



SSIG 12 145



600 CYCLES @ 50 % DOD

• TRULY DEEP CYCLE

- BCI Group 31, 12V
- Reserve Capacity [Ah@20hr rate]: 132
- Reserve Capacity [Ah@100hr rate]: 145
- Energy [kWh]: 1.74
- Weight: 66 lbs.
- Length: 13.94 in (354 mm)
- Width: 6.75 in (171 mm)
- Height: 10.09 in (256 mm)
- WNT



SOLAR SIGNATURE LINE FLOODED

The Solar Signature Line of deep-cycle flooded batteries provide outstanding performance day in and day out.

The Solar Signature Line is designed to deliver maximum sustained performance, long life and increased energy. The cost-effective Solar Signature batteries are ideal for off-grid, grid-tied and unstable grid environments.

Trojan's Grid Technology is a lead antimony alloy grid mixture formulated for use with Trojan's Alpha Plus® Paste with T2 Technology. The overall grid configuration is optimized to enhance current flow through the grid network providing exceptional battery performance, reducing downtime and lowering overall maintenance costs.

Trojan's **Maxguard T2** separator features a multi-rib geometry which keeps acid channels open longer enhancing electrochemical processing while reducing the risk of stratification. Trojan's Maxguard T2 advanced separator sustains performance providing exceptionally longer battery life and significantly lowering your operating costs.

Alpha Plus® Paste with T2 Technology is a proprietary, high-density paste formulation precisely engineered to deliver outstanding battery performance. Together Alpha Plus Paste with T2 Technology increases both sustained capacity and total overall ampere-hours resulting in more operating power for your application. It's a key reason why Trojan batteries consistently outperform the competition.

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DATA SHEET

MODEL SSIG 12 145
 VOLTAGE 12V
 CAPACITY 145Ah @ 100Hr
 MATERIAL Polypropylene
 BATTERY TYPE Deep Cycle Flooded / Wet Lead Acid Battery

12V

PRODUCT + PHYSICAL SPECIFICATIONS

BCI Group Size	Type	Voltage	Cell(s)	Terminal Type ^G	Dimensions ^C Inches (mm)			Weight Lbs. (kg)
					Length	Width	Height ^F	
31	SSIG 12 145	12	6	9	13.94 (354)	6.75 (171)	10.09 (256)	66 (30)

ELECTRICAL SPECIFICATIONS

Cranking Performance		Capacity ^A Minutes		Capacity ^B Amp-Hours (AH)							Energy (kWh)	Internal Resistance (mΩ)	Short Circuit Current (amps)
C.C.A. ^D @ 0°F (-18°C)	C.A. ^F @ 32°F (0°C)	@ 25 Amps	@ 75 Amps	2-Hr	5-Hr	10-Hr	20-Hr	48-Hr	72-Hr	100-Hr	100-Hr		
---	---	--	--	--	--	122	132	135	140	145	1.74	---	---

CHARGING INSTRUCTIONS

Charger Voltage Settings (at 77°F/25°C)				
System Voltage	6V	12V	24V	48V
Maximum Charge Current (% of C ₂₀ Rate)*	13 %			
Maximum Absorption Phase Time (hours)	4			
Absorption Voltage**	---	14.70	29.40	58.80
Float Charge	---	13.50	27.00	54.00
Equalize Charge	---	16.20	32.40	64.80

Do not install or charge batteries in a sealed or non-ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.

* If Charging time is limited contact Trojan Technical Support for Assistance

** In cases where controller has a bulk voltage setting, use absorption voltage setting above



Designed in compliance with applicable BCI, DIN, BS and IEC standards. Tested in compliance to BCI and IEC standards.



