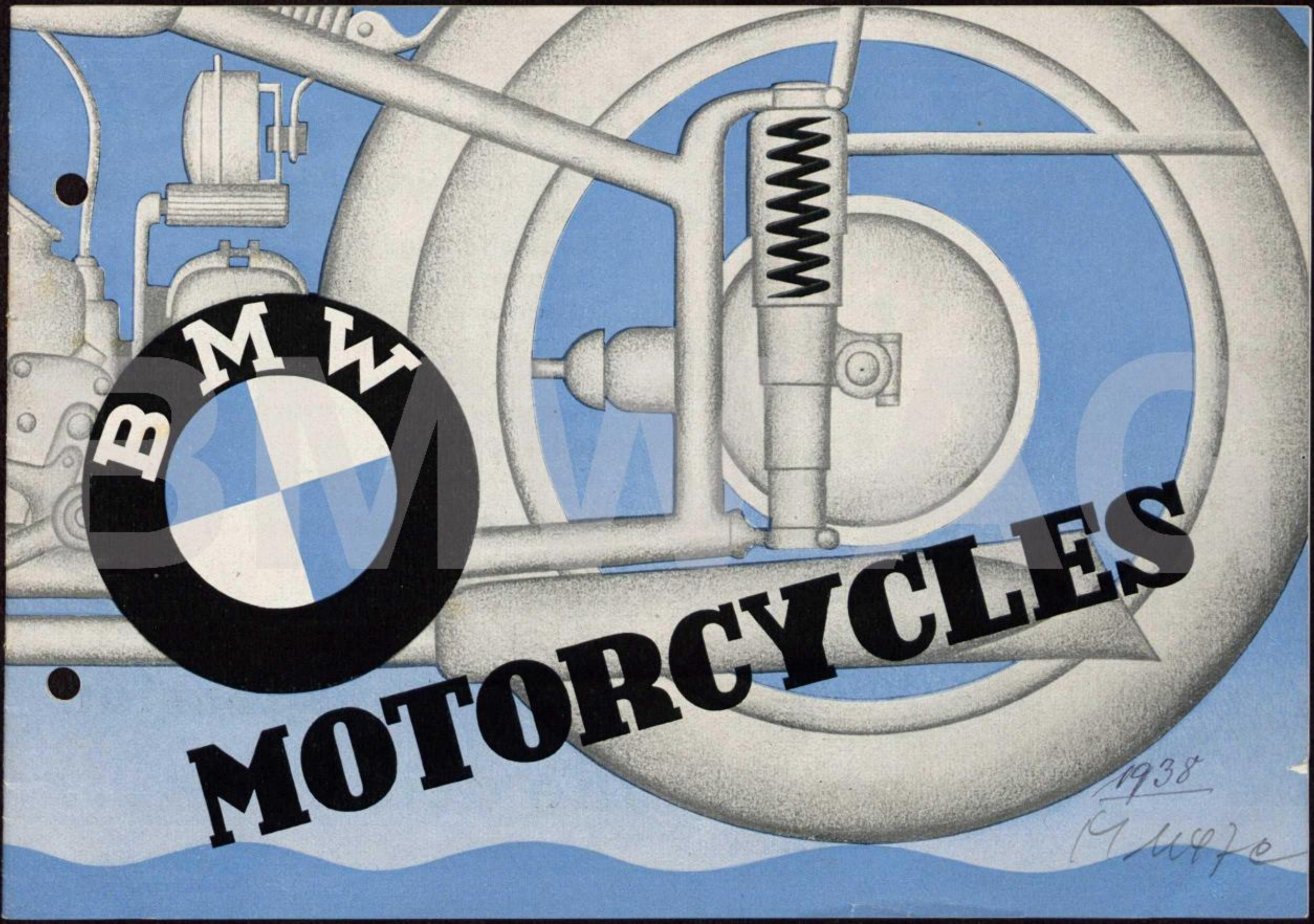
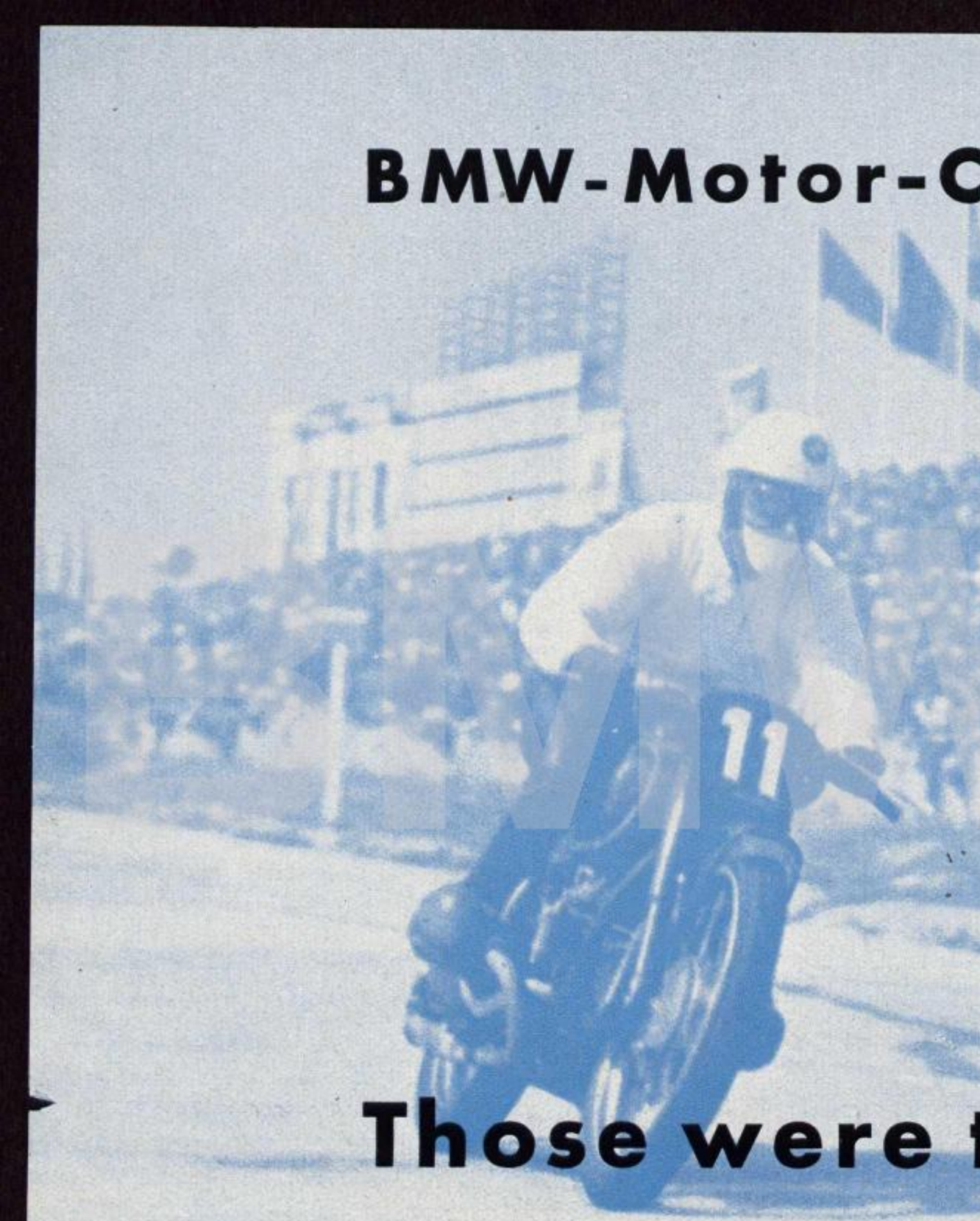

BMW
MOTORCYCLES
1938

BMW-Motor-Cycles won in 1937



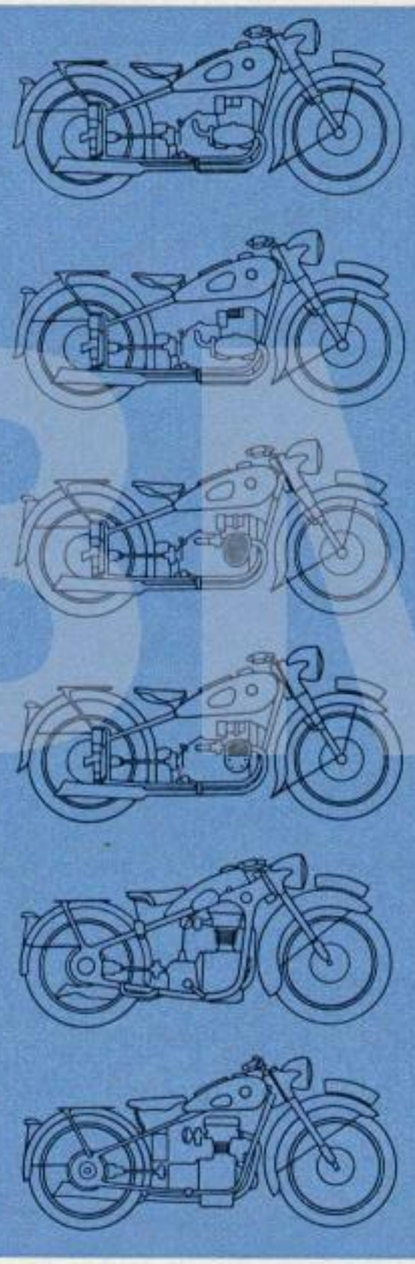
Hungarian Grand Prix
Dutch T. T.
Swedish Grand Prix
German Grand Prix
Ulster Grand Prix
International 6-days Silver Vase
German 500 c. c. championship
Maximum speed record at 174 miles per hour.
12 Worlds class records . . .

with the successful telescopic front forks and

Telescopic rear wheel suspension

Those were the acid tests . . .

...now, already, comes production!



