

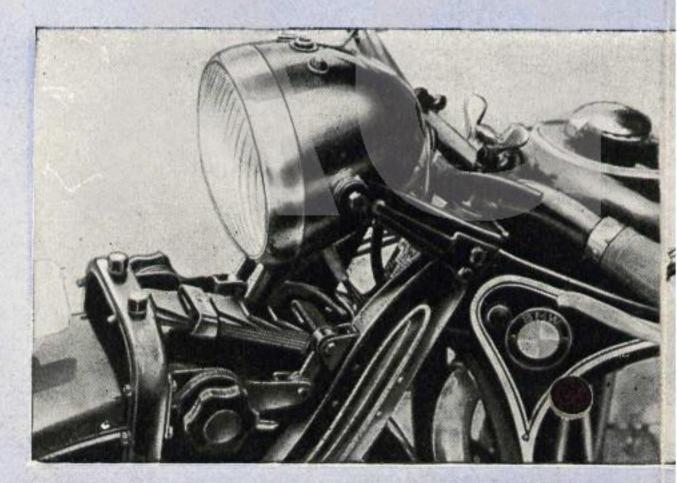
## BMW MOTOR-CYCLES

Perfect heat dissipation is essential for satisfactory performance, as well as for low oil and petrol consumption.

For this reason BMW have employed for more than 12 years amply dimensioned light alloy aluminium cylinder heads only.

It is well-known that if moving parts covered by oil come into contact with dust and dirt this results in a grinding effect, which is bound to prematurely destroy even the best material. Realising this, BMW have for years carefully enclosed all moving parts against dust and dirt, espe-

The smallest detail reflects the excellence of BMW design.



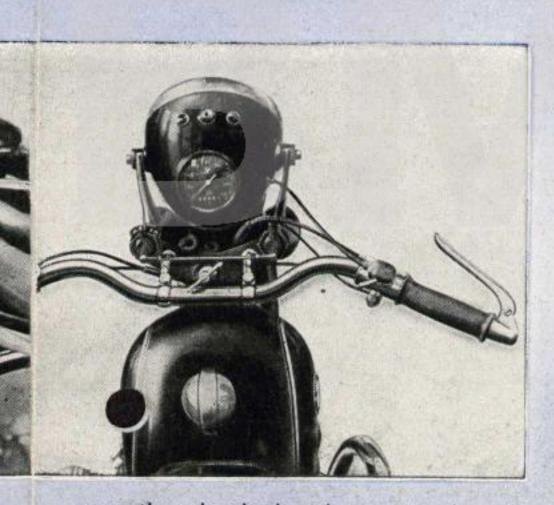
In the same way good appearance and technical perfection were aimed at in the development of the components - engine, gearbox and rear drive. The comprehensive, almost lavish, equipment is at the same time essentially practical.

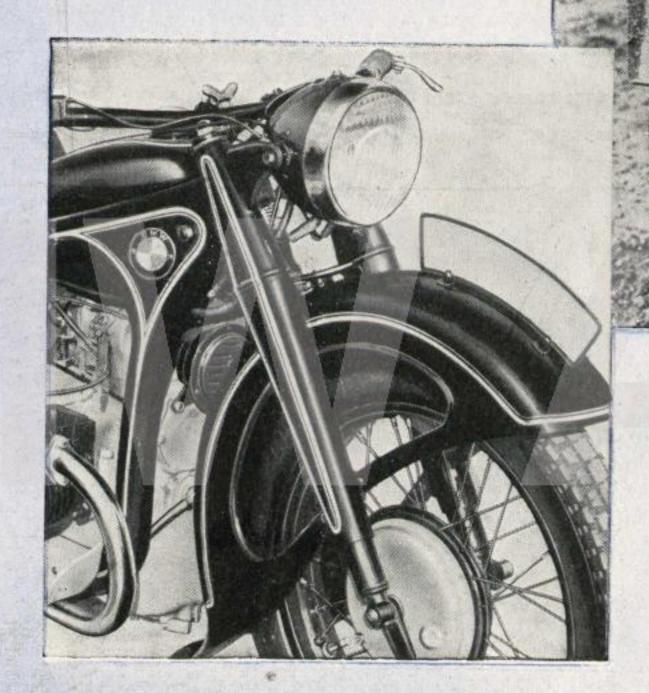
The Bowden cables are enclosed in the handlebars - the throttle and ignition controls are operated by twist grips; the headlamp dimming switch and the Bosch horn button are within easy reach; the speedometer is recessed in the headlamp and illuminated - other features

cially the complete valve gear and the entire rear drive - the latter is normally particularly exposed to dust and dirt. The BMW shaft drive is absolutely weather and trouble-proof.

On the smooth and reliable action of the front suspension in particular, riding

safety and riding comfort depend. The BMW telescopic fork, owing to its ingemous gesign, offers not only the greatest possible standard of safety but practically unlimited life, all joints exposed to mud being eliminated.





