

BATTERY ENERGY STORAGE SYSTEM

Based on the innovative **FlexRack** with Automotive Battery moduls

UP TO 3.6 MWh PER 24FT HC UNIT

FLEXIBLE PROJECT CONFIGURATION

READY FOR AC- AND DC COUPLING

OPTIONAL: NETWORK BOOSTER FOR NETWORK OPERATORS



The **TRICERA 24ft HC storage unit** is a compact 1,500V design, efficiently housing batteries, a battery control and energy management system, HVAC system, DC protections and extensive safety features, suited for all environmental conditions.

The batteries can be configured for **up to 3.6 MWh** for use in various applications. Several different battery topologies are available depending on power requirements for **up to 2C**.

TRICERA offers a robust, modular solution based on proven industrial technology that minimizes installation and maintenance time, extends system life and increases safety.

FEATURES

- **Individually customizable and scalable** in capacity, performance and HVAC system according to customer and project requirements
- Cost effective and flexible battery rack construction **FLEX RACK** to incorporate various types of automotive battery modules
- **AC- and DC-Coupling** in hybrid systems possible e.g., wind energy, photovoltaic, CHP, EV Charging
- Includes TRICERAs **in-house developed software** BCC and EMS
- **On- / Off-Grid ready**
- **Battery Cluster Controller (BCC)**
 - Monitoring and control of batteries, communication and HVAC system
 - System BMS integrated in BCC
 - Monitoring of safety functions and alarming when limit values are exceeded
 - Communication to Inverter
- **Energiemanagementsystem (EMS)**
 - Available for several services
 - Interface to marketer
 - Interface communication via Modbus TCP / IP



20FT | 3.6 MWh CONTAINER



TECHNICAL SPECIFICATIONS

Electrical Parameters	Battery chemistry ¹	NMC
	DC Voltage ¹	Up to 1,500 V _{DC}
	Nominal DC Energy Capacity ¹	Up to 3.6 MWh
	C-Rate ¹	Up to 2 C
	Aux Load Energy per Enclosure ²	25 kW _{peak}
System Parameters	Cooling Power ²	10 kW _{th} - 45 kW _{th} , depending on location and application
	Heating and Cooling ²	HVAC, Air
	Operating Temperature ²	-20 bis +50 °C ambient temperature
	Altitude	Up to 1,000 m
Housing	Container	24ft High Cube Open Side
	Corrosion class ²	Up to C5
	Dimensions	2,896 x 2,438 x 7,450 mm (HxBxL)
	Weight	Up to 31,000 kg
	Other	Static tested, CSC optional
Fire detection and Suppression	Smoke Detection, Temperature Sensors, BCC Monitoring and Detection Optional: <ul style="list-style-type: none"> • Sprinkler system as dry riser with external C-coupling and fine spray nozzles • Gas extinguishing system NOVEC 1230 	
Software	Intelligent Energy Management System (EMS) - Key functions:	Frequency Regulation, Ancillary Service, Renewable Integration, Energy Arbitrage, Demand Management, Load Leveling, Peak Shaving, Micro Grid System, Black Start Capability Integration, Grid Stability, Commercial Application
	Communication interface	via Modbus TCP / IP
Norms	EN 60364, EN 60664-1, EN 61439-1, ISO 13849, EN 61000-6-2, EN 61000-6-4, IEC 62660, UN 38.3 (Modul)	

¹ Depending on available battery type

² Depending on project location and use case

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All data corresponds to the current state of production. Our products are subject to constant further development. All rights reserved.

