

MODEL: IND23-4V
DIMENSIONS: inches (mm)
BATTERY: Flooded/wet lead-acid battery
COLOR: Maroon (case/cover)
MATERIAL: Polypropylene (internal cell container)
 Polyethylene (outer container)



PRODUCT SPECIFICATION

| TYPE | CAPACITY ^A Amp-Hours (AH) | | | | | | | | ENERGY (kWh) | VOLTAGE | DIMENSIONS ^B Inches (mm) | | | WEIGHT lbs. (kg) | |
|---------------------------|--------------------------------------|------------|------------|------------|------------|-------------|-------------|-------------|--------------|--------------|-------------------------------------|----------|---------------------|------------------|-----|
| | 5-Hr Rate | 10-Hr Rate | 20-Hr Rate | 48-Hr Rate | 72-Hr Rate | 100-Hr Rate | 240-Hr Rate | 100-Hr Rate | | | Length | Width | Height ^C | Dry | Wet |
| DEEP CYCLE BATTERY | | | | | | | | | | | | | | | |
| IND23-4V | 977 | 1106 | 1233 | 1390 | 1459 | 1500 | 1514 | 6.00 | 4 | 22-3/8 (568) | 10-1/4 (260) | 24 (610) | 293 (133) | 370 (168) | |

A. 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 nominal 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.

CAPACITY AMP-HOURS (AH)

| Cutoff Voltage | 5-Hr | 10-Hr | 20-Hr | 48-Hr | 72-Hr | 100-Hr | 240-Hr |
|----------------|------|-------|-------|-------|-------|--------|--------|
| 1.75 vpc | 977 | 1106 | 1233 | 1390 | 1459 | 1500 | 1514 |
| 1.80 vpc | 881 | 1040 | 1183 | 1362 | 1431 | 1467 | 1492 |
| 1.85 vpc | 798 | 940 | 1087 | 1252 | 1335 | 1383 | 1387 |
| 1.90 vpc | 583 | 756 | 908 | 1101 | 1183 | 1228 | 1239 |

CHARGING INSTRUCTIONS

| CHARGER VOLTAGE SETTINGS (AT 77°F/25°C) | |
|---|------------------|
| | Voltage per cell |
| Absorption charge | 2.35-2.45 |
| Float charge | 2.20 |
| Equalize charge | 2.58 |

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 | Specific Gravity |
|--|-------------------|---|
| -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%. | Up to 4% per week | The specific gravity at 100% state-of-charge is 1.260 |

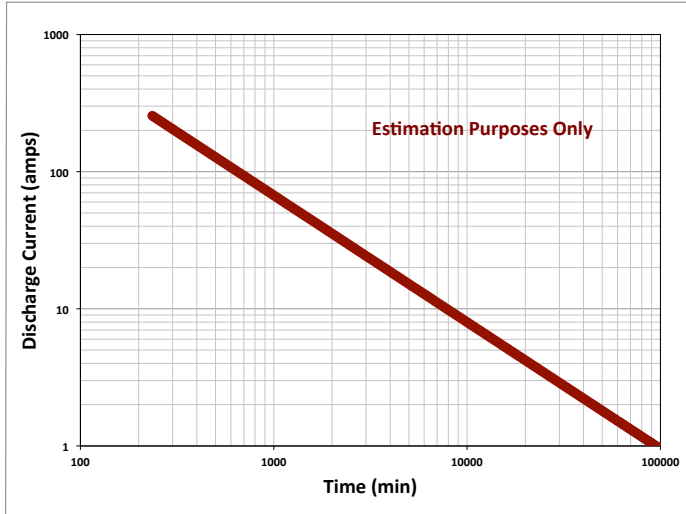
CHARGING TEMPERATURE COMPENSATION

To the Voltage Reading -- Subtract 0.005 volt per cell (VPC) for every 1°C above 25°C or add 0.005 volt per cell for every 1°C below 25°C.

