

The BMW 1 Series M Coupe. Table of Contents.



1. Overview.	2
2. Design: Athletic in shape, intelligent in detail.	5
3. Drivetrain: Top performance redefined.	10
4. Chassis: Pure power turns into fascinating performance.	15
5. Interior, controls and equipment: Concentrated M feeling.	19
6. Technical specifications.	23
7. Driving performance and torque diagrams.	25
8. Exterior and interior dimensions.	26

1. Overview.

The latest offering from BMW's high performance M Division, the highly-anticipated new BMW 1 Series M Coupe, has arrived on Australian shores.

In a sign of the excitement surrounding the latest BMW M car, all of the initial 100 cars allocated to Australia from a limited global production run have already been pre-sold to quick-off-the-mark customers.

BMW Australia has since secured an additional 100 cars, all of which have been allocated to dealers, who are known to have lengthy customer waiting lists.

BMW Group Australia Managing Director Phil Horton, said that the BMW 1 Series M Coupe is an instant classic.

"This is a return to what BMW has always done best: building the perfectly balanced sports coupe," said Mr Horton.

"There would be few cars on the road that could offer as much sheer driving pleasure," he said.

Based on BMW's highly-successful 1 Series Coupe, the BMW M car gains a wider, more muscular stance, with trademark BMW M design motifs such as M side 'gills', quad exhausts, and sculpted, flared wheel arches.

The BMW 1 Series M Coupe features an in-line 6 cylinder engine boasting twin turbo parallel turbo charging with two exhaust turbo chargers of identical size. Based on BMW's multi award-winning three-litre engine, this BMW M power plant sees an increase in engine output to 250kW. 450 Nm of torque is available from just 1500 rpm, with an additional 50 Nm on tap by means of an overboost function.

The BMW 1 Series M Coupe sprints to 100km per hour in just 4.9 seconds. Combined fuel consumption is 9.6 litres over 100 kms, and CO2 emissions are a mere 224 grams per kilometre.

A newly developed six-speed transmission has been specially designed to interact with the high torque engine, yet weighs just 43 kilograms, making it far lighter than conventional transmissions.

The chassis technology of the BMW 1 Series M Coupe is derived directly from motorsport. Components originally developed for the BMW M3 have been modified and fine-tuned in extensive testing on the Nurburgring. The double joint rear axle and five-link rear suspension are made almost entirely of aluminium.

The BMW 1 Series M Coupe comes with a variable M differential lock on the rear axle as standard. With up to 100% locking power, drive torque is distributed as required and offers maximum acceleration when exiting a corner.

The M specific high performance compound brake system (360 mm front and 350 mm rear) provides strong durability under maximum load while being extremely lightweight. Derived from race car technology, the braking system on the BMW 1 Series M Coupe ensures impeccable deceleration with significantly reduced susceptibility to fading.

The BMW 1 Series M Coupe features BMW M's trademark 'M Dynamic Mode', which is activated through a button on the instrument panel. This ensures a higher threshold before DSC interventions occur. M Dynamic Mode enables exceptional handling through corners with deliberate drifting abilities.

The BMW 1 Series M Coupe offers a particularly high standard specification in Australia. Standard features include professional navigation, voice control, internet, remote alarm system, adaptive xenon headlights, harman kardon surround sound system, M servotronic, M Drive, and 19" M light alloy wheels.

The BMW 1 Series M Coupe is available in three exterior paint finishes, Alpine White, Sapphire Black and Valencia Orange, which is unique to this model. Black Boston leather is the standard upholstery.

Fuel saving technologies from BMW's EfficientDynamics technology stable, all of which are standard on the BMW 1 Series M Coupe, include brake energy regeneration, high precision injection and needs-based control of auxiliary units.

The BMW 1 Series M Coupe is priced at \$99,900* with customer deliveries due to take place from June 2011.

BMW 1 Series M Coupe:

in-line 6-cylinder petrol engine with
M TwinPower Turbo and direct injection,
capacity: 2979 cc, output: 250 kW/340 bhp at 5 900 rpm,
max. torque: 450 Nm (with overboost: 500) at 1 500 – 4 500 rpm,
acceleration [0 – 100 km/h]: 4.9 seconds,
acceleration [0 – 200 km/h]: 17.3 seconds,
maximum speed: 250 km/h,
average fuel consumption according to EU: 9.6 litres/100 kilometres,
CO₂ emissions according to EU: 224 g/km, exhaust gas norm: EU5.

2. Design: Athletic in shape, intelligent in detail.



- **Design: classic coupe proportions, M-style aesthetic appeal.**
- **Optimised aerodynamics due to innovative air curtains.**
- **M-exclusive design features: large air inlets, powerfully flared wheel arches, side gill elements, twin tailpipes, sports car ambience in the interior.**

With the new BMW 1 Series M Coupe, the fascinating driving experience offered by a high-performance sports car is brought to the premium compact segment for the very first time. Like every BMW M car, the BMW 1 Series M Coupe combines racing-oriented technology with functionality designed for everyday use and a characteristic visual appearance.

The dynamic proportions with which the BMW 1 Series Coupe proclaims a quality of driving pleasure unique within the competitive field provide the perfect foundation for the instantly fascinating appearance of the first ever high-performance model in the compact segment. With its long bonnet, short front overhang, rear-set passenger cell, long wheelbase and flowing transition of the roof line into a flat rear, the BMW 1 Series M Coupe has all the typical features of a BMW coupe. The realisation of these features in a vehicle of the compact class creates a distinctive overall impression which conveys activity and agility. Measuring 4,380 millimetres in length and 1,420 millimetres in height, the BMW 1 Series M Coupe is both the shortest and the flattest model in the BMW M GmbH range. It is also 55 millimetres wider than the BMW 135i Coupe: the width of 1,803 millimetres is the result and the expression of a track width at the front and rear axle optimised to enhance driving dynamics in a way which is specific to this model.

