

630 CS 633 CSi 635 CSi



**Outstanding sports car performance –
the dominating feature inherited by the BMW coupé.**

The history of BMW started with the world altitude record for aircraft engines – and not with a power unit from a motorbus. Throughout the decades, sport has remained an essential element of BMW's philosophy with a crucial influence on the company's development. Which is why the letters BMW have always been synonymous to sportiness and outstanding performance.

**The BMW coupé:
The expression of a dynamic
tradition.**

By its very character, the BMW coupé is the type of car only BMW can build. It is the result of a long history of motor racing and the expression of an independent style with decades of tradition to call on. It is not – as with other manufacturers – merely the adaptation of a larger saloon version: It is an independent car unmistakeably combining the merits of motor racing achievements with a perfect and technically outstanding engineering concept.

**The BMW coupé:
An ideal come true.**

Sporty competition cars obviously come closest to the ideal man/machine symbiosis, ie the best blend between the car and its performance; and the driver and his personal skill.

One of the most uncompromising representatives of this automobile concept is the new BMW M 1, a genuine, thoroughbred sports car. One of the very few sports cars which really lives up to its name – as

it is designed and constructed specifically for the motor racing challenge.

The BMW coupé – although it is built with a different objective – is just as consistent in reaching the optimum standard. It represents the cultured



but practical, elegant meeting point between the idea of extreme sportiness with very limited space and comfort, and the concept of the dynamic, nimble BMW saloon offering a large amount of space and a high standard of comfort.

And this makes the BMW coupé absolutely ideal for the ambitious driver who does not always need the space and the four doors of one of these large saloons, but who, at the same time, does not want to go as far as the altogether uncompromising road version of the M 1. The BMW coupé is thus a unique synthesis of performance, safety, and comfort.

This brochure partly shows details of items of equipment and metallic colours that are available as optional extras.





At BMW styling always means more than just the contours round a precious interior.

Maximum demands in terms of road performance and motor-ing comfort may sometimes make a car look pretentious. So it all depends on whether the car's styling reflects the signs of our times.

Despite their different func-tions, all BMW cars excel by their straightforward, no-nonsense styling. Styling that concentrates on the essential elements without changing fashion trends. So the BMW coupé, with a view to its high standard of performance and comfort, comes in a compact, clear-cut body with modern, unpretentious contours. Its sober and elegant body is characterized by a well-matched blend of styling ele-ments with large panel areas, and amply dimensioned windows. This modest elegance symbolizes BMW's typical philosophy of soberness and function – the BMW pledge

to dynamic and sporty motoring instead of pretentious and cumbersome prestige. The in-clination towards vitality and manoeuvrability instead of sheer size and weight. This is a rule BMW has maintained throughout the decades – a rule expressed clearly by the BMW coupé.

Motoring journalists with their professional ability to deter-mine the signs of the times pro-vide an excellent yardstick in the search for genuine quality:

"There may be people who feel that a car of this kind should offer more prestige – but I feel that the styling of the BMW coupé, while it has certainly been designed with a fair amount of understatement, gives the car an overall clas-sical but at the same time pro-gressive appearance thanks to its reserved and modest elegance."

Quote from a major German newspaper.

One factor that contributes to the optical elegance of the BMW coupé is quality. Excellent quality.

630 CS

633 CSi

635 CSi

BMW elegance is long-lasting elegance thanks to the particular care put into effective rustproofing. Applying a prin-ciple unique to BMW, the body-work is pre-treated in an elec-trophoretic vertical dip bath. The corrosion-proof primer thus applied is then covered by burnt-in multi-layer paintwork. Careful underfloor protection and BMW cavity preservation

which reaches the very last nooks and crannies make a further crucial contribution to the long service life and the lasting value of BMW cars.

A six-year anti-rust warranty on all parts treated with Tectyl rustproofing is also available for BMW cars. In this case the rust-proofing must be checked and touched up 14 and 36 months after the car has been registered. The small extra cost this involves will always pay off.

Engineering consistency: The BMW coupé in its individual features.

The superior overall standard of the BMW coupé is the result of numerous carefully conceived and designed details.

Integral bumpers all round, with an integrated spoiler at the front.

Rubber impact strips set into the bumpers.

Twin halogen headlights with turn indicators positioned at the outside for optimum visibility, including from the side.

Perfect door window guidance thanks to outside mirror positioned on quarter-light, special window crank and sealing lip.

Special design and styling of the water deflectors, roof columns, and outside mirror to keep the side and rear windows splash-free.

Strong integral central roof column integrated in the car's overall styling together with the built-in roll-over bar.

Forced air extraction with outlets behind the rain sill on the rear roof columns.

Outside rear-view mirror on the driver's side adjustable electrically from the inside.

Light-alloy rims with BMW wire-wheel styling fitted as standard. 6 x 14 and 195/70 VR 14 high-speed tyres. BMW 635 CSi with 6½ x 14 light-alloy rims in cross-wire styling.

Laminated windscreen, brown-tinted heat-insulating glass all round (green-tinted if car is equipped with air conditioning/optional extra).

The carefully calculated spoilers fitted at the front and the rear of the BMW 635 CSi have been designed for everyday motoring and integrated in

the car's overall styling. On average, they reduce uplift at high speeds by 15%. The result is better directional stability and improved roadability at high speeds as well as faster and more precise cornering.

In conjunction with the modified chassis and suspension, the aerodynamic improvements introduced for the BMW 635 CSi guarantee optimum engine power not only in theory, but also in practice – in the form of power conveyed on to the road. And this optimization of the car's driving characteristics also means enhanced active safety.

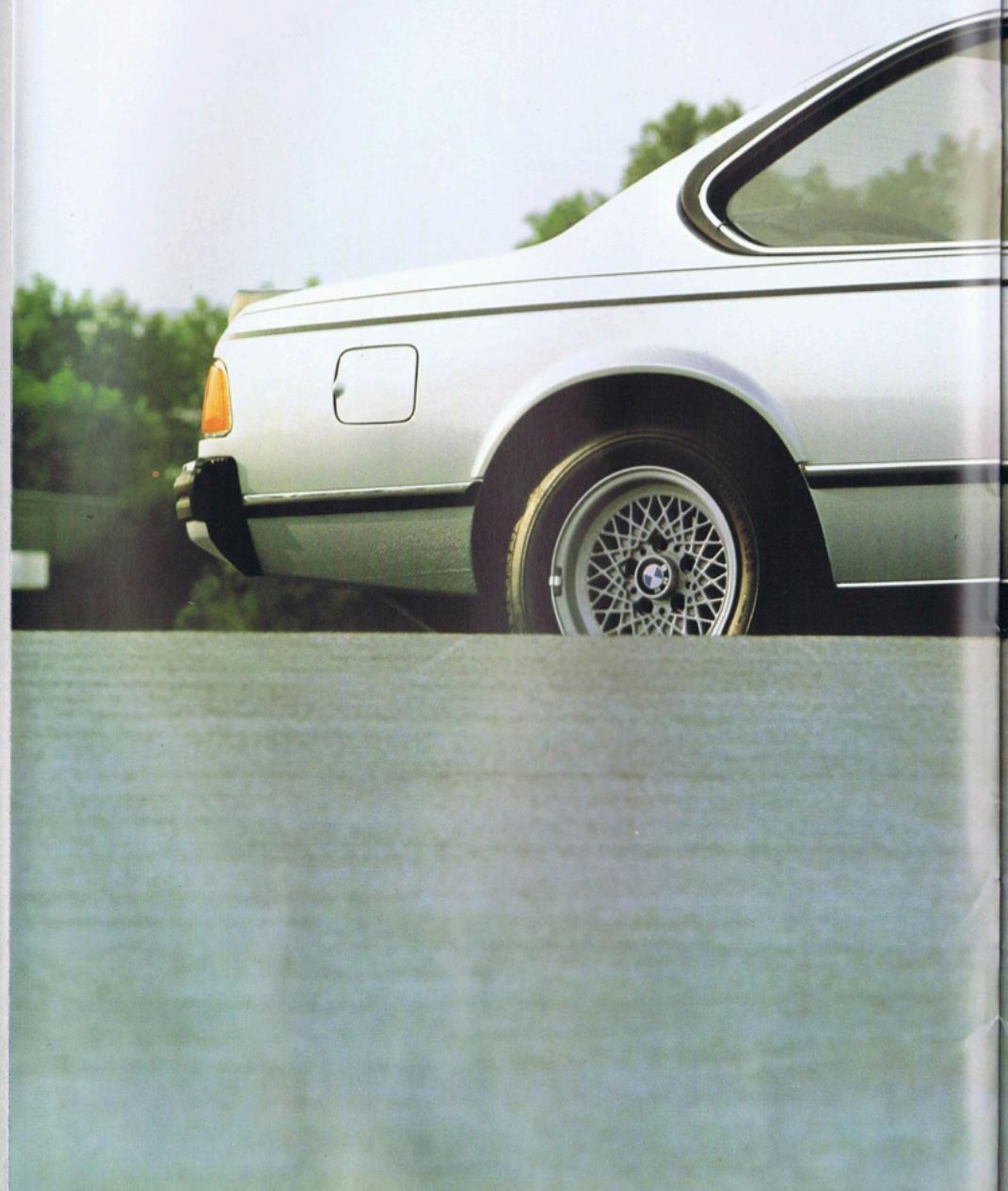
The spoilers are elastic in structure and do not require special attention. Minor deformations will not cause lasting bumps or dents.

