

VANADIUM FLOW BATTERIES CONTAINER

VFB500 / Air Cooling (125kW/500kWh)

The VFB500 product is a 45 feet container modular, distributed all-in-one machine for medium-scale industrial and commercial energy storage needs.

The long service life Vanadium Redox Battery, battery management system, high-performance power conversion system, fire fighting system, distribution system, and thermal management system are integrated into a standard outdoor container.



Technical Parameters	VFB500
AC Side	
AC Output Power	125kW
Power per Stack	32kW
Stacks Configuration	1P4S
Nominal Grid Frequency/Range	50Hz/47Hz ~ 52Hz 60Hz/57Hz ~ 62Hz
Harmonic(THD)	<3% (at Nominal Power)
Power Factor at Nominal Power/Adjustable	-1 ~ 1
cooling Concept of Stack Chamber	Air Cooling
Seamless Switching from Grid to BESS In Case of Power Outage	Optional
Batteries	
Battery Voltage	256-397VDC
Battery Type	Vanadium Redox Battery
Electrolyte System/Concentration (mol/L)	All-Vanadium Sulfuric Acid System /1.7
Capacity	500kWh
DC Side Efficiency	≥80%
Normal Parameters	
Dimension W*D*H	13716*2438*2991 mm
Charge/Discharge Rate	0.25C
Depth of Discharge	100%
Life Cycle	≥15000
Overload Capacity	Long-term:110%
Self Max. Self Power Consumption	25kW
Degree of Protection	IP54
Fire Protection System	Perfluorhexone
Allowed Ambient Temperature	-30 ~ 50°C
Allowed Relative Humidity	0 ~ 95%
Enclosure Corrosion Resistance Level	C3 (C4/C5 Optional)
Weight with Electrolyte	~76000kg
Weight without Electrolyte	~32000kg
Lifting Options	Crane
Scalability	Yes, Units Can Be Connected In Parallel
Accessories (Optional)	Energy Management System, Microgrid Controller, Scada, 4/5G Router, MCCB (Breakers), Power Cables, Smart Meters, Static Transfer Switch(STS), Electric Cabinet
Monitoring	
Display	7 Inches Touchscreen
Communication	RS485/Ethernet
Communication Protocols	MODBUS-RTU/MODBUS-TCP
Remote Control System	Renepoly Cloud