Clear sign of top-flight performance: powerfully shaped front apron with large-format air inlets.

The design of the front end reflects the outstanding power capabilities of the BMW 1 Series M Coupe. The powerfully shaped front apron forms a homogeneous surface, dominated in the lower section by three large-format air intakes. They secure the cooling air supply to the outstandingly high-capability in-line 6-cylinder engine. The wide central air intake is covered by a honeycomb-structured grille, while the two outer intakes are completely open and occupy the spaces in the front apron where the fog lights are housed in the BMW 1 Series Coupe. This means that in every situation on the road, a sufficiently large quantity of cooling air can be fed directly to the engine oil cooler on the right and to the radiator on the left.

The particularly striking design elements of the front end include the BMW radiator grille. It stands upright at the same level as the headlamps, its width identical to the side expansion of the central air intake. The grille's black bars provide another visual echo of the air intakes.

The BMW 1 Series M Coupe is fitted as standard with bi-xenon headlamps. The twin circular headlights characteristic of the brand are truncated in the upper section by an LED-fed positioning light. This is what creates the typical focussed look of the BMW 1 Series M Coupe.

Innovation for optimised aerodynamic properties: air curtains.

The characteristic aesthetic appeal of a BMW M model is primarily created by means of an authentic consistency between form and function. This applies equally to the structure of the front end - determined by the cooling air requirements of the drivetrain engineering - as it does to the aerodynamic optimisation of modified body elements. The BMW 1 Series M Coupe possesses a range of design features geared towards specifically influencing aerodynamic drag and downforce in dynamic driving situations in particular. These include a completely newly developed interior structure of the side air intakes in the front apron. The so-called air curtains, used here for the first time in a serial production vehicle, improve air ducting around the wheel arches with the effect of significantly reducing turbulence.

This innovative aerodynamic feature consists of openings in the outer section of the front apron which routes the in-flowing air into two ducts. They are

approximately 10 centimetres high and 3 centimetres wide and are designed so that the air flows along the inside of the front apron in a closed duct to the wheel arches, where it is discharged through a very narrow opening at high speed, just passing the outer wheel flanks. The escaping air stream covers the side of the front wheels like a curtain, thereby reducing aerodynamically unfavourable turbulence around the wheel arches: this is why they are referred to as air curtains.

The dynamic airflow which covers the front wheels effectively prevents air congestion and turbulence at the wheel arches. All in all, the air curtains thus significantly reduce aerodynamic drag.

The optimisation of air ducting in the area of the wheel arches creates especially high potential for optimising the vehicle's overall aerodynamic properties. This is why it has such a key role to play in the development of innovative aerodynamic measures. An example of the air curtain principle was first presented in the concept study BMW Vision EfficientDynamics at the International Motor Show (IAA) in Frankfurt in 2009, and the developers of the BMW 1 Series M Coupe took on the pioneering task of applying this element to a serial production vehicle. In so doing they were able to tap into the unique research and development facilities provided by the Aerolab at the BMW Group's new Aerodynamic Testing Centre, where true-to-scale vehicle models are tested under realistic conditions.

Side view: powerfully flared wheel arches, characteristic gill elements.

The typical proportions of a BMW coupe, striking features of a high-performance sports car and unmistakable stylistic elements of a BMW M model define the side perspective of the BMW 1 Series M Coupe. With the greenhouse conveying an impression of lightness, the powerfully distinctive shoulder line and the elaborately sculpted surfaces symbolise precisely controllable athleticism. The wheel arches of the 2-door model bulge out especially voluminously at both front and rear. This athletic appearance is functionally related to the wide track, which offers an ideal basis for optimised driving stability for highly dynamic cornering and fast changes in direction. One hallmark M feature is the chrome gill element on the front wheel arch which is particularly elongated. It bears both the side turn indicator and the

M brand logo, as well as forming the starting point of the bead line running via the door openers to the rear. What is more, a vertical contour edge starts at the gill element which leads down to the side sill, providing additional emphasis for the muscular contours of the wheel arches.

The side sills designed specially for the BMW 1 Series M Coupe also feature model-specific lines. Their horizontally oriented contour edge tapers off to the rear, thereby following the surface of the equally broadly flared rear wheel arch. The powerfully sculpted body sections above the front and rear axle reinforce the fascinating light and shade effects which are created by the alternating concave and convex surfaces.

Fine-tuning in the wind tunnel has also shaped the design of the exterior mirrors. With their horizontal contour edge and the outwardly tapered contour of the mirror caps finished in body colour, they add an extra touch of sporty flair. In their basic shape they are the same as those of the BMW M3. The BMW 1 Series M Coupe also features the black, dual-section mirror base in a model-specific design.

Rear design: width emphasised by means of horizontal lines.

The powerfully flared wheel arches also make the rear view of the BMW 1 Series M Coupe seem especially broad. The rear is structured by horizontally arranged lines which underscore this impression, while a discreet spoiler lip on the luggage compartment lid generates additional downforce on the rear axle at high speeds. A discreet indication of the vehicle's unique character is provided by the M brand logo, traditionally placed beneath the right rear light cluster on the luggage compartment lid.

The rear apron has side openings which echo the look of the air intakes in the front apron. An anthracite-coloured insert in the style of a diffuser shifts the visual focus towards the road. What is more, the characteristic M visual symmetry is created by chrome twin tailpipes, each positioned towards the outer edges.