1938 Programme

R 66
600 c. c. sports/sidecar model

R 51
500 c. c. sports model

R 71
750 c. c. sidecar/touring model

R 61
600 c. c. touring model

R 35
350 c. c. trials model

R 20
200 c. c. touring model

In addition to telescopic front forks,

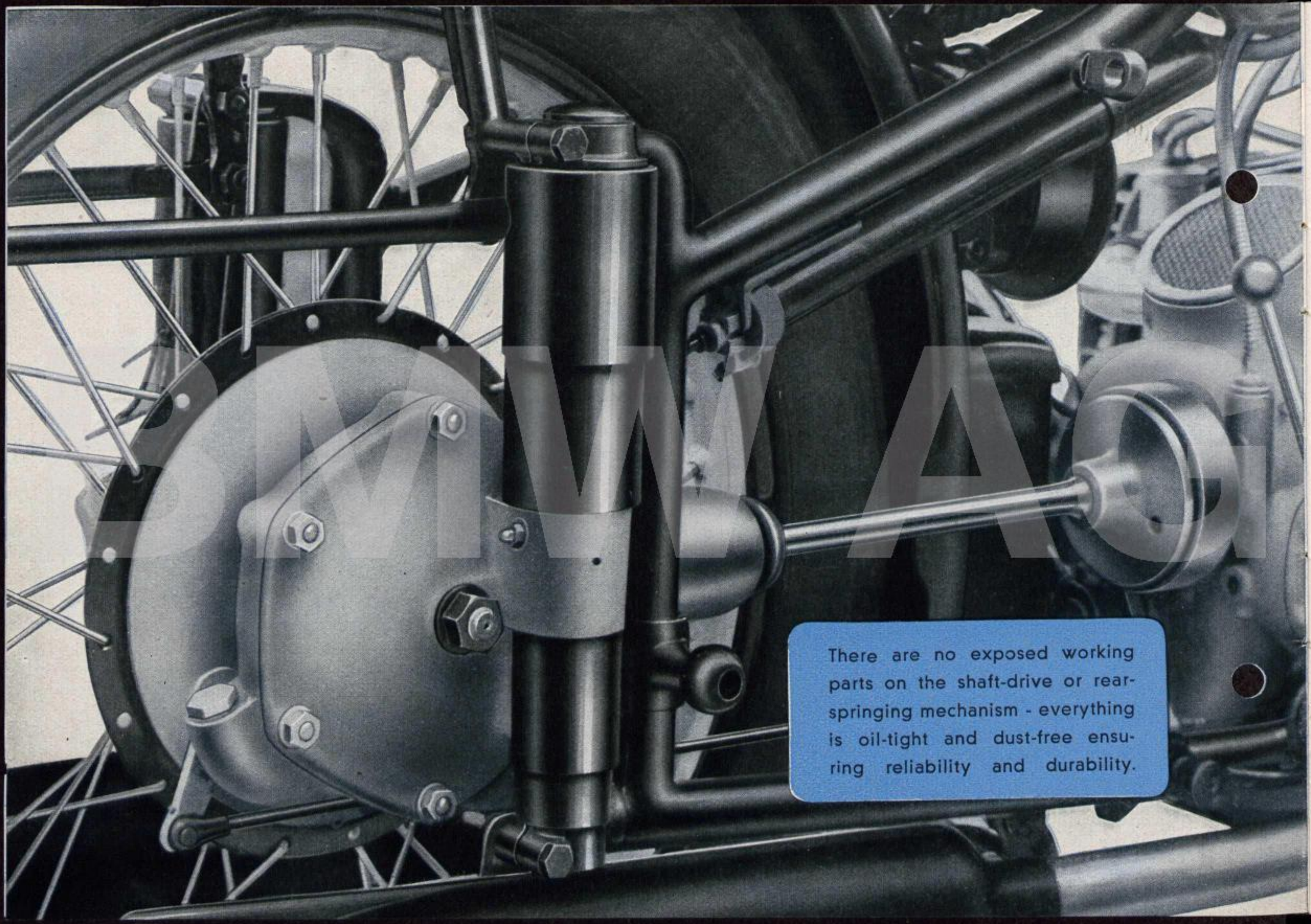
1938 BMW-Motor-Cycles

are being equipped as standard with

telescopic rear-wheel springing

Thus has BMW reached the goal of perfection in the realms of motor-cycle design. For some years past BMW has held supremacy in the field of motor-cycle sport, both for speed and reliability - proved by successes in the most important races and trials, and by the recent amazing performance of Ernst Henne in putting up the World Speed Record to 174 miles an hour. But development went a stage farther, and was devoted to an endeavour to improve the road-holding and comfort. BMW, pioneers of design, added to the telescopic front forks, which give such ideal springing, the **telescopic rear-wheel suspension** which has been put to the acid test of trials and road-racing. This is an added feature to the basis on which BMW design lies: Simple and clean unit-construction of engine and gear-box, shaft-drive, and duplex frame. That these features of design are right is confirmed, not only by the performance and reliability of these machines, but by the fact that still more designers are beginning to follow these principles.

HE RIDES BEST WHO RIDES BMW.

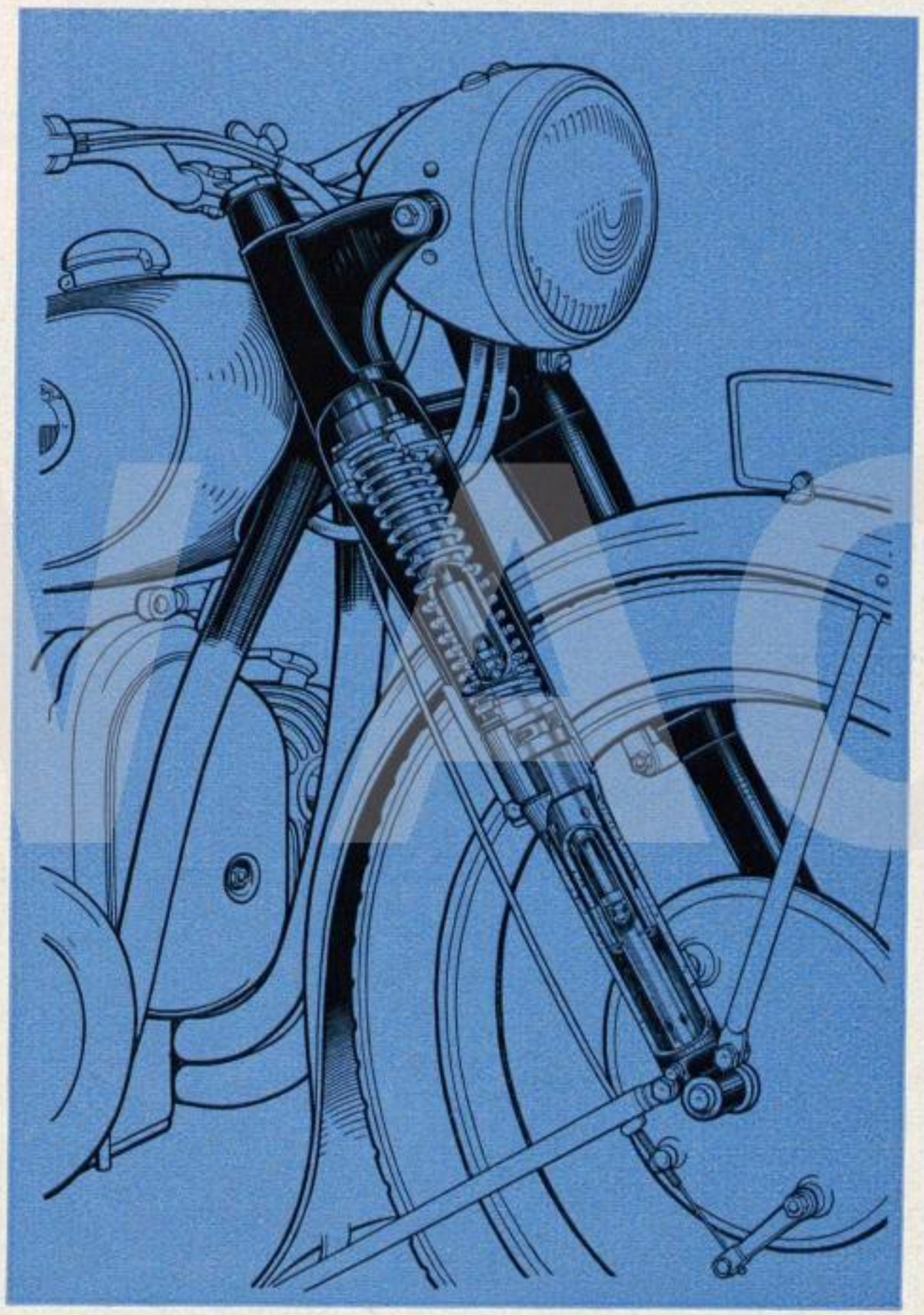


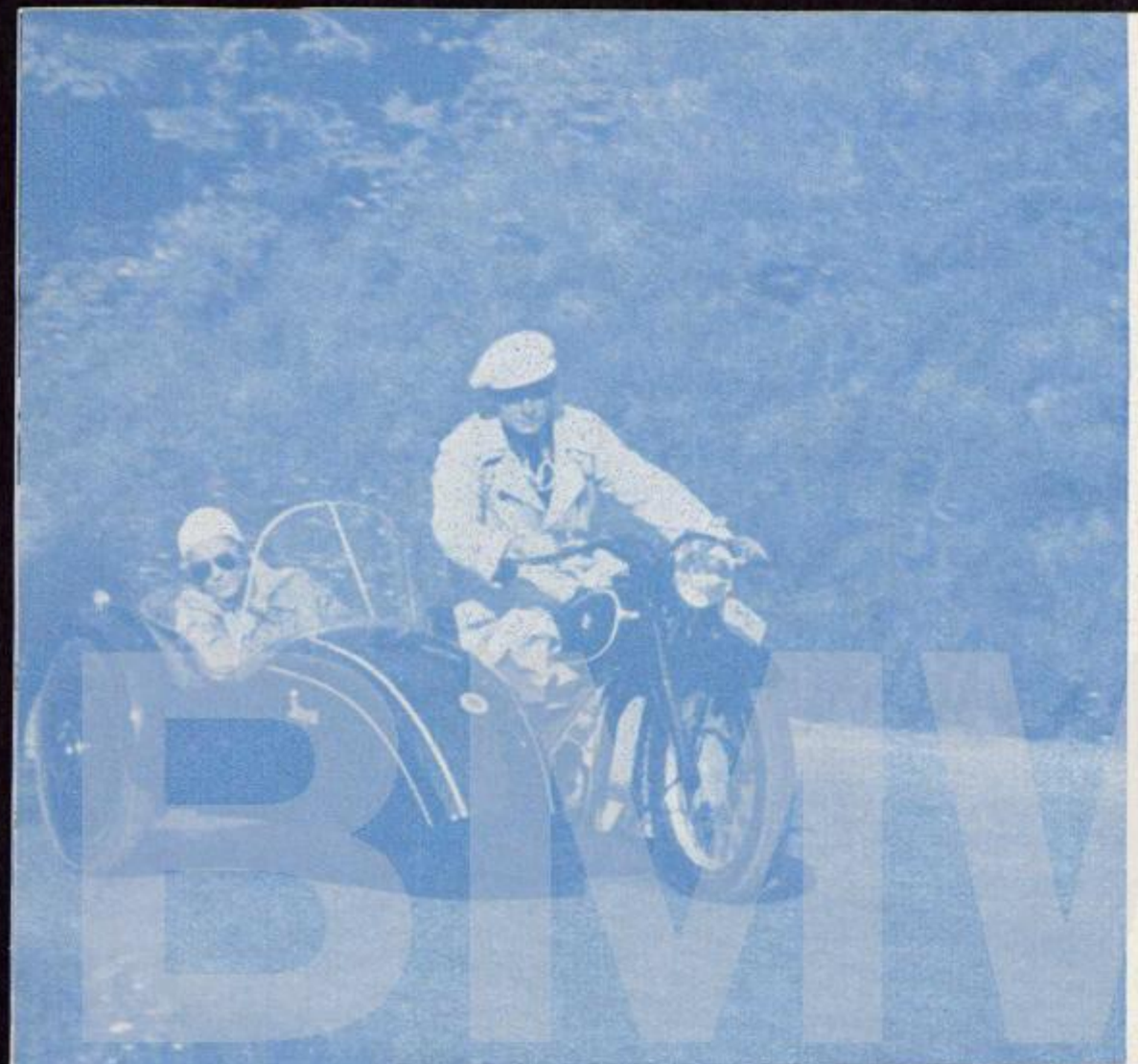
There are no exposed working parts on the shaft-drive or rear-springing mechanism - everything is oil-tight and dust-free ensuring reliability and durability.

