



AGM Batteries

The Sealed Battery Specialists



Advanced American Technology and the use of the most modern computer-aided design and manufacturing techniques combine to make MK Battery's Sealed AGM Batteries the standard by which all other AGM batteries are measured.

## GENERAL APPLICATIONS

| Specifications |            |                   |                 |            |            |                       | Minute Discharged at 77°F (25°C)* |         |         |         |        |        | Discharge Amps |         |         |         |         |         |
|----------------|------------|-------------------|-----------------|------------|------------|-----------------------|-----------------------------------|---------|---------|---------|--------|--------|----------------|---------|---------|---------|---------|---------|
| Model          | Foot Notes | Terminal Standard | Terminal Option | CCA @ 0° F | CA @ 32° F | Res. Capacity @ 77° F | 75 Amps                           | 50 Amps | 25 Amps | 15 Amps | 8 Amps | 5 Amps | 5 Min.         | 10 Min. | 15 Min. | 20 Min. | 30 Min. | 60 Min. |
| 8AU1           | H/NS       | Y                 | N/A             | 200        | 240        | 48                    | 10                                | 20.0    | 54      | 97      | 200    | 340    | 110            | 75      | 60      | 50      | 39      | 23.0    |
| 8A22NF         | V/NS       | G                 | N/A             | 350        | 390        | 90                    | 22                                | 40.0    | 102     | 180     | 365    | 620    | 160            | 120     | 95      | 80      | 62      | 38.0    |
| 8A24           | H/NS       | U                 | G               | 470        | 660        | 140                   | 35                                | 60.0    | 150     | 280     | 550    | 900    | 220            | 165     | 130     | 110     | 85      | 50.5    |
| 8A27           | H/NS       | U                 | B               | 580        | 810        | 175                   | 43                                | 75.0    | 185     | 330     | 640    | 1080   | 270            | 200     | 153     | 130     | 98      | 59.0    |
| 8A31DT         | H/T        | S/X               | N/A             | 650        | 850        | 190                   | 53                                | 87.4    | 200     | 348     | 706    | 1265   | 305            | 226     | 174     | 147     | 114     | 68.2    |
| 8A4D           | H          | S                 | T               | 1110       | 1420       | 380                   | 106                               | 180     | 413     | 745     | 1512   | 2507   | 508            | 408     | 318     | 266     | 200     | 115     |
| 8A8D           | H          | S                 | T               | 1350       | 1725       | 480                   | 138                               | 230     | 517     | 953     | 1874   | 3040   | 600            | 475     | 386     | 325     | 256     | 151     |
| 8AGC2          | V          | G                 | N/A             | 690        | 915        | 380                   | 94                                | 171     | 409     | 718     | 1407   | 2304   | 361            | 278     | 233     | 200     | 167     | 102     |

## MK Battery Features

- 100% Maintenance-Free
- Proprietary Plate Formation Process
- Exclusive Ultra Premium Sealing Valve
- Dual-Purpose Design Yields Deep Cycle Service and High Rate Performance
- Computer-Cast Power Path Grids
- Exclusive Weld Seals
- Over 250 Quality Checks

### BENEFITS

- Maintenance-free sealed construction eliminates the need to add water.
- Less than 2% per month stand loss means little deterioration during transport and storage.
- Non-spillable batteries transport easily and safely by air.
- Quality construction ensures reliable service and support.

### APPLICATIONS

- Water Pumping
- Residential
- Communications
- Cathodic Protection
- Remote Monitoring
- Refrigeration
- Lighting
- Aids to Navigation
- Wind Generation
- Power Wheelchairs
- RV
- Golf Cart
- Solar

### SPECIFICATIONS

|                             |   |
|-----------------------------|---|
| Voltage                     | 6 & 12 volts nominal                                |
| Plate Alloy                 | Lead Calcium  |
| Posts                       | Forged terminals & bushings                         |
| Container/Cover             | Polypropylene                                       |
| Charge Voltage @68°F (20°C) | Cycle 2.40 to 2.43; Float 2.25 to 2.30 v.p.c.       |
| Charge Voltage @77°F (25°C) | Cycle 2.38 to 2.41; Float 2.23 to 2.28 v.p.c.       |
| Vent                        | Self sealing (2PSI operation)                       |
| Operating Temperature       | Fully Charged Range: -40°F (-40°C) to +140°F (60°C) |

