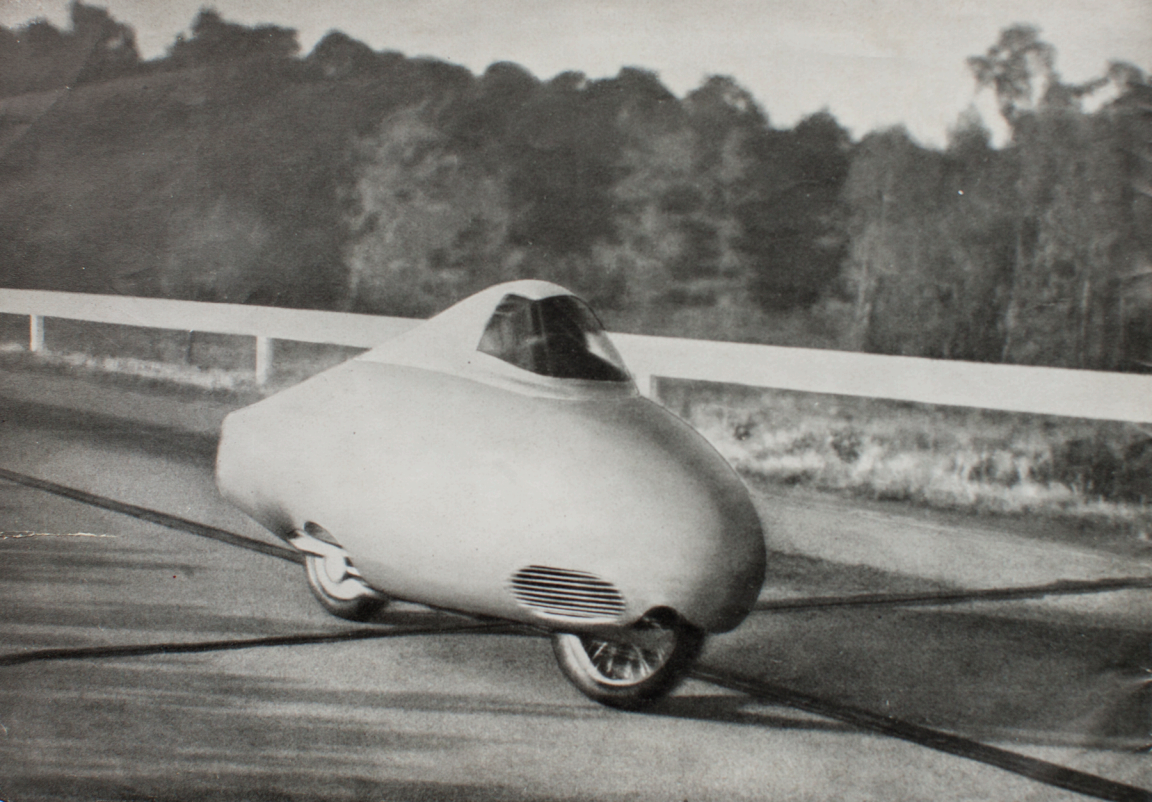


KLOTZ & KIEHNAST MÜNCHEN

# MOTORCYCLES





# *BMW Motorcycles are created by experience, experiment, and first-class workmanship*

Keeping step with the ever-changing wishes of the rider and the increasing demands made upon the machine, our programme is both larger and more varied. We build reliable and safe machines for every purpose and for use under all circumstances. If, perhaps, there was a gap in previous ranges, all requirements can now be filled. These new creations are the summit of modern motor-cycle manufacture, severely tested and proved from start to finish. The well-tried types which have been so enthusiastically ridden by many in the past retain their basic features though still further developed and improved in detail.

We present to you our models with pride, and, these having been manufactured with the greatest possible care, we await with confidence the result of their daily use.

R 20 200 c.c. Touring machine	R 6 600 c.c. Touring machine
R 35 350 c.c. Competition model	R 12 750 c.c. Touring machine
R 5 500 c.c. Sports model	R 17 750 c.c. Sports model

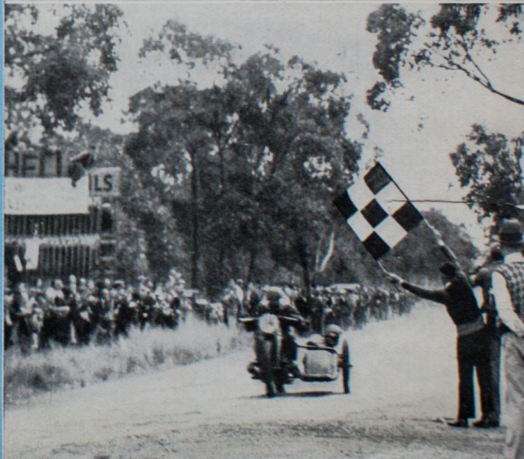
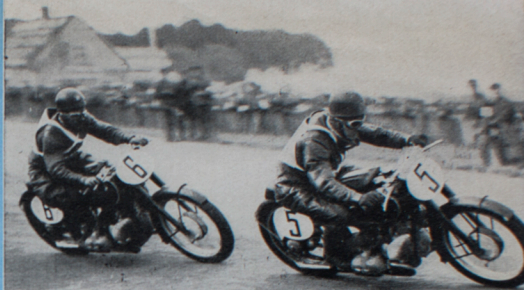
## *A programme of progress*