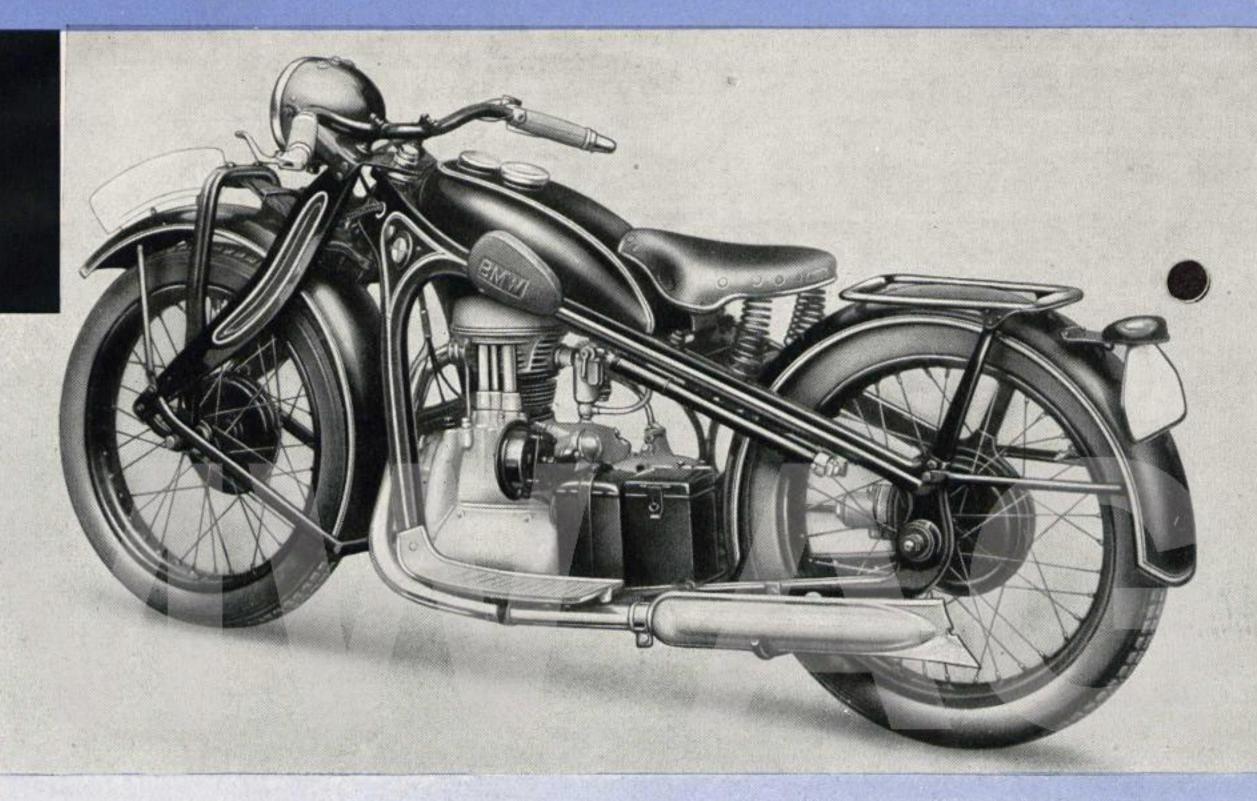
are the shock-absorbers, steering damper, quick-action tank filler cap, tank filter marked in litres, reserve petrol supply tap, and anti-theft lock on the twin-cylinder machines. In brief, the secret of the outstanding success, proverbial reliability and economy of BMW motor-cycles, is the consistent endeavour to improve the design and eliminate wear of each individual part.

## R2

200 c. c. 8 b. h. p. touring model

The popular
lightweight modela very pleasant
machine to ride,
and ideal in traffic

During 5 years of careful development the light-weight model has been improved upon in every detail to such a degree as to offer the fullest guarantee of high performance, long life and extreme economy.



Frame: torsion-free triangular duplex cradle frame; flexible front wheel suspension with shock-absorber; powerful internal expanding brakes front and rear wheels;  $25^{\prime\prime} \times 3^{\prime\prime}$  tyres; saddle height 0.67 m (2'  $2^{1}/_{2}^{\prime\prime}$ ); length 1.95 m (6'  $5^{\prime\prime}$ ); width 0.85 m (2'  $9^{1}/_{2}^{\prime\prime}$ ); road clearance 120 mm ( $4^{3}/_{4}^{\prime\prime}$ ).

Engine: maintained cruising output 8 b. h. p.; bore 63 mm. stroke 64 mm.; four-stroke O. H. V. normal compression touring engine; petrol consumption per 100 km. 2.5-3 ltrs (95 to 110 m. p. g.); all moving parts, including complete valve gear, totally enclosed, special aluminium cylinder head; special aluminium piston; connecting rod on rollers; durable dry single-disc clutch integral with flywheel.

Gearbox: Sturdy 3-speed gearbox; ratios: 1st 1:2.9, 2nd 1:1.7, 3rd 1:1, (direct drive).

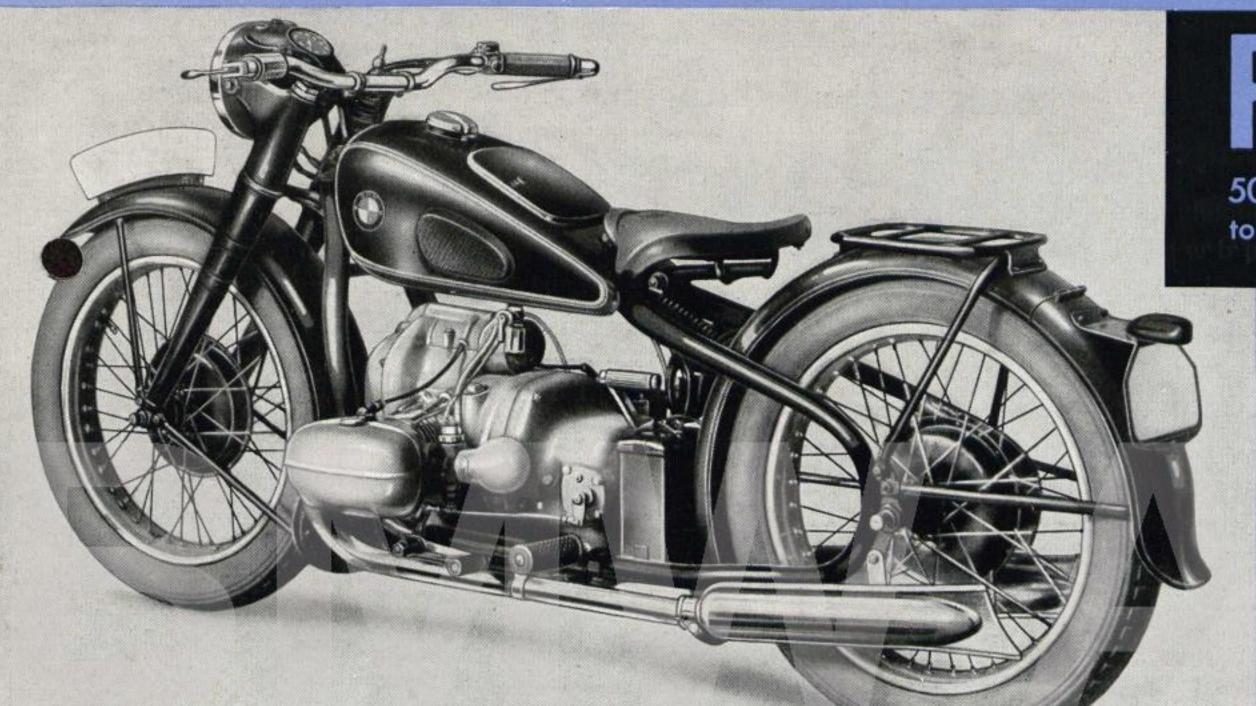
Transmission: Flexible shaft drive; 1:6.72 ratio; spiral bevel gears; enclosed rubber shock-absorber.

