed especially for the M5, the adaptive M suspension automatically adjusts to changing requirements and driving conditions, with functions of a second 3 transfer makes allowance for the road surface, the current position of the car (for example, whether you're driving straight ahead or round a bend), road speed and the load carried. All data are determined by five sensors, processed by a control unit and transmitted as electronic instructions to the four dampers to ensure an optimum damping effect at all times. Accordingly, the dampers are softer when cruising over long distances and firmer when starting off or in fast, dynamic situations on the road.

Using the Nürburgring suspension package, all you do is press a button to choose the suspension tuning you prefer. Program P gives you automatic damper adjustment on the adaptive M suspension. S maintains a firmer, more dynamic setting regardless of driving conditions. Roadholding in bends is also improved to an even higher standard by the reinforced anti-roll bar on the rear axle.

The limited-slip differential on the M5 ensures even better traction, minimising wheel slip on the drive wheels, for example, when setting off on a slippery surface or taking a bend at high speeds. As soon as the amount differs by a certain amount from right to left, a multiple-plate brake temporarily diverts up to 25 per cent of the power on the spinning wheel to the opposite wheel, maintaining the car's driving stability even in the most extreme bends.

Never seen before on any standard-production high-performance car anywhere: the supreme brake system of the BMW M5 with discs measuring 345 x 32 mm (13.58 x 1.26") at the front and 328 x 20 mm (12.91 x 0.79") at the rear. Taken straight from the race track with all the virtues of such race-bred brakes: virtually no fading even under the most extreme conditions, superb brake power in every situation, and a very long service life thanks to the use of the very best materials also able to save weight for optimum smoothness and refinement.

What is the best way to get 250 kW or 340 bhp safely on the road? The answer lies with a suspension which has already proven its qualities on one of the toughest test tracks in the world - on Nürburgring, where we have our own test centre. Precisely this is where the adaptive M suspension has proven its safety tried and tested in many races. For it adjusts the damping effect on each wheel automatically to changes in road speed, road surface, and the load the car is carrying. Then the self-levelling system and the limited-slip differential with 25 per cent locking action ensure additional stability. As a result, the M5 is very safe and forgiving even in extreme situations, combining a sure-footed response with a level of dynamism and safety very difficult to match. And you still ride with optimum comfort at all times, wherever you go. Then, should you prefer a firm sports setting maintained consistently, just press a button and the Nürburgring suspension package fits as standard to its sports trim.

The six-speed manual gearbox allows you to make even more of your M5's superb power reserves, using the optimum gear with optimum torque up to the highest revs which you can ever travel. Sixth gear is a genuine driving gear, the remaining five gears having a somewhat "shorter" ratio than on a five-speed gearbox. As a result, the M5 is now even more flexible in all gears, offering even greater pleasure of dynamic motoring and allowing you to save a lot of fuel even at high speeds by running the engine at low revs.

The high-performance brake system of the M5 is manufactured by a method never seen before in large-scale automobile production. The brake system consists of a multi-component disc with radial bearings for the ring around the disc, whereas conventional brakes are made of one single piece of grey-cast iron. With this conventional design, friction heat generated while applying the brakes is stored at the edge and dissipates only slowly. The "floating" system on the M5, however, allows the brake disc to expand freely as a function of temperature, multi-piece design enabling us moreover to use different materials depending on specific requirements. This means that this system always offers the very best material and properties for each specific purpose. The result is a significant increase in service life and a substantial reduction in weight, even better motoring refinement and, of course, superb brake power and deceleration.

Beautiful perspectives offer you a thrilling experience inside the BMW M5 as soon as you take your seat. Pampered by the ambience of a hand-built luxury car, you will be fascinated by an interior which excels through consistent driver-oriented design to the last detail, supreme quality of finish, and first-rate exclusivity all round.

Hand-picked quality: In the BMW M5 you enjoy the ambience of a luxury saloon hand-built by specialists committed to the highest and strictest standards. For precisely this excellence in maintenance a certain care is needed to reflect our concept of the perfect car. The same supreme

Body-contoured sports seats ensure excellent support without in any way limiting your freedom of movement. With perfect ergonomic design and an outstanding combination of the very best materials: The seats are finished in the middle by the finest upholstery with an active breathing effect, the side strips and headrests are upholstered in Amaretta™.

Driver-oriented design also appealing to your emotions: Right in front of you: the hand-sewn leather airbag steering wheel, behind it

BMW's typical instrument cluster with displays for the Service Interval Indicator, Check/Control, and on-board computer. Just one look and you take in all the information you need. Next to this primary control area comes the electronically managed heating and ventilation system with separate control by the driver and front passenger. Convenient, easy to use, and with all the functions you rightly expect of a BMW.

The on-board computer offers a kind of helpful information - for example the outside temperature and your average road speed - and tells you, for example, when you will be arriving at your destination. If you wish, it can also secure your car by a code preventing unauthorised use, and it offers a timer function. All information can be retrieved directly on the on-board computer itself or by a button on the direction indicator lever, then being presented in the on-board computer display in the centre console and in the instrument cluster.

Check/Control monitors important vehicle functions for their perfect condition, showing you immediately when anything is not working perfectly (in the case of important lights even when they are switched off), information is displayed in the instrument cluster with a separate acoustic signal depending on the priority of the information given.