BMW 635 CSi: Styling tailored to function.

All design details influencing the driving characteristics of the

BMW 635 CSi have been re-adjusted and re-coordinated to remain fully in line with the performance of the new power unit. The transmission, chassis, and the bodyshell in its aerodynamic styling have thus been matched to fit the engine perfectly.

Aerodynamic spoilers, for example, are absolutely essential in motor racing in order to get the full power of the engine on to the road and reach maximum speeds in bends. In fact, even the body of a car designed specifically for motor racing requires a certain number of additional aerodynamic improvements.









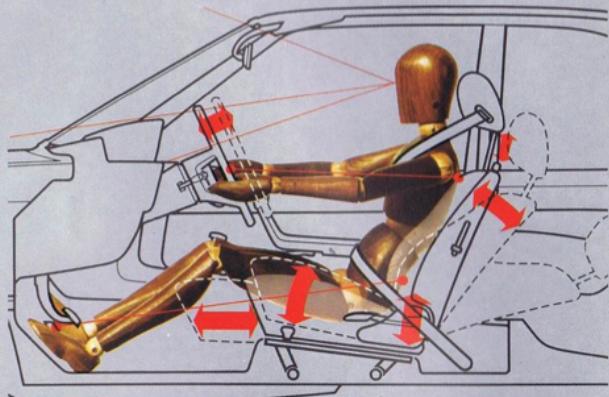
The superior way of mastering a dynamic car.

Safe, self-confident, and responsible motoring means absolute superiority at the wheel. The driver must be able to master a sophisticated top-performance car with absolute ease. So the significance of this man/machine interaction is reflected by the research and technical refinement which has gone into the cockpit and the interior of the BMW coupé.

The BMW coupé has a ideally designed seating, visibility, steering, and control system – with the objective of providing optimum conditions to all kinds and sizes of drivers and passengers. Optimum motoring always requires optimum visibility and driving conditions. BMW has therefore done careful research in determining the perfect combination of visibility, seating position, pedals, steering wheel, instruments and controls. And this research has gone straight into the design of the BMW coupé.

The BMW coupé thus offers the very latest findings in control and handling ease, benefiting from BMW's special experience in motor racing: All parts and components have been designed for optimum ease in handling the most modern technology, thus conserving – and not consuming – the driver's energy.

With BMW, however, this vital support given to the driver does not mean over-automation or exaggerated isolation from the environment. Because a too great decrease in the signals that attract the driver's attention



will also reduce his general level of awareness, increase his reaction time, and impair his driving skill.

Seat and steering wheel adjustment

The steering wheel of the BMW coupé is adjustable for reach (1) and the driver's seat

can be adjusted individually to suit the specific needs of the man at the wheel: The seat can be moved smoothly and precisely fore and aft, up and down, and in its inclination (2). This interacting seating, steering, and control system guarantees that the car and its driver will always be like hand in glove.



1



2

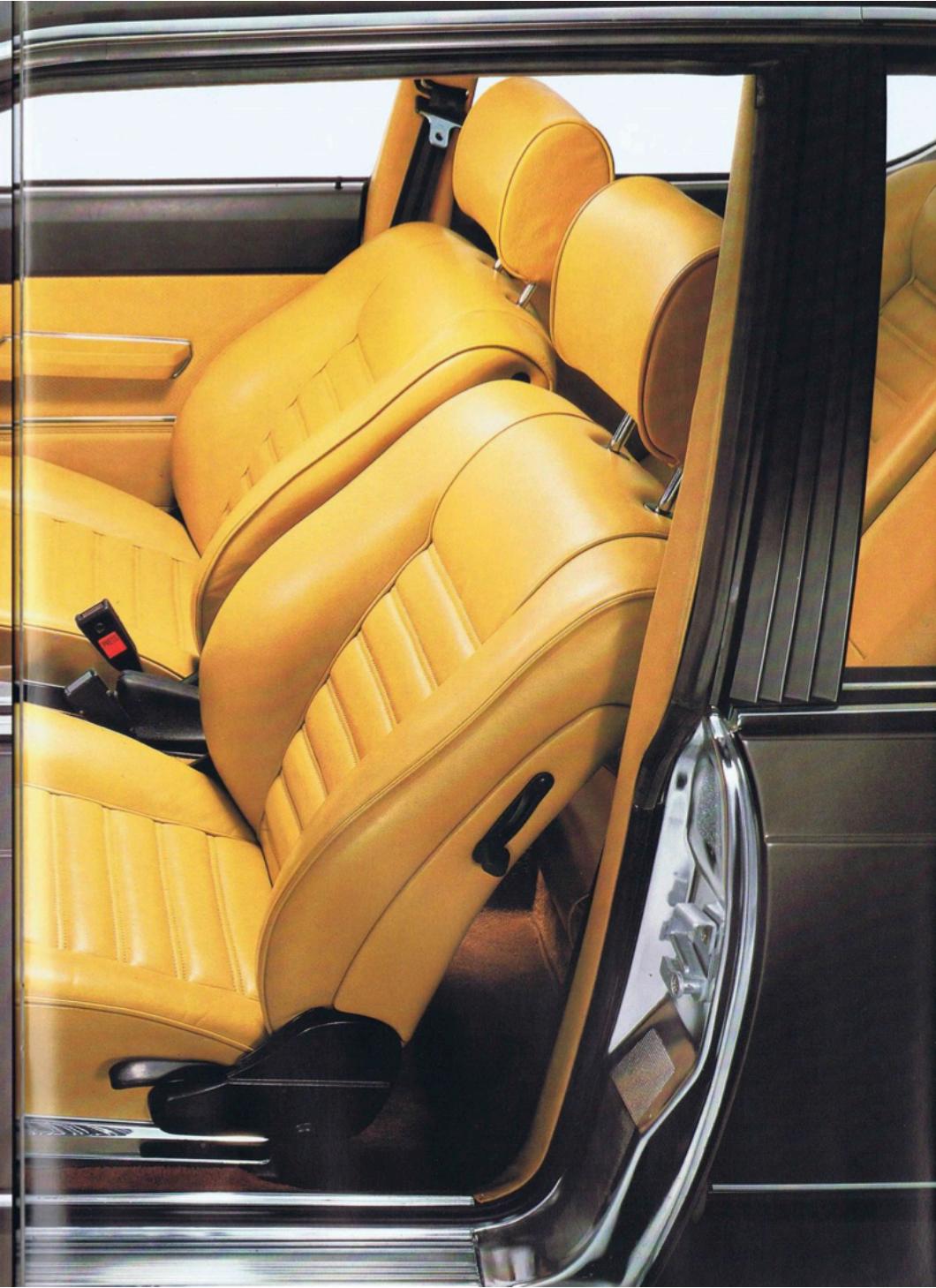


3



4





Each individual driver has the best steering position, optimum visibility thanks to perfect seat height, and the necessary leg-room and pedal position tailored to his size – all the prerequisites for fast responses and perfect handling. And thanks to the adjustable seat base inclination, each driver also has optimum upper leg support to guarantee fatigue-free and relaxed driving. This technology of absolute relaxation makes it easy for the BMW driver to be a safe driver – and enables him to enjoy exclusive sportiness the relaxed way.

As an optional extra, the front passenger's seat is also available with seat inclination and height adjustment. (UK standard feature.)

Seat quality

The seat supports and all seat components offer an unparalleled standard of absolute and carefully tested reliability –

a factor crucial to interior safety in the event of collisions (3).

The perfectly designed and luxuriously upholstered front seats are carefully body-contoured for maximum comfort. Thanks to their bucket-type design and sturdy upholstery, they combine a perfect seating position with excellent body support at the sides (4).

The seat springs, car suspension and shock absorbers are carefully matched to provide one functional entity.

The seats are finished in real leather but velours upholstery is available as an option. The front headrests can be adjusted for height and angle by pressing the button on the side (5).

The armrest on the front passenger's seat can be moved up and down and locked in position from the driver's seat (6).

The seat belt lock can be opened and closed with one hand (7).

The outside rear-view mirror

adjustable electrically from the inside (8) can also be fitted on the nearside front door as an optional extra.

Pockets for loose articles are provided in the upholstered door linings (9).

The large glove-box contains a chargeable torch within easy reach of the driver (10).



Optimum technology in support of the driver.

Automotive progress in providing an optimum symbiosis of man and machine is the result of numerous simultaneous achievements in very many different areas. One of these is the constantly refined and perfected standard of interior fittings and technology, designed to offer the driver comfortable and safe motoring conditions with a minimum of mental and physical effort.

BMW comfort means more than just a pleasant ambience.

