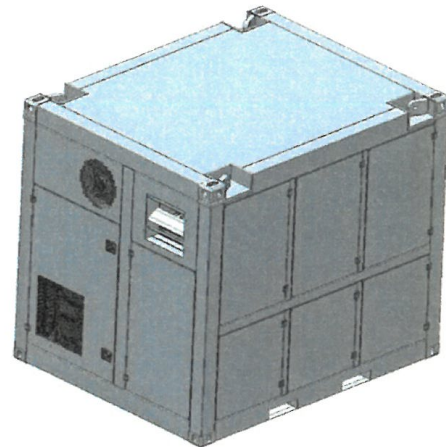
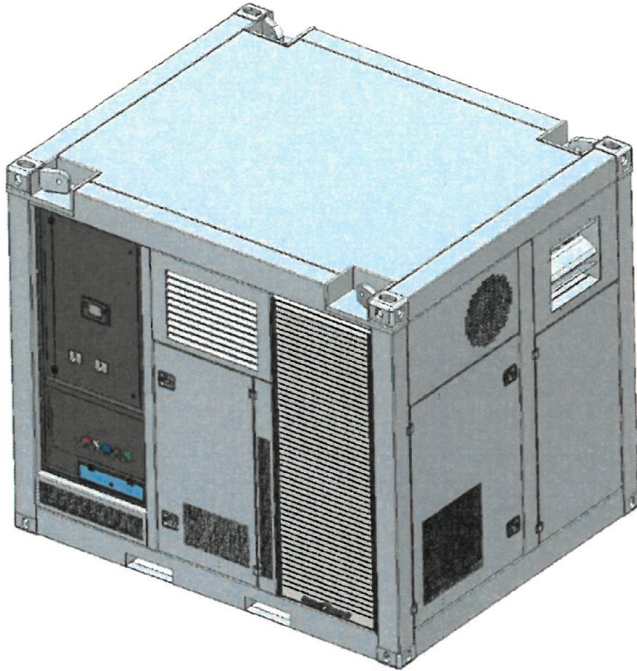


BATTERY ENERGY STORAGE SYSTEM

BESS. The Smart Storage System with Lithium Battery and Integrated Inverter/Charger



STANDARD EQUIPMENT

- Digital Control Panel
- Distribution Panel
- 4 corner lifting points
- Forklift pockets

POWER SOURCES



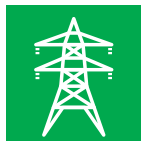
SOLAR



WIND

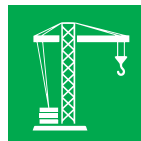


GENERATOR



MAINS

APPLICATIONS



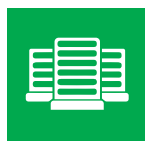
CONSTRUCTION



DISASTER RELIEF



EVENTS



UPS

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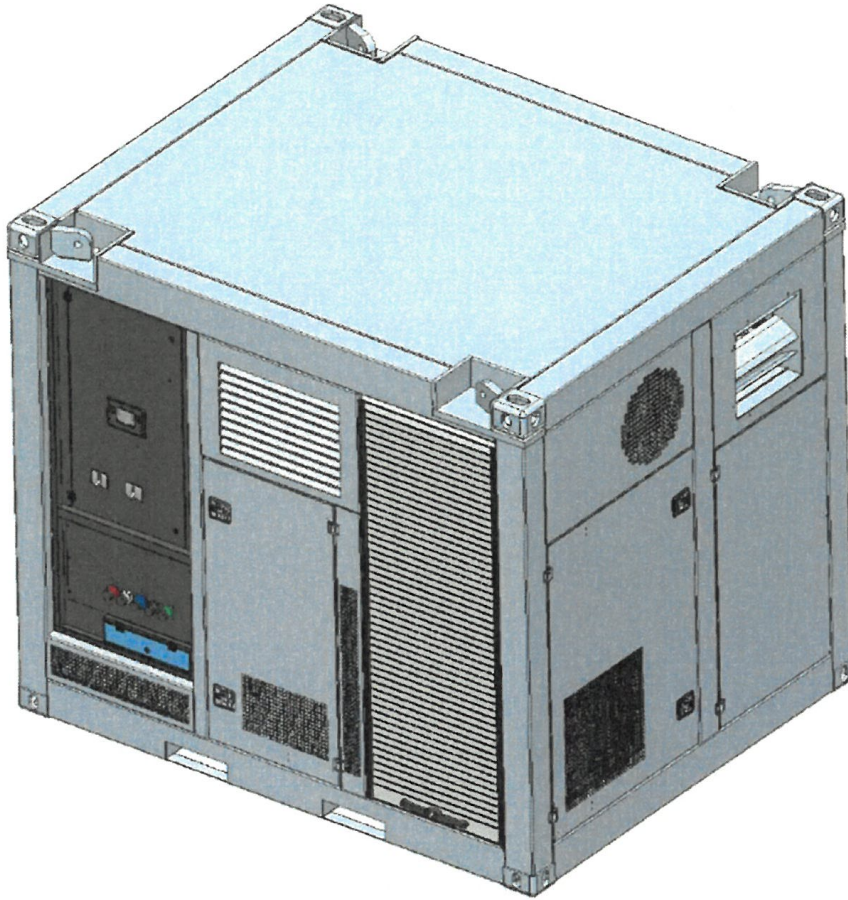