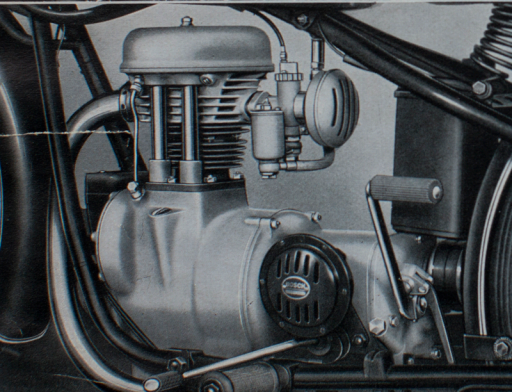
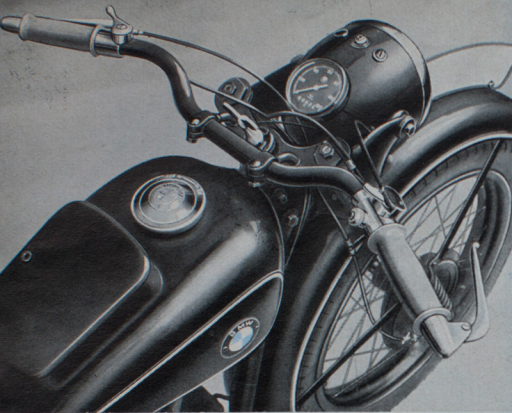


*I*t is no mere chance that BMW machines are used wherever the greatest demands are made without consideration for the material. It is also not a matter of luck that BMW machines are always to be found amongst the leaders in all motor-cycle competitions where high speed and absolute reliability are called for. The 64 World's Motor - Cycle Speed Records - **including the absolute Motor-Cycle Speed Record in the year 1936 at 272 kilometres** an hour put up with a 500 c.c. machine - are truly great performances which could only be attained through untiring years of research, testing, and pioneer work. The secret and explanation of these, often improbable, successes are to be found in the unshakeable principles: Give only the proved best to the Customer; aim always at perfection through well-tested mediums; replace the good only with something better.



It was a long way from the first model R 32, built in 1923, to the World Record-breaking machine used by Henne on the Autobahn near Darmstadt in October 1936 when he attained a speed of 272 Kilometres an hour. But this way led in a straight line to perfection of design coupled with absolute reliability. What was found to be best was rigidly adhered to. The most important knowledge gained was in the superiority of Shaft-drive, Duplex frames, special springing, and highly-developed all-weather finish: and we are proud to have shown the way in these directions. The matter-of-fact way in which the name BMW is coupled with the word "perfection" compels us to produce only the very best. The wonderful reputation of our products gives a guarantee that in a BMW you acquire the highest achievement of the World's motor-cycle industry.





## ***R 20 The lightweight BMW***

### **Low cost - Easy handling**

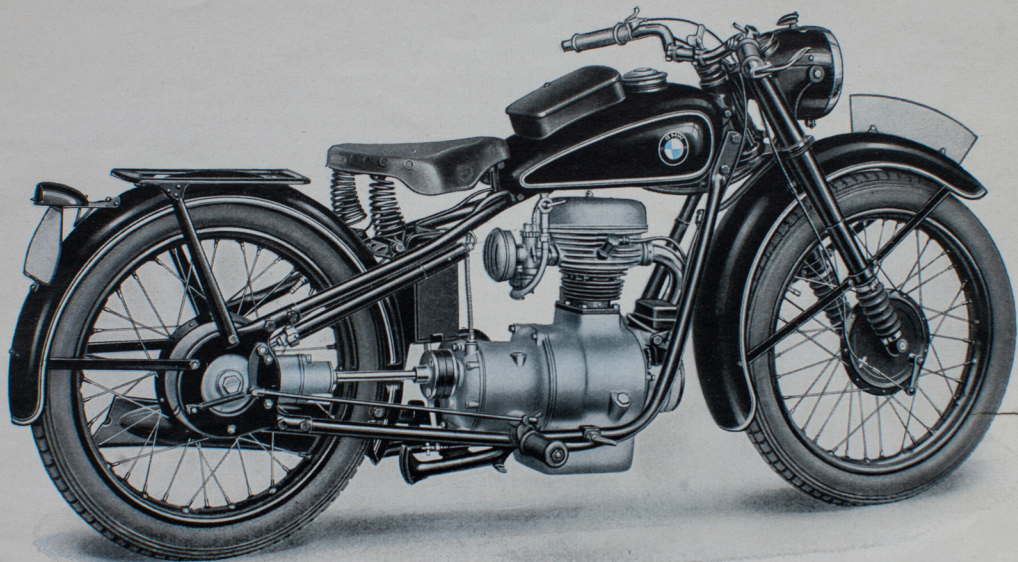
Nice, simple lines; unassuming but trustworthy. That is how this machine will present itself to you. All the knowledge and experience that was gained with the larger models has been put into this machine: at first glance you will notice the telescopic fork. This fork has a wonderful damping effect and makes riding much more pleasant, and the permanent lubrication and enclosed working parts call for very little attention. The bolted and welded duplex frame is very rigid and suits the small machine to perfection. The engine also has been altered with very pleasing results. As soon as you look at the machine, with its superb finish and beautiful lines, you get the impression that this motor-cycle is fully capable of giving its 8 horse power.

