

ADLER

MOTORCYCLES



M 150
M 200
M 250

ADLERWERKE VORM. HEINRICH KLEYER AKTIENGESELLSCHAFT · FRANKFURT AM MAIN

ADLER MOTOR CYCLES ARE EXAMPLES OF GERMAN CRAFTSMANSHIP

- 1880 Establishment of Messrs. HEINRICH KLEYER, Machinery and Velocipede Dealers.
- 1895 Name changed to Adler Works, previously HEINRICH KLEYER LTD.
- 1898 Production of the 100,000th ADLER bicycle. Typewriter production commences.
- 1899 Motor Car production commences.
- 1902 Motor Cycle production commences (discontinued later when the works concentrated on Motor Cars).
- 1949 Resumption of Motor Cycle production.



▶ NEW ADLER DEVELOPMENTS ▶

T E C H N I C A L D A T A

of the ADLER MOTOR CYCLES

	MB 150	MB 200	MB 250
Engine output, continuous rating	8.4 h. p.	11.4 h. p.	16.0 h. p.
Maximum speed, m. p. h. (sitting normally)	59	62.5	40 7 73
Normal Fuel consumption, m. p. g. at a constant speed of m. p. h.	120 (100)	98 (82)	79 (66)
Fuel consumption, m. p. g. at a constant speed of m. p. h.	40	42	48.5
Engine: air-cooled ADLER two-stroke engine with flat-crowned piston and light-alloy cylinder head	148 (123)	118 (98)	105 (88)
No. of cylinders	31	32.5	37.5
Capacity, cc	1	2	2
Bore, mm	147	195	247
Stroke, mm	59	48	54
Compression ratio	54	54	54
	5.4:1	5.75:1	5.75:1

Lubrication: Engine lubricated by petrol mixture in ratio 25:1.

Gearbox: ADLER four-speed gearbox in the engine block, can be dismantled without removing the engine from the frame.

Gear change: Easily operated ratchet foot change.

Rear chain: Roller chain — fully enclosed.

Frame: Double tubular brazed frame with great lateral rigidity. Connections for pillion (buddy seat) foot rests. Fittings for side-car.

Rear springing: Progressive telescopic springing; central hydraulic shock absorber, adjustable to suit varying loads and road conditions, without the use of tools.

Front forks: Swinging link forks with built in hydraulic shock absorbers. Fully enclosed. Steering damper. Braking moment taken by parallelogram linkage.

Wheels: Fully floating axles front and rear.

Fuel tank: Rubber mounted, with rubber knee grips. Capacity approx. 3.3 galls. (4 galls.), of which 1 gallon (1.2 galls.) is reserve capacity.

Electrical Equipment: Flywheel magneto with rectifier in head lamp, 6 V, 25/30 Watt, with full beam, dipped beam, and parking light. MB 150 only.

Voltage-controlled 6 V, 60/90 Watt lighting, battery, and ignition set, with full beam, dipped beam, and parking light. MB 200 and MB 250 only.

All models are equipped with a 6 V, 6 amp.-hr. rubber-mounted battery.

Tools made of chrome-vanadium steel in tool bag.

Equipment: Deep-drawn mudguards, rear mudguard hinged. Centre stand. Adjustable foot rests. Adjustable handlebars. Thief-proof lock in steering head. Speedometer and mileage counter built-in to head lamp and illuminated.

Dimensions:	MB 150	MB 200	MB 250
Height, unloaded, in.	36.8	36.8	36.8
Width, in.	25.6	25.6	25.6
Length, in.	77.5	77.5	77.5
Wheelbase, in.	49.5	49.5	49.5
Tyres	3.25x16	3.25x16	3.25x16
Weight, ready for use, approx. lb.	286	320	320



M 150



M 200



M 250

Advanced designs, such as our ADLER motor cycles, which are ahead of their time, require no major changes in order to stay out in front. We could, therefore, restrict ourselves to making minor refinements and changes, which have introduced some new shapes, and have resulted in considerable improvements in the performance of these machines.

