

5.0 MWh

Efficient.
Scalable.
Safe.



SMO

HIGH-VOLTAGE BESS CONTAINER

Discover the future of sustainability, engineered to efficiently harness and store and distribute renewable energy for a cleaner tomorrow.

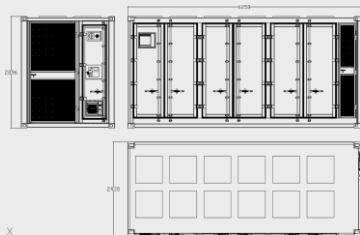


5M0

CONTAINER BASED ESS

Specifications

SYSTEM	Model	5.01 MWh 20 ft. liquid-cooled ESS
	Container type	20 ft. HC ISO Container
	Total capacity at 100% DoD	5,015 kWh
	Usable capacity at 95% DoD	4,760 kWh
	Usable capacity at 90% DoD	4,509 kWh
	Recommended DoD in self-consumption	90%
	Overall voltage range	1.040 ~ 1.497,6 VDC
	Operating voltage range	1.164,8 ~ 1.497,6 VDC
	Peak current (Loop 1 and 2)	1.158 A / Each
	Standard current (loop 1 and 2)	942 A / Each
CELL	Module topology	1P 416S
	Cell type	LFP 314Ah Grade A+
	RTE efficiency	≥ 93.5%
	Rated charge and discharge current	0.5 C
	Peak charge and discharge current	0.6 C
	Cell operating temperature range (STC)	25 ± 10 °C
LIFE & WARRANTY	Expected life cycle @ STC 90% DoD	> 10 Years or 10.000 cycles
	Performance warranty	10 Years or 10 000 cycles
	System warranty	5 Years (extendable up to 10)
ENVIRONMENT	Maximum altitude	< 3000 m
	Protection rating	IP55 Outdoor, over 1000m from the sea coast
	Operating ambient temperature range	-30 ~ +50 °C
	Humidity	5 % ~ 95 % RH Non-condensing
AUXILIARIES	Auxiliary power supply	400 VAC @ 50 Hz 3P + N + PE
	Max. Aux power (heating/cooling system)	≤ 42 kW
DIMENSIONS	Dimensions (L x W x H)	6058 x 2 896 x 2 438 mm
	Weight (fully assembled)	43.000 kg
CERTIFICATIONS	Product certifications	CE; UN 38.3; IEC 62619:2017; IEC 61010-1+A1:2016; IEC 61508:2010; IEC 61000-6-2:2016; IEC 61000-6-4:2019; IEC 61000-6-7:2015; 2006/66/EG
	Battery module	UN 38.3; IEC 62619:2017; IEC 62620:2014
	Cell certifications	IEC 62619, UL 1642, UN 38.3
FEATURES	Communication protocol	ModBus RTU, ModBus TCP, CAN 2.0, Wi-Fi
	Dehumidification system	✓
	Fire detection system	✓
	Fire suppression system	✓
	Thermal management	✓
	Applications	High-voltage application — Three levels of protection, real-time balancing, adaptive CAN charge/discharge logic, adaptive 3-stage recharge logic, remote monitoring and control with the WeCo app for Android / iOS

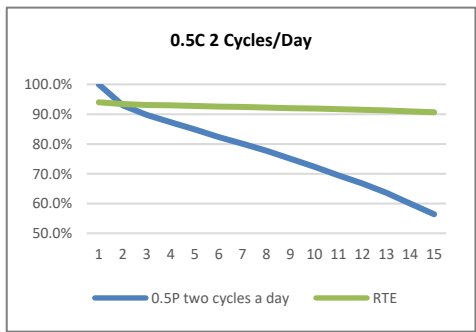
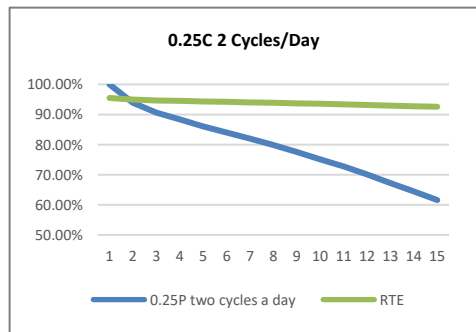


