



# SOLAR

## PHOTOVOLTAIC BATTERIES



### *Sealed, Valve-Regulated, Gelled-Electrolyte Batteries for Renewable Energy Applications*

#### Features

- Valve-regulated...
- Gelled electrolyte...
- Compu-cast, power path grids and computer-controlled oxide...
- Low stand loss...
- Tank formed plates...
- Rated non-spillable by ICAO, IATA and DOT...
- Made in the U.S.A...

#### Benefits

- Sealed construction eliminates periodic watering, corrosive acid fumes and spills.
- Electrolyte will not stratify. No equalization charging required.
- Increases durability and deep cycle ability for heavy demand applications.
- Less than 2% per month stand loss means little deterioration during transport and storage.
- Ensure voltage matching between cells.
- Transports easily and safely by air. No special containers needed.
- Ensures reliable service, support and quality.



QUALITY SYSTEM  
CERTIFIED TO  
**ISO 9001**  
**ISO/TS 16949**  
**ISO 14001**



UL Recognized Component

# Deka<sup>®</sup>

# SOLAR<sup>®</sup>

## PHOTOVOLTAIC BATTERIES

The Deka Solar series of valve-regulated, gelled-electrolyte batteries is designed to offer reliable, maintenance-free power for renewable energy applications where frequent deep cycles are required and minimum maintenance is desirable.

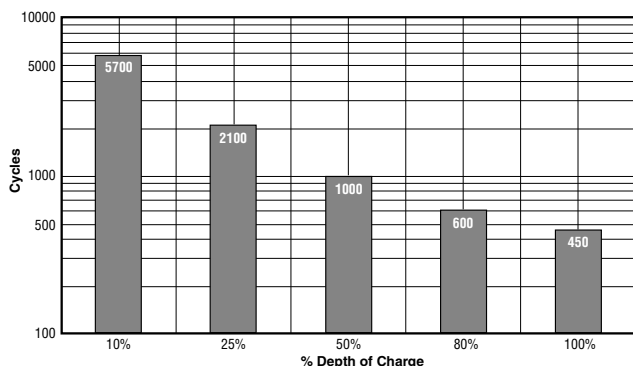
### Applications

Water pumping • Residential • Communications  
Cathodic protection • Remote monitoring • Refrigeration  
Lighting • Aids to navigation • Wind generation

### Specifications

Voltage ..... 12 volts nominal (8GGC2 is 6 volts)  
Plate alloy ..... Lead calcium  
Element, post ..... Threaded stud or "flag" terminal, forged bushing  
Container/cover ... Polypropylene  
Electrolyte ..... Sulfuric acid thixotropic gel  
Vent ..... Self sealing

**Gel Cycle Life vs Depth of Discharge at +25°C (77°F)\*  
Based on BCI 2-hour Capacity**



Cycle Chart applies to types with similar design characteristics, ex., U1, 22NF, 24, 27, 31.

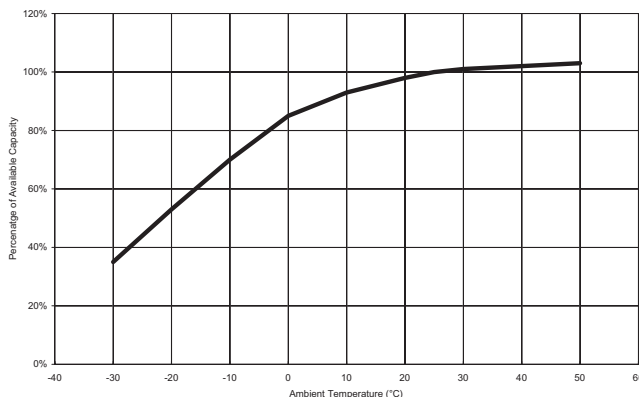
The solar battery excels in cycling applications.

\*Dependent upon proper charging and ambient temperatures.

| Photovoltaic Charging Parameters |                    |                   |
|----------------------------------|--------------------|-------------------|
| Bulk Charge                      | Max Current (amps) | 30% of 20 Hr Rate |
| Absorption (Regulation) Charge   | Constant Voltage   | 2.35 - 2.40 vpc   |
| Float Charge                     | Constant Voltage   | 2.25 - 2.30 vpc   |
| Equalize Charge                  | Constant Voltage   | 2.40 - 2.45 vpc   |
| Temperature Coefficient          | 0.005 mv / °C      |                   |

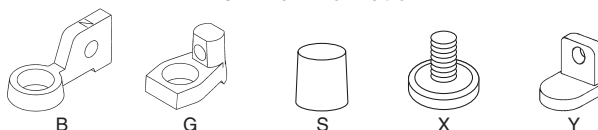
Cut-off parameters per charge & equalize intervals are application specific and will vary dependent upon site specific characteristics such as temperature, days of autonomy, array to load ratio, ect.

### Capacity vs. Operating Temperature



**Capacity vs. Operating Temperatures:** Above 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. The curves show the behavior of the battery after a number of cycles.

