

# Cyclic Duty Gel Batteries

SPECIALIST VEHICLE APPLICATIONS 40Ah – 260Ah



**Antares have been designing auxiliary electrical power systems for over a decade. During that period we have found that the cyclic duty GEL battery offers the best characteristics for specialised vehicles. Used as a professional auxiliary battery which has to provide cyclic performance, the GEL battery provides a very cost effective solution. Antares provide a complete battery applications service for the UK specialist vehicle sector. We also have access to technical backup from one of the leading US battery designers and manufacturers – East Penn Manufacturing.**

## Cyclic GEL batteries

The Antares range of GEL batteries are designed to be used where the battery is expected to be repeatedly charged and discharged, as part of its normal day to day operation.

The construction still allows cranking making them still suitable where space and weight restraints only allow one battery to be used.

GELs are particularly suited to operating voltage sensitive loads such as inverters. The battery “holds up” the voltage for longer giving greater usable capacity.

## Long life and cycling

The “acid limited” battery design does not allow self destruction caused by ultra-deep discharging. This condition, if unchecked, causes plate shedding and positive grid corrosion in other batteries.

The GEL contains a phosphoric acid additive which dramatically extends cycle life. Furthermore the batteries do not “stratify” as with flooded cells since the electrolyte is immobilised.

The plates are sleeved with polyester to avoid “mossing” which can short the cells.

## Ease of use

Our batteries contain a thixotropic GEL which is specially formulated to “set”. It is non-spillable, and therefore can be operated in virtually any position. Installation upside down is not recommended.

The gassing is reduced to 1% of any equivalent flooded cell and therefore a normally ventilated enclosure is suitable.

All batteries (except Pn66060) are fitted with a carrying handle to ease carrying, installation and removal.

## Temperature range

GEL batteries are very well suited to low temperature applications down to  $-60^{\circ}\text{C}$ . A fully charged GEL will not freeze at  $0^{\circ}\text{C}$  and will not harm even if it does at very low arctic temperatures! Capacity is impaired but recovers when the battery is warmed up. The batteries



FM 37786  
ISO 9001:2000

Antares (Europe) Limited  
Chiltern Hill  
Chalfont St Peter  
Gerrards Cross  
Buckinghamshire  
SL9 9UQ UK

www.antares.co.uk  
email: info@antares.co.uk  
tel: +44 (0)1753 890888  
fax: +44 (0)1753 891260

**ANTARES**  
engineering with answers

# Cyclic Gel Batteries

SPECIALIST VEHICLE APPLICATIONS 40Ah – 260Ah

operate best at +20°C to 25°C however they can be successfully used up to +60°C ambients. At elevated temperatures the life of the battery may however be shortened.

## Fast & efficient charging

Charging must be via a correctly set voltage regulated temperature compensated charger to achieve maximum life. The Antares mains chargers and alternator control ranges have this built in.

There is no limit on the recharge rate as the battery current is self limiting. Batteries can be charged from 10.5V to 90% in 3.5 hours making them very suitable for opportunity charging applications.

## Additional Safety

Batteries are explosion proof —

Classified by IATA and FAA as non-hazardous.

Thermal runaway does not occur with these GEL batteries due to the good conductivity from the element to the case.

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

## Sealed for life

A GEL cell is pressurised and sealed using special valves and therefore should never be opened. It is completely maintenance free!

Special valves ensure a positive internal pressure which excludes external contaminated air and aids the recombination process. This process recovers oxygen and hydrogen normally lost in a wet cell

| Cyclic Ability @ 20hr rate, 20°C |        |
|----------------------------------|--------|
| Depth of Discharge               | Cycles |
| 10%                              | 6000   |
| 25%                              | 2500   |
| 50%                              | 1100   |
| 75%                              | 750    |
| 100%                             | 500    |

during deep cycling applications.

## Support

Please call one our applications engineers if you need any assistance. We have had a lot of experience applying these products and can often suggest alternative ways to achieve an optimal solution.

| Part Number                  | 66040                          | 66050       | 66060       | 66080          | 66100       | 66110       | 66210       | 66260*      |
|------------------------------|--------------------------------|-------------|-------------|----------------|-------------|-------------|-------------|-------------|
| Voltage                      | 12VDC                          | 12VDC       | 12VDC       | 12VDC          | 12VDC       | 12VDC       | 12VDC       | 12VDC       |
| Capacity @ 5Hr               | 24Ah                           | 34Ah        | 38Ah        | 66Ah           | 75Ah        | 85Ah        | 152Ah       | 188Ah       |
| Capacity @ 20Hr              | 31Ah                           | 40Ah        | 50Ah        | 74Ah           | 86Ah        | 98Ah        | 183Ah       | 225Ah       |
| Capacity @ 100Hr             | 36.Ah                          | 48Ah        | 57Ah        | 84Ah           | 99Ah        | 108Ah       | 210Ah       | 265Ah       |
| Engine Starting Amps (-18°C) | 175A                           | 225A        | 210A        | 410A           | 505A        | 550A        | 970A        | 1150A       |
| Engine Starting Amps (-0°C)  | 250A                           | 325A        | 300A        | 575A           | 700A        | 780A        | 1245A       | 1470A       |
| Dimensions mm (LxWxH)        | 211x130x184                    | 197x168x175 | 238x140x235 | 276x171x235    | 324x171x251 | 329x171x238 | 527x216x254 | 527x279x254 |
| Weight                       | 11KG                           | 14.4KG      | 17KG        | 24.3KG         | 29KG        | 33KG        | 59KG        | 73KG        |
| Terminations                 | 8mm LUG                        | 1/4" female | 8mm LUG     | 1/4" female*** | 8mm LUG     | SAE/STUD    | SAE POST**  | SAE POST**  |
| Carrying handle              | YES                            | NO          | NO          | YES            | YES         | YES         | YES         | YES         |
| Charge V @ 20°C              | 13.8-14.1VDC                   |             |             |                |             |             |             |             |
| Float V @ 20°C               | 13.5-13.8VDC                   |             |             |                |             |             |             |             |
| Container                    | Polypropylene                  |             |             |                |             |             |             |             |
| Electrolyte                  | Sulphuric Acid Thixotropic GEL |             |             |                |             |             |             |             |
| Plate Alloy                  | Lead Calcium/Copper grid alloy |             |             |                |             |             |             |             |
| Vent                         | Self sealing 2psi operation    |             |             |                |             |             |             |             |

\* Special Order – extended deliveries

\*\* SAE post to 8mm stud conversion – Positive post clamp **64570**, Negative post clamp **64571**

\*\*\* Available with T881 terminal PN #66081