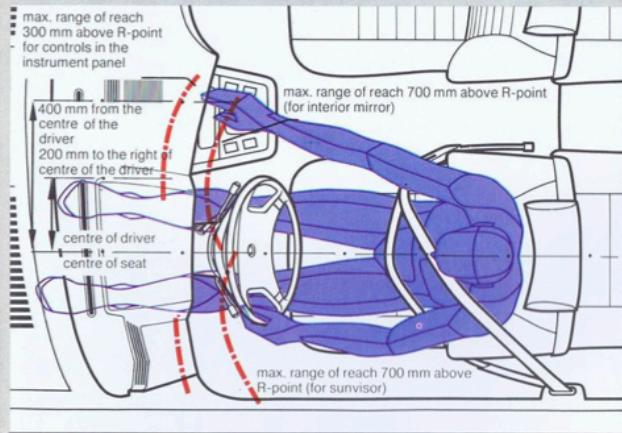
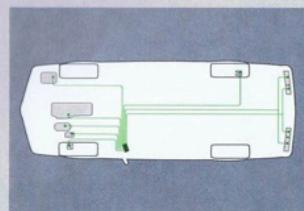
Driving comfort and driving safety both start with the driver's seating position. And the feeling of immediate control each BMW

ducted to determine the driver's area of operation in reaching for the controls and instruments. The underlying assumption is that these control elements should be operable through the so-called "three finger method". Certain predetermined positions and standardized control arrangements have also been applied as a basis. The hatched range contours thus indicate the area within which 95% of all drivers can reach the control elements on the instrument panel.

BMW Check Control:
An allround inspection by pushing just one button.

The Check Control houses information lights for the following 7 functions, which can be tested before starting by pressing the check button with the ignition switched on. The lamps that then come on indicate that the respective system is functioning properly.

Brake fluid level indicator in addition to the automatic warn-



gives its driver – a feeling that makes the driver fully acquainted with his car the minute he takes the wheel – is largely due to the carefully matched seating position, overall visibility, and steering system.

The drawing shows the results obtained in studies con-

The progressively designed driver's area in the BMW coupé is split up carefully into three separate functional zones: The checking zone to one side of the driver with the BMW Check Control, the primary zone right in front of the driver with the most important controls, instru-

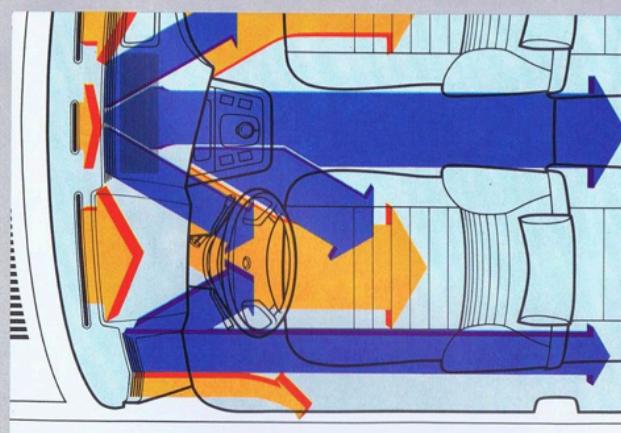
ments, and warning lights, and the secondary zone facing the driver on the wrap-around instrument panel with the heater, ventilation, and comfort controls.

Thanks to the Check Control all the driver has to do to determine the running condition of his car is press a button – no more walking round the car or opening up the engine compartment. This absolute ease in checking the car also helps the driver in deciding when an inspection is due and thus contributes to maintaining the vehicle's lasting value.

The Check Control houses information lights for the following 7 functions, which can be tested before starting by pressing the check button with the ignition switched on. The lamps that then come on indicate that the respective system is functioning properly.

Brake fluid level indicator in addition to the automatic warn-

ments, and warning lights, and the secondary zone facing the driver on the wrap-around instrument panel with the heater, ventilation, and comfort controls.



pressing down brake pedal). Rear light indicator (check with main light switched on). Front left and rear right brake lining wear indicator.

The heating and ventilation system: an environment for relaxation.

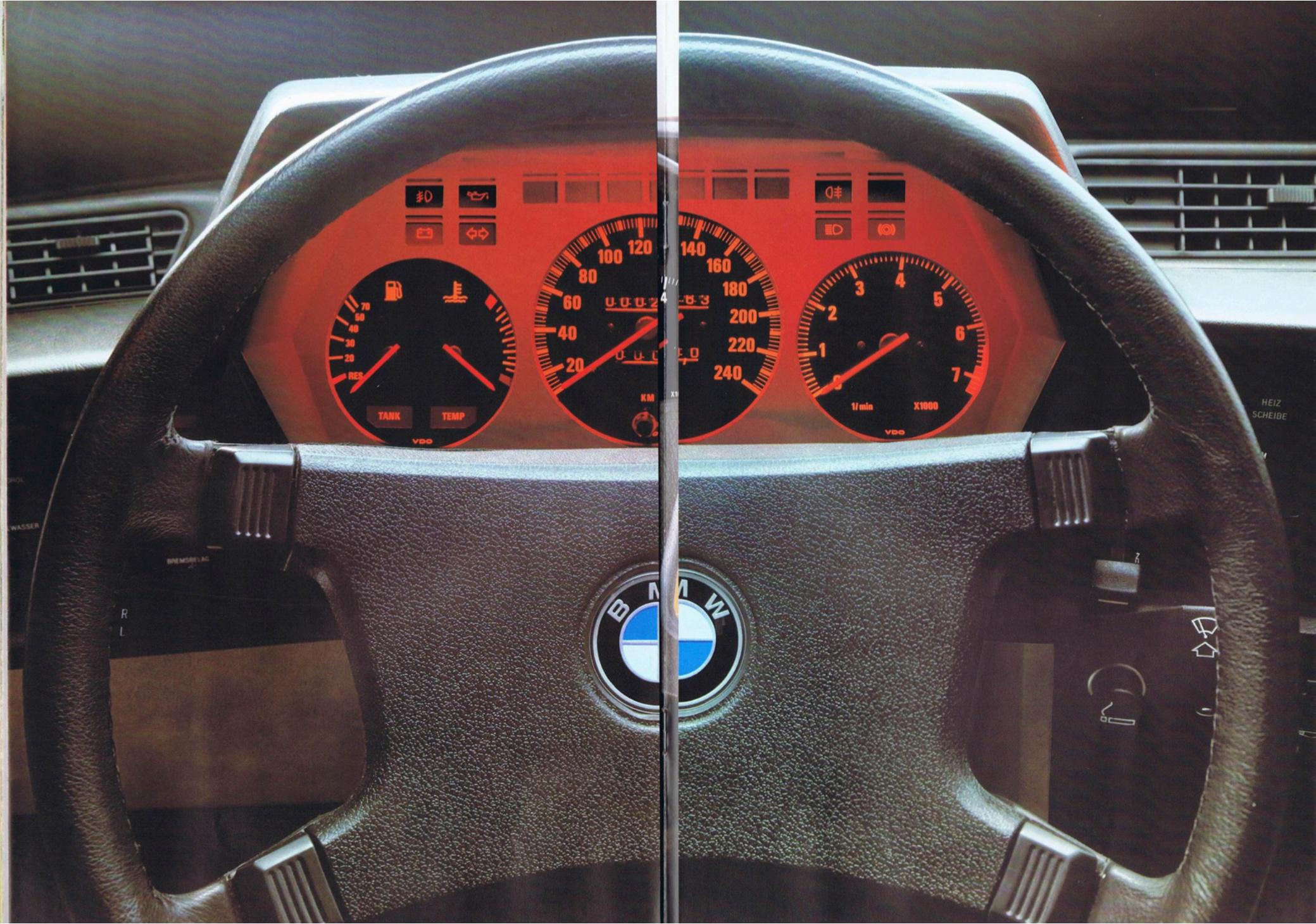
more calmly and to master even the most unusual situation.

The controlled atmosphere in the BMW coupé guarantees draught-free fresh-air zones in the head area and warm-air zones around the passengers. The fast-response heating system offers ultra-fine adjustment with the direction of warm-air flow being selected either upwards or downwards. The carefully arranged fresh-air grilles positioned at the sides and in the middle can be adjusted vertically and horizontally to provide an independent air flow for the driver and the front passenger. The highly effective forced air extraction system, and the fresh-air grilles with their ample air flow, will always keep the driver's and the passengers' heads clear. The heating and ventilation system is further supported by an infinitely variable high-output blower.

The air conditioning system, available as an optional extra,



with green-tinted heat insulated glass improves the perfect atmosphere within the car to an even higher level. Integrated in the fresh-air control and cooling system, the air conditioner guarantees particularly pleasant temperatures in all weather conditions.



