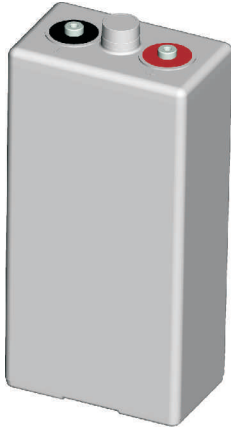




## OPzV500 (2V500AH) Tubular GEL Battery



### Specification

Nominal Voltage	2V	
Capacity	500.0Ah@10hr to 1.80V/cell	
Dimension	Length	166±2mm (6.54 inches)
	Width	206±3mm (8.11 inches)
	Container Height	471±3mm (18.5 inches)
	Total Height (with Terminal)	506±3mm (19.9 inches)
Approx Weight	Approx 35.5 kg (78.26 lbs)	
Container Material	ABS	
Rated Capacity	500 AH/50.0A	(10hr, 1.80V/cell, 20°C/68°F)
	435 A H/87.0A	(5hr, 1.75V/cell, 20°C/68°F)
	385 AH/128.3A	(3hr, 1.75V/cell, 20°C/68°F)
	284 AH/284A	(1hr, 1.60V/cell, 20°C/68°F)
Max. Discharge Current	4800A (5s)	
Internal Resistance	Approx 0.73mΩ	
Operating Temp. Range	Discharge	-20~55°C (-4~131°F)
	Charge	0~40°C (32~104°F)
	Storage	-20~50°C (-4~122°F)
Cycle Use	Initial Charging Current less than 125.0A. Voltage 2.40V~2.50V at 20°C(68°F)Temp. Coefficient -5mV/°C	
	Standby Use No limit on Initial Charging Current Voltage 2.25V~2.30V at 20°C(68°F)Temp. Coefficient -3mV/°C	
Self-discharge	<2% pre month @ 20°C(68°F)	

### Applications

- ◆ Solar energy/wind energy
- ◆ Electric power/nuclear power
- ◆ Communication
- ◆ Ship, maritime affairs
- ◆ UPS, medical facilities and emergency lighting
- ◆ Situation with high environmental protection and energy-saving
- ◆ Better safety performance and reliability
- ◆ Designed service life of 22 years

### Main Technical Advantages

- ◆ Plate: positive plate adopts tubular plate which can prevent active material falling, and adopts multi-component alloy frame. have fine corrosion-resisting performance and long service life. Negative plate adopts special radiated structure.
- ◆ Separator: adopt special micro-pore PVC-SiO<sub>2</sub> separator from Europe AMER-SIL Company, separator have big porosity and low resistance.
- ◆ Electrolyte: adopts Germany gas silicon dioxide, electrolyte in gel state in the battery without flowing, leakage and lamination can be avoided.
- ◆ Safety valve: adopt Germany technology, constant opening and closing, accumulator case expansion, damage and electrolyte dry up can be avoided.

### Constant Current Discharge (Amperes) at 20 °C (68°F)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.85V/cell	384	354	289	219	147	113	77.6	54.2	45.9
1.80V/cell	472	429	337	247	162	123	83.7	58.0	49.0
1.75V/cell	559	480	359	257	166	126	85.3	59.0	49.8
1.70V/cell	627	523	380	267	170	129	86.7	59.8	50.3
1.65V/cell	673	553	395	274	174	131	88.0	60.5	50.9
1.60V/cell	704	572	405	279	176	133	88.9	61.0	51.2

### Constant Power Discharge (Watts) at 20 °C (68°F)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.85V/cell	714	665	552	424	286	221	153	107	91.3
1.80V/cell	863	794	637	474	313	240	164	115	97.3
1.75V/cell	1003	876	672	491	320	244	167	116	98.7
1.70V/cell	1106	942	704	506	326	248	169	118	99.7
1.65V/cell	1166	980	725	517	332	252	171	119	101
1.60V/cell	1197	1000	736	523	334	253	172	120	102

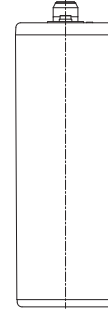
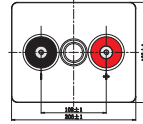
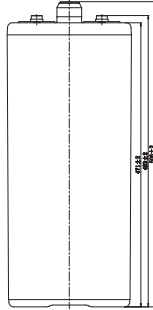
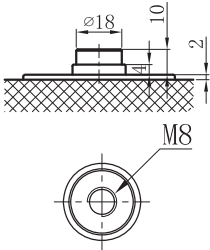
**Note** The above data are average values, and can be obtained with 3 charge/discharge cycles. These are not minimum values.