The visible results of the constant development and improvement to which our products are subjected include the new ADLER front wheel mounting and springing, a new steering head assembly, a new head-lamp mounting, and a new shape for the petrol tank. Less obvious modifications include a slight increase in the wheelbase, an improved steering linkage, a scientific re-distribution of the weight, and a number of improvements in the transmission. It is the constant introduction of improvements of this nature, combined with first-class craftsmanship and a superb finish, which characterises a first-class motor cycle of this type.

Our aim has been the production of motor cycles which combine excellent road-holding qualities with a very high performance without any sacrifices in economy of running. The first-class **road-holding qualities** of ADLER motor cycles are due to their excellent tracking, the low centre of gravity, and a proper distribution of weight between the two axles. These machines are handy, have a carefully chosen steering linkage and a carefully matched springing system, which

ensure good manoeuvrability and a high reserve of stability. The result is a machine with excellent cornering ability, which retains its high road-holding qualities even on bad and slippery road surfaces.

The new ADLER swinging link forks completely satisfy every demand made on modern front wheel mountings and springing:

Low weight of the projecting parts; the weights lie in the plane of the axle. The head-lamp is attached directly to the steering head.

The weight of the unsprung masses is reduced to a minimum; these are the front wheel, the swinging links, and parts of the hydraulic shock absorber.

Precise positioning of the front wheel, even when a side-car is fitted, achieved by the use of torsionally rigid swinging links and forks. The variation in the wheelbase is kept to a minimum owing to the practically vertical motion of the front axle.

The low friction in the mountings and guides results in the springing coming into effect even for very small irregularities in the road surface.

The progressive spring characteristic is carefully designed to absorb any shocks likely to occur in practice.

Aperiodic hydraulic shock absorber — no pitching, no wheel oscillation — springs and dampers are built-in to the forks.

The braking moment is taken by a parallelogram linkage.

The forks do not deflect under the action of the brakes, the full spring force is maintained and hence the adhesion of the front wheel is not diminished.

The use of an enclosed central spring for the saddle is also new. There is no stop preventing the upward movement of the saddle. A new saddle support improves the lateral rigidity of the saddle still further.

The new larger fuel tank — with a capacity of about 3.3 galls. (4 galls.) — improves the appearance of the machine and gives it lines representative of its power and speed. The riding position and the grip of the knees are exemplary, even for the rider of more than average height.

The design and production of the power units with their high **output** are based on the experience we have gained in half a century of motor vehicle manufacture. The successes constantly being achieved in national and international reliability trials, together with suggestions originating from the multitude of ADLER owners, are continually adding to our knowledge, and encourage our design and development staff to make even further improvements. As a result there have been introduced:

Big end bearings with a larger carrying capacity. A new cooling rib arrangement on the cylinders.

Improvements to the piston and the engine ports, an effective method of reducing the induction noise, which at the same time filters the air twice by passing it first through a settling chamber in the casing and then through a wet air filter.

New silencer design which contributes to the general quietness of the machine, increased output of the BOSCH dynamo. 90 watts is now available for lighting instead of 65 watts.

The successes achieved with ADLER motor cycles have confirmed the correctness of our basic design.

Small cylinder volumes, achieved by adopting the twin cylinder type of engine, result in a high h. p.; capacity ratio combined with low piston speeds, long life, and reliability.

Economy in running can be achieved only with a first-class design, the use of the best materials, proper workmanship, and by obtaining the utmost power from the petrol (gasoline) consumed. The changes made in the engine port design that were mentioned above, together with carburettor modifications, have resulted in a lower fuel consumption, and hence improved economy.

Economy and high power, a lively performance and large reserve of power, combined with excellent road-holding qualities have made the ADLER motor cycle one of the leaders in the international motor cycle industry.

The **FRONT SPRINGING** - swinging link forks with hydraulic shock absorbers - both effective and attractive. Refer to the description earlier in this booklet.

The **FRAME** — a rigid double tubular frame — safe even under the heaviest loads.

The **FRONT SPRINGING** — swinging link forks with hydraulic shock absorbers — both effective and attractive. Refer to the description earlier in this booklet.

The **REAR SPRINGING** — telescopic springs with a progressive characteristic, hydraulically damped, and adjustable by hand. This springing is carefully matched to the front springing, and ensures first-class road-holding qualities.

The **SADDLE** with its enclosed central spring complements the excellent springing of the frame.