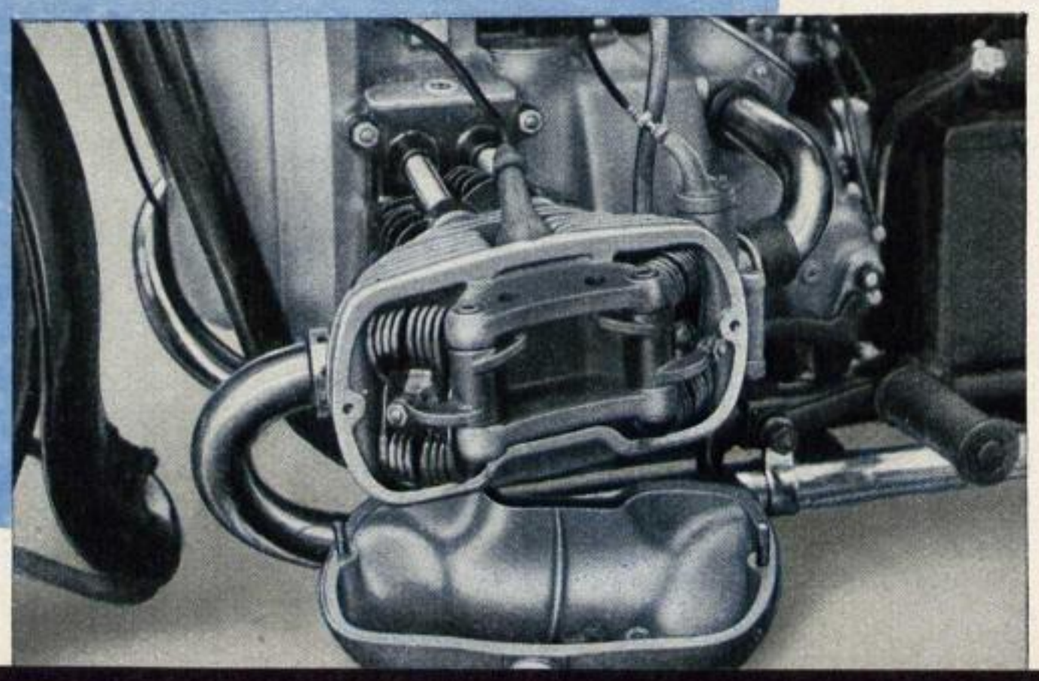
The completely sprung motor-cycle

was an ideal in search of which many years of thought and experiment have passed. Step by step BMW have been progressing towards this ideal which they have finally reached with their production as standard of machines telescopically sprung not only as regards the front wheel, but also as regards the rear wheel.

The basic reason for the wonderful road-holding qualities of BMW machines lies in the telescopic front forks which a few years ago were standardised on all the firm's models. The springs are enclosed in fork shafts which are completely oil- and dust-tight, and the movement is controlled by built-in hydraulic shock-absorbers. These forks require no special maintenance. The already fine suspension provided by this fork is now brought to perfection by the addition of the new BMW TELESCOPIC REAR-WHEEL SUSPENSION. The rear wheel, complete with cardan shaft and crown-and-bevel, is attached to, and floats on, the springs enclosed in tubular guides built into the frame; ensuring accurate movement. The great advantage of a sprung rear wheel lies not only in the greater comfort and reliability provided, but further in the vastly improved adhesion of the rear wheel to the road preventing waste of engine power. The BMW rear-wheel springing requires little extra attention, and the removal of the rear wheel is not in any way obstructed - all BMW machines have really quickly-detachable rear wheels through the medium of their "pull-out" axles.







R 66-600 c.c. sports/sidecar model (30 Brake H. P.)

with telescopic front and rear suspension

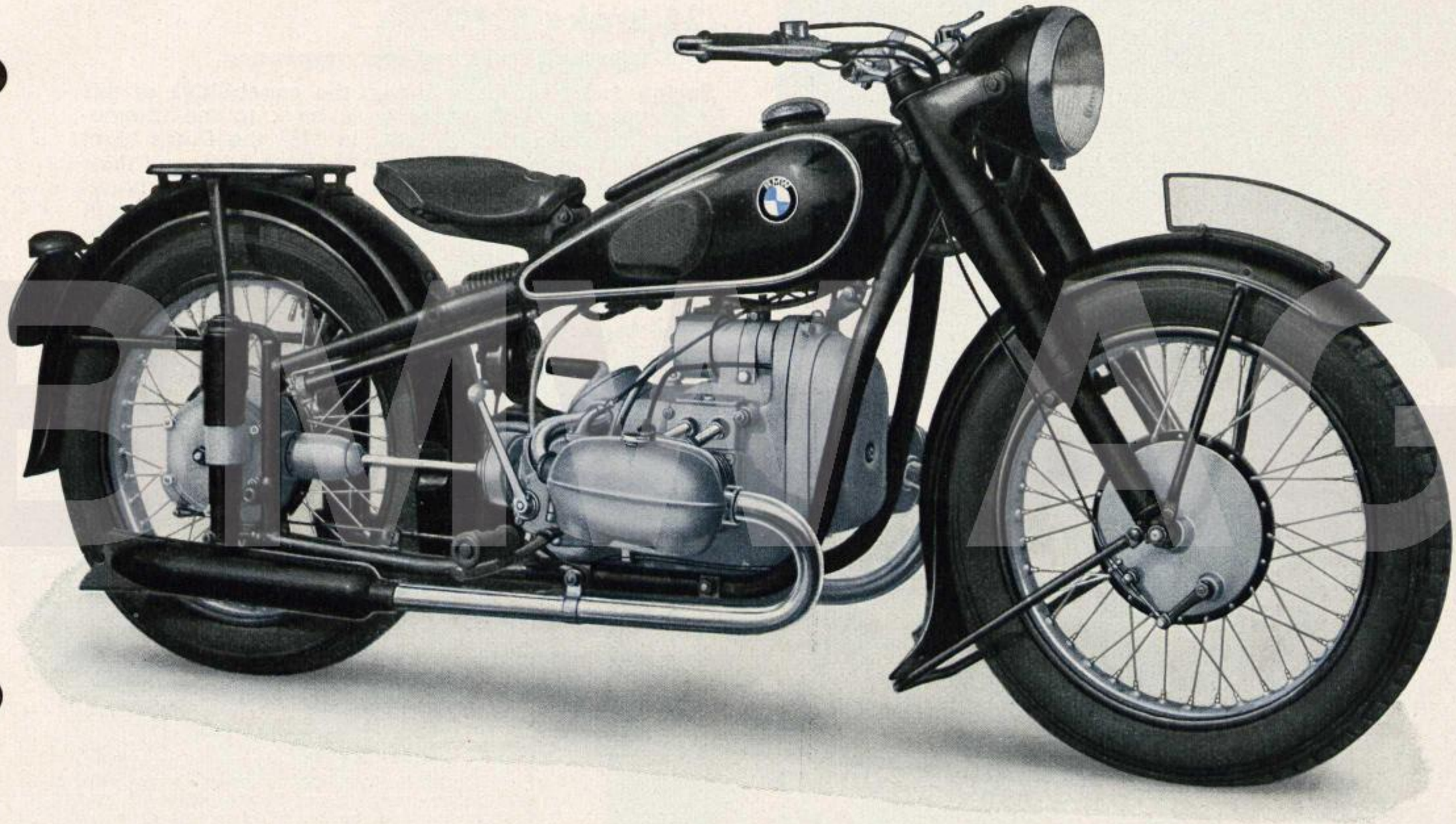
The R 5, the most successful solo sports machine of the past year, created the idea for the development of this powerful 600 c. c. machine for sporting or sidecar purposes. It was a happy thought which led to this development of the fast solo R 5 into a machine which would provide a vivid performance with a sidecar. This is a machine which will give real riding pleasure under really arduous conditions.