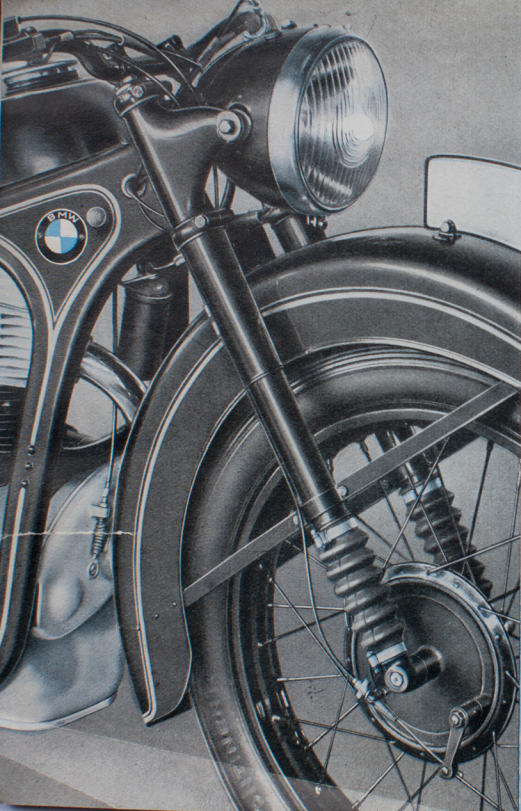
**Engine:** Single-cylinder four-stroke developing 8 brake horse-power, 60 mm bore, 68 mm stroke, 190 c. c. Fully enclosed overhead valves. Well-formed light-alloy cylinder head with large cooling area. Flat-top piston of aluminium alloy. Roller-bearing big-end. Dry-sump lubrication by gear pump. AMAL carburettor with large air filter. Consumption: petrol, 110 m. p. g. oil, 2800 m. p. g. Single-plate dry clutch. Unit construction gear-box with sliding-dog change. Positive and easily-operated foot change on the left side. Gear ratios: top 6.8, second 10.8, bottom 19-1. Power transmitted to rear wheel by shaft, fully enclosed and protected against dirt, and fitted with a large rubber shock-absorber. Crown and bevel gear run on double bearings and give a reduction of 4.18-1.

**Frame:** Duplex-cradle frame of welded and bolted steel tubes. New type telescopic front fork with permanent lubrication giving very smooth springing. Both front and rear wheels of drop-out type. Large dimension brake drums. Well-shaped adjustable handlebars. Built-in steering damper (extra). Twist grip throttle control. 50-Watt Bosch lighting and ignition equipment with dimming switch. Bosch horn. Speedometer built into headlamp. Petrol tank capacity 12 litres (2.7 gallons). Tank also contains toolcase with full range of tools. Low pressure 19x3 in. tyres. Weight ready for the road 286 lbs. Wheelbase 52 inches. Overall length: 79 inches. Ground clearance (engine) 4½ inches.

**A light and beautiful utility mount. Economic to run and built with the famous BMW care.**







## *The new R 35*

### **Something very special for competitions and touring**

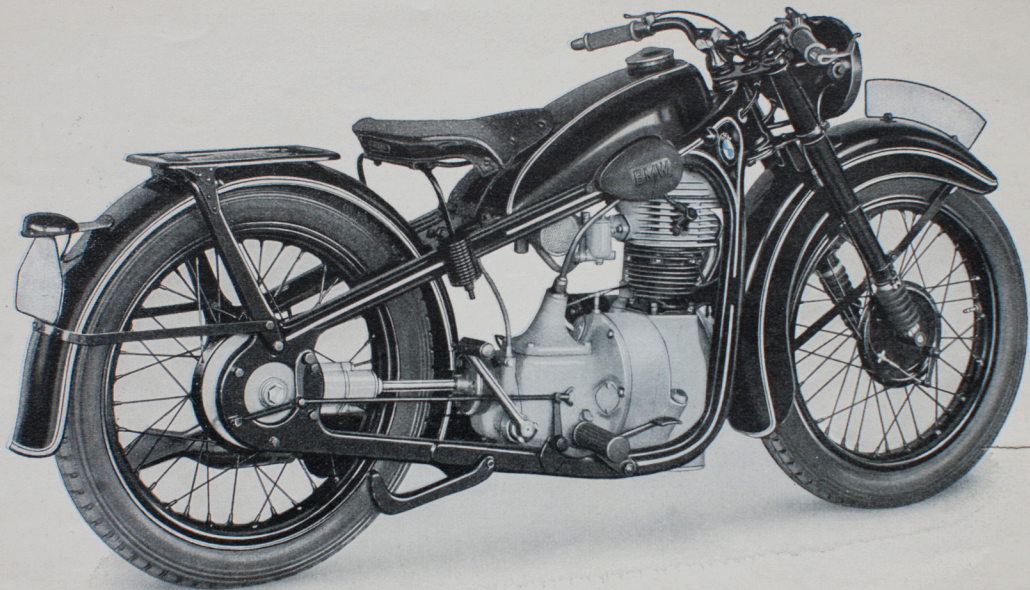
This machine has been built to meet, in every detail, the extra requirements met with in competition work, and for every sort of road use. The wide rear mudguard enables oversize tyres (or snowchains) to be fitted. The frame is of pressed steel with cross-bracing members. The new Type of front fork absorbs the severest shocks and, on account of its being fully enclosed and permanently lubricated, requires very little attention. The engine possesses all the distinguished features of a BMW production, and developing 14 brake horse-power has plenty of power in reserve.