Equipment: Aluminium footboards; adjustable handlebars; ignition and throttle twist grips; Amal single-lever carburetter with air filter; 35/5 watt Bosch dynamo with headlamp dimming device; Bosch horn; speedometer incorporated in petrol tank; well-sprung rubber saddle; tholds 11 litres (21/2 gal.) sufficient for approximately km (250 miles); Seppeler petrol filter; knock-out spindles front and rear.

Weight: 286 lbs. with full petrol tank, tools and equipment, etc.

Features: Excellent cooling system; high cruising b. h. p. output; simple maintenance; low petrol consumption; efficient kickstarter; easy ball-type gear change. The shaft drive provides practical and weather-proof transmission - avoids annoying troubles and frequent replacement of chains and sprockets. All components and accessories of the highest quality.

(All data subject to change without notice.)



500 c. c. 24 b. h. p. touring and sports model

> "To ride the R 5 BMW is to experience the real thrill of motor-cycling"

"The Motor-Cycle" (England)

Frame: Tubular duplex cradle frame with saddle tank incorporating tool-box; adjustable rubber saddle; telescopic fork; no joints exposed to weather; smallest possible unsprung weight; totally enclosed and dustproof, requio lubrication; hydraulic damper adjustable by hand; ium efficiency and life; powerful internal expanding brakes front and rear wheels; 26" x 3.5" tyres; saddle height 0.69 m (2'3"); length 2.13 m (7'0"); width 0.80 m (2'8"); road clearance 120 mm (48/4").

Engine: maintained output 24 b. h. p.; consumption solo 3-

Engine: maintained output 24 b. h. p.; consumption solo 3-3.5 litres (80 to 95 m. p. g.), with side car 3.5-5 litres per 100 kms (55 to 80 m. p. g.); Bore 68 mm. x stroke 68 mm; fourstroke O. H. V. new highefficiency twin-camshaft engine; surprisingly flexible; large, scientifically designed special aluminium cylinder head, ensuring perfect heat dissipation; valve gear totally enclosed; hairpin valve springs; 2 Amal carburetters; special aluminium pistons; connecting rod on rollers; sturdy smooth, dry single-disc clutch integral with flywheel (dirt- and oil-proof).

Gearbox: of latest design (4-speeds) bolted on to the engine: positive foot gear change in conjunction with hand control: top speed with spiral gears: ratios: 1st

hand control; top speed with spiral gears; ratios: 1st 1:3.6, 2nd 1:2.8, 3rd 1:1.7, top 1:1.3.

Transmission: sturdy flexible shaft drive, absolutely dirtproof; ratios: solo 1:3.89, with sidecar 1:4.62; spiral bevel gears; enclosed rubber shock-absorber.

Equipment: chromium-plated handlebars; steering damper; throttle twist grip; 2 Amal carburetters with air filters; 45/70 watt Bosch dynamo, headlamp dimming device; Bosch horn; large speedometer recessed in headlamp; wheel rims chromium plated; tank capacity 14 litres (3 gal.); Seppeler petrol filter; Neimann safety lock. Oil capacity 31/2 pints.

Weight: 363 lbs. with full petrol tank, tools and equipment, etc.

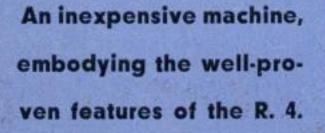
Features: Good road-holding, safe cornering and excellent riding position; exceptional manoeuvrability for crosscountry work; excellent cooling; remarkable acceleration; high cruising and maximum output; simple maintenance; low consumption; sturdy kickstarter; rapid gear change; the shaft drive provides practical and weather-proof transmission, and avoids annoying troubles as well as the replacement of chains and sprockets. All components and accessories of the highest quality.

