

The new MINI. More Safety, More Fun. Contents.



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1. The new MINI. More Safety, More Fun. (Short Version)



Small car, big safety reserves: scoring the maximum number of five stars in the Euro NCAP crash test, the new MINI impressively proves its all-round concept of occupant safety.

The foundation for this best performance in the demanding test regimen is set by the construction of this new premium compact car conceived and designed from the start for a supreme level of passive safety. Indeed, the robust structure of the body with its clearly defined load paths and deformation zones, just like the high level of standard features comprising six airbags, three-point seat belts on all four seats and ISOFIX child seat fastenings at the rear, as well as central safety electronics for appropriate management of the car's restraint systems, is a clear expression of the great significance given to occupant safety in developing cars according to BMW Group standards. Hence, the new MINI has everything it takes to rank No 1 in its segment as a premium offer also in terms of safety.

The five-star score in the Euro NCAP crash test was achieved by the new MINI Cooper. But it is obvious that the positive judgment passed by the testers in the NCAP (New Car Assessment Programme) also applies to the other models in the range, all the more so as the MINI Cooper S, the MINI Cooper, the MINI One and the MINI Cooper D all have the same identical features in terms of passive safety. For maximum occupant protection in the event of a collision is an absolute must in all versions of the new MINI.

Ultra-strong carriers for specific diversion of impact energy.

The Euro NCAP crash test assesses the effectiveness of occupant safety systems in various types of collisions. And in the case of the new MINI the test clearly showed that the risk of injury both in a head-on and a combined side and pole impact is reduced to a minimum. The entire structure of the body with its carefully interacting load-bearing systems and deformation zones serves to effectively divert and absorb impact energy, avoiding damage to the passenger cell right from the start. Hence, the passenger cell is always maintained as the passengers' survival area, regardless of the type of collision.

Fitted crosswise at the front, for example, the power unit leaves ample space for crash boxes able to take up impact energy in the event of a collision. At the same time the specific configuration of the front axle subframe serves to guide impact energy in a crash to the underfloor of the car.

In a collision from the side impact forces are diverted along predefined load paths in the underfloor to the opposite side of the car. The doors, B-pillars, seats, dashboard and roof frame, in turn, guarantee the superior stability of the side structure. The deformation area at the rear, finally, is formed by two longitudinal supports, the floor of the luggage compartment, the rear panel, the side walls, and various reinforcements.

Intelligent management of restraint systems.

The wide range of restraint systems in the new MINI is controlled and masterminded by a central, electronic safety system ensuring that the most effective protection elements are activated in each case as a function of the type and intensity of a collision.

The new MINI comes as standard with frontal and side airbags for the driver and front passenger as well as curtain head airbags inflating out of the roof lining as large curtains whenever required, offering not only the front, but also the rear passengers ample protection from head injury.

Three-point seat belts are provided on all four seats, together with belt force limiters and belt latch tensioners at the front. A further point is that the electronic safety system deactivates the central locking, switches on the hazard warning flashers and interior lights, and switches off the electrical fuel pump in the event of a collision.

Modern chassis technology for even greater active safety.

The new MINI benefits from the innovative power and high standards of the BMW Group also in the area of active safety. So given its highly developed, technically demanding chassis and suspension technology, the new MINI combines unique driving pleasure with maximum all-round safety, the sporting and absolutely straightforward handling of this compact front-wheel-drive athlete keeping the driver in control even in demanding situations on the road.

Powerful brakes, precise steering and the most sophisticated electronic control systems support the driver in avoiding and, respectively, mastering risky situations. And last but not least in this context, all variants of the new MINI come with high-performance, ultra-precise ABS anti-lock brakes, CBC Cornering Brake Control, and EBD Electronic Brake Force Distribution.

In standard trim, the MINI Cooper S and MINI Cooper D come additionally with ASC+T Automatic Stability Control + Traction. Giving the driver the option to deactivate the system at the touch of a button, ASC+T prevents the drive wheels from spinning on a slippery surface, and comes as an option on the MINI Cooper and MINI One.

A further option on all models within the MINI range is DSC Dynamic Stability Control preventing any uncontrolled movement of the car as a result of over- or understeer by intervening in the brakes or, respectively, by reducing engine power. And a further feature of the DSC control system is the Hill Assist start-off function when setting off on a gradient.

The MINI premium offer: safe, reliable, lasting value.

True value enhances driving pleasure and pays off on the road. So the new MINI is not only one of the most thrilling and safest, but also one of the most reliable cars in its segment maintaining lasting value over the years.

According to an analysis by Allgemeiner Deutscher Automobilclub (ADAC), the MINI is indeed the most reliable of all cars in its class currently on sale in Germany, with the risk of a breakdown reduced to a minimum.

