



ENERGY STORAGE SOLUTIONS

for Renewable Energy / Hybrid Systems / Backup Power



Trojan[®]
BATTERY COMPANY

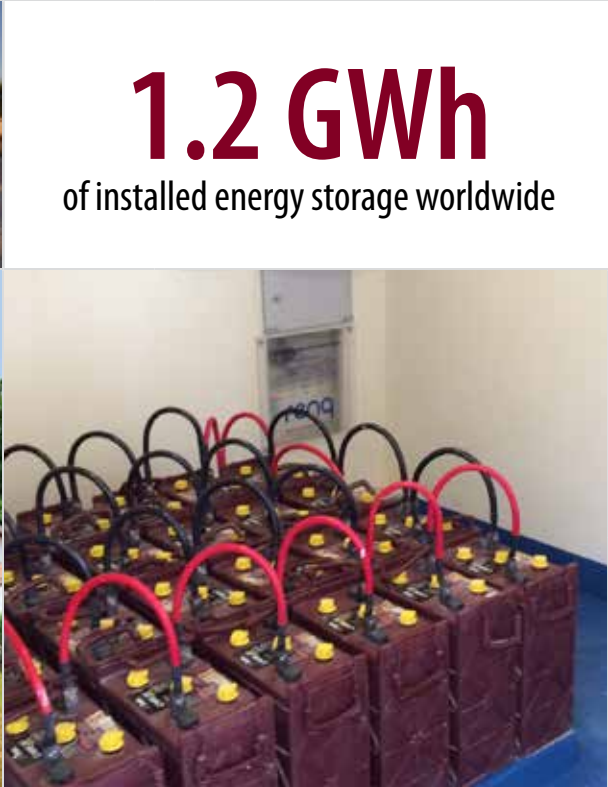
Clean energy for life™



Imagine a World



1.2 GWh
of installed energy storage worldwide





of Clean Energy for Everyone.

As the leading manufacturer of deep-cycle batteries, Trojan Battery Company believes it is possible to make a global shift to energy sources that are environmentally friendly and readily available worldwide.

For nearly 100 years, Trojan Battery has focused its experience and expertise in deep-cycle technology on manufacturing the highest quality, deep-cycle batteries available in the industry.

Trojan Battery's world-class development team continually tests and innovates new products, systems, and applications, establishing Trojan's reputation as the world's #1 deep-cycle battery manufacturer.

Our commitment is to our customer. Trojan Battery ensures that our products are made with the highest quality components and always deliver superior performance, durability and reliability.

Essential to Trojan's overall commitment to product quality is our investment in independent third-party testing, which provides

valuable data on product performance while validating Trojan's product reliability and quality. This investment ensures that Trojan delivers the best products available for your application.

The **Trojan** Advantage

- World's leading manufacturer of advanced deep-cycle battery technology
- Worldwide reputation for best return on investment, durability, performance, and quality components
- Delivers outstanding technical and customer service
- Industry leader in health and safety compliance as well as environmental stewardship
- Made in the USA and available in over 120 countries



SOLAR

TRUE DEEP-CYCLE BATTERIES



SOLAR INDUSTRIAL

Key Features

Smart Carbon™
Alpha Plus® Paste
with T2 Technology™
DuraGrid™ Technology

Reinforced Protection Wrap
Maxguard® XL Separator
Moss Shield



SOLAR AGM

Key Features

Alpha Plus® Paste
with T2 Technology™
DuraGrid™ Technology

Reinforced Protection Wrap
Premium AGM Separator

17 YEARS
DESIGN LIFE

Tested to IEC 61427 Standard

5-YEAR
WARRANTY*

Free replacement in case
of defects in material or
workmanship

EASY
MAINTENANCE

Periodic watering required
depending on age and usage
Easy maintenance with
optional Watering Kit

