



BSA

*The Worlds Largest
Motorcycle Manufacturers.*



The unit construction of the B.S.A. Bantam engine and gearbox. Note that primary drive, kick-start and gear-change mechanism are totally enclosed.

The car-type distributor on the coil-ignition C models is shown below. It is a feature which ensures instant starting under all weather conditions.



BSA Features



The cylinder head and barrel of the B.S.A. Gold Star models are of aluminium alloy, with the push rod cover cast integral.

Below is shown the cylinder head of the A7 and A10 models. Note the finning around the exhaust ports and valve spring chambers, which encourages a generous flow of cooling air over the vital surfaces of the combustion head.





B.S.A. Motor Cycles have always been widely used in the Public Service all over the world. British, Dominion and Foreign Government Departments, Municipal Corporation Public Utility Companies, Police and Fire Services have all proved through long years of service the reliability of B.S.A. Motor Cycles for arduous duty.



BSA

in the Public Service

Top pictures show East Sussex Constabulary (England), and a member of the South Australian Police on B.S.A. Golden Flash 650 Twins. On right, the British Automobile Association who are large users of B.S.A.s; below are the Singapore Police on B.S.A. 350 models.



B.S.A. CYCLES LTD.
Birmingham, 11

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B.S.A. Cycles Ltd. reserves the right to alter the design of any constructional detail of their manufacture of any time without notice.

General Specification

ENGINE. Air cooled with cast iron cylinder barrel and head (aluminium alloy for Gold Star models and aluminium alloy head on D1 and side valve models); high tensile steel connecting rod (light alloy rods on A models). Big-end—roller bearing except on A models, which have detachable indium-lead-bronze plain bearings. Main bearings—plain timing side on A7, A10 and C models; Ball and/or roller bearings on drive side on all models, and on timing side on remainder of range. Gear driven timing mechanism; tappets on models A7 and A10 operated by a single camshaft at rear of engine. Stellite-tipped valves standard on A7 Star Twin, A10 and Gold Star models. Amal carburettor with air cleaner (built-in on models A7 and A10).

LUBRICATION. (Except D1). Dry sump system with separate oil tank under saddle and double gear pump. Model D1, petroil system.

IGNITION. Coil ignition with car type distributor incorporating automatic advance on C models, Magdyno on B and M models, magneto with automatic advance on A models. Wico-Pacy flywheel magneto-generator on D1 or coil ignition with Lucas A.C. generator set (extra) if specified.

TRANSMISSION. Three-speed gearbox on D and C

models; four speeds on others and extra on C models; all with positive stop foot gear change; oil bath primary chain drive.

FRAME. Left-hand or right-hand sidecar lugs on M and A models; 8 in. front brake on Gold Star models and model A10; Rear suspension with quickly detachable rear wheel on Gold Star models and A7 Star Twin, extra on other B and A models; quickly detachable rear wheel on A models; spring-up stand (rear on M models, central on other models).

EQUIPMENT. Lucas 6-volt 60 watt lighting (except D1; see Ignition) with separate dynamo on C and A models, magdyno on others; compensated voltage control; sealed beam headlamp; electric horn (extra on model D1); toolkit; tyre inflator.

FINISH. Pastel green and chromium on D1; Matt silver and chromium tank on C10 and C11; Tank and wheels blue and chromium on C11 de Luxe; green and chromium on B31 and B32 Competition. Red and chromium on B33, B34 Competition and A7 (alternative black and chromium on A7). Silver and chromium on M33, Gold Star and Star Twin models. Silver tank and black wheels on M20 and M21. Black and chromium on A10. Chromium guards on B32 and B34 Competition models.

EXTRAS

SPRING FRAME on Models D1, A7, A10, B31, B33; also B32 and B34 with downswipt pipes only. Four-speed gearbox on C models. **LUCAS A.C. GENERATOR SET** with electric horn on Model D1. **BATTERY OPERATED ELECTRIC HORN** on Wico-Pacy equipped Model D1. **SPEEDOMETER** on Model D1. **LEGSHIELDS** on Models D1, C10 and C11. **PILLION SEAT OR CARRIER** on all Models except D1. **FOLDING PILLION FOOTRESTS** on all Models except D1. **PROP STAND** on all Models except D1. **ALLOY ENGINE** on Models B32 and B34 Competition models. **COLOUR FINISH:** Beige and Chromium finish on Model A10. Matt Silver and Chromium finish on Models M20 and M21.

