

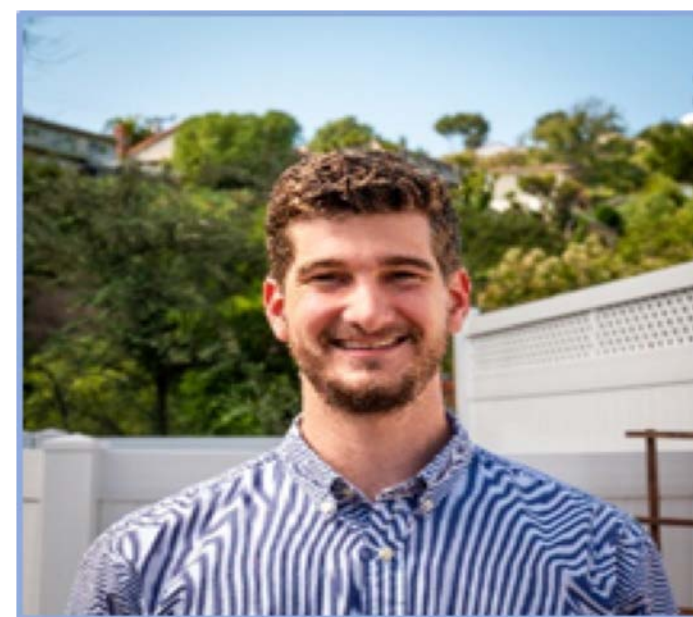
Team Members



Kyle Hicks



Ryan Beighlie



Jack Mohr



Kevin Alcorn

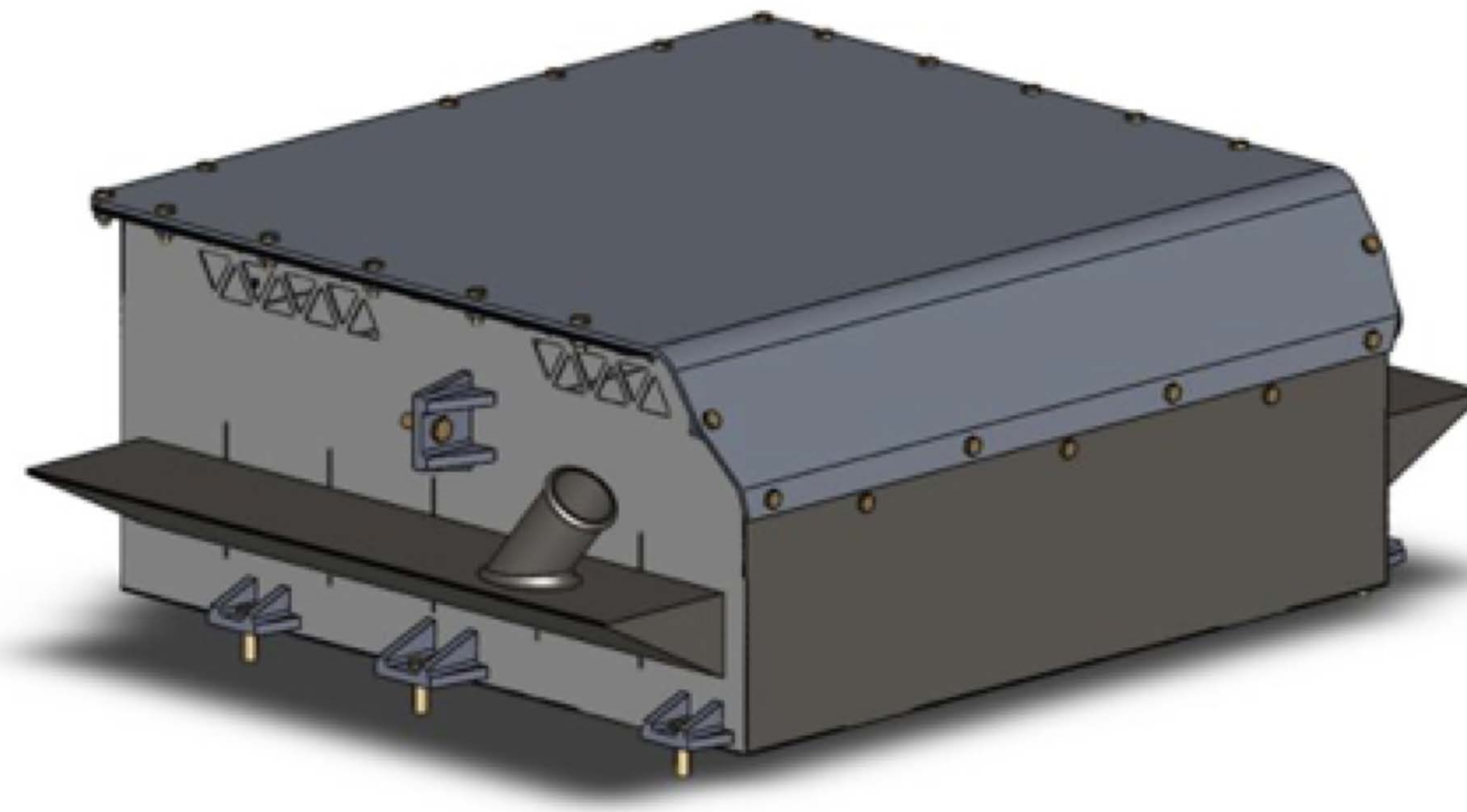
Sponsor

AER is the on-campus electric FSAE (Formula Society of Engineers) team. They design, build, and test a single seat, open wheel, formula style car each year to compete in an international colligate competition.

