# PREMIUM SEDAN HEV

**Powerful** Submerged Battery Pack

E-MERSIV
Submerged battery packs

## Immersion Cooling Technology

## PREMIUM SEDAN HEV APPLICATION

**9 min**

Fast charging[1]

**4,000**

Cycles [2]

**100%**

Thermally safe [3]

1- From a state of charge of 20% to 80% at 35°C inlet cooling temperature
2- 70% DOD @ 1C & 25°C
3- No thermal runaway propagation in case of 2× cell fire and no leaks in the cooling system

These information and photos are not contractual.
E-MERSIV can adapt this battery pack to your needs. More information on: **www.e-mersiv.com**

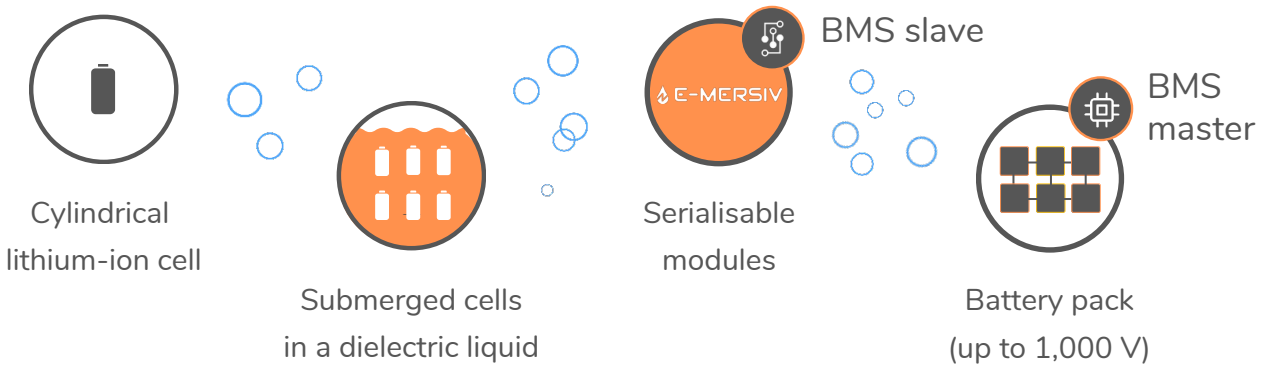
# PREMIUM SEDAN HEV

**Powerful** Submerged Battery Pack

E-MERSIV
Submerged battery packs

From your requirements to **a complete battery pack**, **E-MERSIV** masters all the steps of the industrial development **to offer the best cost/benefit ratio** with an **innovative battery cooling system**.

## E-MERSIV technology




## Focus on the cooling loop

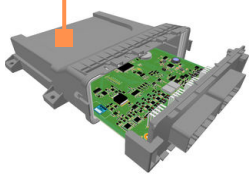
*Example of a flat chassis battery pack on a EV car.*

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

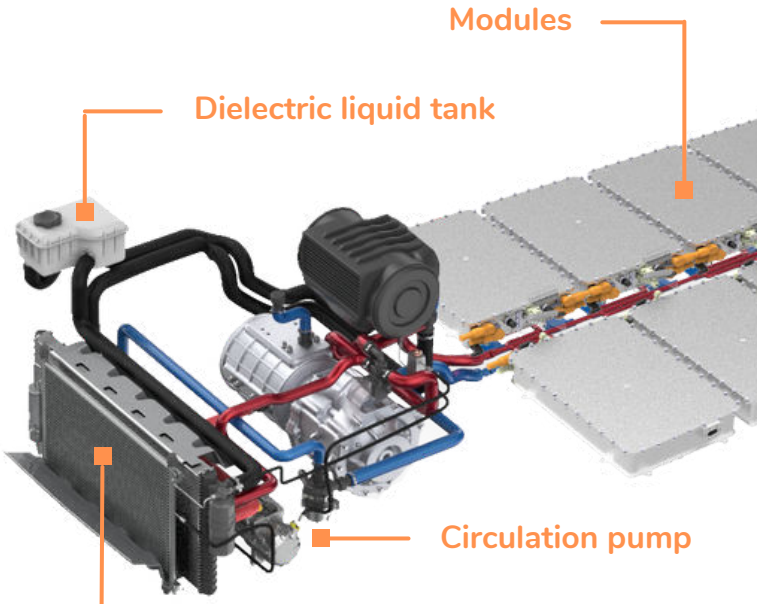
**e-BTMS**

Battery Thermal Management System

Advanced algorithms to reach the **best safety-performance ratio**.