From recognition to action:

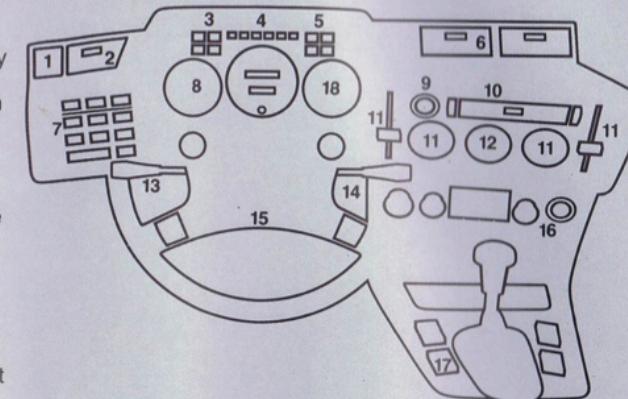
Just a split-second
in the BMW coupé.

In automotive engineering superior action and fast reaction require a system of perfectly matched instruments and control elements – a system which will minimize the time lapse from recognition to action.

The cockpit and control elements of the BMW coupé have thus been designed and optimized on the basis of biomechanical simulation tests. The result: perfect ergonomic driving conditions. And as a consequence the BMW coupé very quickly gives its driver that typical BMW routine which makes the driver the true master of his car and allows him to keep his full attention on the surrounding traffic.

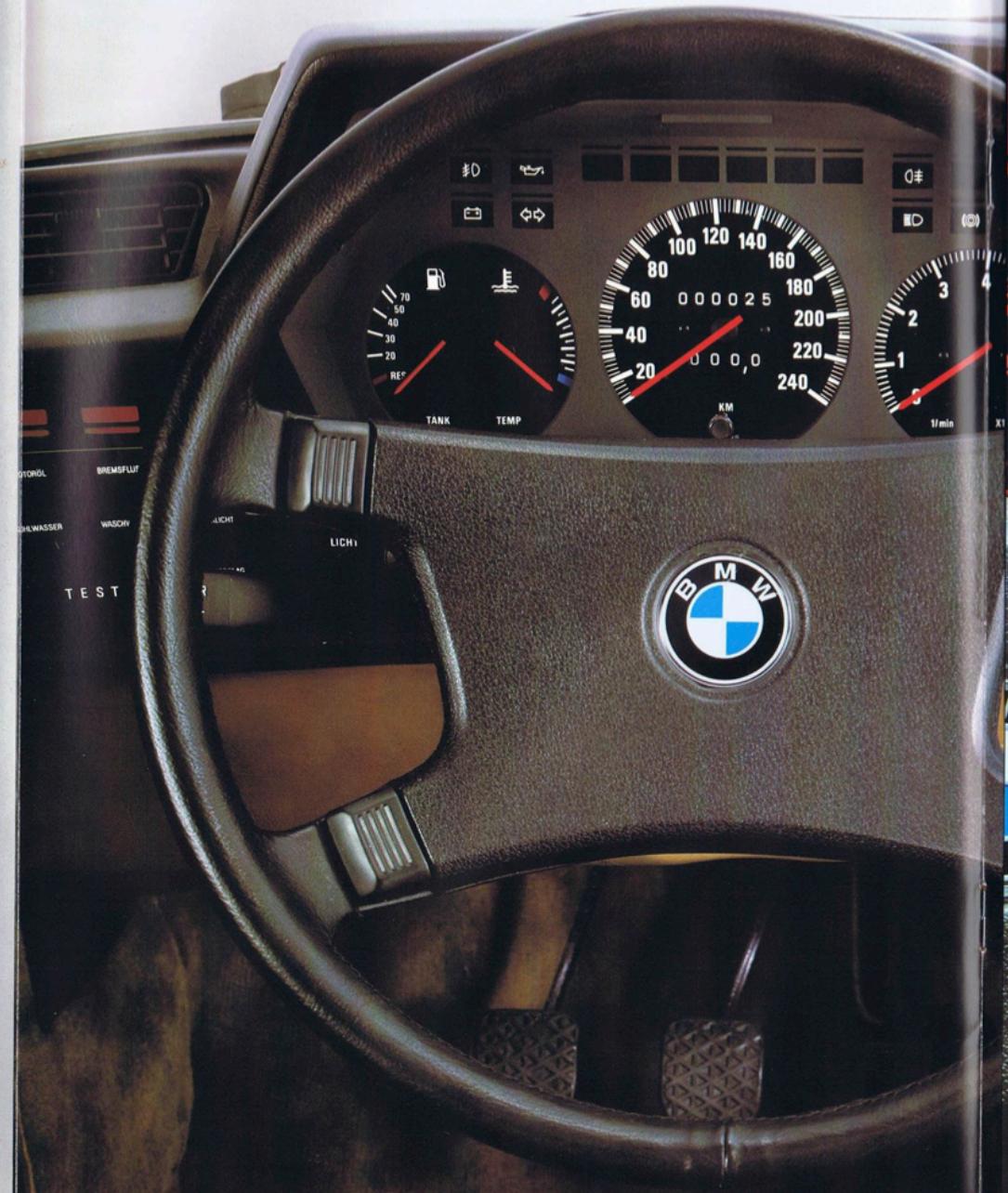
The functional, logical design and arrangement of all the information units and control elements avoids errors and false responses from the very beginning. The instrument panel is arched around the driver's seat and the pleasant orange-coloured illumination soothes the eyes and improves night driving conditions. All control elements are within safe and easy reach.

The power-assisted steering fitted as standard constitutes an important contribution to the motoring comfort of the BMW coupé both at low and high speeds. While generating its full effect when parking, the power steering assistance is automatically reduced as engine speed increases, thus giving the driver the more direct steering and full road contact when moving fast.



1. Warm-air outlet grille for side window defrosting.
2. Fresh-air outlet grille for ventilation; separate horizontal and vertical adjustment for the driver and the front seat passenger.
3. Instrument cluster with turn indicator, battery charge, and oil pressure warning lights.
4. Selector lever position indicator on the automatic transmission.
5. Instrument cluster with warning lights for high beam, rear fog warning light, foglamps (optional extra), handbrake "on" and, integrated in the same light, brake fluid level.
6. Fresh-air outlet grille with separate horizontal and vertical adjustment for the driver and front seat passenger.
7. Check Control: Function control unit for testing various functions just by pushing check button with the ignition switched on. Functions operating correctly when light is illuminated.
8. Fuel tank and coolant temperature indicator with integrated warning lights for fuel on reserve and temperature too high.
9. Push button for heated rear window with warning light for heating "on".
10. Additional fresh-air grille above the centre console for the driver, with horizontal and vertical adjustment and separate on/off position.
11. Finely adjustable heating and ventilation system with controls for heat and air distribution.
12. Rotary control for operating the quiet, infinitely variable electrical blower with an integrated quartz clock.
13. Combination stalk for turn indicator, flasher, high beam, and parking light.
14. Combination stalk for two-speed windscreens wiper, intermittent wiper, and automatic screen-washer/wiper.
15. Leather-coated four-spoke steering wheel (adjustable for reach) with large impact plate and four wide horn buttons.
16. Push button for hazard warning system.
17. Switches for operating front and rear electric window lifts.
18. Rev counter.

The number of steering wheel turns from lock to lock is also reduced quite considerably, thus the car is far more agile and easier to handle, particularly in city traffic and when parking. Steering wheel forces when parking slowly are thus reduced





by up to 77% – yet another contribution to active safety through fatigue-free driving.

The comfort and effective safety offered by a central locking mechanism comes as standard with the BMW coupé. The doors, luggage compartment, and fuel tank filler cap are locked and unlocked electrically. This allows use of the central locking mechanism also when the engine has been switched off, while the safety emergency switch combined with the central lock will automatically unlock the doors in the event of an impact or collision, thus allowing the doors to be opened from the outside.

The leather-coated four-spoke steering wheel features a large, tulip-shaped impact plate and four wide horn buttons placed conveniently next to the driver's hands (1).

The elaborate safety padding, shown here between the door and the instrument panel, has been integrated into the overall styling of the interior (3/4).

The switches for the electric window lifts fitted at the front and rear as standard are housed in the centre console (3/4).

The automatic transmission (633 CSi auto) represents an additional contribution to motoring comfort and road safety (BMW 635 CSi available with five-speed manual gearbox only). This transmission is perfectly integrated into the overall drive system and carefully matched with the particular per-

formance characteristics of the BMW power unit (4).

The speedometer and rev counter on the BMW 635 CSi go up to the higher speed ranges that this car is able to reach (5).

Various stereo, mono, and cassette radio sets (6) are available as optional extras. Other extras are a manual or electrically operated steel sliding roof, Recaro seats with cloth or leather finish (driver and front seat passenger), an automatic leveller, automatic speed control, a five-speed manual gearbox, limited-slip differential, and a headlight wipe/wash

system (for further optional extras see specifications).



Motoring culture throughout the interior.

The quality and perfect finish of the luxurious leather upholstery also contributes to the special ambience inside the BMW coupé. Especially as the leather upholstery is available in 7 different colours to suit the driver's individual taste.

Velours upholstery is available as an optional extra at no extra cost. Passengers travelling in the rear seats of the BMW coupé, will experience the great difference between this high-performance car and its competitors. Because each seat in the BMW offers the same high standard of space and culture, of material quality and finish.

