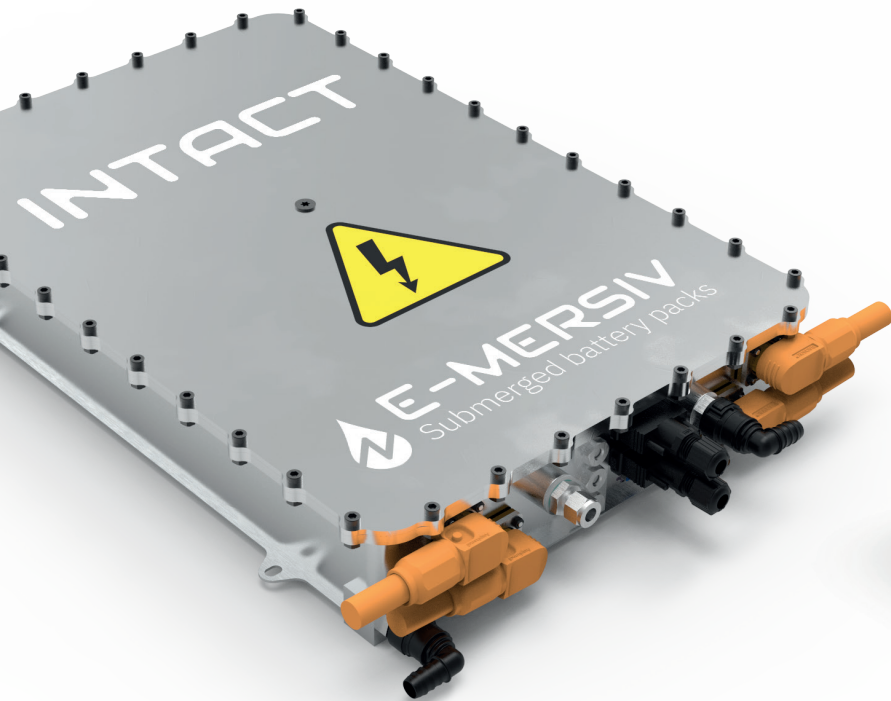


# INTACT

Increased safety and high density battery

**E-MERSIV**  
Submerged battery packs



Immersion Cooling Technology

e-Battery Thermal Management System

INTACT, the High Performance Battery

171

Wh / kg

240

Wh / L

These information and photos are not contractual.

E-MERSIV can adapt this battery to your needs. More information on: [www.e-mersiv.com](http://www.e-mersiv.com)

From a single cell to a **complete battery pack**, **E-MERSIV** masters all the steps of the chain to develop and offer an **innovative battery cooling system**.

## E-MERSIV Technology



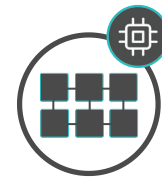
Cylindrical lithium-ion cell



Submerged cells in a dielectric liquid



Serialisable modules



Battery pack (up to 1,00V)

## Focus on the cooling loop

Example of flat chassis battery pack on a EV car.

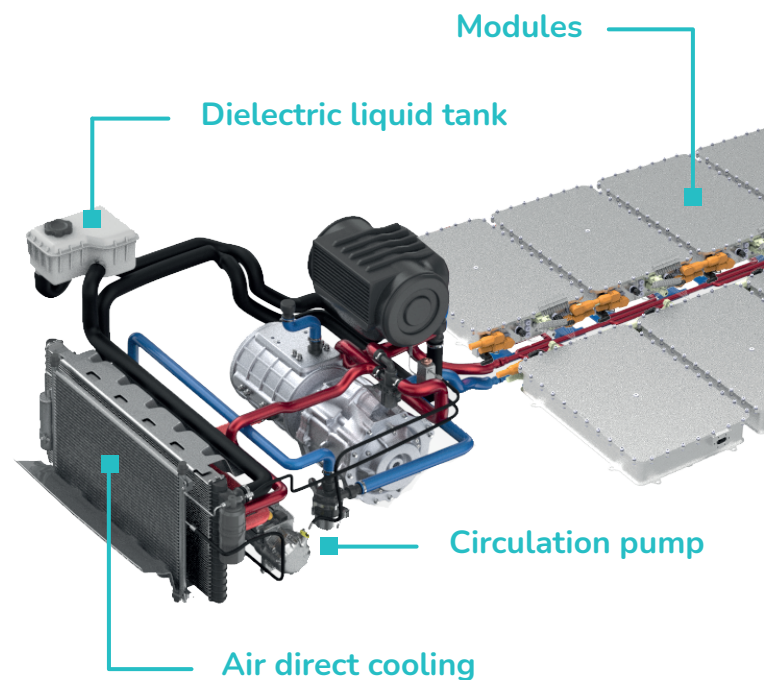
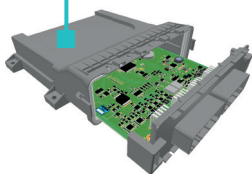
With **E-MERSIV**, modules can be adapted to any shape and any type of vehicles.