- Data logging
- Cooling strategies
- Strategy to avoid lithium plating




**Option:** integrate a secondary dual loop with a pump and a plate heat exchanger.

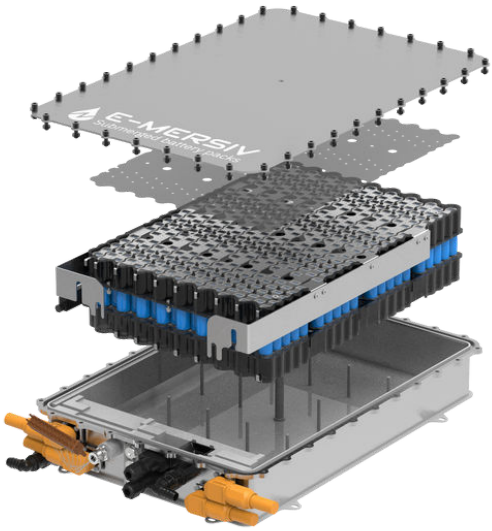
These information and photos are not contractual.
E-MERSIV can adapt this battery pack to your needs. More information on: **www.e-mersiv.com**

# PREMIUM SEDAN HEV

**Powerful** Submerged Battery Pack

E-MERSIV
Submerged battery packs

| Module Specifications | Value |
|---|---|
| Available Energy @1C & 25°C | 1.2 kWh |
| Nominal voltage | 237 V (LFP 72s) |
| Nominal capacity | 5.12 Ah |
| Continuous charging current | 20 A |
| Continuous power in Discharge | 23.7 kW |
| Continuous power in Charge | 4.7 kW |
| Gravimetric energy density (wet) | 57 Wh/kg |
| Volumetric energy density | 107 Wh/L |
| Targeted cooling inlet temperature | 35°C |
| The module is serialisable up to | 800 V |
| Weight (wet) | 21.2 kg |
| Size H×W×D | 350 × 405 × 80 mm |
| Lifecycles (70% DOD @ 1C & 25°C) | 4,000 cycles |
| Cells type | Cylindrical 26650 LFP |
| Electrical architecture | 2p72s |




These information and photos are not contractual.
E-MERSIV can adapt this battery pack to your needs. More information on: www.e-mersiv.com

# PREMIUM SEDAN HEV

**Powerful** Submerged Battery Pack

E-MERSIV
Submerged battery packs

| Battery Pack Specifications (6 modules) | Value |
|---|---|
| Available Energy @1C & 25°C | 7.3 kWh |
| Nominal voltage (18s version) | 712.8 V |
| Continuous power in discharge | 140 kW |
| Continuous power in charge | 28 kW |
| Regenerative braking power | 57 kW |
| Fast charge time (20% to 80% SOC) | 9 minutes |
| Estimated total battery weight * | 180 kg |
| Peak power discharge | 45 C |

*including powerbox and wet cooling loop

### SEVERE 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.

### ULTRA-FAST CHARGING

**Charge** from 20% to 80% in only 9 minutes with increased performance up to 4C continuous power and 8C peak power.

These information and photos are not contractual.
E-MERSIV can adapt this battery pack to your needs. More information on: www.e-mersiv.com

