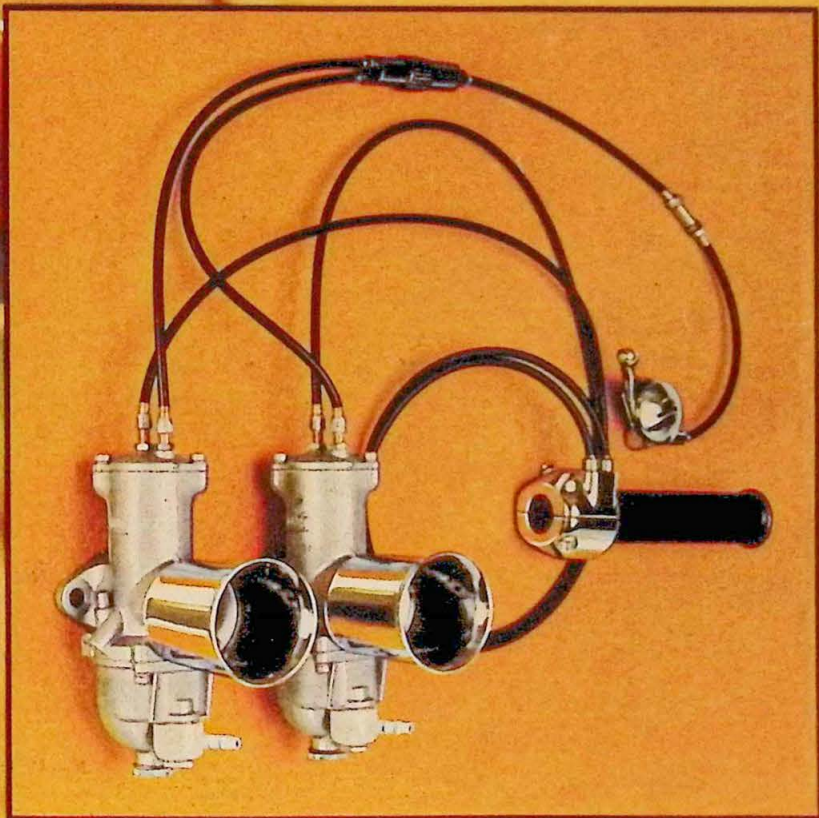


# AMAL CARBURETION SYSTEMS

**AMAL**





# Give your bike a chance to breathe... with a new Amal carburetion system

BRITCYCLE  
PARTS CO.  
www.britcycle.com

**Amal carburetors have been regular race winners since the earliest days of motor-cycling – and they keep on winning, year in year out – right into the 1970's.**

**If your bike is fitted with one or more Amal carburetors and has seen a lot of mileage on street, trail, or dirt – you'll find that refitting with an all-new Amal carburetion system will bring back that sharp 'new machine' performance you experienced your first time out of the dealer's showroom.**

**If your cycle doesn't have the good fortune to be equipped with Amal carburetor and controls already – that's no reason to keep the poor machine deprived any longer. Refit with Amal – experience a new dimension in controlled power.**

**Check with your dealer. He will tell you all about Amal's high-performance features, and advise you on the right Amal equipment to suit your cycle.**

## The Amal Concentric Carburetor

Just about all British-made motorcycles come fitted with Amal carburetors and carburetor controls. Machines made since late 1966 carry the latest model Amal Concentric, with float-bowl positioned concentrically with the main carburetor body.

The float-bowl assembly is common to all Amal Concentrics. To cover the Amal range of nine different inlet bore diameters, the main upper body comes in three sizes:

Series 600 with bores of 22, 24, or 26 mm  
Series 900 with bores of 28, 30, or 32 mm  
Series 1000 with bores of 34, 36, or 38 mm

Now just check these superb design features which make the Amal Concentric the only real carburetor choice for the rider who demands the best:

- Concentric float bowl guarantees regular and constant gasoline feed – even at steep angles of bank
- Pilot bush (pilot jet for two-cycle machines) and precision air passages ensure satin-smooth idling
- Tapered jet needle glides up to give even progressive response as throttle is opened from slow-running position
- From three-quarter throttle upwards, needle jet is fully open, and full gas feed from main jet comes into play for all-out maximum power
- Series 600 and 900 carburetors incorporate rich-mixture choke valve and tickler for no-trouble starting – even in winter conditions
- Choke valve is omitted from Series 1000 carburetors which are used mainly on large competition cycles: engine is warmed up prior to race commencement



*... fitting a new Amal Concentric is an easy job for any rider.*

## How to Choose your New Amal Concentric

For cycles originally equipped with one or more Amal Concentrics it's easy – just ride to your nearest Amal dealer, quote him the reference number on the carburetor body next to the air intake, together with the year, make, and model of your machine. Have him fit the new carb for you, or take it home and mount it yourself – fitting a new Amal Concentric is an easy job for any rider.