8+ YEARS
DESIGN LIFE

Tested to IEC 61427
Standard

3-YEAR
WARRANTY*

Free replacement
in case of defects
in material or
workmanship

MAINTENANCE-
FREE

No watering necessary

NON
HAZARDOUS

Sealed VRLA battery allows
for horizontal or vertical
installation
Equipped with flame arrestors
Non-hazardous, can be
air shipped



SOLAR PREMIUM



Key Features

Smart Carbon™
Alpha Plus® Paste
with T2 Technology™

DuraGrid™ Technology
Maxguard® XL Separator
Moss Shield

SOLAR SIGNATURE



Key Features

Alpha Plus® Paste
with T2 Technology™

Trojan Grid Technology
Maxguard® T2 Separator

8+ YEARS DESIGN LIFE

Tested to IEC 61427 Standard

3-YEAR WARRANTY*

Free replacement in case
of defects in material or
workmanship

EASY MAINTENANCE

Periodic watering required
depending on age and usage
Easy maintenance with
optional Watering Kit

6 MO. to 1 YEAR WARRANTY*

Free replacement in case
of defects in material or
workmanship

EASY MAINTENANCE

Periodic watering required
depending on age and usage
Easy Maintenance with
optional Watering Kit
(most models)



SOLAR INDUSTRIAL

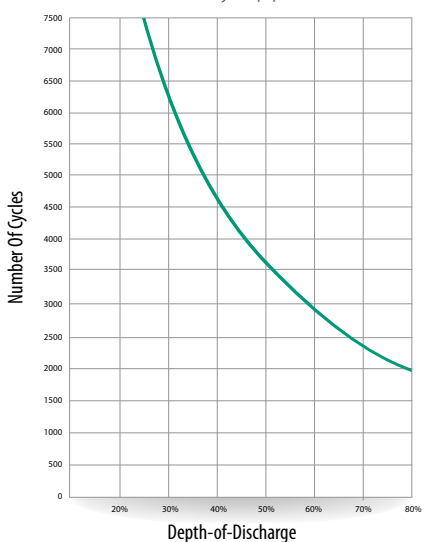
The Solar Industrial Line is engineered specifically to support renewable energy systems with large daily loads where the batteries are cycled regularly. These high amp-hour capacity batteries are ideal for use in large off-grid photovoltaic (PV) systems, off-grid hybrid PV systems, grid-tied PV systems with battery backup, smart grid peak shifting systems and a variety of other applications. The Solar Industrial Line is tested to IEC standards and features advanced battery technologies that deliver reliable power. Trojan's Solar Industrial Line is the perfect combination of performance and function.

- Flooded
- 610-2450Ah @ 100Hr
- 17 Years Life*
- 5-Year Warranty
- Easy Maintenance

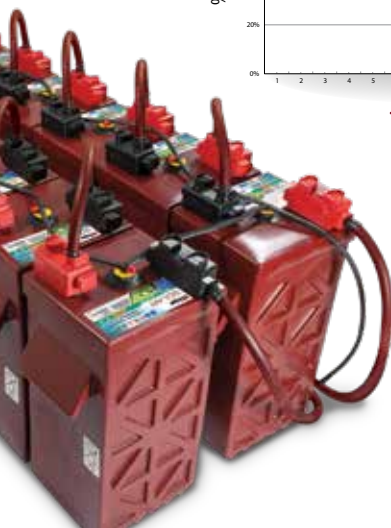
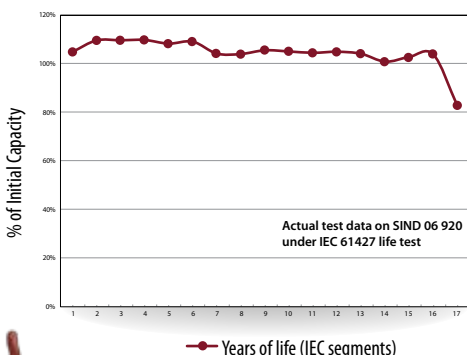
*According to IEC 61427



Depth of Discharge vs. Cycle Life in a Stationary Application



Sustained Capacity over IEC Life Test



1 Smart Carbon™

Increases the electrochemically active surface area which provides improved charge acceptance and faster recharge in applications where the batteries may experience Partial State Of Charge (PSOC) on a regular basis.