### Terminal Information



| Type No. | Footnotes | Volts | Discharge Amps per unit to 1.75VPC at 77°F (25°C) |        |        |        |        |        |        |       |       |       |       |       |       |        | Approx. Wt. Lbs. (Kgs.) | Dimensions In (mm) |             |             |
|----------|-----------|-------|---------------------------------------------------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|--------|-------------------------|--------------------|-------------|-------------|
|          |           |       | 5 Min                                             | 10 Min | 15 Min | 20 Min | 30 Min | 60 Min | 90 Min | 3 Hr  | 6 Hr  | 8 Hr  | 20 Hr | 24 Hr | 48 Hr | 100 Hr |                         | L                  | W           | H           |
| 8GU1     | 4,Y       | 12    | 74.7                                              | 54.3   | 44.6   | 38.8   | 31.9   | 21     | 15     | 8.50  | 4.67  | 3.56  | 1.58  | 1.33  | 0.73  | 0.36   | 23.4 (10.6)             | 7 3/4 (197)        | 5 1/2 (130) | 7 1/4 (184) |
| 8GU1H    | 4,17,Y    | 12    | 74.7                                              | 54.3   | 44.6   | 38.8   | 31.9   | 21     | 15     | 8.50  | 4.67  | 3.56  | 1.58  | 1.33  | 0.73  | 0.36   | 23.4 (10.6)             | 8 3/8 (211)        | 5 1/2 (130) | 7 1/4 (184) |
| 8G22NF   | 4,G       | 12    | 120                                               | 86.7   | 69.1   | 60     | 47     | 31.8   | 23.2   | 13.30 | 7.65  | 5.74  | 2.55  | 2.15  | 1.16  | 0.58   | 37 (16.8)               | 9 3/8 (238)        | 5 1/2 (140) | 9 1/4 (235) |
| 8G24     | 4,17,G    | 12    | 204                                               | 152    | 119    | 100    | 78     | 48.5   | 35     | 19.77 | 10.75 | 8.30  | 3.68  | 3.12  | 1.68  | 0.845  | 52 (23.6)               | 10 3/8 (276)       | 6 1/4 (171) | 9 1/4 (235) |
| 8G27     | 4,17,G    | 12    | 242                                               | 185.3  | 142.5  | 118.8  | 90.25  | 57     | 41.5   | 23.30 | 12.67 | 9.80  | 4.32  | 3.67  | 1.99  | 0.99   | 62.7 (28.4)             | 12 3/4 (324)       | 6 1/4 (171) | 9 1/4 (235) |
| 8G30H    | 4,17,B    | 12    | 266                                               | 199.5  | 161.5  | 137.8  | 104.5  | 64.5   | 47     | 26.20 | 14.20 | 11.00 | 4.88  | 4.10  | 2.15  | 1.08   | 69.5 (31.5)             | 12 1/8 (329)       | 6 1/4 (171) | 9 1/4 (248) |
| 8G31     | 4,X       | 12    | 266                                               | 199.5  | 161.5  | 137.8  | 104.5  | 64.5   | 47     | 26.20 | 14.20 | 11.00 | 4.88  | 4.10  | 2.15  | 1.08   | 69.5 (31.5)             | 12 1/8 (329)       | 6 1/4 (171) | 9 1/4 (238) |
| 8GGC2    | 4,17,G    | 6     | 325                                               | 250    | 210    | 180    | 150    | 99     | 76     | 45.30 | 25.80 | 20.00 | 9.00  | 7.60  | 3.90  | 1.98   | 68.4 (31.0)             | 10 3/4 (260)       | 7 1/4 (181) | 11 (279)    |
| 8G4D     | 4,17      | 12    | 485                                               | 375    | 300    | 255    | 195    | 122    | 88     | 49.20 | 26.70 | 20.70 | 9.15  | 7.78  | 4.22  | 2.10   | 127 (57.5)              | 20 3/4 (527)       | 8 1/2 (216) | 10 (254)    |
| 8G8D     | 4,17      | 12    | 600                                               | 460    | 370    | 315    | 245    | 150    | 105    | 60.60 | 33.00 | 25.50 | 11.25 | 9.54  | 5.18  | 2.65   | 157 (71.1)              | 20 3/4 (527)       | 11 (279)    | 10 (254)    |

ALL RATINGS ARE AFTER 15 CYCLES AND CONFORM TO B.C.I. SPECIFICATIONS.

**IMPORTANT CHARGING INSTRUCTIONS:** WARRANTY VOID IF OPENED OR IMPROPERLY CHARGED. Do not install in a sealed container. Constant under or overcharging will damage any battery and shorten its life! Use a good constant potential, voltage-regulated charger. The **open circuit voltage** of a fully charged 12-volt battery is 12.8V at 68°F (20°C).

### Footnotes:

4 - Gray Cover / Gray Case  
17 - Includes handle  
B - Flag terminal w/ 3/8" diameter hole  
G - Offset post w/ horizontal hole, stainless steel 5/16" bolt & hex nut

S - SAE "automotive type" post  
X - 3/8" x 16 stainless steel stud posts  
Y - Small L terminal with round holes  
Batteries manufactured in polypropylene cases and covers.

**"POWERED FOR PERFORMANCE"<sup>™</sup>**  
**EAST PENN manufacturing co., inc.**

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www.eastpennunig.com • e-mail: sales@eastpennunig.com  
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## Deep Cycle Power for Renewable Energy Systems - Solar, PV and Wind

### Off Grid & Grid Tied Systems

Sun Xtender® Batteries are the Original "AGM" (Absorbent Glass Mat) Battery Designed for the U.S. Military.

Deep Cycle unique high density plate technology provides superior reliability, power & extended cycle life.

Valve Regulated (VR), sealed non-spillable design never needs watering, is maintenance free and operates upright, on its side or end.

Low Impedance design with excellent charge acceptance - No current limit with controlled voltage charging.

Shockproof high impact reinforced Case resists bulging.

Copper alloy corrosion free connections for maximum conductivity.



Sun Xtender® Providing Safe, Reliable & Long Lasting Power Worldwide Since 1987

Power when you need it  
[www.sunxtender.com](http://www.sunxtender.com)

Crafted for quality in the U.S.A.