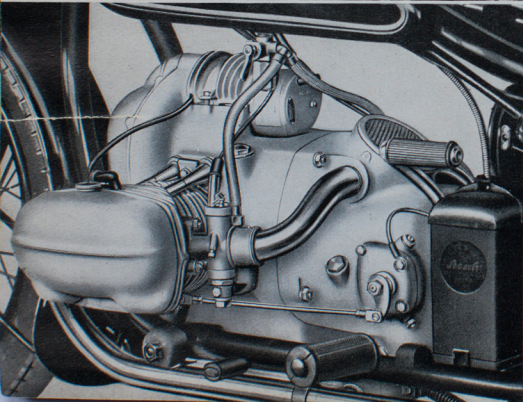
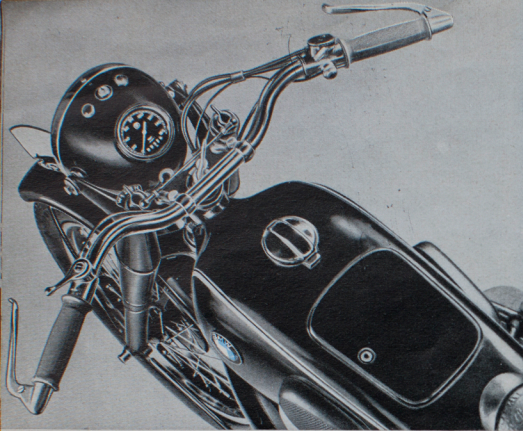
**Engine and gearbox:** Vertical single-cylinder four-stroke engine with a bore of 72 and a stroke of 80 giving a capacity of 340 c. c. and a sustained 14 horse-power. Quickly detachable light-alloy cylinder head with carefully developed cooling properties. The overhead valve mechanism is fully enclosed in oil-tight covers. "Sum" three-jet carburetter with air-filter. Consumption 90 m. p. g. Flat-top aluminium piston. Steel connecting rod. Roller-bearing big-end. Single-dry-plate flywheel clutch fully-enclosed. Four-speed sliding-dog gear-box with tank-side gate-change. Gear ratios: 5.63, 7.6, 12.27, and 20.27-1. Robust shaft-drive with flexible couplings and shock absorbers.

**Frame:** Cross-braced triangulated duplex-cradle frame of pressed-steel. Smooth springing by means of the new telescopic forks with fully enclosed working parts. Quickly detachable front and rear wheels with pull-out spindles. Powerful internal expanding brakes. 19 x 3½ in. wired-on tyres. 2¾ gallon tank. Adjustable handlebars with twist-grip throttle. Steering damper. 45/70-Watt Bosch lighting equipment. Large headlamp with built-in speedometer and dipping switch. Bosch horn. Weight with full tanks 340 lbs. Saddle height 28 inches. Length 79 inches. Width 33 inches. Engine ground clearance 5 inches.

**A handy, reliable, medium-weight machine. Perfectly suited for competition purposes or for every-day use.**







## *The R 5 sports model*

### **The classic high-performance machine**

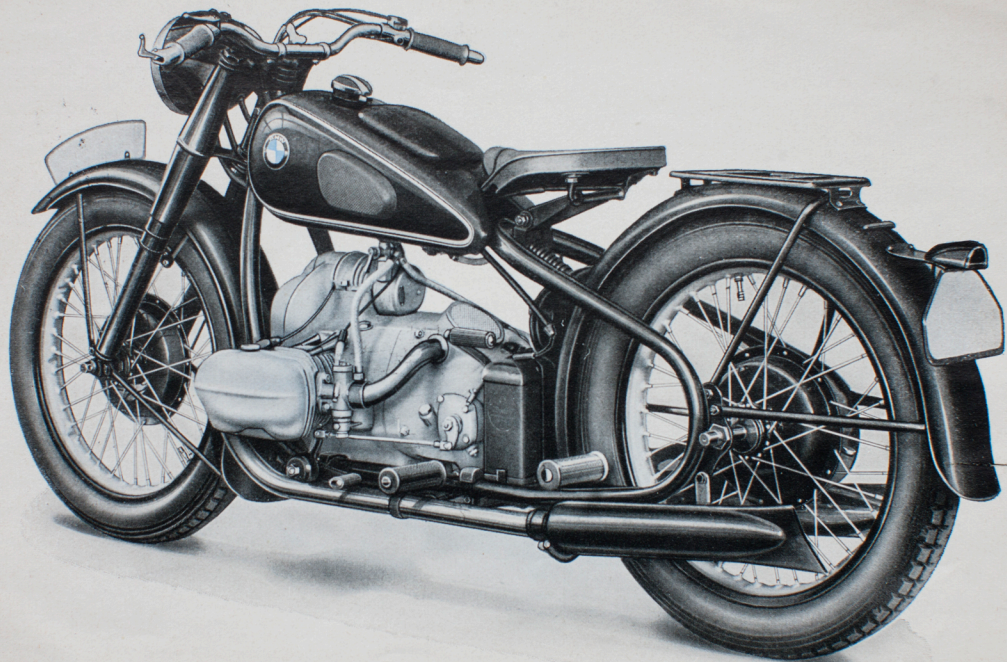
In laying out this machine care has been taken to provide every wish of the most fastidious rider. Good breeding, beauty of line, and absolute reliability are united in rare harmony. The carefully enclosed powerful engine bears in every little detail evidence of the loving care with which it has been developed. Smooth and elastic at low rates of speed it is yet capable of developing and sustaining 24 brake horse-power. The specially - and carefully - designed telescopic forks with their ideal springing and oil rebound-dampers, and the rubber floating saddle, guarantee real riding comfort. A triangular duplex-cradle frame built up of tapered steel tubing combines to form an indestructible assembly.