Competition and Gold Star Models

B.S.A. 350 and 500 c.c. Competition Models

are designed and equipped specifically for the Trials enthusiast. They have upswept exhaust pipe (downswept optional); wide clearance mudguards without valances; lower gear ratios of 7.1, 9.3, 14.5, 21.1, on the 350 model; 5.6, 7.4, 11.6, 16.8 on the 500 model. Both machines have chromium plated mudguards and stays, rear chainguard, chaincase and brake cover plates. A 2-gallon petrol tank is optional. The 350 has green and chromium tank and wheels; the 500 is finished in red and chromium. Spring Frame (with downswept exhaust pipe only) is available at an extra charge.

B.S.A. 350 and 500 c.c. Gold Star Models

are high-performance machines with specially-tuned engine and aluminium cylinder head and barrel. Specification is variable to suit the type of event for which the machine is required. High, medium or low compression ratio can be supplied, with port sizes, cams, valve springs, carburetter, etc., to suit. A close-ratio gearbox is available and variations in engine shaft sprocket can be specified. Lucas magdyno or racing magneto with battery lighting and electric horn, and rev counter in lieu of speedometer are optional items of equipment. Both models have spring frame and 8 in. front brake.

Technical Data — all models

Model	Gear ratios				Tyre sizes		Tank Capacities	
					Front	Rear	Petrol	Oil
D1	7.0	11.7	22.0	—	2.75-19	2.75-19	Galls. 1½	Pints —
D1 Comp.	8.65	14.5	27.1	—	2.75-19	3.25-19	1½	—
C10	6.6	9.8	14.5	—	3.00-19	3.00-19	2½	4
C11	6.6	9.8	14.5	—	3.00-20	3.00-20	2½	4
B31	5.6	7.4	11.5	16.7	3.25-19	3.25-19	3	4
B32	7.1	9.3	14.5	21.1	2.75-21	4.00-19	3	4
B32 Gold Star	*5.6	7.4	11.5	16.7	2.75-21	4.00-19	3	5
B33	5.0	6.6	10.3	14.9	3.25-19	3.50-19	3	4
B34	5.6	7.4	11.6	16.8	2.75-21	4.00-19	3	4
B34 Gold Star	*5.0	6.6	10.3	14.9	2.75-21	4.00-19	3	5
M20	5.3	7.0	10.9	15.8	3.25-19	3.25-19	3	5
M21 S/car	5.9	7.8	12.2	17.7	3.25-19	3.50-19	3	5
M33 Solo	4.8	6.3	9.6	14.2	3.25-19	3.50-19	3	5
A7 Solo	5.1	6.2	9.0	13.2	3.25-19	3.50-19	3½	4
A10 (Solo)	4.4	5.4	7.8	11.4	3.25-19	3.80-19	4½	4
A10 (Sidecar)	5.2	6.3	9.1	13.3				

* Alternative gear ratios for Trials, Scrambles and Road Racing are available.

BSA BANTAM

125 c.c.



B.S.A. Bantam 125 c.c. Model D1

Now firmly established as "scooter of the lightweights", the B.S.A. Bantam offers really attractive performance with easy handling and amazing economy.



B.S.A. Bantam 125 c.c. Model D1

With Spring Frame and Lucas generator, battery and coil ignition gives the pleasure of the simplest and lightest B.S.A. model the option of luxury motor cycling at moderate extra cost.

BSA



B.S.A. 350 O.H.V. Model B31

One of the most popular 350's on the road, this B.S.A. model combines a sparkling performance with a high degree of reliability. Spring Frame extra.