L-shaped rear light clusters with homogeneous red glass covers create a characteristic night-time illumination. Inside these, the rear light is provided by two light banks fed by LED units. The light sources of the brake lights, arranged in an offset pattern behind them, generate an intense signalling

effect. The dynamic brake light is activated in the event of particularly abrupt deceleration, warning road-users to the rear by means of a flashing signal.

Exclusive exterior paint finish and 19-inch light alloy rims.

There are three exterior paint finishes to choose from for the BMW 1 Series M Coupe. In addition to Alpine White non-metallic and Sapphire Black metallic, the colour variation Valencia Orange is available exclusively for this compact high-performance sports car.

The standard 19-inch M light alloy wheels provide perfect road contact and a striking appearance. The light alloy wheels in Y-spoke design have already demonstrated their outstanding dynamic properties as part of the Competition Package for the BMW M3.

Interior design: perfect ambience for focused driving pleasure.

Regardless of the body colour selected, the interior is geared specifically towards a focused, proactive, sporty driving experience in terms of its design, colour concept and choice of materials. The interior concept developed exclusively for the BMW 1 Series M Coupe consists of an anthracite-coloured roof liner and an M-specific cockpit with grey dials, red points and white lighting for the circular instruments. What is more, a high-quality dark Alcantara covering for the door panels, interior strips, gearshift and handbrake lever gaiter and cockpit scoop emphasises the sports car style of the ambience.

The black sports seats in Boston leather have orange contrasting stitching and an M logo embossed in the front of each headrest. The contrast stitching is also echoed on the rear seats, the gearshift and handbrake lever gaiter as well as on other design elements featuring Alcantara. The M leather steering wheel features multifunction keys including the button for spontaneous activation of a sporty vehicle set-up.

The dominance of dark surfaces, including the A pillar trim, promotes concentration on the road. In combination with high-quality materials and selective colour accentuations, the interior of the BMW 1 Series M Coupe provides a remarkably harmoniously configuration and at the same time an exclusive ambience for unique driving pleasure.



3. Drivetrain: Top performance redefined.

- **In-line 6-cylinder engine with M TwinPower Turbo and direct injection, 250 kW/340 bhp, maximum torque with overboost: 500 Nm.**
- **Typical M characteristics with engine-speed-oriented power delivery, acceleration (0 – 100 km/h) in 4.9 seconds.**
- **6-speed manual transmission with M gearshift lever.**

An in-line 6-cylinder engine with outstanding performance figures, sensational free-revving properties and long-lasting thrust provides the BMW 1 Series M Coupe with its power source for delivering supreme driving dynamics. The concept has a familiar feel: in the model history of BMW M GmbH, the high-revving 6-cylinder power unit is one of the classic engine concepts. In the second and even the third generation of the BMW M3 its qualities provided a fascinating point of entry to the world of high-performance sports cars bearing the M logo. In the BMW 1 Series M Coupe, this well-proven engine concept is realised in its most up-to-date form.

The 3.0-litre power unit combines the typical M performance characteristics with contemporary efficiency. It possesses a wide range of high-quality detailed solutions and has been modified in M style so as to be able to handle the requirements of both everyday traffic and the race track. The result: with a maximum engine output of 250 kW/340 bhp, the BMW 1 Series M Coupe achieves almost exactly the level of the third-generation BMW M3, while in terms of driving dynamics this compact, top-flight athlete is clearly superior to the latter model, which was replaced just a few years ago. When compared directly on a test run at the Nürburgring Nordschleife - the ultimate test track for the development and set-up of all BMW models – the BMW 1 Series M Coupe comes out clearly in front.

Transfer of propulsion power from the M TwinPower Turbo engine in the BMW 1 Series M Coupe is taken care of by a 6-speed manual transmission. This newly developed transmission features dry sump lubrication and is operated by means of a very short M gearshift lever. With its precise control

and short shifts, the obligatory manual transmission perfectly underscores the purist, sporty character of the BMW 1 Series M Coupe.

M TwinPower Turbo and direct injection: more performance, less CO₂.

Spontaneous power delivery, long-lasting pulling power and a level of efficiency unequalled in this performance category are the characteristic features of the in-line 6-cylinder engine which powers the BMW 1 Series M Coupe. This wide range of qualities is achieved by means of M TwinPower Turbo Technology with direct petrol injection. The turbocharging system generates a power bonus which would only be possible in conventional naturally aspirated engines by increasing the number of cylinders and the size - in other words a much greater engine weight. By contrast, the engine of the BMW 1 Series M Coupe, as powerful as it is compact, is particularly light due to its aluminium crankcase, thereby contributing to a harmonious axle load distribution which promotes an agile drive response.

The M TwinPower Turbo Technology used in the BMW 1 Series M Coupe consists of two relatively small turbo-chargers which, because of their low inertia moment, are active even at low engine speeds, each providing three cylinders with compressed air. This results in an unusually spontaneous responsiveness. The turbo lag familiar from conventionally turbo-charged engines is eliminated, and instead the power unit of the BMW 1 Series M Coupe provides torque of 450 newton metres at an engine speed of just 1500 rpm.

M-specific performance curve and overboost function for long-lasting propulsion power.

Over and above this, the turbo-charging system operates across all load ranges with increased pressure. This means that maximum torque is available into the range of 4,500 rpm. It can also be increased by another 50 newton metres in full throttle by means of an overboost function. The maximum level of 500 newton metres enables especially dynamic acceleration manoeuvres and the forward thrust once again available after each gearshift makes for a linear speed increase which is characteristic of M vehicles. The BMW 1 Series M Coupe thus accelerates in just 4.9 seconds from zero to

100 km/h, and 12.4 seconds later it reaches the 200 km/h mark. The urge to accelerate is limited at 250 km/h by means of intervention in the engine control system.