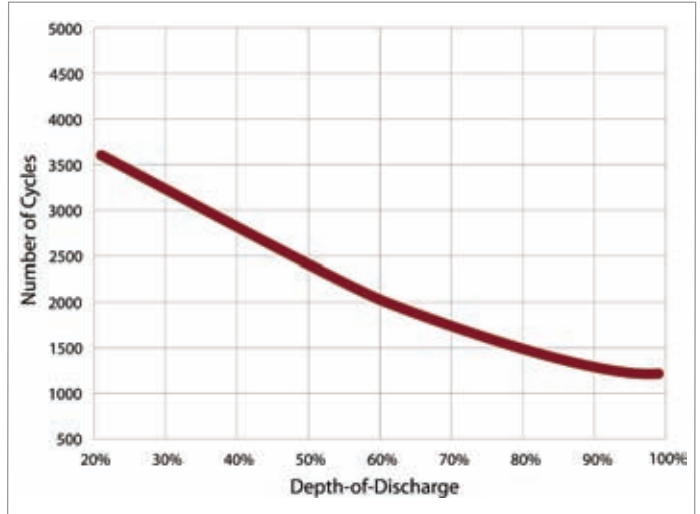
EXPECTED LIFE VS. TEMPERATURE

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, GEL, and AGM alike and even small increases in temperature will have a major influence on battery life.

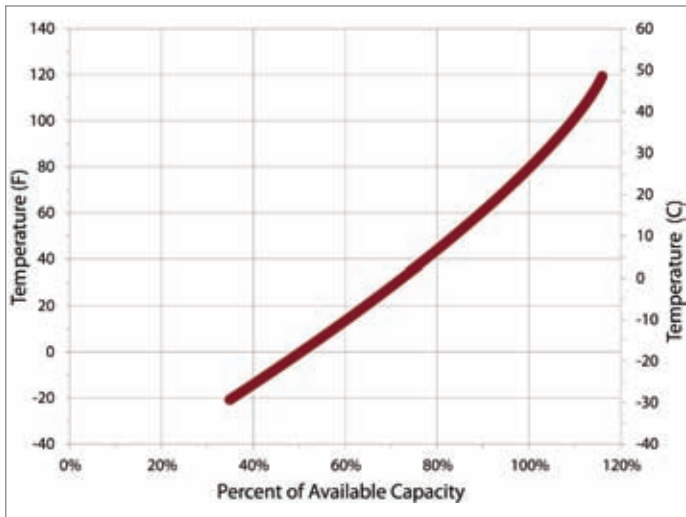
TROJAN IND23-4V PERFORMANCE



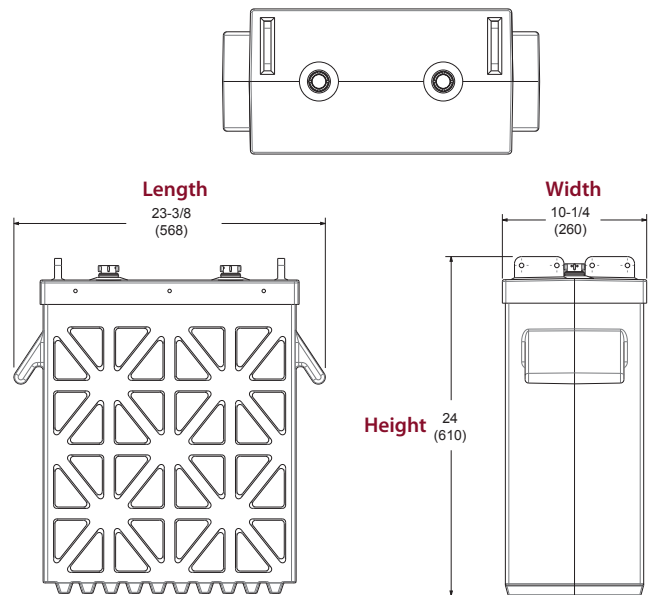
CYCLE LIFE



CAPACITY VS. TEMPERATURE



BATTERY DIMENSIONS



TERMINAL CONFIGURATIONS

| 14 | IND | Ind Terminal |
|---|-----|--------------|
|  | | |
| Terminal Height Inches (mm) | | |
| 1-3/4 (44) | | |
| Torque Values LB-IN (Nm) | | |
| 100 - 120 (11 - 14) | | |
| Through-hole Diameter Inches (mm) | | |
| 3/8 (9.5) | | |

VENT CAP OPTIONS