The **BRAKES** — generously dimensioned light alloy hub brakes — are adequate for the severest conditions.

The **FUEL TANK** — carefully matched to the machine, now has a capacity of approx. 3.3 galls. (U. S. = 4 galls.), so that the range of the machine is increased. Its narrow shape and large knee-grips ensure a comfortable riding position and full control over the machine.

The **ENGINE BLOCK**, which is made of light alloy, encloses the whole of the transmission. The dynamo and carburetter are completely enclosed and protected from damp and dirt.

The **GEARBOX** — four-speed, easily operated foot-change with a positive neutral position, clutch running in an oil-bath — makes it possible to use the engine power to the best advantage with the utmost ease.

The **IGNITION and LIGHTING EQUIPMENT** matches the high standard of the machine as a whole.

The **FINISH** will satisfy the most exacting demands. The driving chain is fully enclosed; the battery is mounted in a separate compartment to protect it from damp and dirt. First-class cellulosing and heavy chromium-plating ensure that the machine will retain its attractive appearance. The tools are adequate for undertaking all running repairs, and are of the best quality.

The **ADLER MB 150** is a very lively but none the less simple and reliable machine, the performance and finish of which is well above average for its class. The MB 150 will be found eminently suitable both for going to work and for touring. The 8.4 h. p. developed by this engine and the robust construction of the frame enable the sporting enthusiast to take part in the keenest competitions.