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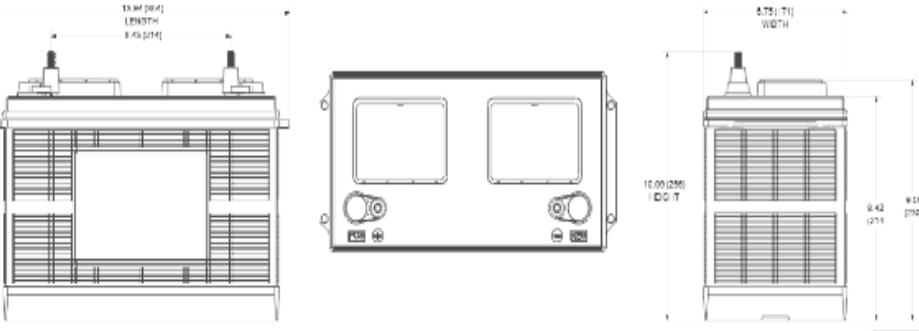
CHARGING TEMPERATURE COMPENSATION

Add	Subtract
0.005 volt per cell for every 1°C below 25°C	0.005 volt per cell for every 1°C above 25°C
0.0028 volt per cell for every 1°F below 77°F	0.0028 volt per cell for every 1°F above 77°F

OPERATIONAL DATA

Operating Temperature	Self Discharge
-4°F to 122°F (-20°C to 50°C) At temperatures below 32°F (0°C) maintain a state of charge greater than 60%	Less than 3% per month depending on storage temperature conditions

BATTERY DIMENSIONS



EXPECTED LIFE VS. TEMPERATURE


Chemical reactions internal to the battery are driven by voltage and temperature. The higher the battery temperature, the faster chemical reactions will occur. While higher temperatures can provide improved discharge performance the increased rate of chemical reactions will result in a corresponding loss of battery life. As a rule of thumb, for every 10°C increase in temperature the reaction rate doubles. Thus, a month of operation at 35°C is equivalent in battery life to two months at 25°C. Heat is an enemy of all lead acid batteries, FLA, AGM and gel alike and even small increases in temperature will have a major influence on battery life.

- A. The amount of amp-hours (Ah) a battery can deliver when discharged at a constant rate at 86°F (30°C) for all rates 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 should be mounted with 0.5 inches (12.7 mm) spacing minimum.

STATE OF CHARGE MEASURE OF OPEN-CIRCUIT VOLTAGE

Percentage Charge	Specific Gravity	Cell	12 Volt
100	1.277	2.122	12.73
90	1.258	2.103	12.62
80	1.238	2.083	12.50
70	1.217	2.062	12.37
60	1.195	2.040	12.24
50	1.172	2.017	12.10
40	1.148	1.993	11.96
30	1.124	1.969	11.81
20	1.098	1.943	11.66
10	1.073	1.918	11.51

TERMINAL CONFIGURATION

9	WNT	Wingnut Terminal
		<p>Terminal Height Inches (mm) 1.50 (38)</p> <p>Torque Values in-lb (Nm) 95 – 105 (11 – 12)</p> <p>Bolt 5/16" - 18</p>

SMART CARBON™

Deep-cycle batteries used in off-grid and unstable grid applications are heavily cycled at partial state of charge (PSOC). Operating at PSOC on a regular basis can quickly diminish the overall life of a battery, which results in frequent and costly battery replacements.

To address the impact of PSOC on deep-cycle batteries in renewable energy (RE), inverter backup and telecom applications, Trojan Battery has now included Smart Carbon™ as a standard feature in its Industrial and Premium flooded battery lines.

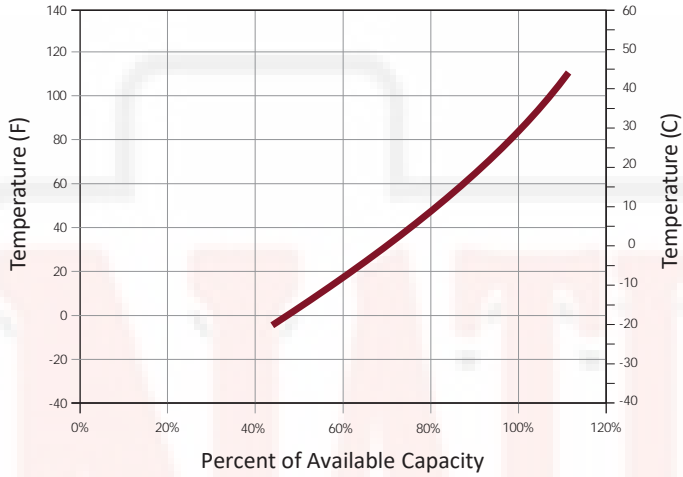
- C. Height taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal.
 D. Terminal images are representative only.
 E. A boost charge should be performed every 6 months when batteries are in storage.
 F. Weight may vary.