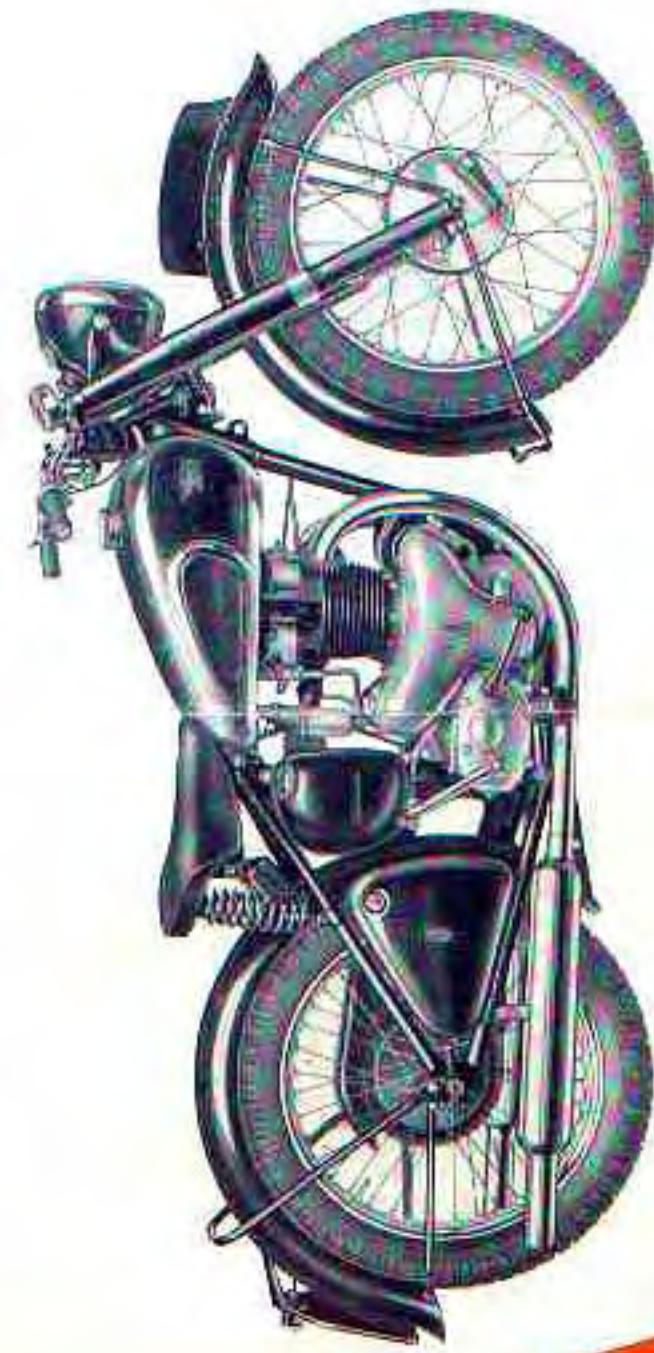


B.S.A. 500 O.H.V. Model B33

A sturdy 500 of exceptional value, with a high power-weight ratio which gives outstanding performance with economy. Spring Frame extra.

