320i 325i 325iX 324td touring









### Presenting a new world of dynamic motoring.

he only way to really enter new, innovative terrain is to start from a clean sheet of paper, giving up conventional concepts altogether.
Which is precisely what BMW has done in developing the new touring. The touring is most definitely a dynamic car, a typical BMW. It is a compact car, a typical 3 Series. But it simply doesn't fit into any of the conventional categories. The touring looks dynamic at first sight, but in a different way. It is beautiful to behold — the kind of car you would buy for its looks alone, just like a coupé or convertible. It offers a number of important practical benefits through its versatile interior, adding rational value to emotional appeal. The touring combines common sense with unique motoring flair, providing ideal conditions for both the business user and the leisure-time enthusiast.

Individual style and genuine versatility are however only two of the many features that make this car so unique. For like every BMW, it also offers a thrill of motoring that evokes admiration even with the most discerning driver. The silky-smooth refinement of the powerful straight-six, the superb handling, the perfect interplay of the numerous sophisticated and reliable components and, not least, the impressive safety reserves add to this fascination. All this makes the touring an overwhelming new concept with the quality of a BMW. A performance car for many purposes. A car with its own distinctive looks, setting it aside from the rest of the motoring world. A unique car in its own right — the

BMW touring.



## An unprecedented combination of grace and pace.

ersatility is the name of the game with the BMW touring. For this is an entirely new kind of sporty, dynamic automobile. With compact di-

mensions and a variable interior. With four doors, a rear hatch, and ample room for five passengers and their luggage. With dynamic styling that emanates a unique

flair for the aesthetic connoisseur.

Quite simply, the touring is a new, different car. But at the same time it's a typical BMW.

The rear window and the rear



side windows are bonded on to the touring and make a contribution to the excellent body stability.

The aerodynamic front spoiler and the discreet but efficient rear

Better streamlining — just one of the advantages of the bonded rear and side windows.

spoiler above the rear window make the touring just as sleek as its saloon counterpart. Outstanding streamlining for outstanding performance.

The green heat-insulating glass, naturally provided as standard, keeps the passenger compartment cool and pleasant even in hot sunshine.

Satin-chrome finish, another standard feature, accentuates the sporty and dynamic character of the BMW touring. Nearly all the

conventional chrome is replaced by silky, matte black. Only the kidney-shaped front grille, the hallmark of all BMWs, stands out in shining brilliance, a clear symbol of the touring's heritage. The rear-view mirrors are finished in body colour, as are the front and rear bumpers. This exclusive appearance is enhanced by the unique range of paintwork colours, the touring being available only in dark metallic, salmon-silver metallic and black.

Exclusivity BMW-style is nevertheless not confined to the car's looks alone. For the touring also features exclusive technologies, proving how consistently BMW solves even the most intricate problem. Added to this, the outstanding production quality also gives every BMW a touch of excellence.

Particularly the touring, therefore, shows exceptional attention to detail borne out by the constant quest for perfection.

One of the touring's exceptional features is the heated rear window wiper rest position that ensures prompt operation of the wiper even after a long and cold winter night. Then there are the rear window washer nozzles built into the screenwiper shaft, the innovative ellipsoid-technology low-

Theoretically, conventional rear window wipers were quite adequate.
Theoretically . . .

beam headlights and the lenstechnology foglamps (from the 325i upwards). For BMW will not stop searching for the better solution until we really have the best that modern technology can offer.

It goes without saying that this also applies to the passive safety

of the touring. Carefully calculated reinforcements throughout the entire body of the car absorb impact energy in the event of a collision. The deformable front section ensures that the passenger compartment will remain virtually undamaged in a head-on crash up to 56 km/h. The re-engineered and re-styled front bumper takes up minor bumps when parking up to 4 km/h without even being bent out of shape.

To make sure that the proud owner of a BMW touring will always remain proud, the body is zinc-plated where appropriate. Then it is dipped into a phosphate bath, primed in a cathodic dip bath, and efficiently sealed in all hollow cavities with an electronically calculated cover of wax, to name just a few stages in BMW's lasting quality concept.

In all, every touring undergoes a multi-step anti-corrosion regimen to provide the outstanding quality that has made BMW famous the world over. Giving BMW a reputation of lasting reliability and value in the automobile world.



More light. Ellipsoid technology makes the low-beam head-lights a lot brighter without increasing their compact dimensions. The driver has a larger field of vision, the road is illuminated even better. Dazzling of both the driver himself and oncoming traffic is reduced to a minimum.



New look. The BMW touring is finished in matte black instead of glossy chrome. The discreet rear spoiler comes as standard. The panel for the car's number plate is specially moulded and contoured.



Optimum safety.
Carefully calculated crumple zones protect the passenger compartment in head-on collisions up to 56 km/h. The front bumper remains stable and undamaged in minor impacts up to 4 km/h. Greater safety and lower repair costs.

