

U.S. Battery's Brand New RE-L16XC
Real improvements from the inside out

SPECIFICATIONS
RE L16 / 6-VOLT

AMP HOURS (100hr.rate)	441
AMP HOURS (20hr.rate)	401
AMP HOURS (5hr.rate)	332
MINUTES (@ 75 AMPS)	245
MINUTES (@ 25 AMPS)	915
LENGTH	11-7/8" (302mm)
WIDTH	7-1/8" (181mm)
HEIGHT	16-3/4" (425mm)

Outside Positive (OSP™) Battery Designs

The primary causes of positive plate deterioration are positive grid corrosion and positive active material wear-out or softening and shedding. These failure modes are the result of the normal overcharge required to fully charge batteries and to mix the electrolyte to prevent electrolyte stratification. In addition, batteries that are used in applications that require continuous float charging may be more susceptible to grid corrosion as a result of prolonged overcharging. Also, batteries that are subjected to frequent deep discharges (greater than 50% DOD) often exhibit increased effects from positive active material wear-out. This is usually the case in Renewable Energy applications. Testing at US Battery has shown that an effective method for mitigating the effects of positive plate deterioration is to increase the ratio of positive to negative active material by adding a positive plate and removing a negative plate from a conventional cell design resulting in an Outside Positive (OSP™) cell design vs a conventional Outside Negative (OSN) cell design. This design approach results in a cell with increased positive to negative active material ratio, increased positive to negative grid ratio, and increased protection of the positive plate from positive plate deterioration. This results in longer life, increased capacity, and more stable performance over the life of the battery.

DEFENDER™ Moss Shields

Electrical shorting can be caused by 'mossing' shorts at the top of the cell element. These mossing shorts are the result of positive active material particles that have softened and shed from the positive plates, become suspended in the electrolyte, and eventually collect at the top of the cell element. Once enough of this material has collected to bridge the tops of the separators, it can contact both a positive and a negative plate where it converts to conductive lead and forms a short circuit resulting in cell and battery failure. This failure mode is more prevalent in stationary applications than in vehicular applications because of the absence of vibration and shock that normally dislodges the mossing material and causes it to fall to the bottom of the container where it collects innocuously in the mud cells. Testing at US Battery has shown that the use of insulating 'moss shields' in batteries used in these stationary applications can effectively prevent the formation of these mossing shorts. This results in longer life, increased capacity, and more stable performance over the life of the battery.



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