Given this kind of quality, the MINI rounds off the excellent result of the BMW Group in all areas of the ADAC breakdown statistics covering some 400,000 cases of technical assistance in the course of the year 2006. And at the same time the same statistics prove the consistently high reliability of the MINI throughout all model years.

Thrilling design, the extremely attractive vehicle concept, supreme safety and reliability, as well as particular quality of finish make the MINI a particularly desirable car. And this also means a lot in terms of lasting value. Indeed, since the value of a car in the course of time can be determined by expert forecasts, a recent ranking of numerous models by **Auto Bild**, one of Germany's leading motoring journals, lauded the new MINI Cooper as the "Value Champion 2007": With its anticipated resale value of 69 per cent after three years, the new MINI ranked second in this area, beaten only by the MINI Convertible able to retain no less than 70 per cent of its new value three years after initial registration.

2. The new MINI. More Safety, More Fun. (Long Version)



Each and every drive in a MINI makes certain wishes come true and confirms good arguments and selling points. The powerful engines and agile handling of the car, for example, ensure unique driving pleasure, while the fascinating flair and characteristic design of the MINI make this small premium car absolutely irresistible.

Ultimately, the high, convincing level of the car's active and passive safety systems makes the MINI the perfect choice in its segment, with the new MINI scoring the best result of five stars in the Euro NCAP crash test. Indeed, such an outstanding result in this demanding test procedure clearly proves the highly effective occupant safety offered by the new MINI, with all model variants fitted as standard with six airbags, three-point seat belts on all four seats, and ISOFIX child seat fastenings at the rear. And last but not least, the MINI offers consistent reliability at all times, as we see from the latest breakdown statistics compiled by Allgemeiner Deutscher Automobilclub (ADAC).

In its safety and quality, this compact two-door naturally fulfils all the high standards applied by the BMW Group. Apart from individual character and technical highlights, this safety and quality are indeed two of the main factors that make the MINI so desirable – desirability which, in practice, means lasting value at a high level: With its presumable resale value of 70 and, respectively, 69 per cent of the car's price as new after three years, the MINI Convertible and the new MINI Cooper both rank top-of-the-range in a study conducted by the German car journal **Auto Bild**, bringing home the title of "Value Champion 2007".

Keeping impact energy away from the passenger cell.

In determining the car's wide range of safety features, the engineers and designers responsible for the new MINI proceeded carefully from the results of practical accident research by the BMW Group. So to offer an even higher standard of safety than before despite the compact dimensions of the body, the new MINI comes with a brand-new concept of all-round occupant safety, the use of various materials at the most appropriate points helping to ensure the highest possible standard of safety in a crash.

High-strength steel and tailored rolled blanks varying in thickness as a function of loads and forces, as well as aluminium door elements and the use of magnesium for the instrument panel between the A-pillars, ensures supreme stability and lightweight construction all in one.

Load paths efficiently diverting impact energy on the body are defined for all types of collision. Appropriate carrier structures are positioned exactly where required in the floorpan, in the side frames, on the bulkhead, on the roof, and in the frontal and rear ends. Together with crash boxes efficiently absorbing impact energy even in a confined space, they serve to keep the forces acting on the car away from the extremely stiff passenger cell thus fulfilling its function as the occupants' survival area with maximum efficiency even in a severe collision.

Euro NCAP crash test confirms minimum risk of injury.

The Euro NCAP crash test confirms that the new MINI reduces the risk of injury to a minimum both in a head-on and a combined side and pole impact. Thanks to the engine fitted crosswise at the front, there is sufficient space for the integration of crash boxes able to take up impact energy in a head-on collision. At the same time the specific arrangement of the front axle subframe conveys crash energy to the underfloor of the car in the event of a collision, with the footwells being additionally stabilised by crossbars in the bulkhead and so-called ski-ramps.

In a side-on collision the forces acting on the body are diverted through the underfloor to the opposite side of the car, the doors, B-pillars, seats, instrument panel and roof frame all serving to keep the entire side structure strong and stable. Diagonal door reinforcements and a pressed aluminium profile around the window sills form a joint deformation zone together with the A- and B-pillars.

The deformation zone at the rear, in turn, is formed by two longitudinal arms, the floor of the luggage compartment, the rear panel, the side walls and various reinforcements. And last but not least, extremely strong pillars and crossbars guarantee full stability of the passenger cell also in a rollover.

Intelligent control of the car's restraint systems.

Effective diversion and absorption of impact energy and the stable passenger cell ensure all-round fulfilment of the strictest safety requirements by the restraint systems featured as standard in the new MINI. Both the six airbags and the seat belts are masterminded by a central electronic safety unit activating precisely the most effective safety elements in a collision as a function of the type and intensity of an impact. The data required for this purpose comes from sensors installed in the centre of the car and on the B-pillars, the information transmitted for this purpose being checked additionally for feasibility by a central electronic airbag control unit positioned in a well-protected position near the centre console.