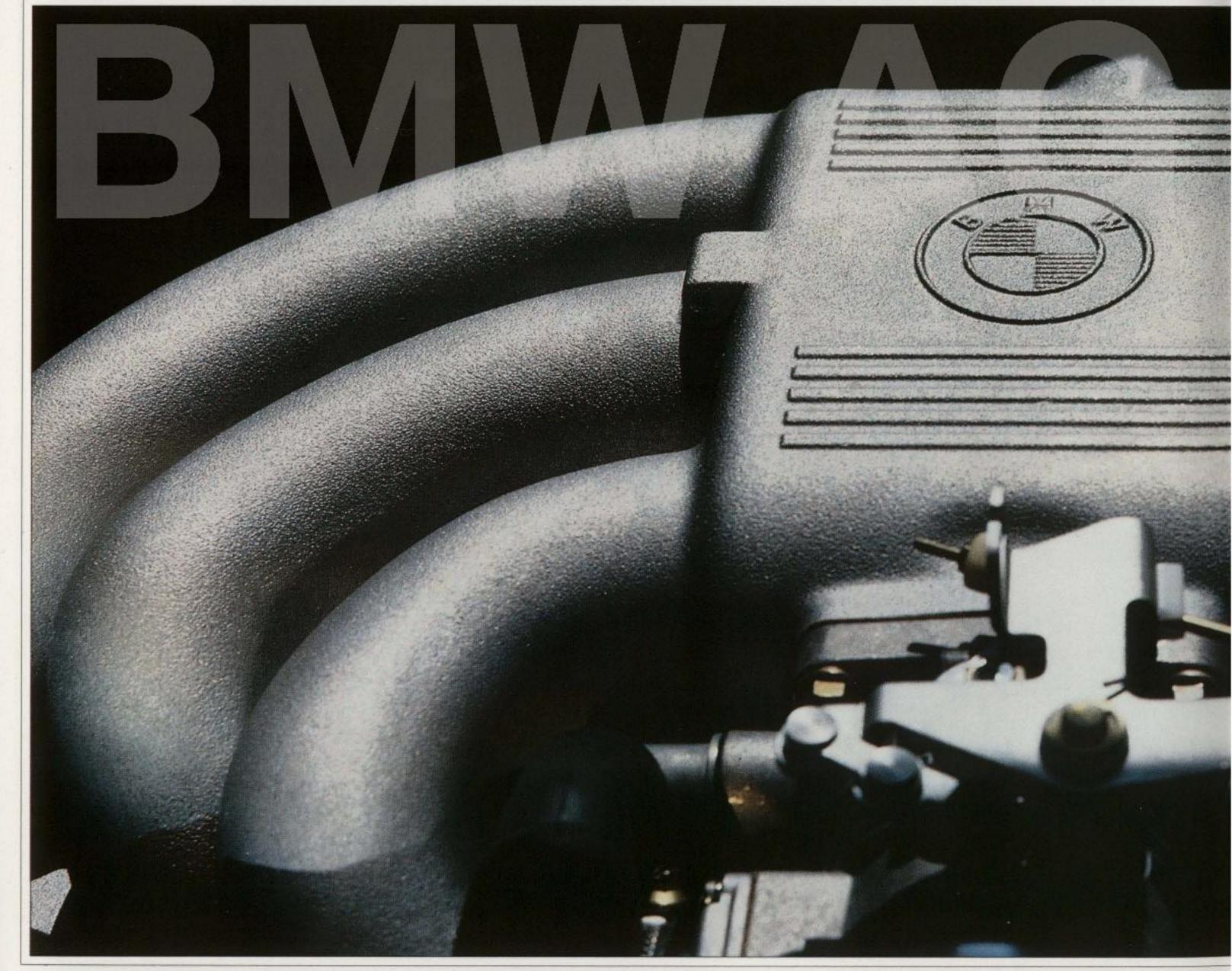
### The concept of refinement.

ing also prove what an exceptional car this is. For all models have the superior performance and supreme refinement of a BMW 6-cylinder inline power unit. The range starts with the 85 kW/115 bhp of the new

2.4-litre turbo-diesel. Then come the 2.0 - and 2.5-litre petrol engines developing 95 kW/129 bhp and 125 kW/170 bhp, respectively. A feature shared by all of these engines is their turbine-like running smoothness and their outstanding technological concept.

The crankshaft runs in 7 bearings, superbly balanced by 12 counterweights and a torsional vibration damper. This makes the engine so smooth you can hardly hear it, let alone feel it.

All of these straight-six petrol engines are controlled by third-gen-



eration Digital Motor Electronics.
Creating a standard of efficiency and engine management which clearly proves that BMW has more experience with the sensible use of modern electronics than any other manufacturer in Europe.

The range of functions provided by this DME is absolutely unique. The system operates faster than conventional units, but incorporates fewer parts. It ensures maximum reliability and functionality, drawing information from many points on the current status of the engine and the running conditions of the car. It's even able to detect deficiencies and then inform the workshop through onboard diagnosis.

DME compares actual measurements with target data, adjusting within a split-second to even the slightest change in running conditions. It determines when the engine is being started cold, and knows the difference when a cold start is repeated. So that the fuel/air mixture cannot become too rich by mistake.

This fine tuning is so sophisticated the driver won't even notice

Engine management that counts how often the engine is started.

it. But he certainly will notice the superior power and low emission fuel efficiency that DME is able to provide in this way.

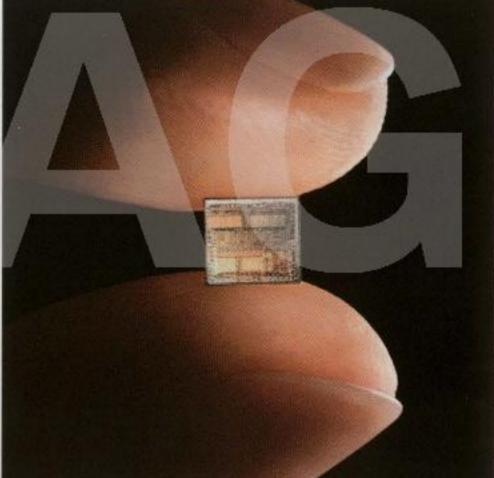
Driving, feeling, experiencing these engines is a unique thrill: their silent perfection, their silky-smooth refinement, their spontaneity in responding to the acceler-

ator and the almost carefree way these 6-cylinder power units rev up to maximum engine speed.

This high level of technology is matched by an equally high degree of environmental protection. For the lambda-controlled catalytic converters fitted as standard efficiently minimise exhaust emissions without depriving the engine of its outstanding power and performance.

Top speed and acceleration figures clearly prove that the dynamic looks of the touring are matched by equally dynamic performance on the road. The 320i touring accelerates to 100 km/h in about 11 seconds and has a top speed of 190 km/h plus. The 325i touring reaches 100 km/h in less than 9 seconds and has a top speed of almost 215 km/h. Which should be more than sufficient





The brain. DME III, the world's most advanced engine management, gives the two petrol engines of the touring a particularly good blend

of performance, fuel efficiency and environmental care. Economical, modern and efficient engine control.

under all circumstances.