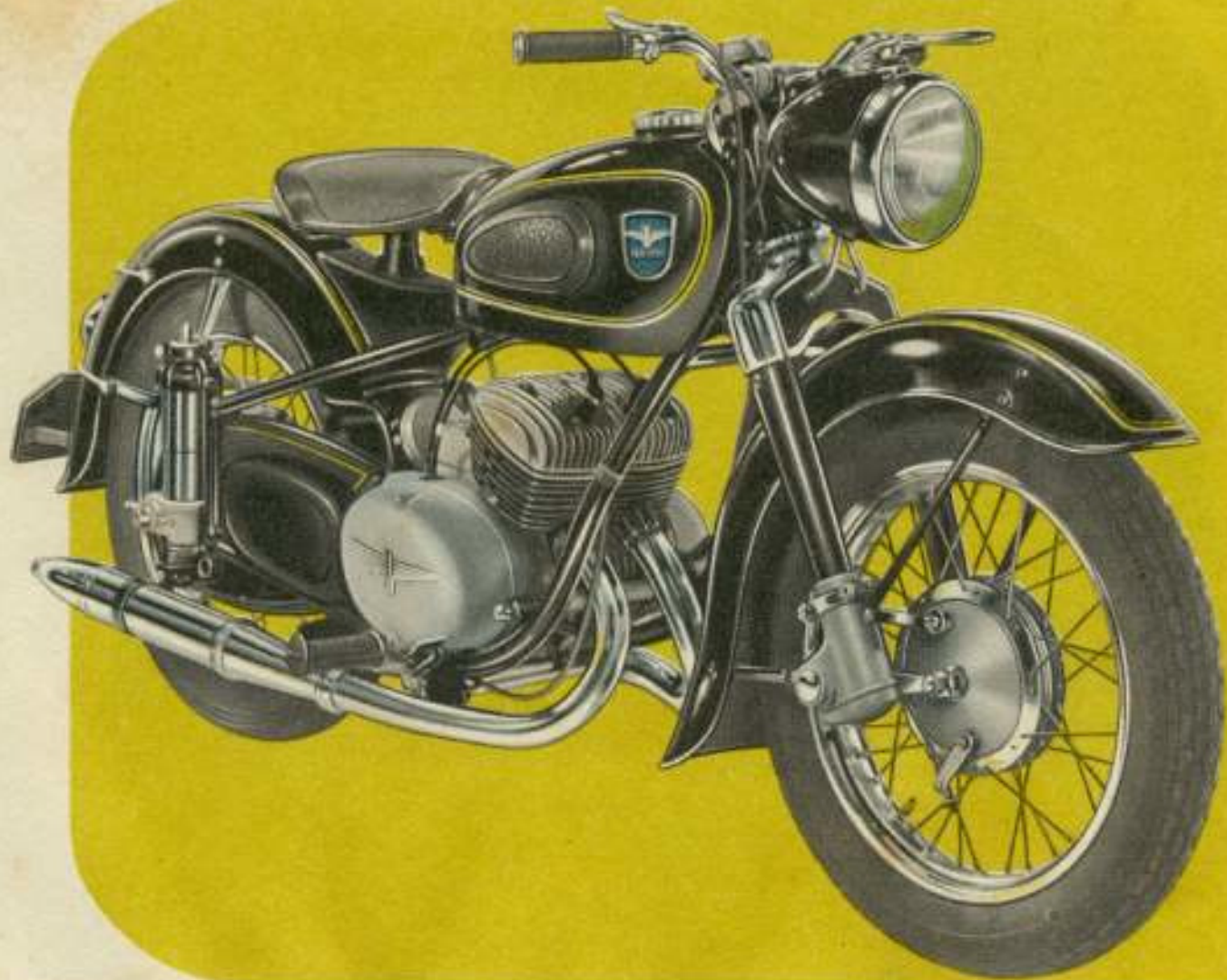
M 150



M 150



M 200



The ADLER MB 200 Twin

is a thoroughbred machine for the discriminating owner. Despite its lively performance — 11.4 h. p. — it is easy to maintain and keep in tune, economical to run, and an ideal touring machine even for heavy loads and bad roads. This machine attained a high international reputation within a very short time of its introduction on the market.

Even when the MB 200 is fitted with a sidecar, average speeds can be attained which used to be possible only with a far heavier machine.