The engine reaches its top output of 250 kW/340 bhp at 5,900 rpm, while long-lasting revving power is available well over 7,000 rpm. With this engine-speed-oriented performance curve, the 6-cylinder power unit in the BMW 1 Series M Coupe provides the perfect M-like qualities of a high-performance engine.

M TwinPower Turbo Technology is superior to conventional turbo-charging systems not just in terms of power delivery but also in the area of efficiency. The use of turbines made of high-strength steel which can endure temperatures of over 1,000 degrees Celsius means that there is no need for the cooling effect of an increased fuel supply. This results in a significant benefits in terms of fuel consumption, especially when the vehicle is subjected to high performance requirements. So the BMW 1 Series M Coupe provides an especially well-balanced blend of fascinating performance and contemporary efficiency.

What is more, it is the precisely-measured fuel supply using direct injection which especially contributes to the engine's high level of efficiency. Using piezo injectors arranged centrally in the cylinder head between the valves and thus immediately adjacent to the spark plugs, the second-generation direct injection system used in the BMW 1 Series M Coupe guarantees high-precision fuel dosage and clean combustion. The outwardly opening injectors operate at an injection pressure of up to 200 bar, distributing the fuel in each combustion chamber in a cone pattern. Direct injection of the fuel also achieves a cooling effect which allows for higher compression, optimising the efficiency of the combustion process.

Optimised efficiency due to brake energy regeneration and needs-based control of auxiliary units.

Optimum use of the energy contained in the fuel is also very important for a highly sports-oriented vehicle. In the BMW 1 Series M Coupe, fascinating driving pleasure is interrupted by fuelling stops significantly less frequently than in other vehicles of the same performance category. In addition to the excellent efficiency of the engine, fuel consumption reduction measures

developed as part of the Efficient Dynamics development strategy also contribute here.

The BMW 1 Series M Coupe is fitted as standard with brake energy regeneration. The system concentrates the generation of electrical current for the vehicle power system to the vehicle's trailing throttle and braking phases. Under throttle, the generator is generally disconnected, so for acceleration manoeuvres in particular more energy is available for conversion into driving dynamics. Other efficiency-enhancing measures relating to the engine include needs-based control of the auxiliary units, which only require energy when active. With an average fuel consumption in the EU test cycle of 9.6 litres per 100 kilometres and a CO₂ level of 224 grams per kilometre, the BMW 1 Series M Coupe confirms its outstanding position within the competitive field in this discipline, too.

Performance-optimised cooling circuit, dual-mass flywheel in lightweight construction, two engine characteristic curves.

The typical M characteristics of the 6-cylinder engine are further emphasised by other technical details. The cooling system of the power unit is designed to enable it to do justice both to its outstanding performance potential and to the particularly high demands of constantly drawing on maximum power output. An additional separate radiator and a specific air duct deal with the increased thermal stress which can occur when driving in particularly sporty style on the race track.

The efforts made in optimising performance and efficiency are also reflected in a newly developed dual-mass flywheel. Its lightweight construction benefits the engine's efficiency and it also has an increased solidity which is able to cope with the 6-cylinder engine's high level of torque of up to 500 newton metres under full throttle.

The engine control of the M TwinPower Turbo engine makes it possible to realise two differing characteristic curves. This means that the performance characteristics of the power unit can be varied according to the given situation on the road or the driver's wishes. In its basic setting the engine demonstrates the precision which is typical of BMW M cars in alternating between the accelerator pedal commands given by the driver and the response in terms of drive torque delivery. This configuration offers an ideal

basis for supreme handling of the 6-cylinder engine's performance capacity. A tangibly more direct characteristic curve designed for proactive, sporty driving is obtained by activating M Drive mode. In this mode, which the driver selects by pressing a button on the steering wheel, the response of the engine shows a much increased level of spontaneity. Even minimal thrusts of the accelerator pedal are rewarded with instant, massive increases in engine speed, making the power delivery of the 6-cylinder engine a defining quality of the driving experience.

The differences in the impact of the two curves are clearly felt by the driver, and there is also a differentiation in terms of engine acoustics. The silencer system developed for the BMW 1 Series M Coupe generates a sonorous, permanently present yet unobtrusive sound which accentuates the high-revving quality of the engine in typical M style when high levels of power are harnessed. In line with the spontaneous power delivery obtained after activation of the M button on the steering wheel, the engine sound likewise responds with faster and more intense changes in frequency, emphasising its sporty character.

Classic sporty flair, modern efficiency: 6-speed manual transmission.

A newly developed 6-speed manual transmission is used for power transmission to the rear wheels in the BMW 1 Series M Coupe. It was specially designed to interact with high-torque engines and has been fitted for this purpose with a specific gear set concept as well as an intermediate bearing for the main shafts. The high transmission capability is combined with a compact design and a weight of some 43 kilograms, making it much lighter than conventional transmissions. The 6-speed manual transmission is operated by means of a very short M gearshift lever.



4. Chassis: Pure power turns into fascinating performance.

- **Weight-optimised chassis with M-specific axle kinematics.**
- **Variable M differential lock.**
- **Driving stability regulation with M Dynamic Mode, Servotronic, compound high-performance brake system.**

Superior power is generated in the six cylinders of its turbo engine and the unmistakable M feeling comes from chassis technology developed using motor racing expertise, allowing the BMW 1 Series M Coupe to transform this power into performance. Traditionally and as a matter of principle, the chassis of a BMW M car always has even greater driving dynamics potential than its engine. In the BMW 1 Series M coupe, too, the power characteristics and suspension settings go together to form a harmonious overall concept which provides unlimited driving pleasure in a high-performance car.