No matter which of these engines you choose, the touring is invariably a refined automobile that combines culture with dynamism. So that all you have to do is choose exactly how much dynamism and performance you would prefer for your personal style.

take place silently and invisibly — concealed somewhere in the background until they finally emerge for all the world to see. One of the greatest and most sophisticated inventions since the early days of the diesel, Digital Diesel Electronics (DDE) by BMW, is not even expressed by one single letter in the model designation. But it certainly is expressed to the driver through the benefits he gets from his car.

The merits of Digital Diesel Electronics become evident in practice in four significant areas:

Motoring comfort: Electronic

2.4 litres, 6 cylinders in line, turbocharging, electronic fuel injection. What a diesel.

fuel injection ensures even more accurate control of the fuel supply than before, totally eliminating the typical vibration of conventional diesels.

All-round economy: Electronic fuel injection adjusts accurately to the current running conditions of the engine. And it makes this the world's first diesel equipped with Energy Control in the cockpit, enabling the driver to constantly and reliably check the car's fuel consumption.

Environmental protection: Being consistently controlled for optimum efficiency, the electronic fuel injection keeps exhaust emissions at a minimum for maximum protection of the environment.

Ease of service: Like DME, DDE detects and memorises any deficiencies that can then be retrieved at the workshop through BMW on-board diagnosis. This ensures quicker and more efficient service.

The smoothness of the engine when idling has also been improved. Even when the engine is ticking over nothing will remind the driver that the power unit beneath the hood is actually a diesel.

The inherent smoothness of the inline 6-cylinder concept thus

### The world's first High-Tech diesel.

becomes even more noticeable. Absolutely no diesel noise is able to penetrate the sound-deadening partial encapsulation of the engine.

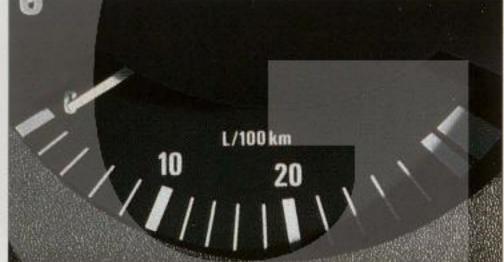
The turbo-diesel revs up smoothly when accelerating, without the usual "turbo-lag" inevitable on so many other cars. For the reliable electronic brain also controls the turbocharger pressure, efficiently making allowance for atmospheric conditions and environmental influences. For the first time ever, this turbo-diesel also enables the driver to use the

engine as a finely tuned "brake" for slowing down. Depending on how the driver moves the gas pedal, Digital Diesel Electronics actuates a bypass valve that bridges the emission feed line to the turbocharger. So that this turbo-diesel runs like a 6-cylinder petrol engine in every respect. It is fast, smooth and dynamic all in one.

Digital Diesel Electronics is available from BMW in conjunction with BMW's lauded 2.4-litre turbo-diesel.

This 6-cylinder inline engine has already shown in the past that a diesel may by all means achieve the same standard as a petrol engine. Now it proves through electronic fuel injection and turbo pressure control that this standard can be elevated to a new, even higher level.

The new turbocharger makes the engine respond even more spontaneously to the gas pedal.



Economy at first sight. With its innovative electronic fuel injection the 324td touring is the

world's first diesel to feature an Energy Control fuel consumption indicator in the cockpit.

Preheating time has been reduced by another 50 per cent.

Not even the performance provided by the 85 kW/115 bhp power unit is reminiscent of a diesel. The BMW 324td touring accelerates to 100 km/h in less than 13 seconds, and the top speed of almost 190 km/h will leave many petrol-engined cars far behind.

This combination of BMW 6-cylinder technology and refinement with the long running life and economy of a diesel is truly unique. It clearly proves BMW's success in optimising the diesel and raising it to an entirely new standard. Which is precisely what makes the 324td touring a typical BMW.



## Built for supreme handling.



any car manufacturers regard the suspension of their automobiles as a kind of corporate philosophy — as a reflection of inherent values. And BMW is no exception to this rule.

Every BMW must be quick, agile and sure-footed. With a suspension that provides comfort and accentuates dynamism. Plus, perhaps even as the most important asset, safety reserves far above average.

The suspension of the touring

is based on that of the 3 Series saloon. Which means independent suspension on all four wheels front and rear. A single-joint springstrut axle at the front, semi-trailing arms at the back. On the 325i the front axle track control arms are made of extra-light aluminium. Strong anti-roll bars on both axles (not on the 320i) reduce body sway in fast bends, anti-dive and anti-squat keep the car level both when braking and accelerating.

Resting on these secure foundations, the suspension of the BMW touring has been carefully reinforced and modified to suit the higher weight of the car.

Twin-sleeve gas-pressure shock absorbers front and rear ensure that the driver and his passengers will have a good ride even on bumpy roads. The light-alloy wheels are also standard on the BMW touring.

With the direct steering transmission, the BMW touring responds instantaneously to even the slightest movement of the steering wheel. The 325iX and

### SUSPENSION

324td touring come as standard with power steering to cope efficiently with their higher weight.

A few more words on the typi-

The finely adjusted touring suspension — a nice balance of comfort and sports car handling.

cal characteristics of the suspension. In very fast bends under extreme conditions the neutral behaviour of the touring gradually changes into a gentle oversteer, allowing the driver to respond in good time and with superior style.

The prerequisite for this kind of outstanding performance, of course, is to have equally outstanding brakes. Which is some-

thing we at BMW take for granted: four extra-large disc brakes ensure optimum safety under all conditions. On the 325i and 325iX touring the efficiency of the brakes is further enhanced by four-channel ABS with optimal sensor control fitted as standard.

Motorists often out on poor roads and in bad weather will certainly prefer one of the touring models in particular: the 325iX touring with four-wheel drive. For

The driver can respond in good time to the reactions of the car.