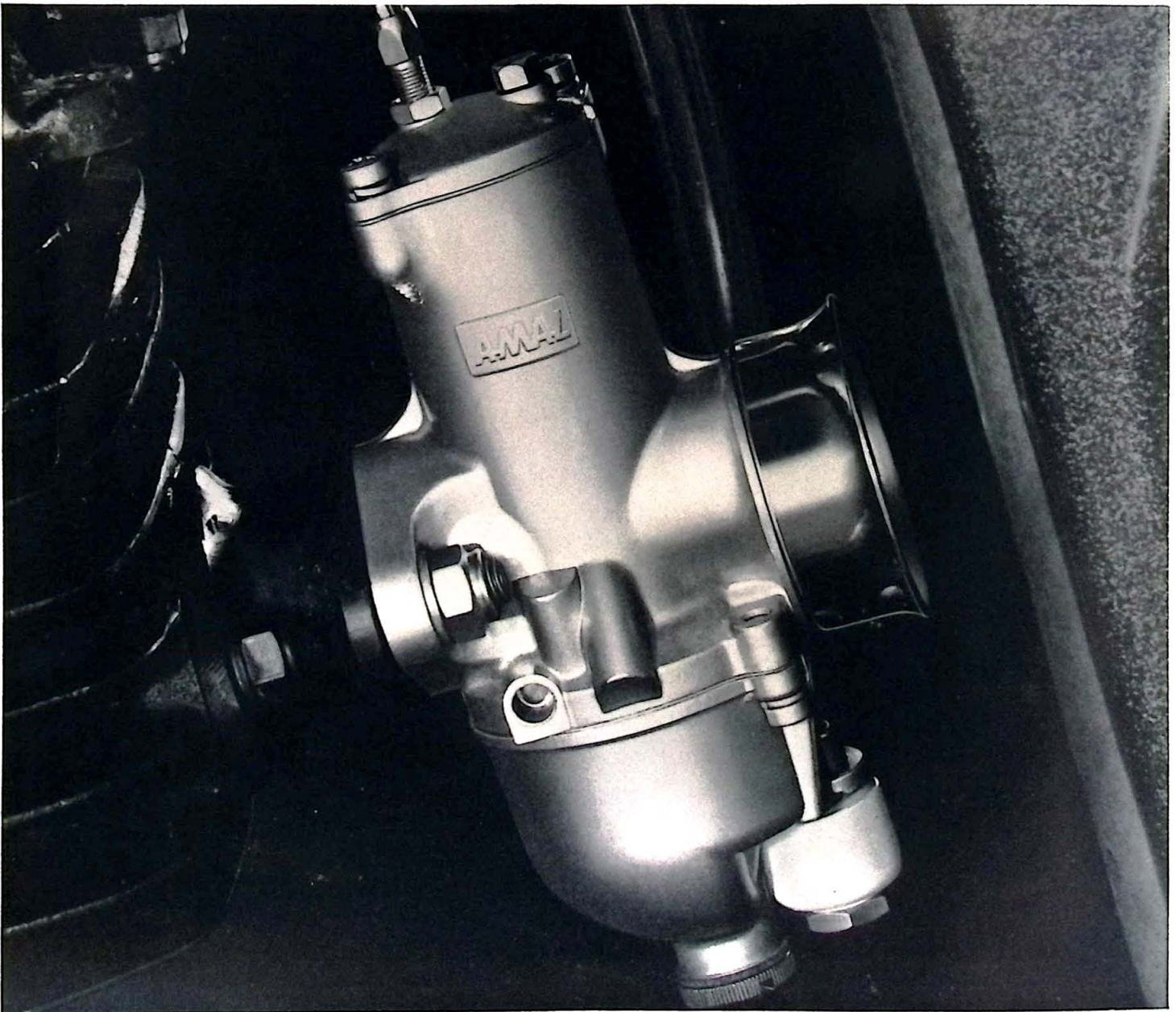
If your bike is fitted with an earlier model Amal carburetor, select a new Amal Concentric with bore diameter (dimension S on drawing page 5) the same as that of your old carburetor. Your Amal dealer will be able to advise you on the best jet sizes for your machine. Ask for leaflet 117/3 which tells you all you need to know about tuning up the new carb.

Be sure to get the right banjo part (item 23 on exploded view page 6) to suit your particular fuel pipe.





