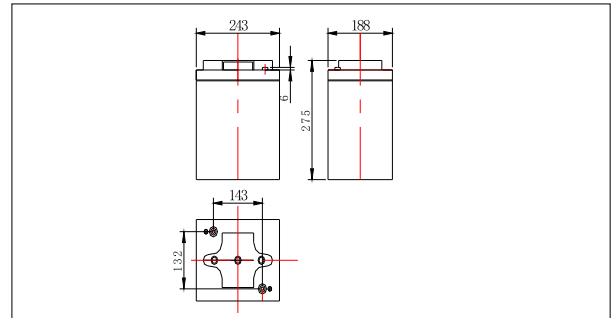




Sw62250(6V225AH)



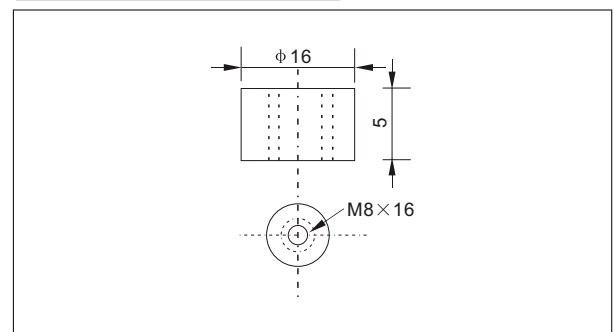
Outer dimensions (mm)



Specifications

Nominal Voltage		6V
Rated capacity (10 hour rate)		225 Ah
Dimensions	Total Height	275 mm (10.83 inches)
	Height	275 mm (10.83 inches)
	Length	243 mm (9.57 inches)
	Width	188mm (7.40 inches)
Weight Approx		34.5Kg (76.24 lbs)

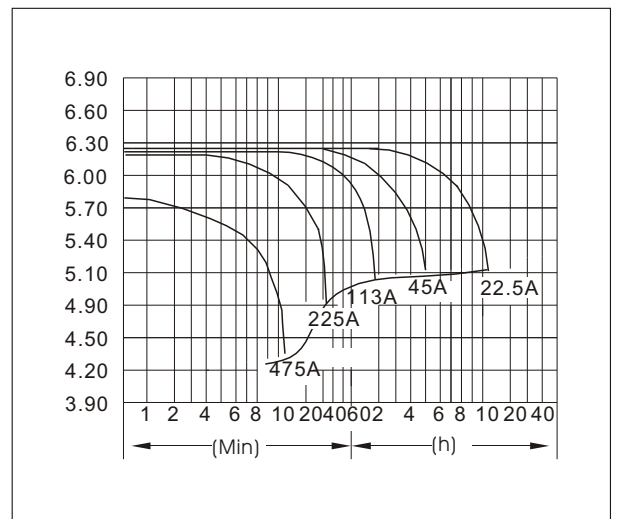
Terminal Type (mm)



Characteristics

Capacity 25°C(77°F)	10 hour rate(22.5 A) 5 hour rate(36.0 A) 1 hour rate(135 A)	225 AH 180 AH 135 AH
Internal Resistance	Full charged Battery at 25°C(77°F)	Approx 1.3 m Ω
Capacity affected by Temperature (10hour rate)	40°C(104°F) 25°C(77°F) 0°C(32°F) -15°C(5°F)	102% 100% 85% 65%
Self-Discharge at 25°C(77°F)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Terminal		T19
Charge (constant Voltage)	Cycle	Initial Charging Current less than 90 A Voltage 7.05-7.2V
	Float	Voltage 6.75-6.90V

Discharge Curves 25°C(77°F)