BSA

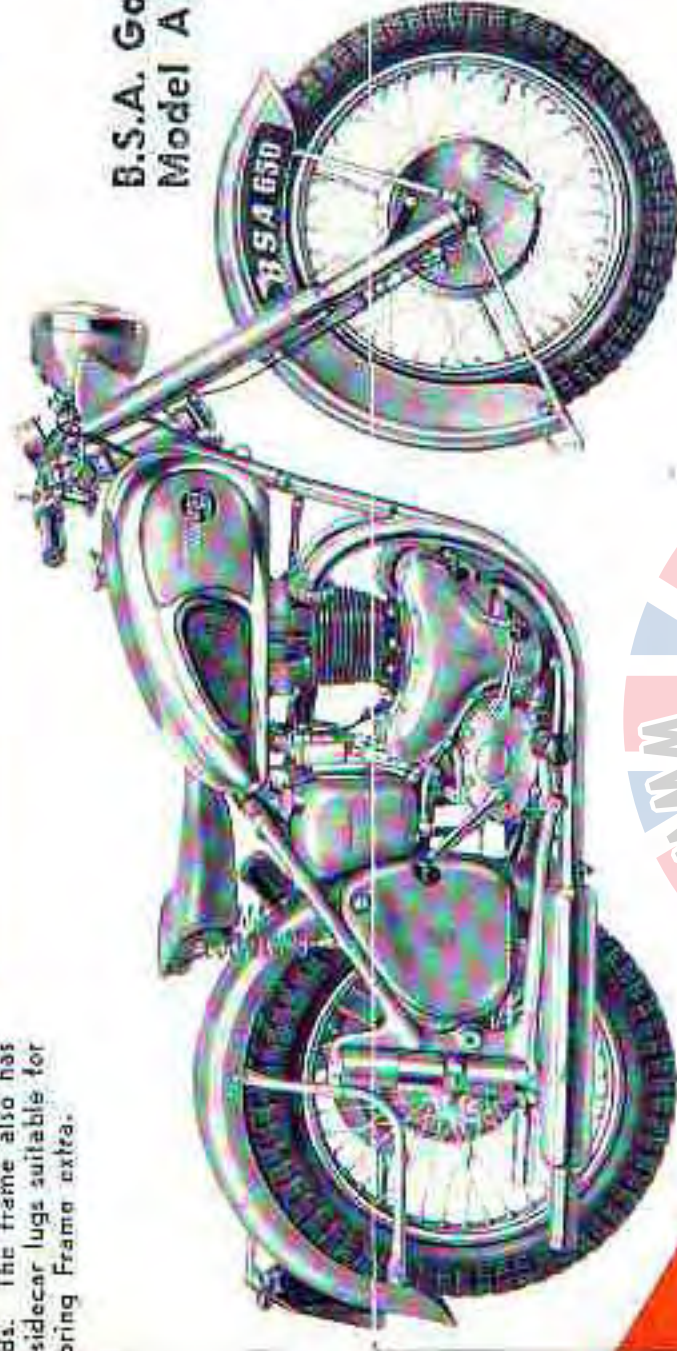
350 and 500 O.H.V.
for fast Solo riding



B.S.A. 500 O.H.V. Twin Model A7

now has an entirely redesigned engine incorporating new cylinder head and rocker box, modified crankcase with positive oil supply to camshaft, and forged aluminium alloy connecting rods. The frame also has been modified to incorporate sidcar lugs suitable for left or right-hand sidcar. Spring Frame extra.

The BSA Twins



B.S.A. Golden Flash 650 Twin Model A10

The B.S.A. Golden Flash is now firmly established as the leader of the Twins. It combines remarkable performance with extreme flexibility and is the ideal machine for solo or sidcar riding. Spring Frame, as illustrated, extra.



B.S.A. 500 C.H.V. Model A7 Star Twin

Now with redesigned engine as Model A7, but with slightly higher compression ratio, the B.S.A. Star Twin offers brilliant performance, whilst the plunger type rear suspension ensures maximum comfort.



