

Smart Energy Storage

PowerX Sodium Batteries



Battery Energy Storage System 65-540kWh
The only battery with 100% green heart.

OUR GOAL

The electrification of our society is accelerating, and thus also the need for storage of the electricity generated on e.g. solar cell plant. We see a good synergy between our cable solutions, energy storage and solar and wind systems as well as charging stations.

We have therefore entered into an agreement with PowerX Technology Innovation in Italy. They are active in several sectors as well as a wide range of green solutions such as. renewable energy, energy storage and electricity generation, and we see great potential for their salt-based batteries for energy storage.

BATTERY ENERGY STORAGE SYSTEMS

PowerX battery storage systems are designed for optimal sustainability. They are based on salt technology (NiNaCl), which allows for hybrid solutions that can be adapted to the individual project at the same time.

PowerX sodium batteries provide i.a. benefits in relation to:

- Resource saving
- Environmental efficiency
- Smart energy consumption
- Fuel saving
- Load management
- Cost savings
- Robustness
- And much more



SMART STORAGE SOLUTION



SMART TECHNOLOGY

- ✚ FULL GENSET HYBRIDIZATION
- ✚ NO COOLING AND F&G SYSTEM
- ✚ LOAD MANAGEMENT
- ✚ PLUG & PLAY



ECO-FRIENDLY

- ✚ RECYCLING BATTERIES
- ✚ NO COMBUSTIBLE SOLUTION
- ✚ NET ZERO EMISSION



PERFORMANCE

- ✚ HIGH EFFICIENCY
- ✚ SCALABLE



OUR RANGE


SERIE MINI



SERIE COMPACT



SERIE LEGO

TECHNICAL DATA		MINI	CONCEPT	LEGO
Ppeak (30sec)	kW	65÷90	90÷135	180÷540
Energy Capacity (100% DoD)	kWh	65÷90 (*)	90÷135 (*)	180÷540 (*)
Nominal Voltage	V	400±10%	400±10%	400±10%
Nominal Frequency	Hz	50±5%	50±5%	50±5%
Range Design Temperature	°C	-20÷+40	-20÷+40	-20÷+40
IP Container		IP54	IP54	IP54
BATTERY				
Quantity	pieces	Up to 3	4÷6	8÷24
Cell (chemical feature)		NaNiCl2 (Salt)		
Nominal Voltage	V	620Vcc		
Energy	Wh	<700 / each battery		
Life duration (80% DoD)	cicles	4500 cycles at 80% DOD		
Nominal Capacity of single battery	kWh	22.5	22.5	22.5
POWER CONVERSION SYSTEM (PCS)				
Nominal Power	kW	50	100	270
(*)		Starting from above mentioned values, scalable up to any size by selecting a number of PCS units (based on client demand)		
PERFORMANCE				
Discharge 100%	hours	3		
Charge standard	hours	8		
OVERALL DIMENSIONS				
L x D x H	ft	5 or 10 for PCS Container (on project basis) 10 or 20 for Batteries Container		

SPECIFICATIONS

AUXILIARY CONNECTION	: 3P + PEN 230/400Vac (internally or externally provided).
EARTHING	: from external earthing pin or grid connection.
SYSTEM CONTROLLER	: High-end industrial controller, communication through local HMI.
OPERATIONAL MODES	: SoC Control, Voltage Control, Frequency Response, Peak Shaving.
COMMUNICATION INTERF	: Modbus TCP/IP (IEC-61850).

INTERNATIONAL REGULATIONS

BESS System

Engineering	IEC 61000-6-2 / IEC 61000-6-4
Batteries	EN IEC 62485-1:2018 / EN IEC 62485-2:2018 / CE
Inverter	EN IEC 61000-6-2 / EN IEC 61000-6-2
Transport	Road and sea transport ADR class



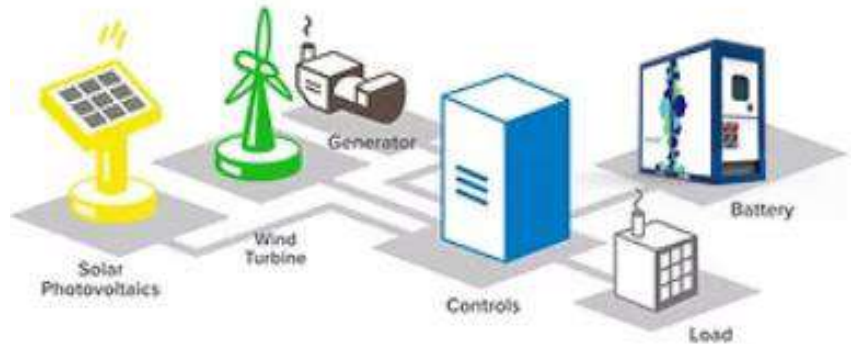
GENSET HYBRIDIZATION

Our EBS systems can be used in combination with gensets or renewables energy sources to create an hybrid power source for micro-grids, construction yards, residential and industrial plants.

KEY BENEFITS

SMART GENSET LOADS MANAGEMENT

- Genset fuel saving (running)
- Genset downsizing for same application
- Noise reduction
- Gas emission reduction
- Lower genset maintenance costs



KEY FEATURES

Grid following
 Grid forming
 Black start
 Peak shaving
 Spin reserve

APPLICATION

Construction yards
 Micro-grids
 Residential
 Industrial plants
 Hybrid PV plant



SERVICES

Our **Smart Power Plan Tool** is specifically conceived to provide a complete inventory of power requirements and then matching the power generation exactly to the users demand.



VALUE ADDED

Design of optimal power supplies for a wide range of application (live events, temporary power plants, etc.) through the usage of an unique and internationally awarded Smart Power Plan: **MyZap**.

Wide range of **APPLICATION**

- + Live Events
- + Temporary Power Plants powered by generating sets of any type





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