In the event of collision the electronic safety system serves furthermore to deactivate the car's central locking, switch on the hazard warning flashers and interior lights, and switch off the electrical fuel pump.

Six-pack: frontal, side and head curtain airbags all featured as standard.

The all-round package of restraint systems is made up of frontal, side and curtain airbags, as well as three-point seat belts for all four seats. Efficient protection of the driver and front passenger is ensured not only by the frontal airbags, but also by the two side airbags integrated in the side supports on the front seats. The curtain head airbags, in turn, inflate out of the roof lining whenever required as extra-large "curtains" offering both the front and rear passengers optimum protection from head injury.

Three-point seat belts naturally come as standard on all four seats, featuring additional belt latch tensioners and belt force limiters at the front.

Both the front and rear seats are fitted with belt warning units telling the driver by way of optical and acoustic signals whether the occupants are wearing their seat belts. Should, for example, the sensors installed for this purpose notice that the front passenger's seat is occupied but the seat belt is not in use, telltales in the Center Speedo and in the rev counter display are activated accordingly and an acoustic warning signal provides an additional alert. The visual telltale signal around the rev counter also reminds the driver and passengers to use the seat belts at the rear.

ISOFIX fastening points at the rear allow optimum use of child seats fastened securely and safely in position whenever required. And should a child seat be fitted on the front passenger's seat, the airbag can naturally be deactivated, a telltale informing the driver accordingly.

The safety steering column in the new MINI, finally, deforms in the event of a collision in a defined process to avoid the risk of driver injury.

Modern suspension technology: more fun, more safety.

The new MINI benefits from the innovative power and high standards of the BMW Group also in the area of active safety. Given its highly engineered and technically demanding chassis and suspension structure, the new MINI indeed combines unique driving pleasure with maximum safety on the road.

Through its sporting and absolutely straightforward handling, this compact front-wheel-drive performer keeps the driver fully in control even under demanding conditions, powerful brakes, precise steering and sophisticated electronic control systems supporting the driver in avoiding and, respectively, mastering risky situations.

McPherson spring struts ensure precise wheel guidance on the front axle, keeping the steering largely free of drive forces also in fast bends, when applying the brakes and accelerating.

A construction quite unique in the new MINI's market segment is the central-arm rear axle. Given its very demanding kinematics, this special axle configuration guarantees optimum road contact and grip at all times. Longitudinal arms made of aluminium then ensure further enhancement of precision and wheel guidance, at the same time keeping any extra weight to a minimum.

The anti-roll bars, finally, make an important contribution to that go-kart feeling so typical of the MINI. The suspension and damper systems are set up individually according to each model and the power of the engine, again ensuring that the new MINI remains an agile and safe car with unique handling on all model variants.

New steering system keeping the MINI precisely on course.

With its low centre of gravity, wide track and "stance on the wheels" concept, the MINI is built from the start for safe and precise driving behaviour. A lot of the car's superior agility and ease of control also comes from the newly developed steering system, EPAS Electrical Power-Assisted Steering ensuring the driving dynamics and motoring comfort so typical of the MINI.

The steering is sporting and direct, with steering assistance provided as a function of road speed. In practice, this minimises the steering forces required of the driver when parking and manoeuvring the car, while on country roads and the motorway the reduction of steering assistance allows the car to respond particularly smoothly and precisely to movements of the steering wheel. Integrated active steering return, finally, moves the steering wheel precisely back to its centre position after changing direction at all speeds.

The modern mechanical units featured in the new steering system minimise both mass inertia and internal friction, giving the driver even more exact feedback on road conditions and the current driving situation.

A further advantage of the Electrical Power-Assisted Steering is that the steering can be programmed to various settings, enabling the driver to handle the car in dynamic but nevertheless very smooth and superior style since the steering control map, after pressing the optionally available Sports button, adjusts to the change in conditions. Higher steering forces and enhanced precision also help to maximise the car's safety and handling under dynamic driving conditions.

A safe team: powerful brakes, modern control systems.

All variants of the new MINI come as standard with a high-performance and ultra-precise ABS anti-lock brake system, CBC Cornering Brake Control, and EBD Electronic Brake Force Distribution, ensuring appropriate distribution and dosage of brake forces in all situations.

The new MINI naturally features a highly effective brake system, disc brakes on all four wheels providing maximum stopping power at all times. All model versions come with brake discs measuring 259 millimetres or 10.20" in diameter at the rear, while the inner-vented discs fitted at the front measure 280 millimetres or 11.02" in diameter and an even larger 294 millimetres or 11.57" on the MINI Cooper S.