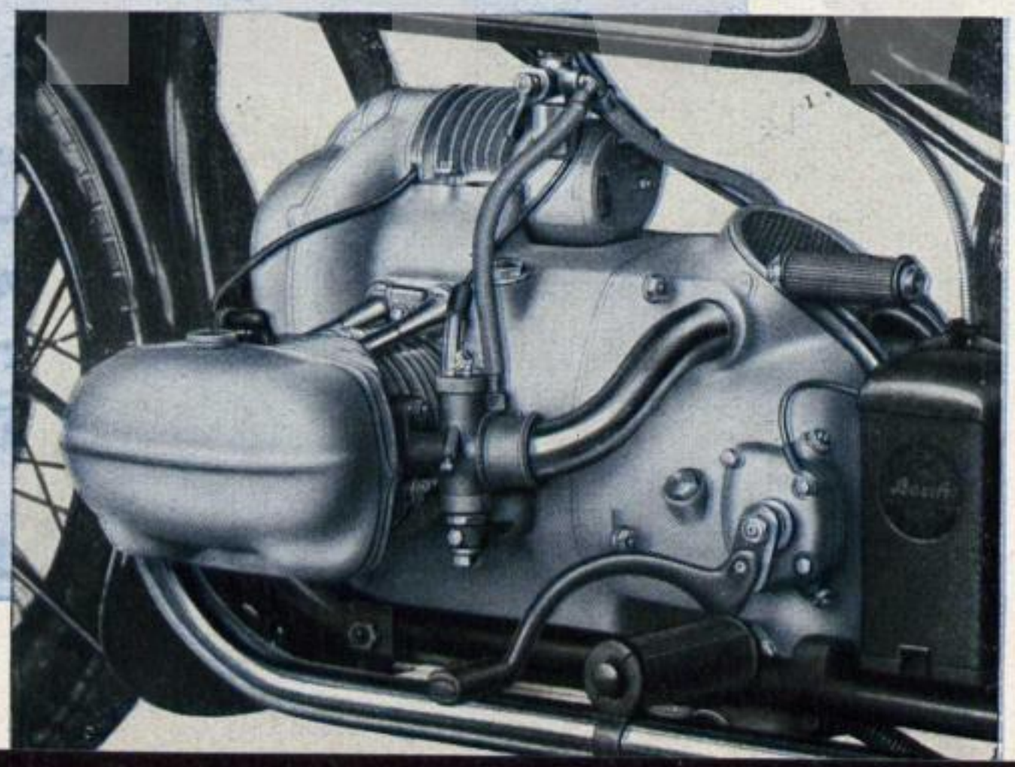
Frame: Duplex cradle frame. Telescopic front- and rear-wheel springing. Adjustable rubber-top saddle. Graceful saddletank with quick-action filler-cap, knee-grips, and enclosed tool-box. Quickly-detachable and interchangeable wheels with pull-out axles. Large internal-expanding brakes. Adjustable handlebars. Steering damper. Twist-grip throttle control. Handlebar ignition control. 6-Volt 75-Watt Bosch lighting equipment and horn. Speedometer built into head-lamp. Thief proof handlebar lock.

Engine: Horizontally-opposed twin-cylinder four stroke engine developing 32 brake-horse power. Clean one-piece crankcase. Enclosed, but accessible, dynamo. Aluminium cylinder-heads with large cooling-area. Enclosed valve mechanism. Overhead valves with hairpin springs. Ball-bearing crankshaft. Steel connecting-road with roller-bearing big-end. Cam driven by pinion direct from crankshaft. Enclosed distributor and coil. Twin Amal carburettors with joint air-filter let into the gear-box housing. Single plate dry clutch.

Transmission: Four-speed sliding dog gear-box built in a unit with the engine. Built-in dust-tight positive-stop foot change lever with emergency hand lever. Combined hand and foot levers can be supplied at slight extra cost. Reliable, water-tight, shaft-drive to the rear-wheel with flexible universal joints and helical cut gears.

See also the page "BMW Technical Data".





R 51-500 c.c. sports model (24 Brake H.P.)

with telescopic front and rear suspension

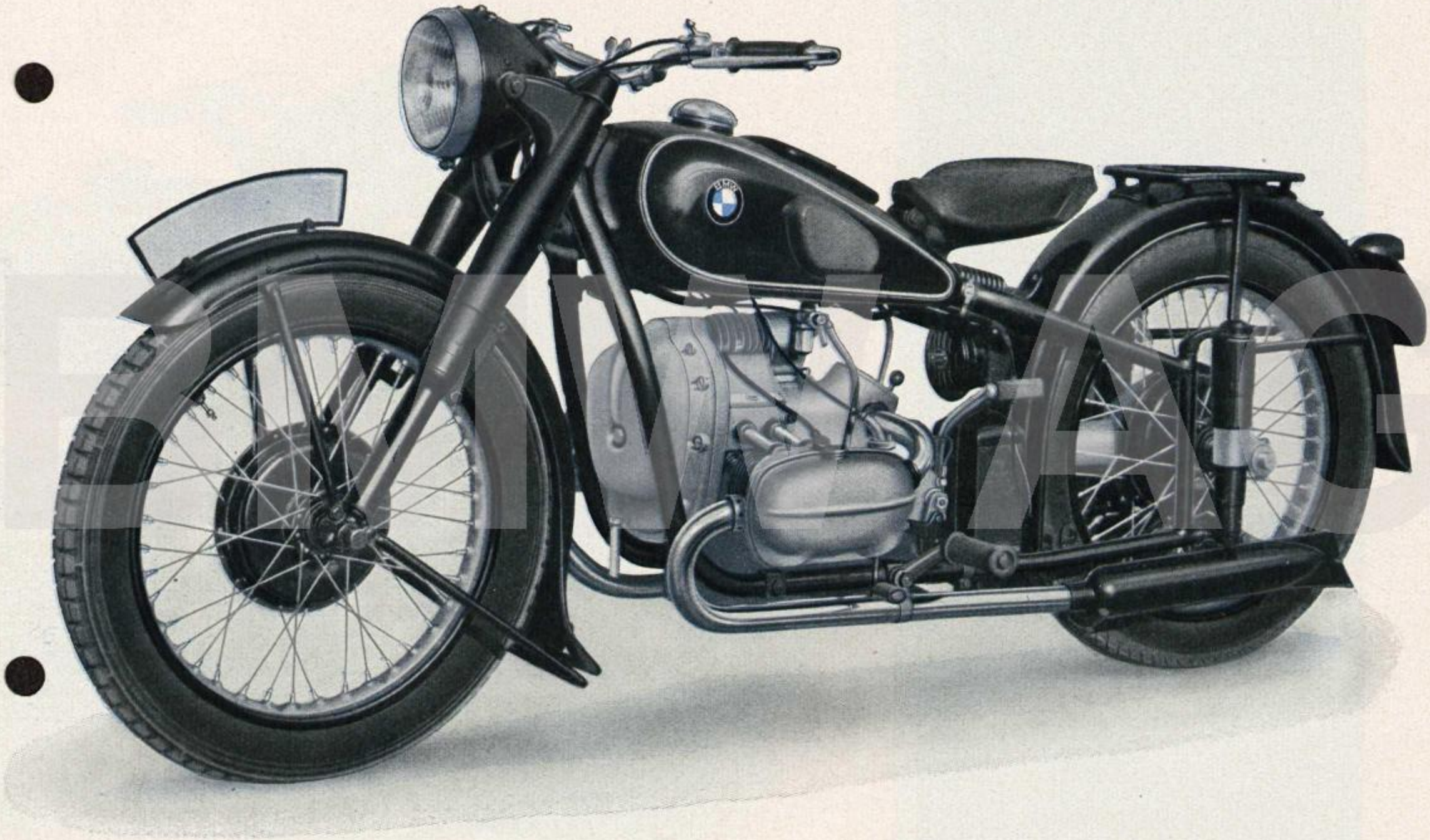
Racing and trials have shown the capabilities of this machine. Its development goes back to the International Six Days Trial of 1936. In 1937 the Dutch team relied on this machine for the Six Days Trial, and their choice was proved correct when they won the hotly-contested Silver Vase trophy. Anybody who must put up high averages over long journeys, who delights in riding for sport, and who demands all that modern technique has to offer, cannot, in the long run, be without the R 51.

Frame: Duplex cradle frame. Telescopic front- and rear-wheel springing. Adjustable rubber-top saddle. Graceful saddle-tank with quick-action filler-cap, knee grips, and enclosed tool-box. Quickly-detachable, interchangeable wheels with pull-out axles. Large internal-expanding brakes. Adjustable handlebars. Steering damper. Twist-grip throttle control. Handlebar ignition control. 6-Volt 75-Watt Bosch lighting equipment and horn. Speedometer built into headlamp. Thief-proof handlebar lock.

Engine: Horizontally-opposed twin-cylinder four-stroke engine developing 24 horse-power. Clean one piece crankcase. Dynamo enclosed yet accessible. Aluminium cylinder-head with good cooling properties. Complete enclosure of valve mechanism. Overhead valves with hairpin springs. Steel connecting-rod with roller-bearing big end. Ball-bearing crankshaft. Chain driven cams direct from crankshaft. Full protection for coil and distributor. Twin Amal carburetters with common air filter built-in with the gear-box housing. Dry, single-plate, clutch.

Transmission: Four-speed sliding-dog gear-box built in a unit with the engine. Built-in dust-tight positive-stop foot change lever with emergency hand lever. Combined hand and foot levers can be supplied at slight extra cost. Reliable, water-tight, shaft-drive to the rear-wheel with flexible universal joints and helical cut gears.

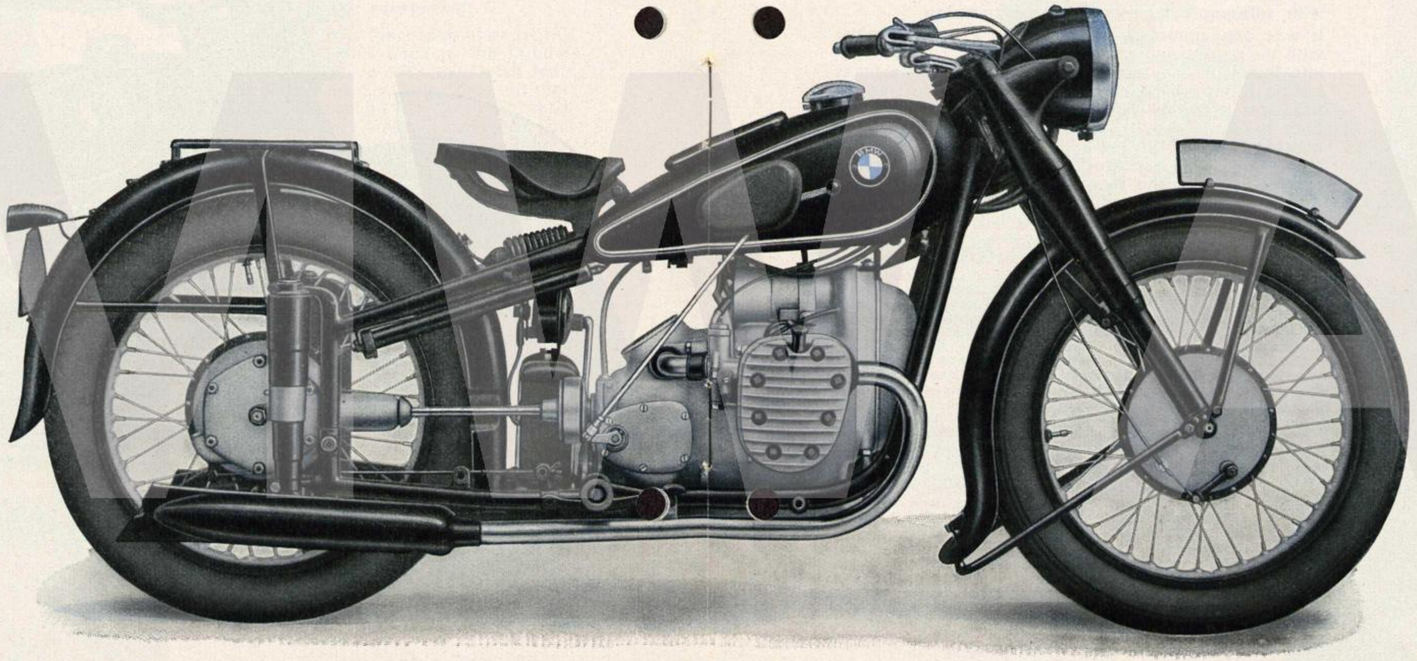
See also the page "BMW Technical Data".



