

Hyundai Ioniq 5

Benchmark program



benchmarking@fev.com



benchmarking.fev.com



FEV



Tech Nuggets

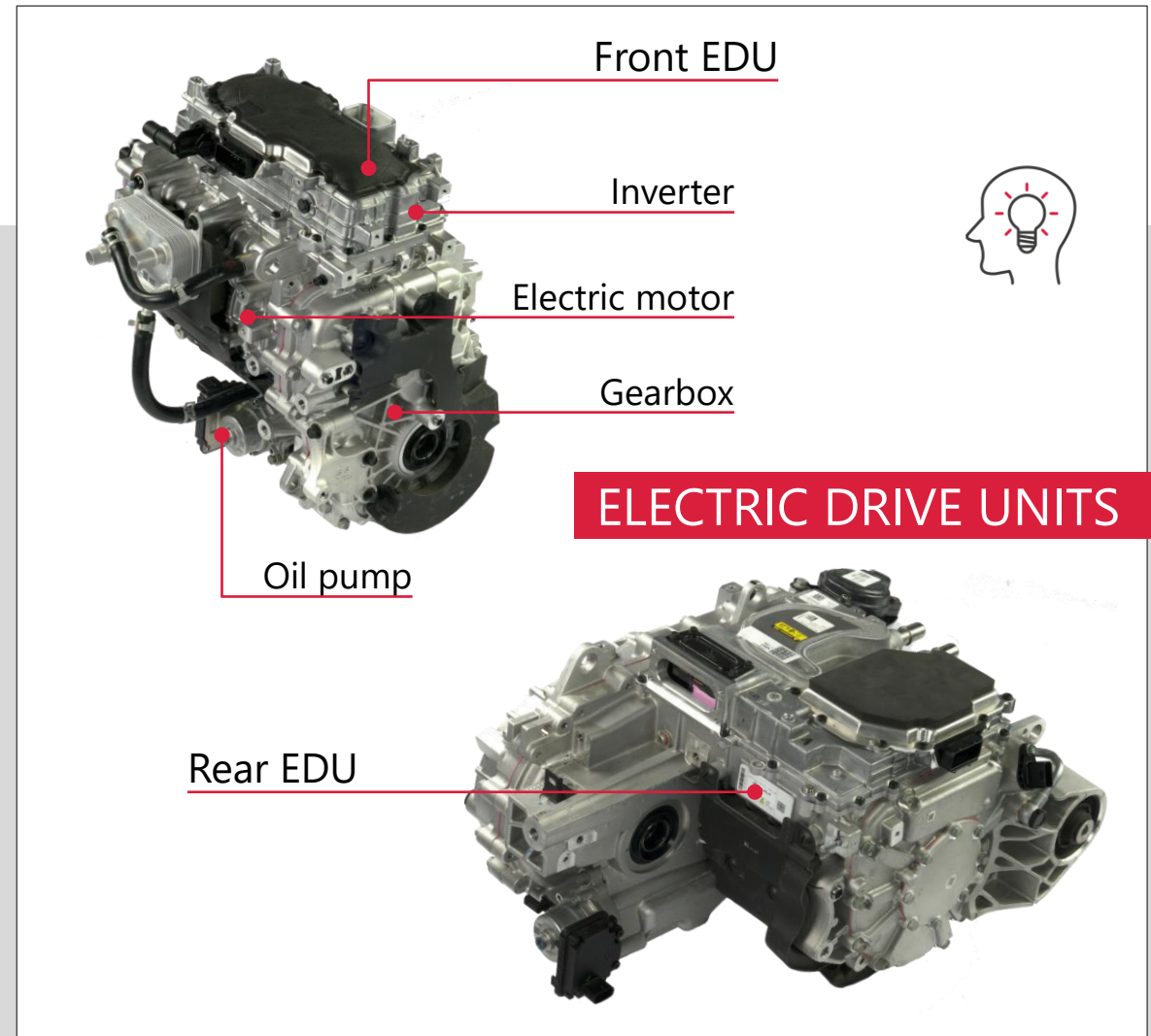
TECH-NUGGETS – Electric drive unit

HYUNDAI IONIQ 5 – BENCHMARKING PROGRAM

Interested in further details?
Contact benchmarking@fev.com!