2 Alpha Plus® Paste with T2 Technology™

A proprietary, high-density paste formulation precisely engineered to deliver outstanding battery performance.

3 DuraGrid™ Technology

Features a thick grid structure which maintains greater corrosion resistance, effectively increasing the life of the battery.

4 Reinforced Protection Wrap

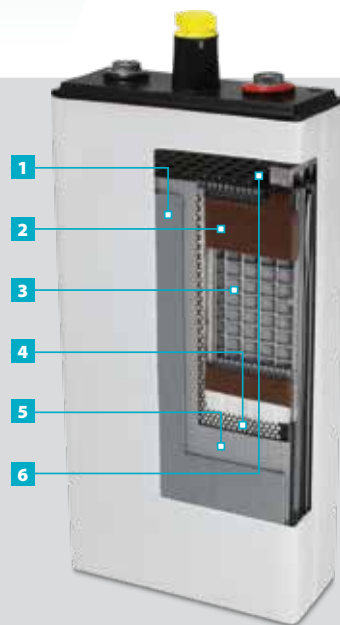
Protects against shedding and assures the electrochemical performance of the battery's active material.

5 Maxguard® XL Separator

Features a wide-channel design that increases acid flow for optimum battery performance.

6 Moss Shield

Protects the separators from damage. The moss shield increases the battery life by protecting the top of the plates from shorting to the cell strap.



SOLAR AGM



- VRLA Sealed
- 105-375Ah @ 20Hr
- 8 Years Life*
- 3-Year Warranty
- Maintenance-Free

*According to IEC 61427



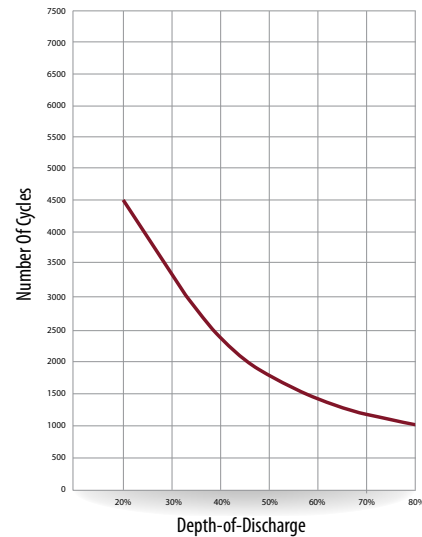
Trojan has incorporated several key engineering features in its Solar AGM batteries for renewable energy, hybrid and backup power applications that require deep-cycling power in a non-spillable battery design. Engineered for best value and worry-free storage, Trojan Solar AGM maintenance-free batteries can be counted on day in and day out as a reliable power source for a wide range of off-grid and unreliable grid applications.

Trojan's proven quality and reliability is the result of our extensive engineering expertise in deep-cycle battery design. Our Solar AGM batteries feature:

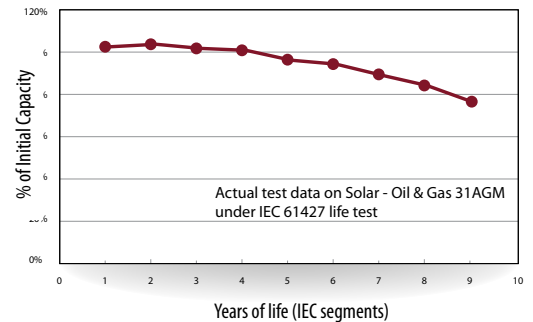
- Rugged Polypropylene case
- Flame arrestors for safety
- Optimized paste formula for solar applications
- Premium absorbed glass mat separators for maximum performance
- Top-facing or front-facing terminals for easy installation

These combined elements deliver increased total energy output, maximized sustained performance, consistent quality, and enhanced durability. The Trojan Solar AGM batteries are produced at its U.S.-based manufacturing operations which employ the latest technology, testing and quality check standards in the industry.