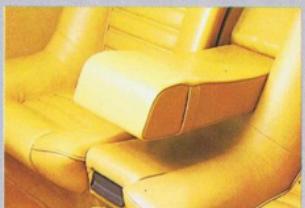
The perfectly body contoured, individual rear seats offer excellent side support. The centre armrest (3) as well as the electric window lifts for partially lowering the rear side windows are natural features in the BMW coupé. To accommodate the three-anchor inertia reel belts available for the rear seats as an optional extra, the belt locks are integrated in the middle of the centre armrest.

Two recessed compartments for the installation of stereo loudspeakers (optional extras) are provided in the parcel shelf. The first-aid kit is kept handy and ready for use in the rear

stowage compartment on the driver's side (1). As an option, the rear-seat headrests may be adjusted for height and angle (2).

Thanks to the pivot on the bottom belt anchor, access to the rear-seat area is particularly generous.

The leather upholstery in the BMW coupé is available in 7 different colours: nylon brown, light grey, navy blue, fern green, black, velours red and white beige.





The BMW chassis concept: Perfect safety and easy handling in one.

The BMW chassis – spring struts on the front wheels (1) and semi-trailing arms with spring struts at the rear (2) – is one of the most outstanding and safest car chassis in the world.

This design concept, which has also been highly successful in motor racing, excels particularly in the careful coordination of all parts and components, and the ultra-fine suspension and shock absorbing qualities. The BMW coupé thus combines precise and smooth running characteristics with a high standard of motoring culture.

Based on a pre-defined chassis response programme, each individual wheel will adjust independently to all driving and road conditions. The result of this perfect synthesis of performance and comfort is optimum road-holding even in extreme situations (3).

The braking system of the BMW coupé is geared to the car's outstanding performance and makes full use of the outstanding chassis qualities. Designed and constructed as a dual twin-circuit system, the brakes guarantee their full braking effect precisely where it should be, on the front wheels, even if one circuit fails to

operate: (4). The coupé also features inner-vented disc brakes on the front and rear wheels (5), a brake servo, and a pipe pressure governor to avoid excessive braking force on the rear wheels.

BMW 635 CSi: Extra performance on a sporty basis.

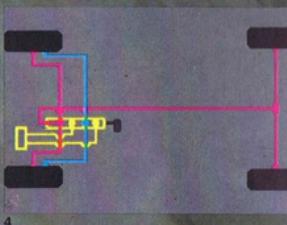
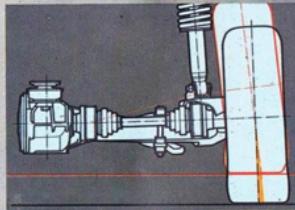
All the features of the BMW 635 CSi which have an influence on the car's driving behaviour have been geared to the higher standard of performance and the new characteristics of the engine and transmission.

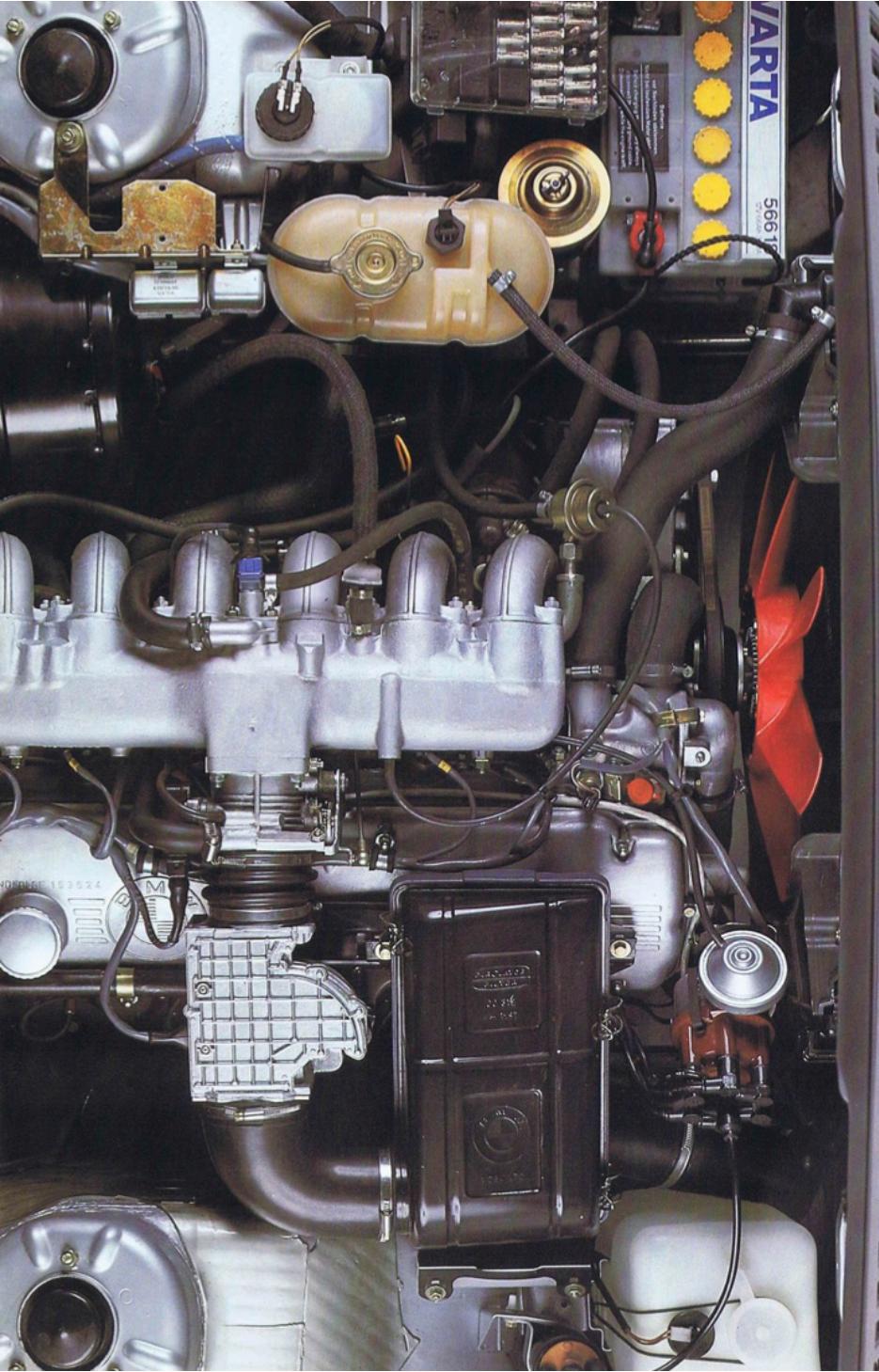
- Front and rear axle with reinforced stabilizer bars.
- Additional tilt angle stops on the front spring struts to guarantee controlled spring action and increase the effect of the stabilizer bar.
- Tougher, sporty suspension and shock absorption to provide improved road contact under all conditions. These reinforced stabilizer bars, tilt angle stops, and tougher suspension/shock absorption are also available as optional extras for the BMW 633 CSi.
- Wider 6½ light-alloy rims available for the BMW 635 CSi increase the tyre/road contact area.

The result is optimum power not only in the engine but also on the road. Better road-holding, better directional stability, and reduced body tilt in fast bends – all the ingredients that go into sporty motoring and improved performance to the utmost limits.

This outstanding performance of the chassis is then optimized by the carefully designed aerodynamic improvements.

In its entirety, this combination of increased engine power, improved torque, a sporty 5-speed gearbox, chassis modifications, and aerodynamic improvements, gives the BMW 635 CSi driving characteristics more reminiscent of competition cars than those of standard production models.





**BMW engine design:
The performance pledge.**

The temperament of BMW power units is a design objective. Because our performance pledge is based on the fact that dynamic and agile driving qualities will be even more important tomorrow than they are today.

Seen from this perspective, the outstanding performance offered by the BMW coupé is not a purpose in itself. Rather, it is the essential basis required for adjusting quickly to changing traffic conditions – a requirement that a powerful car can fulfill more easily and with greater safety than an under-powered automobile.

The extreme reliability, sturdiness and service life of BMW standard production engines

results from a dual basis: sophisticated engineering and an unusual amount of racing experience.

This was achieved by building racing engines that are able to develop far more than twice the power of the standard unit and withstand the toughest of conditions requires numerous design refinements over and above the carefully conceived basic design.

The latest example of BMW's engine technology is the 160 DIN kw (218 bhp) power unit in the new BMW 635 CSi. A power unit developed parallel to the M 1 engines on the basis of the 3.5 ltr racing block renowned for its success in the BMW racing coupé.

BMW 635 CSi: Improved performance from motor racing success.

Thanks to its optimum physical and engineering conditions, the BMW high-performance six-cylinder concept has become the basis for numerous engines, designed and built for the most varied purposes. The new 3.5 ltr engine that powers the BMW 635 CSi, for example, develops 160 DIN kW (218 bhp). The output of the engine develops in the BMW M 1 racing car, in turn, goes from 204 DIN kW (277 bhp) in the standard version to 588 DIN kW (800 bhp) in the Group 5 turbocharged version. This incomparable range of different engine versions demonstrates the possibilities inherent in the inline BMW six-cylinder engine concept – and shows the standard of quality and engine know-how offered by the BMW power units.