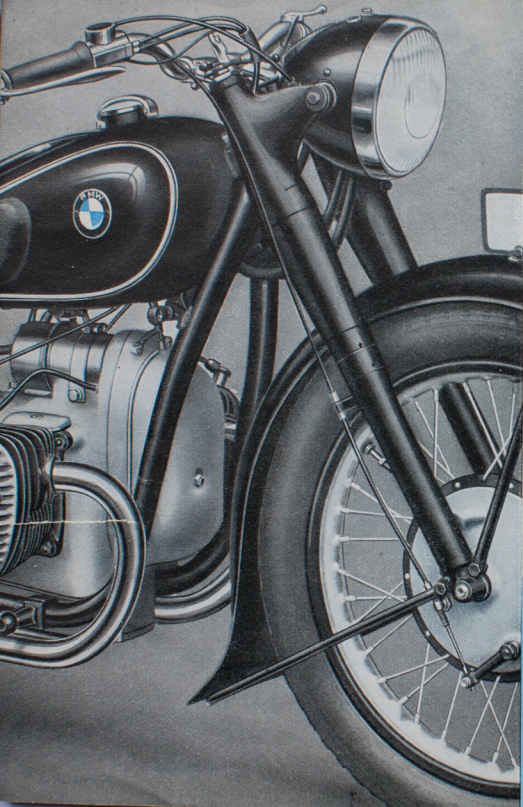
**Engine and gearbox:** Transverse twin-cylinder horizontally-opposed engine with a bore of 68 and a stroke of 68 giving a capacity of 494 c. c. 24 brake horse-power. Light-alloy cylinder heads with large cooling surfaces. Fully enclosed overhead-valve mechanism with hairpin valve springs operated from twin camshafts through short push-rods. The entire valve mechanism is enclosed in oil-tight covers. Twin Amal carburettors with a large air-filter in the gear-box casing. Consumption 85 m. p. g. Special aluminium piston. Steel connecting rods on roller bearings. Unit-construction of engine and gear-box; Four-speed gear-box with sliding dog operation by combined hand and foot levers. Single-plate dry clutch. Gear ratios: 5.06 (helical-gear) 6.61, 8.87 and 14-1. Weather-proof shaft drive with rubber flexible couplings. Spiral crown-and-bevel gears.

**Frame:** Triangulated duplex-cradle frame built of tapered tubes. Three gallon saddle tank with built-in tool-box. Adjustable rubber floating saddle. Modern telescopic forks with adjustable oil damping. Inter-changeable wheels with pull-out axles, 19 x 3.5 in. tyres. Large internal expanding brakes. Steering damper. Twist-grip throttle. 45/70-Watt Bosch lighting-set with dimmer switch and electric horn. Large speedometer built into the headlamp. Handlebar lock. Weight with full tanks 363 lbs. Saddle height 27 inches. Length 83 inches. Width 32 inches. Ground clearance 4<sup>3</sup>/<sub>4</sub> inches.

**An ideal combination of all the principles and knowledge gained from our successful racing experiences. The ideal machine for the enthusiastic sportsman.**