The temperatures mentioned above are limited to the BMS ranges; such values may not be covered by the performance warranty.
We recommend contacting WeCo for the most up-to-date datasheet and reading the warranty and the manual before making any purchase decision.
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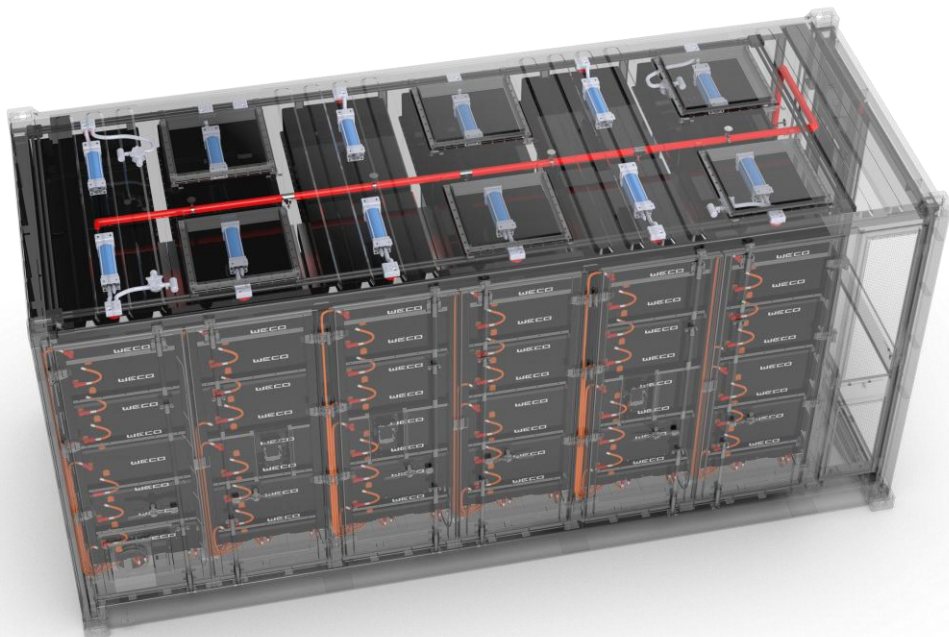


Section	Parameter	PCS-WTS 2500C	PCS-WTS 3500C
DC Parameters	Number of DC Input Channels	1	2
DC Parameters	Max. DC Current	2810 A	3934 A
DC Parameters	DC Voltage Operating Range	1000 V ~ 1500 V	1000 V ~ 1500 V
AC Parameters	Total Rated Power	2500 kW	3500 kW
AC Parameters	Max. Output Power	2750 kVA	3850 kVA
AC Parameters	Rated Voltage	690 Vac	690 Vac
AC Parameters	Isolation Mode	Transformer Isolation	Transformer Isolation
AC Parameters	Q Range	0 ~ 2625 kVar	0 ~ 3675 kVar
On-grid Mode	Rated Grid Voltage	6 ~ 35 kV (Customizable)	6 ~ 35 kV (Customizable)
On-grid Mode	Rated Grid Frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
On-grid Mode	THD	< 3%	< 3%
On-grid Mode	Power Factor	-1 ~ 1	-1 ~ 1
Transformer Parameters	Rated Capacity	2500 kVA	3500 kVA
Transformer Parameters	Transformer Type	Oil-immersed Transformer	Oil-immersed Transformer
Transformer Parameters	LV/MV Voltage	0.69 / (6 ~ 35) kV	0.69 / (6 ~ 35) kV
System Parameters	Dimensions (W × H × D)	6058 × 2438 × 2896 mm	6058 × 2438 × 2896 mm
System Parameters	Operation Temperature	-40°C ~ +60°C (Derating above 45°C)	-40°C ~ +60°C (Derating above 45°C)
System Parameters	Operation Humidity	0 ~ 100%	0 ~ 100%
System Parameters	Operating Altitude	≤ 5000 m (No derating within 3000 m)	≤ 5000 m (No derating within 3000 m)
System Parameters	IP Rating	IP54 (PCS IP66)	IP54 (PCS IP66)
System Parameters	BMS Communication	RS485 / CAN	RS485 / CAN
System Parameters	EMS Communication	Ethernet Interface	Ethernet Interface
System Parameters	Communication Protocol	Modbus RTU / Modbus TCP / IEC104 / IEC61850	Modbus RTU / Modbus TCP / IEC104 / IEC61850
System Parameters	Standard Compliance	GB/T 34120, IEC62477, IEC61000, EN50549	GB/T 34120, IEC62477, IEC61000, EN50549

