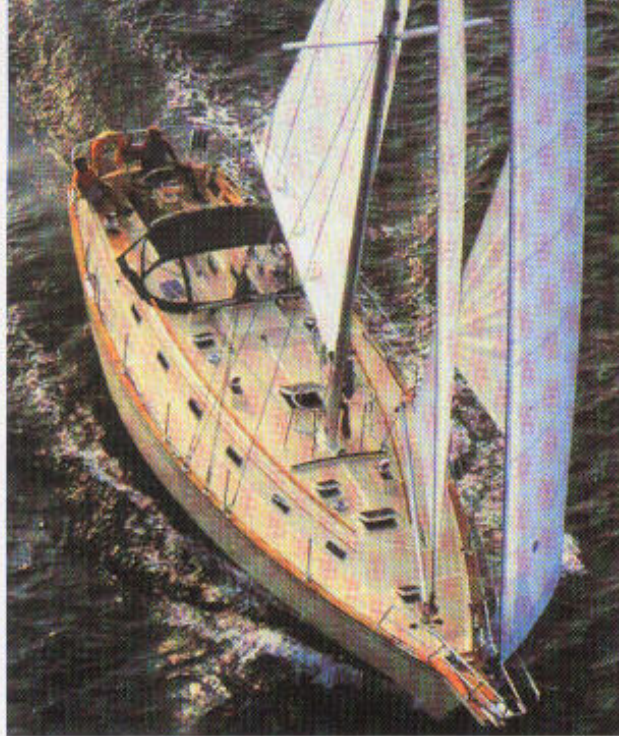


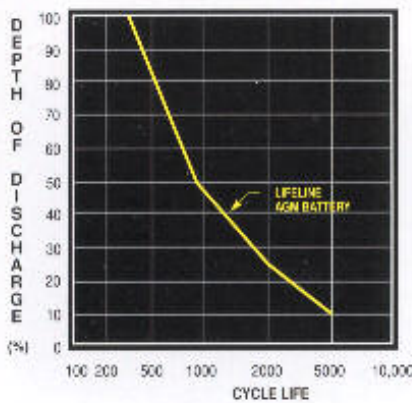
# LONG CYCLE LIFE

## Lifeline Recombinant Gas Batteries

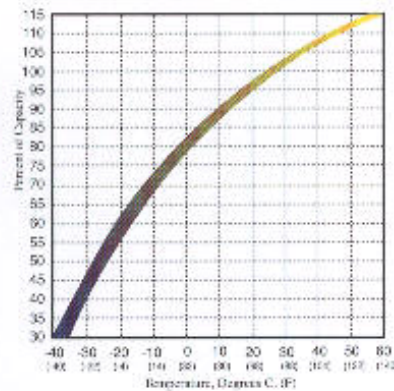
The cells are sealed with pressure relief valves that provide a positive pressure within the battery. The plates are sandwiched with a micro fibrous silica glass mat consisting of a blend of glass fibres of varying length and diameter that have good wicking characteristics and promote retention of the electrolyte. Electrolyte is absorbed and held in place by the capillary action between the fluid and the glass mat fibres. The mat is 90% saturated with electrolyte. By design, it is not totally saturated with electrolyte... a portion is filled with gas. The void space provides the channels by which oxygen travels in its path from positive to negative plate during charging. The void spaces allow the freshly generated gases, which are in their atomic state and very reactive, to recombine rapidly and safely. The recombination passivates the negative slightly, reducing electrolysis and ultimately eliminating the need to add water, which makes the battery truly maintenance free. Because of this type construction, the VRSLAB have much lower internal resistance and thus have greater starting power, particularly at cold temperatures. Additionally, this glass mat provides a much higher degree of support against shock and vibration than the old flooded type.



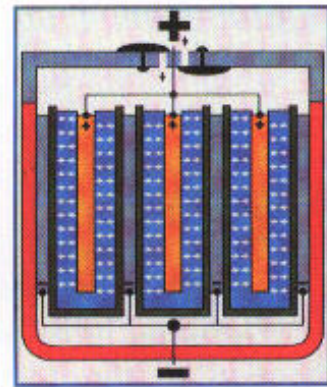
LIFE CYCLE PERFORMANCE CHART



Battery Capacity at various temperatures



Achieving full capacity at a specified temperature is a function of charging voltage. Please refer to a "Lifeline" Charge Voltage/Ambient Temperature Charging Curve to ensure your batteries are being fully charged.



