

Liquid-cooled Battery 20ft Container



Toyon's innovative 400 V all-in-one container solution integrates PCS, EMS, BMS, cooling and fire suppression systems, AC combiner cabinet, and other essential components. The highly integrated system, combined with high-quality 314 Ah battery cells, delivers higher energy density in a compact footprint. Its efficient hybrid cooling system ensures stable operation, keeping cell temperature differences within 3°C. Designed in a standard 20 ft container, the solution allows easy transportation, rapid installation, and flexible deployment, making it suitable for a wide range of commercial, industrial, and utility-scale energy storage applications.

2.17MWh

Features



Higher Energy Density

The 20-ft liquid-cooled energy storage container offers a maximum capacity of 2.17 MWh, delivering higher energy density and reducing overall costs.



Lower Operating Noise

Minimized fan usage significantly reduces operating noise compared to air-cooled solutions.



Better Temperature Control

The liquid cooling system maintains cell temperature differences below 3°C, improving voltage consistency and overall performance.



Lower Self Power Consumption

A variable-frequency compressor adapts to temperature conditions, reducing the system's power consumption.



Longer Service Life

Enhanced cell temperature consistency extends battery life, increases safety, and improves return on investment.



Higher Protection

The container features an IP55-rated enclosure (PACK IP65), up to C5 corrosion protection, and high/low-temperature design for robust environmental resistance.

Liquid-Cooled Battery

PRODUCT DESCRIPTION

DC Side	
Cell Type	LFP / 314 Ah
Pack Configuration	48.2 kWh / 1P48S
System Configuration	2170 kWh / 9P240S
Rated DC Voltage	768 V
DC Voltage Range	672 ~ 864 V
Max. Charge/Discharge Rate	0.5 P
Max. Depth of Discharge	100%(25 ± 2°C)
AC Side	
Rated Output Power	1000 kW
Rated AC Voltage	400 V
AC Voltage Range	±15%
Grid Type	3W+N+PE
Rated Frequency	50 Hz / 60 Hz
Power Factor	0.99/ -1 ~ +1
THDi	≤3%
DC Ratio	<0.5% I _{pn}
General	
Max. Round Trip Efficiency	89%
Cycle Life	≥8,000 cycles
Communication	Modbus TCP/IP
Fire Suppression System	Aerosol system+Water spray system
Ingress Rating	IP55
Cooling	Liquid cooling+Forced air cooling
Operating Temperature	-25°C~55°C (Derating after 45°C)
Anticorrosion Rating	C4 (C5 optional)
Humidity	0~95% RH (non-condensing)
Noise	≤ 80 dB
Altitude	3000m (Derating above 2000m)
Dimensions (W*D*H)	6,058*2,438*2,591 mm
Weight	24 t
Safety/EMC	UN3536, IEC62619, IEC63056, IEC62477-1, IEC61000-6-2/4, UL9540A, IEC62933-5-2
Grid code	EN50549-1/-10, EN50549-2/-10, G99, VDE4105, NRS097, C10/11, CEI0-21, CEI0-16