The BMW 1 Series M Coupe has a chassis whose elements have run through BMW M GmbH's racing-oriented development process, including wheel suspension, damper systems and brakes. Numerous key components were originally conceived for the BMW M3 and are now to be found in the compact high-performance coupe in modified form specifically adapted to the new model. In creating the vehicle set-up, a procedure which includes test runs on the Nürburgring Nordschleife, the interaction of the engine, chassis and body was optimised here again so as to create a characteristic, consistent overall set of properties.

Low weight, high rigidity: front and rear axle with high aluminium content.

The double pivot front axle of the BMW 1 Series M Coupe is made almost entirely of aluminium. Both the extremely rigid spring struts and the swivel bearings are made of light alloy, and the tubular stabiliser is optimised in terms of rigidity and weight. The BMW 1 Series M Coupe also has a model-specific front axle support.

The aluminium five-link rear axle of the BMW 1 Series M Coupe is likewise fitted with a tubular stabiliser. Axle links made of forged aluminium and aluminium shock absorbers round off the lightweight construction concept as

applied to wheel suspension. Two additional longitudinal struts optimise directional stability in the rear axle. The M-specific axle kinematics and a precise set-up geared towards the relatively low vehicle weight of 1495 kilograms ensure that this chassis construction is able to transform the fascinating engine power of the BMW 1 Series M Coupe into superior performance in a way which is characteristic of the brand. And the high level of strain to which the vehicle is exposed when driven in an extremely proactive sporty style is taken into account down to the last detail. For example, the rear axle final drive of the BMW 1 Series M Coupe has a housing fitted with cooling ribs so as to allow highly effective heat dissipation.

Intelligent power distribution with variable M differential lock.

What is more, the rear axle final drive of the BMW 1 Series M Coupe is fitted as standard with the variable M differential lock. This generates lock-up torque as required and completely variably up to 100%, thus providing for optimum traction on all road surfaces. The variable M differential lock responds to differences in rotational speeds in the right and left rear wheel, redirecting drive torque within a fraction of a second. This means that propulsion power is always available wherever it can be best transformed into driving dynamics due to better road surface contact.

The principle of the M differential lock particularly demonstrates its superiority when there is a significant difference in friction coefficient between the drive wheels. As soon as this results in an increasing difference in rotational speed between the wheels, an increase in lock-up torque is instantly generated. So compared to conventional differential locks it is able to transmit a higher level of drive torque in demanding situations on the road.

This gives the BMW 1 Series M Coupe traction benefits on slippery surfaces, snow and sand. It also supports sporty-style motoring on narrow, winding roads such as mountain passes since optimum traction and maximum drive torque are available when accelerating out of a bend. So in this model, too, the variable M differential lock proves ideal support for the driving dynamics properties of rear-wheel drive.

Highly resilient, low weight: compound brake system.

Just like their thrilling capacity for acceleration, impressive deceleration is also one of the characteristics which set every BMW M car apart from its

competitors. The BMW 1 Series M Coupe is fitted with an M-specific compound high-performance brake system which provides impressive stability even under extreme stress as well as being extremely light.

The design principle of the brake system derived from motor racing guarantees excellent deceleration figures with significantly reduced heat sensitivity. Their inner-vented and perforated grey cast iron discs with a diameter of 360 millimetres at the front and 350 millimetres at the rear are linked to the aluminium disc chamber on a floating basis by means of cast-in premium steel pins. Since this arrangement greatly reduces the level of thermal stress to which the brake discs are exposed, their performance capacity and lifetime are increased. This design also promotes weight optimisation, and the reduction in unsprung masses in this section of the chassis contributes directly to an increase in agility.

The negative pressure required for the brake servo is generated by an electrically operated pump. A continuous wear indicator enables the driver to permanently monitor the state of the brake pads. A display in the cockpit provides information on the residual service life, not only increasing safety but also avoiding unnecessary maintenance.

The road contact required for transmission of both drive torque and braking torque is provided by 19-inch light alloy wheels with mixed tyres which are fitted as standard. The light alloy wheels in M-specific Y-spoke design already demonstrated their outstanding dynamic properties as part of the Competition Package for the BMW M3. The wheels on the front axle are in 9J x 19 format and fitted with low-profile 245/35 tyres. The rear wheels are 10J x 19 with tyres in 265/35 format.

As standard: steering with Servotronic function.

In the BMW 1 Series M Coupe, power transmission to the rear wheels also provides the ideal basis for thrilling driving dynamics due to the consistent separation of drivetrain and steering functions. The rack-and-pinion steering is fitted with the hydraulic power steering system Servotronic which regulates its supportive effect in relation to road speed.

At low speeds the steering assistance is comfort-oriented. This means that parking manoeuvres can be handled with much reduced physical effort. At

high speeds, steering support is specifically reduced so as to achieve supreme directional stability and maximum precision on bends. This gives the driver a precise sense of steering angle and feedback on the state of the road and means that the BMW 1 Series M Coupe can be steered with a high degree of directional accuracy when travelling along winding country roads at high speeds.

First-class driving stability: Dynamic Stability Control plus M Dynamic Mode.

