

MODEL **31-Gel**  
 VOLTAGE **12**  
 CAPACITY **102Ah @ 20Hr**  
 MATERIAL **Polypropylene**  
 BATTERY **VRLA AGM / Non-Spillable / Maintenance-Free**  
 COLOR **Maroon (case) Grey (cover)**  
 WATERING **No Watering Required**



## 12 VOLT

### PHYSICAL SPECIFICATIONS

BCI	MODEL NAME	TERMINAL TYPE <sup>G</sup>	DIMENSIONS <sup>C</sup> INCHES (mm)			WEIGHT <sup>H</sup> LBS. (kg)	HANDLES	INSTALLATION ORIENTATION
			LENGTH	WIDTH	HEIGHT <sup>D</sup>			
31	31-GEL	7	12.94 (329)	6.82 (173)	9.64 (245)	70 (32)	Plastic Handle	Horizontal and Vertical

### ELECTRICAL SPECIFICATIONS

VOLTAGE	CAPACITY <sup>A</sup> MINUTES	CAPACITY <sup>B</sup> AMP-HOURS (Ah)					ENERGY (kWh)	INTERNAL RESISTANCE (mΩ)	SHORT CIRCUIT CURRENT (amps)
	@ 25 Amps	5-Hr	10-Hr	20-Hr	100-Hr	100-Hr			
12	200	85	94	102	108	1.30	—	—	—

### CHARGING INSTRUCTIONS

CHARGER VOLTAGE SETTINGS (AT 77°F/25°C)				
SYSTEM VOLTAGE	12V	24V	36V	48V
Maximum Charge Current (A)	13% of C <sub>20</sub>			
Absorption Voltage (2.40 V/cell)	14.40	28.80	43.20	57.60
Float Voltage (2.25 V/cell)	13.50	27.00	40.50	54.00
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.				

### CHARGING TEMPERATURE COMPENSATION

ADD	SUBTRACT
0.003 volt per cell for every 1°C below 25°C 0.0017 volt per cell for every 1°F below 77°F	0.003 volt per cell for every 1°C above 25°C 0.0017 volt per cell for every 1°F above 77°F

### 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

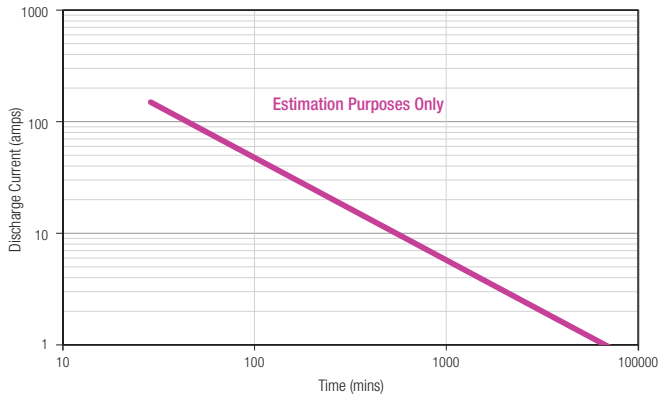
### RECYCLE RESPONSIBLY



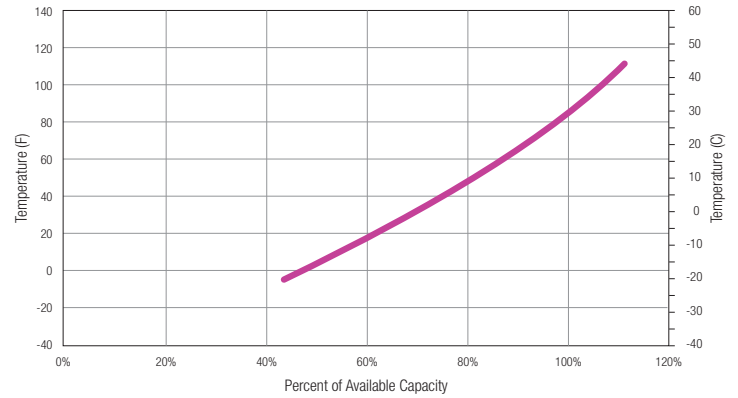
### STATE OF CHARGE MEASURE OF OPEN-CIRCUIT VOLTAGE

PERCENTAGE CHARGE	CELL	12 VOLT
100	2.14	12.84
75	2.11	12.66
50	2.06	12.36
25	2.00	12.00
0	1.97	11.82

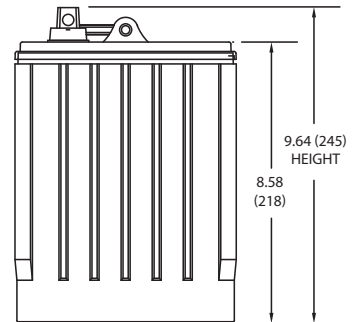
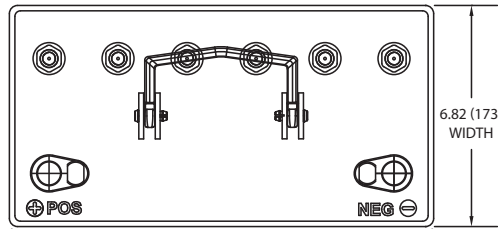
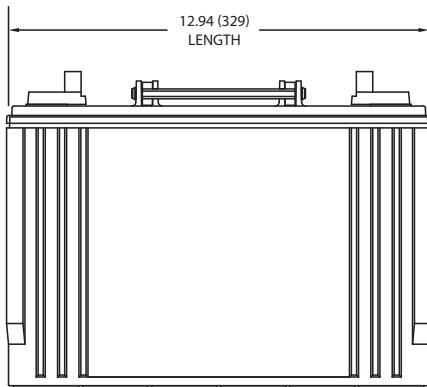
## TROJAN 31-GEL PERFORMANCE




## PERCENT CAPACITY VS. TEMPERATURE



## BATTERY DIMENSIONS (shown with UT)



## TERMINAL CONFIGURATIONS<sup>E</sup>

7	UT	UNIVERSAL TERMINAL
		
<b>Terminal Height Inches (mm)</b> 1.10 (28)		
<b>Torque Values in-lb (Nm)</b> 95 – 105 (11 – 12)		
<b>Bolt</b> 5/16" – 18		

- A. The number of minutes a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.
- B. The amount of amp-hours (Ah) a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.
- C. Dimensions are based on nominal size. Dimensions may vary depending on type of handle or terminal. Batteries to be mounted with .5 inches (12.7 mm) spacing minimum.

- D. Dimensions taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal.
- E. Terminal images are representative only.
- F. Weight may vary.



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



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