R 71-750 c. c. sidecar touring model (22 Brake H. P.)

with telescopic front and rear suspension

The R 71 is a further development of the R 12 in a sound and logical manner. The latter model made a name for itself for good performance and for reliability. The present model follows the general lines of other twin-cylinder machines in the series, and still greater comfort comes with the new rear-wheel springing, the adjustable saddle, and four-speed gear-box. This machine, also, has a fine performance. It is the ideal type of machine for every sort of heavy duty from extensive touring to work in the roughest country, on account of its stability, reliability, and great reserve of power. Also, it is a machine to which a sidecar can be attached with confidence that it will handle the heaviest loads.

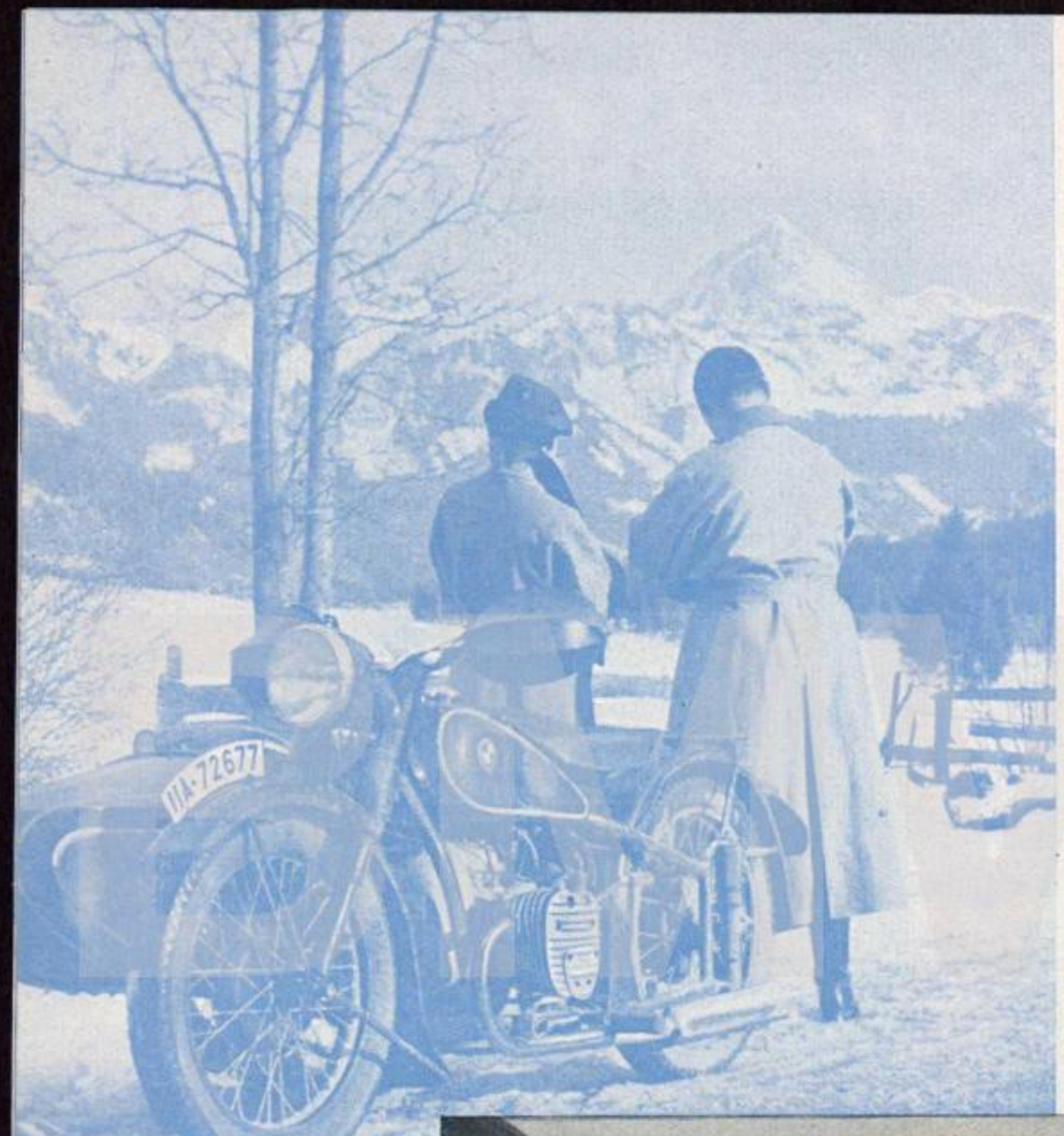


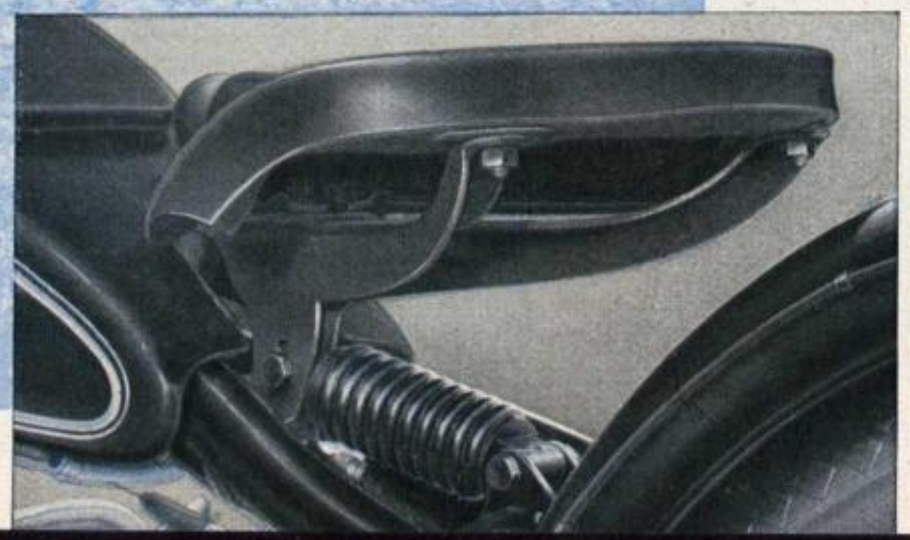
Frame: Duplex cradle frame. Telescopic front- and rear-wheel springing. Adjustable rubber-top saddle. Graceful saddle-tank with quick-action filler-cap, knee-grips, and enclosed tool-box. Quickly-detachable and interchangeable wheels with pull-out axles. Large internal-expanding brakes. Adjustable handlebars. Steering damper. Twist-grip throttle control. Handlebar ignition control. 6-Volt 75 Watt Bosch lighting equipment and horn. Speedometer built into head lamp. Thief-proof handlebar lock.

Engine: Horizontally-opposed twin-cylinder four-stroke developing 22 brake horse power. Clean one-piece crankcase. Dynamo enclosed but accessible. Cast-iron cylinder with heavy finning and detachable aluminium cylinder-head with good cooling properties. Side-by-side valves completely enclosed. Ball-bearing crankshaft. Steel connecting rod rith roller-bearing big-end. Gear driven cam wheel direct from crankshaft. Distributor and coil fully protected. Twin carburetters with common air-filter in gear-box-housing. Dry one-plate clutch.

Transmission: Four-speed sliding-dog gear-box built in a unit with the engine. Built-in dust-tight positive-stop foot change lever with emergency hand lever. Combined hand and foot levers can be supplied at slight extra cost. Reliable, water-tight, shaft-drive to the rear-wheel with flexible universal joints and helical cut gears.

See also the page "BMW Technical Data".





R 61-600 c. c. touring model (18 Brake H. P.)

with telescopic front and rear suspension

It was only natural that the model R 6, so popular with the tourist and sidecar driver, should be brought into line with the rest of the twin-cylinder machines by the fitting of the rear-wheel springing. Just as natural was it that all those features which had proved their worth in the R 6 should be embodied in this new model.