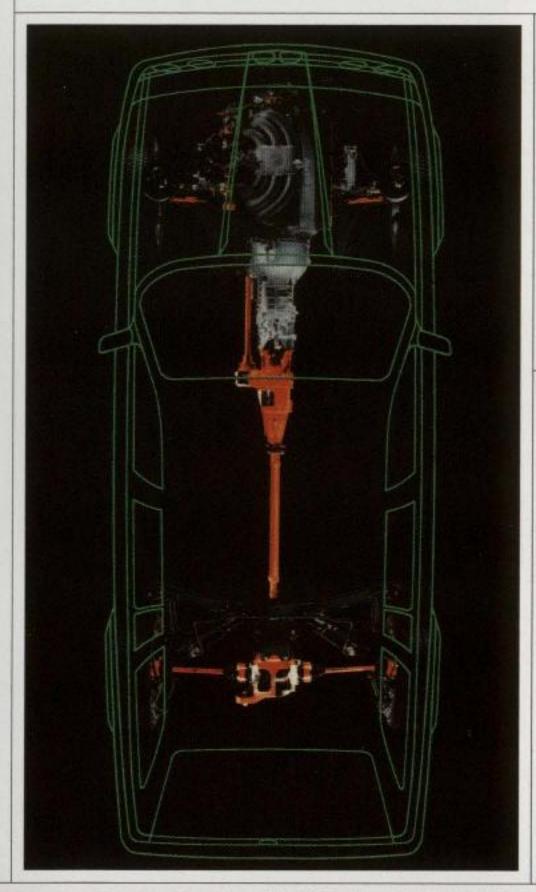
the touring is even more versatile in conjunction with BMW's "intelligent" four-wheel drive system. It goes without saying that a four-wheel drive BMW does not claim to be an off-road vehicle. But together with the variable luggage space in the touring, BMW four-wheel drive does indeed offer many new opportunities and lots of options where other vehicles cannot go.

With BMW four-wheel drive one-third of the drive power goes to the front, two-thirds to the rear wheels, thus retaining the driving characteristics typical of a BMW. And when the two axles start turning at different speeds, a central viscous lock cuts in to eliminate any discrepancy.

Another viscous lock makes sure that the rear wheels always run in perfect harmony. As soon as one rear wheel is about to spin, engine power is automatically



### SUSPENSION



Power distribution. Operating via a central planetary transmission, BMW fourwheel drive transfers 37 % of the drive power to the front axle, 63% to the rear. A viscous lock on the central differential cuts in the moment a wheel

is about to slip, reducing engine torque to the drive axle. Apart from the rear differential an additional viscous lock ensures that the rear wheels always receive exactly the right power for optimum traction under all conditions.

transferred to the opposite wheel, ensuring optimum traction at all times.

The front wheels both receive the same drive power. They are intentionally not fitted with a viscous lock in order to make sure that the steering remains unaffected by driving forces.

The BMW 325iX touring naturally offers permanently available ABS. As an option the 325iX touring even comes with fourspeed automatic transmission, an absolute novelty with cars featuring permanent four-wheel drive.

So while performance and dynamism represent one aspect of the BMW touring concept, unique driving safety is the other. Together, these features are the best guarantee of genuine all-round harmony.







### Madeto-measure.

ot one single feature on a BMW is a product of chance. On the contrary, every detail, every component is the result of careful studies and tests. Designing the cockpit of BMW cars, our engineers apply only one standard: the driver and his needs. Every movement, every action of the driver is analysed time and again, the know-how gained in the process then being applied to the configuration and layout of the BMW cockpit.

The result is BMW's unique arched cockpit in concave arrangement around the driver. A cockpit which sets the standard in terms of its functions and styling. A cockpit which gives every driver - no matter how tall or how short — his or her ideal position at the wheel. All controls, switches and levers are where you "automatically" reach for them. All information can be read off the instruments within fractions of a second. And at night all instruments and switches are illuminated by a clear but discreet orange light.

After all, it's essential particularly in fast cars to have optimum man/machine communication. A true symbiosis made-to-measure

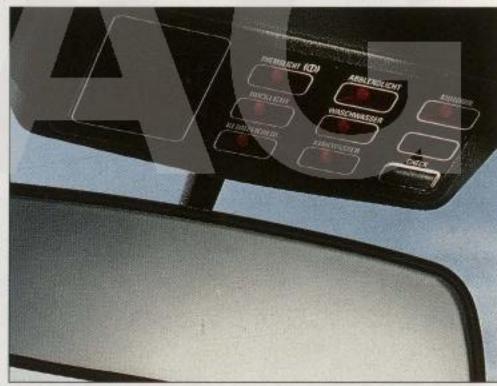
It's often a matter of split-seconds.

for the active, efficient driver.

Optimum communication

Optimum communication also means optimum service and maintenance of your car. So depending on your style of motoring, driving conditions and mileage

covered, the Service Interval Indicator shows exactly how long it is until the next service or oil change. Which means that a BMW only has to be serviced when it's really necessary. The on-board computer available as an option (not for the 324td) enables you to plan trips and travelling times with a high degree of accuracy, to determine in advance when you have to stop for fuel, and when to watch out for black ice on the road. It



Thorough and consistent. Check/Control fitted as standard constantly supervises the coolant, engine oil and screenwasher level as well as the most important lights, so that there's no need, for example, to check the oil level at regular intervals.

calculates your average fuel consumption, your average speed, the range you can presumably cover on the remaining fuel, and many other important data. It even gives you a loud and clear warning when the outside temperature drops below +3°C. And to retrieve information you don't even have to take your hands off the steering wheel — the on-board computer is remotely-controlled from a lever on the steering column. Simply because BMW takes driver ergonomics very seriously.

# A perfect match of function and style.

car really is you often have to check the interior. For it's the overall finish, the choice of materials, the use of top-quality fabric and upholstery as well as the many small but important details that betray the true class of an automobile.

Everything in the BMW touring reflects the supreme standard typical of BMW. The finish leaves nothing to be desired. Everything fits, every feature is exactly where it should be. You literally feel the high quality of the materials combined and matched to provide a perfect blend. The generous use of high-class fabric creates a sophisticated atmosphere, the luggage compartment is fully lined with a carpet.

Numerous features that make life with this car so pleasant bear testimony to the fascinating blend of style and function within the

Even with the window open the door remains closed — central locking with a anti-theft lock.