# PREMIUM SEDAN HEV

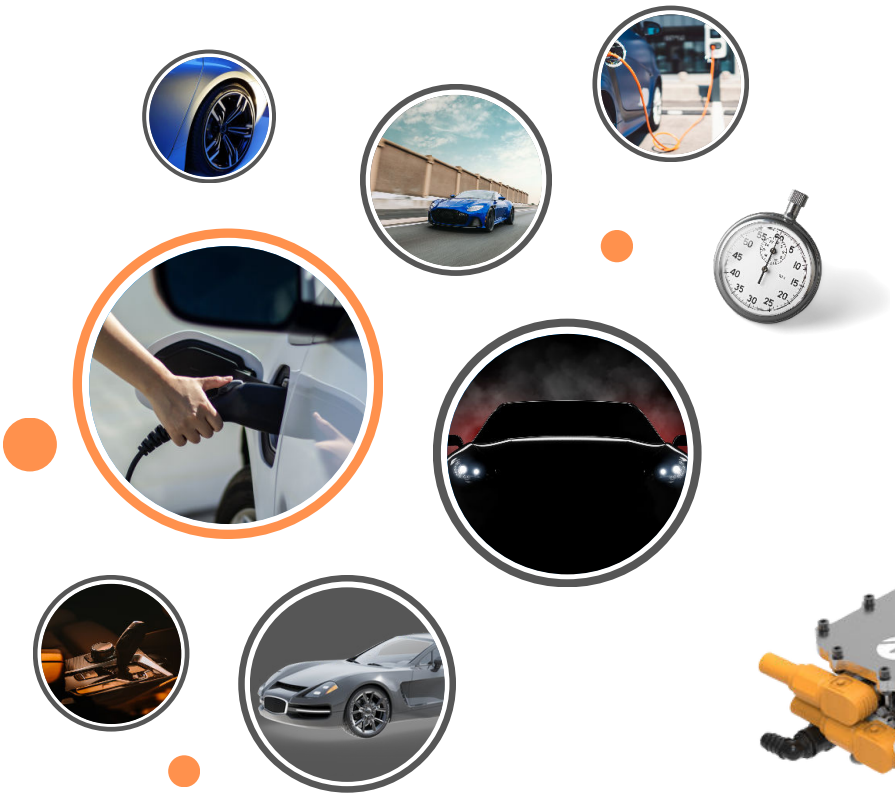
**Powerful** Submerged Battery Pack

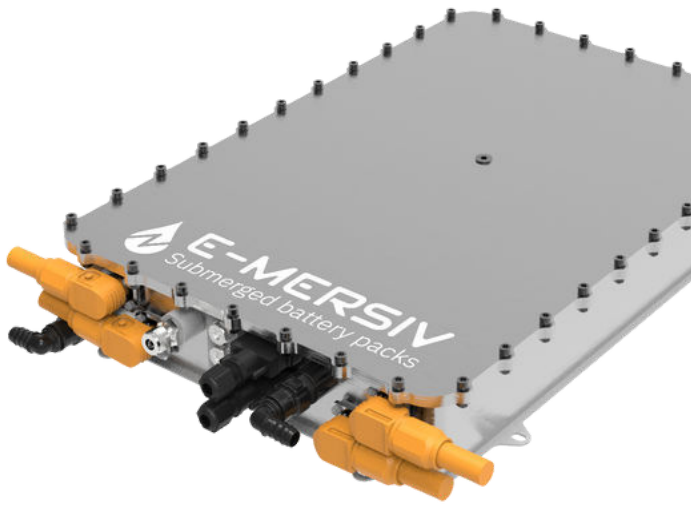
E-MERSIV
Submerged battery packs

With **more than 150,000 hours of tests** in submerged Li-ion Batteries, Battery Management System (BMS) and Thermal Management, **E-MERSIV** can **meet all your needs and support all your projects:**