Depth of Discharge vs. Cycle Life in a Stationary Application



Sustained Capacity over IEC Life Test



Most Usable Energy

- Highest Ah and kWh throughput
- Lowest cost of energy over lifetime
- Best overall battery value



SOLAR PREMIUM



- Flooded
- 225-1255Ah @ 100Hr
- 8 Years Life*
- 3-Year Warranty
- Easy Maintenance

*According to IEC 61427

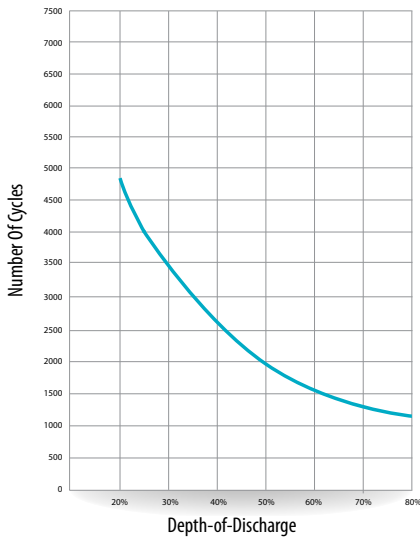


15% MORE CYCLES

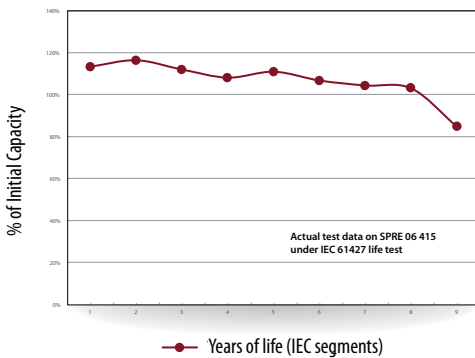
IEC 61427

EASY MAINTENANCE

Depth of Discharge vs. Cycle Life in a Stationary Application



Sustained Capacity over IEC Life Test



1 Smart Carbon™

A proprietary formula of carbon additives designed to enhance battery life and performance.

2 Alpha Plus® Paste with T2 Technology™

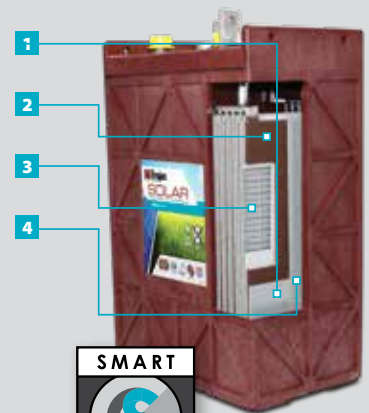
Optimizes porosity development in the active material resulting in sustained battery performance over a longer period of time.

3 DuraGrid™ Technology

Specifically designed for the longer life requirements of renewable energy applications.

4 Maxguard® XL Separator

30 percent thicker than our T2 flooded battery separator, and provides even greater resistance to stratification which is typically a mode of failure in batteries used in renewable energy systems.



SOLAR SIGNATURE

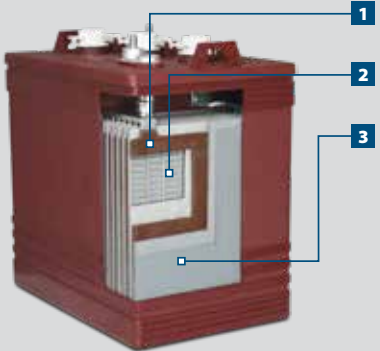
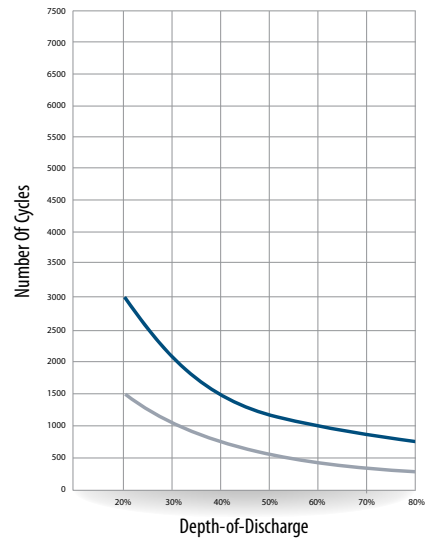