B.S.A. 250 S.V. Model C10

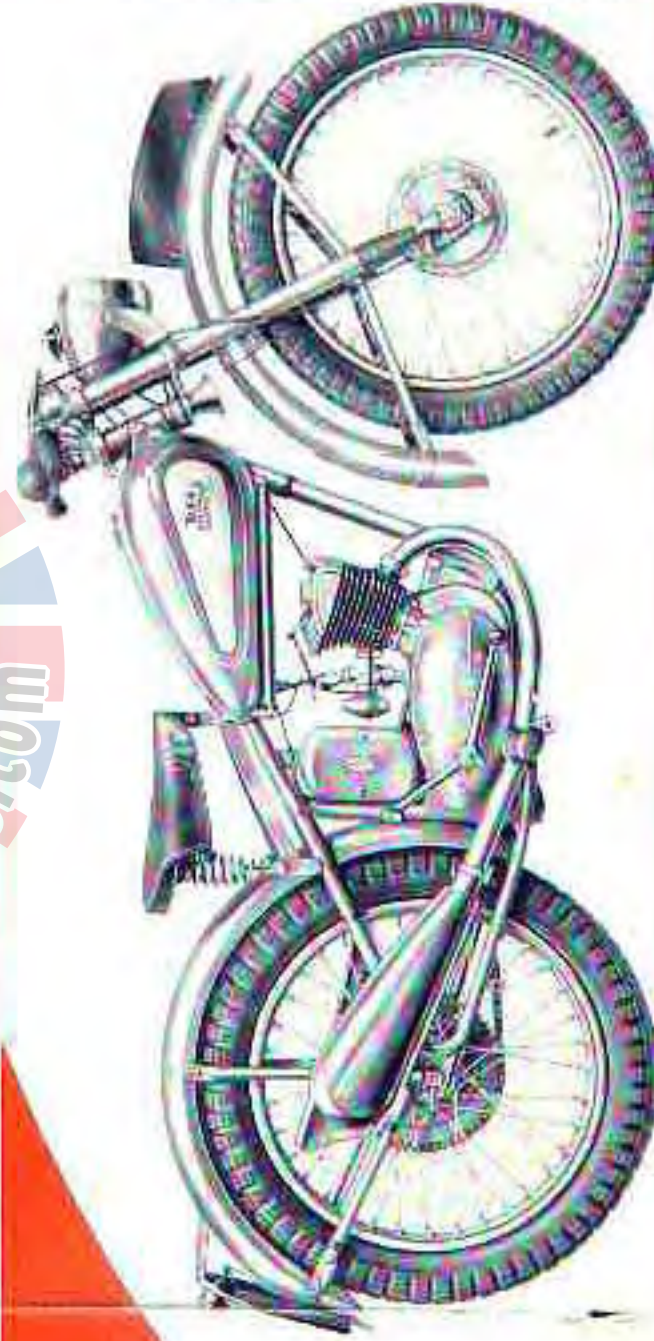
A thoroughly reliable and economical 250 which will meet the requirements of the everyday utility rider.



B.S.A. 250 O.H.V. Model C11 de luxe

The de luxe model illustrated has blue and chromium look and wheels. Standard model has matt silver and chromium tank and black wheels.

The most popular Motor Cycle in the World



B.S.A. Bantam 125 c.c. Competition Model

Introduced to meet a popular demand, this lightweight competition model has achieved outstanding success in sporting events everywhere. It has compression release valve in cylinder head, roller bearing in front wheel, up-swept exhaust, unvalved foot-rests, folding kick start and larger rear wheel sprocket giving lower gear for trials.

BSA Competition and Gold Star Models



B.S.A. Competition 350 c.c. Model B32

These models have built up an enviable reputation as the result of their successes in Trials and Scramble events in all parts of the world. They are supplied with Lucas magneto standard, but alternative lighting equipment is available. Spring Frame extra (with downswep exhaust pipe only).



B.S.A. 500 B32 Gold Star

The specification of these high performance models is extremely versatile. They can be supplied with cams, gears and compression ratios to suit whichever type of sporting event the buyer favours. For road racing, foot gear change pedal can be fitted in rearward position, with mechanism inside the box modified to give normal movement.



B.S.A.

500 S.V. Model M20. 600 S.V. Model M21
Two machines which are equally reliable as solo or heavy-duty sidcar models.



B.S.A. 500 O.H.V. Model M33

A lively robust machine capable of maintaining high touring speeds either solo or with sidcar.

BSA

500 and 600 c.c.
for Solo or Sidcar work

The Latest addition to the World's Widest and Finest range of Motor Cycles —



BSA

MOTO-SERVICE

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Tel. PLAINES 01.07

**GOLDEN
O.H.V.**

**FLASH
TWIN**

The New GOLDEN FLASH

Embodying the attractive design and specification features which have contributed to the remarkable popularity of model A 7, the entirely new engine of increased cylinder capacity has a remarkable performance throughout its entire speed range. At the same time the engine is so flexible and the machine so versatile that it provides an unprecedented sidecar performance, and will satisfy the most ardent high-speed solo enthusiast.

Engine Even-firing Vertical Twin Cylinder O.H.V. 70 mm. bore by 84 mm. stroke; 646 c.c. (40 cu. in.). One-piece forged steel crankshaft with integral bobweights and bolted-on central flywheel also incorporating a bobweight. Roller journal bearing on drive-side mainshaft. Plain bearing big-ends with replaceable indium-flashed lead-bronze liners. Plain bearing for mainshaft timing side. Forged light alloy connecting rods with phosphor-bronze bushes for small-end bearings; low expansion aluminium silicon alloy pistons, with two compression rings, and slotted scraper ring in special duplex oil control groove. Twin cylinders cast in single unit with specially cored air passages. Unit cylinder head-casting with narrow angle valves, two per cylinder, operating in shallow combustion chambers specially developed for maximum efficiency. Separate exhaust rocker box for each cylinder with twin inlet rocker box at rear; special cylinder fin arrangement ensures maximum air flow between ports and over the combustion heads.

