

# Battery Range Summary

Genesis® NP batteries feature heavy duty thick lead calcium grids for years of dependable performance. The high energy density design, factory sealed case and leak proof construction ensures that these rechargeable sealed lead acid batteries are extremely reliable and virtually maintenance-free.

The batteries are completely sealed by the factory, meaning zero watering requirements. The Genesis NP battery design includes a low pressure relief valve to release any build-up of pressure within the case. This vent is completely self-resealing ensuring the highest possible rate of internal recombination is reached within each battery.

With an expected life span of three to five years in float applications at 77°F (25°C) ambient temperature, more than 1,000 discharge/recharge cycles can be realized depending on the DoD for each cycle. The internal grid design has been perfected over 10 decades of battery experience to yield a battery that can recover even after repeated deep discharges.

## Features and Benefits

- Capacity range 1- 200Ah
- Lead calcium alloy
- Sealed design, no watering required
- 1,000+ cycles can be realized depending on Depth of Discharge (DoD)
- Heavy duty grids maximize life
- Three to five year life expectancy in float applications at 77°F (25°C) ambient temperature



## Construction

- Heavy duty thick lead-calcium grids
- Sealed case for leak-proof operation
- Designed to promote internal recombination for longer life
- Integral pressure relief valve operates at 2-3 PSI and is self-resealing
- Flame retardant UL94-V0 case and cover available

## Installation and Operation

- Space efficient footprint
- Compact, quick and simple installation process
- Three to five year life expectancy in float applications at 77°F (25°C) ambient temperature
- Low maintenance - no watering required
- Operating temperature: -5°F (-15°C) to 122°F (50°C); Recommended temperature: 68°F (20°C) to 86°F (30°C)

## Standards

- Approved for air transportation (IATA A67)
- Recognized by UL File no. MH16464 and MH15740
- Non-spillable classification (UN2800)
- IEC 61056-1, IEC 60896-21 and IEC60896-22 compliant

## General Specifications

### Genesis® NPH Battery Series

| Battery Type | FR Battery Type* | Volts | Nominal Capacity<br>10hr rate-Ah | Nominal Dimensions |     |       |    |          |    | Typical Weight |      | Layout | Terminal Illustration | Electrolyte (1.300 SG) |       |        |       |
|--------------|------------------|-------|----------------------------------|--------------------|-----|-------|----|----------|----|----------------|------|--------|-----------------------|------------------------|-------|--------|-------|
|              |                  |       |                                  | Length             |     | Width |    | Height † |    | lbs            | kg   |        |                       | Volume                 |       | Volume |       |
|              |                  |       |                                  | in                 | mm  | in    | mm | in       | mm |                |      |        |                       | gal                    | L     | lbs    | kg    |
| NPH3.2-12    | NPH3.2-12FR      | 12    | 3.2                              | 5.25               | 134 | 2.64  | 67 | 2.52     | 64 | 3.05           | 1.38 | 3      | A/C                   | 0.051                  | 0.192 | 0.556  | 0.252 |