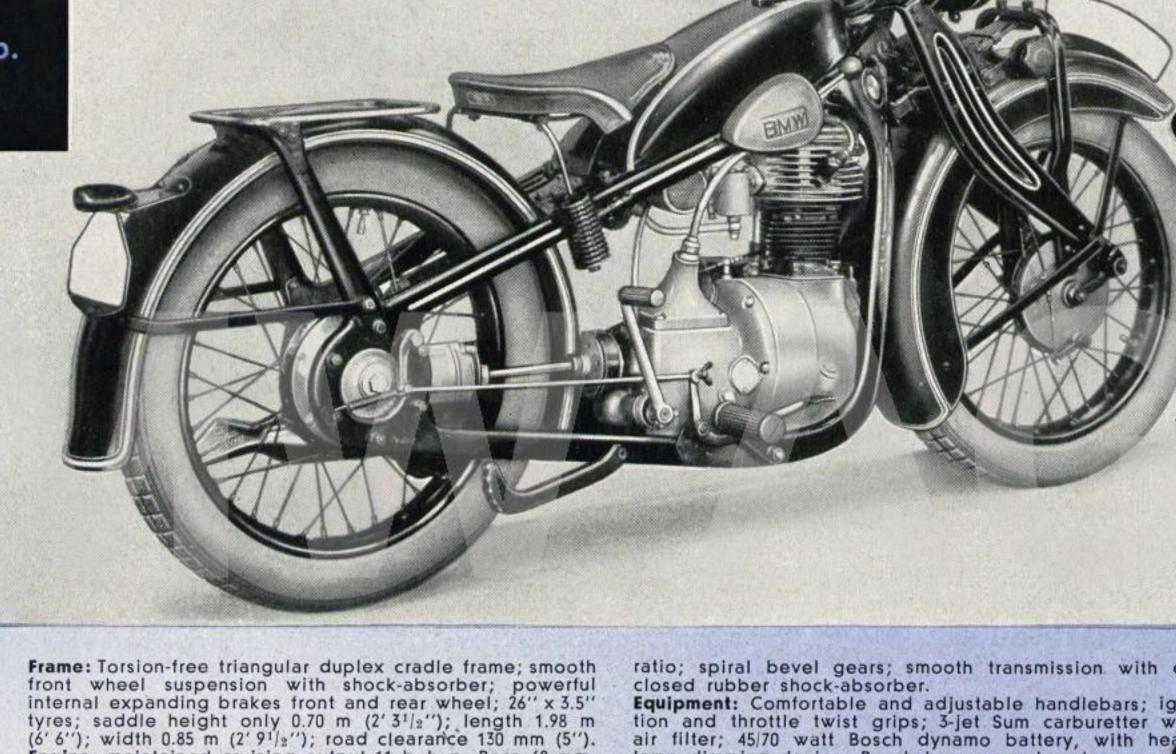
A superlative machine from every viewpoint the result of our considerable racing and "6-Days" experiences - the ideal machine both for the road and cross-country riding.

(All data subject to change without notice.)

300 c. c. 11 b. h. p. touring model

A sturdy, economic model for every purpose





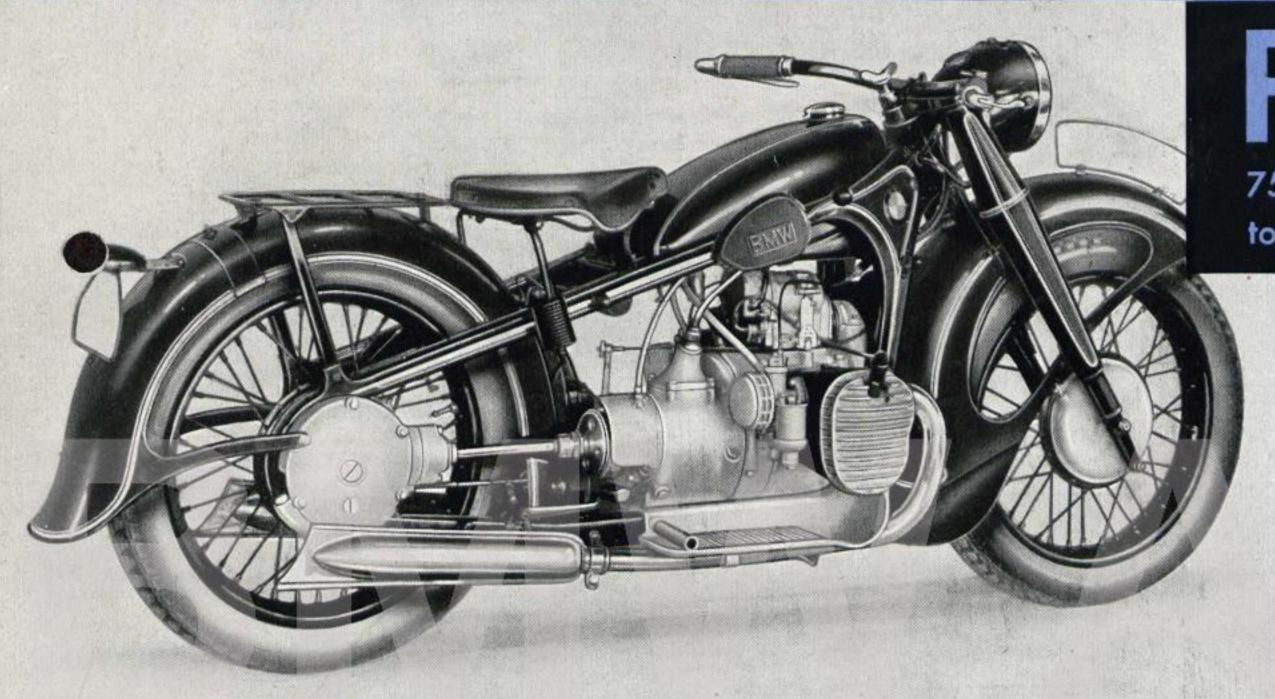
tyres; saddle height only 0.70 m (2'  $3^{1/2}$ ''); length 1.98 m (6' 6''); width 0.85 m (2'  $9^{1/2}$ ''); road clearance 130 mm (5''). **Engine:** maintained cruising output 11 b. h. p. Bore 68 mm. x stroke 84 mm; four-stroke O. H. V. normal compression touring engine; petrol consumption approximately 3 litres per 100 km (95 m. p. g.); all moving parts, including com-plete valve gear, totally enclosed; large, scientifically designed cylinder head of special aluminium ensuring perfect heat dissipation at all times; special aluminium pistons; connecting rod on rollers; durable dry singledisc clutch, integral with flywheel (dirt- and oil-proof). Gearbox: Sturdy 4-speed gearbox; well-chosen ratios; accessible gate-change combined with knee-grip; ratios: 1st 1:3.6, 2nd 1:2.18, 3rd 1:1.35, top 1:1 (direct drive). Transmission: Sturdy, dirt-proof flexible shaft drive; 1:5.11

ratio; spiral bevel gears; smooth transmission with en-

Equipment: Comfortable and adjustable handlebars; ignition and throttle twist grips; 3-jet Sum carburetter with air filter; 45/70 watt Bosch dynamo battery, with heal lamp dimming device; Bosch horn; speedometer recess in headlamp; tank capacity 12.5 litres (23/4 gal.); Sepper petrol filter; knock-out spindles front and rear.