# AGM SPECIFICATIONS

| to 1.75VPC at 77°F (25°C) |      |      |       |       |       |       |        | Ampere Hour Capacity* |            |            |           |           | Weight    | Dimensions – In (mm) |  |                                     |                                     |
|---------------------------|------|------|-------|-------|-------|-------|--------|-----------------------|------------|------------|-----------|-----------|-----------|----------------------|--|-------------------------------------|-------------------------------------|
| 90 Min.                   | 3 Hr | 5 Hr | 10 Hr | 20 Hr | 24 Hr | 48 Hr | 100 Hr | 100 Hr Rate           | 20 Hr Rate | 10 Hr Rate | 5 Hr Rate | 3 Hr Rate | 1 Hr Rate | Approx. Lbs. (Kgs.)  | L                                      | W                                   | H <sup>■</sup>                      |
| 16                        | 8.8  | 5.5  | 3.1   | 1.6   | 1.3   | 0.74  | 0.37   | 37                    | 32         | 31         | 27.5      | 26.4      | 23        | 24 (11)              | 8 <sup>5</sup> / <sub>16</sub> (211)   | 5 <sup>1</sup> / <sub>8</sub> (130) | 7 <sup>1</sup> / <sub>4</sub> (184) |
| 28                        | 15.0 | 9.3  | 5.1   | 2.7   | 2.3   | 1.2   | 0.63   | 63                    | 54         | 51         | 46.5      | 45.0      | 35.5      | 39 (17)              | 9 <sup>3</sup> / <sub>8</sub> (238)    | 5 <sup>1</sup> / <sub>2</sub> (140) | 9 <sup>1</sup> / <sub>4</sub> (235) |
| 36                        | 21.6 | 14.1 | 7.0   | 3.9   | 3.3   | 1.8   | 0.91   | 91                    | 78         | 70         | 70.5      | 64.8      | 50.5      | 53 (24)              | 10 <sup>1</sup> / <sub>4</sub> (260)   | 6 <sup>3</sup> / <sub>4</sub> (171) | 9 <sup>5</sup> / <sub>8</sub> (251) |
| 44                        | 25.0 | 15.6 | 8.5   | 4.6   | 3.8   | 2.1   | 1.0    | 100                   | 92         | 85         | 78.0      | 75.0      | 59        | 63 (29)              | 12 <sup>3</sup> / <sub>4</sub> (324)   | 6 <sup>7</sup> / <sub>8</sub> (175) | 9 <sup>1</sup> / <sub>4</sub> (235) |
| 49                        | 27.1 | 17.2 | 9.5   | 5.2   | 4.4   | 2.3   | 1.1    | 110                   | 104        | 95         | 86.0      | 81.3      | 68.2      | 69 (31)              | 12 <sup>15</sup> / <sub>16</sub> (329) | 6 <sup>3</sup> / <sub>4</sub> (171) | 9 <sup>3</sup> / <sub>8</sub> (238) |
| 85                        | 50.0 | 32.7 | 17.8  | 9.9   | 8.3   | 4.4   | 2.1    | 210                   | 198        | 178        | 164       | 150       | 115       | 129 (59)             | 20 <sup>3</sup> / <sub>4</sub> (527)   | 8 <sup>1</sup> / <sub>2</sub> (216) | 10 (254)                            |
| 106                       | 60.7 | 39.4 | 22    | 12.2  | 10.2  | 5.2   | 2.5    | 250                   | 244        | 220        | 197       | 182       | 151       | 158 (72)             | 20 <sup>3</sup> / <sub>4</sub> (527)   | 11 (279)                            | 10 (254)                            |
| 84.3                      | 48.2 | 32.6 | 18.6  | 9.3   | 8.4   | 4.3   | 2.2    | 220                   | 187        | 186        | 163       | 145       | 102       | 68 (31)              | 10 <sup>1</sup> / <sub>4</sub> (260)   | 7 <sup>1</sup> / <sub>8</sub> (181) | 11 (279)                            |

■ Height based on standard terminal.  
For terminal option, please call for exact dimensions.