### Genesis® NP Battery Series

| Battery Type | FR Battery Type* | Volts | Nominal Capacity<br>20hr rate-Ah | Nominal Dimensions |     |       |     |          |      | Typical Weight |       | Layout | Terminal Illustration | Electrolyte (1.300 SG) |       |        |       |
|--------------|------------------|-------|----------------------------------|--------------------|-----|-------|-----|----------|------|----------------|-------|--------|-----------------------|------------------------|-------|--------|-------|
|              |                  |       |                                  | Length             |     | Width |     | Height † |      | lbs            | kg    |        |                       | Volume                 |       | Volume |       |
|              |                  |       |                                  | in                 | mm  | in    | mm  | in       | mm   |                |       |        |                       | gal                    | L     | lbs    | kg    |
| NP1-6        | NP1-6FR          | 6     | 1.0                              | 2.01               | 51  | 1.65  | 42  | 2.24     | 57   | 0.61           | 0.28  | 5      | A                     | 0.012                  | 0.045 | 0.130  | 0.059 |
| NP1.2-6      | NP1.2-6FR        | 6     | 1.2                              | 3.82               | 97  | 0.98  | 25  | 2.20     | 56   | 0.67           | 0.30  | 1      | A                     | 0.014                  | 0.053 | 0.152  | 0.069 |
| NP2.8-6      | NP2.8-6FR        | 6     | 2.8                              | 2.64               | 67  | 1.30  | 33  | 4.13     | 105  | 1.30           | 0.59  | 5      | A/C                   | 0.025                  | 0.095 | 0.271  | 0.123 |
| NP3-6        | NP3-6FR          | 6     | 3.0                              | 5.28               | 134 | 1.30  | 33  | 2.64     | 67   | 1.53           | 0.69  | 1      | A                     | 0.030                  | 0.114 | 0.325  | 0.147 |
| NP3.2-6      | NP3.2-6FR        | 6     | 3.2                              | 2.60               | 66  | 1.30  | 33  | 4.09     | 104  | 1.30           | 0.59  | 5      | A                     | 0.030                  | 0.114 | 0.325  | 0.147 |
| NP3.8-6      | NP3.8-6FR        | 6     | 3.8                              | 2.60               | 66  | 1.30  | 33  | 4.92     | 125  | 1.65           | 0.75  | 1      | A                     | 0.035                  | 0.132 | 0.379  | 0.172 |
| NP4-6        | NP4-6FR          | 6     | 4.0                              | 2.76               | 70  | 1.85  | 47  | 4.15     | 105  | 1.76           | 0.80  | 5      | A/C                   | 0.038                  | 0.144 | 0.412  | 0.187 |
| NP4.5-6      | NP4.5-6FR        | 6     | 4.5                              | 2.76               | 70  | 1.85  | 47  | 4.15     | 105  | 1.80           | 0.82  | 5      | A/C                   | 0.040                  | 0.151 | 0.433  | 0.196 |
| NP5-6        | NP5-6FR          | 6     | 5.0                              | 2.76               | 70  | 1.85  | 47  | 4.15     | 105  | 1.83           | 0.83  | 5      | A/C                   | 0.046                  | 0.172 | 0.493  | 0.223 |
| NP7-6        | NP7-6FR          | 6     | 7.0                              | 5.95               | 151 | 1.30  | 33  | 3.94     | 100  | 2.76           | 1.25  | 1      | A/C                   | 0.065                  | 0.246 | 0.704  | 0.319 |
| NP8.5-6      | NP8.5-6FR        | 6     | 8.5                              | 3.86               | 98  | 2.20  | 56  | 4.65     | 118  | 3.53           | 1.60  | 9      | A/C                   | 0.080                  | 0.303 | 0.866  | 0.393 |
| NP10-6       | NP10-6FR         | 6     | 10.0                             | 5.95               | 151 | 1.97  | 50  | 3.98     | 101  | 3.81           | 1.73  | 1      | A/C                   | 0.100                  | 0.379 | 1.08   | 0.491 |
| NP12-6       | NP12-6FR         | 6     | 12.0                             | 5.95               | 151 | 1.97  | 50  | 3.98     | 101  | 4.23           | 1.92  | 1      | A/C                   | 0.100                  | 0.379 | 1.08   | 0.491 |
| NP0.8-12     | NP0.8-12FR       | 12    | 0.8                              | 3.78               | 96  | 0.98  | 25  | 2.42     | 61   | 0.82           | 0.37  | 7      | H/I                   | 0.013                  | 0.049 | 0.14   | 0.064 |
| NP1.2-12     | NP1.2-12FR       | 12    | 1.2                              | 3.82               | 97  | 1.89  | 48  | 2.20     | 56   | 1.25           | 0.57  | 3      | A                     | 0.025                  | 0.095 | 0.27   | 0.123 |