*Series 900 Amal Concentric in racing configuration: choke valve components (parts 10, 8, 33 overleaf) have been removed, and choke-cable entry sealed by plug 31.*





# Amal Concentric Carburetor Dimensions

		A	B	C	D	E	F	G	H	J
Series 600	inches mm	2.41 61.2	2.90 73.6	1.63 41.3	1.94 49.2	2.43 61.7	2.56 65.0	1.63 41.2	1.84 46.4	1.30 33.0
Series 900	inches mm	2.74 69.6	3.02 76.6	1.69 42.9	2.13 53.9	2.55 64.7	2.75 69.8	1.81 46.0	1.84 46.4	1.30 33.0
Series 1000	inches mm	3.00 76.2	3.13 79.6	2.05 52.0	2.76 70.0	2.66 67.7	3.00 76.2	2.06 52.4	3.93 98.8	1.38 35.0

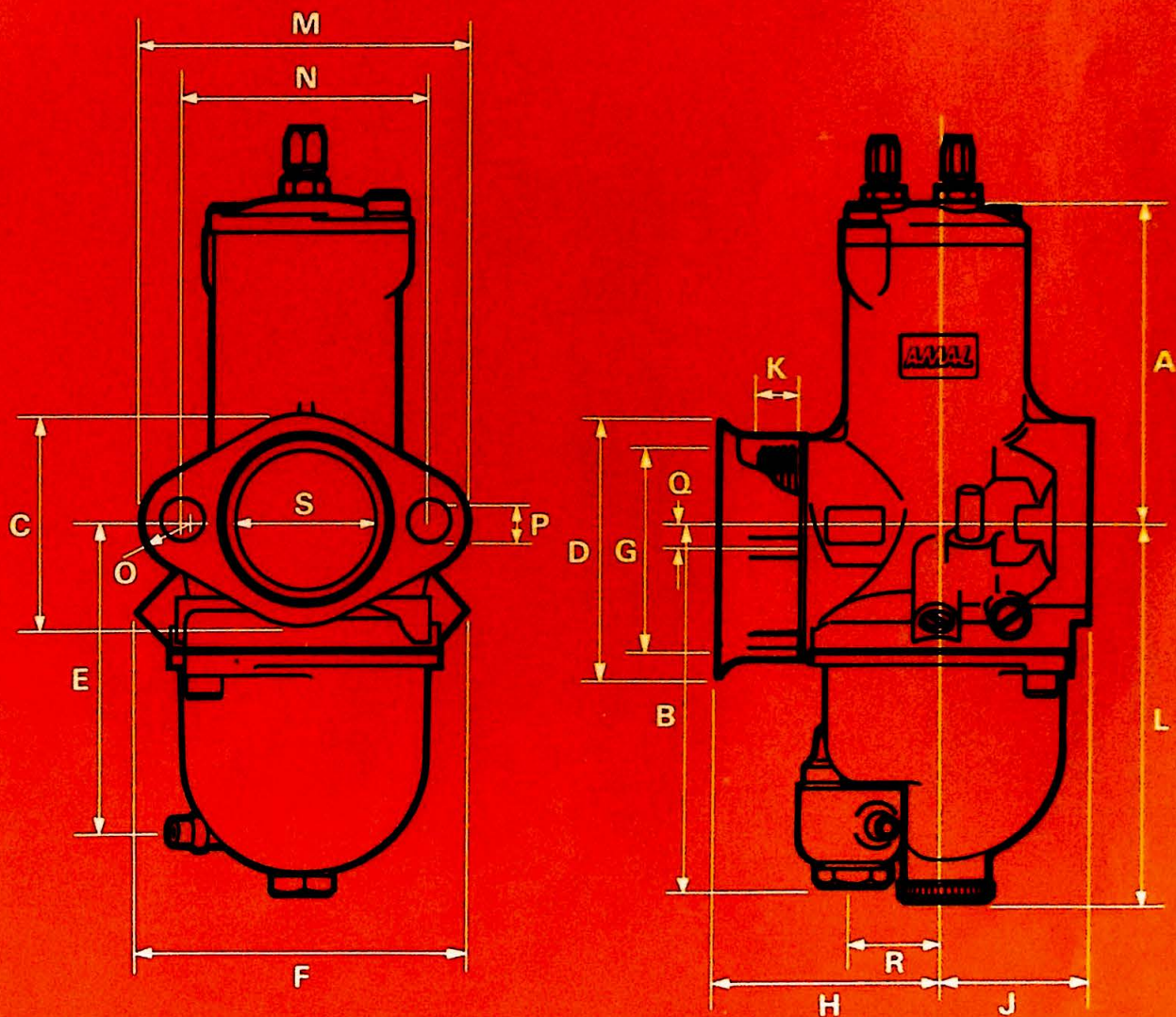
  

		K	L*	M	N	O†	P‡	Q	R	S
Series 600	inches mm	0.30 7.6	3.13 79.6	2.63 66.7	2.00 50.8	0.38 9.5	0.34 8.7	0.19 4.7	0.78 19.8	Bore 22, 24 or 26