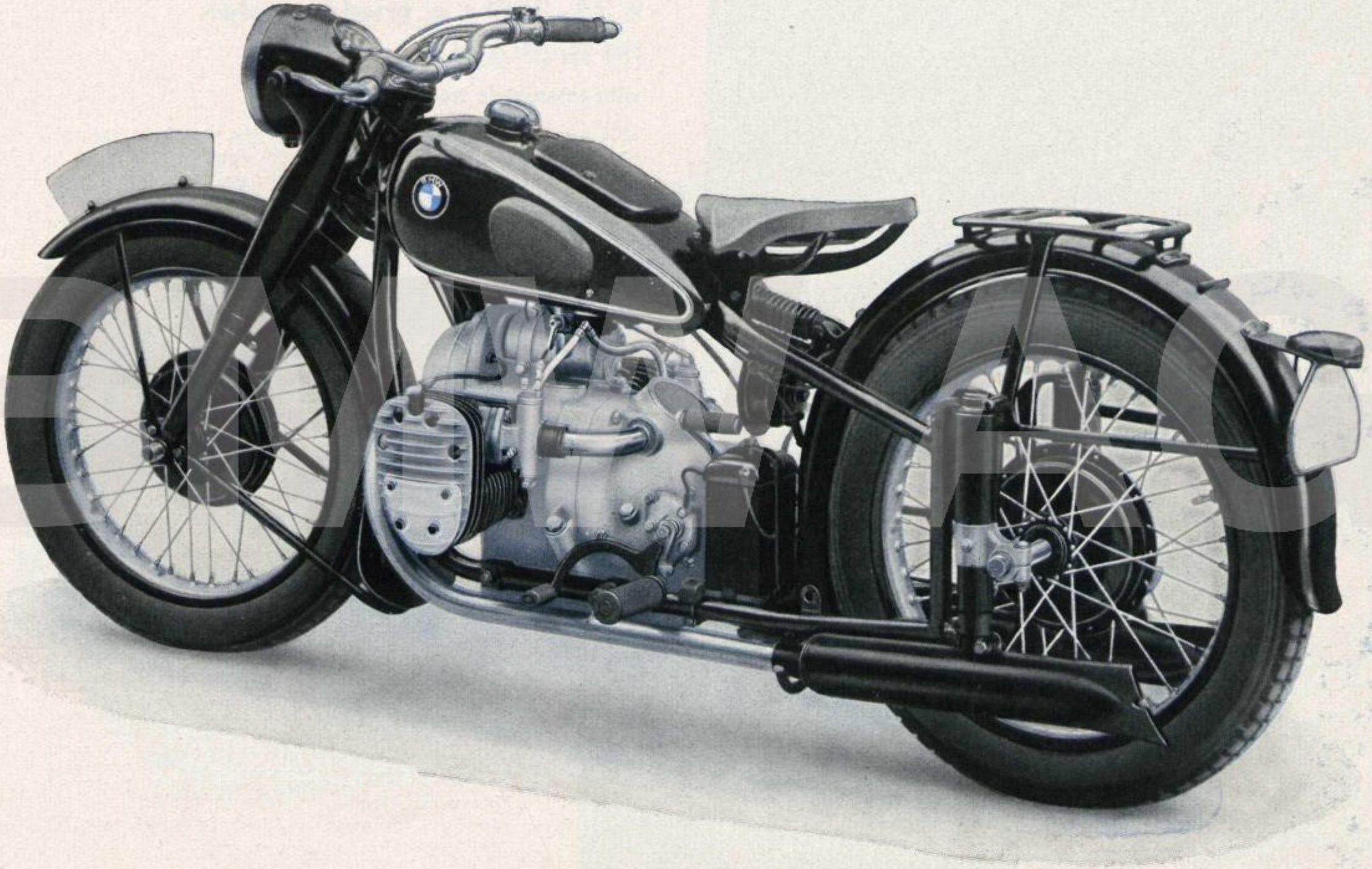
Thus the R 61 is a powerful, untiring machine, which can be used for the longest journeys, solo or sidecar, by the most inexpert of riders. It will perform every duty in a faultless manner, and with its luxurious springing and quiet running it makes the longest journey a pleasure.

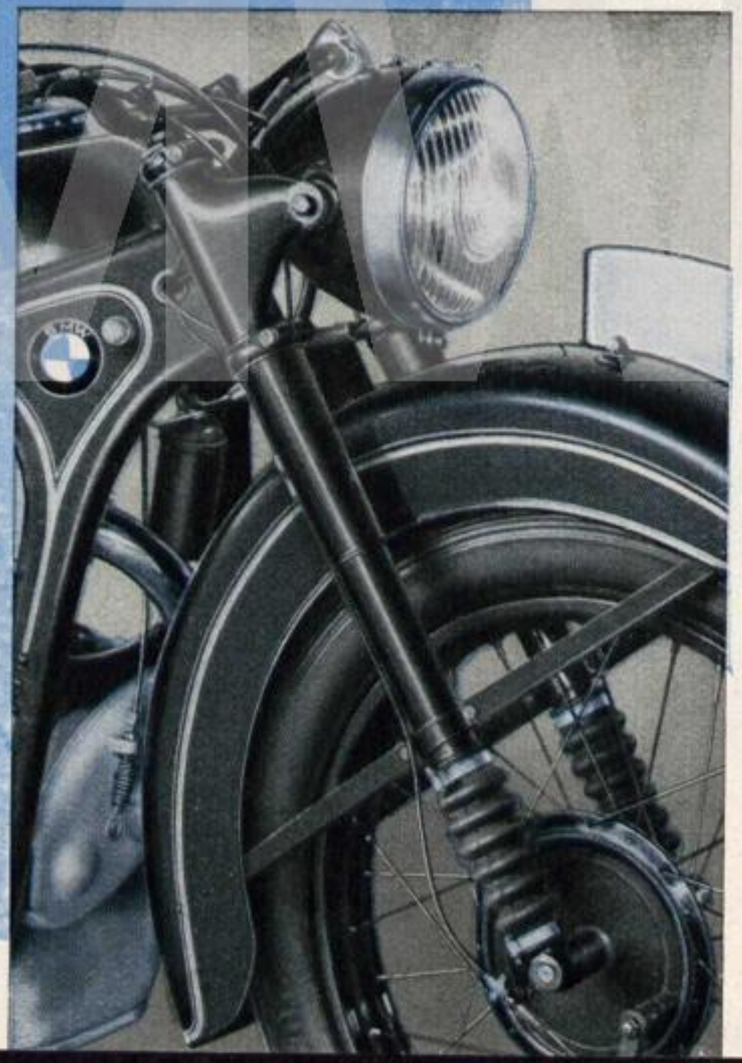
Frame: Duplex cradle frame. Telescopic front- and rear-wheel springing. Adjustable rubber-top saddle. Graceful saddle-tank with quick-action filler-cap, knee-grips, and enclosed tool box. Quickly-detachable and interchangeable wheels with pull-out axles. Large internal-expanding brakes. Adjustable handlebars. Steering damper. Twist-grip throttle control. Handlebar ignition control. 6-Volt 75 Watt Bosch lighting equipment and horn. Speedometer built into head lamp. Thief-proof handlebar lock.

Engine: Horizontally-opposed twin-cylinder four-stroke developing 18 brake horse power. Clean one piece crank-case. Dynamo enclosed but accessible. Cast-iron cylinder with heavy finning and detachable aluminium cylinder-head with good cooling properties. Side-by-side valves completely enclosed. Ball-bearing crankshaft. Steel connecting rod with roller-bearing big-end. Gear driven cam wheel direct from crankshaft. Distributor and coil fully protected. Twin carburetters with common air-filter in gear-box housing. Dry one plate clutch.

Transmission: Four-speed sliding-dog gear-box built in a unit with the engine. Built-in dust-tight positive-stop foot change lever with emergency hand lever. Combined hand and foot levers can be supplied at slight extra cost. Reliable, water-tight, shaft-drive to the rear-wheel with flexible universal joints and helical cut gears.

See also the page "BMW Technical Data".





R 35-350 c. c. trials model (14 Brake H. P.)

with telescopic front forks

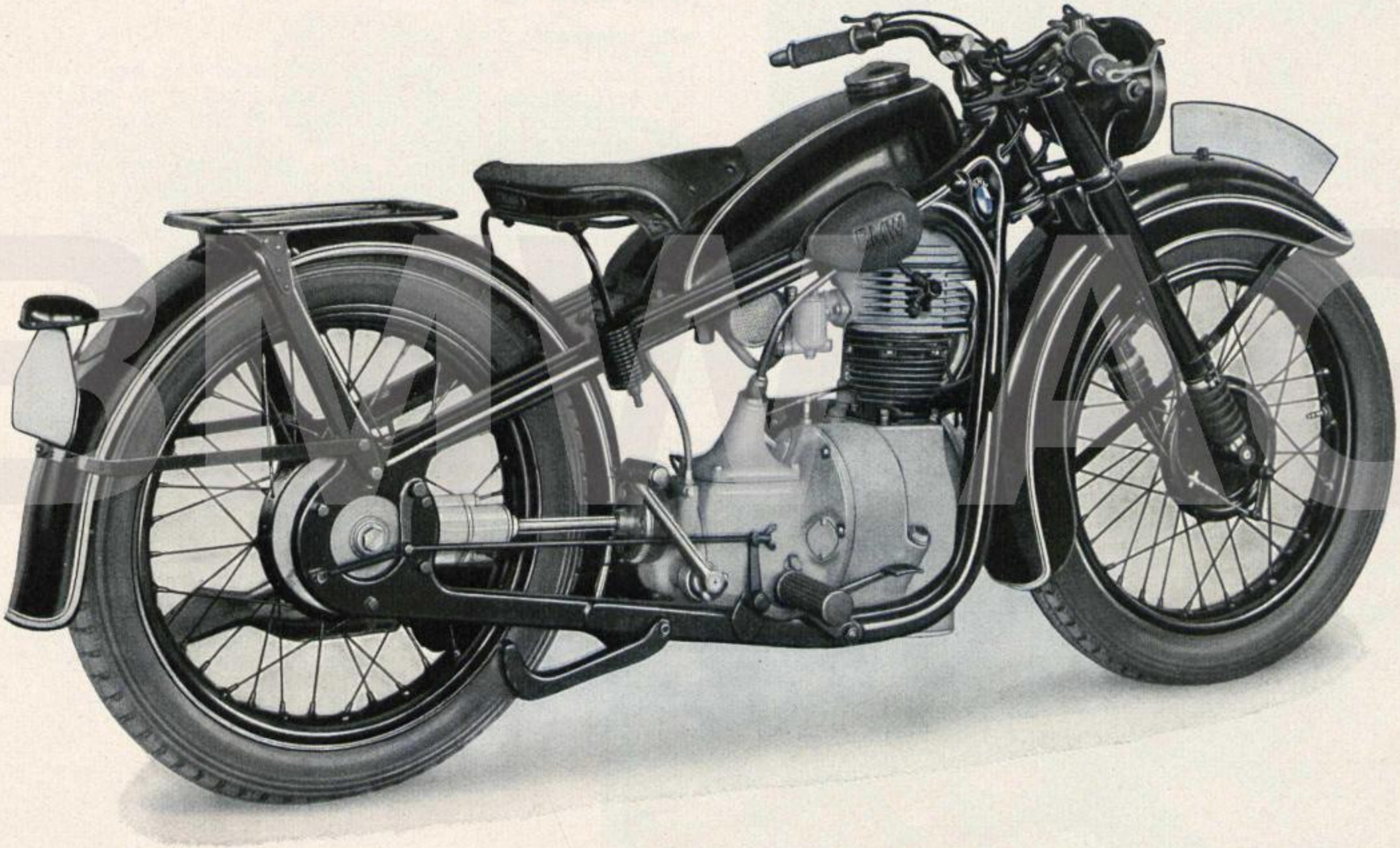
This model has more than proved its worth in reliability trials, in long journeys, and in very heavy duty in the service of various civil authorities. It is proved to be reliable, robust, and still exceptionally easy to handle. A machine built to withstand the rigours of service in the roughest kind of land it has a very favourable petrol consumption of 80/90 miles per gallon and is, therefore, also a utility machine for ordinary purposes.