BMW touring. Central locking, for example, comes as standard — and with it additional safety against theft. Just by turning the

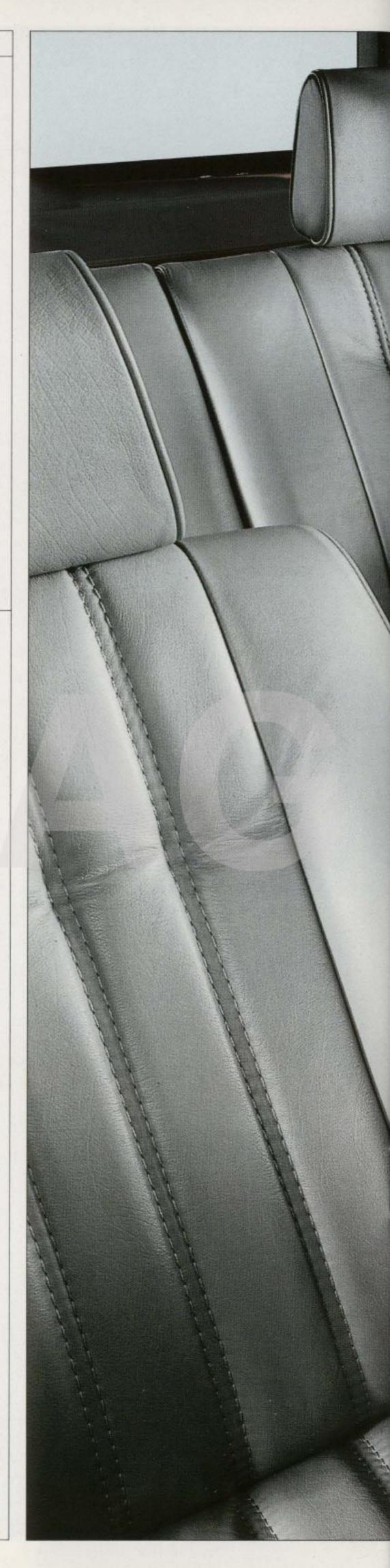
key all the way to the right in the lock, you can prevent the doors from being opened also from the inside. Even if the window is slightly open, the door knob won't budge from its fixed position.

The sensibly raked windows with green heat-insulating glass help to provide pleasant temperatures inside the car even in hot, sunny weather. And if the sun is really beating down, the four-stage blower with 10 outlets provides an ample supply of fresh air to the passenger compartment.

As just one example of perfect ergonomics, consider the switch for adjusting the two electrically controlled rear-view mirrors. It fits conveniently and snugly into the armrest on the driver's door, enabling you to adjust the mirrors while leaning back comfortably in your seat.

Usually it's inconspicuous but helpful features of this kind that show on a small scale how a manufacturer solves problems and offers essential solutions on a large scale.

The seats, for instance, are one example of such an essential solution. For the seats of the BMW touring uphold the supreme standard of the entire car. They are comfortable and well-sprung, but not too soft. They have perfect body





contour and offer firm and secure

support in bends.

The front seats have a wide range of adjustment. They are also adjustable for height and offer every driver and front passenger a relaxed seating position. For motoring without fatigue depends to a large extent on the seats you have in your car.

The rear seats offer ample space for three passengers — unless, of course, you'd like to make full use of the large capacity provided by the luggage compartment, in which case you can fold down the rear seats either in full or on one side. So that within a few seconds, the touring converts into the most practical leisure-time vehicle you can imagine.

Under "normal" circumstances the touring has the interior of an exclusive coupé. With a cover over the luggage compartment for absolute privacy and security. Everything is kept neatly and tidily where it should be.

The warning triangle, first-aid box and toolkit (optional) fit into a covered stowage compartment with special holders at the rear left, making sure that everything is always kept in place. The stowage

### **Everything is kept where** it should be.

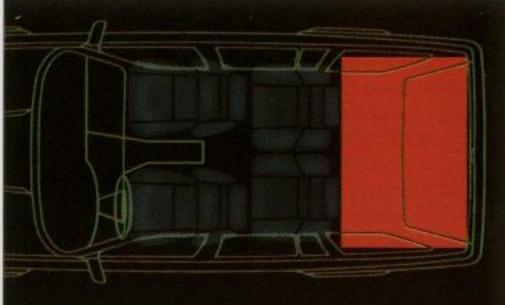
compartment on the right serves for any other items you'd like to keep safe and sound out of harm's way (on the 324td and 325iX touring this space is taken up by the car's battery).

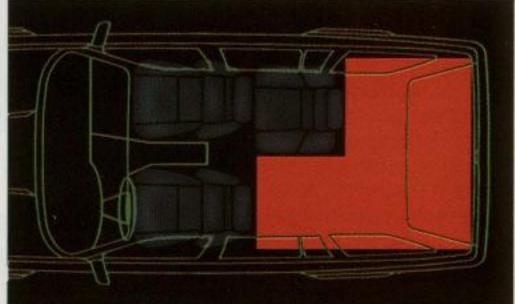
Since your luggage should be kept just as safe as everything else, the touring features retractable fastening catches on the floor panel. So that you can fasten each and every item safely and securely.

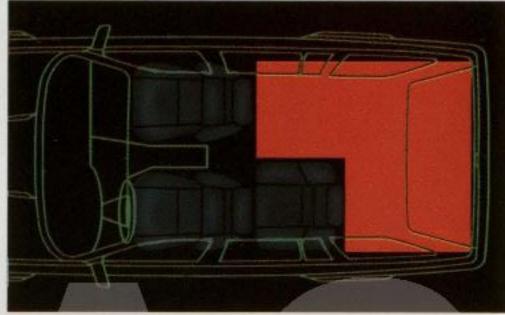
Considering all these qualities and unique features, do you know another car that offers the same convincing synthesis of dynamism, exclusivity and versatility that comes with the BMW touring?