- Flooded
- 95-490Ah @ 100Hr
- 6 Months to 1 Year Warranty
- Easy Maintenance



The Solar Signature Line of deep-cycle flooded batteries is engineered to provide rugged durability and outstanding performance. Trojan's Solar Signature Line is perfectly suited for use in renewable energy systems where lowest life-cycle cost is the key consideration. An all-around power house, the Solar Signature Line features Trojan's historically-proven engineering with T2 Technology, an advanced battery technology for maximum sustained performance, longer life and increased total energy.

Depth of Discharge vs. Cycle Life in a Stationary Application



- 1 Alpha Plus[®] Paste with T2 Technology[™]**
Optimizes porosity development in the active material resulting in sustained battery performance over a longer period of time.
- 2 Trojan Grid Technology**
Specifically designed for the longer life requirements of renewable energy applications.
- 3 Maxguard[®] T2 Separator**
30 percent thicker than our T2 flooded battery separator and provides even greater resistance to stratification which is typically a mode of failure in batteries used in renewable energy systems.



Trojan Engineered Solutions


| Advanced Technology | | | | |
|--------------------------------------|------------------|-----------|---------------|-----------------|
| Technology | Solar Industrial | Solar AGM | Solar Premium | Solar Signature |
| Smart Carbon™ | ✓ | | ✓ | |
| Alpha Plus® Paste with T2 Technology | ✓ | ✓ | ✓ | ✓ |
| DuraGrid™ Technology | ✓ | ✓ | ✓ | |
| Trojan Grid Technology | | | | ✓ |
| Reinforced Protection Wrap | ✓ | | ✓ | |
| Maxguard® XL Separator | ✓ | | ✓ | |
| Premium AGM Separator | | ✓ | | |
| Maxguard® T2 Separator | | | | ✓ |
| Moss Shield | ✓ | | ✓ | |
| Maximum Flame Arrestors | ✓ | ✓ | ✓ | ✓ |
| Advanced Lead Acid | ✓ | ✓ | ✓ | |
| Single-Point Watering Kit | ✓ | | ✓ | ✓ |
| Koroseal protective wrapping | ✓ | | | |
| Overall rugged construction | ✓ | ✓ | ✓ | ✓ |

Engineered and manufactured with the reliability, durability and performance our customers have come to expect.

At Trojan, we are investing at record levels in manufacturing and production improvement projects at our U.S. facilities. Trojan's recent addition of advanced robotics, state-of-the-art cast-on-strap (COS) technology, automated acid fill stations, heat seal and testing equipment ensure the overall quality of our batteries.


IEC 61427 STANDARD

Secondary cells and batteries for renewable energy storage




17
Years

Trojan Battery
Solar Industrial Line



8+
Years

Trojan Battery
Solar Premium Line



8+
Years

Trojan Battery
Solar AGM

Importance of testing PV batteries to the IEC 61427 standard

Life expectancy of PV batteries has been difficult to quantify – until now. The International Electrotechnical Commission's (IEC) standard 61427 test provides performance criteria that all batteries for PV applications should be measured against. It offers a common, internationally accepted platform to compare and contrast batteries from different manufacturers.

