

# EV Motive AGM

**[Electric Vehicles,  
Wheelchairs, UPS, etc]**



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EV Motive AGM series is a special NORTHBATT Absorptive Glass Mat technology series, designed for all Electric Powered Vehicles. Its robust construction guarantees maximum reliability and product consistency under any Heavy Duty Motive Energy demand. Due to its innovative manufacturing process, delivers high capacity output and more power for same volume and footprint.

Plates are made of novel lead – calcium alloy and ultra purity materials, involving the most environmental friendly processing methods. Strict manufacturing and quality control processes, give product superiority and safety needed.

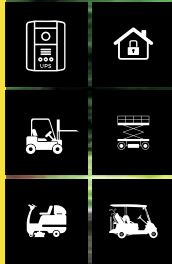
Excellent corrosion resistance performance and long cycle life under very low temperatures are also ensured by exceptional container formation and terminal sealing procedures.

High temperature and humidity plate curing technique, make plate high oxidation extend and harms due to vibrations or shocks to be avoided. EV Motive AGM Series is designed for tough applications and repeated deep discharging. Tested according to international standard IEC 60896-21, IEC 61982-3: 2001 and complies to defined requirements of IEC 60896-22.

- Positive Plates:** Extra cycle resistant pasted Positive plates are made of multivariate lead grids.
- Negative Plates:** Negative plates with pasted formula provide large discharge current.
- Separator:** High porous acid-proof AGM separator allows hydrogen recombination into water, while high absorptive rate reserves quantitative electrolyte for the chemical reaction.
- Terminals:** Lead-tin alloy with copper insert threaded terminals conducting electricity reliably and safely.
- Electrolyte:** They utilize an electrolyte suspension system consisting a high porosity, glass fiber material, which in conjunction with plates, totally absorbs the electrolyte.
- Safety Valves:** The pressure maintaining ability of relief valve can promote the gas recombination, meanwhile prevent foreign matters get into the battery or contain bulge because of overcharge.
- Container - Lid:** Made from a ABS material for mechanical strength to ensure vibration proof of the battery.

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## DESIGN FEATURES & BENEFITS

- Extra long cycle life and resistance to mechanical stress.
- Increase durability and deep cycle ability (900 cycles @ 50% D.O.D) for heavy demand applications.
- Maintenance-free, Spill proof / leak proof - Multi-position usage
- Very high purity lead (purity rate 99.994%)
- Traction heavy duty grid design gives consistent active material adhesion and corrosion resistance.
- Low self-discharge - Very good power to weight ratios
- Charging Voltage – Float 13.7 – 13.9V, Cyclic 14.3 – 14.9V

## APPLICATIONS

- Electric vehicles/scooters/ bicycles
- Golf cars/buggies
- Military target/shooting electric car
- Railways/Marine applications
- Cleaning equipment
- Mobility access/wheelchairs
- UPS/EPS
- Battery powered light weight pallet trucks/ platforms/scissors lifts
- Automated Guided Vehicles (AGV's)
- Small-Medium Solar Systems