## *The R 6 touring machine*

**The sturdy, unassuming machine for all purposes**

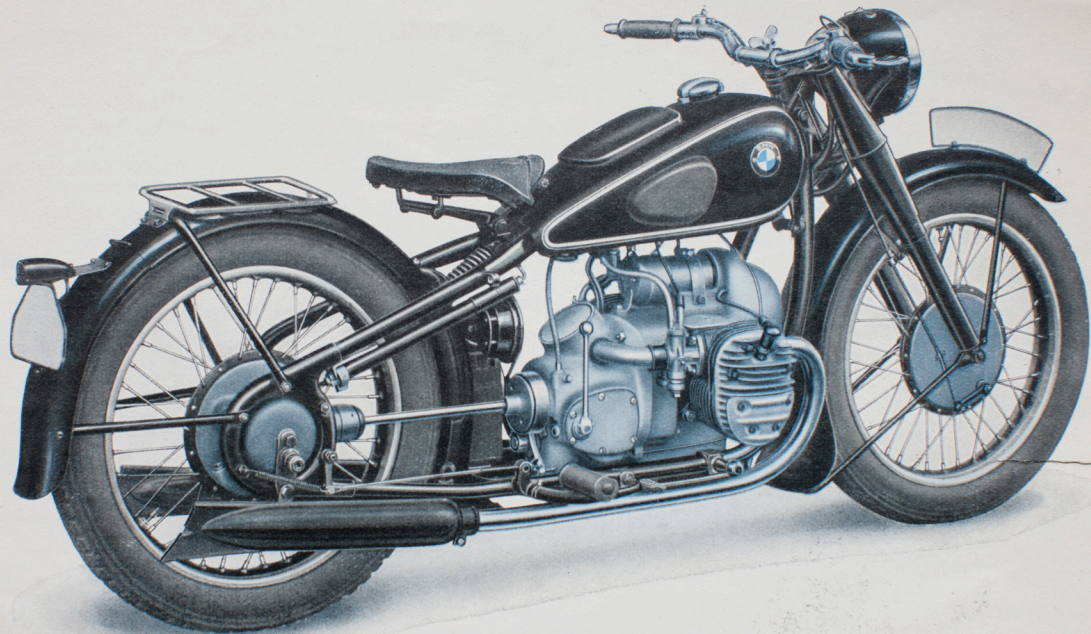
The object in producing this 600 c. c. machine was to provide a solo or side-car machine incorporating all the knowledge and experience gained in our successful racing activities. It has the same type of frame, and the same type of fork, so often used, and as often proved successful, in strenuous competitions. It is the same type of gear-box and the same type of shaft-drive which have more than proved their ability to stand up under the severest strains and under the least favourable running conditions. The side-valve engine has been subject to further development and, according to our proved principles, is designed for long, trouble-free service. This machine fully maintains the BMW reputation for building motor-cycles which combine pleasing lines with a beautiful finish.

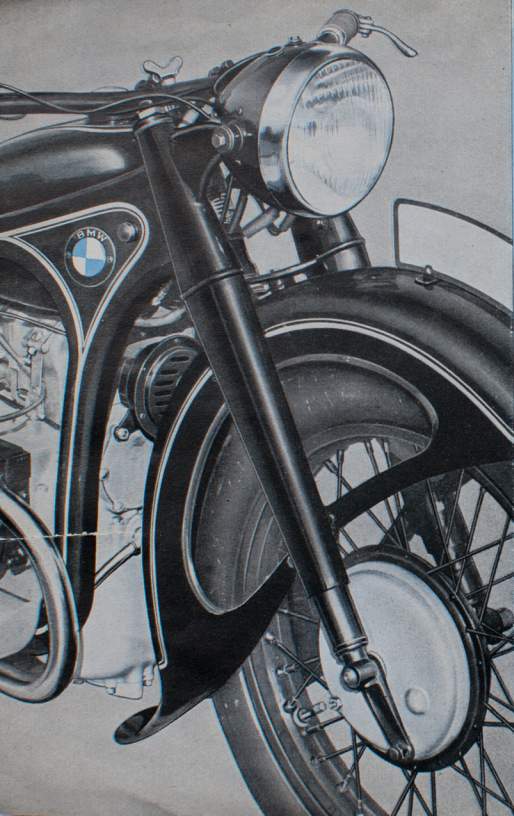
**Engine and gearbox:** Horizontally-opposed four-stroke transverse twin with a bore of 70 mm and a stroke of 78 mm giving a capacity of 600 c. c. Compression ratio 6:1. Steady power output 18 brake horse-power. Cast-iron cylinder with large horizontally disposed cooling ribs. Detachable cylinder heads with protecting shields. Fully enclosed side-by-side valves. Gear-driven camshaft-drive. Flywheel assembly running on double ball bearings in one-piece crank-case. Flat-top aluminium piston. H-section steel connecting-rods running on roller-bearing big-ends. Dry-sump lubrication by gear pump. Twin Amal carburettors with large joint air-filter. Petrol consumption 85 m. p. g. Single-plate dry clutch, light in operation yet powerful. Gear-box built in one with the engine. Four gears with sliding-dog selection and combined hand and foot operation. Gear ratios: 5.07, 6.65, 8.89 and 4.04-1. (Sidecar: 6.0, 7.85, 10.13 and 16.63-1.) Strong reliable shaft-drive with flexible couplings and spiral gear drive.

**Frame:** Taper-tube duplex cradle frame.  $3\frac{1}{2}$  gallon saddle tank with built-in tool-box. Adjustable rubber-top spring saddle. Trouble-free telescopic forks with adjustable oil damping. Adjustable handlebars and footrests. Side-car connections. Interchangeable wheels with pull-out axles. 26 x 3.25 in. tyres. Large dimension brakes. Complete weight 385 lbs. General dimensions the same as model R 5.