| MODEL NAME | VOLTAGE | CAPACITY ^A Amp-Hours (Ah) | | | | | ENERGY ^E (kWh) | | DEFAULT TERMINAL | DIMENSIONS ^B Inches (mm) | | | WEIGHT ^D lbs. (kg) |
|---------------------------------------------------------------------------------------------------------|---------|--------------------------------------|------------|------------|------------|-------------|---------------------------|--------|------------------|-------------------------------------|---------------------|-----------|-------------------------------|
| | | 10-Hr Rate | 20-Hr Rate | 48-Hr Rate | 72-Hr Rate | 100-Hr Rate | 100-Hr Rate | Length | | Width | Height ^C | | |
| SOLAR INDUSTRIAL LINE - DEEP-CYCLE FLOODED BATTERIES WITH SMART CARBON™ - 3,600 CYCLES @ 50% DOD | | | | | | | | | | | | | |
| SIND 06 610 | 6 VOLT | 421 | 472 | 540 | 578 | 610 | 3.66 | 14 | 15.33 (389) | 10.22 (260) | 24.01 (610) | 220 (100) | |
| SIND 06 920 | 6 VOLT | 627 | 708 | 813 | 870 | 920 | 5.52 | 14 | 22.34 (567) | 10.30 (262) | 24.01 (610) | 315 (143) | |
| SIND 06 1225 | 6 VOLT | 835 | 942 | 1083 | 1159 | 1225 | 7.35 | 14 | 27.13 (689) | 10.44 (265) | 24.01 (610) | 415 (188) | |
| SIND 04 1685 | 4 VOLT | 1149 | 1293 | 1489 | 1594 | 1685 | 6.74 | 14 | 22.34 (567) | 10.30 (262) | 24.01 (610) | 367 (167) | |
| SIND 04 2145 | 4 VOLT | 1474 | 1647 | 1896 | 2030 | 2145 | 8.58 | 14 | 27.22 (691) | 10.44 (265) | 24.01 (610) | 465 (211) | |
| SIND 02 1990 | 2 VOLT | 1393 | 1547 | 1771 | 1889 | 1990 | 3.98 | 14 | 15.33 (389) | 10.22 (260) | 24.01 (610) | 235 (107) | |
| SIND 02 2450 | 2 VOLT | 1712 | 1882 | 2166 | 2318 | 2450 | 4.90 | 14 | 17.33 (440) | 10.22 (260) | 24.01 (610) | 278 (125) | |
| SOLAR PREMIUM LINE - DEEP-CYCLE FLOODED BATTERIES WITH SMART CARBON™ - 1,900 CYCLES @ 50% DOD | | | | | | | | | | | | | |
| SPRE 12 225* | 12 VOLT | 179 | 204 | 212 | 216 | 225 | 2.70 | 6 | 14.97 (380) | 6.91 (176) | 14.71 (374) | 132 (60) | |
| SPRE 06 255 | 6 VOLT | 211 | 229 | 244 | 249 | 255 | 1.53 | 16 | 10.30 (262) | 7.13 (181) | 11.74 (298) | 67 (30) | |
| SPRE 06 415* | 6 VOLT | 346 | 377 | 401 | 410 | 415 | 2.50 | 5 | 11.66 (296) | 6.94 (176) | 17.55 (446) | 118 (54) | |
| SPRE 02 1255* | 2 VOLT | 1039 | 1130 | 1203 | 1232 | 1255 | 2.51 | 5 | 11.66 (296) | 6.94 (176) | 17.55 (446) | 119 (54) | |
| SOLAR SIGNATURE LINE - DEEP-CYCLE FLOODED BATTERIES - 1,200 CYCLES @ 50% DOD | | | | | | | | | | | | | |
| SSIG 12 170 | 12 VOLT | 136 | 153 | 157 | 164 | 170 | 2.04 | 2 | 13.95 (354) | 7.13 (181) | 10.71 (272) | 84 (38) | |
| SSIG 12 230* | 12 VOLT | 192 | 209 | 214 | 223 | 230 | 2.76 | 6 | 14.97 (380) | 6.91 (176) | 14.67 (373) | 114 (52) | |