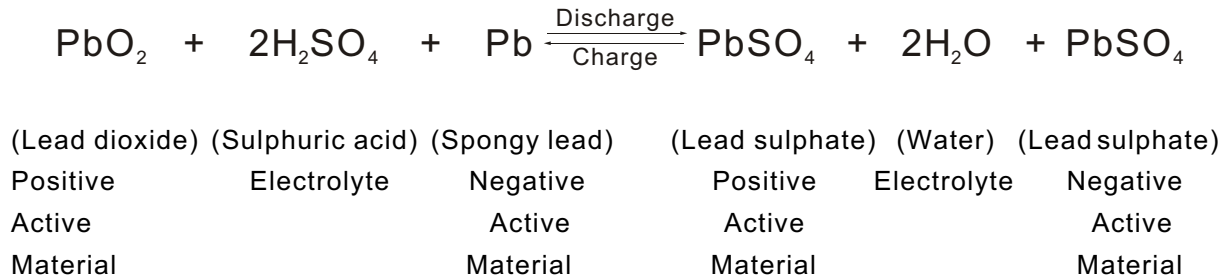


Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
4.80V	A	721	475	352	236	124	72.5	53.2	41.4	34.2	24.2	21.7	11.7
	W	3719	2535	1888	1269	671	397.8	296.1	232.9	194.2	138.8	125.5	68.2
5.10V	A	698	428	360	245	127	75.2	56.3	43.9	36.5	25.7	23.2	12.4
	W	3727	2392	2017	1377	718	433.1	325.7	255.1	212.5	150.1	136.1	72.6
5.25V	A	675	383	315	230	123	73.4	54.9	43.2	36.0	25.4	22.7	12.4
	W	3687	2179	1799	1321	711	425.4	319.8	252.7	211.0	149.5	134.4	73.1
5.40V	A	651	361	293	212	119	71.6	53.6	42.5	35.1	24.8	22.5	12.2
	W	3650	2082	1687	1225	691	419.0	315.7	251.1	207.4	146.6	133.7	72.4
5.55V	A	629	338	270	189	115	69.8	51.8	41.4	34.2	24.1	21.4	11.5
	W	3566	1959	1574	1106	675	412.2	307.4	246.5	204.1	144.2	129.0	69.5

8、 SEALING MECHANISM

The chemical reaction taking place in a lead-acid battery is as shown in the following formula:



When battery charging approaches its final stage, the charging current is consumed solely for electrolytic decomposition of oxygen gas from positive plates and hydrogen gas from negative plates, the generated gas will escape from the battery causing a decrease of the electrolyte, thereby requiring occasional water replenishment.

However, Sunnyway Battery utilize the characteristics of spongy lead, or negative active material, which is very active in moist conditions and reacts very quickly with oxygen, thereby suppressing the decrease of water eliminating the need of water replenishment.

The process of charging from its beginning to the final stage is identical with that of conventional batteries as shown in Fig.5.1.

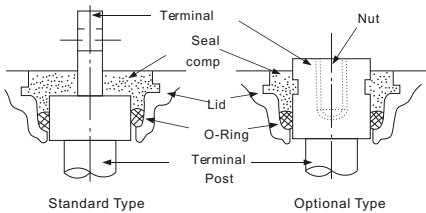
On the one hand, after the final stage of charging or under overcharge condition, the charging energy is consumed for electrolytic decomposition of water, and the positive plates generate oxygen gas, which reacts with the spongy lead in negative plates and

The sulphuric acid in electrolyte, turning a part of negative plates into a discharged condition thus suppressing the hydrogen gas generation from negative plates.

The part of negative plates which had turned to discharged condition through reaction with oxygen gas is the reverted to original spongy lead by subsequent charging. Thus, a negative plate keeps equilibrium between the amount which turns into spongy lead by charging and the amount of spongy lead which turns into lead sulphate through absorbing the gas generated from positive plate, which makes it possible for the battery to be of a sealed type.

The chemical reaction which takes place after the final stage of charging or under overcharge condition is as shown in Fig 5.2. and the reaction formula is described in the ① - ④.

SUNNYWAY BATTERY Construction and Functions

Parts	Material of Construction	Functions
Positive & Negative Plates	<ul style="list-style-type: none"> • Pasted type plate in which special lead-calcium alloy grids are pasted with active material. 	<ul style="list-style-type: none"> • Retain sufficient capacity. • Maintain capacity performance for long period of time (long life performance.) • Minimize self-discharge.
Separator	<ul style="list-style-type: none"> • Mat made of glass fibres with excellent heat oxidation resistance. • PVC or PE 	<ul style="list-style-type: none"> • Prevents short circuit between positive and negative plates. • Retains electrolyte. • Prevents active material fall by pressing plate surfaces.
Electrolyte	<ul style="list-style-type: none"> • Dilute sulphuric acid in quantity to preclude free electrolyte. 	<ul style="list-style-type: none"> • Causes electron motive reaction in negative and positive active material.
Container & Cover	<ul style="list-style-type: none"> • ABS synthetic resin. • ABS no burn 	<ul style="list-style-type: none"> • Accommodates plate group consisting of positive and negative plates and separators. • Retains sufficient mechanical strength to withstand battery internal pressure.
Safety Valve	<ul style="list-style-type: none"> • Synthetic rubber with excellent acid resistance and little deterioration by aging. • In cap shape. 	<ul style="list-style-type: none"> • Releases gas if cell internal pressure rises abnormal high and normalizes internal pressure. • Prevents ingress of oxygen.
Terminal	 <ul style="list-style-type: none"> • Made of copper or lead alloy integrally moulded with terminal post. • Terminal section employs dual complete seal construction of o-ring and sealing compound. • Color of sealing compound: red for positive section and black for negative section. • Optional type has a nut embedded in terminal. 	<ul style="list-style-type: none"> • Terminal with a large and non welded sectional area enhances high rate discharge characteristics and reliability. • Perfect seal is given at a terminal sealing section. • Facilitates fixing of connecting bars and take off terminal.