

# Cyclic-start AGM Batteries

SPECIALIST VEHICLE APPLICATIONS 40Ah/250Ah



## What is an AGM battery?

AGM stands for absorbed glass mat. In a standard flooded lead acid battery, the acid is free to move around the plates. (It can also spill out if the battery becomes damaged). In an AGM battery the electrolyte is immobilised in an absorbent separator—much like blotting paper.

Using this construction the battery designers have struck a balance between the high starting currents available from conventional flooded automotive batteries and the improved cycles available from the Cyclic Duty GEL type.

**Antares have reintroduced a range of AGM batteries to allow specialist vehicle designers the option of the benefits of a fully sealed unit, a high current starting battery combined with increased cyclic performance compared with traditional start batteries.**

**This range of AGM batteries shares the same ruggedised construction and high performance valves as its cyclic duty GEL alternative.**

**The AGM should be selected in applications which have high current loads, such as starting, operate in very low temperatures and need extremely fast recharge.**

## GEL vs AGM

Which is better? This debate has been characterised by misunderstandings. Neither is better, it is just a matter of selecting the most appropriate battery for your application.

If you are looking for maximum cyclic performance in an auxiliary battery then the cyclic duty GEL is best suited. If your application demands greater power from limited space and weight, possibly at low temperature, such as engine starting from a small battery, you should select the cyclic-start AGM. As a rule of thumb currents in excess of 2-3 times the Ah capacity of the battery bank require AGM technology, this is particularly so when operating in extreme winter conditions. It is essential that the AGM is fully charged, preferably with an overnight regime.

If you only need standby power in an emergency then either are suitable.

Both the AGM and GEL ranges are fully sealed and either can be selected for use in closed installations such as a lockers or car boot, but the enclosure should not be airtight.

Our engineers are often called in to help with this selection. We have applied both battery types to a variety of applications, and can calculate theoretical performance which can be verified where appropriate with practical tests.

We would be pleased to help you make the right selection—please call us.



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engineering with answers

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## Rugged construction

It is often the part you don't see that makes the difference. Most batteries look remarkably similar on the outside and the reason for this is that the basic cases are indeed the same! Over the years the sizes been standardised by the authorities to allow interchangeability and many polypropylene cases are made by specialist manufacturers. What makes the batteries different is what is inside – and of course the label!

The Antares Cyclic-start AGM is a specialised battery built in a purpose built facility alongside our Cyclic Duty GEL range, sharing many components. Most notably the valves, construction methods and quality checks.

## Advanced valves

Although sealed, a safety valve is provided because in an accidental

overcharge condition it will release excess pressure, thereby avoiding an explosion. By using advanced valve technology, slight pressure can be maintained more accurately, which improves the gas recombination process giving longer life but still ensuring safe operation.

## Ease of use

As with the GEL the electrolyte is immobilised. It is non-spillable, and therefore can be operated in virtually any position, however installation upside down is not recommended. Where necessary, usually to reduce height, the batteries may be mounted on their sides with only a marginal loss of capacity.

## Fast charging

Charging must be via a correctly set voltage regulated temperature compensated charger to achieve








Cyclic Ability @ 20hr rate, 20°C	
Depth of Discharge	Cycles
10%	3200
25%	1200
50%	500
75%	250
100%	200

maximum life. Antares DC and AC chargers, active line chargers and alternator controllers ranges all have this built in.

## Safe to transport

Batteries are explosion proof — classified by IATA, ICAO, and FAA as non-hazardous.

These products meet international environmental standards and conform to EC1994 directive on dangerous substances.

Part Number	66413	66414	66415	66410	66411	66421	66417
Capacity @ 100Hr	37Ah	63Ah	91Ah	100Ah	110Ah	210Ah	250Ah
Capacity @ 20Hr	32Ah	54Ah	78Ah	92Ah	104Ah	198Ah	244Ah
Capacity @ 5Hr	28Ah	46Ah	70Ah	78Ah	86Ah	164Ah	197Ah
Engine Starting CCA(-18°C)	200A	350A	410A	580A	650A	1110A	1350A
Engine Starting CCA (-0°C)	240A	390A	660A	810A	850A	1420A	1725A
Length (mm)	211	238	260	324	329	527	527
Width (mm)	130	140	171	175	171	216	279
Height (mm)	184	235	251	220	238	254	254
Weight (kg)	10.9	17.5	24.0	28.6	31.3	58.5	71.7
Terminations	BOLT 1/4"	SAE/ BOLT	SAE/ BOLT	BOLTED INSERT	SAE+ STUD	SAE POST*	SAE POST*
							
Operating Temperature	Fully charged: -40degC to +60degC						
Charging @ 20°C	Charge Voltage 14.4-14.6VDC, Float Voltage 13.5-13.8 VDC						
Container/cover	Polypropylene						
Plate Alloy	Lead Calcium						
Valve	High performance self sealing valve, 2psi operation						
Posts	Forged terminals and bushings						

\*to convert SAE post to 8mm stud use: – Positive post clamp **64570**, Negative post clamp **64571**