## Charging Information & Chart Footnotes

\*AMPERE HOUR CAPACITY IS A NOMINAL RATING.

**BATTERY VOLTAGE:** All batteries are 12 Volt excluding MODEL 8AGC2, which is 6 Volt.

**IMPORTANT CHARGING INSTRUCTIONS:** WARRANTY VOID IF OPENED OR IMPROPERLY CHARGED. Constant under or overcharging will damage any battery and shorten its life! Use a good constant potential, voltage-regulated charger. For 12-volt batteries, charge to at least 14.4 volts but no more than 14.6 volts at 68°F (20°C). For 6-volt batteries, charge to at least 7.2 volts but no more than 7.3 volts at 68°F (20°C). Do not charge in a sealed container.

**NON-SPILLABLE** by DOT (Department of Transportation), ICAO (International Commercial Airline Organization), and IATA (International Airline Transport Association) definitions.

### FOOTNOTES:

- H - Includes handles
- NS - Non-Spillable Battery
- T - Dual top terminals w/SAE posts & stainless steel 3/8" stud and wing nuts
- V - Combination terminals, offset post with horizontal hole, 5/16" bolt and hex nut



UL Recognized Component

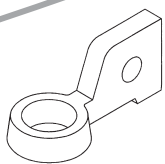
MH17218

The quality system at East Penn Mfg. is certified to

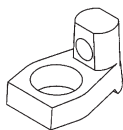
**ISO 9001**



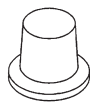
## TERMINAL INFORMATION



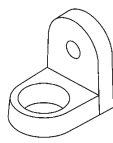
**B**  
Flag terminal with 3/8" diameter hole (T876)



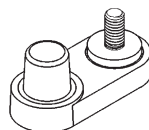
**G**  
Offset post with horizontal hole, stainless steel 5/16" bolt & hex nut (T881)



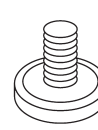
**S**  
SAE "Automotive Post" (TSAE)



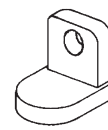
**T**  
Heavy Duty "L" terminal with 3/8" diameter hole (T975)



**U**  
Molded-in offset SAE post & vert 5/16" NEG. & 3/8" POS. stainless steel studs & wing nuts



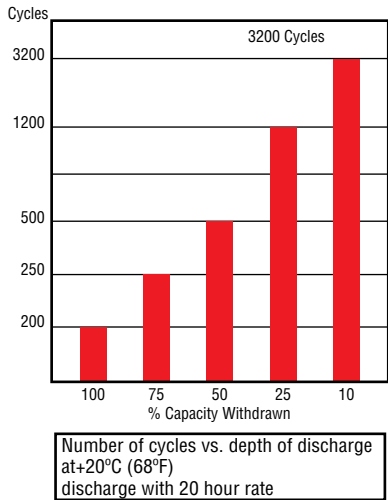
**X**  
3/8" - 16 stainless steel stud posts (STUD)



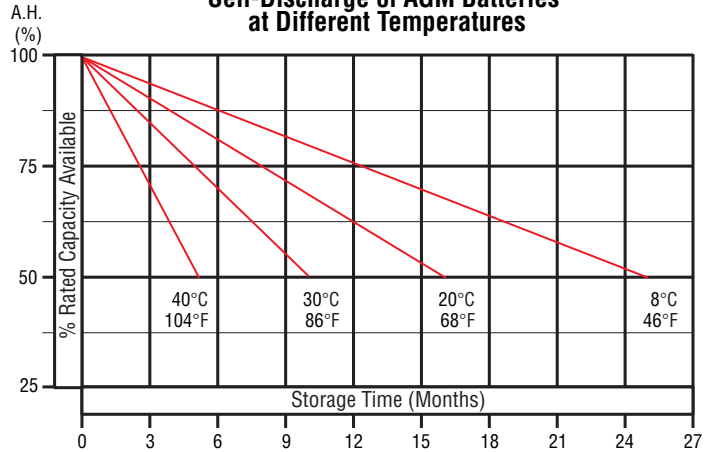
**Y**  
Small "L" terminal with 1/4" - 20 round hole (T873)

