

***Efficiency Analysis of 18650 Lithium ion Battery Discharging for 3 KW
Electric Vehicles***

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ABSTRACT

This study aims to analyze the capacity, efficiency, and power consumption of lithium ion batteries. This study uses the discharging method by loading the driver's weight of 50 kg, 63 kg, 70 kg and 83 kg using a 3 kilowatt electric vehicle. In addition, there are mileages that will be tested, namely 0.6 km, 1.2 km and 1.8 km. As for the results of battery efficiency in testing the 3 kilowatt electric vehicle, it was found that loading the driver's body weight by 50 kg was more efficient with a battery efficiency result of 0.6 km of 84.75%, 1.2 km of distance resulted in a battery efficiency of 95.73%, and a distance of 1.8 km produces a battery efficiency of 98.51%. the consumption of battery power using the discharging method produces data that loads the driver's body weight with the smallest weight of 50 kg. When the driver's weight is 50 kg for every 14 km distance, the battery must be charged, the driver's weight is 63 kg for every 11 km distance, the battery must be charged, the driver's body weight is 70 kg for every 9 km distance, the battery must be charged. the driver's body weighs 83 kg every 6 km distance must be charged to the battery.

Keywords : 18650 Lithium Ion Battery, Battery Efficiency, Electric Car,

Discharging