### e-BTMS

Battery Thermal Management System

Advanced algorithms to reach the best ratio safety-performance.

- Data logging & transfer
- Wireless communication
- Cooling fluid regulation



**Option:** integrate a secondary dual loop with a pump and a radiator inside of the modules.

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## MODULE

The values below correspond to a single module

### Physical Specifications

### Value

Available Energy @1c	6.5 kWh
Nominal voltage	65V (NMC 18s)
Nominal capacity	80 Ah
Continuous / Peak (10s) power in Discharge	19 /19 kW
Continuous / Peak (10s) power in Charge	3.25 / 6.5 kW
Gravimetric energy density (dry)	171 Wh / kg
Volumetric energy density	240 Wh / L
Cooling / Dielectric coolant	< 60°C
Communication	Canbus

The module is serialisable → Up to 1,000 V

### Dimensions

### Value

Height	100 mm
Width	630 mm
Depth	430 mm
Volume	27.1 L
Weight (dry)	34 kg
Weight (wet)	38 kg

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### PACK 800 V

The values below correspond to an example of 10 modules

## Physical Specifications

## Value

Available Energy @1c

65 kWh

Nominal voltage

648 V

Discharge power

195 kW

Regenerative braking power

65 kW

Charge power

32.5 kW

Total battery weight\*

430 kg

\*including wet cooling loop and flat floor chassis



### AMBIANT TEMPERATURE

Provide the best temperature homogeneity between the cells to improve the performance and capacity of the battery.



### INCREASED SAFETY

No thermal runaway propagation. Tested with simultaneous thermal runaway of two adjacent cells.



### LONGER LIFETIME

Improve cell lifetime by up to 30% for a sustainable battery that meets the needs of the market and new ecological challenges.



### HIGHER PERFORMANCE

Increase the battery capacities and performance up to 10C accelerating, 10C regenerative braking, and 7C continuously.

# INTACT

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Submerged battery packs

Thanks to a **20 years experience** in Li-ion Batteries, Battery Management System and Thermal Management, **E-MERSIV** can meet **all your needs** and support **all your projects**:

Simulation

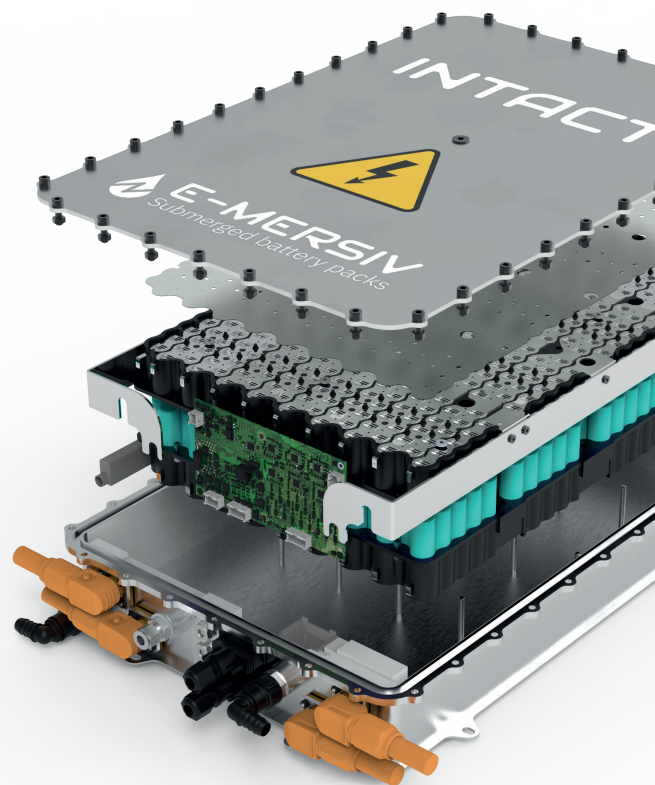
Design

Tests

Production

Certifications

Whatever is your market, **E-MERSIV** helps you to **meet standards** and can accompany your efforts to obtain the **right approvals** and **certifications**.



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# E-MERSIV

Submerged battery packs

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