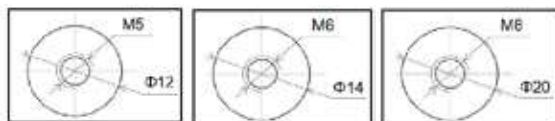
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| EV MOTIVE AGM  |    |     |     |     |            |     |     |        |                                     |                                                   |         |           |        |
|----------------|----|-----|-----|-----|------------|-----|-----|--------|-------------------------------------|---------------------------------------------------|---------|-----------|--------|
| Northbatt Code | V  | AH  |     |     | DIMENSIONS |     |     |        | Recom.<br>max.<br>Charge<br>Current | Recom.<br>max.<br>Discharge<br>Current<br>(5 sec) | Weight  | TERMINALS |        |
|                |    |     |     |     | L          | W   | H   | T.H    |                                     |                                                   |         | TYPE      | LAYOUT |
|                |    |     |     |     |            |     |     |        |                                     |                                                   |         |           |        |
|                |    | C20 | C5  | C2  |            |     |     |        |                                     |                                                   |         |           |        |
| 230-6 EV       | 6  | 230 | 200 | 185 | 260        | 180 | 245 | 250    | 28.5                                | 1850                                              | "31.00" | "M8"      | "D"    |
| 185-8 EV       | 8  | 185 | 165 | 135 | 260        | 180 | 275 | 280    | 22.5                                | 1350                                              | "33.50" | "M8"      | "B"    |
| 16-12 EV       | 12 | 16  | 13  | 12  | 151        | 99  | 98  | "98.5" | 2.4                                 | 120                                               | "3.95"  | "M5"      | "A"    |
| 27-12 EV       | 12 | 27  | 23  | 20  | 181        | 77  | 170 | 170    | 4.0                                 | 200                                               | "6.15"  | "M5"      | "B"    |
| 30-12 EV       | 12 | 30  | 24  | 22  | 166        | 175 | 125 | 125    | 4.8                                 | 220                                               | "8.00"  | "M5"      | "B"    |
| 38-12 EV       | 12 | 38  | 33  | 30  | 195        | 130 | 167 | 167    | 6.4                                 | 330                                               | "11.50" | "M6"      | "C"    |
| 50-12 EV       | 12 | 50  | 45  | 40  | 198        | 166 | 170 | 170    | 8.2                                 | 400                                               | "13.20" | "M6"      | "B"    |
| 65-12 EV       | 12 | 65  | 58  | 49  | 228        | 138 | 205 | 208    | 10.6                                | 490                                               | "16.50" | "M6"      | "C"    |
| 72-12 EV       | 12 | 72  | 63  | 53  | 228        | 148 | 173 | 178    | 11.8                                | 530                                               | "17.30" | "M6"      | "C"    |
| 88-12 EV       | 12 | 88  | 80  | 68  | 260        | 168 | 210 | 210    | 14.4                                | 680                                               | "24.00" | "M6"      | "C"    |
| 123-12 EV      | 12 | 123 | 110 | 95  | 330        | 172 | 214 | 214    | 20.0                                | 950                                               | "30.00" | "M8"      | "C"    |
| 165-12 EV      | 12 | 165 | 145 | 125 | 336        | 172 | 274 | 279    | 25.0                                | 1250                                              | "45.00" | "M8"      | "C"    |

## TERMINAL TYPES - LAYOUTS

### TERMINAL TYPES

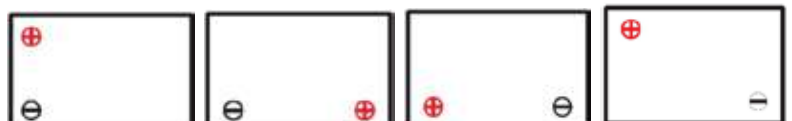


M5

M6

M8

### TERMINAL LAYOUTS



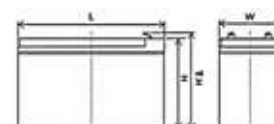
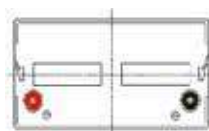
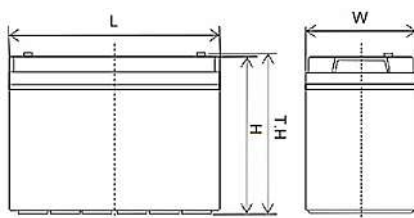
A

B

C

D

## BATTERY DIMENSIONS

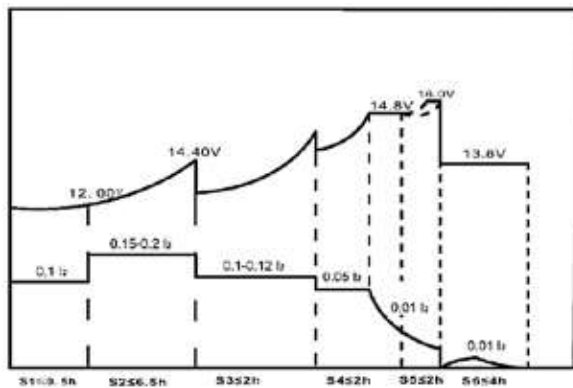


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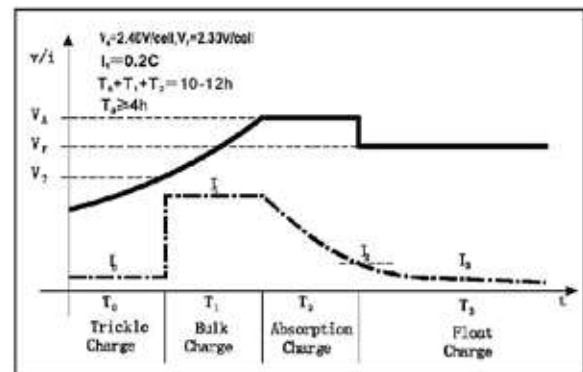