Weight: 328 lbs. with full tank, tools and equipment, etc. Features: Excellent riding qualities, even on the roughest ground; efficient cooling; surprising cruising output; simple maintenance; low consumption; efficient kickstarter; rapid gear change; sturdy gearbox; ease of maintenance; simple and easy to control; well-chosen gear ratios; the shaft drive provides a practical and weather-proof transmission, and avoids annoying troubles and frequent replacement of chains and sprockets. All components and accessories of the highest quality.

(All data subject to change without notice.)



# R12

750 c. c. 20 b. h. p. touring model

The powerful and lively touring and sidecar model of world-wide fame

Frame: torsion-free triangular duplex cradle frame; enclosed, absolutely dustproof telescopic fork with hydraulic shock-absorbers; no joints exposed to weather; smallest possible unsprung weight; unique efficiency and long life; interphangeable wheels with knock-out spindles; powerful in all expanding brakes in front and rear; 26" x 3.5" tyles, road clearance 130 mm (5").

Engine: maintained cruising output 20 b. h. p.; fuel consumption: solo 4-4.5 litres, with sidecar 5-6 litres per 100 km (60 to 70 and 45 to 55 m. p. g. resp.); bore 78 mm. x stroke 78 mm; four-stroke; sidevalve engine; valve gear totally enclosed; large aluminium cylinder heads adequately cooled to withstand severe stresses; special aluminium pistons; connecting rods on rollers; dry dual disc clutch integral with flywheel, fully protected from dirt and oil.

**Gearbox:** sturdy 4-speed gearbox; well-chosen ratios; capable of sustaining heavy stresses; convenient gate-change, incorporated with knee-grip; top gear with spiral gears; ratios: 1st 1:3.18, 2nd 1:2.06, 3rd 1:1.42, top 1:1.09.

**Transmission:** Sturdy, totally enclosed shaft drive; capable of withstanding the stress of the most heavily loaded

sidecar; solo ratio: 1:4.07; sidecar ratio: 1:4.75; flexible shaft; enclosed rubber shock-absorber; spiral bevel gears. **Equipment:** Adjustable handlebars; ignition and throttle twist grips; 2 Amal carburetters with air filter; Bosch coil ignition; 45/70 Watt Bosch dynamo; headlamp dimming device; Bosch horn; large speedometer recessed in headlamp; tank capacity 14 litres (3<sup>1</sup>/<sub>4</sub> gal.); Seppeler petrol filter; aluminium footboards; Neimann safety lock.

aluminium footboards; Neimann safety lock.

Weight: 414 lbs. with full petrol tank, tools and equipment, etc.

Features: Unparalleled safety and road performance; smooth clutch; excellent riding position; highest safety and marvellous endurance both on main roads and in hilly country; long life and simple maintenance; low petrol consumption; efficient kickstarter; indestructible; surprisingly simple and easy to control; the shaft drive provides a practical and weatherproof transmission; avoids annoying troubles and frequent replacement of chains and sprockets. All components and accessories of the highest quality.

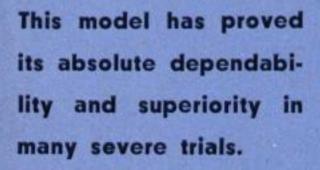
Note: This model is available also as a single-carburetter machine with 18 b. h. p. maintained cruising output; 35/50 Watt Bosch magneto equipment. A dwarf in petrol consumption but a giant in performance - the last word in motor-cycle engineering - the acme of reliability.

(All data subject to change without notice.)

## R4

400 c.c. 14 b.h.p. The "goanywhere" sports model

The proved crosscountry and touring machine for solo or sidecar work



Frame: Torsion-free triangular duplex cradle frame; smooth front wheel suspension with shock-absorber; powerful internal expanding brakes front and rear wheels; 26" x 3.5" mm. tyres; saddle height 0.70 m (2' 31/2"); lenght 1.98 m. (6' 6"); width 0.85 m (2' 91/2"); road clearance 130 mm (5"). Engine: maintained cruising output 14 b. h. p.; Bore 78 mm. x stroke 84 mm; four-stroke O. H.V. normal compression touring engine; consumption per 100 km solo: 3-3.5 litres (80 to 95 m. p. g.), with side car 3.5-4 litres (70 to 80 m. p. g.); all moving parts, including complete valve gear, totally enclosed; exceptionally large, scientifically designed cylinder head of special aluminium, ensuring perfect heat dissipation, even under conditions of heavy stress; special aluminium piston; connecting rod on rollers; durable dry singledisc clutch, integral with flywheel (dirt and oil-proof).