The recombination of the gases on charge with the absorbed glass mat design.

## MARINE & R.V. STARTING APPLICATIONS

| Part Number | Nom Volts | Overall Dimensions |           |           | Unit Wt. lb. (kg) | CCA | CCA  | CCA  | Minutes of Discharge @ 25 Amps |
|-------------|-----------|--------------------|-----------|-----------|-------------------|-----|------|------|--------------------------------|
|             |           | L in(mm)           | W in(mm)  | H in(mm)  |                   | 0°F | 32°F | 68°F |                                |
| GPL-1300    | 12        | 5.23(133)          | 4.54(115) | 5.81(148) | 15(6.8)           | 265 | 335  | 415  | 32                             |
| GPL-1400T   | 12        | 9.78(249)          | 5.17(132) | 6.83(174) | 32(14.5)          | 550 | 700  | 850  | 90                             |

Terminals: GPL-24T, GPL-27T & GPL-31T are heavy duty copper alloy Marine Terminals. GPL-1200T is a 10-32 copper alloy threaded insert and the GPL-1400T is an 8mm copper alloy threaded insert. The GPL-111T is a 1/4"-20N.C. copper alloy threaded insert. All "T" batteries supplied with brass bolts and washers. A= Automotive post. L= L bladed terminal 5/16" bolt hole and supplied with bolts and washers. Handles: "T" models= Handles are built into cover design. GPL-24T and GPL-27T also incorporate strap handles. Handles not available on part numbers GPL-4C & GPL-1300. Models GPL-4D & GPL-8D are equipped with rope handles. Ratings: Capacity ratings are stated at 77°F (25°C) to 1.75 volts per cell. Drawings: Product drawings for each model available upon request.

## SPECIFICATIONS

| Part Number | Nom Volts | Overall Dimensions |            |            | Unit Wt. lb. (kg) | CCA  | CCA  | CCA  | Capacity Ampere Hrs @ 20 Hour. Rate | Minutes of Discharge @ |         |        |
|-------------|-----------|--------------------|------------|------------|-------------------|------|------|------|-------------------------------------|------------------------|---------|--------|
|             |           | L in(mm)           | W in(mm)   | H in(mm)   |                   | 68°F | 32°F | 0°F  |                                     | 25 Amps                | 15 Amps | 8 Amps |
| GPL-111T    | 12        | 7.71(196)          | 5.18(132)  | 6.89(175)  | 24(10.9)          | 325  | 275  | 215  | 33                                  | 50                     | 93      | 185    |
| GPL-24T     | 12        | 11.13(283)         | 6.77(172)  | 9.25(235)  | 56(25.5)          | 800  | 680  | 550  | 80                                  | 149                    | 259     | 524    |
| GPL-27T     | 12        | 13.09(333)         | 6.77(172)  | 9.25(235)  | 65(29.5)          | 845  | 715  | 575  | 100                                 | 186                    | 324     | 655    |
| GPL-31T     | 12        | 12.90(328)         | 6.75(172)  | 9.27(236)  | 69(31.4)          | 880  | 750  | 600  | 105                                 | 195                    | 340     | 688    |
| GPL-4DA     | 12        | 20.75(528)         | 8.71(222)  | 10.09(257) | 135(61.2)         | 1595 | 1360 | 1100 | 210                                 | 390                    | 680     | 1375   |
| GPL-4DL     | 12        | 20.75(527)         | 8.71(222)  | 10.44(266) | 135(61.2)         | 1595 | 1360 | 1100 | 210                                 | 390                    | 680     | 1375   |
| GPL-8DA     | 12        | 20.72(527)         | 10.94(278) | 9.88(251)  | 162(73.6)         | 1975 | 1675 | 1350 | 255                                 | 475                    | 825     | 1670   |