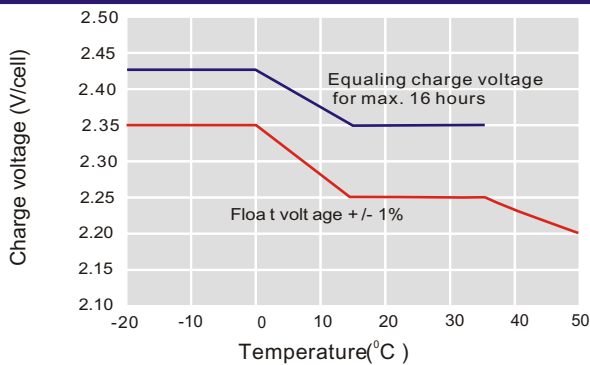
## OPzV500 (2V500AH) Tubular GEL Battery

### Dimensions

#### T11 Terminal

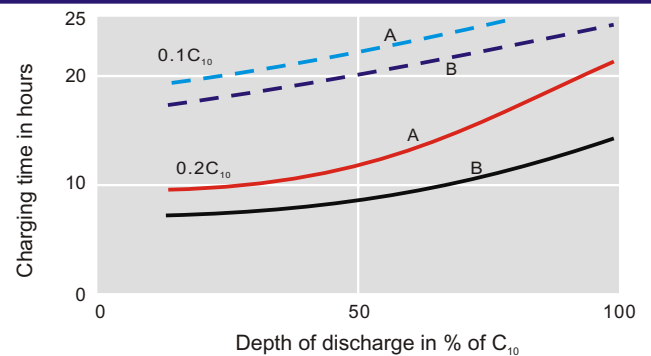


### Discharge Characteristics



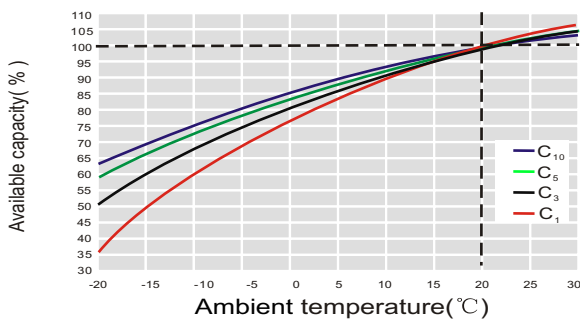
For continuous charging we recommend a voltage of 2.25 V. The charging voltage must be compensated to the curve for continuously different battery ambient temperature.

### Charging Characteristics

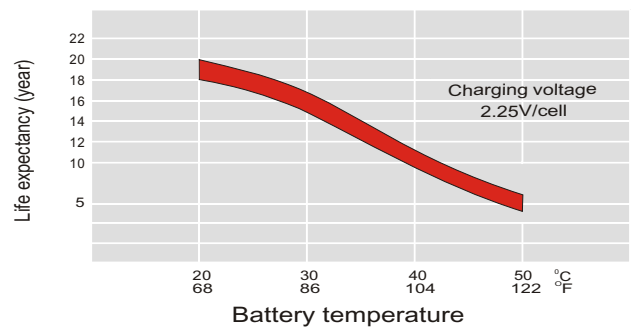


Charge voltage:  
 A—2.25 V/cell      B—2.40 V/cell  
 - - - State of charge 100 %      — State of charge 90 %

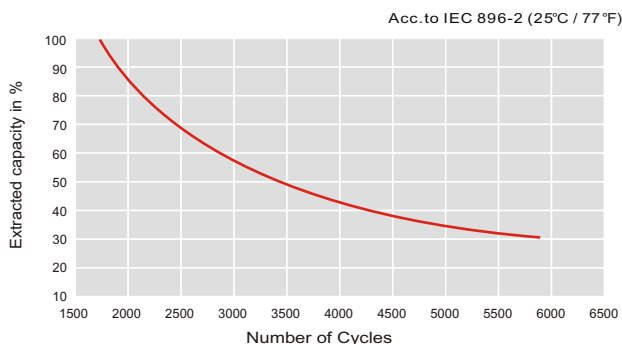
### Temperature Effects in Relation to Battery Capacity



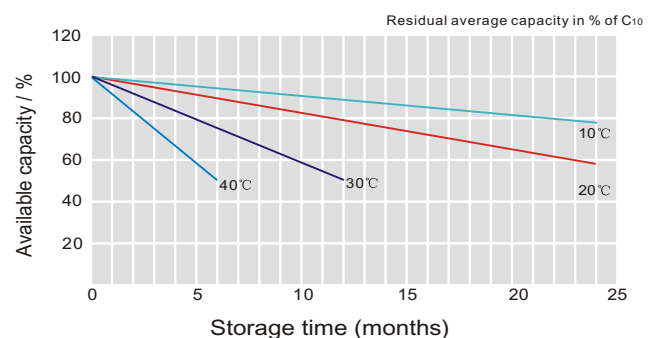
### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### General Relation of Capacity VS. Storage Time



### JYC OPzV BATTERIES

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