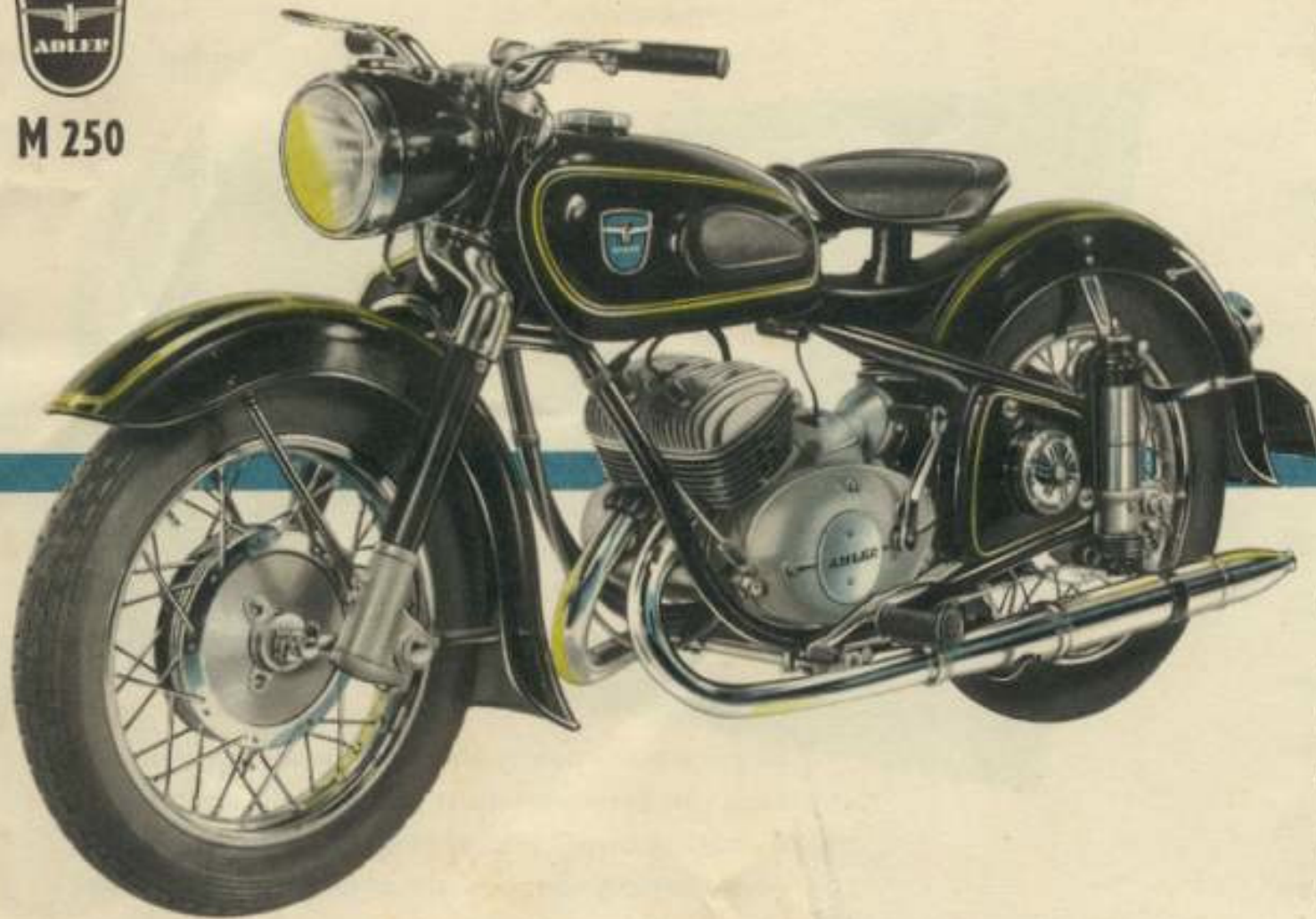


M 200

This is mainly due to the phenomenal acceleration of the twin two-stroke engine; despite its high power, this engine is quite happy when running continuously at full throttle.