**A machine which, on account of its easy starting reliability and splendid performance, both surprises and delights.**







## *The R 12 touring machine*

**For the most strenuous work with side-car and long journeys**

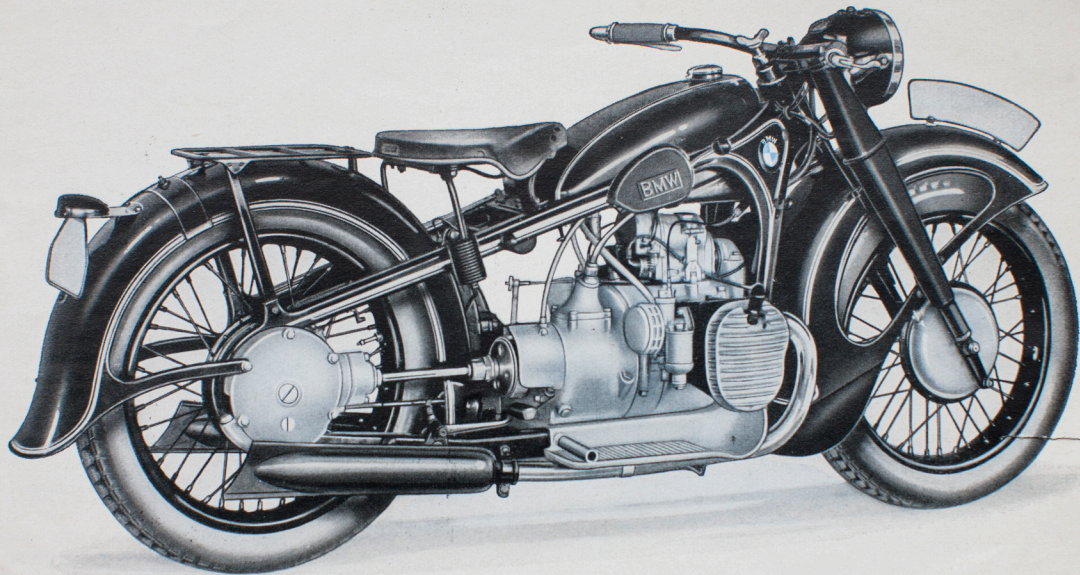
A creation which looks, and is, sturdy and trustworthy. This machine is an example of the quality with which the name BMW is linked all over the world. Machines of this matured type of design, with their natural reliability, are running under the most difficult circumstances in all the corners of the earth. The careful enclosure of all moving parts, and the large protecting mudguards, provide a machine equal to all demands in all weathers.

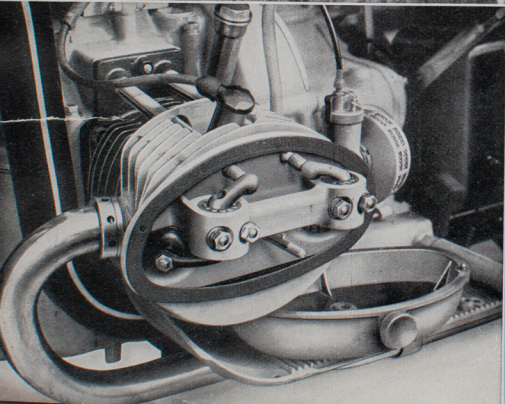
**Engine and gearbox:** Horizontally-opposed twin-cylinder engine set transversely in the frame. Bore: 78 mm, Stroke: 78 mm, Capacity: 748 c. c. This engine gives a "steady" 20 b. h. p. Side-by-side valves fully enclosed. Cast-iron cylinder, with detachable light-alloy cylinder head. Flat-top aluminium piston. Steel connecting-rod running on roller-bearing big-end. Dry two-plate flywheel-clutch. Strong unit-construction gear-box with well-chosen ratios selected by sliding dogs through hand-operated gate-change. Ratios: Top 4.44; third 5.78; second 8.38; bottom 12.94-1. Side-car: 5.17 : 6.74 / 9.68 : 15.1-1. Strong shaft drive to rear wheel with flexible couplings. Dry-sump lubrication. Twin carburettors with large air-filter. Consumption Solo: 70 m. p. g. Side-car: 55 m. p. g.

**Frame:** Triangulated pressed-steel frame, rivetted-up. Telescopic forks with built-in oil damping system. Adjustable handlebars with steering damper. Aluminium footboards. Quickly-detachable interchangeable wheels with pull-out axles. 26 x 3 in. tyres. Powerful internal-expanding brakes. Quickly-detachable rear mudguard section. 45/70-Watt Bosch lighting and ignition set. Bosch horn. Speedometer built-in to headlamp. Handlebar lock. Side-car connections. Three gallon tank. Saddle height: 28 inches. Wheelbase: 54 inches. Overall length: 82 inches. Overall width: 35 inches. Ground clearance: 5 inches. Weight complete: 407 lbs. If required this machine can be supplied with 35/50-Watt Bosch ignition/lighting set and single carburettor which will reduce the power output to 18 horse-power.

**A utility machine for which no going is too hard, and no hill too steep. A reliable model for the most severe service.**







