20FT LFP 5 MWh UNIT

TRICERA energy

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 20ft HC storage unit** is a compact 1500V 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 5,0 MWh** for use in various applications. Several different battery topologies are available depending on power requirements for **up to 1C**.

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

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TECHNICAL SPECIFICATIONS

Electrical Parameters	Battery chemistry[1]	LFP
	DC Voltage[1]	Up to 1.500 V_{DC}
	Nominal DC Energy Capacity[1]	5 MWh
	C-Rate[1]	1 C or 0,5 C or 0,25 C
	Aux Load Energy per Enclosure[2]	42 kW_{peak}
System Parameters	Heating and Cooling[2]	Liquid cooling system
	Operating Temperature[2]	-15 bis +45 °C ambient temperature
	Altitude	Up to 2.000 m
Housing	Container	20ft High Cube Open Side
	Corrossion class[2]	C3, Up to C5 optional
	Dimensions	2.896 x 2.438 x 6.058 mm (HxBxL)
	Weight	Up to 45.000 kg
	Other	Static tested, CSC-Plaque
Fire detection and Suppression	Smoke Detection, Temperature Sensors, visual and acustic signal, BCC Monitoring and Detection, Gas extinguishing system Optional: • Sprinkler system as dry riser with external C-coupling and fine spray nozzles	
Software	Intelligent Energy Managemen 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, EN 61439-1, ISO 13849, EN 60664, EN 61000-6-2, EN 61000-6-4, IEC 62660, UN 38.3, UL 9540 A, NFPA 855	

[1] Depending om available battery type
[2] Deending on project location and use case

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