Series 900	inches mm	0.30 7.6	3.23 82.1	2.63 66.7	2.00 50.8	0.38 9.5	0.34 8.7	0.19 4.7	0.78 19.8	Bore 28, 30 or 32
Series 1000	inches mm	0.32 8.0	3.35 85.1	3.35 85.0	2.56 65.0	0.52 13.2	0.34 8.7	0.18 4.5	0.78 19.8	Bore 34, 36 or 38

\* This dimension only applies to carburetors fitted with drain plug (optional extra).

† Flange radius.

‡ Hole diameter.





# Spares for your Amal Concentric

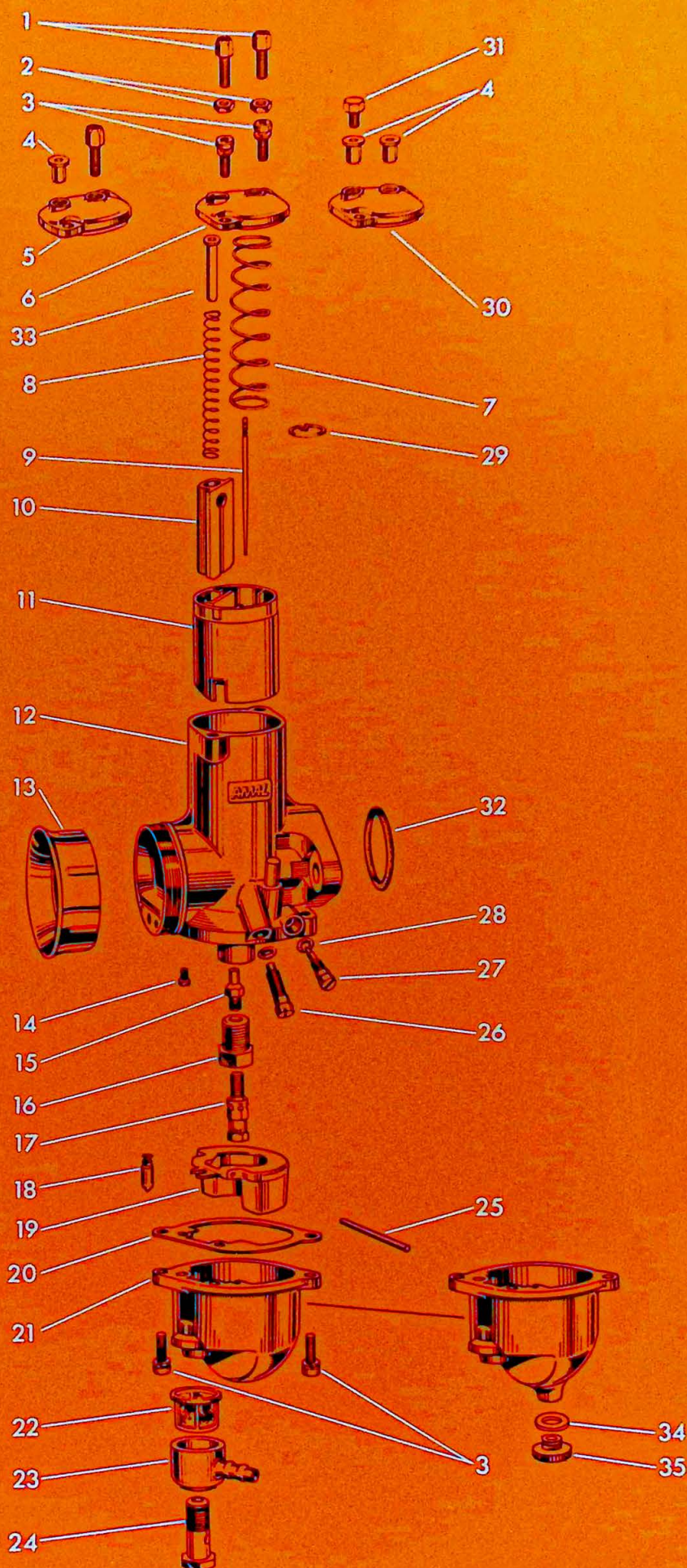
The exploded view right shows all the components of the Amal Concentric, and gives you a good idea on how your carburetor comes apart and fits together. Please take note of the following points about some of the variable items:

**1** The pilot jet (14) only comes with carburetors for two-cycle engines. This jet is omitted on Amals for four-cycle engines, which instead are fitted with a pilot bush (not illustrated).