The ideal level of driving stability - both in adverse weather conditions and when driving on the race track in sporty style - is guaranteed by DSC (Dynamic Stability Control), which is adapted specifically to M requirements. It stabilises the vehicle whenever necessary by means of selective wheel intervention and a reduction in drive torque. For example, if there is an imminent tendency to oversteer or understeer on bends, the system counteracts early on. The DSC elements in the BMW 1 Series M Coupe are the Antilock Brake System (ABS), a slip control system (ASC) which prevents the wheels from spinning on road surfaces with reduced grip, the brake assistant Dynamic Brake Control (DBC), a drive-off assistant which prevents the vehicle from rolling backwards on hill starts, and Cornering Brake Control (CBC) which regulates brake force distribution on bends. DSC also compensates for the reduction of braking impact when the brake system reaches very high temperatures - an effect known as fading - by means of a selective increase in brake pressure. Regular dry braking removes any dampness from the brake discs which might impair deceleration.

In the wet or on a slippery surface the driving stability system intervenes early on but discreetly so as to avoid oversteering. As an alternative to the normal operating status, the driver can activate M Dynamic Mode (MDM) by means of a switch on the instrument panel, thereby raising the intervention threshold of the driving stability control system. This facilitates driving off on snow or loose sand by means of controlled slip. MDM also enables specifically applied, dynamic oversteering and thus controlled drifting on bends. By pressing on the MDM button for longer, the driving stability regulation system can also be completely deactivated. The current status of the system is indicated by the relevant symbols in the instrument panel.



5. Interior, controls and equipment: Concentrated M feeling.

- **Sports seats in leather with special contrast stitching.**
- **Interior trim strips, door panels, cockpit scoop and handbrake lever gaiter in exclusive Alcantara.**
- **M-specific cockpit with speed range up to 300 km/h, multifunction steering wheel with M button.**

The BMW 1 Series M Coupe conveys a sense of driving pleasure which sets new standards in the compact segment and which can be enjoyed on a day-to-day basis thanks to the concept harmony characteristic of BMW M cars. Its racing-oriented performance characteristics are unique and the resulting potential in terms of driving dynamics provides pure fascination again and again - not just on the race track but in everyday traffic conditions, too. The first ever BMW M model in the compact segment combines the driving properties of a high-performance sports car with the unlimited functionality of a BMW 1 Series coupe. The superiority of its engine and chassis technology can be permanently felt, even in city traffic - whether in the spontaneous response of the engine, the decelerating impact of the brake system or the precision of the steering. But quite apart from this, the BMW 1 Series M Coupe also demonstrates its practical qualities with such features as four fully-fledged seats, a level of comfort which is geared towards covering lengthy distances and a luggage compartment with a capacity of 370 litres which includes a through-load facility for a ski bag.

Secure hold, exclusive design: sports seats as standard.

The standard sports seats in Boston leather offer both driver and front passenger excellent lateral hold even when taking bends in dynamic style. The design, created exclusively for the BMW 1 Series M Coupe, includes orange contrast stitching on the black surfaces of the seats and backrests as well as the M logo embossed in the front of the headrests. The longitudinal direction, height, tilt and backrest angle of the driver and front passenger seat can be electrically adjusted. Seat heating is also available for both front seats.

It is characteristic of sports cars that dark colours dominate inside the vehicle, thereby enhancing the driver's concentration on the road. In the BMW 1 Series M Coupe this effect is created by the anthracite-coloured BMW Individual roof liner but also by the exclusive design of the interior trim strips, door panels and cockpit scoop in dark Alcantara. These design elements also feature the orange-coloured contrast stitching, as do the gearshift and handbrake lever gaiter. An M driver footrest and M entry sills round off the exclusively styled interior.

M-specific cockpit, multifunction steering wheel with M button.

The model-specific design of the characteristic M cockpit in the BMW 1 Series M Coupe also contributes to optimum vehicle control. In the instrument panel, grey dial faces for the tachometer and a speed indicator going up to 300 km/h with red needles are combined with white display illumination.

The M leather steering wheel, which also comes as standard, has multifunction keys for operating the audio and telephone systems. In addition, the characteristic M button on the right steering wheel spoke enables the driver to switch spontaneously to a sports-style vehicle set-up. This configuration activates a particularly sporty characteristic curve in the engine control. Here, accelerator pedal commands are implemented with greater spontaneity.

In addition to those features characteristic of M vehicles and other elements specific to this particular model which directly contribute to creating an exclusive driving experience in a high-performance sports car, the BMW 1 Series M Coupe also features an extensive range of standard equipment which underscores its premium character. Its standard safety features include front, pelvis-thorax and side curtain head airbags, three-point automatic seatbelts for all seats with belt force limiters and belt tensioners at the front. An automatic air conditioning system is standard featuring separate temperature control for the driver and front passenger side, temperature-adjustable rear ventilation, and solar and condensation sensors. Other standard features include sun protection glazing, a headlight cleaning system, a rain sensor including automatic driving light control and automatic anti-

dazzle interior and exterior mirrors. The exterior mirrors are also electrically heated and automatically folded in.

Comfort access enables automatic door unlocking and engine start if the vehicle key carried by the driver is identified. An armrest with integrated storage compartment between the driver and front passenger seat, and a storage package, provide a bonus in terms of comfort and functionality for increased driving pleasure, especially over longer distances.

**Increased comfort and optimum visibility with
BMW ConnectedDrive driver assistance systems.**

For relaxed driving over long distances, the standard cruise control can be used in the BMW 1 Series M Coupe. Optional driver assistance systems from the BMW ConnectedDrive development area also include the high beam assistant, which facilitates optimum road surface illumination. This system automatically activates the high beam as soon as the traffic situation allows, switching back equally swiftly to low beam if there is oncoming traffic or sufficient ambient lighting in a built-up area.