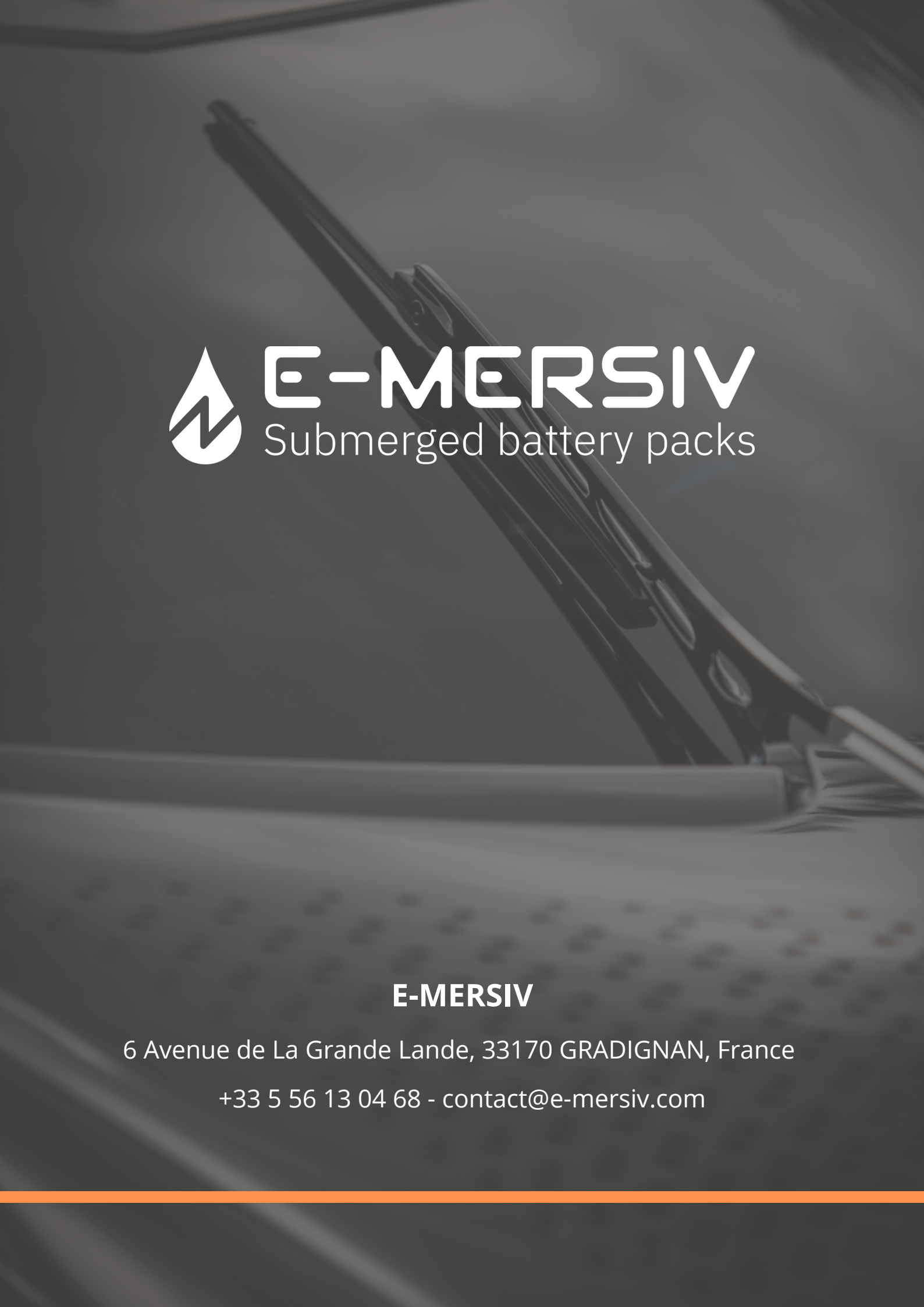
- Simulation
- Design
- Tests
- Production
- Certifications

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






These information and photos are not contractual.
E-MERSIV can adapt this battery pack to your needs. More information on: **www.e-mersiv.com**



# E-MERSIV

Submerged battery packs

**E-MERSIV**

6 Avenue de La Grande Lande, 33170 GRADIGNAN, France

+33 5 56 13 04 68 - contact@e-mersiv.com