| NP2-12       | NP2-12FR         | 12    | 2.0                              | 5.91               | 150 | 0.79  | 20  | 3.50     | 89   | 1.54           | 0.70  | 8      | B                     | 0.034                  | 0.129 | 0.37   | 0.167 |
| NP2-12-C     | NP2-12CFR        | 12    | 2.0                              | 7.17               | 182 | 0.93  | 24  | 2.40     | 61   | 1.61           | 0.73  | 6      | L                     | 0.035                  | 0.132 | 0.38   | 0.172 |
| NP2.3-12     | NP2.3-12FR       | 12    | 2.3                              | 7.01               | 178 | 1.38  | 35  | 2.64     | 67   | 2.23           | 1.01  | 1      | A                     | 0.036                  | 0.136 | 0.39   | 0.177 |
| NP2.6-12     | NP2.6-12FR       | 12    | 2.6                              | 5.28               | 134 | 2.64  | 67  | 2.60     | 66   | 2.79           | 1.27  | 3      | A                     | 0.045                  | 0.170 | 0.49   | 0.221 |
| NP2.9-12     | NP2.9-12FR       | 12    | 2.9                              | 3.11               | 79  | 2.20  | 56  | 4.13     | 105  | 2.73           | 1.24  | 1      | A/C                   | 0.053                  | 0.201 | 0.57   | 0.260 |
| NP3-12       | NP3-12FR         | 12    | 3.0                              | 5.20               | 132 | 1.30  | 33  | 4.13     | 105  | 2.60           | 1.18  | 1      | A                     | 0.053                  | 0.201 | 0.57   | 0.260 |
| NP3.4-12     | NP3.4-12FR       | 12    | 3.4                              | 5.28               | 134 | 2.64  | 67  | 2.64     | 67   | 3.06           | 1.39  | 3      | A/C                   | 0.059                  | 0.223 | 0.64   | 0.290 |
| NP4-12       | NP4-12FR         | 12    | 4.0                              | 3.54               | 90  | 2.76  | 70  | 4.21     | 107  | 3.74           | 1.70  | 1      | A/C                   | 0.075                  | 0.284 | 0.81   | 0.368 |
| NP4.5-12     | NP4.5-12FR       | 12    | 4.5                              | 3.54               | 90  | 2.76  | 70  | 4.21     | 107  | 3.75           | 1.70  | 1      | A/C                   | 0.083                  | 0.312 | 0.89   | 0.405 |
| NP5-12       | NP5-12FR         | 12    | 5.0                              | 3.54               | 90  | 2.76  | 70  | 4.21     | 107  | 3.88           | 1.76  | 1      | A/C                   | 0.085                  | 0.322 | 0.92   | 0.417 |
| NP7-12       | NP7-12FR         | 12    | 7.0                              | 5.95               | 151 | 2.56  | 65  | 3.94     | 100  | 5.29           | 2.40  | 4      | A/C                   | 0.120                  | 0.454 | 1.30   | 0.589 |
| NP9-12       | NP9-12FR         | 12    | 9.0**                            | 5.95               | 151 | 2.56  | 65  | 3.94     | 100  | 5.94           | 2.69  | 4      | C/N                   | 0.148                  | 0.560 | 1.60   | 0.726 |
| NP12-12      | NP12-12FR        | 12    | 12.0                             | 5.95               | 151 | 3.86  | 98  | 3.94     | 100  | 8.26           | 3.75  | 4      | C                     | 0.180                  | 0.681 | 1.95   | 0.884 |
| NP18-12      | NP18-12FR        | 12    | 17.2                             | 7.13               | 181 | 3.00  | 76  | 6.57     | 167  | 13.6           | 6.17  | 2      | D/E                   | 0.280                  | 1.06  | 3.03   | 1.38  |
| NP22-12      | n/a              | 12    | 20.9                             | 7.13               | 181 | 3.00  | 76  | 6.57     | 167  | 15.1           | 6.90  | 2      | G                     | 0.347                  | 1.31  | 3.76   | 1.71  |
| NP24-12      | NP24-12FR        | 12    | 24.0                             | 6.54               | 166 | 6.89  | 175 | 4.92     | 125  | 20.0           | 9.07  | 2      | C/D/E                 | 0.430                  | 1.63  | 4.66   | 2.11  |
| NP33-12      | NP33-12FR        | 12    | 33.0                             | 7.76               | 197 | 5.16  | 131 | 6.22†    | 158‡ | 25.1           | 11.39 | 1      | E/F                   | 0.480                  | 1.82  | 5.20   | 2.36  |
| NP35-12      | NP35-12FR        | 12    | 35.0                             | 7.90               | 198 | 5.20  | 132 | 6.69     | 170  | 27.8           | 12.61 | 1      | F                     | 0.540                  | 2.04  | 5.85   | 2.65  |
| NP38-12      | NP38-12FR        | 12    | 38.0                             | 7.76               | 197 | 6.50  | 165 | 6.77     | 172  | 29.8           | 14.35 | 2      | F/G                   | 0.680                  | 2.57  | 7.36   | 3.34  |
| NP55-12      | NP55-12FR        | 12    | 55.0                             | 9.02               | 229 | 5.43  | 138 | 8.15†    | 207‡ | 40.8           | 18.50 | 1      | M/E                   | 0.850                  | 3.22  | 9.21   | 4.17  |

