



**BATTERY:** VRLA GEL  
**DIMENSIONS:** inches (mm)  
**COLOR:** Maroon (case) Grey (cover)  
**MATERIAL:** Polypropylene

Trojan's deep-cycle gel batteries are sealed, maintenance-free batteries that deliver superior power in demanding renewable energy applications. Engineered for rugged durability, outstanding performance and long battery life, Trojan's deep-cycle gel batteries feature a number of important design characteristics that provide significant advantages over competing gel products. The gelled electrolyte is a proprietary formulation that delivers consistent performance and dramatically extends the battery's cycle life. Lead alloy grids provide longer shelf life and superior corrosion resistance as well as deliver more concentrated energy to the terminals. Its premium grade, double-insulated separators allow maximum charge flow between the plates for optimum performance.

### PRODUCT SPECIFICATION

BCI GROUP SIZE	TYPE	VOLTAGE	CAPACITY <sup>A</sup> Amp-Hours (AH)				ENERGY (kWH)		Default TERMINAL	DIMENSIONS <sup>B</sup> Inches (mm)			WEIGHT lbs. (Kg)
			5-Hr Rate	10-Hr Rate	20-Hr Rate	100-Hr Rate	100-Hr Rate	Length		Width	Height		
<b>GEL LINE - VRLA DEEP-CYCLE BATTERIES - 1,000 CYCLES @ 50% DOD</b>													
24	24-GEL	12 VOLT	66	72	77	85	1.02	6	10.92 (277)	6.61 (168)	9.26 (235)	52 (24)	
27	27-GEL	12 VOLT	76	84	91	100	1.20	7	12.73 (323)	6.38 (162)	9.26 (235)	63 (29)	
31	31-GEL	12 VOLT	85	94	102	108	1.30	7	12.94 (329)	6.82 (173)	9.64 (245)	70 (32)	
DIN	55HP-GEL	12 VOLT	110	115	125	137	1.64	8	13.53 (344)	6.72 (171)	10.99 (279)	85 (39)	
GC2	6V-GEL	6 VOLT	154	167	189	198	1.19	6	10.25 (260)	7.08 (180)	10.82 (275)	68 (31)	
DIN	TE35-GEL	6 VOLT	180	193	210	220	1.32	8	9.62 (244)	7.49 (190)	10.70 (272)	69 (31)	
8D	8D-GEL	12 VOLT	188	207	225	265	3.18	5	20.69 (526)	10.95 (278)	10.82 (275)	163 (73)	

A. The amount of amp-hours (AH) a battery can deliver when discharged at a constant rate at 80°F (27°C) and 86°F (30°C) for the 5-Hour rate and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.  
B. Dimensions are based on nominal size. Dimensions may vary depending on type of handle or terminal.  
C. Dimensions taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal. Trojan's battery testing procedures adhere to both BCI and IEC test standards.

## CHARGING INSTRUCTIONS

CHARGER VOLTAGE SETTINGS (AT 77°F/25°C)				
System Voltage	12V	24V	36V	48V
Absorption	14.1 – 14.4	28.2 – 28.8	42.3 – 43.2	56.4 – 57.6
Float	13.5	27	40.5	54

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.

## OPERATIONAL DATA

OPERATING TEMPERATURE	SELF DISCHARGE
-4°F to 113°F (-20°C to +45°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.

Batteries may be utilized at higher temperatures with the understanding that battery life will be reduced by 50% for every 10° C (18° F) increase in operating temperatures over 68° F (20° C).

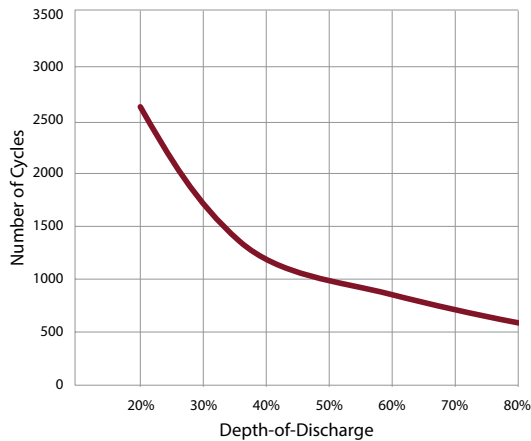
## CHARGING TEMPERATURE COMPENSATION

.028 VPC for every 10°F (5.55°C) above or below 77°F (25°C) (add .028 VPC for every 10°F (5.55°C) below 77°F and subtract .028 VPC for every 10°C above 77°F).

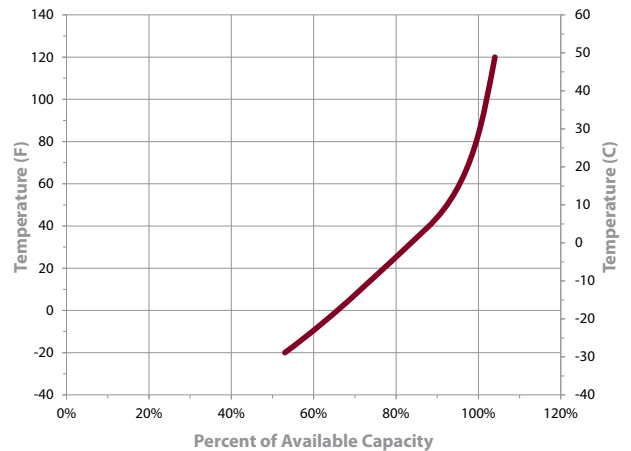
## EXPECTED LIFE VS. TEMPERATURE

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.





## TYPICAL CYCLE LIFE IN A STATIONARY APPLICATION



## CAPACITY VS. TEMPERATURE



## TERMINAL CONFIGURATIONS

5 LT	L-Terminal	6 DT	Automotive Post & Stud Terminal	7 UT	Universal Terminal
	<p><b>Terminal Height Inches (mm)</b> 1.70 (43)</p> <p><b>Torque Values in-lb (Nm)</b> 100 – 120 (11 – 14)</p> <p><b>Bolt Size</b> 5/16"</p>		<p><b>Terminal Height Inches (mm)</b> .69 (18)</p> <p><b>Torque Values in-lb (Nm)</b> AP: 50 – 70 (6 – 8) ST: 120 – 180 (14 – 20)</p> <p><b>Bolt Size</b> 5/16"</p>		<p><b>Terminal Height Inches (mm)</b> 1.10 (28)</p> <p><b>Torque Values in-lb (Nm)</b> 95 – 105 (11 – 12)</p> <p><b>Bolt Size</b> 5/16"</p>
<b>8 AP</b>	<b>Automotive Terminal</b>				
	<p><b>Terminal Height Inches (mm)</b> .83 (21)</p> <p><b>Torque Values in-lb (Nm)</b> 50 – 70 (6 – 8)</p>				



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.trojanbatteryRE.com](http://www.trojanbatteryRE.com)**

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