# **Battery Pack 3KWh**

### **Objective:**

- Design a battery module using 50Ahr prismatic cells, this module will be used later to make a desired battery pack.
- Use battery module & package it to fit existing space in 2 & 3 Wheeler vehicle for retrofitment of IC engine to electric vehicle.

## Approach:

- Designed Module of 48V which can be used in series & parallel to achieve desired battery pack configurations in terms of size, shape, voltage, & Amp, peak discharge.
- 48V was selected considering drivetrain configuration.

## Solution:

- Battery pack was designed to fit existing space inside 3 wheeler & battery swapping can be done.
- The battery pack was designed such that two packs can be placed bellow the driver seat.
- Outer body of the pack is made of 3 major parts extrusion body and cap at two ends.

## My Role:

- Conceptualization
- Design battery module as per AIS 048
- CAD & Production drawing GD&T
- Free-Free Modal Analysis to find natural frequencies
- Thermal Calculations
- Design for Manufacturing & Assembly
- Prototype Manufacturing
- Laser welding
- Testing