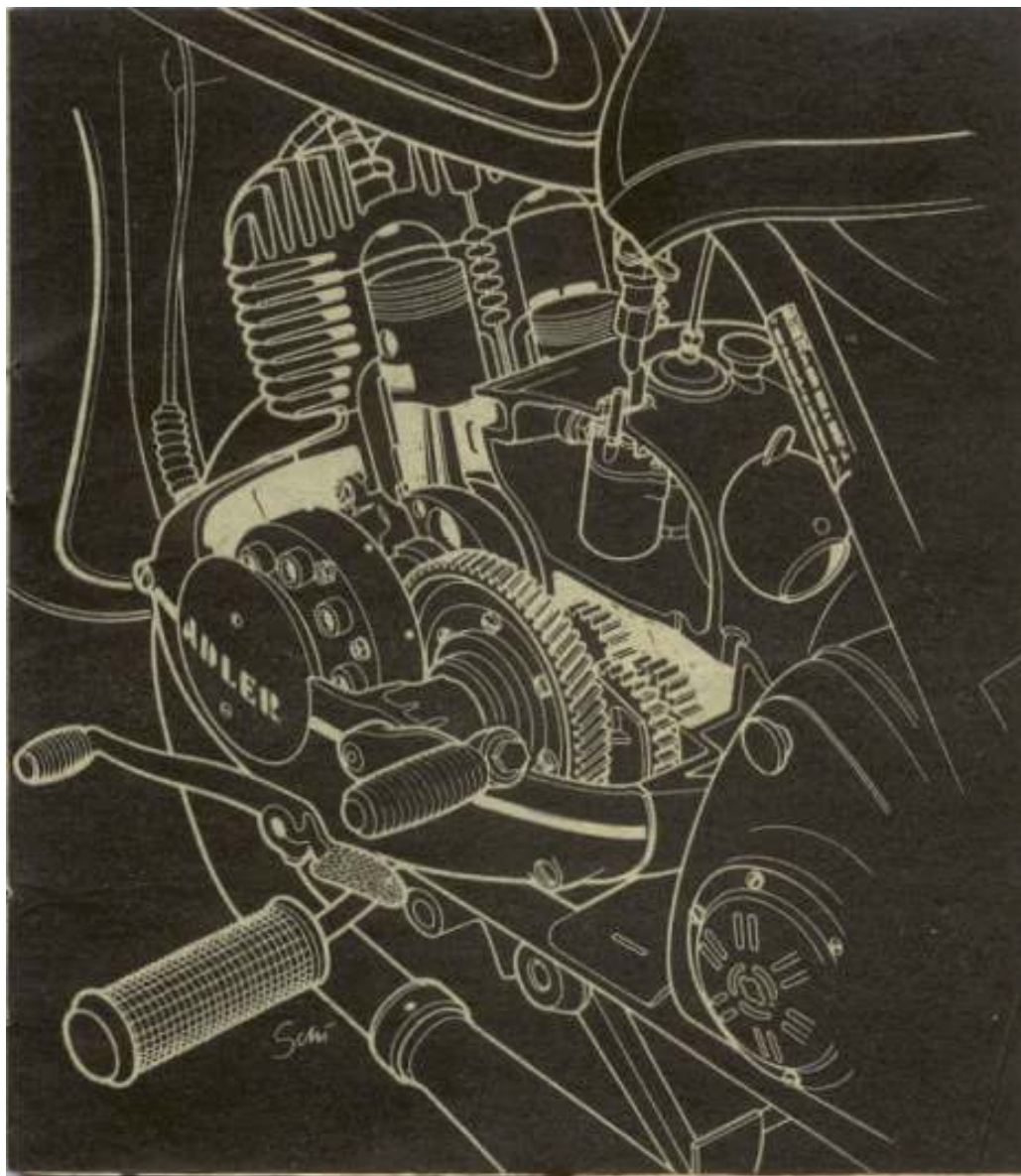


M 250



The high output of the 250 cc engine has made this machine superior to all others in meeting the requirements of those motor cyclists who insist on everything which the most modern machines

have to offer: Power and reliability, first-class brakes and a long life, comfort and unsurpassed road-holding properties, and, not least, an attractive appearance.