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PERCENT CAPACITY VS. TEMPERATURE

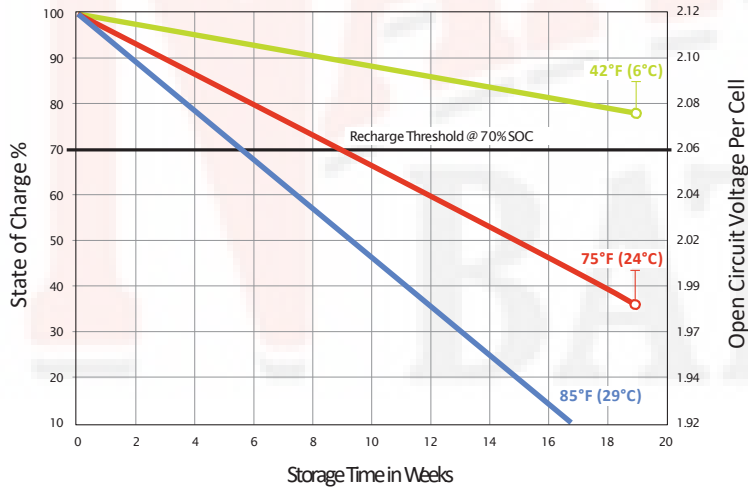


*PERIODIC CHARGE

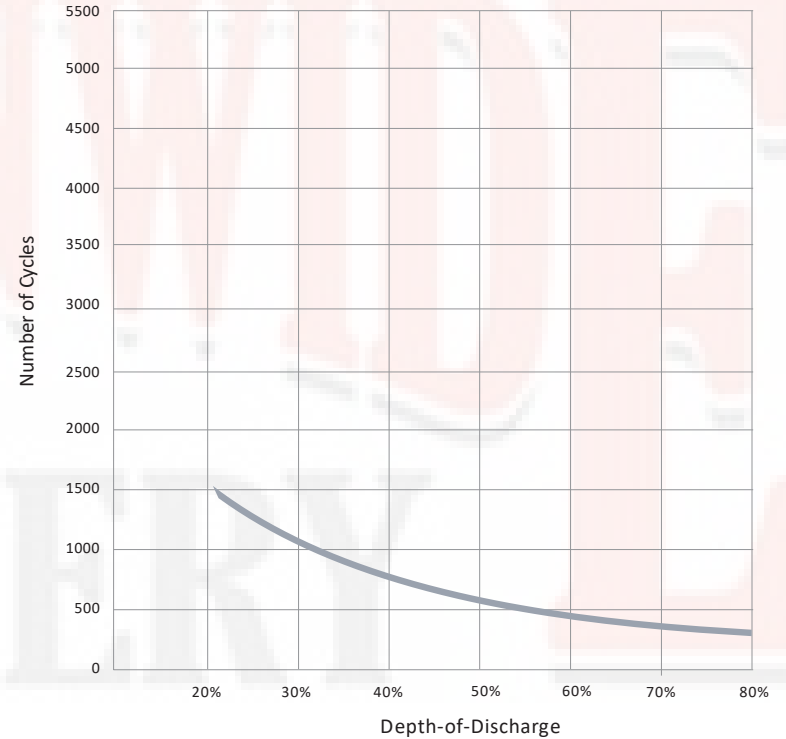
FREQUENCY

Provide a periodic freshening charge to maintain a SOC greater than the threshold of 70%.

SELF DISCHARGE VS. TIME*



DOD VS CYCLE LIFE IN A STATIONARY APPLICATION



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