**2** A new throttle needle (9), needle jet (15), and jet holder (16) should always be fitted as a new matched set, not individually.

**3** Series 600 and 900 carburetors are fitted as standard with a 0.1 inch (2.5 mm) seating in the float-bowl (21) inlet, and Series 1000 carburetors with a 0.125 inch (3.2 mm) seating. Special float bowls for all three models include one with a 0.156 inch (4 mm) seating for alcohol fuels (use special float needle 622/149), and another with a 0.062 inch (1.6 mm) seating for automobile-type pumped fuel feeds. The drain plug is an optional extra.

**4** Be sure to select the right banjo part (23) for your particular fuel pipe.





# Parts List for Amal Concentric Carburetors

Key to illustration	Component	Carburetor Series 600	Carburetor Series 900	Carburetor Series 1000
1	Cable adjuster	4/035	4/035	4/035
2	Cable-adjuster locknut	5/077	5/077	5/077
3	Securing screw for float-bowl and mixing-chamber top	622/086	622/086	622/086
4	Cable ferrule for use with mid-cable adjuster	6/132A	6/132A	—
5	Mixing-chamber top for adjuster and ferrule	622/097	928/097	—
6	Mixing-chamber top (standard)	622/064	928/064	1034/064
7	Throttle-slide spring	622/131	622/131	1034/061
8	Choke-valve spring	622/129	622/129	—
9	Throttle needle (paired with needle jet 622/079)	622/063	928/063	1034/063
9	Throttle needle (paired with needle jet 622/122)	622/124	622/124	622/124
9	Throttle needle (for alcohol only)	622/099	928/099	1034/099
10	Choke valve	622/062	928/062	—
11	Throttle slide (specify cutaway)	622/060	928/060	1034/060
12	Carburetor body and tickler assembly	*	*	*
13	Velocity stack – standard	376/066	928/066	—
13	Velocity stack – 2 $\frac{3}{4}$ in. (70 mm) long	376/143	928/069	1034/070
13	Velocity stack – 2 $\frac{5}{8}$ in. (59 mm) long	—	928/070	—
14	Pilot jet	124/026	124/026	124/026
15	Needle jet (preferred for 2-cycle engines)	622/079	622/079	622/079
15	Needle jet (preferred for 4-cycle engines)	622/122	622/122	622/122
15	Needle jet (for alcohol only)	622/100	622/100	622/100
16	Jet holder	622/128	622/128	622/128
17	Main jet (specify size)	376/100	376/100	376/100
18	Float needle	622/068	622/068	622/068
18	Float needle (for alcohol only. Use with 622/054 float bowl)	622/149	622/149	622/149
19	Float	622/069	622/069	622/069
20	Float-bowl washer	622/073	622/073	622/073
21	Float bowl – 0.10 in. (2.5 mm) seating	622/050	622/050	622/050
21	Float bowl – 0.10 in. seating with drain plug	622/055	622/055	622/055
21	Float bowl – 0.062 in. (1.6 mm) seating	622/052	622/052	622/052
21	Float bowl – 0.062 in. seating with drain plug	622/057	622/057	622/057
21	Float bowl – 0.125 in. (3.2 mm) seating	622/051	622/051	622/051
21	Float bowl – 0.125 in. seating with drain plug	622/056	622/056	622/056
21	Float bowl – 0.156 in. (4.0 mm) seating (for alcohol only. Use with 622/149 float needle)	622/054	622/054	622/054
22	Filter	376/093	376/093	376/093
22	Filter (for alcohol only)	376/093B	376/093B	376/093B
23	Banjo, single, push-on ( $\frac{1}{4}$ in. inside diameter tubing)	376/097	376/097	376/097
23	Banjo, single, threaded $\frac{1}{4}$ in. BSP ( $\frac{5}{16}$ in. tubing)	376/090	376/090	376/090
23	Banjo, single, push-on ( $\frac{5}{16}$ in. tubing)	376/130	376/130	376/130
23	Banjo, double, 90°, push-on ( $\frac{5}{16}$ in. tubing)	376/135	376/135	376/135
23	Banjo, double, 150°, push-on ( $\frac{5}{16}$ in. tubing)	376/139	376/139	376/139
23	Banjo, double, 55°, push-on ( $\frac{5}{16}$ in. tubing)	376/410	376/410	376/410
23	Banjo, double, 180°, push-on ( $\frac{1}{4}$ in. tubing)	376/419	376/419	376/419
Not shown	Banjo washer (for alcohol only)	14/175	14/175	14/175
24	Banjo bolt	622/078	622/078	622/078
Not shown	Banjo bolt washer (for diecast banjos only)	13/163	13/163	13/163
25	Float spindle	622/071	622/071	622/071
26	Throttle stop adjusting screw	622/077	622/077	622/077
27	Pilot air adjusting screw	622/076	622/076	622/076
28	'O' rings	622/082	622/082	622/082
29	Needle clip	622/067	622/067	1034/065
30	Mixing-chamber top for two ferrules	622/098	928/098	—
31	Plug for mixing-chamber top	4/137A	4/137A	—
32	'O' ring for flange sealing	622/101	622/101	—
33	Choke valve guide	622/134	928/103	—
Not shown	Jet key and 'Pozidriv' screwdriver	622/104	622/104	622/104
34	Float-bowl drain-plug washer	622/151	622/151	622/151
35	Float-bowl drain plug	622/147	622/147	622/147
Not shown	Tickler stem	622/089	622/089	1034/067
Not shown	Tickler head	622/081	622/081	1034/068
Not shown	Tickler spring	14/032	14/032	1034/073
Not shown	Tickler body	—	—	1034/074
Not shown	Main-jet filter	928/071	928/071	928/071
Not shown	Cable sheath	—	—	316/083
Not shown	Air-intake adapter	—	—	1034/075