Sun Xtender® Batteries are Environmentally Friendly  
100% Recyclable

**CONCORDE**  
Concorde Battery Corporation

AS 9100 REV. B:2004 and ISO 9001:2000



phone 626-813-1234 fax 626-813-1235 [www.sunxtender.com](http://www.sunxtender.com)



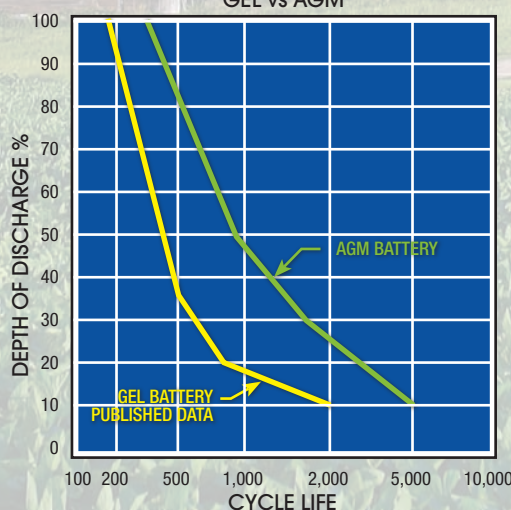


| Sun Xtender<br>Battery<br>Part Number | Volts | Overall Dimensions |                  |                   | Unit Wt<br>Lbs (Kgs) | Nominal Capacity Ampere Hours<br>@ 25° C (77° F) to 1.75 volts per cell |                   |                   |                   |                    |
|---------------------------------------|-------|--------------------|------------------|-------------------|----------------------|-------------------------------------------------------------------------|-------------------|-------------------|-------------------|--------------------|
|                                       |       | Length<br>in (mm)  | Width<br>in (mm) | Height<br>in (mm) |                      | 1<br>Hour<br>Rate                                                       | 2<br>Hour<br>Rate | 4<br>Hour<br>Rate | 8<br>Hour<br>Rate | 24<br>Hour<br>Rate |
| PVX-340T                              | 12    | 7.71 (196)         | 5.18 (132)       | 6.89 (175)        | 25 (11.4)            | 21                                                                      | 27                | 28                | 30                | 34                 |
| PVX-420T                              | 12    | 7.71 (196)         | 5.18 (132)       | 8.05 (204)        | 30 (13.6)            | 26                                                                      | 33                | 34                | 36                | 42                 |
| PVX-490T                              | 12    | 8.99 (228)         | 5.45 (138)       | 8.82 (224)        | 36 (16.4)            | 31                                                                      | 39                | 40                | 43                | 49                 |
| PVX-560T                              | 12    | 8.99 (228)         | 5.45 (138)       | 8.82 (224)        | 40 (18.2)            | 36                                                                      | 45                | 46                | 49                | 56                 |
| PVX-690T                              | 12    | 10.19 (259)        | 6.60 (168)       | 8.93 (227)        | 51 (23.2)            | 42                                                                      | 53                | 55                | 60                | 69                 |
| PVX-840T                              | 12    | 10.19 (259)        | 6.60 (168)       | 8.93 (227)        | 57 (25.9)            | 52                                                                      | 66                | 68                | 74                | 84                 |
| PVX-890T                              | 12    | 12.90 (328)        | 6.75 (172)       | 8.96 (228)        | 62 (28.2)            | 55                                                                      | 70                | 72                | 79                | 89                 |
| PVX-1040HT                            | 12    | 13.12 (333)        | 6.60 (168)       | 8.93 (227)        | 66 (30.0)            | 65                                                                      | 82                | 85                | 93                | 104                |
| PVX-1040T                             | 12    | 12.00 (304)        | 6.60 (168)       | 8.93 (227)        | 66 (30.0)            | 65                                                                      | 82                | 85                | 93                | 104                |
| PVX-1080T                             | 12    | 12.90 (328)        | 6.75 (172)       | 8.96 (228)        | 70 (31.8)            | 68                                                                      | 86                | 88                | 97                | 108                |
| PVX-2120L                             | 12    | 20.76 (527)        | 8.63 (219)       | 8.63 (219)        | 138 (62.7)           | 136                                                                     | 172               | 176               | 194               | 212                |
| PVX-2580L                             | 12    | 20.76 (527)        | 10.89 (277)      | 9.73 (247)        | 165 (75)             | 165                                                                     | 209               | 214               | 236               | 258                |
| PVX-1030T                             | 6     | 10.19 (259)        | 6.37 (162)       | 8.92 (227)        | 42 (19.1)            | 65                                                                      | 82                | 85                | 93                | 103                |
| PVX-1380T                             | 6     | 10.19 (259)        | 6.60 (168)       | 8.92 (227)        | 51 (23.2)            | 84                                                                      | 106               | 110               | 120               | 138                |
| PVX-2240T                             | 6     | 10.28 (261)        | 7.06 (179)       | 9.99 (254)        | 67 (30.4)            | 143                                                                     | 180               | 185               | 204               | 224                |
| PVX-3050T                             | 6     | 10.28 (251)        | 7.06 (179)       | 13.02 (331)       | 91 (41.3)            | 190                                                                     | 205               | 270               | 280               | 305                |
| PVX-5040T                             | 2     | 10.19 (259)        | 6.60 (168)       | 8.93 (227)        | 57 (25.9)            | 312                                                                     | 396               | 408               | 444               | 504                |
| PVX-5340T                             | 2     | 12.90 (328)        | 6.75 (171)       | 8.96 (228)        | 62 (28.2)            | 330                                                                     | 420               | 432               | 474               | 534                |
| PVX-6240T                             | 2     | 12.01 (305)        | 6.60 (168)       | 8.93 (227)        | 66 (30.0)            | 390                                                                     | 492               | 510               | 558               | 624                |
| PVX-6480T                             | 2     | 12.90 (328)        | 6.75 (171)       | 8.96 (228)        | 70 (31.8)            | 408                                                                     | 516               | 528               | 582               | 648                |
| PVX-6720T                             | 2     | 10.28 (261)        | 7.06 (179)       | 9.97 (254)        | 70 (31.8)            | 429                                                                     | 540               | 555               | 612               | 672                |
| PVX-9150T                             | 2     | 10.28 (261)        | 7.06 (179)       | 13.02 (331)       | 94 (42.6)            | 570                                                                     | 615               | 810               | 840               | 915                |

