

Cylinder Head By Casting Number

Casting No	Inlet	Outlet	Cc	Series	
2A628	1,062"/26,99	1,00"/25,4	24,5	Mini 850, Mini 998, Sprite 948	Round inlet port
2A629	1,062"/26,99	1,00"/25,4	24,5	948, A30, A35, Mini 850, Mini 998, Morris Minor	Round inlet port
12A1456	1,062"/26,99	1,00"/25,4	24,5	Mini 850, Mini 998, Sprite948	Round inlet port
12G202	1,156"/29,36	1,00"/25,4	26,1	Cooper 997, Austin 1100, Spridget 9CG & 10CG	Round inlet port
CAM4180	1,0625"/26,99	1,00"/25,4	25,5	Mini - A+ (1980 - on) and lead free	
12G206	1,218"/30,93	1,00"/25,4	28,3	early 998 Cooper, MG 1100, Spridget 10CG spät und 10CC	Square inlet port
12G295	1,218"/30,93	1,00"/25,4	28,3	early 998 Cooper, MG 1100, Spridget 10CG spät und 10CC	Great square inlet
12A185	1,401"/35,6	1,22"/31,0	21,4	First Cooper S	
AEG163	1,401"/35,6	1,22"/31,0	21,4	Later Mk1 & Mk2 Cooper S	
12G940*	1,312"/33,33	1,15"/29,2	21,4	Mini 1275GT, Austin 1300 all late A+ models inc Turbo Not MG Metro, Spridgets 1275	
12G940	1,401"/35,6	1,15"/29,2	21,4	Stamped 12G1805 on flat area by thermostat, MG 1300 & GT & Mk3	
12G940*	1,401"/35,6	1,15"/29,2	21,4	Stamped 12G1805 on flat area by thermostat, MG 1300 & GT & Mk3, MG Metro	
12G940*	1,312"/33,33	1,15"/29,2	21,4	Single point injection	
12G940B	1,312"/33,33	1,15"/29,2	21,4	Single point injection	cast into head at clutch end
12G940*	1,312"/33,33	1,15"/29,2	21,4	Multi point injection	Also with number LDF 10 cast into the head at clutch and painted black

These heads fit to the "small bore" engines

***Note:**

***** A+ head castings - despite having the same 12G940 casting number - are considerably different in appearance, losing the flat area behind the thermostat housing and around the rest of the rocker/head stud areas to a sculptured look - where these areas are replaced by a 'sunken' cast finish. The A+ castings were introduced with the appearance of the Metro in 1980, although some late 1275GTs (1979-on) had them fitted. Generally they are easily recognised by their colour - a putrid yellow on the small-bore castings and bright red on the large-bore ones, a paint finish that is VERY difficult to remove, even in a chemical tank.

***** The MG Metro Turbo shares the same valve sizes with the other non-'big valve' 12G940 variants but has 8mm, sodium-filled exhaust valves.

***** A+ heads generally have three collet grooves in the valves, collets are 14-degree cone taper instead of the 10-degree on single groove collets (so parts are not interchangeable between single and triple groove types) and the top-caps have a raised ridge around the collet hole.

***** SPi (single point injection or 'Tbi' Throttle Body injection) heads are easily recognised by having no heater tap valve port bored through, no by-pass hose adaptor and no tapping for water temperature sender unit just below thermostat housing.

***** TPi (twin point injection or 'MPi' Multi Point injection) heads are easily recognised by having no heater tap valve port bored through, no by-pass hose adaptor, no tapping for water temperature sender unit just below thermostat housing and three bolt holes drilled/tapped in a flattened surface immediately below the thermostat housing area to take the alternator bracket.

998 and 1098cc Cylinder Head Identification

Cylinder head details in this section are appropriate for the 998cc engine used in Minis between 1963 and 1992 (including Riley Elf, Wolseley Hornet and Cooper models) and the 1098cc engine used in Minis between 1975 and 1981.

The cylinder head design for the standard tune 998cc Mini engine was shared with the 848cc engine, but not the 998cc Cooper unit. It was also shared with other BMC model engines, including 803 and 948cc units to be found in Morris Minors, Austin A30, A35 and A40 models and the 'Frogeye' Austin Healey Sprite Mk I. Only the castings marked **2A628** (usually earlier A Series), **12A1456** (later A Series), **CAM4005** (air injection type) and **CAM4180** (A Plus, 1981 on) Mk I. Only the castings marked **2A628** (usually earlier A Series), **12A1456** (later A Series), **CAM4005** (air injection type) and **CAM4180** (A Plus, 1981 on) are appropriate for the standard tune 998cc Mini - the outwardly similar **2A629** is not. The other obvious distinguishing feature of this cylinder head is the inlet valve diameter, which at just 1 1/16" (27mm) is the smallest of any A Series head design. The 998cc Cooper cylinder head was also fitted to high performance 1098cc engines, including the MG, Wolseley, Riley Kestrel and Vanden Plas Princess 1100 models, plus 1098cc Austin Healey Sprites and MG Midgets. For identification purposes the casting number is **12G206** (only on the earliest produced heads) or **12G295** (on the vast majority), while inlet valves are 5/32" larger than on the standard 998cc head at 1 7/32" (31mm) diameter

As far as flow characteristics are concerned, the number **12G295** is writ large in Mini tuners' folklore. It is wholeheartedly recommended for uprated small bore A Series engines for any application other than full race.

The Mini 1098cc cylinder head design also saw use on several other engines including the single carburettor Austin/Morris 1100, the 948cc Austin Healey Sprite Mk II and MG Midget Mk I and the earliest incarnation of the Mini Cooper, the 997cc model. For identification purposes the casting number is **12G202** and inlet valves are 1 5/32" (29.4mm) diameter. At various times during A Series engine production, new and reconditioned cylinder heads from the factory were either in 'assembly' or 'bare' condition. Assemblies usually included studs, valves, valve springs and guides (but not rockers, rocker shaft and pedestals) whereas bare heads usually included valve guides and studs only. These states of build were however not hard and fast, so if you are offered a new or reconditioned factory cylinder head on an exchange unit scheme you should establish before ordering exactly what you will receive, to guard against the possibility of giving away components on your old head that you will still need in future!

Wo habe ich das alles her?

Einen großen Teil von diesen beiden unten genannten Seiten. Eienen Teil aus dem Bich von Vizard und noch weniger habe ich irgendwo irgendwann gelesen und gefunden.

<https://www.somerfordmini.co.uk/cylinder-head-998-and-1098cc>

<https://www.calverst.com/technical-info/identification-by-casting-number/>