Bi-xenon headlamps with Adaptive Headlights are standard for the BMW 1 Series M Coupe including cornering light and dynamic headlight beam throw adjustment. The Adaptive Headlight function ensures that the road is fully lit when cornering. Here the direction of swivel of the headlamps is derived from the steering angle, yaw rate and road speed of the vehicle. Every time the vehicle turns a corner, the inside headlamp casts an additional cone of light so as to illuminate the road in the direction in which the vehicle is heading.

Park Distance Control with sensors at the rear end, is standard, serving to facilitate reverse parking. An acoustic signal is heard whose frequency increases as the vehicle gets closer to an obstacle; in conjunction with the optional navigation system, this is supplemented by a visual display of the vehicle's position on the on-board monitor.

**High-quality audio and navigation systems, ground-breaking
integration of smartphones and external music players.**

Maximum audio enjoyment is provided by the harman kardon Surround Sound System, featuring digital amplifier technology and ten speakers which is standard on the 1 Series M Coupe.

In conjunction with the standard navigation system Professional, the BMW 1 Series M Coupe is fitted with the iDrive operating system. This enables operation of infotainment, navigation and communication functions using a Controller featuring favourite buttons on the central console as well as additional favourite buttons below the radio operating unit. Menu functions and maps are displayed on the 8.8-inch, high-resolution Control Display which is placed at the centre of the dashboard for perfect ergonomics.

During activated route guidance, map depiction on the Control Display is supplemented by arrows. Full screen map display provides an incomparably detailed view of the region through which the vehicle is currently travelling. As an alternative, an assistance window can be activated in the Control Display which provides additional graphics, information from the on-board computer or details of the entertainment program. All navigation data is saved on an 80 GB hard drive which is permanently installed in the vehicle and can also be used for creating a personal music archive. Music files can be transferred from CDs, external MP3 players or USB sticks, for example, with a storage capacity reserved for this purpose on the hard drive of over 12 GB.

In combination with the navigation system Professional including mobile phone preparation, innovative technologies to integrate mobile phones and music players are available for the BMW 1 M Series Coupe. Mobile end devices can also be controlled via the iDrive operating system. A newly developed interface technology allows integration of the latest generation of the Apple iPhone and the Apple iPod touch. These devices can be controlled via the iDrive menu, including all the latest functions.

As the latest addition to the range of office functions also developed within the BMW ConnectedDrive program, e-mails can be displayed in the BMW 1 Series M Coupe via Bluetooth. Owners of a BlackBerry® smartphone made by the mobile phone manufacturer RIM (Research In Motion) will be able to access the phone's e-mail directory via their BMW's iDrive operating system. The messages can be shown on the Control Display and read out aloud using the optional voice output function.

6. Technical specifications. BMW 1 Series M Coupe.



BMW 1 Series M		
Body		
No. of doors/seats		2 / 4
Length/width/height (unladen)	mm	4380 / 1803 / 1420 ¹⁾
Wheelbase	mm	2660
Track width front/rear	mm	1541 / 1541
Ground clearance	mm	³⁾
Turning circle	m	11,5
Fuel tank capacity	approx. l	53
Cooling system incl. heating	l	10,4
Engine oil ²⁾	l	6,5
Unladen weight according to	kg	1495
Payload according to DIN	kg	405
Permitted total weight	kg	1900
Permitted axle load front/rear	kg	940 / 1030
Permitted axle load (12 %) braked/unbraked	kg	- / -
Permitted roof load/trailer nose	kg	75 / -
Luggage compartment volume	l	370
Drag	c _x x A	³⁾
Engine		
Type/no. cylinders/valves		in-line/ 6 / 4
Engine technology		M TwinPower Turbo direct injection, second generation
Capacity, effective	cc	2979
Stroke/bore	mm	89.6 / 84.0
Compression	:1	10,2
Fuel		min. RON 91
Output	kW/bhp	250 / 340
at engine speed	rpm	5900
Torque	Nm	450 + 50 (with overboost)
at engine speed	rpm	1500 – 4500
Electrical system		
Battery/location	Ah/-	70 / luggage compartment
Alternator	AW	180 / 2520
Driving dynamics and safety		
Front wheel suspension		Aluminium double pivot spring-strut front axle with trailing link; small positive kingpin offset; lateral force compensation; brake dive reduction
Rear wheel suspension		Five-link axle in lightweight construction with drive-off and brake dive compensation
Brake, front		Single piston floating caliper compound disc brakes
Diameter	mm	360 x 30, vented and perforated
Brake, rear		Single piston floating caliper compound disc brakes
Diameter	mm	350 x 24, vented and perforated
Driving stability systems		Standard: DSC incl. ABS and M Dynamic Mode (MDM), Cornering Brake Control CBC, brake assistant DBC, dry brake function, fading compensation, drive-off assistant, variable M differential lock
Safety features		Standard: airbags for driver and front passenger, side airbags for driver and front passenger, head airbags for the front and rear seats, crash-active headrests at front, three-point automatic seat belts for all seats, at front with belt tensioner, belt force limiter and belt stopper, crash sensors, tyre damage display
Steering		Rack-and-pinion with hydraulic support and Servotronic function
Total steering transmission	:1	12,5
Tyres, front/rear		245 / 35R19 93Y XL/ 265 / 35R19 98Y XL
Rims, front/rear		9J x 19 EH2 IS 31 cast aluminium / 10J x 19 EH2 IS 25 cast aluminium