## PERFORMANCE CURVES

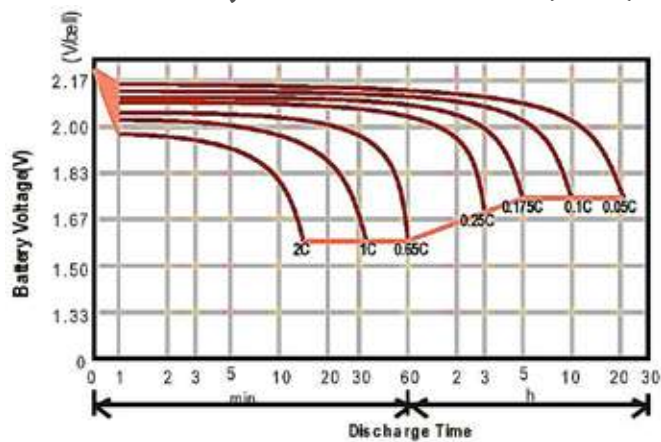
Charge Characteristic Curve  $\leq 38-12$  EV (25 °C)



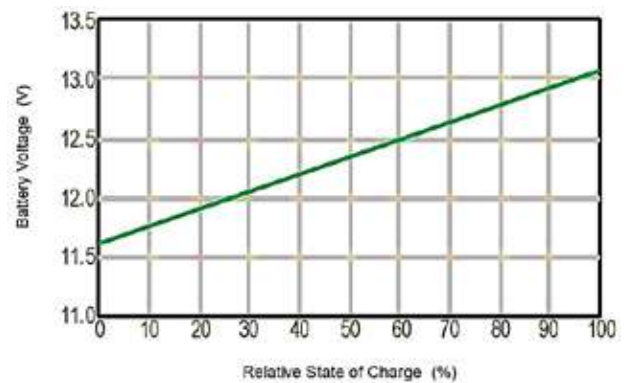
Charge Characteristic Curve  $>38-12$  EV (25 °C)



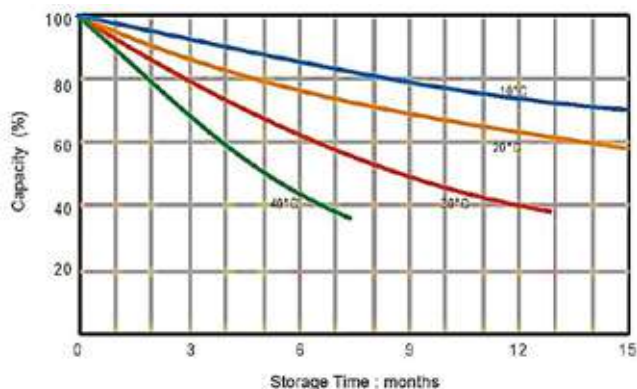
Discharge Characteristic Curves (25 °C)



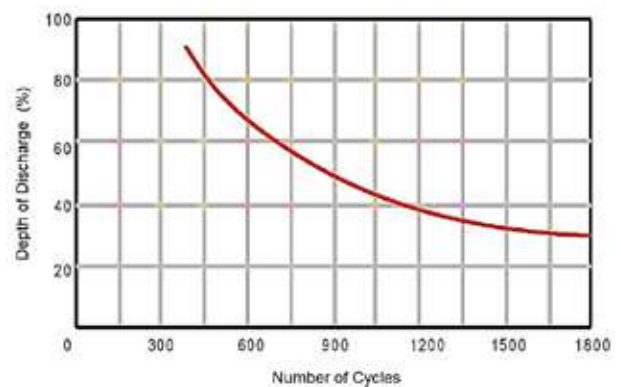
OCV vs State of Charge (25 °C)



Self Discharge vs Capacity



Cycle Life vs D.O.D





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#### BRANCH STORE:

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