\* FR: UL94-V0, Flame Retardant Case and Cover ( Oxygen index 28)

\*\* Nominal capacity 10hr rate-Ah

† Height is top cover. Overall height, including terminal is dependent on the terminal configuration.

Note: All dimensions are +/- 0.08 inches (2mm); Weights are +/- 5%

Torque Specifications:

M5 Bolt: 26.6 lbf.in (3Nm) +/- 5%

M6 Bolt: 44.31 lbf.in (5Nm) +/- 5%

M5 Receptacle: 35.4 lbf.in (4Nm) +/- 5%

M6 Receptacle: 65 lbf.in (6.8Nm) +/- 5%

## General Specifications Continued

### Genesis® NP Battery Series

| Battery Type | FR Battery Type* | Volts | Nominal Capacity<br>20hr rate-Ah | Nominal Dimensions |     |       |     |                   |                  | Typical Weight |       | Layout | Terminal Illustration | Electrolyte (1.300 SG) |      |        |       |
|--------------|------------------|-------|----------------------------------|--------------------|-----|-------|-----|-------------------|------------------|----------------|-------|--------|-----------------------|------------------------|------|--------|-------|
|              |                  |       |                                  | Length             |     | Width |     | Height †          |                  | lbs            | kg    |        |                       | Volume                 |      | Volume |       |
|              |                  |       |                                  | in                 | mm  | in    | mm  | in                | mm               | lbs            | kg    |        |                       | gal                    | L    | lbs    | kg    |
| NP65-12      | NP65-12FR        | 12    | 65.0                             | 13.78              | 350 | 6.54  | 166 | 6.85              | 174              | 50.1           | 22.72 | 2      | F/G                   | 1.10                   | 4.16 | 11.91  | 5.40  |
| NP75-12      | NP75-12FR        | 12    | 75.0                             | 10.20              | 259 | 6.65  | 169 | 8.19 <sup>‡</sup> | 208 <sup>‡</sup> | 57.0           | 25.85 | 1      | M/G                   | 1.25                   | 4.73 | 13.54  | 6.14  |
| NP90-12      | NP90-12FR        | 12    | 90.0                             | 11.97              | 304 | 6.61  | 168 | 9.02 <sup>‡</sup> | 229 <sup>‡</sup> | 66.51          | 30.17 | 1      | M/G                   | 1.50                   | 5.68 | 16.24  | 7.37  |
| NP100-12     | NP100-12FR       | 12    | 100.0                            | 12.95              | 329 | 6.85  | 174 | 8.43 <sup>‡</sup> | 214 <sup>‡</sup> | 72.62          | 32.94 | 1      | J/G                   | 1.60                   | 6.06 | 17.33  | 7.86  |
| NP120-12     | NP120-12FR       | 12    | 120.0                            | 16.02              | 407 | 6.81  | 173 | 9.25              | 235              | 84.68          | 38.41 | 1      | J/G                   | 1.90                   | 7.19 | 20.58  | 9.33  |
| NP150-12     | NP150-12FR       | 12    | 150.0                            | 19.02              | 483 | 6.69  | 170 | 9.49              | 241 <sup>‡</sup> | 103.90         | 47.13 | 1      | J/G                   | 2.30                   | 8.71 | 24.91  | 11.30 |
| NP200-12     | NP200-12FR       | 12    | 200.0                            | 20.55              | 522 | 9.45  | 240 | 8.58              | 218 <sup>‡</sup> | 139.92         | 63.60 | 3      | K/O                   | 3.40                   | 12.9 | 36.82  | 16.70 |