Both the MINI Cooper S and the MINI Cooper D are fitted as standard with ASC+T Automatic Stability Control + Traction. Giving the driver the option to deactivate the system at the touch of a button, ASC+T prevents the drive wheels from spinning on a slippery surface and at the same time facilitates the process of setting off with the drive wheels on surfaces with varying grip.

Should one of the drive wheels have only inadequate grip in such a situation, the brakes are applied on that wheel until it has sufficient traction to ensure driving stability.

The system only has to be deactivated in exceptional situations, for example when the car is running on snow chains. Hence, ASC+T is automatically activated every time the driver starts the engine.

ASC+T is available as an option on the MINI Cooper and MINI One, and all versions of the new MINI come as an option with DSC Dynamic Stability Control, a high-tech car stability system preventing the car from swerving in a bend on account of over- or understeer by applying the brakes on the appropriate wheel and/or by reducing engine power.

Another feature of DSC Dynamic Stability Control is Hill Assist enabling the driver to set off smoothly and without problems also when the MINI is parked on an uphill gradient. Should in such a situation the driver move his foot from the brake to the gas pedal, the brake pressure required to hold the MINI in position is maintained consistently until there is sufficient drive power on the front wheels to "pull" the car up.

In conjunction with ASC+T and, respectively, DSC, the new MINI is available with a Brake Assistant automatically maximising brake pressure whenever the driver requires the full power of the brakes. This helps to keep stopping distances to a minimum even if the driver fails to press down the brake pedal with maximum intensity.

Unique: tyre defect indicator featured as standard.

The new MINI is the only car in its segment fitted as standard with a tyre defect indicator helping to reduce the risk of an accident attributable to tyre damage or the gradual loss of air pressure. Comparing the rotational speeds of the various wheels, this system permanently monitors air pressure in all of the tyres, electronic sensors in the wheels transmitting the information obtained in this way to a control unit. The driver is then informed of any irregularities caused by a loss of pressure in any of the tyres by means of an optical signal in the cockpit.

The tyre pressure indicator is activated at speeds of more than 25 km/h and triggers a warning signal as soon as the tyre pressure deviates from the normal rating by more than 30 per cent.

Yet another new feature in the MINI segment is the use of tyres with runflat technology allowing the driver to continue on the road even on a completely flat tyre. In such a case the specially designed extended hump rims keep the tyres safely in position, enabling the driver to cover up to 150 kilometres or 90 miles at a speed of up to 80 km/h or 50 mph.

Runflat tyres are standard on the MINI Cooper S and available as an option on the other model variants.

The MINI premium offer: safe, reliable, lasting value.

It goes without saying that the MINI brand is fully committed to the premium quality of the BMW Group without the slightest compromise. Indeed, this pledge is clearly borne out throughout all phases of development and production on all models, comprising both the design and functions of each individual car.

Superior quality is therefore one of the factors contributing to the outstanding desirability of the MINI, just like the car's unique flair and the driving pleasure offered by this compact front-wheel-drive performer. Further features closely linked to one another are reliability and customer satisfaction – which, at the end of the day, means that the outstanding success of the MINI is based on a unique combination of fascination and facts.

Quality, safety, reliability – these are the values which enhance the level of driving pleasure in the new MINI to an even higher standard, particularly as they pay off on a long-term basis, with the new MINI being one of the most reliable cars in its segment offering lasting value over many years: According to an analysis by Allgemeiner Deutscher Automobilclub (ADAC), the MINI is the most reliable of all cars currently on sale in Germany in its segment, with the smallest risk of a breakdown.

In the ADAC breakdown statistics covering some 400,000 cases of technical assistance in the course of the year 2006, the MINI rounds off the outstanding result of the BMW Group in all segments, clearly showing how consistent integration of the brand into the BMW Group's quality and safety standards has provided supreme product qualities within a very short time.

The statistics also prove the ongoing reliability of the MINI maintaining the highest standard throughout all years of production.

Fascinating design, the extremely attractive car concept, superior safety and reliability as well as a particularly high standard of finish quality make the MINI a very desirable car. And this also has a positive effect on the MINI's lasting value, a ranking established by the German motoring journal **Auto Bild** on the basis of forecasts by experts lauding the new MINI Cooper as the "Value Champion 2007": With an anticipated resale value of 69 per cent after three years, the MINI Cooper finished second in this ranking, outdone only by the MINI Convertible maintaining an even more impressive 70 per cent of its value as new three years after its first registration. And since lasting value is one of the most significant cost factors in purchasing and running a car, this consideration is an important argument in the customer's purchasing decision.

So taking these criteria, too, into account, it is even easier to give in to the charm of the new MINI.