

/ ELED

**A NEXT  
GENERATION  
OF POWER**

# FLEXIBLE IN EVERY ASPECT

ELEO designs and builds modular plug & play battery systems custom-created to meet the requirements of a wide range of applications—completely compliant and configurable for any direction, orientation, and capacity.



BATTERY SYSTEMS	MIN.	MAX.
Capacity	10 kWh	1000 kWh
Voltage	50 VDC	800 VDC
Power	0,5 C	2 C
Lifespan	3000	6000 cycles

# CUTTING-EDGE TECHNOLOGY



## MAXIMUM AUTONOMY

Experience more power per pack with the highest energy-dense cells on the market and optimal packing flexibility.



## LASTING PERFORMANCE

ELEO's battery systems operate at the ultimate power capabilities—monitored and calibrated to remain robust regardless of extreme temperatures and conditions.



## SUPERIOR SAFETY

State-of-the-art safety measures such as temperature regulation, propagation prevention technology, and the Battery Management System's safety features minimize risk while maximizing performance.



## PACKED WITH FEATURES

Packed with functionality from integrated telematics and advanced insights coming from highly accurate SOC, SOH and SOP algorithms enabling optimized user experience.



## SEAMLESS INTEGRATION

A full plug & play system in a robust enclosure designed for durability—allowing for easy installation and impeccable performance.

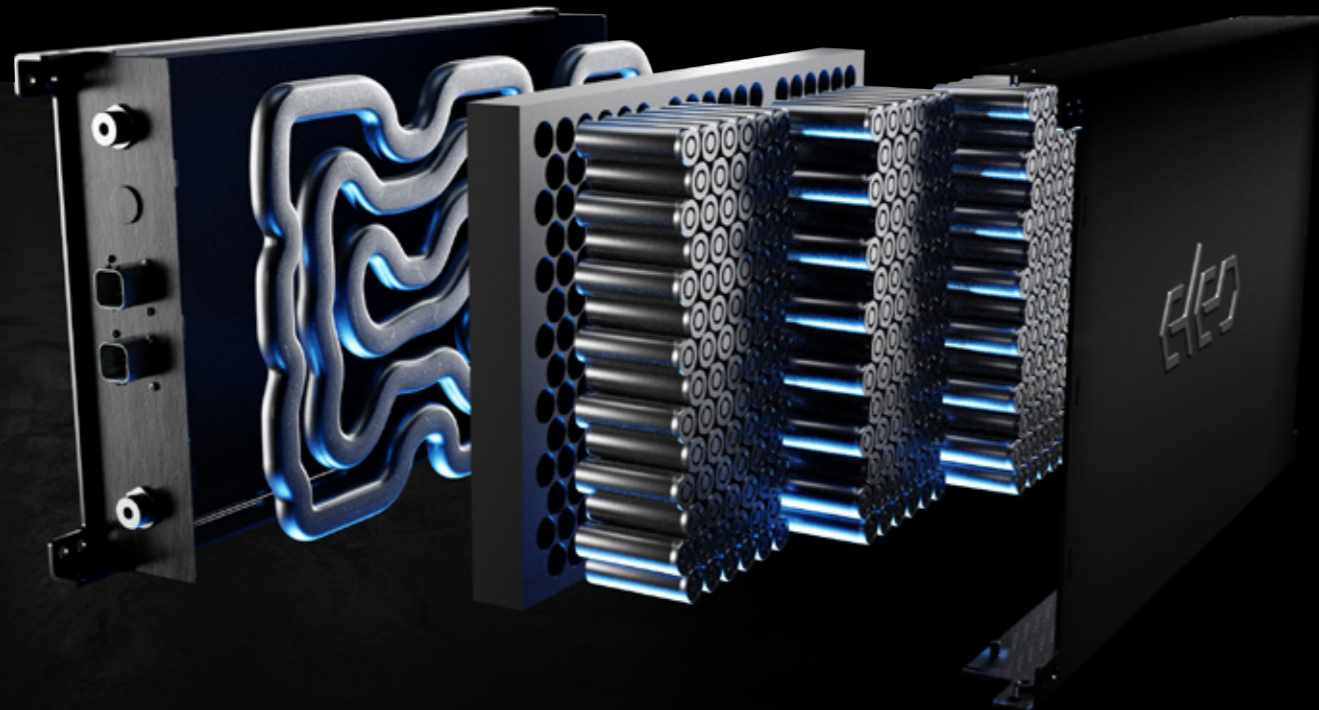


## TESTED & COMPLIANT

Each pack goes through intensive in house testing, is automatically certified according to R10, UN38.3, IEC62619, SIL-2 and designed to comply with R100 and a host of other certifications.

# ENGINEERED FOR EXCELLENCE

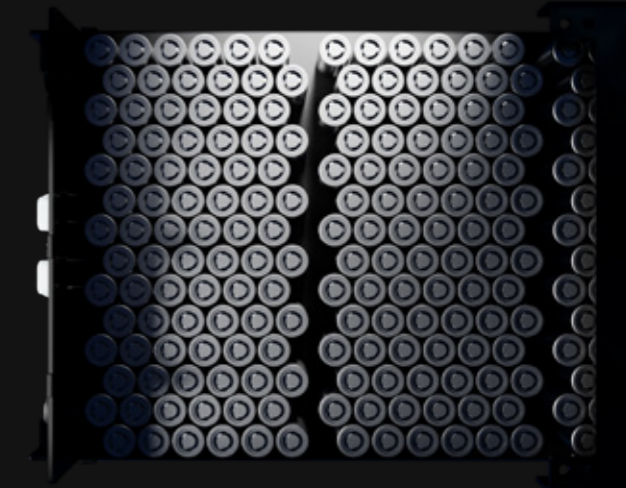
ELEO's engineers apply future-forward technology to create groundbreaking solutions—going further to achieve a global goal of electrification through innovation.