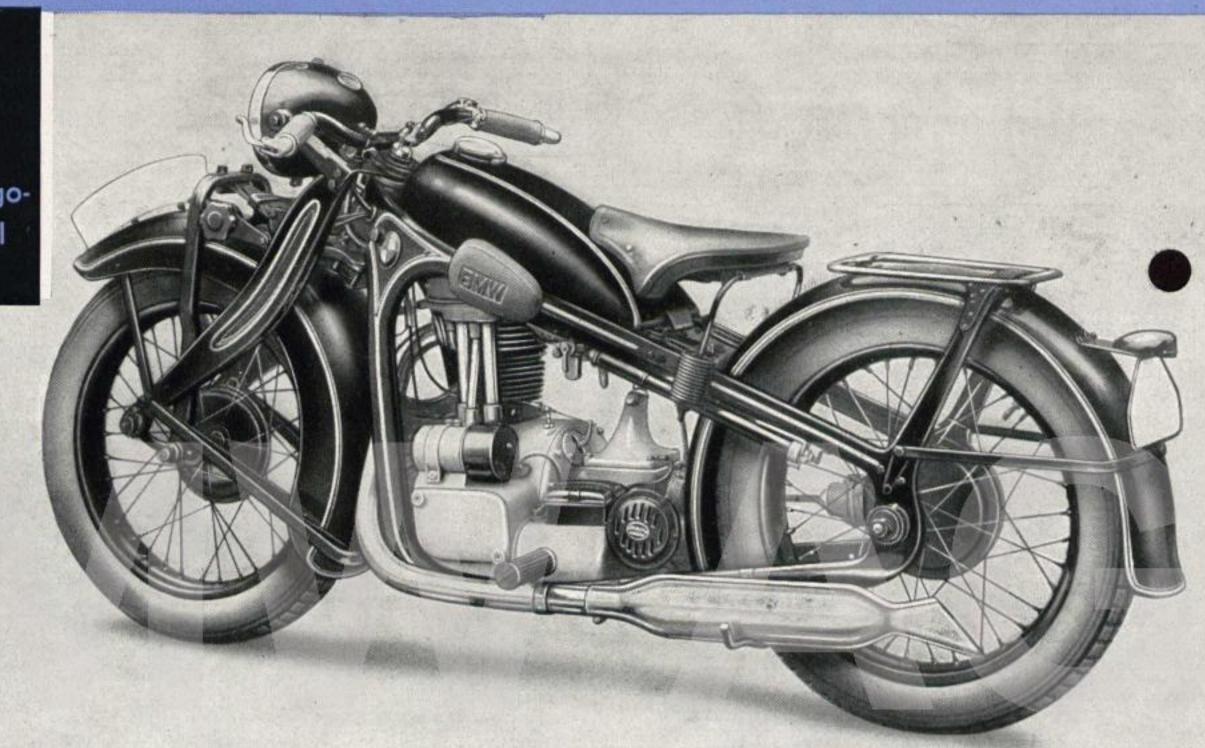
Gearbox: Sturdy 4-speed gearbox; convenient gate change, combined with knee-grip; ratios: 1st 1:3.6, 2nd 1:2.18, 3rd 1:1.35, top 1:1 with direct drive.

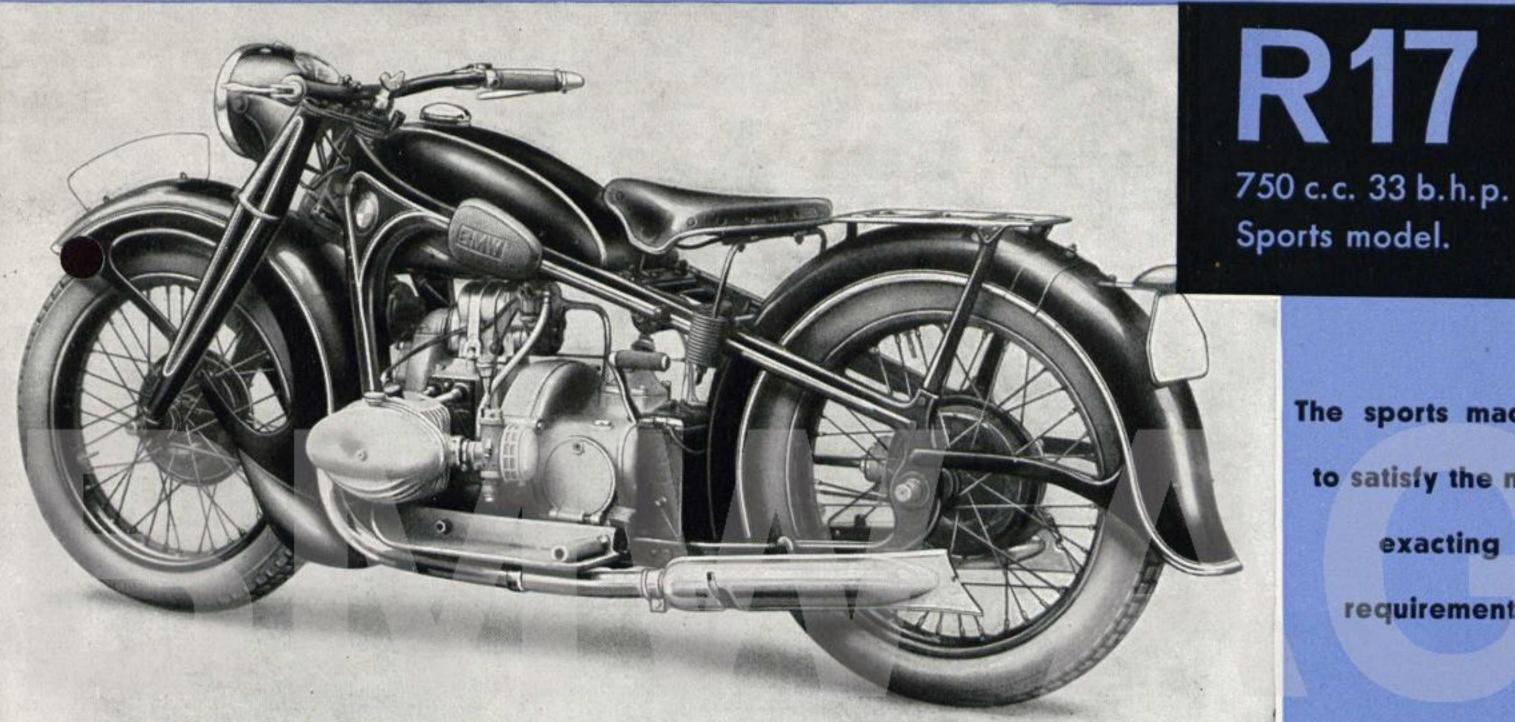
**Transmission:** Sturdy, totally enclosed flexible shaft drive; solo ratio 1:5.12, with sidecar 1:5.62; spiral bevel gears; enclosed rubber shock-absorber.