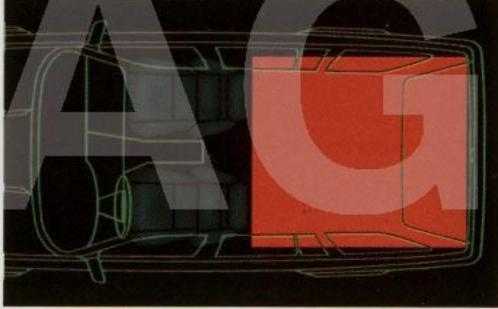












Versatility. The lug-gage/stowage com-partment fully car-peted all round can be used for all kinds of purposes. The rear seats fold down either completely or on one side. And to use the full length of

the interior for stowing away long or bulky items, you can even remove the complete rear seat bench quickly and easily. A versatile car for the versatile driver.

# Distinctive accessories for a distinctive automobile.

MWs are automobiles of distinction. Every BMW that leaves the factory therefore has a wide range of features, but still offers sufficient margin for individual refinement through special accessories conceived and designed for the true individualist.

For the sports driver at the wheel of the BMW touring, BMW offers various special features ex works specifically tailored to the car. For example, two different leather steering wheels, sports seats, even wider light-alloy wheels.

Drivers who wish to place more emphasis on motoring comfort in addition to dynamic performance also have numerous options at

their disposal. Just consider the electronic/hydraulic (EH) automatic transmission for the petrol-en-

Sports seats for some, automatic transmission with EH control for others.

gined models — an automatic transmission with the perfection of three individual driving programmes. Then there are other amenities such as air conditioning or leather upholstery, power steering or the BMW Sound System. This superb hifi consists of various loudspeaker components perfectly tuned by acoustics engineers to suit the interior of the touring.

Even motorists who want to further underline the versatility of their touring have the opportunity to individualise their car with BMW accessories.

If you enjoy breezing along with a steady flow of fresh air plus sunshine coming into the car, you'll certainly opt for the electric steel sliding/vent roof. So you see that the BMW range of special equipment has everything to suit your personal preferences.

### SPECIAL EQUIPMENT





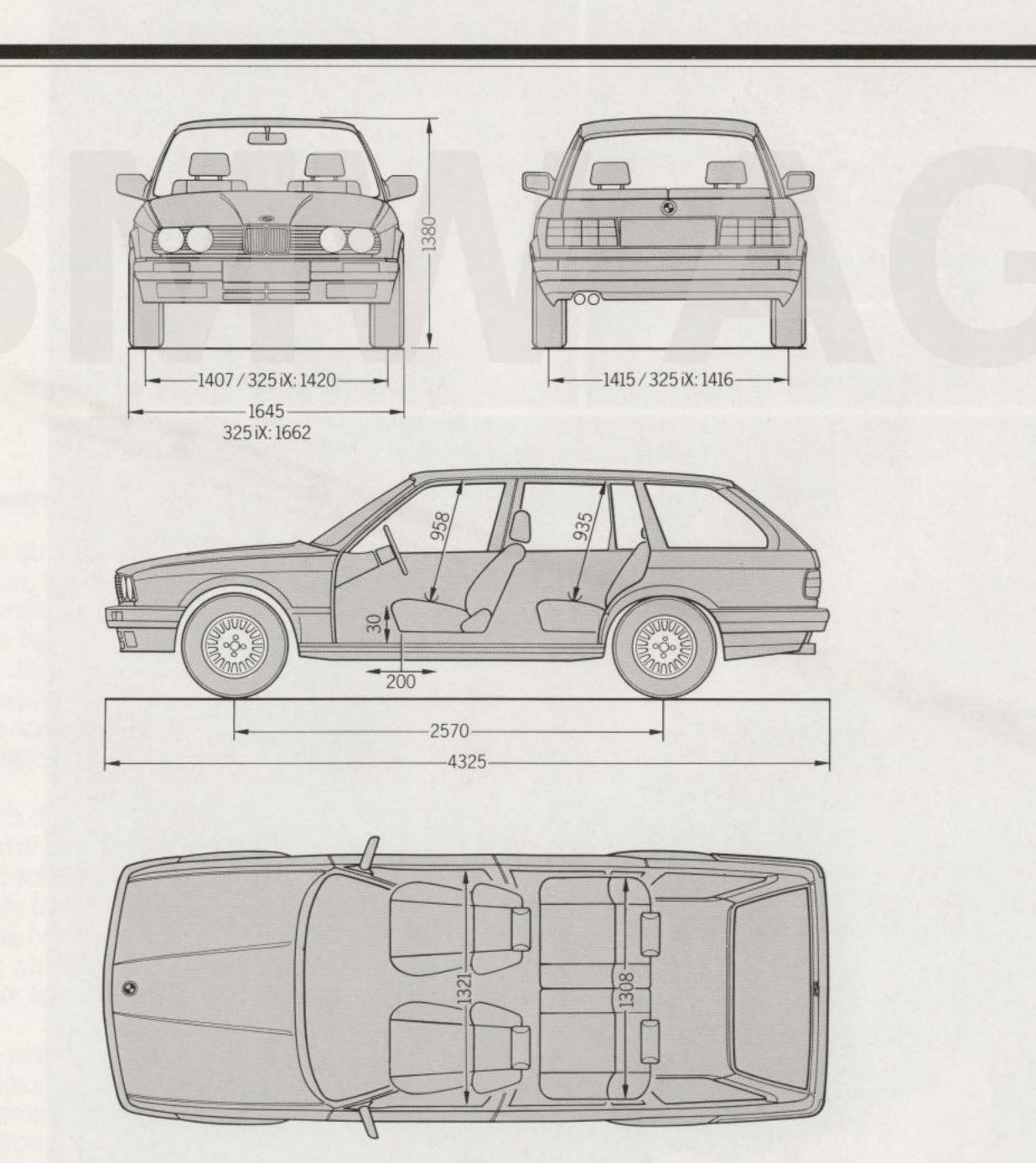






**Customised just for** you. The BMW touring comes with a wide range of special equipment. For the sports driver and for the comfortoriented motorist, for example, the M Technic leather steering wheel, sports seats for the driver and front passenger, even wider light-alloy wheels, or a 4-speed automatic transmission with EH control (petrol-engined models only) and three different driving programmes, or an electric steel sliding/vent roof. This is BMW's concept of individual motoring in style.