### DataSafe® NPX Battery Series

| Battery Type | FR Battery Type* | Volts | Watts/<br>Cell to<br>1.67 End<br>Voltage | Nominal Capacity<br>20hr rate-Ah | Nominal Dimensions |     |       |     |                   |                  | Typical Weight |       | Layout | Terminal Illustration | Electrolyte (1.300 SG) |       |        |       |
|--------------|------------------|-------|--|----------------------------------|--------------------|-----|-------|-----|-------------------|------------------|----------------|-------|--------|-----------------------|------------------------|-------|--------|-------|
|              |                  |       |  |                                  | Length             |     | Width |     | Height †          |                  | lbs            | kg    |        |                       | Volume                 |       | Volume |       |
|              |                  |       |  |                                  | in                 | mm  | in    | mm  | in                | mm               | lbs            | kg    |        |                       | gal                    | L     | lbs    | kg    |
| NPX-35-6     | NPX-35-6FR       | 6     | 35W/Cell                                 | 8                                | 5.95               | 151 | 1.30  | 33  | 3.94              | 100              | 3.15           | 1.43  | 1      | A/C                   | 0.048                  | 0.182 | 0.520  | 0.236 |
| NPX-50-6     | NPX-50FR         | 6     | 50W/Cell                                 | 13                               | 5.95               | 151 | 1.97  | 50  | 3.94              | 100              | 4.60           | 2.09  | 1      | A/C                   | 0.070                  | 0.265 | 0.758  | 0.344 |
| NPX-25       | NPX-25FR         | 12    | 23W/Cell                                 | 5                                | 3.54               | 90  | 2.75  | 70  | 4.21              | 107              | 4.30           | 1.95  | 1      | A/C                   | 0.065                  | 0.246 | 0.704  | 0.319 |
| NPX-35       | NPX-35FR         | 12    | 35W/Cell                                 | 8                                | 5.95               | 151 | 2.56  | 65  | 3.94              | 100              | 6.06           | 2.75  | 4      | A/C                   | 0.102                  | 0.386 | 1.10   | 0.501 |
| NPX-80       | NPX-80FR         | 12    | 80W/Cell                                 | 20                               | 7.13               | 181 | 2.39  | 76  | 6.57              | 167              | 13.87          | 6.29  | 2      | D/E                   | 0.250                  | 0.946 | 2.71   | 1.23  |
| NPX-100      | NPX-100FR        | 12    | 95W/Cell                                 | 28                               | 6.54               | 166 | 4.92  | 125 | 6.89              | 175              | 21.38          | 9.70  | 2      | D/E                   | 0.375                  | 1.42  | 4.06   | 1.84  |
| NPX-135      | NPX-135FR        | 12    | 135W/Cell                                | 33                               | 7.76               | 197 | 5.16  | 131 | 6.22 <sup>‡</sup> | 158 <sup>‡</sup> | 26.32          | 11.94 | 1      | E/F                   | 0.438                  | 1.66  | 4.74   | 2.15  |
| NPX-150      | NPX-150FR        | 12    | 150W/Cell                                | 40                               | 7.76               | 197 | 6.50  | 165 | 6.77              | 172              | 31.50          | 14.29 | 2      | F/G                   | 0.570                  | 2.16  | 6.17   | 2.80  |