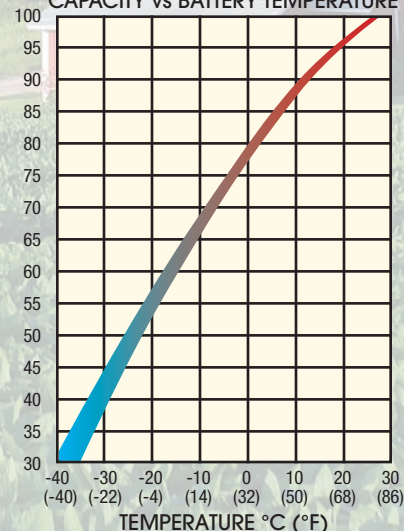
**Standard Terminals:** All batteries with a "T" at the end of the part number incorporate M8 (copper alloy) threaded insert terminals except as follows: PVX-340T & PVX-420T are M6 and PVX-2120L & PVX-2580L are "L" Blade (solid copper) terminals. All batteries are supplied with silicon bronze bolts, nuts, and washers required for installation. **Optional (Copper Alloy) Terminal Installed at the Factory:** Batteries with a "T" at the end of the part number (except PVX-340T & PVX-420T) are available with an optional factory installed "A" SAE automotive type terminal by adding the appropriate suffix to the end of the part number. For example, order PVX-1040TA instead of PVX-1040T. **Optional (Copper Alloy) Terminal Kit:** Kits can be ordered for "After Factory" customer conversions of "T" type batteries (except PVX-340T & PVX-420T) by ordering P/N 6918 for the "A" SAE automotive post kit. Kit includes terminals and installation bolts required for installation. **Terminal Torque Values:** (M6 use 35 in-lbs / 4.0 nm.) (M8 use 70 in-lbs / 7.9 nm.) **Handles:** All batteries include built in lifting handles except the PVX-490T and PVX-560T. **Ratings:** Capacity ratings are after 15 cycles and are stated at 77°F (25°C) to 1.75 volts per cell. For more information contact the factory. Never install batteries in a sealed compartment or container. For 48 Hour Rate, 72 Hour Rate, and 120 Hour Rate please refer to: [www.sunxtender.com](http://www.sunxtender.com)

Distributed by:

LIFE CYCLE PERFORMANCE COMPARISON  
GEL vs AGM



CAPACITY vs BATTERY TEMPERATURE





**SUN XTENDER BATTERIES**  
 A Division of Concorde Battery Corp.  
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## Company Info



# AGM DEEP CYCLE SOLAR BATTERIES

**ABSORBENT GLASS MAT  
 VALVE REGULATED SEALED LEAD ACID (VRLA)  
 MAINTENANCE-FREE BATTERIES**  
**Designed for: RENEWABLE ENERGY STORAGE SYSTEMS  
 SOLAR, PV AND WIND, OFF GRID & GRID TIED SYSTEMS**

