

AACHEN, 2020  
FEV CONSULTING

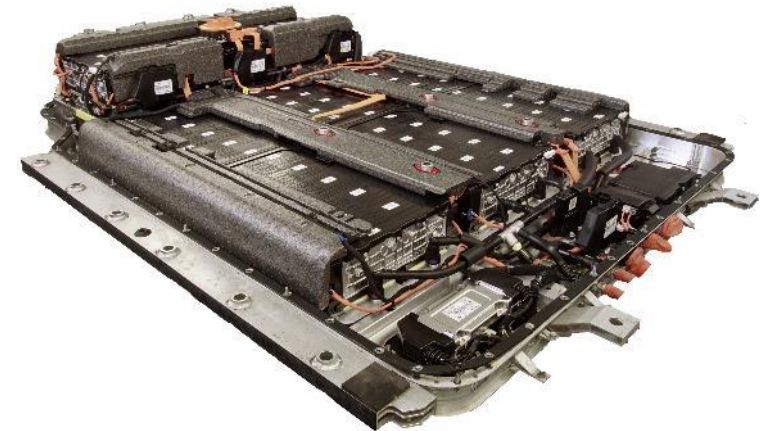
# BENCHMARK KIA SOUL EV 2020 HV BATTERY 64 kWh



INTRODUCTION

# KIA SOUL EV HV BATTERY

- Long range BEV HV battery
  - Underfloor battery with 64 kWh energy and 180Ah
  - Modules are placed on two levels
  - 3P94S cell configuration
- Integrated cooling circuit
  - Water/glycol cooling circuit
  - HV PTC heater functionality
  - Brazed aluminum cooling plates
- Modularity approach
  - 64 kWh also used at KIA Niro and Hyundai Kona
  - Shares components with 39.2 kWh battery variant

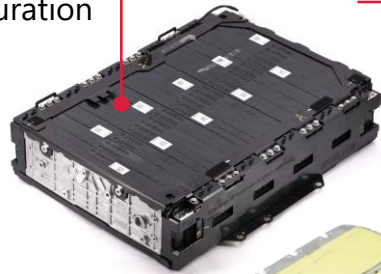


# The benchmark report of the KIA Soul EV 64 kWh battery pack contains a teardown documentation including technical specifications

## HV BATTERY PACK

### Cell module

- 30 pouch cells
- 3P10S configuration

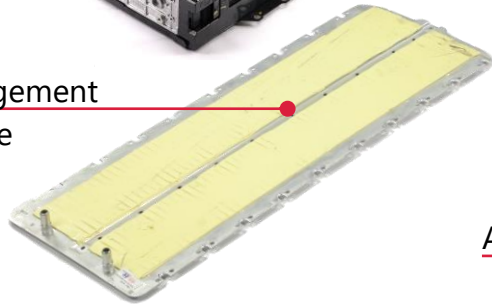


### Deep drawn sheet metal cover



### Thermal management

- Cooling plate

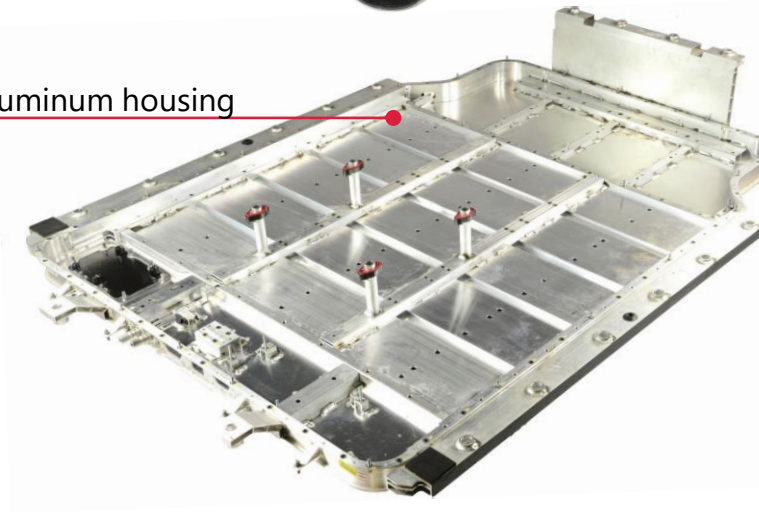


### BMS / BDU unit

- 1 BMS master
- 5 BMS slaves



### Aluminum housing



## TEARDOWN REPORT

### Photos

- ~ 40 photos of teardown process
- ~ 300 photos of all components

### Bill of material

- Component name & number
- Short description, mass & dimensions

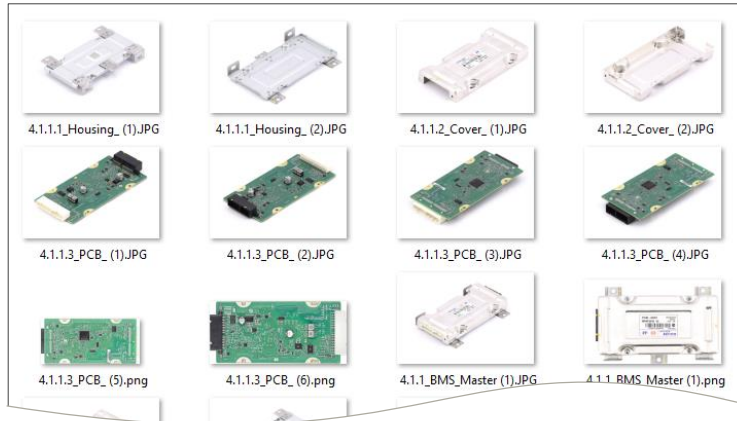
### Report

- > 70 slides showing main components including specs (mass, dimensions...)

# FEV provides detailed documentation of the battery pack hardware

## CONTENT

### PHOTOS

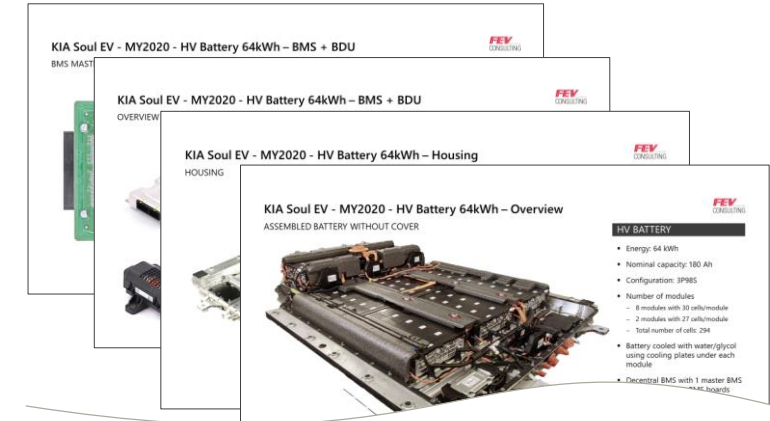


### BILL OF MATERIAL

KIA Soul EV - HV battery - 64 kWh

| Name | Description | Technical review | BOM level | Alt | Q1  | Q2  | Q3  | Main | Q1  | Q2  | Q3  | Part nr. | Part number |
|------|-------------|------------------|-----------|-----|-----|-----|-----|------|-----|-----|-----|----------|-------------|
| ...  | ...         | ...              | ...       | ... | ... | ... | ... | ...  | ... | ... | ... | ...      | ...         |

### REPORT



> **300** Photos  
in high resolution

> **100** BOM items  
with main specs

> **70** Report slides





## CONTACT DETAILS

### CONTACT

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