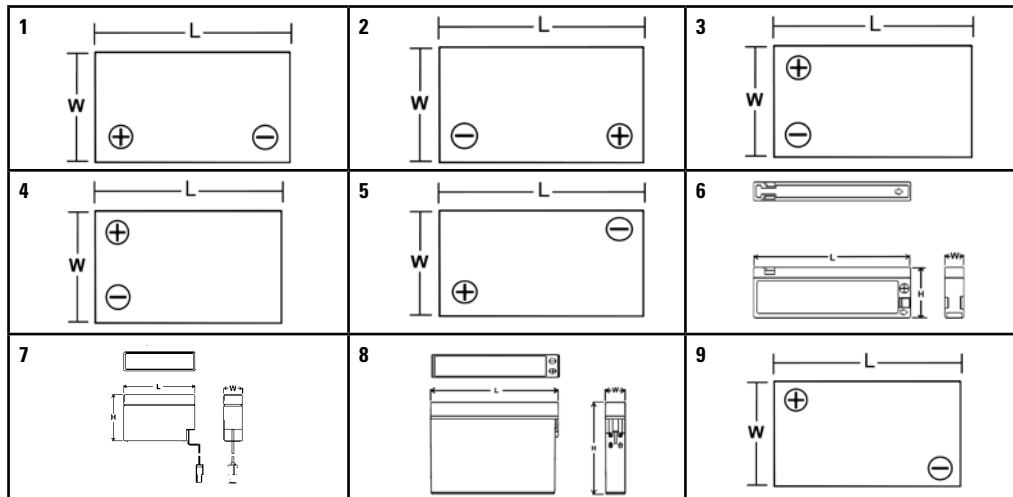
\* FR: UL94-VO, Flame Retardant Case and Cover (Oxygen index 28)  
 † Height is top cover. Overall height, including terminal is dependent on the terminal configuration.  
 Note: All dimensions are +/- 0.08 inches (2mm); Weights are +/- 5%

Torque Specifications:  
 M5 Bolt: 26.6 lbf.in (3Nm) +/- 5%  
 M6 Bolt: 44.31 lbf.in (5Nm) +/- 5%  
 M5 Receptacle: 35.4 lbf.in (4Nm) +/- 5%  
 M6 Receptacle: 65 lbf.in (6.8Nm) +/- 5%