| SSIG 12 255* | 12 VOLT | 211 | 229 | 237 | 247 | 255 | 3.06 | 6 | 14.97 (380) | 6.91 (176) | 14.67 (373) | 123 (56) | |
| SSIG 06 235 | 6 VOLT | 196 | 214 | 220 | 228 | 235 | 1.42 | 1 | 10.30 (262) | 7.13 (181) | 10.74 (273) | 58 (26) | |
| SSIG 06 255 | 6 VOLT | 211 | 229 | 237 | 247 | 255 | 1.53 | 1 | 10.30 (262) | 7.13 (181) | 10.74 (273) | 62 (28) | |
| SSIG 06 290 | 6 VOLT | 243 | 265 | 271 | 281 | 290 | 1.74 | 1 | 10.30 (262) | 7.13 (181) | 11.48 (292) | 72 (33) | |
| SSIG 06 375* | 6 VOLT | 309 | 336 | 348 | 363 | 375 | 2.25 | 6 | 11.66 (296) | 6.94 (176) | 14.37 (365) | 96 (44) | |
| SSIG 06 405* | 6 VOLT | 337 | 366 | 376 | 392 | 405 | 2.43 | 6 | 11.66 (296) | 6.94 (176) | 14.37 (365) | 98 (44) | |
| SSIG 06 475* | 6 VOLT | 393 | 428 | 441 | 459 | 475 | 2.85 | 5 | 11.66 (296) | 6.94 (176) | 17.55 (446) | 114 (52) | |
| SSIG 06 490* | 6 VOLT | 407 | 443 | 455 | 474 | 490 | 2.94 | 5 | 11.66 (296) | 6.94 (176) | 17.55 (446) | 125 (57) | |
| SOLAR SIGNATURE LINE - DEEP-CYCLE FLOODED BATTERIES - 600 CYCLES @ 50% DOD | | | | | | | | | | | | | |
| SSIG 12 95 | 12 VOLT | 79 | 87 | 88 | 92 | 95 | 1.14 | 7 | 10.92 (277) | 6.62 (168) | 9.25 (235) | 47 (21) | |
| SSIG 12 120 | 12 VOLT | 99 | 107 | 111 | 116 | 120 | 1.44 | 9 | 12.84 (326) | 6.60 (168) | 9.74 (247) | 55 (25) | |
| SSIG 12 145 | 12 VOLT | 122 | 132 | 135 | 140 | 145 | 1.74 | 9 | 13.94 (354) | 6.75 (171) | 10.09 (256) | 66 (30) | |
| MODEL NAME | VOLTAGE | CAPACITY ^A Amp-Hours (Ah) | | | | | ENERGY ^E (kWh) | | DEFAULT TERMINAL | DIMENSIONS ^B Inches (mm) | | | WEIGHT ^D lbs. (kg) |
| | | 10-Hr Rate | 20-Hr Rate | 48-Hr Rate | 72-Hr Rate | 100-Hr Rate | 20-Hr Rate | Length | | Width | Height ^C | | |
| SOLAR AGM LINE - DEEP-CYCLE AGM BATTERIES - 1,700 CYCLES @ 50% DOD | | | | | | | | | | | | | |
| SAGM 12 105 | 12 VOLT | 94 | 105 | 109 | 111 | 113 | 1.26 | 5, 15 | 12.80 (325) | 6.81 (173) | 9.34 (237) | 67 (30) | |
| SAGM 12 135 | 12 VOLT | 131 | 135 | 136 | 137 | 137 | 1.62 | 5, 15 | 12.96 (329) | 7.06 (179) | 10.96 (278) | 83 (38) | |
| SAGM 12 205 | 12 VOLT | 174 | 205 | 210 | 213 | 216 | 2.46 | 5, 15 | 14.97 (380) | 6.94 (176) | 14.07 (357) | 131 (59) | |
| SAGM 08 165 | 8 VOLT | 145 | 165 | 168 | 171 | 174 | 1.32 | 5, 15 | 10.30 (262) | 7.06 (179) | 10.73 (273) | 70 (32) | |
| SAGM 06 220 | 6 VOLT | 190 | 220 | 228 | 231 | 235 | 1.32 | 5, 15 | 10.30 (262) | 7.06 (179) | 10.73 (273) | 68 (31) | |
| SAGM 06 315 | 6 VOLT | 278 | 315 | 326 | 331 | 335 | 1.89 | 5, 15 | 11.66 (296) | 6.94 (176) | 13.99 (355) | 95 (43) | |
| SAGM 06 375 | 6 VOLT | 329 | 375 | 389 | 394 | 400 | 2.25 | 5, 15 | 11.66 (296) | 6.94 (176) | 16.31 (414) | 114 (52) | |