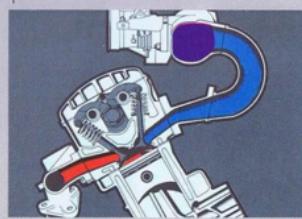
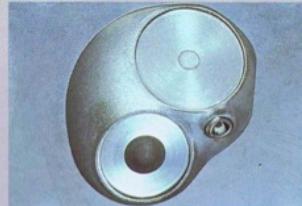
On account of its different heritage, the BMW 635 CSi power unit differs in its performance characteristics from the other BMW coupé engines. Engine power and torque have been increased far more than the relatively minor increase in displacement would indicate. The new 3.5 ltr engine thus offers a lot of extra power even at low engine speeds while at the same time it excels by its cultivated smoothness and well-balanced running characteristics.

Driving the BMW 635 CSi immediately reveals the considerable increase in performance. The maximum output of 160 DIN kW (218 bhp) is already available at 5200 rpm. And the maximum torque, which has now been increased to 310 Nm

(228.5 ft/lb) is generated at 4000 rpm. These performance ratings put this BMW six-cylinder above many a comparable 8-cylinder.

Maximum engine speed has been reduced to 6200 rpm – and together with the longer final drive ratio this means the same road speed at a lower engine speed in top gear. The result is less fuel consumption, a lower noise level, and extra comfort. Further optimization of the famous BMW triple-hemispherical swirl-action combustion chambers provides more power, better utilization of the fuel/air mixture, and, again, greater fuel economy. The specially revised fuel/air mixture intake ducts minimize fuel loss and optimize fuel/air flow.

To get this new standard of performance properly on to the road, the five-speed gearbox of the BMW 635 CSi has been tailored to the engine's increased torque.



Particular attention has been given to the speed range between 60 and 110 mph – and this is where the BMW 635 CSi develops its useful acceleration.

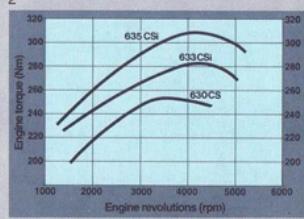
BMW 633 CSi	BMW 635 CSi
0 - 60 mph in 7.6 s	0 - 60 mph in 7.3 s
0 - 100 mph in 20.8 s	0 - 100 mph in 18.2 s
30 - 75 mph in 8.7 s	30 - 75 mph in 7.4 s
50-100 mph in 15.3 s	50-100 mph in 13.1 s

The BMW six-cylinder – a synthesis of outstanding performance, elasticity, motoring culture, and economy.

The BMW coupé range has two alternative engines to offer in addition to the BMW 635 CSi.

The dual register carburetor engine of the BMW 630 CS develops 135 DIN kW (184 bhp) at 5800 rpm, generates a maximum torque of 255 Nm (188 ft/lb) at 3500 rpm, and accelerates the BMW coupé from 0 to 60 mph in 8.6 s.

The injection engine of the BMW 633 CSi develops 145 DIN kW (197 bhp) at 5500 rpm, generates a maximum torque



of 285 Nm (210 ft/lb) at 4300 rpm, and accelerates the BMW coupé from 0 to 60 mph in 7.6 s.

The BMW 633 CSi/ 635 CSi feature an electronically controlled Bosch L-Jetronic fuel injection system which determines the correct amount of fuel required as a function of the air intake and driving conditions. This keeps fuel consumption at a minimum while increasing the engines' response and spontaneous power output.

All the BMW coupés are fitted with a contact-free transistorized ignition system for ultra-precise ignition timing.

The overhead camshaft running in four bearings is driven by a specially damped roller chain. Thanks to its considerable rigidity the camshaft guarantees exact valve control and thus contributes to the engine's running smoothness at all speeds.



The spherical combustion chamber combines optimum swirl action of the fuel/air mixture with a soft combustion process and a high degree of thermal efficiency. The result is a genuinely unique process of power development, absolutely noiseless combustion, reduced exhaust emission, and greater fuel economy (1).

The optimized flow manifolds and ducts on the BMW power units minimize fuel/air mixture supply losses. And at the same time the special angle at which the BMW power units are installed offers a sufficient distance between the intake valve and the fuel supply manifold to increase engine torque by a significant margin.

The cross-flow principle built into BMW engines ensures a straight, undeflected flow of the fuel/air mixture between the intake and the exhaust end and thus provides the basis for smooth combustion and minimized exhaust emission (3).

Thanks to their careful balance of all mass forces and the precisely-damped crankshaft and drive system, the BMW six-cylinder power units achieve an unparalleled standard of turbine-like running smoothness (2).

Many other engines require more displacement or more cylinders to



reach the same torque as BMW power units, and thus run less economically. And this superior torque typical of BMW engineering is also the basis for more reliability, robustness, and a longer service life. Because engines that are able to cope with all traffic situations in the medium engine speed range do not have to be run at extremely high engine speeds detrimental to their overall service life (4).

BMW cars in motor racing: The best competing to the advantage.

Over and above a large portion of dedication and true enthusiasm, BMW regards motor racing as a technical and professional venture to be pursued with industrial resources. A venture where success means proof of efficiency and outstanding performance in a highly technical field. And a venture which serves to measure a company's abilities in solving the most demanding technological and organisational problems.

Over and above its inherent purpose, motor racing is a genuine stimulus for automotive progress. It is through motor racing that modern cars have reached the high standard of performance and driving safety required in today's traffic. And it is thanks to motor racing that the performance and safety reserves now regarded as natural were developed.

The crucial point, however, is to use the know-how gained in motor racing also for standard production vehicles – and not to restrict superior technical solutions to racing cars alone.

Today, our standard production cars possess numerous design features that they have inherited either directly or indirectly from racing experience and developments. While at the same time we have a number of design features currently in use in our racing cars which may also become standard production components in the near future.

This possibility of transplanting motor racing developments into everyday motoring practice is one of the reasons BMW concentrates on production car racing.

When the worst comes to the worst,
a BMW coupé does not give up.
It gives in. And it does so systematically.



To reach an optimum standard of safety, a car must be amply powered, manoeuvrable, easy to handle, and – even in the top international category – compact in its dimensions. At the same time it must represent the latest stage in terms of safety developments. This is why safety with BMW means the perfect combination of active and passive safety. And it explains how BMW safety has developed out of a long motor

racing tradition and intensive research with the objective of integrating the most progressive safety technologies into compact car dimensions.

The BMW Body Testing Division has one of the most up-to-date research facilities for testing car safety. Highly specialized and perfectly equipped test stations, as well as the BMW proving grounds, conduct comprehensive simulation and crash tests to determine the

limits and reaction of the overall body and individual components in roll-overs and collisions from all sides.

Particular attention is given to the interaction between all kinds of vehicle deformation and the effect of individual safety measures. The result is utmost safety down to the very last design feature.

The safety system thus developed and introduced for the BMW coupé is more com-

plex than in any other comparable car. The superiority of this prophylactic safety system in the event of an emergency is not only a result of its progressive design details, such as the specific crush behaviour of the front section, the fully-integrated roll-over bar, or the extremely safe and rigid passenger shell. Rather, it also results from the careful combination of all safety components to form a comprehensive safety system

hitherto unparalleled in coupé motoring.

A few examples of BMW crash tests and facilities:

Head-on collision test.
Impact against a solid wall at 30 mph (1).

Pendulum test for bumper efficiency (2).

Roof column and roll-over bar stability test (3).

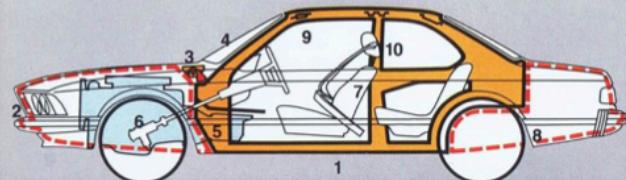
Door stability test (4).
Safety belt and fastening

point stability test (5).

Optimization of seat protection system by simulated test sledge impacts (6).



There are many reasons for driving a BMW coupé. And quite a few of them are a must.



The BMW coupé offers a systematic combination of precisely matched, interacting safety features: the BMW life preservation system.

The body of the BMW coupé is based on the latest results in safety research. So safety is an essential element of the car's styling: the sturdy, almost vertical central pillar combined with the stable roll-over bar protects the passenger's safety cell even under extreme conditions. The strong but nevertheless elegant rear roof pillar – which merges smoothly into the sides of the coupé – serves the same purpose.

The BMW safety system: More than the aggregate effect of the individual parts.