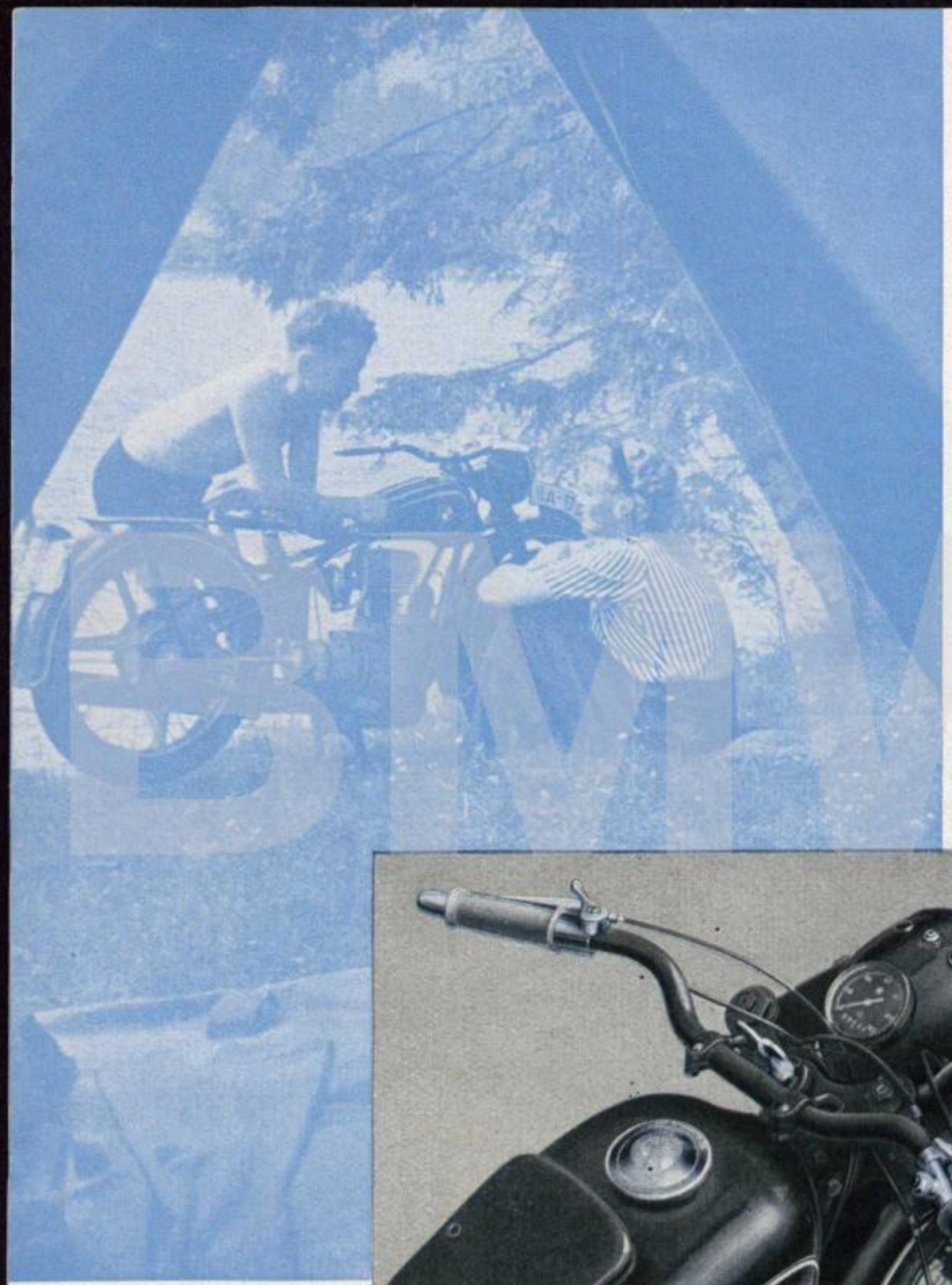
Frame: Torsion-free triangulated duplex pressed-steel frame. Smooth and efficient telescopic front forks rith fully protected working parts and requiring no special attention. Graceful saddle-tank with quick-action filler cap and knee-grips. Quickly detachable and interchangeable wheels with pull-out axles. Powerful internal expanding brakes. Comfortable, adjustable, handlebars. Steering damper. Twist-grip throttle control. Handlebar ignition control. 6-Volt 75 Watt Bosch lighting set and horn. Large speedometer fitted in headlamp.

Engine: Vertical single-cylinder four-stroke engine developing 14 brake horse-power. Overhead valves set in an aluminium cylinder head with good cooling properties. Completely enclosed valve mechanism. Ball bearing crankshaft. Steel connecting-rod with roller-bearing big-end. Triple-jet carburetter with air-filter. Reliable dry single-plate clutch.

Transmission: Robust four-speed sliding dog gear-box with tankside gate change. Tool-box and kick-starter built into gear-box housing. Powerful weather-proof shaft drive with flexible couplings. An indestructible transmission requiring the minimum of attention.

See also the page of "BMW Technical Data".





R 20-200 c. c. lightweight model (8 Brake H. P.)

with telescopic front forks

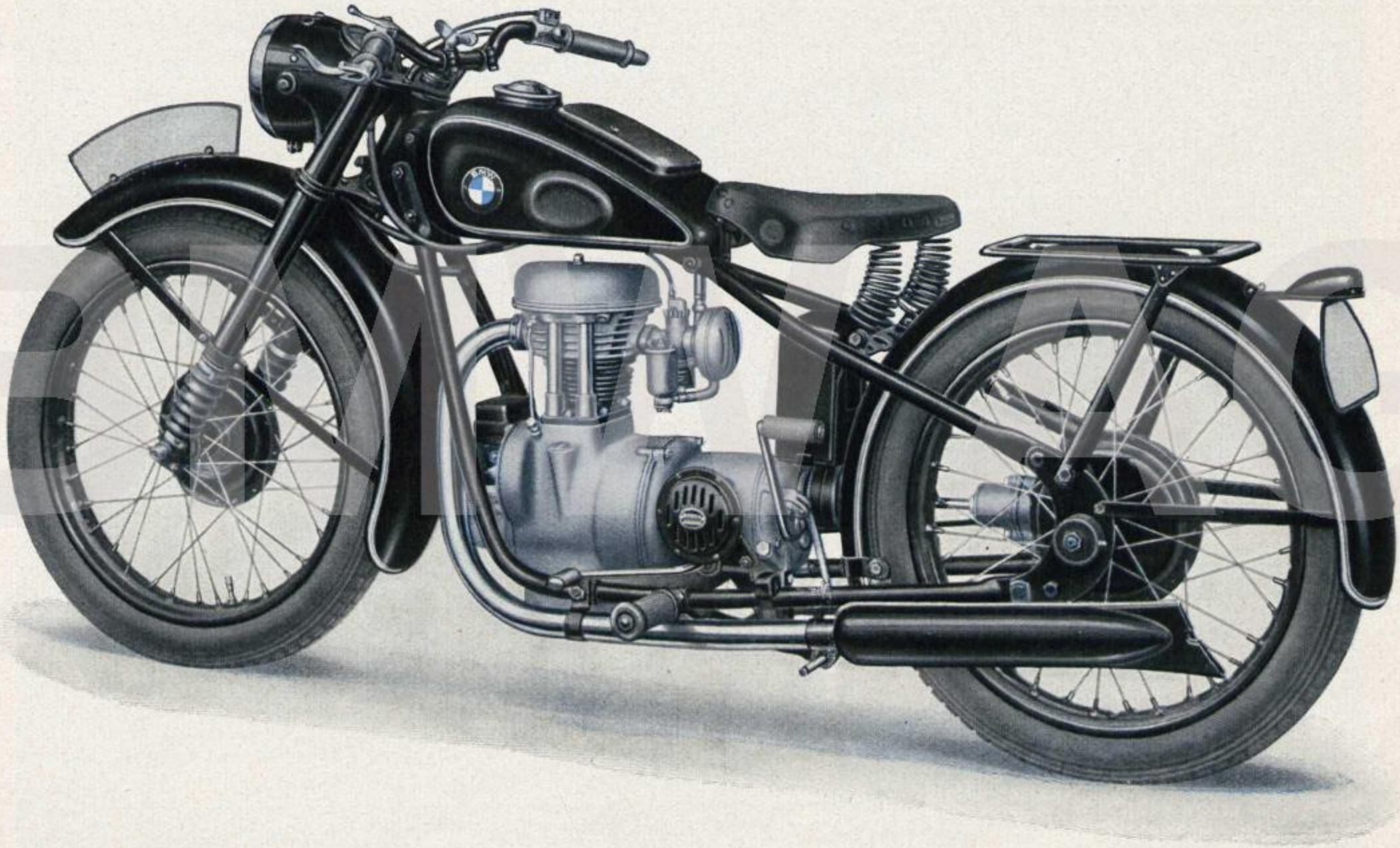
This handsome and handy BMW model has been a firm favourite for many years on account of its good performance and complete reliability. With its attractive lines and the telescopic front forks it is bound to make many more friends - especially as this, the smallest of the range, has all its "Big Brothers". It is always ready for pottering about town - as it is for longer journeys or for holiday tours. Its great virtues lie in the very easy handling and low fuel consumption. Small in size - but big in the usual BMW value!

Frame: Duplex-cradle frame. Telescopic front forks with smooth action and completely oil-tight, requiring no special attention. Saddle tank of graceful form embodying tool-box. Both wheels equipped with pull-out axles and large internal expanding brakes. Comfortable, adjustable handlebars. Steering-damper. Twist-grip throttle control. Handlebar ignition lever. 6-Volt 75-Watt Bosch lighting set and horn. Speedometer incorporated in headlamp.

Engine: Single-cylinder four-stroke engine developing 8 brake horse-power. Heavily-finned aluminium cylinder head. Overhead valves with complete enclosure of operating mechanism. Ball-bearing crankshaft. Steel connecting rod with roller-bearing big-end. Amal carburetter with air filter. Dry single-plate clutch.

Transmission: Robust three-speed sliding-dog gear-box built in a unit with the engine. Positive foot-change. Weather-proof, indestructible shaft drive completely protected from dirt. Shock-absorbing shaft couplings.

See also the page of "BMW Technical Data".