Objective

Our need is to accurately simulate and/or test the amount of heat the components housed inside the accumulator produce under plausible operating conditions. A cooling system will then be designed that would be fitted to AER's 2020 car (AER-20).

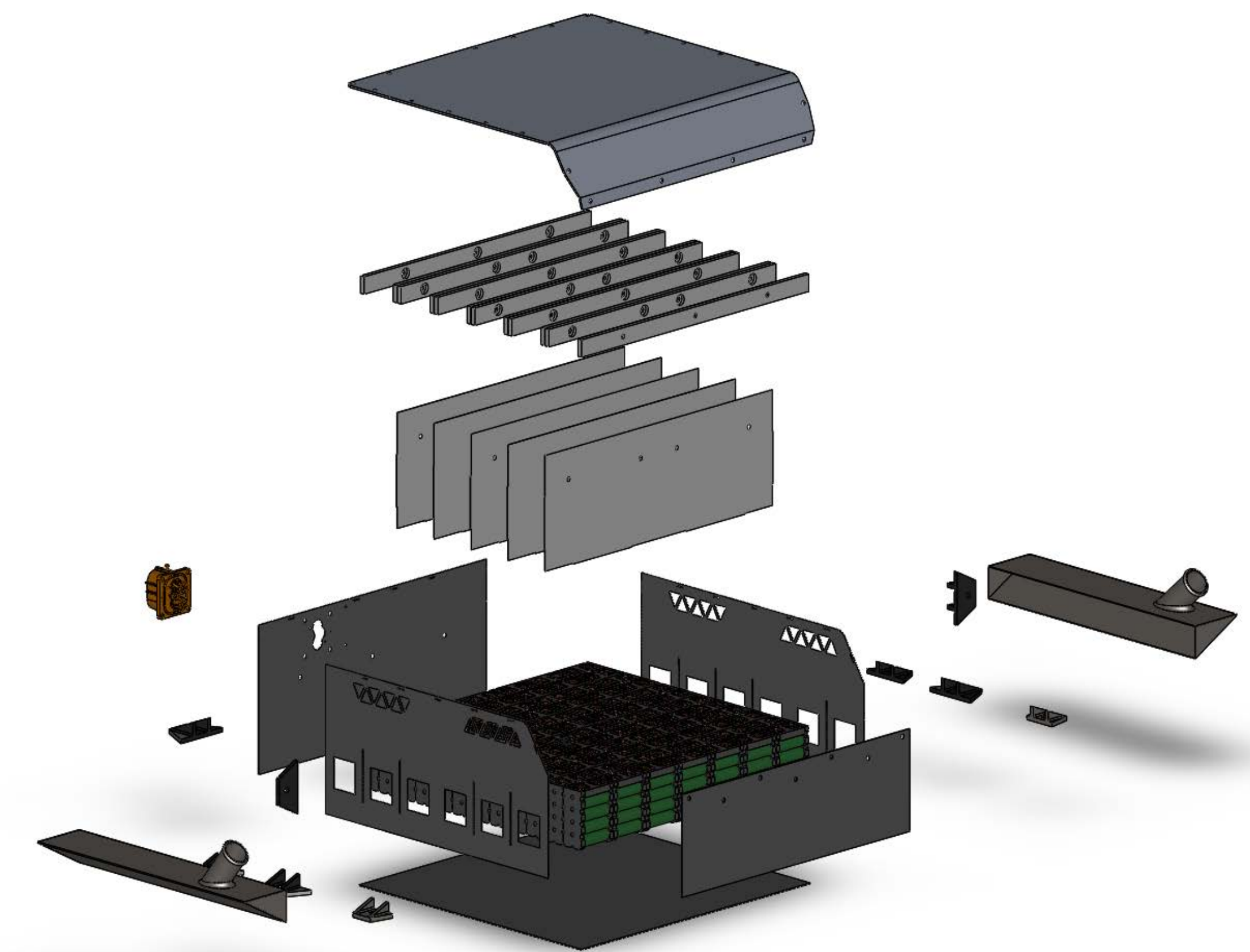
Accumulator Housing



Requirements

- Battery cells shall not exceed 60C at any time.
- The total system weight shall not exceed 75 lbs., and preferably be less than 60 lbs.
- Cooling system shall only be secured to the chassis tubes.
- Cooling system shall not interfere with tractive system.
- Battery cooling system shall stay independent from tractive cooling system.
- Maximum/Minimum design envelope of the accumulator container shall be 23"x20"x12" and 18.5"x20"x7.5", respectively.
- Accumulator container shall interface with user and tractive system the same as the current one.

Exploded View



Accumulator Container System Level Diagram