## The most important data.



		320i catalyst*	325i catalyst*	325iX catalyst*	324td
WEIGHT					
Unladen	kø	1230 (1250)	1270 (1290)	1370 (1390)1)	1300 (1320)
Max permissible	kg	1710 (1730)	1750 (1770)	1850 (1870)1)	1780 (1800)
Permitted load	ka	480	480	4801)	480
Permitted load front/rear	l/g	825/970	840/1000	400"	850 /1030
	kg			75	
Permitted roof load	* Kg	75	75	75	75 F00 (1000
Permitted trailer load unbraked/braked*	* kg	500/1200	500/1200	500/12001)	500/1200
NGINE					
ylinders		6	6	6	6
apacity	CC	1990	2494	2494	2443
troke/bore	mm	66/80	75/84	75/84	81/80
ominal output/rpm	kW/bhp/rpm	95/129/6000	125/170/5800	125/170/5800	85/115/4800
flax torque/rpm	Nm/ft-lb/rpm	164/121/4300	222/164/4300	222/164/4300	220/162/2400
	kW/bhp/ltr	47.7/64.9	50.1/68.1		
orque per litre	Translation of the Control of the Co			50.1/68.1	34.8/47.3
orque per litre	Nm/ft-lb/ltr	82.4/60.7	89.0/65.6	89.0/65.6	90.1/66.4
ompression ratio/fuel grade		8.8/unleaded regular	8.8/unleaded regular	8.8/unleaded regular	22.0/diesel
RANSMISSION					
tandard gearbox ratios I/II/III	.1	3.72/2.02/1.32	3.83/2.20/1.40	3.83/2.20/1.40	3.83/2.20/1.40
IV/V/R	.1	1.00/0.80/3.45	1.00/0.81/3.46	1.00/0.81/3.46	1.00/0.81/3.46
nal drive ratio	1	4.27			
inal drive ratio	: 1	4.27	3.91	3.91 (4.10)	3.25
PERFORMANCE					
Orag coefficient		0.36	0.35	0.37	0.37
op speed	km/h	196 (188)	214 (212)	208 (206)	187 (182)
cceleration 0-100 km/h	sec	11.5 (13.3)	8.8 (10.1)	9.7 (11.2)	12.3 (13.3)
tanding-start km	sec	32.5 (34.5)	29.6 (31.3)	30.7 (32.6)	33.7 (34.8)
lexibility 80-120 km/h in	300	32.3 (34.3)	29.0 (31.3)	30.7 (32.0)	55.7 (54.6)
th gear (standard gearbox)	200	11.7	9.2	10.8	11.5
ur gear (Stariuaru gearbox)	sec	11./		10.0	11.0
UEL CONSUMPTION***					
-speed standard gearbox					
0 km/h	ltr/100 km				
20 km/h	ltr/100 km				
ity traffic	ltr/100 km				
verage	ltr/100 km				
velage	107 100 KH				
/HEELS					
re dimensions		195/65 R 14 H	195/65 VR 14	TD 200/60 VR 365	195/65 R 14 H
heel dimensions		6 J x 14	6 J x 14	365 x 150 TD	6 J x 14
aterial		Light alloy	Light alloy	Light alloy	Light alloy
EOTDION OVOTELA					
LECTRICAL SYSTEM			60	0.4	
attery capacity	Ah	55	63	84	84
Iternator output	A/W	80/1120	80/1120	80/1120	80/1120
Alternator output	A/W	80/1120	80/1120	* Please contact your BMW dealer for the specifications of models without catalytic converter.  * Please contact your BMW dealer for the specifications of models without EH control.	

without catalytic converter.

<sup>\*\*</sup> With a max gradient of 12%.

<sup>\*\*\*</sup> Figures not available at time of going to press.

<sup>1)</sup> Provisional figures.

without EH control.

Unladen weight applies to vehicles with standard equipment. Special equipment and optional extras increase this figure.

<sup>320</sup>i/325i available from second quarter 1988.

<sup>325</sup>iX/324td available from summer 1988.



### **BODYWORK**

Four-door touring with rear hatch, monocoque all-steel bodywork welded to the floor assembly, torsionally rigid safety cell on all planes, front and rear crumple zones with predetermined deformation, integrated roof crossbar, all-round body reinforcement.

Tank capacity: 64 ltr (324td: 55 ltr).

### **ENGINE**

Water-cooled 6-cylinder
4-stroke inline engine, longitudinally mounted and inclined, lightalloy cylinder head, crossflow principle, spherical combustion chambers, overhead camshaft with
7 bearings, crankshaft running in
7 bearings with 12 counterweights, torsional vibration damper. Engine suspended on vibration
dampers, viscous-coupled temperature-related fan with bimetallic
spring.

Digital Motor Electronics III with electronic grid-controlled ignition and grid-controlled air-volumemetered fuel injection, warm-up control grid and automatic choke, fuel supply with overrun control, self-learning idle speed control, on-board diagnosis with emergency running function. Twin-tube catalytic converter exhaust system with twin tailpipes. Emission control regulated by catalytic converter with heated lambda probe for unleaded 91 ROM regular fuel. Activated carbon filter with controlled tank ventilation.

### FROM 325i CATALYST

Engine oil cooler.

### 324td

Water-cooled 6-cylinder 4-stroke diesel engine, longitudinally mounted and inclined, turbulence chamber principle, camshaft with 7 bearings, crankshaft running in 7 bearings with 12 counterweights, engine suspended on vibration dampers. Digital Diesel Electronics (DDE), temperature-related increase in idle speed, hydraulic choke, overrun control, emergency running function, onboard diagnosis. Turbocharging with electrically controlled turbocharger pressure. Engine oil cooler, bypass valve to reduce engine drag torque, temperature-controlled viscous-coupled fan with bimetallic spring, heated fuel filter. Partial engine encapsulation and sound deadening separated from the engine itself, insulation on engine compartment lid and bottom side panels.

### TRANSMISSION/SUSPENSION

Standard drive: engine at the front, power transmission to rear wheels. Hydraulically actuated single-plate dry clutch with torsional vibration damper and automatic adjustment for wear. 5-speed gearbox (top speed in 5th gear) with synchromesh on reverse gear.

