

Millat Deep Cycle Flooded Batteries are suitable for use where repeated charge discharge cycles are required such as solar energy systems, electric vehicles, golf carts, etc.

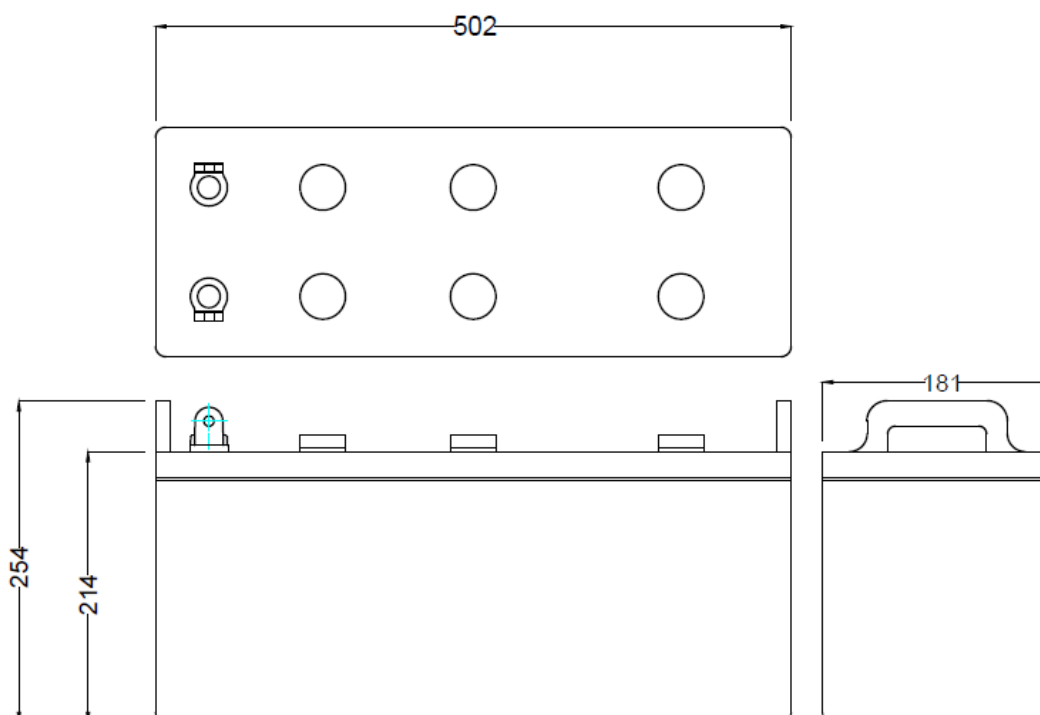
These batteries are constructed with thick plates of lead antimony alloy special formulated paste and synthetic pulp separators with glass mat.



Specifications

Type	Flooded Lead Acid	Weight Dry	28 kg <i>approximate</i>
Volts	12 V	Electrolyte Volume	9.5 litre <i>approximate</i>
Capacity	120Ah 20hr rate to 1.7V/cell at 30°C after 10 cycles	Electrolyte Density	1.260
No of cells	6	Dimensions (LXWXH)	502X181X254
Terminal	L-Type with 8mm hole	Case Material	Polypropylene

Dimensions



Charging

New Deep cycle batteries need to be cycled several times before they reach their full capacity, approximately 10 cycles. Capacity will be limited during this period. New batteries should be given full charge before use.

Selection of correct charging parameters is one of the most important parameters for ensuring long life and trouble-free operation. Following a discharge, the battery should be immediately charged in a well-ventilated area.

Depth of Discharge

The life of a battery, measured in number of charge discharge cycles, depends on how deeply it is discharged before recharging (depth of discharge). Battery should not be discharged beyond 80% of its capacity otherwise it will lose some of its capacity permanently. Repeated discharge beyond 80% of capacity will result in extremely low life. For optimum life and performance batteries should be used at 40% of their capacity up to 1.210 specific gravity. Depth of discharge can be approximately measured by checking the specific gravity of the battery.