## Terminal Illustrations

|  |   |  |   |
|--|---|--|---|
| <b>A</b><br><br>in. (mm)<br>0.250 (6.35)<br>0.187 (4.75)<br>0.124 (3.15)<br>0.098 (2.49)<br>0.059 (1.50)<br>0.031 (0.79)<br>0.020 (0.51)<br>0.004 (0.10) | <b>B</b><br><br>in. (mm)<br>0.472 (11.99)<br>0.250 (6.35)<br>0.236 (5.99)<br>0.187 (4.75)<br>0.130 (3.30)<br>0.079 (2.01)<br>0.020 (0.51) | <b>C</b><br><br>in. (mm)<br>0.313 (7.95)<br>0.250 (6.35)<br>0.180 (4.57)<br>0.098 (2.49)<br>0.059 (1.50)<br>0.031 (0.79)<br>0.020 (0.51)<br>0.004 (0.10) | <b>D</b><br><br>in. (mm)<br>0.472 (11.99)<br>0.453 (11.51)<br>0.217 (5.51)<br>0.079 (2.01)  |
| <b>E</b><br><br>M5   | <b>F</b><br><br>in. (mm)<br>0.709 (18.01)<br>0.551 (14.00)<br>0.256 (6.50)<br>0.236 (5.99)  | <b>G</b><br><br>M6   | <b>H</b><br><br>in. (mm)<br>0.530 (13.46)<br>0.420 (10.67)<br>0.310 (7.87)<br>0.230 (5.84)<br>0.160 (4.06)  |
| <b>I</b><br><br>in. (mm)<br>0.880 (21.84)<br>0.530 (13.46)<br>0.430 (10.92)<br>0.295 (7.49)  | <b>J</b><br><br>in. (mm)<br>1.024 (26.01)<br>0.910 (23.11)<br>0.430 (10.92)<br>0.335 (8.51)<br>0.315 (8.00)                               | <b>K</b><br><br>M8   | <b>L</b><br><br>in. (mm)<br>0.870 (22.01)<br>0.550 (13.97)<br>0.430 (10.92)<br>0.230 (5.84)   |
| <b>M</b><br><br>in. (mm)<br>0.806 (20.47)<br>0.760 (19.30)<br>0.690 (17.53)<br>0.630 (16.00)<br>0.394 (10.01)<br>0.335 (8.50)                            | <b>N</b><br><br>in. (mm)<br>0.209 (5.30)<br>0.394 (10.0)<br>0.059 (1.50)<br>0.472 (12.0)<br>0.197 (5.00)                                  | <b>O</b><br><br>in. (mm)<br>1.083 (27.5)<br>0.484 (12.3)<br>0.335 (8.5)<br>0.315 (8.0)   | <b>Part Number Reference:</b><br>"T" = 0.250 in wide (reference C)<br>"R" = Receptacle (reference E and G)<br>"B" = Bolt-On (reference D, F, J, K and N)<br>"W" = Wide (reference I)<br><br><b>Terminal Tolerances are:</b><br>±0.02 in. for dimensions < 5mm<br>±0.04 in. for dimensions ≥ 5mm<br>±0.08 in. for all height dimensions unless otherwise specified |

## Layout Illustrations



### Charging

- Standby use: Apply constant voltage charging at 2.28 volts per cell (or 2.25-2.30Vpc)
- Cyclic use: Apply constant voltage charging at 2.40-2.50 Vpc. Initial charging current should be set at less than 0.25CA
- Top charge: Product in storage (ambient temperature 77°F (25°C)) requires a top charge every six months. Apply constant voltage at 2.40 Vpc, initial charging should be set at less than 0.1CA for 15-20 hours

### Temperature

- Keep within ambient temperatures of 5°F (-15°C) to 122°F (50°C) for both charging and discharging

### Discharge

- Stop operation when voltage has reached the minimum permissible voltage per cell\*. Recharge immediately
- Do not operate at 6CA or more current continuously

\*Reference EnerSys Publication No. US-NP-AM

### Storage

- Always store battery in a fully charged condition
- If battery is to be stored for a long period, apply a recovery top-charge every 6 months
- Store batteries in a dry and cool location

### Incorporating Battery into Equipment

- Encase battery in a well ventilated compartment
- Avoid installing battery near heated units such as transformer
- House the battery in the lowest section of the equipment enclosure or rack to prevent unnecessary battery temperature rise

### Others

- Avoid terminal short circuit
- DO NOT expose to open flame
- WARNING: Avoid exposure of the battery to any type of oil, solvent, detergent, petroleum-based solvent or ammonia solutions. These materials could potentially cause permanent damage to the battery jar and cover and will void the warranty



**EnerSys World Headquarters**  
2366 Bernville Road  
Reading, PA 19605, USA  
Tel: +1-610-208-1991 /  
+1-800-538-3627

**EnerSys EMEA**  
EH Europe GmbH  
Baarerstrasse 18  
6300 Zug, Switzerland

**EnerSys Asia**  
152 Beach Road  
Gateway East Building #11-03  
Singapore 189721  
Tel: +65 6508 1780