

# magnum

## Premium Deep Cycle Batteries

Magnum deep cycle batteries have been specifically designed for the Remote Area Power (RAPS) and standby power markets. It utilises tubular positive plate technology in order to maximise battery life.

The construction of tubular plate cell differs markedly from the method used in making flat plate cells and offers substantial benefits. The active material the Magnum is held in place by a series of tubes made from woven, acid resistance, resin coated polyester fibre.

The polyester tubes have thousands of minute pores which allow electrolyte to pass freely, but minimise any loss of active material. This enables the Magnum to withstand cycling conditions better than a comparable flat plate battery which provides a "reserve" against misuse and prevents premature damage to the battery.

In addition, the spines of the tubular positive plate are completely surrounded with a thick layer of active material which is far thicker than that found on a flat pasted battery. As the rate of corrosion of the positive plate is related to the depth of cover of the active material, this tubular design reduces the corrosion rate, giving greater protection and a longer service life.

A large volume of low concentrate acid has been provided over the plates. This allows the Magnum battery to have a much longer discharge time as well as reducing the frequency of the need for topping up with distilled water. The lower acid concentrations also reduce corrosion and increases cycling ability. Cells are fitted with a vent cap with integral level indicator for easier service.

The cells are packed in either 4 or 6v configuration inside an acid resistant power coated steel case with rails. The inter cell links are burnt to reduce the number of bolted connections. This reduces installation and maintenance costs and increases reliability. Inter pack links are provided.

The steel case has a number of advantage. Cell compression is maintained which prevents the cells to bulge and the battery to deform and fail. The Magnum battery can be shipped without fear of breakage. In-built rails at the base allow the pack to sit directly on the floor, eliminating the cost of a battery rack. Strong, integrated handles allow easy movement. The steel case also helps cool the battery.



Available From



**WA Solar  
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## Product Specification

<b>Application</b>	Cyclic (RAPS, Solar/Diesel Hybrid, Diesel Hybrid)		
<b>Design Life</b>	7 years (Minimum, Achieved 8-14 years in actual service)		
<b>Self Discharge Rate</b>	< 5% per month at 25oC		
<b>Number of Cycles v's DOD</b> (at 25oC, C10. Cyclic life increases with longer cycle periods)			
- 20%	3000	- 30%	2700
- 40%		- 40%	2200
- 50%	2050	- 60%	1800
- 80%		- 80%	1400
<b>Positive Plate</b>	<b>Negative Plate</b>		
- Type	Tubular	- Type	Flat Pasted
- Material	Lead Antimony	- Material	Lead Antimony
- Thickness	9.8mm	- Thickness	4.1mm
<b>Separator</b>	<b>Container &amp; Cover Materials</b>		
- Type	Microporous Plastic	- Cell	Polypropylene
- Thickness	0.95mm	- Case	Acid Resistant Power Coated Steel
<b>Efficiency at C10 (%)</b>	<b>Temperature Range</b>		
- Ampere-Hour	> 90%	- Recommended	15 - 35oC
- Watt-Hour	> 80%	- Max Continuous	45oC (54oC<1hr)

Model	MAG535-6	MAG875-6	MAG1025-4	MAG1320-4
<b>Voltage</b>	6	6	4	4
<b>Capacity at 25oC</b> (C100 – 1.85v/cell, C24 – 1.75v/cell)	535Ah C100 448Ah C24	875Ah C100 739Ah C24	1025Ah C100 867Ah C24	1320Ah C100 1118Ah C24
<b>Discharge Current</b> Max/Short Circuit Current	525/2203A	875/3205A	1000/4087A	1285/5100A
<b>Charge Current</b> Maximum/Normal/Minimum	46/41/26	75/67/43	88/78/52	113/100/67
<b>Physical</b> (Dimensions in mm LxWxH)	360x185x645 88Kg	550x185x645 133Kg	345x235x645 103Kg	345x285x645 130Kg
<b>Electrolyte Volume</b>	15.2L	25.5L	20.2L	25.6L

Feature	Benefit
Tubular positive plate	Higher cyclic life Withstands high temperature Fast recharging No Shedding Lower corrosion of plate Larger surface area
Proven reliability	The plate designed for submarine batteries
Mounted in steel cases	Can be shipped to remote sites without fear of damage Helps draw heat out of battery
Runner on base of case	Can be placed directly on floor, does not require rack Aids air circulation to keep battery cooler Reduces acid stratification within battery
Handles on steel case	Easy lifting and placing in position
Hinge cover over terminal	Safety, dropped items cannot fall across battery
Low specific gravity	Less corrosive - longer life
Large electrolyte reserve (90mm)	Batteries need topping up infrequently (3-6 months)
Already linked in 4 or 6v blocks	Less connections, higher reliability of the system, easier installation