## MORE POWER PER PACK

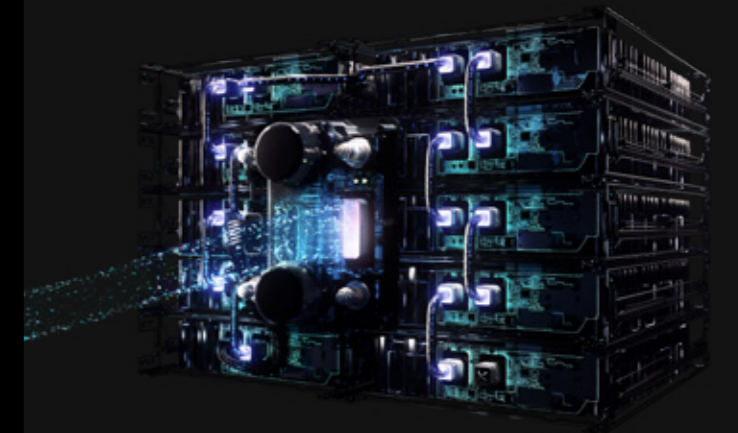
ELEO strategize state-of-the-art cylindrical cells through a signature scalable design to provide optimal use of space—resulting in maximum autonomy.

Additionally, ELEO's dedicated battery research lab thoroughly analyzes and characterizes battery behavior to get the most out of any cell—through highly accurate algorithms (SOC, SOH, SOP) to optimize performance and lifespan under any circumstance.



## ELEO MANAGEMENT SYSTEM

ELEO's unique Battery Management System architecture ensures each customized pack is automatically validated, certified, and seamlessly integrates to any application through proprietary communication protocols. The BMS is SIL-2 compliant and has all active safety functions built-in—with integrated telematics enabling OTA updates and remote monitoring.





## PROPAGATION PREVENTION TECHNOLOGY

Safety has always been ELEO's number one priority, which is why every battery system meets the highest standards of safety.

In the unlikely event a cell goes into thermal runaway, ELEO's propagation prevention technology assures surrounding cells are protected and there will be no thermal runaway propagation—limiting damage to a single replaceable module and mitigating any safety risks.

## UNIQUE THERMAL INTERFACE

ELEO's Unique Thermal Management System uses a single-surface method to minimize temperature differences between all batteries within the modules—assuring ideal uniformity and an increased lifespan.

The ELEO designed cooling plate has an intricate network for transporting thermal liquid throughout all modules, allowing for peak performance even under the most extreme temperature conditions.



# SPECIALIZED MODULAR METHOD

ELEO's building-block modular-based method makes for battery packs personalized to the specifications of your application—devised to apply to any configuration, orientation, and direction. Now, a wide variety of applications can be electrified with hassle-free installation and the full spectrum of plug & play advantages.



## MODULES MADE FOR YOU

Designed to be flexible, utilizing a selection of diverse shapes & sizes and scalable into any orientation and configuration to give you the pack you need. Each module has built-in electronics for current, voltage and temperature monitoring, cell balancing, and constant logs & data gathering throughout the lifetime. Liquid cooling plates or electronic heating pads can be also be integrated for optimal temperature control.

## BATTERY MODULE

MODULES		L12	L18	L24	L30	L36
Voltage nom.		3.0 kWh	4.5 kWh	6.0 kWh	7.5 kWh	9.0 kWh
		51.7VDC	51.7VDC	51.7VDC	51.7VDC	51.7VDC
Dimensions (mm)	L	409	566	724	881	1039
	W	316	316	316	316	316
	H	90	90	90	90	90

# ROBUST INTERFACE



PMU HV VERSION

## ADVANCED FEATURES

- Contactors with automatic precharge
- SIL-2 compliant
- CANopen compatible CANbus communication with RS485 and J1939 available
- Telematics, GPS, RTC and memory for use-case logging and buffering
- CCS AC type 2 charger communication
- Flexible in/outputs for various functions such as control of chargers (AC / DC), cooling/heating systems, moisture detection and external LEDs
- Integrated insulation monitoring device and high-voltage interlock for exceptional safety

## BATTERY PACK MANAGEMENT UNIT (PMU)

○ ELECTRICAL DATA	LV VERSION	HV VERSION
Max. battery voltage	120 VDC	800 VDC
Insulation Monitoring	Optional	Yes
High Voltage Interlock	Optional	Yes
Contactor Switching	Single	Double
Supply Voltage	9-28 VDC	9-28 VDC
Integrated DCDC	Yes	No
Max. Continuous Current	400 A	400 A
Communication	CANOpen, RS485, J1939	CANOpen, RS485, J1939



PMU LV VERSION



## ABOUT THE COMPANY

Since 2017 ELEO has been dedicated to creating the most elegant battery system solutions for the electrification of a wide variety of industrial machines and vehicles.

ELEO's brand new state-of-the-art headquarters have furthered this goal, applying highly-automated techniques to exponentially increase production. As the ambition grows, so does ELEO along with it —bringing on the next generation of power.



## **ELEO Technologies B.V.**

Automotive Campus 80  
5708 JZ Helmond  
The Netherlands

**W** [eleo.tech](http://eleo.tech)  
**E** [info@eleo.tech](mailto:info@eleo.tech)

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