Single-joint spring strut front axle with anti-dive and anti-roll bar. Semi-trailing arm rear axle (swept back by 15°), anti-squat and anti-dive, separate springs/shock absorbers. Rack-and-pinion steering with variable transmission ratio, safety steering column.

Twin-circuit brake system with brake servo, brake pressure governor on rear axle, asbestos-free brake pads, fist-calliper disc brakes front/rear, inner-vented at the front. Handbrake acting mechanically on rear wheels through additional drum brakes.

BMW 6 J x 14 light-alloy wheels with 195/65 R 14 H tyres.

### 320i 325i 325iX 324td

### 325i

Sports-tuned suspension and anti-roll bar at the rear.

Anti-lock braking system (ABS). 195/65 VR 14 low-profile tyres.

### 325iX

Reinforced clutch, engine speed-related power steering.

Power divider with viscous lock for permanent 4-wheel drive with asymmetric power distribution: 37% to front wheels, 63% to rear wheels. Front wheels powered by chain-drive auxiliary shaft. Rear axle differential with additional viscous lock. BMW 365 x 150 TD light-alloy wheels with TD 200/60 VR 365 tyres.

### 325iX/324td

Engine speed-related power steering.

### 324td

Engine speed-related power steering. Two-mass flywheel. Hydraulically actuated single-plate dry clutch with plate spring and automatic adjustment for wear.

### EXTERIOR FEATURES

Twin circular headlights integrated in radiator grille. All-round parking protection through wraparound bumpers and rubber side strips. Front/rear bumpers able to regenerate after impacts up to 4 km/h. Engine compartment and luggage compartment lids supported when open by torsion bar and gas-pressure spring. Both rear-view mirrors painted in body colour, satin chrome-finish.

Laminated windscreen, heated rear window bonded on to body, green heat-insulating glass all round. Tank cap with holder on filler flap, central locking with antitheft lock.

Hollow cavity preservation, undersealing. 6-year warranty against rust perforation provided rustproofing is checked annually. Exclusive colour range.

### 325iX

Flared wheel cutouts front and rear, wider side-sills in body colour.

### INTERIOR FEATURES

Full carpeting of entire floor and stowage compartment. Lockable, illuminated glove compartment. Stowage spaces on instrument panel, front and rear centre console, stowage boxes in doors. Armrests with integral grab handles on front doors. Illuminated safety ashtray and cigar lighter. Foam-padded four-spoke steering wheel, dia 380 mm, stickshift knob secured in position.

Safety padding on front roof pillars, all-round padding on doors with fabric centrepiece, shaped roof lining with recessed sun visors, padded kneeroom, anti-

dazzle safety mirror.

Reclining front seats with fine backrest and seat height adjustment, longitudinal seat adjustment on roller bearings. Front head restraints adjustable for height and angle. Symmetrically contoured rear seats.

Inertia-reel seat belts front/rear, belt retainer at the front and hip belt in the middle.

Luggage compartment cover, spare wheel beneath stowage compartment floor, luggage compartment illuminated and with padded edges for safe loading. Stowage compartments left/right and lashing points for cover sheet.

Luggage compartment capacity 370 — 1125 ltr (to VDA standard).

### **ELECTRICAL SYSTEM**

Twin halogen headlights with ellipsoid technology for low beam, rear fog warning light, two reversing lights. Instruments and controls grouped in semi-circular layout around the driver, electronic speedometer and rev counter.

Energy Control (fuel consumption gauge), Service Interval Indicator, fuel gauge and coolant temperature gauge. Additional warning lights for fuel level, handbrake pulled, brake pad wear and brake fluid level, oil pressure. Analogue quartz clock in centre console. Electric screenwasher system with automatic wash/wipe and fingertip control, two wiper speeds, intermittent wipe, operated from steering column, rear window wash/wipe with heated screenwasher system, socket for rechargeable torch (optional) in glove compartment.

Check/Control with active display above windscreen for automatic verification with the ignition switched on of low-beam headlights, brake lights, tail lights, number plate illumination, coolant level, screenwasher reservoir level (also for rear window), engine oil level; central indicator light in instrument cluster. Electrically adjustable rear-view mirrors.

Heating/ventilation: Fresh air heater independent of engine speed, quiet 4-stage blower, defroster nozzles for windscreen and side windows, fresh air supply through 4 outlet grilles at the side and in the middle, cylindrical outlet with a wide range of vertical adjustment, horizontal adjustment and separate on/off control, forced extraction of stale air, rear compartment heating.

### 325i/325iX

ABS indicator light in instrument cluster. Lens-technology foglamps integrated in front air dam, two rear fog warning lights.

### 324td

Combined indicator light for electronic fuel injection and water separator. Additional indicator lights for preheating and ready-to-start.

### LIFE-LONG RELIABILITY

To ensure that your BMW always remains in perfect condition, reliable and economic BMW service starts right from the beginning. In the design and development of BMW cars:

Through the use of components and parts that are easy to repair.

Through progressive systems such as the BMW Service Interval

Indicator.

Through excellent production quality thanks to the most advanced and sophisticated meth-

ods of production.

After-sales service is guaranteed by a most competent partner: the BMW dealer. He offers you everything you need, whenever you need it:

Specialists with excellent training and technical know-how.

Modern BMW-approved workshop equipment.

A reliable, long-term supply of

parts.

Genuine BMW Parts to keep your BMW in its original, as-new condition.

Attractive seasonal offers special service, parts, accessories and lifestyle products.

Efficient and conscientious repairs that give you excellent value

for money.

This ensures that your BMW will remain what it is throughout a long running life: the ultimate driving machine.

The models illustrated in this brochure show the specifications for the German market. In part, they include optional equipment and accessories not fitted as standard. According to the specific requirements of other markets, alterations in models, standard and optional equipment, as described in the text and illustrations, may occur. For precise information, please contact your BMW importer or dealer. Subject to change in design and equipment.

© BMW AG, Munich/ West Germany. Not to be reproduced wholly or in part without written permission of BMW AG, Munich. 7 11 03 21 20 2/87 VM. Printed in West Germany 1987.