BMW Technical Data

	R 66/30 B.H.P.	R 51/24 B.H.P.	R 71/22 B.H.P.	R 61/18 B.H.P.	R 35/14 B.H.P.	R 20/8 B.H.P.
Revs. per min.	5400	5400	4600	4600	5200	5000
Cubic capacity	597 c.c.	494 c.c.	745 c.c.	600 c.c.	340 c.c.	190 c.c.
Bore and Stroke	69.8 x 78 mm	68 x 68 mm	78 x 78 mm	70 x 78 mm	72 x 84 mm	60 x 68 mm
Compression ratio	6,8 : 1	6,7 : 1	5,7 : 1	6:1	6:1	6:1
Lighting set	6-V/75 Watt	6-V/75 Watt	6-V/75 Watt	6-V/75 Watt	6-V/75 Watt	6-V/75 Watt
Carburetter	2 Amal	2 Amal	2 Graetzin	2 Amal	1 Sum	1 Amal
Gear-box ratios:						
bottom	3,6 : 1	3,6 : 1	3,6 : 1	3,6 : 1	3,6 : 1	4,55 : 1
second	2,28 : 1	2,28 : 1	2,28 : 1	2,28 : 1	2,18 : 1	2,58 : 1
third	1,7 : 1	1,7 : 1	1,7 : 1	1,7 : 1	1,35 : 1	1,64 : 1
top	1,3 : 1	1,3 : 1	1,3 : 1	1,3 : 1	1 : 1	
Axle ratio:						
solo	3,6 : 1	3,89 : 1	3,6 : 1	3,89 : 1	5,63 : 1	4,18 : 1
sidecar	4,38 : 1	4,62 : 1	3,89 : 1	4,62 : 1		
Tank capacity	3 Galls.	3 Galls.	3 Galls.	3 Galls.	2½ Galls.	2¼ Galls.
Consumption:						
Petrol: solo	63 m.p.g.	72 m.p.g.	63 m.p.g.	72-84 m.p.g.	84-94 m.p.g.	114 m.p.g.
sidecar	48 m.p.g.	57 m.p.g.	46 m.p.g.	57 m.p.g.		
Oil	2800 m.p.g.	2800 m.p.g.	2800 m.p.g.	2800 m.p.g.	2800 m.p.g.	2800 m.p.g.
Tyre Sizes	19 x 3.5"	19 x 3.5"	19 x 3.5"	19 x 3.5"	19 x 3.5"	19 x 3"
Overall width	32"	32"	32"	32"	32"	31 ½"
Overall length	83 ¾"	83 ¾"	83 ¾"	83 ¾"	78 ½"	78 ½"
Saddle height	28 ¼"	28 ¼"	28 ¼"	28 ¼"	28"	27 ¾"
Ground clearance	5 ¼" under exhaust pipe	5" under exhaust pipe	5 ¼" under exhaust pipe	5 ¼" under exhaust pipe	5 ⅛" under crankcase	4 ¼" under crankcase
Weight (with full tanks and equipment)	411 ½ lbs.	400 ½ lbs.	411 ½ lbs.	405 lbs.	341 lbs.	286 lbs.

Data without prejudice an subject to alteration.

Features of design

which have proved

their worth by the

most drastic tests

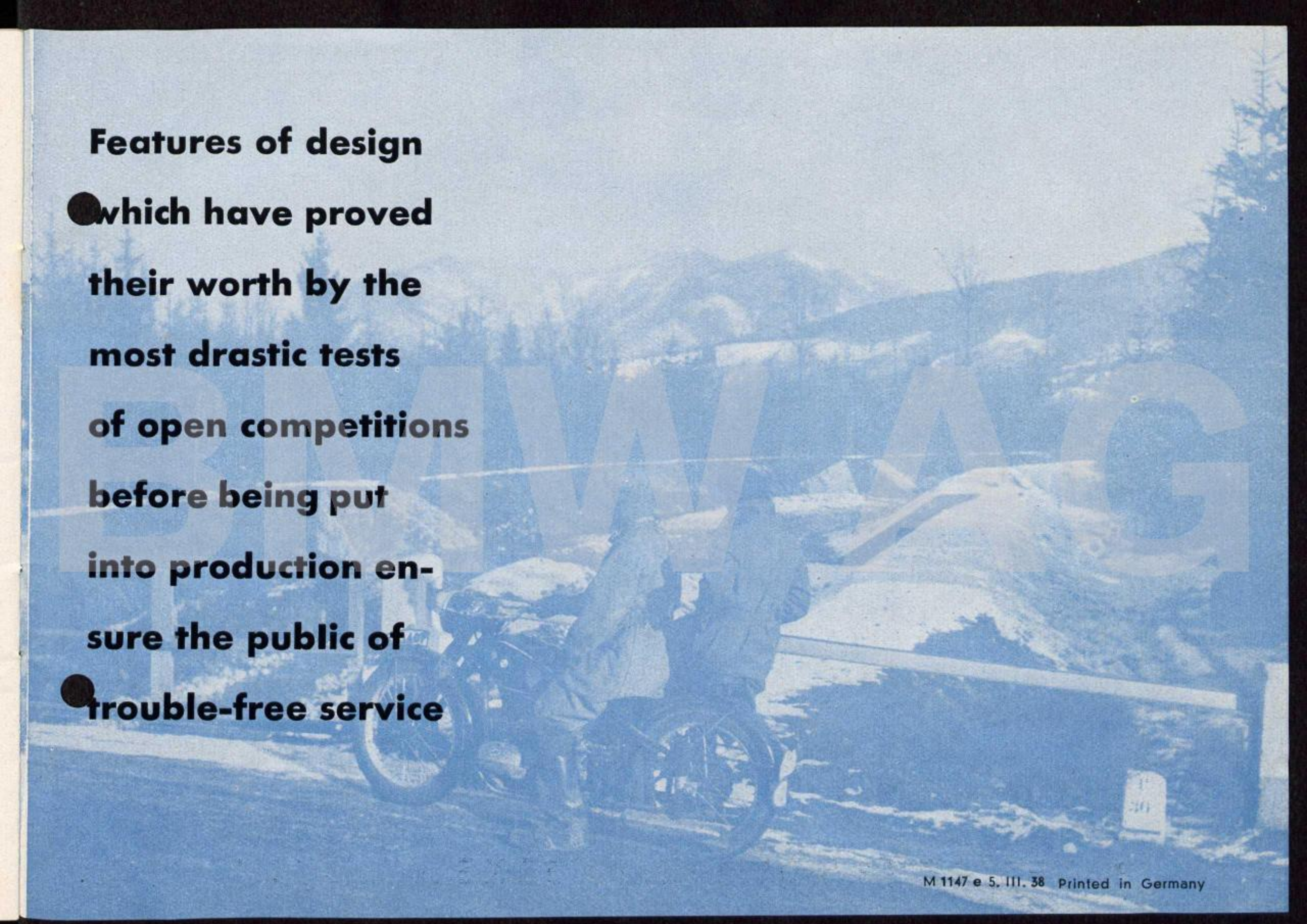
of open competitions

before being put

into production en-

sure the public of

trouble-free service



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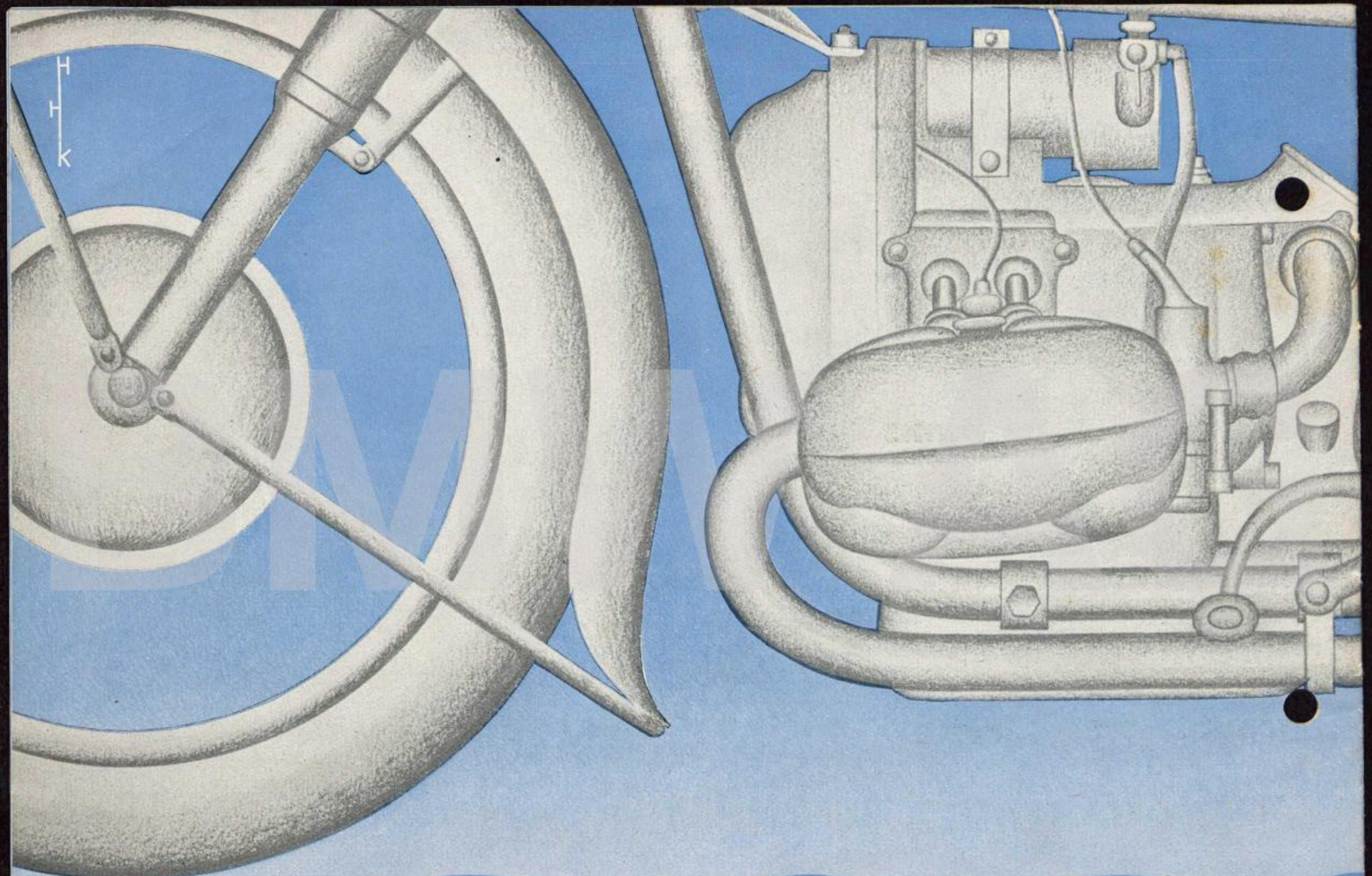

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