



**BMW Bavaria**



Munich has been called "the metropolis with heart." This may be one reason why Munich has been chosen as the site of the 1972 Olympic Games.

The Bavarian Motor Works, although the smallest automobile manufacturer in Germany, is nevertheless Munich's favorite child. BMW builds automobiles that are exemplary in technology and function, totally tuned to the driver. Not mass produced, but tailor-made.

BMW products have set a standard far beyond their native borders. BMW has revolutionized motorcycle construction. Contributed many chapters to the history of aviation. And, given a new dimension to automobile construction.

For the Bavarian Motor Works, "made in Germany" has always been more than a mark of origin. For BMW, these words are a seal of quality and an obligation.

Until now it was true to say: Sporty automobiles cannot be comfortable. Comfortable ones cannot be sporty. Now there is an exception: the new BMW Bavaria.

With the Bavaria we can now fulfil two different demands with one automobile.

Sporty drivers will find the BMW Bavaria a comfortable touring car. Comfort-conscious drivers will now discover the fascination of sporty performance.

In the 2.8 class, there is now a new dimension: a handy, vital, functional automobile.



### **Chassis:**

The BMW Bavaria chassis is tuned to the performance of the car's engine, the soundest concept, since, even in extreme situations, it offers reserves of safety. The Bavaria chassis can take much higher speeds than the car can drive.

The BMW Bavaria chassis has been tested in the most important European and German touring-car races. It has brought BMW the German Mountain Championship, the German Rallye Championship, the All European 24-hour races, and many other important wins. All in contests that depend, in great part, on the performability of the chassis. BMW drivers call the BMW chassis a technical form of life insurance.

### **Brakes:**

The good conscience of an automobile is its braking system. The BMW Bavaria has a duplex twin circuit system incorporating two separate brake lines to disc brakes on all four wheels. Braking power is constantly coordinated. Even if one brake system fails, braking power is still so powerful that it can operate at more than 75% total efficiency.





BMW 400

### Engine:

Our company is called the Bavarian Motor Works. The German word "motor" is our middle name. Just as it is the focal point of our automobile.

A careful distribution of mass, plus even, "soft" combustion, causes remarkably quiet, turbine-like, round running in BMW engines. This is especially true of the new 2.8 liter Bavaria engine.

Since there is such a pronounced absence of vibration, the Bavaria's engine not only preserves the car from fatigue, it does the same for the driver.

The automobile enthusiast publication Road & Track writes: "The new BMW 6-cylinder engine is a jewel. Without doubt, this car is faster, sportier and more fleet of foot than its sharpest competition."

Performance of the Bavaria's engine was first tested in the steep passes of the Bavarian Alps. Only when it performed superbly there, did we consider it good enough for the new BMW Bavaria.



BMW 400 with 2.8 liter engine and 12 speed gearbox





**Body:**

Each weekday, 4,000 new cars are registered in Germany and 11,443 the daily figure averages over 30,000. Every day a density of traffic is on the increase and parking space decreases. BMW therefore put forward the opinion that outer dimensions should no longer grow with piston displacement.

For this reason, the body of the BMW is compact. Large wheels inside, area of the outside lines are tightly sculptured and technical effects that are merely fashionable have been avoided.

The BMW body is so constructed that front and rear sections form crash zones. The passenger compartment becomes a safety compartment. This has been proved through sophisticated tests by the Technical University of Berlin.



**Comfort:**

Comfort is not an add-on idea to BMW. BMW believes comfort can be built into, as an essential function of that car.

All operating elements of the BMW Bavaria are in the fore, kept within easy reach of the driver. All instruments within his direct line of vision are set under glare-free glass.

A heating and ventilation system works independently of road speed, provides pleasant climate at all times. Everything operates for the convenience of the driver, becomes an integral part of the car.







**Joy of driving:**

The BMW Bavaria is an automobile that combines technical refinement with thought-out functional comfort.

Car & Driver says about this car: "The BMW 6-cylinder is an automobile incomparable in the world of automobiles."

The usefulness of this car to the driver cannot be described in a catalog. Because there is something about this car that cannot be expressed either in words or pictures, the typical BMW feeling for driving.

Only behind the wheel of a BMW does one sense this feeling. It is nothing less than the positive Joy of Driving.



BMW 1997



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#### Power Unit

4-cylinder, 4-stroke inline, with water-hose-driven variable compression adjustment by adjustable mounting clamp around the intake plug; single overhead camshaft 4 bearings; injectors displaced, overhead valve in inverted V layout; valve gear drive by double roller chain with injection damper; camshaft with 7 main bearings and 12 ball-joint shafts; drive with horizontal injection damper; water cooling; pressure air circulation with full-flow air filter and pressure relief valve.