\* When ordering spares, please quote complete carburetor number positioned on raised boss adjacent to air intake.



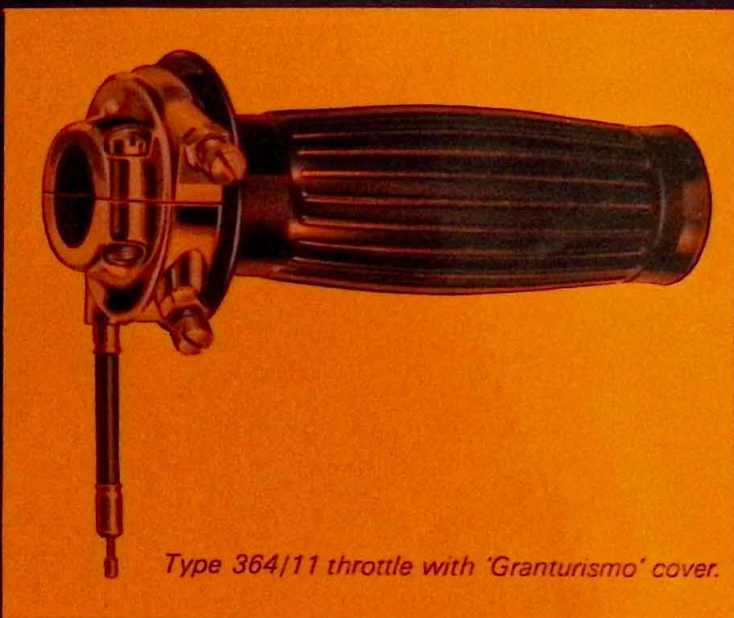
# Amal Throttle Twistgrips

A new Amal Concentric isn't complete without a new Amal throttle twistgrip and cable to go with it. The new throttle and cable will make sure you get super-smooth control of the new carb, and extract all the refinement available from its precision-metered fuel control system.

There are four models of Amal throttle to choose from, all for right-hand control on  $\frac{7}{8}$  inch (22 mm) handlebars. All Amal throttles are approximately  $4\frac{3}{4}$  inches (120 mm) long.



*Type 16/364 throttle with 'Granturismo' cover.*



*Type 364/11 throttle with 'Granturismo' cover.*



*Type 313/10 throttle with slim rubber cover.*



## Amal Type 16 Throttle

Standard throttle for any street- or trail-bike fitted with Amal Series 600 or 900 carburetor. Also OK for use with other makes of carburetor having  $1\frac{3}{4}$  inches (44 mm) cable travel or less at the throttle slide.

This popular Amal throttle comes with a chrome-plated handlebar clamp and friction adjuster screw: screw can either be set so that throttle snaps shut under spring tension on release of grip, or stays put until moved back by hand to idling position. The throttle is available with three different covers:

- Type 16/364 with cushioned rubber 'Granturismo' cover pictured left
- Type 16/417 with slim rubber cover
- Type 16/418 with slim plastic cover

## Amal Type 364 Throttle

Custom-made throttle for the enthusiast, the Amal Type 364 can be used with all Amal carburetors, or just about any other make of carburetor you can name.