Valves operated by overhead rockers, and push rods actuated by a single camshaft at rear through large cam-type tappets with specially generous bearing surfaces. Camshaft gear-driven from engine-shaft through idler pinion, and incorporating timed mechanical breather. Twin exhaust pipes with cylindrical absorption type silencers.

Lubrication System Engine lubricated by dry-sump system with twin gear-type pump, driven by skew gear from engine shaft; pressure feed to timing-side main bearing and big-ends, with by-pass oil pressure release. Metered pressure oil feed to overhead rocker spindles, with return to crankcase. Camshaft operates in specially-designed oil trough. Other moving parts lubricated by oil mist. Capacity of oil-tank—four Imperial pints.

Induction System Bifurcated inlet manifold cast in cylinder head, ensuring correct gas flow from Amal carburettor specially adapted to accommodate large capacity built-in air cleaner, mounted on seat tube between oil tank and tool box.

Ignition Lucas magneto, gear driven from camshaft with centrifugal type automatic advance.

Transmission Primary drive from engine by $\frac{3}{8}$ " duplex roller chain, running in cast aluminium oil-bath chaincase, inner portion forming part of crankcase. Chain tension correctly maintained by adjustable slipper-type

tensioner with hard-chrome bearing surface and external adjustment. Twin cam-type spring-loaded engine shaft cush drive. Rear chain $\frac{5}{8}$ " x $\frac{3}{8}$ " roller, lubricated by special breather-pipe from oil tank. Five-plate clutch with oil-proof fabric inserts; six radially disposed springs designed for uniform pressure distribution; clutch centre mounted on roller bearing to ensure correct alignment when disengaged. Clutch operation by hardened steel push-rod through centre of hollow gearbox mainshaft.

Gearbox B.S.A. four-speed constant mesh gearbox with built-in positive stop foot change. Gearbox mainshaft mounted on ball journal bearings.

Frame Duplex triangulated cradle of ample strength for solo or sidecar work. All frame lugs including those for sidecar and pillion footrests are of forged steel. B.S.A. telescopic front forks with automatic progressive hydraulic damping, and special oil seals at sliding members. Wheels quickly detachable, front with the 8" brake incorporating duplex type ribbed shoes of great strength operating in high-MOLYBDENUM cast iron drum; rear of straight spoke type with 7" brake; Dunlop tyres, front 3.25-19, rear 3.50-19. Welded pressed steel petrol tank—capacity $4\frac{1}{4}$ Imperial gallons (5 U.S. gallons); adjustable handlebar; generous mudguards; tail portion of rear guard detachable for easy wheel removal; spring-up central stand; adjustable footrests.

Equipment Adjustable spring-seat saddle; Lucas 6-volt c.v.c. lighting set with sealed-beam headlamp and high frequency electric horn; metal toolbox under seat tube with complete toolkit; tyre pump; rubber knee-grips.

Controls On left of handlebar, clutch lever and headlamp dip-switch; on right of handlebar, front brake, air lever and horn button; damper knob on steering head; ignition cut-out button on nearside back stay; rear brake operated by left toe pedal; kickstarter and gear-change pedals on right, both provided with rubber sleeves. Twin petrol taps at rear of tank, both with reserve levers and fine mesh gauze filters. Finger adjustment for brakes and clutch controls.

Finish All bright parts including the exhaust system heavily chromium plated; frame, mudguards, etc., lustrous black enamel; petrol tank, black and chrome with distinctive motif; wheel rims chrome with black centres; polished front chain case, gearbox cover, timing cover.

EXTRAS

Spring Frame, as illustrated.

Colour Finish—frame, forks and mudguards in beige enamel; petrol tank beige and chrome with attractive motif; wheel rims chrome with beige centres.

B.S.A. CYCLES LTD., BIRMINGHAM 11, ENGLAND

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