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| Part Number | Volts | Industry Reference | Overall Dimensions |     |       |     |        |       | Unit Wt |      | Nominal Capacity Ampere Hours @ 25° C (77° F) to 1.75 volts per cell |           |           |           |           |           |           |           |           |  |  |  |
|-------------|-------|--------------------|--------------------|-----|-------|-----|--------|-------|---------|------|----------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|--|--|
|             |       |                    | Length             |     | Width |     | Height |       | Lbs     | Kgs  | 1                                                                    | 2         | 4         | 8         | 24        | 48        | 72        | 100       | 120       |  |  |  |
|             |       |                    | in                 | mm  | in    | mm  | in     | mm    |         |      | Hour Rate                                                            | Hour Rate | Hour Rate | Hour Rate | Hour Rate | Hour Rate | Hour Rate | Hour Rate | Hour Rate |  |  |  |
| PVX-340T    | 12    | U1                 | 7.71               | 196 | 5.18  | 132 | 6.89   | 175   | 25      | 11.4 | 21                                                                   | 27        | 28        | 30        | 34        | 36        | 37        | 37        | 38        |  |  |  |
| PVX-420T    | 12    | U1 Tall            | 7.71               | 196 | 5.18  | 132 | 8.05   | 204   | 30      | 13.6 | 26                                                                   | 33        | 34        | 36        | 42        | 43        | 43        | 44        | 45        |  |  |  |
| PVX-490T    | 12    | 22NF               | 8.99               | 228 | 5.45  | 138 | 8.82   | 224   | 36      | 16.4 | 31                                                                   | 39        | 40        | 43        | 49        | 52        | 54        | 54        | 55        |  |  |  |
| PVX-560T    | 12    | 22NF               | 8.99               | 228 | 5.45  | 138 | 8.82   | 224   | 40      | 18.2 | 36                                                                   | 45        | 46        | 49        | 56        | 60        | 62        | 62        | 63        |  |  |  |
| PVX-690T    | 12    | 24                 | 10.22              | 260 | 6.60  | 168 | 8.93   | 227   | 51      | 23.2 | 42                                                                   | 53        | 55        | 60        | 69        | 73        | 76        | 78        | 79        |  |  |  |
| PVX-840T    | 12    | 24                 | 10.22              | 260 | 6.60  | 168 | 8.93   | 227   | 57      | 25.9 | 52                                                                   | 66        | 68        | 74        | 84        | 90        | 94        | 96        | 97        |  |  |  |
| PVX-890T    | 12    | 31                 | 12.90              | 260 | 6.75  | 172 | 8.96   | 228   | 62      | 28.2 | 55                                                                   | 70        | 72        | 79        | 89        | 95        | 98        | 100       | 102       |  |  |  |
| PVX-1040HT  | 12    | 27                 | 13.12              | 333 | 6.60  | 168 | 8.93   | 227   | 66      | 30.0 | 65                                                                   | 82        | 85        | 93        | 104       | 112       | 116       | 118       | 120       |  |  |  |
| PVX-1040T   | 12    | 27                 | 12.01              | 305 | 6.60  | 168 | 8.93   | 227   | 66      | 30.0 | 65                                                                   | 82        | 85        | 93        | 104       | 112       | 116       | 118       | 120       |  |  |  |
| PVX-1080T   | 12    | 31                 | 12.90              | 328 | 6.75  | 172 | 8.96   | 228   | 70      | 31.8 | 68                                                                   | 86        | 88        | 97        | 108       | 118       | 122       | 124       | 126       |  |  |  |
| PVX-1530T   | 12    | 30H Tall           | 13.46              | 342 | 6.77  | 172 | 11.95  | 304   | 97      | 44   | 95                                                                   | 120       | 124       | 136       | 153       | 167       | 173       | 176       | 179       |  |  |  |
| PVX-2120L   | 12    | 4D                 | 20.76              | 527 | 8.70  | 221 | 9.77   | 248   | 138     | 62.7 | 136                                                                  | 172       | 176       | 194       | 212       | 235       | 244       | 250       | 253       |  |  |  |
| PVX-2580L   | 12    | 8D                 | 20.76              | 527 | 10.89 | 277 | 9.77   | 248   | 165     | 75   | 165                                                                  | 209       | 214       | 236       | 258       | 285       | 295       | 300       | 305       |  |  |  |
| PVX-1030T   | 6     | 24                 | 10.21              | 259 | 6.60  | 168 | 8.92   | 227   | 42      | 19.1 | 65                                                                   | 82        | 85        | 93        | 103       | 112       | 116       | 118       | 120       |  |  |  |
| PVX-1380T   | 6     | 24                 | 10.21              | 259 | 6.60  | 168 | 8.92   | 227   | 51      | 23.2 | 84                                                                   | 106       | 110       | 120       | 138       | 146       | 151       | 155       | 158       |  |  |  |
| PVX-2240T   | 6     | GC2                | 10.28              | 261 | 7.06  | 179 | 9.92   | 251.8 | 67      | 30.4 | 143                                                                  | 180       | 185       | 204       | 224       | 246       | 256       | 260       | 263       |  |  |  |
| PVX-3050T   | 6     | GC2 Tall           | 10.28              | 261 | 7.06  | 179 | 12.94  | 328.6 | 91      | 41.3 | 190                                                                  | 245       | 270       | 280       | 305       | 335       | 348       | 354       | 358       |  |  |  |
| PVX-4050HT  | 6     | L16                | 11.64              | 296 | 6.95  | 177 | 15.73  | 399   | 120     | 54.4 | 266                                                                  | 345       | 360       | 376       | 405       | 424       | 434       | 443       | 448       |  |  |  |
| PVX-5040T   | 2     | 24                 | 10.21              | 259 | 6.60  | 168 | 8.93   | 227   | 57      | 25.9 | 312                                                                  | 396       | 408       | 444       | 504       | 540       | 561       | 574       | 582       |  |  |  |
| PVX-5340T   | 2     | 31                 | 12.90              | 328 | 6.75  | 171 | 8.96   | 228   | 62      | 28.2 | 330                                                                  | 420       | 432       | 474       | 534       | 570       | 591       | 604       | 612       |  |  |  |
| PVX-6240T   | 2     | 27                 | 12.01              | 305 | 6.60  | 168 | 8.93   | 227   | 66      | 30.0 | 390                                                                  | 492       | 510       | 558       | 624       | 672       | 696       | 710       | 720       |  |  |  |
| PVX-6480T   | 2     | 31                 | 12.90              | 328 | 6.75  | 171 | 8.96   | 228   | 70      | 31.8 | 408                                                                  | 516       | 528       | 582       | 648       | 708       | 732       | 746       | 756       |  |  |  |
| PVX-6720T   | 2     | GC2                | 10.28              | 261 | 7.06  | 179 | 9.92   | 251.8 | 70      | 31.8 | 429                                                                  | 540       | 555       | 612       | 672       | 738       | 768       | 780       | 789       |  |  |  |
| PVX-9150T   | 2     | GC2 Tall           | 10.28              | 261 | 7.06  | 179 | 12.94  | 328.6 | 94      | 42.6 | 570                                                                  | 735       | 810       | 840       | 915       | 1005      | 1044      | 1062      | 1074      |  |  |  |
| PVX-12150HT | 2     | L16                | 11.64              | 296 | 6.95  | 177 | 15.73  | 399   | 124     | 56.2 | 798                                                                  | 1035      | 1080      | 1128      | 1215      | 1272      | 1302      | 1329      | 1344      |  |  |  |

## Click to View Sun Xtender Battery Terminal Types

**Standard Terminals:** All batteries with a "T" at the end of the part number incorporate M8 (copper alloy) threaded insert terminals except as follows: PVX-340T & PVX-420T are M6 and PVX-2120L & PVX-2580L are "L" Blade (solid copper) terminals. All batteries are supplied with silicon bronze bolts, nuts, and washers required for installation.

**Optional (Copper Alloy) Terminal Installed at the Factory:** Batteries with a "T" at the end of the



part number (except PVX-340T & PVX-420T) are available with an optional factory installed "A" SAE automotive type terminal by adding the appropriate suffix to the end of the part number. For example, order PVX-1040TA instead of PVX-1040T.

**Optional (Copper Alloy) Terminal Kit:** Kits can be ordered for `After Factory` customer conversions of "T" type batteries (except PVX-340T & PVX-420T) by ordering P/N 6918 for the "A" SAE automotive post kit. Kit includes terminals and installation bolts required for installation.

