

# ESS Container

## 4.180 MWh

Liquid-cooled energy storage system



**Liquid-cooled energy storage system based on HiTHIUM prismatic LFP ESS Cells 314 Ah with very high cyclic lifetime.**

Improved safety characteristics and specially optimised for the highest requirements on safety, reliability and performance. Suitable e.g. for industrial, utility, and grid serving applications.

- Product certification and compliance: IEC 62619, IEC 62477, IEC 63056, IEC 61000, UL 1973, UL 9540A, NFPA 855, UN 38.3
- Company certifications: ISO 9001, ISO 14001, ISO 45001
- Environmental Compliance: RoHS, REACH, Cobalt free
- Flexible solution: String or central PCS compliance.

**High safety**

- High thermal stability thanks to liquid cooling
- Multi-stage, active fire protection system, compliance to NFPA 855
- Use of highly safe prismatic HiTHIUM LFP cells
- Dedicated cell monitoring and protection system

**Low LCOS (Levelised Cost of Storage)**

- Excellent thermal management improves energy throughput by ensuring optimal operating temperature
- Highly integrated: including thermal management system, fire protection system, BMS, etc.
- Supports back to back and side by side installations

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Liquid-cooled energy storage system based on prismatic LFP cells with very high cyclic lifetime



### GENERAL

Configuration	5*2P416S
Cooling Method	Liquid Cooling
BMS Communication	CAN, RS485, Ethernet
Gravimetric ED	≥ 119 Wh/kg (≥54 Wh/lb)
Volumetric ED	≥ 97 Wh/L (≥367 Wh/gal)
Application Altitude	≤ 4,000 m (≤13,123 ft)

### ELECTRICAL

Nominal Voltage	1,331.2 V
Operating Voltage	1,040 V ... 1,500 V
Nominal Energy	4,180 kWh <sup>1,2</sup>
Nominal SOC at Delivery	27 % <sup>2</sup>
Nominal Charge/Discharge Rate	0.5 P / 0.5 P
Round Trip Efficiency	≥ 94 % <sup>1,2</sup>

<sup>1</sup> 0.5 P / 0.5 P

<sup>2</sup> 25 °C +/- 2 °C  
(73.4°F ... 80.6°F)

<sup>3</sup> ambient temperature

### MECHANICAL

Dimensions (L x W x H)	6,058 x 2,438 x 2,896 mm (238 ½ x 96 x 114 in)
Maximum Weight	35,000 kg (77,162 lb)
Protection Level	IP 55

### TEMPERATURE RANGE

Operating	-30 °C ... 55 °C <sup>3</sup> (-22 °F ... 131 °F)
Storing (Recommended)	-20 °C ... 35 °C <sup>3</sup> (-4 °F ... 95 °F)

### PRODUCT CERTIFICATIONS AND COMPLIANCE

Certificates, Report and Compliance	IEC 62619, IEC 62477, IEC 63056, IEC 61000, UL 1973, UL 9540A, NFPA 855
Safe Transportation	UN 38.3

### ENVIRONMENTAL

Compliance	RoHS, REACH, Cobalt free
Battery Regulation (EU)	2023/1542

### COMPANY CERTIFICATIONS

ISO 9001, ISO 14001,  
ISO 45001, SA 8000

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