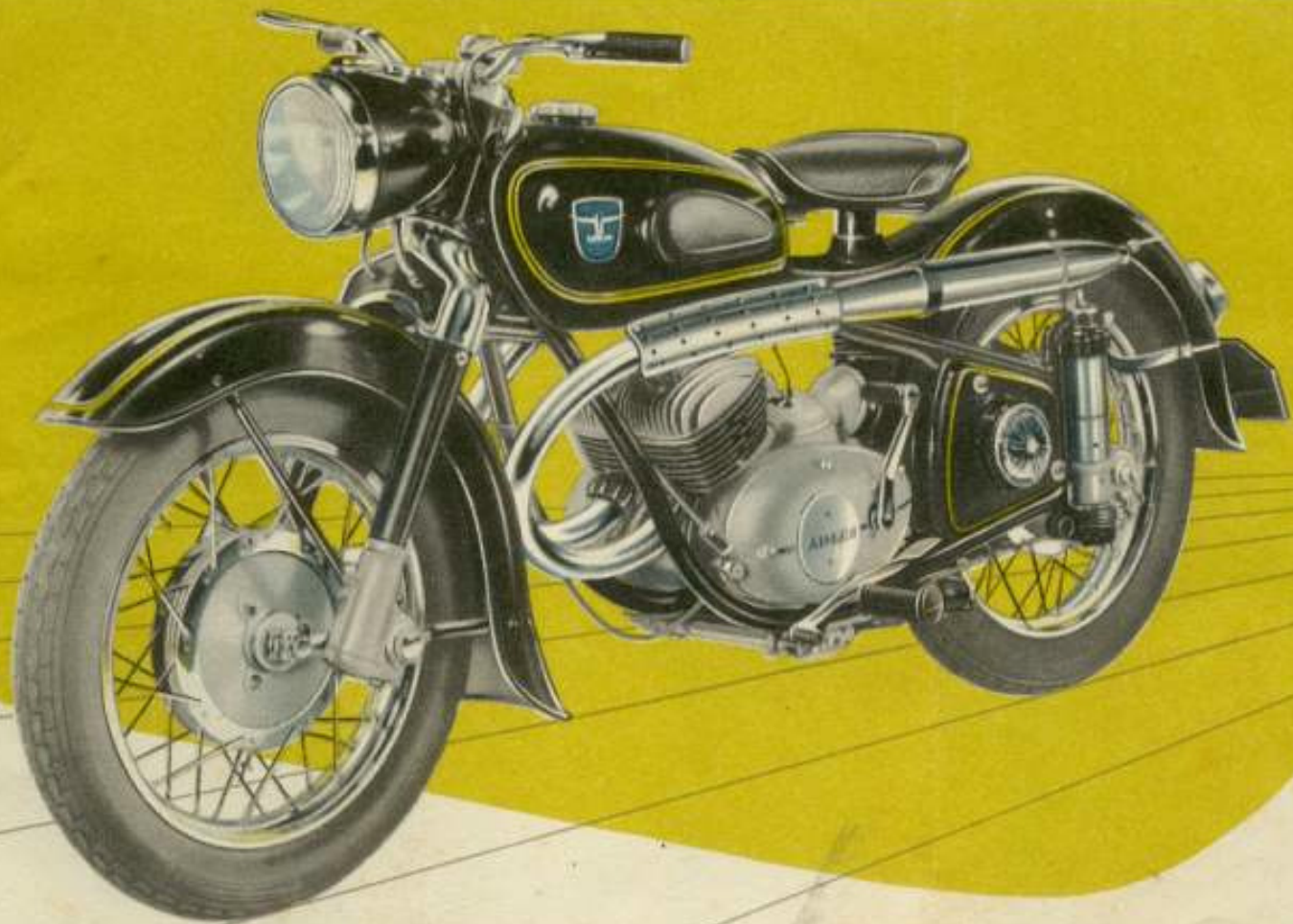


THE ADLER MB 250 TWIN TWO-STROKE ENGINE.


16 h. p. at 5600 r. p. m. represents a very high output for an engine in the 250 cc class. This engine, however, is not a super-tuned racing unit, sensitive to every minor change in its working conditions, or with a high rate of wear. The latter point is illustrated by the low average piston speed, which is synonymous with a long life. In this respect the ADLER twin is far in advance of other sporting engines of the same capacity. There are two power strokes per revolution — just like a four-cylinder four-stroke engine — so that the engine delivers an even torque, while the abnormally smooth running is due to the one-piece crankcase, which ensures that the bearings are properly lined-up, and also to the precision finish of the crankshaft and connecting rods. The special scavenging system developed for these ADLER engines makes them very flexible in operation, so that their high performance can be utilised to the full over a wide speed range. This is the secret behind the magnificent acceleration of these machines.



M 250



M 250 S

Final stages of the 28th International Six Days Race in Czecho-slovakia. An ADLER MB 250 on a hair-pin bend. 



The sporting successes achieved by the ADLER MB 250 S have been unexcelled. ADLER motor cycles have proved themselves in many difficult reliability, cross-country, and long distance trials both at home and abroad against heavy international competition.

26th INTERNATIONAL SIX DAYS TRIAL 1955 in Czecho-slovakia. 5 ADLER machines started — 5 ADLER machines finished without loss of points — 5 FIM Gold medals.

27th INTERNATIONAL SIX DAYS TRIAL 1957 in Austria. — 4 ADLER machines started — 4 ADLER machines finished — 3 Gold and 1 Bronze medals.

ADAC THREE DAYS TRIAL 1955 — 1 Gold medal and 2nd prize for Works Teams.

INTERNATIONAL MOTOR CYCLE TROPHY OF MONACO 1953 2 Gold medal diplomas, winners of class up to 250 cc, and Ladies Cup.

LUTTICH—MONACO—LUTTICH 1953 — 4 ADLER machines started — 4 Gold medals and Team Prize.

FLYING KILOMETER AT WATERLOO, 1953 — won by a production ADLER MB 250 at 122.199 km/hr (approx. 76 m.p.h.)

WARSAGE 24 HOUR RACE 1953 — Winner, 2nd, 3rd, and 4th places in the class up to 250 cc — 2nd, 4th, 5th and 6th places in general classification.

WARSAGE 24 HOUR RACE 1952 — Winner in the class up to 250 cc — Second in the general classification to a 500 cc special machine and faster than the winner in the 350 cc class. In this year's National and International sporting events more than 50 % of the ADLER riders starting won a Gold medal, 25 % a Silver medal, and 13 % Bronze or Souvenir awards.

ADLER

SERVICING FACILITIES

which have gained a high reputation in the 50 years since they were first introduced, are ranged behind every ADLER machine.

ADLER Service stands for good, quick service; assistance; advice; and, above all, an excellent spares supply service.

ADLER Service
results in
Minimum Depreciation
and
Maximum Reliability.

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