**Terminal Torque Values:** [M6 use 35 in-lbs / 4.0 Nm] [M8 use 70 in-lbs / 7.9 Nm]

**Handles:** All batteries include built in lifting handles except the PVX-490T and PVX-560T.

**Ratings:** Capacity ratings are after 15 cycles and are stated at 77°F (25°C) to 1.75 volts per cell.

For more information, click on the battery part number in the table above or contact the factory. Never install batteries in a sealed compartment or container.

#### SUN-XTENDER™ BATTERY DESIGN FEATURES

- Copper Alloy Terminals for improved electrical connections.
- No exposed lead terminals. This change was incorporated to improve environmental safety and health.
- Threaded insert terminals are recessed to prevent short circuits across battery connections.<sup>1</sup>
- New cover is flat top design. No protruding or exposed vent valves.<sup>1</sup>
- Built in lifting handles, except PVX-490T and PVX-560T.
- Reinforced container walls to reduce bulging.
- High Impact Strength Copolymer Polypropylene Case and Cover.
- Completely Sealed Valve Regulated Construction.
- Immobilized Electrolyte Non-Spillable.
- Maintenance Free Design Never Requires Watering.
- Absorbed Glass Mat (AGM) Micro-porous Glass Separators retain electrolyte.
- Flame Arresting Pressure Regulated Safety Valves.
- UL Recognized Systems Component.
- Positive Plates - Proprietary Lead Calcium Alloy- Negatives Plates - Lead Calcium.
- Low Self Discharge Rate Approximately 1 % per month at 25°C (77°F).
- Operate over a Wide Range of Temperatures from -40°C (-40°F) to +72°C (+160°F).
- Classified as "Non-Spillable Battery" for transport. Complies with DOT HMR49, Non-Hazardous Materials.

<sup>1</sup> Threaded Insert "T" type Features.

**Ratings:** Capacity ratings are after 15 cycles and are at 77°F (25°C) to 1.75 volts per cell.

**Drawings:** Click on the battery part number on the specification sheet above.

**Charging Instructions:** Initial charge or recharge - 2.37 to 2.40 volts per cell at 25° C (77° F). Float charge - 2.20 to 2.23 volts per cell at 25° C (77° F). Conditioning charge - 2.58 volts per cell at 25° C (77° F). Temperature compensation - 4.00 mV. per cell per degree C [Reference to 25° C (77° F)]. This is for battery temperature (not ambient temperature) and is useful for battery temperatures from 0° C to 40° C. Contact Concorde Battery Corporation for temperatures that exceed this range. Specifications subject to change without notice.

The data/information contained in the Sun Xtender official website has been reviewed and approved for general release on the basis that these documents contain no export-controlled information.

**[Home Page](#) | [Battery Distributors](#) | [Sun Xtender 2V / 6V / 12V Battery Series](#)**  
**[ISO 9001:2000 + AS9100B](#) | [Renewable Energy Directory](#) |**

Sun Xtender® Battery Produces the Highest Quality Solar Energy & Wind Power Batteries,  
Renewable Energy Storage Batteries, Deep Cycle Batteries, and AGM Batteries

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4. ABBREVIATION USED IN TITLE IS: SEALED LEAD ACID (SLA).

| REV | DESCRIPTION | DATE | APPROVED |
|-----|-------------|------|----------|
|-----|-------------|------|----------|



|                                                                 |                  |                  |
|-----------------------------------------------------------------|------------------|------------------|
| PART NUMBER                                                     | PVX-690T         | PVX-840T         |
| NOMINAL WEIGHT                                                  | 51 LBS [23.2 KG] | 57 LBS [25.9 KG] |
| AMPERE HOUR CAPACITY @ 24 HOUR<br>1.75 VOLTS/CELL @ 77°F (25°C) | 69 AH            | 84 AH            |