## *The R 17* *touring and sports machine*

### **A fast, powerful model**

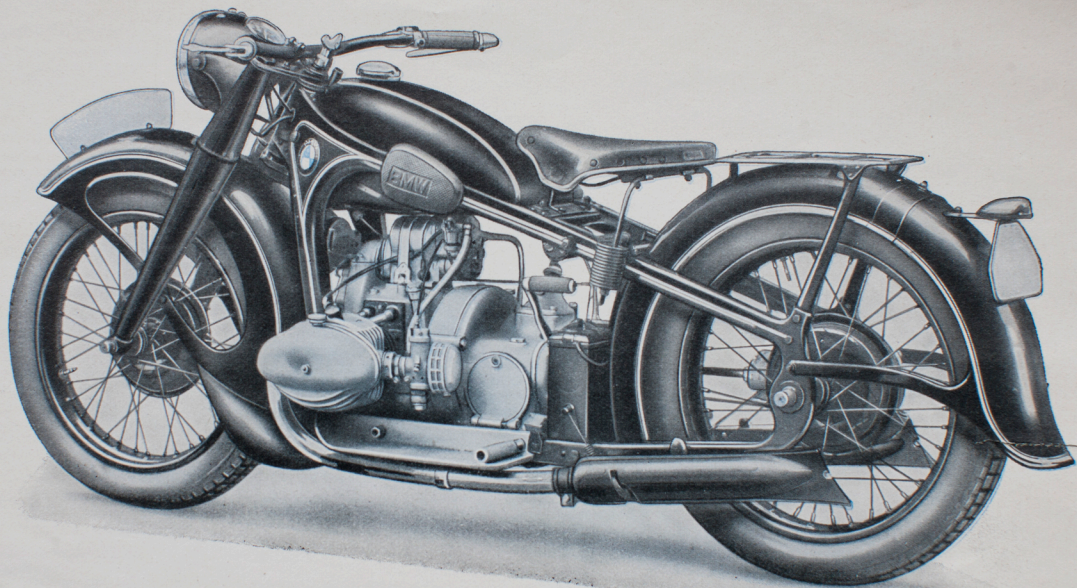
This machine embodies evidence of the creative skill of our designers as well as the results of their successful search for yet more power. At the same time the roadholding qualities have been further improved to ensure absolute safety. Really fast touring with the maximum safety can be enjoyed with this machine. The pulling power and acceleration make it an ideal sidecar mount.

**Engine and gearbox:** Horizontally-opposed transverse twin. Bore, 83 mm, stroke, 68 mm, giving a capacity of 730 c. c., and a peak power of 33 horsepower. Quickly detachable alloy heads. Flat-top aluminium slipper pistons. Fully-enclosed and protected overhead valve gear. Dry-sump lubrication by gear pump. Twin carburettors with large air cleaner. Consumption 50/60 m. p. g. Dry two-plate flywheel clutch. Unit construction of engine and fourspeed gear-box. Sliding dog operation of gears by gate change lever. Gear ratios: 4.44, 5.78, 8.38, and 12.94-1. (Sidecar: 5.18, 6.74, 9.78, and 15.1-1.) Top gear is a spiral silent drive. Final drive by shaft.

**Frame:** Triangulated pressed steel duplex frame, rivetted up. Telescopic forks with built-in oil dampers. Adjustable handlebars with steering damper. Twist-grip throttle and ignition. Powerful brakes. Pull-out wheel spindles and inter-changeable wheels. 26 x 3 $\frac{1}{2}$  in. tyres. (27 x 4 in. tyres can be supplied at slight extra cost.) Aluminium footboards. 45/70-Watt Bosch lighting and ignition set. Weight 411 lbs. All other details of dimensions etc. as model R 12.

**The ideal machine for fast, long-distance journeys - but equally suitable for overcoming such difficulties as are met with on a cross-country trial.**





## Comments from Press and Public:

### "The Motor Cycle", 18. 4. 1935:

The engine, when it was warmed up, had one of the nicest "Tick-overs", that I have experienced for quite a long time. The quiet running on the pilot jet, and the smoothness of the engine, created a great interest, no matter where I went with the machine.

.... Speeds up to 80 miles per hour (130 kilometres) were now and again reached on this BMW R 12 touring machine.

Mile after mile was covered at high speed without any undue noise from the engine or exhaust being noticeable. Only on turning the head could one hear a soft singing of the transmission, but I am not quite sure whether this almost inaudible hum was not caused by the exhaust or tyres. Only he who has ridden a BMW knows the pleasure of cornering at speed.

### "Voorwaarts", Rotterdam:

A great reserve of power, low upkeep costs, a minimum of faults and repairs, this combination of good points gives BMW the right to term itself "King of engines".

### MOTORWELT, Nr. 22, 1936 (H. H. Dienstbach):

The plain lines of the R 5 are very attractive, no corners where dirt can gather, no obtrusive oil pipes, and everything, yes! everything enclosed. It takes your breath away when you get the thrill of the acceleration of this wonderful engine.

### M. Agrinier, Boulevard Exelmans, Paris:

I can tell you now that the rider who does not own a BMW machine has never known what motorcycling actually is. This is the eight machine in my possession; I have owned all makes, both French and foreign, and I confess that I have never experienced as much satisfaction and pleasure as with my BMW.

All parts are accessible to a degree far beyond that of the majority of single-cylinders. Cleaness and, above all, silence, and what silence! How many times have I been asked whether this motor cycle was ... electric! If anyone doubts what I claim I simply reply: buy a BMW and you will say as much.

to Henry B.  
The. Nesfort  
20.4.37

Dear Sirs  
With reference to a  
500 Bolls I bought from you  
via J. Lyons of Oxford, a month  
ago, I have now covered  
200 miles & should like to  
tell you what a wonderful  
job of thing it is. The  
performance is amazing. I  
have had a speed 100 m.p.h.  
in very slightly favourable  
conditions, & have been  
tuned at just over 90, over  
half a mile, exactly as the  
bike being exactly as sold,  
with air cleaner & silencers.  
These are a couple  
of points on which I would  
like your advice. There is  
framed. Perhaps last year

Yours faithfully  
J.P. Bingley







**BAYERISCHE MOTOREN WERKE AG MUNICH**