BMW 1 Series M

BMW ConnectedDrive

Comfort	Special equipment features: Integration of mobile end devices
Infotainment	Special equipment features: internet access, Office functions, Bluetooth audio streaming and online music title update
Safety	Special equipment features: Adaptive Headlights with cornering light, variable light distribution and adaptive headlight beam throw adjustment, high beam assistant, Park Distance Control, cruise control

Gearbox

Transmission type	6-speed manual transmission		
Gear ratio	I	:1	4.110
	II	:1	2.315
	III	:1	1.542
	IV	:1	1.179
	V	:1	1.00
	VI	:1	0.846
	R	:1	3.154
Differential ratio	:1		

Performance figures

Power-to-weight ratio	kg/kW (kg/bhp)	6.0 (4.4)
Power output per litre	kW/l	83.9 (114.1)
Acceleration 0 - 100 km/h	s	4.9
Acceleration 0 - 200 km/h	s	17.3
	0-1000 m	23.7
in 4th/5th gear	80-120 km/h	4.1 / 4.9
Max. speed	km/h	250 ⁴⁾

BMW EfficientDynamics

BMW EfficientDynamics measures as standard	Brake energy regeneration, needs-based control of auxiliary units, intelligent lightweight construction, rear axle final drive with optimised warm-up properties, aerodynamic optimisation including air curtains
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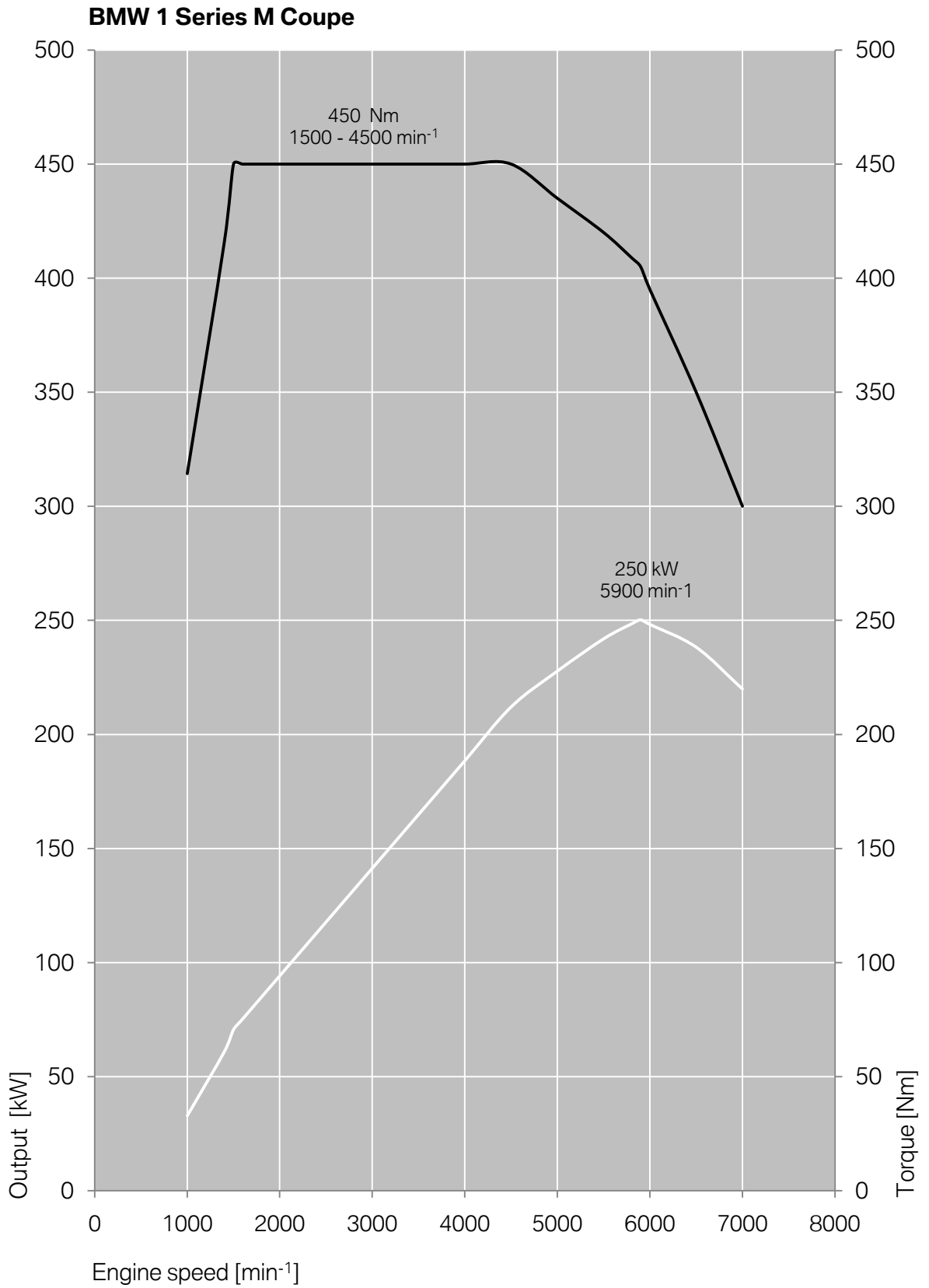
Fuel consumption in EU

urban	l/100	13.6
extra-urban	l/100	7.3
Total	l/100	9.6
CO ₂	g/km	224
Emissions classification	EU5	

Technical specifications apply to ACEA markets/registration-related data applies to Germany only in some cases (weights, max. speed)

- 1) Height with roof aerial
- 2) Oil change quantity
- 3) Electronically cut off

7. Driving performance and torque diagrams.



8. Exterior and interior dimensions.