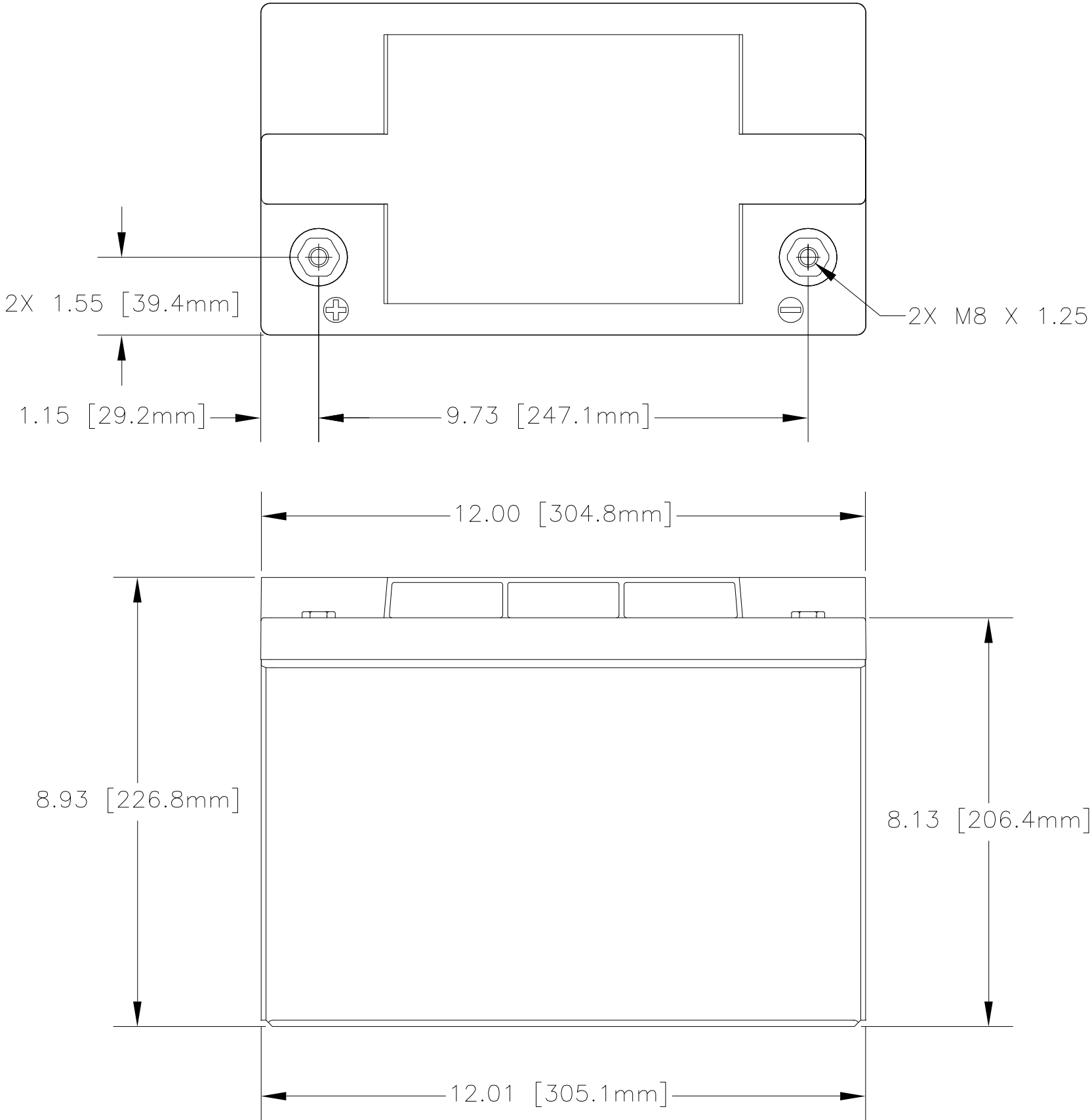
### ENVELOPE DRAWING

[illegible]