Retention rate 15 years operations											
Years	0.25P once a day	RTE	Available power (MWh)	0.25P two cycles a day	RTE	Available power	0.5P one cycle a day	RTE	Available power (MWh)	0.5P two cycles a day	RTE
0	100.0%	95.48%	4,877	100.0%	95.48%	4,877	100.0%	93.98%	4,838	100.0%	93.98%
1	96.3%	95.15%	4,688	93.86%	94.94%	4,565	95.82%	93.61%	4,627	93.0%	93.37%
2	93.8%	94.94%	4,561	90.62%	94.68%	4,401	93.52%	93.42%	4,511	89.8%	93.12%
3	92.1%	94.80%	4,475	88.41%	94.51%	4,290	91.74%	93.27%	4,422	87.2%	92.92%
4	90.8%	94.70%	4,410	86.03%	94.33%	4,170	90.28%	93.16%	4,349	85.0%	92.75%
5	89.9%	94.62%	4,362	84.03%	94.19%	4,070	89.00%	93.06%	4,285	82.3%	92.56%
6	88.6%	94.53%	4,299	82.02%	94.04%	3,970	87.70%	92.96%	4,220	80.1%	92.40%
7	87.6%	94.45%	4,249	79.82%	93.88%	3,860	86.50%	92.87%	4,160	77.7%	92.23%
8	86.6%	94.37%	4,199	77.53%	93.72%	3,746	85.40%	92.79%	4,106	75.0%	92.05%
9	85.6%	94.30%	4,149	75.07%	93.55%	3,624	84.20%	92.70%	4,046	72.3%	91.85%
10	84.6%	94.23%	4,099	72.70%	93.38%	3,506	83.20%	92.62%	3,996	69.4%	91.65%
11	83.6%	94.15%	4,049	70.10%	93.20%	3,378	82.20%	92.55%	3,947	66.8%	91.46%
12	82.6%	94.08%	3,999	67.24%	92.99%	3,236	81.06%	92.47%	3,890	63.6%	91.22%
13	81.6%	94.01%	3,949	64.41%	92.78%	3,096	80.10%	92.40%	3,843	60.0%	90.94%
14	80.6%	93.94%	3,899	61.58%	92.57%	2,957	79.00%	92.33%	3,788	56.4%	90.65%



*For the 5MWh – 2.5MW configuration, two 1250kW inverters can be used in parallel.
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High-voltage battery modules

LFP 314 Ah Grade A+ cells in a 1P416S architecture deliver up to 1,500 V DC, with real-time balancing and three-level protection.



Containerised 5.0 MWh system

Liquid-cooled 20 ft. ISO container, IP55-rated for outdoor sites — engineered for solar-plus-storage and grid-scale applications.

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The images shown are for illustrative purposes only and may not reflect the final product.

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FEATURES

- High voltage up to 1500 V DC
- Parallel operation via EMS
- Remote monitoring and configuration
- App and web portal
- Up to 15 years of operation

5.0 MWh

HIGH-VOLTAGE CONTAINER



Protection IP 55

With its IP55 protection rating, it is resistant to dust and water, ensuring maximum performance in any outdoor scenario.



Fire suppression

Safety always comes first! Each container is equipped with a sophisticated fire suppression system, offering unparalleled safety and peace of mind.



Plug & Play

Easy installation, everything is plug and play and cable-free. Error-free installation method with a final self-check via the App.



Heating and cooling

Our state-of-the-art heating system keeps the battery at the optimal temperature, ensuring consistent performance even in freezing conditions.



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