





Product Specification Sheet

	STANDARD PRODUCTS	
	ZESS 50	ZESS 500
		
Electrical		
Electrical Input (Charge)		
Maximum voltage	118VDC	590VDC
Maximum current charge	150ADC	150ADC
Frequency	DC	DC
Charge power maximum	12.5 kW	125 kW
Electrical Output (Discharge)		
Operating voltage	60 to 108VDC	300 to 590VDC
Operating current	0 to 300ADC	0 to 300ADC
Frequency	DC	DC
Energy storage capacity	50 kWh	500 kWh
Discharge power max	25 kW	250 kW
Electrical performance		
Round trip peak efficiency at cell stack (see note 1)	77%	77%
Round trip peak efficiency inclusive of aux power (control, pumps) (see note 2)	68%	68%
Cycle Life full 100% DOD (cell stack only)	10 yr ~10% capacity degradation	10 yr ~ 10% capacity degradation
Redundancy	N/A	N-1, N-2 (auto isolation and bypass of module)
Mechanical		
Dimensions (H x W x D) w/sump (-9" in H w/o Sump)	88.5 x 51.3 x 47.4	8'6" x 20' x 8'
Weight	3200lbs	35,000lbs plus 7,800 (sea-box)
Certifications		
Electrical equipment Design to	UL 508, NFPA 70	UL 508, NFPA 70
Safety	OSHA	OSHA
Third party verification	No (Upon request)	No (Upon request)
MSDS	Yes	Yes
Quality	ISO 9001	ISO 9001
Control/Protection/Communication		
Customer interface	Modbus Std or hardwire	Modbus Std or hardwire



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(other protocols offered as option, contact factory)		
Alarm time stamp data	Yes	Yes
Status	Yes	Yes
Remote Communication/monitoring	Yes, Network/Satellite	Yes, Network/Satellite
PLC and module level comprehensive monitoring (voltage, current, leak, electrolyte level, temp)	Yes	Yes
Built in, remote controlled auto sequence and verification routine	Yes	Yes
HMI display/control	Yes	Yes
Warranty and Service		
Std warranty (months oper/ship)	12/18	12/18
Extended warranty w/PM contract	Up to 5 years	Up to 5 years
Annual preventative maintenance contract available	Yes	Yes
Environmental		
Enclosure	NEMA 3R	NEMA 3R
Std Temp Range – Standby	10 to 50C	10 to 50C
Std Temp Range – Operation	10 to 40C	10 to 40C
Opt hot/cold package	-40C to 50C	-40C to 50C
Temp Range – storage w/electrolyte	0 to 50C	0 to 50C
Temp Range – storage w/o electrolyte	-30C to 50C	-30C to 50C
Humidity	100%	100%
Installation	Modular, minimal civil work	Modular, minimal civil work
Unit handling	Fork-lift	Overhead crane rigging
Spill Containment	Built in	Built in

Note 1: DC efficiency varies depending on discharge rate. The value specified is at the 80A discharge rate

Note 2: Round trip efficiency is dependent of charge/discharge rate. The value specified is 150A charge and 150A discharge rate.

Important: Other communication protocols are available please contact our office.

Important: Optional PCS (DC/AC, or DC/DC) or ZESS POWR proprietary Hybrid PCS (full integration of multiple renewable or conventional energy sources for AC on and/or off grid, and any DC voltage) available for complete system ready for site interconnect.