* Polyon™ Case

- A. The amount of amp-hours (Ah) for Solar Line batteries can deliver when discharged at a constant rate at 86°F (30°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.
- B. Dimensions may vary depending on type of handle or terminal. Batteries to be mounted with .5 inches (12.7 mm) spacing minimum.
- C. Dimensions taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal.
- D. Weight may vary.
- E. The Energy (kWh) for the Solar AGM batteries are based on the 20-Hr Rate.

TERMINAL CONFIGURATIONS



1 - ELPT
Embedded Low Profile



2 - EHPT
Embedded High Profile



5 - LT
L-Terminal



6 - DT
Automotive Post & Stud



7 - UT
Universal



8 - AP
Automotive Post



9 - WNT
Wingnut



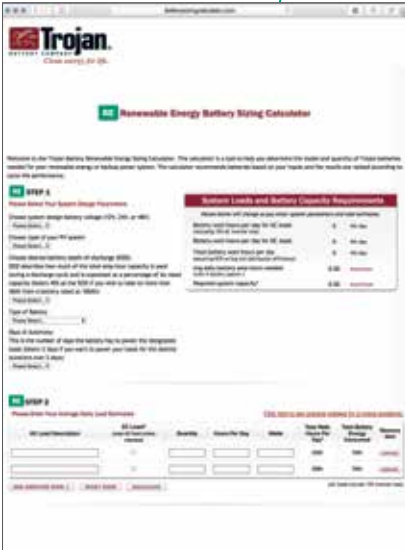
14 - IND
Ind



15 - M6/M8
6mm/8mm Insert



16 - SLT
Small L-Terminal



www.batterysizingcalculator.com

Configure your Renewable Energy System with Trojan Batteries using the Online Renewable Energy Battery Sizing Calculator

Trojan's battery sizing calculator is an easier way to determine battery capacity than manually calculating load requirements and then converting them to battery capacity. Customers simply fill in the appropriate information on the electronic form such as battery voltage, desired depth-of-discharge (DOD), days of autonomy, AC and DC loads, device types with power ratings, and hours per day or days per week used, and the application automatically determines the required battery capacity. It then recommends the Trojan battery models for their particular application. The calculator also allows customers to run "what if" scenarios to find specific battery options to meet their budget or configuration requirements.

Environmental Stewardship

At Trojan Battery, when we say, "Clean energy for life™," we mean every word. As proactive supporters of environmental sustainability, our environmental stewardship focuses on clean energy initiatives and recycling programs.



- Trojan batteries are 99% recyclable. The container plastic, battery lead and electrolyte from old deep-cycle batteries can be recycled to produce new deep-cycle batteries.
- Through its partnership with Southern California Edison (SCE), Trojan saves more than 8 million kilowatt hours and cuts CO₂ emissions by over 12 million pounds significantly reducing our annual energy consumption and carbon foot print.

TROJAN BATTERY COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001:2015 =



Trojan batteries are available worldwide. We offer outstanding technical support, provided by full-time application engineers.

Call 800.423.6569 or + 1.562.236.3000 or visit www.trojanbattery.com

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