Heavily chrome-plated for extra ruggedness and good-looks, this beautifully engineered throttle handle is fitted with friction adjuster, and also has an extra adjuster screw for accurate limitation of the full-open carburetor-slide position. Ensures optimum air flow at full throttle, and prevents excessive strain on control-cable ends. Available with three styles of cover and either medium or fast action, this superb throttle is a *must* for the competition rider. The following models are available:

**Medium action** –  $1\frac{1}{2}$  inch (38 mm) maximum cable travel. Suitable for Series 600 and 900 Amal Concentric carburetors.

Type 364/11 with cushioned rubber 'Granturismo' cover pictured left

Type 364/10 with slim rubber cover

Type 364/12 with slim plastic cover

**Fast action** –  $2\frac{3}{4}$  inches (60 mm) maximum cable travel. Suitable for Series 600, 900 and 1000 Amal Concentric carburetors.

Type 364/14 with 'Granturismo' cover

Type 364/9 with slim rubber cover

Type 364/15 with slim plastic cover

## Amal Type 313 Throttle

This throttle handle is for motorcycles fitted with two carburetors, and has a double rotor to accept two control cables. It has the same de luxe chrome finish as the Type 364, together with friction adjuster and positive-stop adjuster for full-open gas position. The Type 313 is suitable for control of two Series 600 or 900 Amal Concentrics, or two carburetors of other makes having  $1\frac{1}{4}$  inches (32 mm) cable travel or less at the throttle slide.

Available models comprise:

Type 313/13 with 'Granturismo' cover

Type 313/10 with slim rubber cover (pictured left)

Type 313/11 with slim plastic cover

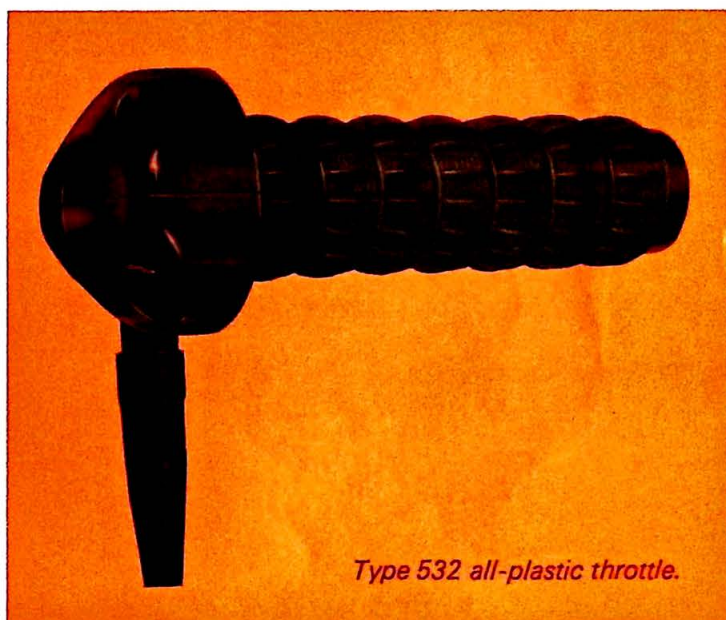
## All-plastic Throttle Type 532

This fast-action throttle is for the rider who prefers light high-quality plastic construction. The heavy-ribbed plastic cover is ideal for competition or trail work, and the throttle comes ready-fitted with slotted metal cable adjuster together with tight-fitting cable sheath to keep out water and dirt. Suitable for control of Amal Series 600, 900 or 1000 carburetors, or other makes of carb with  $1\frac{1}{2}$  inches (40 mm) movement or less at the throttle slide.

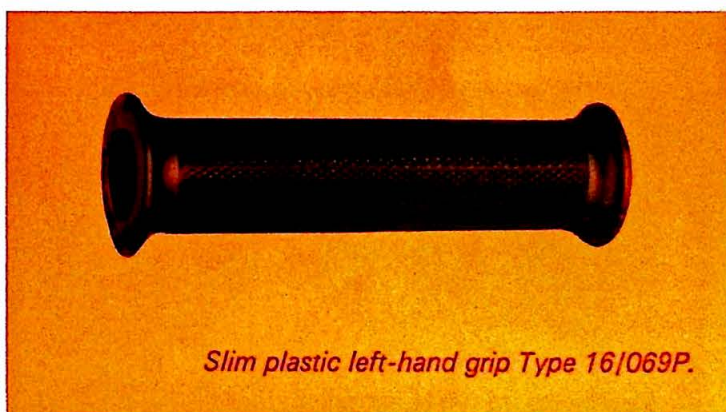
## Matching Left-hand Grips and Replacement Throttle Covers

Left-hand grips are available to match all Amal throttles. Replacements for worn throttle covers can also be supplied. See table below for part numbers.