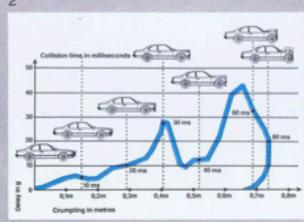
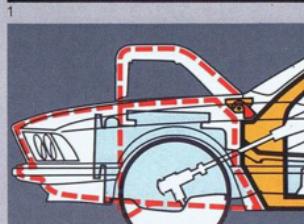
The passenger shell is protected at three different levels (1): The lower vehicle level which consists of bulkhead reinforcement members, special longitudinal supports at the side, and support elements behind the rear seat and in the luggage compartment. The central level with support elements along the instrument panel, safety plates in the doors with special reinforcement around the hinges and locks, as well as reinforcement members in the parcel shelf. And, finally, the upper level with all-round stabilization profiles in the roof and a roll-over bar extending

from the central roof columns.

Thanks to its predetermined deformation points, the front section (2) will ideally interrupt the impact caused by a head-on collision, thus perfectly interacting with the safety belts in their specific function.

In the event of an accident, the passengers will therefore never be subject to excessive g-forces and the strain will remain bearable (3).

The engine compartment lid is also



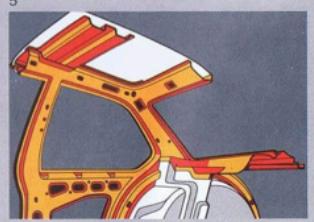
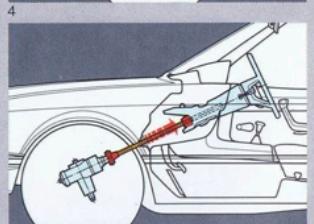
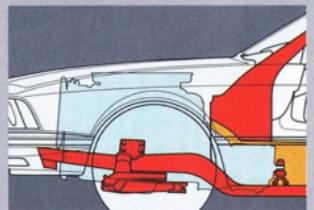
designed for predetermined crush behaviour. It will bend at definite points and not go through the laminated glass windscreen (2). It is also fitted with special safety locks to keep it in position.

The special design of the propeller shaft tunnel and the extra-rigid bulkhead prevent the engine and gearbox from penetrating the passenger shell (4).

The steering transmission is in a protected point outside of the crush zone and the collapsible safety steering column prevents impact forces from being conveyed directly on to the steering wheel (5).

Special-profile reinforcement members, such as the reinforced front and rear roof columns, which are designed into the body and carefully tested prior to production, constitute part of the safety shell.

In designing the safety shell, BMW

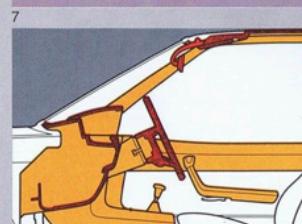


has given particular significance to the roof area. Because in the event of a roll-over the roof must never be pressed in too far. So every BMW has reinforced central roof columns combined with a roll-over bar (6) and specially profiled front and rear roof columns. This guarantees an extremely rigid and sturdy roof structure.

The interior is fully padded to absorb impact energy, and the instruments, handles, and the mirror are all flexibly mounted and deformable.

The wide padded strips along the doors merge neatly into the instrument panel and the padding next to the rear seats also provides added protection. The roof columns are covered by large leatherette cushions and extra padding is provided around the sun visors.

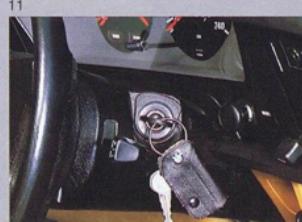
This systematic safety padding extends from the instrument panel



right down to the knee area (9). The metal reinforcement plates around the instrument panel are not only carefully padded, but also designed to ensure that all edges face away from the passenger compartment. The instrument panel itself has rounded-off and deformable edges to avoid head injuries (10) and the centre console is specially padded for extra softness.

The headrests have naturally also been designed and tested for maximum interior safety (11). The starter/ignition lock has been carefully integrated into the steering column to ensure that the key is not directly in front of the driver's knee while access to the lock is still free and unobstructed (12).

Thanks to their special safety locks, the doors will always remain closed in the event of a collision – while they

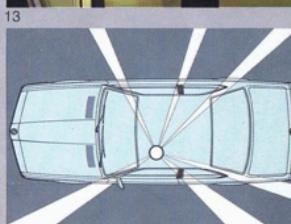


can then be opened from the inside and the outside as the rigid safety shell avoids any deformation (13).

All-round visibility is excellent thanks to the large windows. The roof columns have been kept narrow but safe and sturdy to keep blind spots to a minimum (14).

Safety: For the sensible driver.

The outstanding reliability of the BMW safety system will only pay off if the driver and passengers have fastened their safety belts. This means that fastening the safety belts is not in some countries just the law, but also a crucial prerequisite for maximum safety: professionals buckle up. The automatic inertia reel belts (with a recessed roll-up mechanism) can easily be fastened with one hand only. And they feature double locking action by responding not only to vehicle deceleration but also to belt tension (15).





Sheer driving pleasure.



BMW – sheer driving pleasure

Specifications

BMW 630 CS

BMW 633 CSI

BMW 635 CSi

Bodywork

Dimensions and weights

Two-door coupé with rigid safety cell, predetermined front and rear crumple zones, integral roll-over bar, all-round reinforcements, engine compartment lid hinged at the front with safety lock

Length 4755 mm (187"), width 1725 mm (68"), height (unladen) 1365 mm (54"), wheelbase 2626 mm (103"), track, front 1422 mm (56"), rear 1487 mm (59"), turning circle 11.2 m (37 ft), door width 1040 mm (41") Shoulder width, front 1435 mm (56.5"), rear 1410 mm (55.5"), seating width front 550 mm (22"), rear 1245 mm (49"), seat depth, front 485 mm (19"), rear 450 mm (17.7"), fore-and-aft seat adjustment 215 mm (8.5"), height adjustment of driver's seat 45 mm (2") Capacity of luggage compartment, absolute: approx 530 ltr (19 cu ft), acc to VDA approx 413 ltr (14 cu ft), fuel tank 70 ltr (15.5 Imp gals) including 7 ltr (1.5 Imp gals) reserve	Weight unladen 1450 kg (3196 lb) (Automatic 1470 kg/3241 lb) Permitted load 380 kg (837 lb) (Automatic 360 kg/794 lb) Permitted gross weight 1830 kg (4034 lb) Permitted trailer load braked 1800 kg (3968 lb) at a max gradient of 12% (630 CS/633 CSI Automatic at a max gradient of 8%), unbraked 650 kg (1433 lb), roof load 75 kg (165 lb)	Weight unladen 1470 kg (3241 lb) (Automatic 1490 kg/3284 lb) Permitted load 360 kg (794 lb) (Automatic 340 kg/749 lb) Permitted gross weight 1830 kg (4034 lb) Weight unladen 1500 kg (3308 lb) Permitted load 360 kg (794 lb) Permitted gross weight 1860 kg (4101 lb)
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Engine

Water-cooled 6-cylinder 4-stroke inline, arranged longitudinally at car front, light-alloy cylinder head, crossflow principle, overhead camshaft with 4 main bearings, spherical swirl-action combustion chamber adapted to either carburetor or fuel injection system, parallel-displaced overhead valves in V-arrangement, roller chain drive, vibration-damped crankshaft with 7 main bearings and 12 counterweights, torsional vibration damping, forced-feed lubrication with Eaton pump and main flow oil filter

Crankcase developed from racing engine, extremely short stroke, combustion chamber specially designed around spark plugs, fuel mixture ducts revised to minimize power loss and optimize chamber filling

Single down draught 4A1 carburetor with automatic choke and continuous cold running enrichment, accelerator pump	Electronic fuel injection system Bosch L-Jetronic, system control through air flow metering, automatic choke	
Capacity 2968 cc (192 cu in), stroke 86 mm (3.4"), bore 89 mm (3.5")	Capacity 3210 cc (196 cu in), stroke 86 mm (3.4"), bore 89 mm (3.5")	Capacity 3453 cc (211 cu in), stroke 84 mm (3.3"), bore 93.4 mm (3.7")
Max output 135 DIN kW (184 bhp) at 5800 rpm	Max output 140 DIN kW (197 bhp) at 5500 rpm	Max output 160 DIN kW (218 bhp) at 5200 rpm
Max torque 255 Nm at 3500 rpm	Max torque 285 Nm at 4300 rpm	Max torque 310 Nm at 4000 rpm

Compression ratio 9.0:1

3-phase alternator 12 Volts, 55 Amps/770 Watts (as of 630 CS Automatic 65 Amps/910 Watts), battery 12 Volts, 66 Amps/hr

Contact-free transistorized ignition

Hydraulically operated single-disc dry-plate spring clutch with torsional vibration damper and automatic adjustment

Optional extra: Automatic transmission with fluid coupling as torque converter

Synchronized 4-speed gearbox: I: 3.855; II: 2.203; III: 1.402; IV: 1.0; Rev 4.3

Final drive 3.25:1

Divided propeller shaft with elastically suspended central bearing and 2 universal joints, rear axle drive through double universal joint shaft with maintenance-free homokinetic joints