In frontal collisions the driver airbag protects your head and upper body. As soon as a collision sensor registers a certain impact level, sensors on the airbag inflator, inflating the airbag within fractions of a second. Whenever the car is fitted with a passenger airbag, always make sure that your passenger is wearing his seat belt and is sitting at an adequate distance from the glove compartment.

To avoid unnecessary expenditure, the front passenger seat is fitted with a seat occupation detector ensuring that the passenger airbag will only be activated when necessary. Please note that under no circumstances should small children or child seats be placed on the front seat if a passenger airbag is fitted.

The belt latch tensioner makes sure that the belt rests firmly on your body in the event of a collision. Within fractions of a second the belt latch is pulled back by means of a spring, the shoulder and lap belts being tightened simultaneously.

Standard equipment.

Safety

- Airbag for driver
- All-round parking protection
- All-round rustproofing by partial galvanising, phosphate coating and cathodic dip bath
- Anti-lock brake system (ABS)
- Aluminum-free clutch and brake linings
- Automatic belt height adjustment at the front

Brakes

- Disc brakes at the front, inner-vented, 345 x 32 mm (13.58 x 1.26")
- Disc brakes at the rear, inner-vented, 328 x 20 mm (12.91 x 0.79")
- High-performance brake system with floating brake ring
- Drumple units at the front, plastic bumpers front/rear regenerating to their original shape in collisions up to 4 km/h (2.5 mph)
- Crumple zones with predetermined deformation, integral side impact protectors, roof crossbar
- Ergonomic belt system at the rear with belt latches at the outside
- Extremely rigid all-steel bodyshell welded to the floor assembly
- Headrests at the rear
- Inertia-reel seat belts at the front with belt latch tensioner and belt clamp
- Power-assisted steering
- Safety steering column

Power unit

- Digital Motor Electronics (DME 3.3) with hot-wire air mass metering
- Fully sequential fuel injection and cold start control
- Intake system with three-stage resonance control and individual butterfly management
- On-board diagnosis
- Dual-mass crankshaft running in 7 bearings
- Separate exhaust pipes for each metallic catalytic converter, heated oxygen sensor, activated carbon filter, controlled-lambda purge
- Six-cylinder in-line engine, four valves per cylinder

Transmission/suspension

- Adaptive M suspension
- Double-joint spring strut front axle
- Double-elastic rear axle mounts
- Forged 18-inch light alloy wheels in M parallel-spoke styling, 8 J x 18 at the front and 9 J x 18 at the rear (no snow chains and winter tyres)
- Nürburgring suspension package with reinforced anti-roll bar at the rear
- Precision-arm rear axle with auxiliary control arm for exact, three-dimensional rear wheel geometry, anti-roll arms
- Self-levelling rear axle
- Five-speed manual gearbox
- Two-speed flywheel
- Two-stage gas pressure shock absorbers at the front

Exterior features

- Directional headlights, low beams in ellipsoid technology
- Engine compartment and luggage compartment lids supported when open by gas pressure springs
- Foglamps in ellipsoid technology
- Green Heat insulating glass all round

Headlamp cleaning system

- Metallic paint
- Rear-view mirrors, bumpers and side-sills finished in body colour with contrasting colour at the bottom
- Rear-view mirrors, screenwasher jets and driver's door lock electrically heated

Interior features

- Air conditioning with microfilter
- Automatic dimming interior rear-view mirror
- Check/Control with display of functional instrument cluster (alphanumeric)
- Courtesy lights with automatic dimming function and map reading lights at the front
- Electrically adjustable rear-view mirrors
- Electric fitting/sliding sunroof
- Electric window lifts front and rear with fingertip control
- First aid kit and warning triangle
- Folding centre armrest on rear seats
- Gearshift lever knob (with illuminated shift diagram) and gater, handbrake lever handle and gater all finished in leather
- Headrests at the front, adjustable for height and angle
- Interior light delay
- Leather M steering wheel with airbag at no extra cost
- LIGHTS ON? warning
- Luggage compartment capacity 460 ltr (163 cu ft) (measured to VDA standard)
- Map reading lights
- Microfilter
- On-board computer with integral exterior temperature display, digital clock and auxiliary ventilation
- Rear seat reading lights
- Service Interval Indicator
- Ski bag
- Sports seats at the front adjustable for height and angle and with adjustable thigh support
- Steering wheel adjustable for reach
- Top-quality seat upholstery combined with Amaretta™
- Upper half of instrument cluster with soft skin surface
- Vanity mirrors in sun visors, illuminated and with sliding covers, for driver and front passenger

Security

- Central locking with deadlock and crash sensor
- Engine immobiliser
- Visible chassis number on dashboard

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- Aluminum-free clutch and brake linings
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Exterior features

- Directional headlights, low beams in ellipsoid technology
- Engine compartment and luggage compartment lids supported when open by gas pressure springs
- Foglamps in ellipsoid technology
- Green Heat insulating glass all round

Headlamp cleaning system

- Metallic paint
- Rear-view mirrors, bumpers and side-sills finished in body colour with contrasting colour at the bottom
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