Equipment: adjustable handlebars; ignition and throttle twist grips; 3-jet Sum carburetter with air filter; 43/70 was Bosch dynamo with dimming device; Bosch horn; speed meter recessed in headlamp; tank capacity 12.5 litre (28/4"); Seppeler petrol filter; knock-out spindles front and

Weight: 346 lbs. with full tank, tools and equipment, etc. Features: Well-chosen gear ratios; easy gear change; efficient kickstarter; excellent riding position; ease of maintenance; most comfortable riding even over the roughest ground; excellent cooling system; exceptionally high cruising output; low fuel consumption; surprisingly simple and easy to control; the shaft drive provides a practical and weather-proof transmission, and avoids annoying troubles and frequent replacement of chains and sprockets. All components and accessories of the highest quality.

(All data subject to change without notice.)





The sports machine to satisfy the most exacting

requirements

Frame: Torsion-free triangular duplex cradle frame; enclosed, absolutely dirt-proof telescopic fork with hydraulic shock-absorber; no joints exposed to weather; smallest possible unsprung weight; interchangeable wheels with out spindles: powerful internal expanding brakes free and rear wheels;  $26'' \times 3.5''$  tyres (at extra charge 27''; saddle height 0.70 mm (2'  $3^{1/2}$ ''); length 2.10 (6' 10"); width 0.90 m (2' 11"); road clearance 130 mm (5").

Engine: maintained cruising output 33 b. h. p.; consumption, solo 4.5-5 litres, with sidecar 5.5-6.5 litres per 100 km (55 to 60 and 40 to 50 m.p.g.); Bore 83 mm. x stroke 68 mm; four-stroke; O. H. V.; valve gear totally enclosed; large aluminium cylinder heads adequately cooled to withstand the most severe stresses; special aluminium pistons; connecting rods on rollers; dry dual-disc clutch integral with flywheel (dirt and oil-proof).

Gearbox: Exceptionally sturdy 4-speed gearbox, with well-chosen ratios: gate change incorporated with kneegrip; top gear with spiral gears; ratios: 1st 1:3.18, 2nd 1:2.06, 3rd 1:1.42, top 1:1.09.

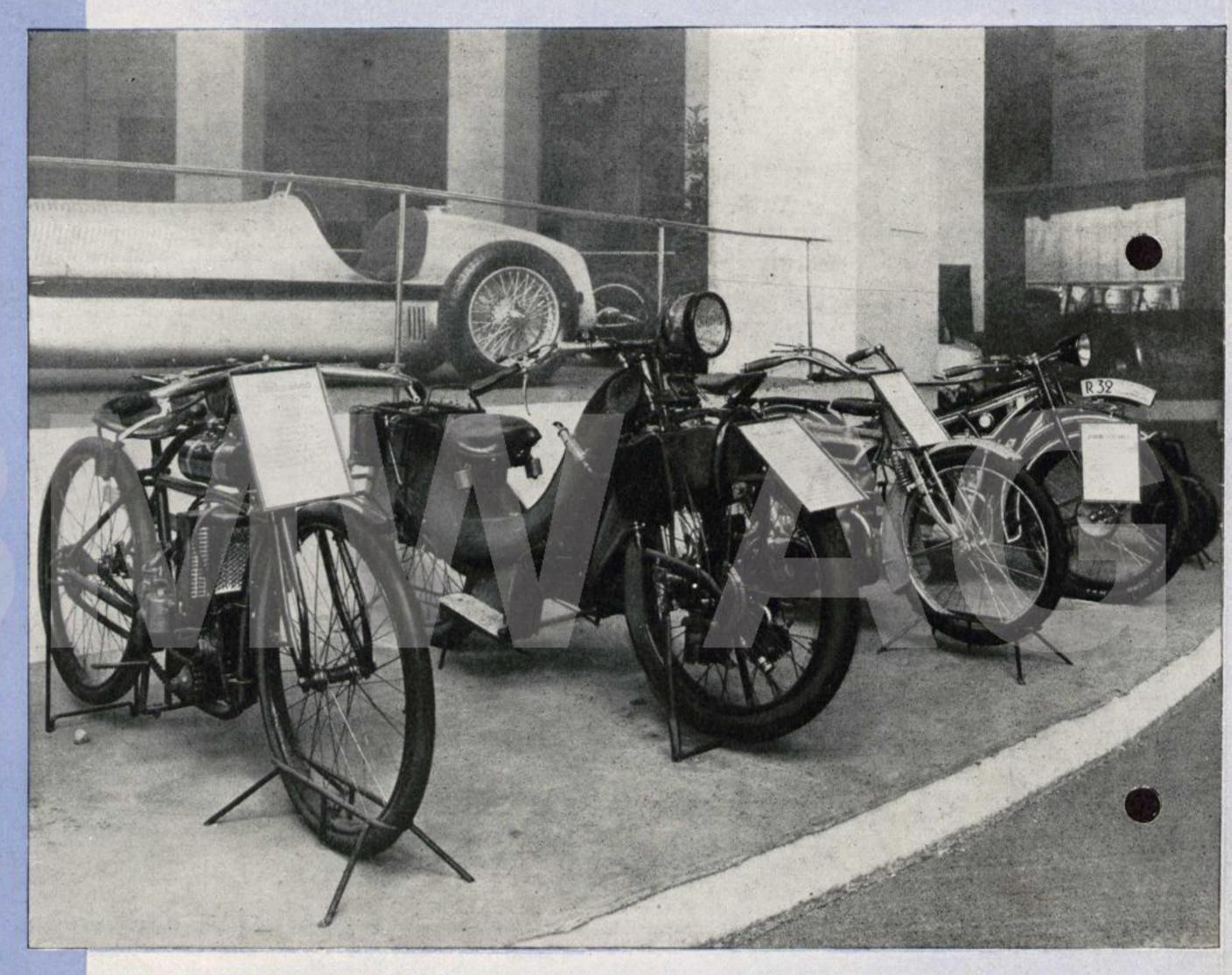
Transmission: Totally enclosed flexible shaft drive to withstand the stress of the most heavily loaded sidecar; solo ratio 1: 4.07, sidecar ratio 1: 4.75; enclosed rubber shockabsorber; spiral bevel gears.