Synchronized 5-speed gearbox with direct gear transmission for sporty motoring I: 3.717; II: 2.403; III: 1.766; IV: 1.263; V: 1.0; Rev 4.234

Final drive 3.07:1, final drive transmission with special oil reservoir

Transmission

Max speed 221 km/h (130 mph) (Automatic 202 km/h/125 mph)

Acceleration from 0-100 km/h in 9.3 secs (0-60 mph in 8.6 secs)

(Automatic 8.8 secs/0-60 mph in 8.2 secs)

Acceleration from 0-120 km/h in 12.4 secs (0.75 mph in 12.4 secs)

(Automatic 14.8 secs, 0.75 mph in 14.7 secs)

Standing-start kilometre in 29.9 secs (Automatic 32.3 secs)

Standing-start kilometre in 28.1 secs

Max speed 222 km/h (138 mph)

Acceleration from 0-100 km/h in 7.6 secs (0-60 mph in 7.3 secs)

(Automatic 8.4 secs/0-60 mph in 10.2 secs)

Acceleration from 0-120 km/h in 11.8 secs (0.75 mph in 11.8 secs)

(Automatic 13.8 secs, 0.75 mph in 13.7 secs)

Standing-start kilometre in 29.0 secs (Automatic 31.3 secs)

Standing-start kilometre in 28.1 secs

Fuel consumption to DIN 70030: 24.8 mpg (Imp) (Automatic 22.8); premium-grade fuel 98 ROZ

Fuel consumption at a constant 100 km/h (62 mph): 26.8 mpg (Imp) (Automatic 26.4); premium-grade fuel 98 ROZ

Fuel consumption to DIN 70030: 28.3 mpg (Imp) (Automatic 25.7); premium-grade fuel 98 ROZ

Fuel consumption at a constant 100 km/h (62 mph): 32.8 mpg (Imp) (Automatic 29.7); premium-grade fuel 98 ROZ

Fuel consumption to DIN 70030: 28.3 mpg (Imp) (Automatic 25.7); premium-grade fuel 98 ROZ

Fuel consumption at a constant 100 km/h (62 mph): 32.1 mpg (Imp); premium-grade fuel 98 ROZ

Suspension and brakes

Front suspension: independent wheel suspension on oblique spring struts (caster displacement), coil springs with cross-force neutralisation through eccentric arrangement and additional rubber springing, torsion-bar stabilizer

Rear suspension: independent wheel suspension on semi-trailing arms in rubber bushes, spring struts with coil springs and additional rubber springs, torsion-bar stabilizer

Sports-tuned suspension with tilt angle stops on the front spring struts

Collapsible safety steering column, steering wheel adjustable for reach by 30 mm (1.2"), three-piece track rod, engine speed-related power steering, overall steering ratio 16.9:1

Light-alloy 6 x 14H2 sports rims, 195/70 VR 14 steel radial tyres

Light-alloy 6 1/2 x 14H2 sports rims with cross-spoke styling, 195/70 VR 14 steel radial tyres

Dual twin-circuit braking system with brake servo and rear axle brake pressure governor, vented disc brakes front and rear; front: 4-piston fixed-calliper disc brakes with automatic pad wear compensation, disc diameter 272 mm (10.7"), brake lining wear warning light on front left and rear right wheel with function lamps in the Check Control; handbrake acting mechanically on the additional dual servo-brake at the rear, dia 160 mm (6.3")

Bumpers visually part of the overall chassis both front and rear with integrated spoiler at the front; aluminium trim between rear lights

Bumpers visually part of the overall chassis both front and rear with large, regenerating spoiler at the front, rear spoiler made of black synthetic material on luggage compartment lid with model designation, slender ornamental strips at the side and the black trim between the rear lights

All-round parking protection through rubber-trimmed bumpers extended around the side of the car and rubber side rubbing strips, engine compartment lid supported by 2 gas-filled struts with special safety lock (hook catch), chrome-plated door sills

Electric window lifts front and rear (rear windows open partially), exterior rear-view mirror operated electrically from the inside, water-repellent profiles to reduce spray on side and rear windows, brown-tinted glass allround with heat insulation, laminated windscreen, heated rear window

Double halogen headlights (automatic disconnection with ignition), 2 reversing lights, integral rear fog warning light, electric central locking system with emergency safety switch (including fuel tank filler cap), recessed tank filler with holder for filler cap

Hollow-cavity protection, undersealing, two further treatments after purchase ensure a 6-year warranty against corrosion

Check Control: functional lighting system that indicates when check button is pushed and ignition engaged, brake lining wear, brake fluid level, coolant level, screenwasher water level, engine oil level, brake lights and tail lights. Illumination of all function lights indicates that all systems are working

Instruments and controls arched in a semi-circle around the driver, clearly legible and visible instruments with rev counter, fuel and coolant temperature gauges, quartz clock, mileage trip recorder, illuminated switch panels for lights and fog lights; infinitely adjustable orange instrument panel illumination, additional warning lights for: coolant temperature, handbrake on and brake fluid level, rear fog warning light, selector panel for Automatic transmission

(optional extra 630 CS/633 CSI only); 2-speed screenwipers, intermittent wiper, electric screenwashers with intermittent wash/wipe phase, operated from steering column.

Leather-covered 4-spoke steering wheel (dia 380 mm/15") adjustable for reach, large padded central boss and 4 large horn buttons, leather gear lever knob

5-speed shift diagram on centre console

Exterior fittings

Heating and ventilation: coolant temperature-controlled fresh air heating with finely-adjustable temperature control, quiet, infinitely variable electronically-controlled blower, defroster outlets for the windscreen and side windows, fresh air inlets through grilles at the sides and in the centre, adjustable both vertically and horizontally, separate controls for the driver and front seat passenger, additional fresh air grille separately adjustable and controllable for the driver above the centre console, forced air extraction with outlets behind the rain gutter at the rear roof columns, illuminated heating diagram

Leather upholstery, precise adjustment of front seat backrests for desired angle, front passenger seat can be realised and tipped forward from driver's seat, driver's seat adjustable individually for height and angle, smooth fore-and-aft adjustment thanks to seat rollers, front headrests adjustable for angle and for height, removable by means of push button, individually contoured seats at the rear with centre armrest, 3-anchor inertia reel safety belts for front seats with recessed reel and pivoting system, armrests front and rear, with integral grab handles at the front, 2 roof grab handles with clothes hooks (runners if car is fitted with steel sliding roof as an optional extra), knee guard under instrument panel, padded centre console

Full deep pile carpeted interior with carpeted parcel shelf, 2 covered stowage boxes in the parcel shelf with an integrated first-aid kit and prepared for loudspeaker installation; other stowage compartments within easy reach of the large, illuminated and lockable glove box (socket with rechargeable torch in glove box), in the pockets on the doors, on the instrument panel (front seat passenger) and in the centre console; illuminated ashtray at the front of the centre console and between the rear seats

Between the rear seats, the central console has contacts on door pillars, engine compartment light, luggage compartment fully carpeted and illuminated, deep pile carpet on luggage compartment floor, large toolkit with cover inside luggage compartment lid

The version without front and rear spoilers (and without the ornamental strips on the side and the black trim between the rear lights) is available in all paintwork colours

Optional extras

Automatic transmission with servo clutch indicated on instrument panel (standard in UK), automatic speed control (for Automatic transmission models only)*

5-speed gearbox with direct gear from the engine, tuned chassis (tilt angle stops on the front spring struts, modified front stabilizer bar, reinforced rear stabilizer bar, sports-tuned springs/shock absorbers)

Limited-slip differential, automatic rear axle leveller, trailer suspension, trailer towing bar with removable ball end (recommended in conjunction with trailer suspension or levelling system)

3-anchor inertia reel safety belts at the rear, leather-covered sports steering wheel (dia 380 mm/15"), lowered front seats (standard equipment in conjunction with steel sliding roof), 2 headrests on rear seats, Recaro seats for driver or driver and front seat passenger in black fabric or leather finish, front passenger seat adjustable for height and angle, air conditioning with all-round green-tinted glass, velours foot-mats, all-cloth seat covering in velours (optional), warning triangle with holder, 2-kg fire extinguisher with holder (not available together with Recaro seats)

Steel sliding sun roof operated manually or electrically (and in conjunction with lowered front seats), metallic paintwork, green-tinted heat insulation glass allround, clear glass allround (optional)

Headlight washer/wiper unit, outside rear-view mirror on front passenger's side adjustable electrically from the inside, halogen fog lamps, more powerful alternator 65 Amps/910 Watts (630 CS only), different types of radios (mono with 2 loudspeakers, stereo and cassette player each with 4 loudspeakers), radio suppression, no model designation

*in preparation
The models shown comply with West German specifications. According to the requirements of particular export markets alterations in models, standard and optional equipment may occur. For precise information, please contact your BMW importer or distributor. Changes in design and fittings reserved.

MODEL	IMPERIAL	METRIC
630 CSi coupé	15.2 mpg	29.7 l/100 km
633 CSi coupé	15.2 mpg	23.2 l/100 km
635 CSi coupé	14.8 mpg	26.3 l/100 km

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