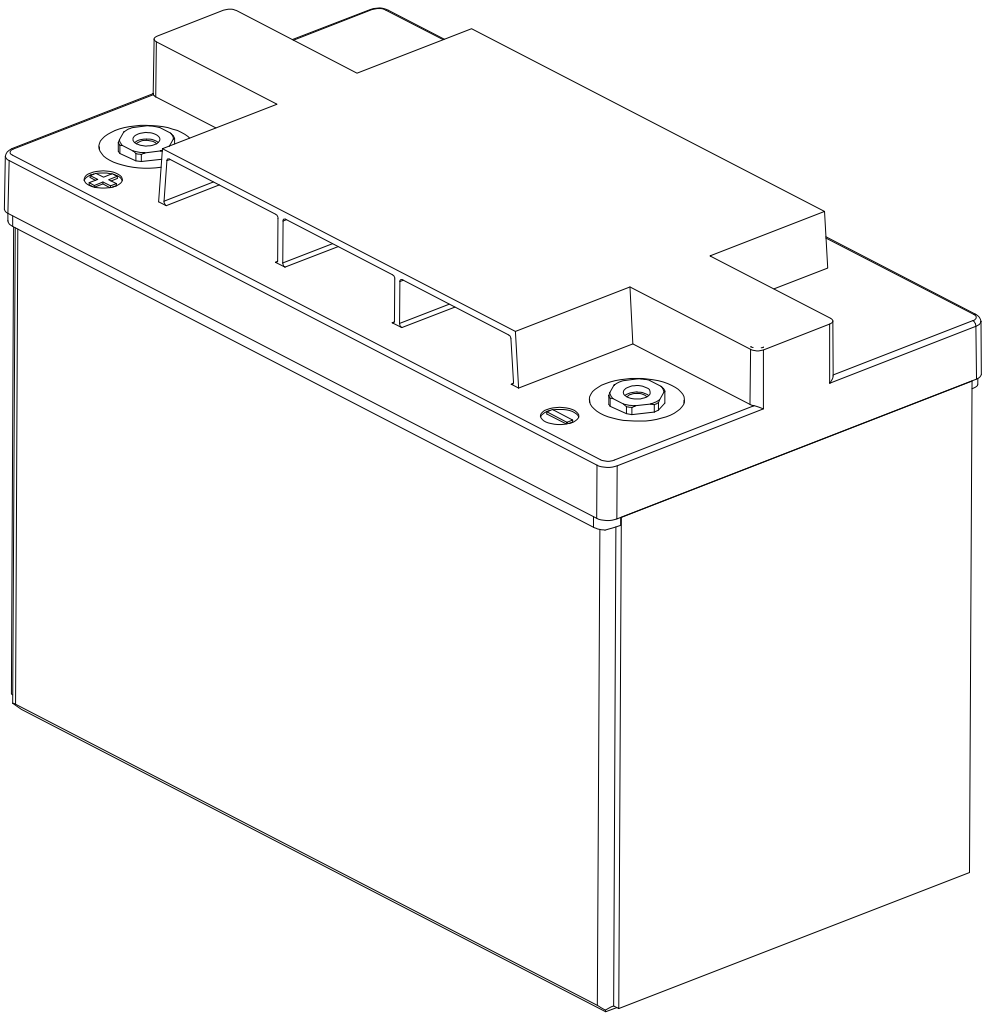
ENGINEERING COPY 13JUN03

NOTES: UNLESS OTHERWISE SPECIFIED

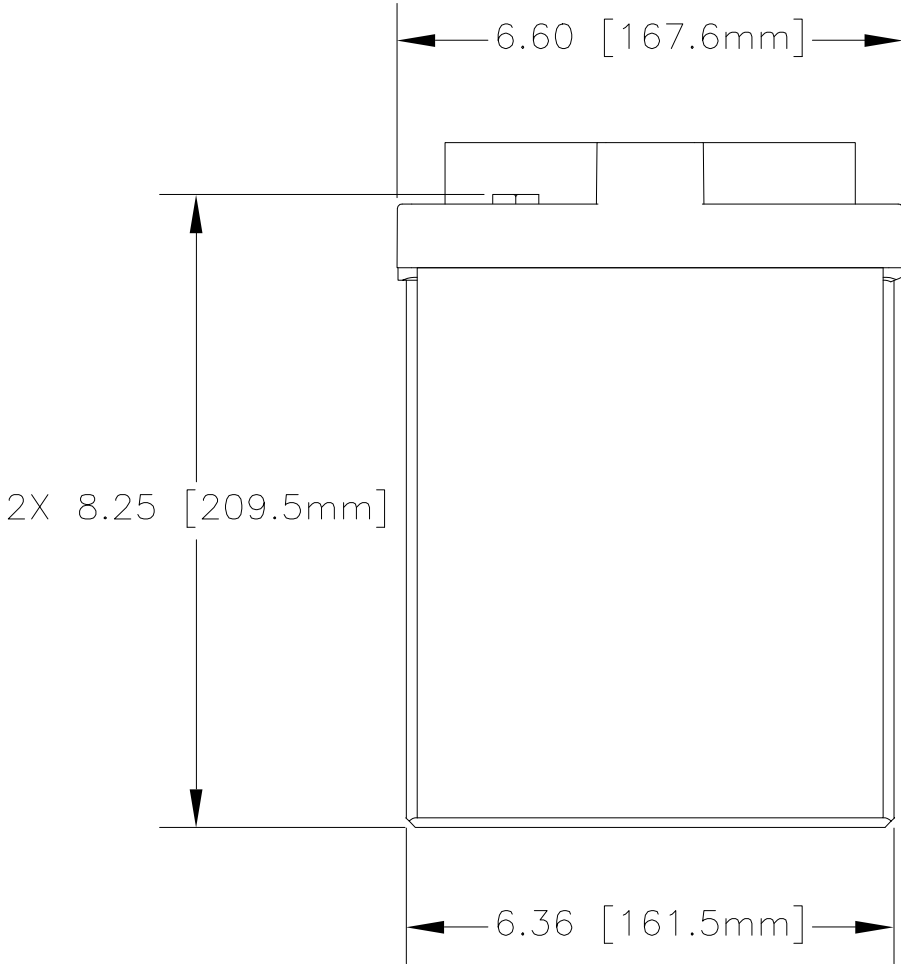
1. SEE DRAWING NO. CB-00285 AND PROCEDURE P-1000 FOR ASSEMBLY AND TEST INSTRUCTION. PROCEDURES AND ASSEMBLY DRAWINGS ARE FOR INTERNAL USE ONLY.
2. ALL TESTING ARE IAW BATTERY COUNCIL INTERNATIONAL STANDARDS.
3. ALL DIMENSIONS ARE IN INCHES [MM].
4. ABBREVIATION USED IN TITLE IS: SEALED LEAD ACID (SLA).



| CAPACITY RATINGS                                                |                |
|-----------------------------------------------------------------|----------------|
| PART NUMBER                                                     | PVX-1040T      |
| NOMINAL WEIGHT                                                  | 66 LBS [30 KG] |
| AMPERE HOUR CAPACITY @ 24 HOUR<br>1.75 VOLTS/CELL @ 77°F (25°C) | 104 AH         |



REFERENCE VIEW



ENVELOPE DRAWING

|                                                                                                                                                                        |  |            |                         |              |                             |         |         |                                                                             |                                              |         |           |          |                       |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|-------------------------|--------------|-----------------------------|---------|---------|-----------------------------------------------------------------------------|----------------------------------------------|---------|-----------|----------|-----------------------|-----------|
|                                                                                                                                                                        |  | CAGE CODE  | PART OR IDENTIFYING NO. |              | NOMENCLATURE OR DESCRIPTION |         |         |                                                                             | MATERIAL SPECIFICATION                       |         |           | ITEM NO. |                       |           |
| QTY REQD                                                                                                                                                               |  | PARTS LIST |                         |              |                             |         |         |                                                                             |                                              |         |           |          |                       |           |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:<br><br>FRACTIONS    DECIMALS    ANGLES<br><br>± 1/32    .XX    ± .06    ± 1°<br><br>.XXX    ± .030 |  |            |                         |              | CONTRACT NO.<br><br>NA      |         |         | CONCORDE BATTERY CORPORATION<br>2009 SAN BERNARDINO RD, W. COVINA, CA 91790 |                                              |         |           |          |                       |           |
|                                                                                                                                                                        |  |            |                         |              | APPROVALS                   |         | DATE    |                                                                             | TITLE    BATTERY, SLA, 12 VOLT,<br>PVX-1040T |         |           |          |                       |           |
|                                                                                                                                                                        |  |            |                         |              | DRAWN    ELH                |         | 8/13/01 |                                                                             |                                              |         |           |          |                       |           |
|                                                                                                                                                                        |  |            |                         |              | TREATMENT    NONE           |         |         | CHECKED    HRF                                                              |                                              | 8/21/01 |           | SIZE     |                       | CAGE CODE |
| FINISH    NONE                                                                                                                                                         |  |            | APPROVED    JBT         |              | 8/23/01                     |         | C       |                                                                             | 63017                                        |         | PVX-1040T |          | A                     |           |
| SIMILAR TO NA                                                                                                                                                          |  | ACT WT NA  | CALC WT NA              | ISSUED    AT |                             | 6/13/03 |         | SCALE    NONE                                                               |                                              |         |           |          | SHEET    1    OF    1 |           |