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BATTERY ENERGY STORAGE SYSTEM

BATTERY ENERGY STORAGE SYSTEM		
GENERAL TECHNICAL DATA		
Rated voltage	VAC	150 - 1000
Nominal energy storage	kWh	540
CCS2 power	kW	180
Communication technology		CAN bus
Sound power level	dB(A)	<65
Protection degree		IP44
Battery Quantity	units	6
BATTERY		
Battery nominal voltage	VDC	653.4
Model		CUBE
Brand		
Nominal Battery Capacity	Ah	135.84
Max. Continuous Charging power	kW	51kW at 50% SOC considering operational limits
Max. Continuous Discharging power	kW	35kW at 10% SOC 109kW at 90% SOC considering operational limits
INVERTER		
Quantity	units	1
Continuous power at power factor = 0,8	kVA	200
PERFORMANCE		
Recharging time (@ 80% DoD) @50kW	Time [h]	8,5
Recharging time (@ 80% DoD) @100kW	Time [h]	4,5
Recharging time (@ 80% DoD) @200kW	Time [h]	2,5
Operating temperature	°C	-20 to +45*
CONTROL		
Energy management system		Comap
Battery management system (BMS)		Volvo group
INLET connection		CAMLOCK (400A max 200KW)
OUTLET connection		COMBO2 x 180 kW CCS2 DC charger
Dimensions (L x W x H)	mm	2991x2438x2591
Weight	kg	~7600

10' ISO CONTAINER



HANDLING

- Forklift pockets
- BGG certified corner blocks

FIRE EXTINGUISHER SYSTEM

- Emergency motorized shutters and SFE powder aerosol technology

VENTILATION

- Battery ventilation through motorized shutters
- Forced ventilation with fans powered by inverter

INSULATION

- Class 1, thermal insulation

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BI-DIRECTIONAL INVERTER



STANDARD FEATURES

- Multilevel IGBT Technology
- Transformer-less topology
- Low distortion sinusoidal current thanks to PWM high frequency IGBT semiconductor technology
- Output Inverter high efficiency power section features low distortion output voltage based on Multilevel IGBT topology
- Forced air system cooling
- Digital control
- Whole power electronics on single removable power module IGBT
- High working frequency
- Mechanical design according to easy maintenance philosophy
- Parallel communication via optical fiber
- Full digital management of the unit controlled by software setting configuration

GENERAL INFORMATION	
Inverter	Multi level IGBT high frequency switching transformer-less
Cooling system	Forced air
ELECTRICAL AC SECTION IN GRID CONNECTED MODE	
Nominal output voltage	3Ph + N 380/400/415Vac
Nominal frequency	50/60Hz
ELECTRICAL AC SECTION IN STAND ALONE MODE	
Nominal output voltage	3Ph + N 380/400/415Vac
Nominal output current (3Ph + N @400V)	180 kW
Nominal frequency	50/60Hz
Accepted inverter overload	2,6 Pn
ELECTRICAL DC SECTION	
Nominal voltage	720Vdc
Max charging current	200A
Max discharging current	250A
MECHANICAL	
Protection level	IP20
Plant wiring	Power Bus BAR
Wiring lock	Present
Service access to control electronic	from the front
ENVIRONMENT	
Operating temperature	0-55°C (with derating over 55 °C)
Relative humidity	< 95% no moisture
Max altitude with no deration	Up to 1000m asl (1% deration every 100m up to and including 2000m)
Storage temperature	-20°C to + 70°C
OTHER FEATURES	
LCD Interface	
EMC class	IEC-EN62040-2 CLASS A
Noise level	60dB(A) at 1m
Air flow rate	1800m³/h