Equipment: Adjustable handlebars; ignition and throttle twist grips; 2 Amal carburetters, with air filters; 45/70 Watt Bosch dynamo battery; headlamp dimming device; Bosch horn; large speedometer recessed in headlamp; tank capacity 14 litres (31/4 gal.); Seppeler petrol filter; aluminium footboards; Nelmann safety lock.

Weight: 410 lbs. with full tank, tools and equipment, etc. Features: Maximum efficiency and life; smooth clutch; unparalleled safety and road performance; efficient kickstarter; supreme safety and marvellous endurance qualities for level or mountainous country; low petrol consumption; indestructible; surprisingly simple and easy to control; the shaft drive provides a practical and weather-proof transmission, and avoids annoying troubles and frequent replacement of chains and sprockets. All components and accessories of the highest quality.

With its maintained output of 33 b. h. p. this production model comes up to the requirements of the most fastidious rider, both in acceleration and maximum speed.

(All data subject to change without notice.)



The first BMW model R 32 motor-cycle among its contemporaries in the Hall of Honour at the International Motor Car and Motor Cycle Show in Berlin in 1936.

When two well-known technical periodicals describe the BMW motor cycle as "a leading product of the motor-cycle industry" and "the pioneers of the German school of design" they infer that BMW machines lead all others by virtue of their advanced design, absolute reliability and high performance.

This perfection has only been attained by reason of consistent and tenacious development of a novel design introduced as far back as 1923. While the great majority of motor-cycles then on the market showed unmistakeable characteristics of bicycle design, the BMW company developed their first machine, the R. 32 model, along the lines of motor-car construction. This departure from orthodox design was considered very advanced at that time and was much admired - but even more criticised. To-day, 13 years later, every motor-cycle expert knows that the typical features of the BMW motor-cycles - the triangular duplex frame, the flat-twin engine set across the frame, the unit construction and the extremely robust shaft drive - have not only brilliantly proved their worth but even to-day represent the most advanced design in existence.

The pioneer work has borne abundant fruit - from year to year details have been improved upon, the performance of the machine and its life increased,

but the unique constructional features remained unaltered. The extensive experience in design and production gained by BMW in the manufacture of highefficiency aero engines, in racing, in cross-country trials and in record-breaking has been practically utilized in the production of standard machines. By reason of this consistent technical development BMW motorcycles have reached the highest degree of perfection both in appearance and dependability, endurance and economy. The most convincing proof of this superiority was the victory of the team officially representing Germany, all riding B M W motor-cycles, in the International 6-Days' Trial, winning the International Trophy, the blue riband of the motor-cycling world. This Trophy has been won for Germany three years in succession, and each year the team has been mounted on BMWs. No other mark has yet succeeded in providing the same incontrovertible proof of high performance and reliability.

The superlative achievements, however, are Henne's sensational 57 worlds' records, including the world's maximum speed record of 160 m. p. h. BMW is proved to be the world's fastest motor-cycle.

#### These facts prove the intrinsic value of the BMW!



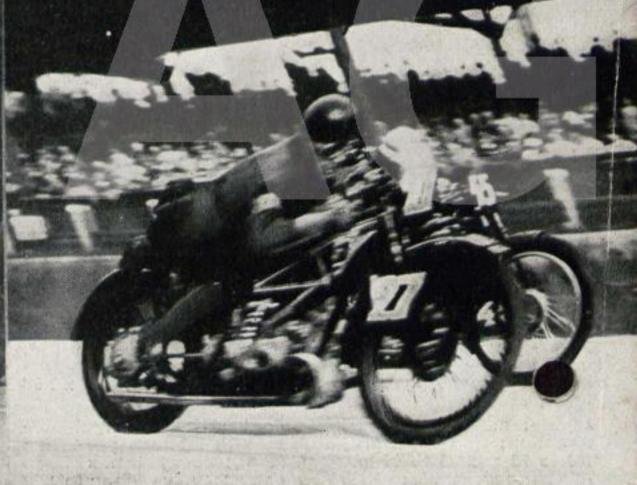
In the Kilometer Race 1935 in Hungary, Komlossy was first on a 500 c.c. B M W at 118 m.p. n.



E. Starkle on his B M W achieved victory in the 1,000 c.c. side-car class of the 1935 Swiss Grand Prix.



In the 1935 International 6-Days' Trial a team of 3 B M W s officially representing Germany (as in 1933 and 1934) won the International Trophy for the third year in succession.



Gall on a BMW was the fastest German motor-cycle rider in the 1935 International Avus Race.



BAYERISCHE MOTOREN WERKE A.-G. · MUNICH 13