# CHARACTERISTICS OF MK AGM BATTERIES

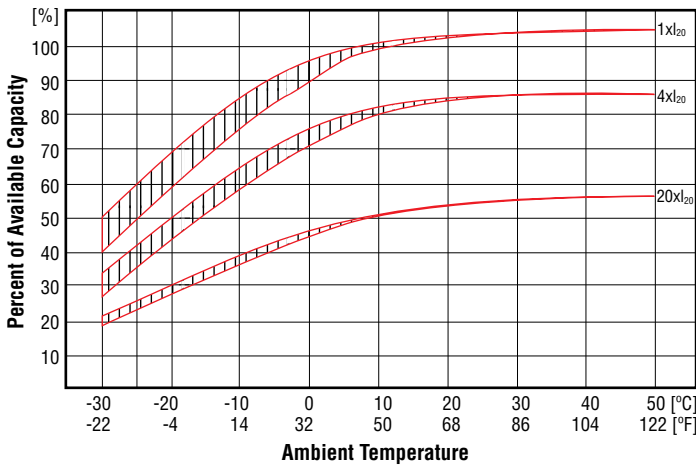
## Cycling Ability



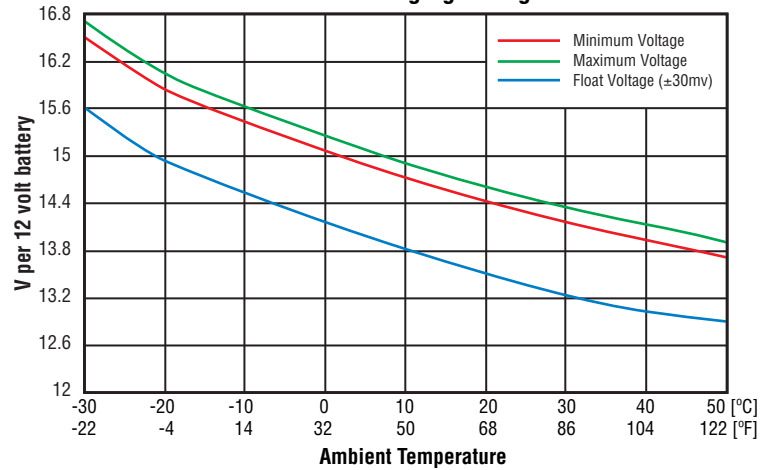
## Self-Discharge of AGM Batteries at Different Temperatures



## Capacity vs Operating Temperature



## Constant Charging Voltage



### Capacity vs Operating Temperatures

Shown are the changes in capacity for wider ambient temperature range, giving the available capacity, as a percentage of the rated capacity, at different ambient temperatures, for 3 different load examples, with uninterrupted discharge to the appropriate discharge cut-off voltage. The values for the upper edge of the curve were obtained from charging at an ambient temperature of  $\pm 20^{\circ}\text{C}$  with a voltage limit of 2.4V/cell. For the lower edge, charging was carried out at the specified ambient temperature. The curves show the behavior of the battery after a number of cycles.

### Constant Charging Voltage

Shown is the constant charging voltage in relation to the ambient temperature. The bandwidth shows a tolerance of  $\pm 30\text{mV}/\text{cell}$ . This constant voltage is suitable for continuous charging and cyclic operation. In a parallel stand-by mode it always keeps the battery in a fully charged state; in a cyclic mode, it provides for rapid recharging and high cyclic performance.

## YOUR PARTNER IN POWER

Products  
Service  
Customer Care

MK Battery is one of the largest sealed lead acid battery distributors worldwide due to our total commitment to the following core principles:

MK Battery manufactures and distributes only the highest quality batteries (gel, AGM and flooded deep cycle) that are specifically designed for our customers' many, varied applications including broadband communications, UPS (uninterruptible power supplies), power wheelchairs, telephony (valve-regulated stationary), solar, marine and electronics.

MK Battery ships fresh inventory fast, often within 24 hours, from a stock of more than 100,000 batteries in multiple key distribution centers throughout North America and assures our customers proper spent battery disposal through EPA permitted smelters. (Please note that violation of hazardous waste disposal laws place heavy penalties on offenders).

MK Battery is genuinely concerned for our customers' well-being as a long-term partner... not just a supplier. MK Battery listens to our customers and delivers what you want, when you need it.



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