#### Capacity/Stroke/Rate

175.6 cu in. (2.85 "3.9")

Output: 180 hp (SAE) at 6 900 rpm

Torque: 173.6 lb ft at 3 700 rpm (SAE)

Compression ratio: 8.0:1

Components: 2 Zetec 2080 (SAE) two stage, with second stage vacuum controlled, automatic choke, accelerator pump.

Transmission: 4 forward speeds (all synchronised with housing divided for 3.55, and 2.18, 3rd 1.375, 4th 1.0, reverse 8.15:1, final drive ratio 3.54:1 (optional limited-slip differential with 25% locking action). Axle shafts each with 2 constant velocity joints. Optional automatic transmission with torque converter.

#### Chassis

Front axle: independent suspension with spring/shock absorber shock inclined rearwards, lower wishbones and trailing link pivoting on large-capacity rubber rebounding coil springs high-mounted and offset in relation to strut center-line with rubber auxiliary springs; 7.8" wheel travel; double-lube lubrication shock absorbers.

Rear axle: independent suspension with rubber-mounted semi-trailing arms and spring/shock absorber struts with high-mounted coil springs and rubber auxiliary springs; 7.8" wheel travel; double-lube lubrication shock

absorbers. Optional: Stage 10 wheel seal lubrication system.

Steering: 27-Diameter mechanism with four-piece wheel and roller, 3-piece rack rod; overall steering ratio 16.9:1. Safety steering column with 2 universal joints and impact absorbing shock absorber. Optional: power steering.

Wheels: 3-hole steel disc AHS, 6.2 x 14 with shock absorber.

Tires: 173 HR 14 radial ply, tubeless.

Brakes: Service brake, with servo assist-unit. Dual circuit system with 2 gears at front wheel cylinders (Moke Duplex), 16.7" diameter discs on all four wheels with fixed callipers. Pressure brake in rear brake line. Parking brake, mechanically operated, on rear wheel only, with 6.2" diameter brake drums. Disc-Servo system.

Body: Torizontally rigid passenger safety cell with impact absorbing front and rear sections, welded to floor panel assembly with reinforced deep-section longitudinal and cross members.

Windows: Fully-insulating front and rear; 25 sq m (28.9 sq ft) window area. Laminated safety glass front windscreen. Optional, heated rear window.

Seats: front spacing 22", rear spacing 20.3" wide; door locks with belt cut-off and tilt-back retractor; childproof locks on rear doors; belts: individual four seats, 22" wide, with infinite adjustment of seat back angle; rear bench seat 34.7" wide, with center console and armrest on rear door.

Dimensions: length 161", width 68.3", height 161.5" (12.7"), wheelbase 108", track front, rear 38.9/37.8", ground clearance 8.8", turning circle (left-hand drive), 30.6'

Weights: curb weight 2086 lb, gross vehicle weight 2812 lb, luggage compartment capacity 33.1 cu ft, fuel tank capacity 19.8 US

gal, including approx. 2.1 US gal reserve. Fuel tank, hood, located 30" ahead rear 1432 lb, wet load 165 lb.

#### Electrical System

12 Volt with 630 Watt alternator and 35 Ah battery; 4 sealed beam headlights.

Instrument panel: with speedometer including trip mileage recorder, revolution counter with red warning zone, fuel gauge with reserve marking and low fuel warning, oil pressure gauge, cooling water thermometer. Tactile warning lights for battery charge, horn indicator, headlight main beam parking brake and dual circuit brake failure. Hazard warning flashers, back-up lights, mirror light. Overhead luggage compartment and ignition lock, intensity variable control of instrument lighting intensity, automatic sun/weather operator by horn indicator lever.

#### Equipment

Heating and ventilation: dual circuit fresh air supply system with up to 25.5 cu ft per second airflow (variable response to heating demand). 3-speed blower, air flow rate independent of road speed. Directional heat output to foot wells, side window demisting, heater output 6 kWatts equivalent. Fresh air supply to car's interior through 2 servicing huddles on instrument panel, sliding grille with adjustable guide vanes. Air circulation via dust filters on rear roof pillars.

Early finished accessories: storage, dunks and glove box, recess on floor, storage compartment on transmission tunnel, pockets on front seat backs, additional compartment with lid on driver's side of steering column, also containing fusebox.

All five seats provided with 2- or 3-point safety belts; gear straps, safety interior mirror; sitting on floor or safety handle, two straps at rear; passenger compartment



Figure 14



Figure 15

and luggage compartment fully carpeted.

#### Performance

Acceleration: 0-60 mph in 8.0 sec. Top speed: 130 mph.

Fuel consumption: 10% standard test method; 21.6 US mpg at 60 mph.

Alterations of construction and seating excluded.

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