State of Charge	Specific Gravity at 30 °C
100%	1.260
80%	1.240
60%	1.210
40%	1.190
30%	1.180
20%	1.175

Operating temperature

Operating batteries at high temperature shortens their life. Charging should be stopped if electrolyte temperature exceeds 50°C it should be resumed again after the temperature drops below 40°C. Batteries should be kept in a cool and well-ventilated area.

Charging with Constant Voltage

Batteries should be charged with a constant voltage of 14.4V with the charging current controlled at 20A. With this method charging current will be maintained at 20A until the battery voltage rises to 14.4 volt after which the current will start to decrease and the charger will keep the voltage constant at 14.4V. Charging should be stopped after the current has reached 1% of its rated capacity (1.2Amp for D1450)

Equalisation Charge

To ensure that all the cells/batteries are at the same charge level in a battery bank it is recommended that the batteries be given an extended charge at 14.6 V for 2 to 3 hrs once a month.

Float Charge

Maintain battery at a voltage of 13.8V for keeping it charged and ready at all times.

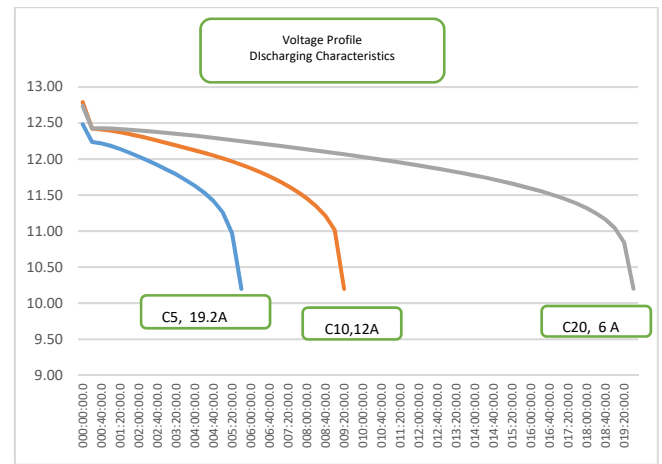
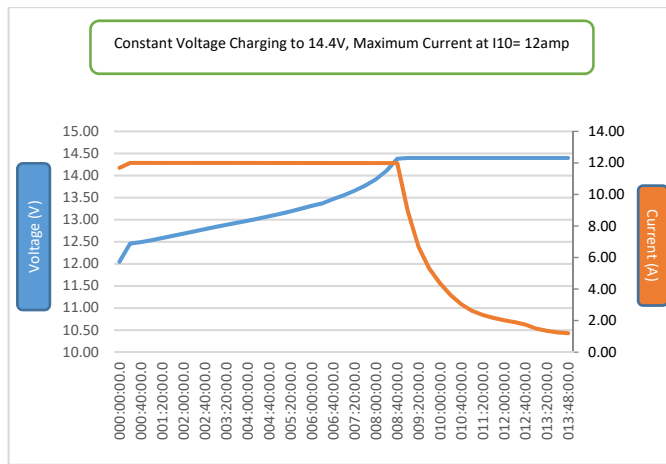
The above voltages are at battery temperature of 25°C. For temperatures above 25°C reduce the charging voltage by 15mV/°C and increase the voltage by 15mV/°C for temperatures below 25°C

Maintenance

Electrolyte level of the battery should be maintained by adding distilled / De-Ionised water only. Electrolyte should be added only after the battery has been fully charged. Adding too much water (above the max level) will deteriorate battery performance. Too little water (below the min level) will damage the battery.

Terminals and cables should be cleaned regularly. Slightly grease the terminals to prevent corrosion.

Keep top of battery clean and dry.



Safety Precautions

1. All lead-acid batteries generate highly flammable Hydrogen gas. If ignited, the gas may explode violently. When working near batteries, always wear safety glasses, do not smoke or use open flame near the batteries, remove watches and jewellery and avoid causing sparks with tools.
2. Battery electrolyte is corrosive and can cause blindness or severe burns. If exposed to battery electrolyte, immediately flush with water and seek medical attention.
3. The batteries in your equipment are electrically live at all times. Keep the top of the batteries clean and dry to prevent ground shorts and corrosion.
4. Do not tip a battery in any direction excessively. This would allow battery electrolyte to push through the battery vent assembly.

Specifications subject to change without notice