INSIGHTS

- While Hyundai Ioniq 5 is also available as RWD, the top-spec variant is driven by two electric drive units (EDUs) with overall system power of 225 kW
- Both EDUs include
 - Oil cooled electric motor
 - Inverter using SiC MOSFET technology
 - 1-speed reducer gearbox
- Front EDU features a clutch to disengage unit for certain operation modes
- Rear EDU covers DC charging functionality for voltage conversion from 400V to 800V



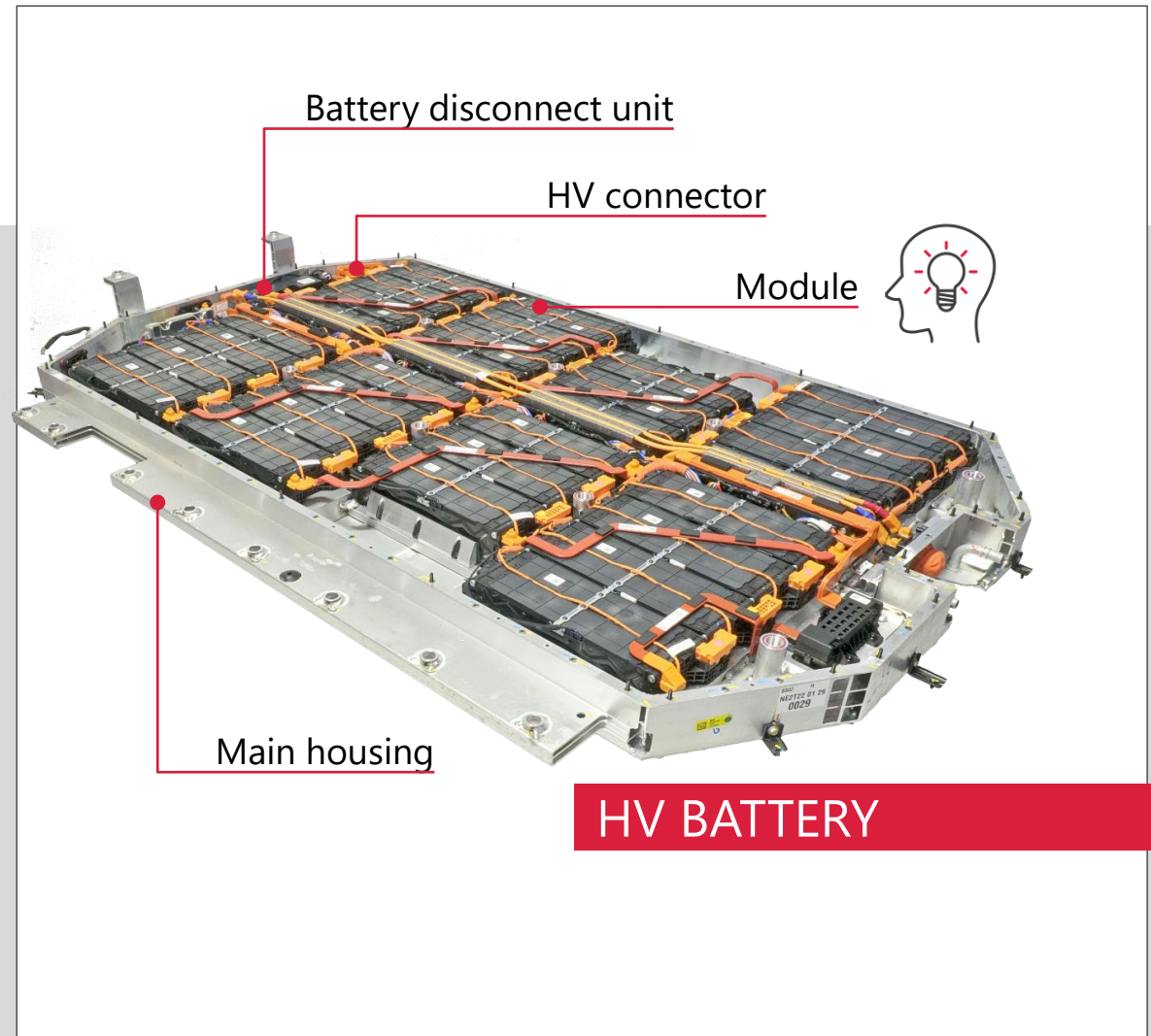
TECH-NUGGETS – HV Battery

HYUNDAI IONIQ 5 – BENCHMARKING PROGRAM

Interested in further details?
Contact benchmarking@fev.com!

INSIGHTS

- The Hyundai Ioniq 5 is available with different battery variants from 58 kWh up to 77.4 kWh in the MY2023 version
- As part of the E-GMP platform, the battery has a voltage level of 800 V which mainly affects the number of modules and HV connections
- The housing consists of
 - Main housing out of welded aluminum profiles
 - Sheet metal cover
 - Polymer underride guard
- The cooling plate is integrated into the main housing



TECH-NUGGETS – Power Electronics

HYUNDAI IONIQ 5 – BENCHMARKING PROGRAM

Interested in further details?
Contact benchmarking@fev.com!

INSIGHTS

- Apart from the traction inverters, different power electronic components are part of the Ioniq 5 powertrain
 - 11 kW bidirectional On-board Charger
 - Switch box to distribute energy at rear EDU
 - Power delivery unit to distribute energy at front EDU
- The Integrated Charging Control Unit (ICCU), supplied by Hyundai Mobis, includes 11 kW AC charging functionality and a 12 V DC/DC converter
- Ioniq 5 is available with “Vehicle-to-Load” option, where a 220 V socket at the back seat is supplied by the On-board Charger