Description of cover	Left-hand grip	Throttle cover
Cushioned rubber 'Granturismo' cover	16/367	16/365
Slim rubber cover	16/069R	16/070R
Slim plastic cover	16/069P	16/070P
Ribbed plastic cover for throttle Type 532	532/001	532/002



*Type 532 all-plastic throttle.*



*Slim plastic left-hand grip Type 16/069P.*



## Amal Type 12/608 Choke Control Lever

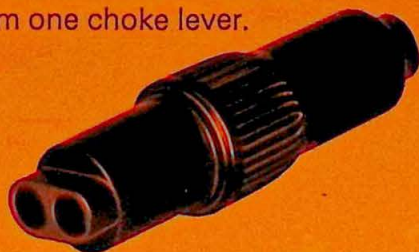
If you're refitting with new Amal carb and throttle – might as well go all the way and have a new choke control lever to match. With gleaming finish in high quality chrome, this control lever is designed for right-side fitting on standard  $\frac{7}{8}$  inch (22 mm) handlebars. For left-side mounting, specify Type 12/609.



## Amal Type 244/104 Junction Box

To operate two choke valves from one control lever, you need an Amal junction box giving two-cable outlet control from single-inlet choke lever control.

A single-inlet, three-outlet junction box, Type 244/2080, is also available to control three carburetors from one choke lever.



## Amal Control Cables

A worn control cable can let you down at an awkward moment on street, track or trail. The Amal control cable is a high-quality product, with an outer cover which is water-, oil- and petrol-proof.

Amal control cables come in standard lengths with cable stops, ferrules, and nipples ready fitted to suit all different control combinations. See opposite page for complete run-down.





## Amal Throttle and Choke Cables for Single-Carburetor Motorcycles

Cable Part Number	For control of	To suit carburetor Series	Throttle or choke lever Type	Cable adjustment on
530/49	Throttle slide	600	16	Carburetor
530/50	Throttle slide	600	364	Carburetor
530/51	Throttle slide	600	532	Carburetor
530/52	Throttle slide	600	16	Mid-cable
530/53	Throttle slide	600	364	Mid-cable
530/54	Throttle slide	600	532	Mid-cable
530/55	Throttle slide	900	16	Carburetor
530/56	Throttle slide	900	364	Carburetor
530/57	Throttle slide	900	532	Carburetor
530/58	Throttle slide	900	16	Mid-cable
530/59	Throttle slide	900	364	Mid-cable
530/60	Throttle slide	900	532	Mid-cable
530/61	Throttle slide	1000	364	Carburetor
530/68	Throttle slide	1000	532	Carburetor
530/62	Throttle slide	1000	364	Mid-cable
530/63	Throttle slide	1000	532	Mid-cable
530/64	Choke valve	600	12/608	Carburetor
530/65	Choke valve	600	12/608	Mid-cable
530/66	Choke valve	900	12/608	Carburetor
530/67	Choke valve	900	12/608	Mid-cable

## Amal Throttle and Choke Cables for Twin-Carburetor Motorcycles

For use with twin-barrel throttle Type 313 and choke lever Type 12/608. Throttle cables are

supplied separately, so that two are required per throttle handle. Choke cable comes as a complete package : single inlet cable with mid-cable adjuster – one-to-two junction box – twin choke valve cables. The front-cover inset picture illustrates this configuration, with cable adjustment on the carburetors.

Cable Part Number	For control of	To suit two carburetors Series	Cable adjustment on
530/71	Throttles slides	600	Carburetors
530/72	Throttles slides	600	Mid-cable
530/73	Throttles slides	900	Carburetors
530/74	Throttles slides	900	Mid-cable
530/75	Choke valves	600	Carburetors
530/76	Choke valves	600	Mid-cable
530/77	Choke valves	900	Carburetors
530/78	Choke valves	900	Mid-cable

## Amal Throttle and Choke Cables for Three-Carburetor Motorcycles

Throttle slides on BSA and Triumph three-cylinder cycles are connected by a linkage controlled by single-cable throttle twistgrip Type 364. A single cable, Part Number 530/69, is required for this application.

The choke control cable for these three-cylinder machines comes as a complete package : single inlet cable with mid-cable adjuster – one-to-three junction box – triple choke valve cables. Cable adjustment is on the carburetors, and the part number of the complete choke control cable package is 530/23.