



# VTD12-85 (12V 85AH/20HR)

## Deep Cycle AGM Battery

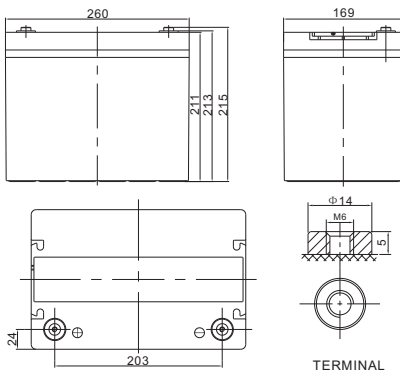
The Valiant VTD series deep cycle AGM battery features special additives to the positive plate and advanced AGM separators which increase cycle life up to 70% higher compared with standard AGM batteries. This technology also provides up to 15 years of float life. The VTD series is highly suited for systems that rely heavily on battery storage power such as off-grid solar systems, RV and marine and electric vehicles.

### Applications

- Off-grid solar systems
- RV and marine
- UPS/Telecom
- Electric vehicle
- Golf cart

### Dimensions & Weight

Length(mm/inch)	260/10.24
Width(mm/inch)	169/6.65
Height(mm/inch)	211/8.31
Total Height(mm/inch)	215/8.46
Weight(kg/lbs)(±3%)	26.1/57.4



### Battery Discharge Table

### General Features

- Thicker plate with high Tin low Calcium alloy
- Deep discharge recovery, 1200cycle @50% DOD
- 2 years full warranty in most applications
- Longer Service Life, in both Float or Cycling applications
- High Power Density

### Technical Specifications

Nominal Voltage		12V (6 cells per unit)
Design Floating Life @ 25°C		15 Years
Nominal Capacity @ 25°C	20 hour rate@4.25A,10.8V	85Ah
Capacity @ 25°C	10 hour rate (7.7A, 10.8V)	77Ah
	5 hour rate (13.5A, 10.5V)	67.5Ah
	1 hour rate (51.9A, 9.6V)	51.9Ah
Internal Resistance	Full Charged Battery@ 25°C	≤7.0mΩ
Ambient Temperature	Discharge	-15°C~45°C
	Charge	-15°C~45°C
	Storage	-15°C~45°C
Max.Discharge Current		@ 25°C 500A(5s)
Capacity affected by Temperature (10 hour )	40°C	105%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-Discharge@25°C per Month		3%
Charge (Constant Voltage) @ 25°C	Standby Use	Initial Charging Current Less than 25.5A Voltage 13.6-13.8V
	Cycle Use	Initial Charging Current Less than 25.5A Voltage 14.4-14.9V

12V  
85Ah

AGM  
Technology

Deep  
Cycle



### COMPLIED STANDARDS

IEC 60896-21/22  
YD/T799  
GB/T 19638

JIS C8704  
BS6290 part4  
CE

### Discharge Constant Current per Cell (Amperes at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	137.4	83.7	56.1	51.9	30.0	21.0	14.3	9.4	8.4	4.59	1.02
1.65V	134.9	82.2	55.1	50.9	29.4	20.7	14.0	9.3	8.3	4.51	1.00
1.70V	132.4	80.6	54.1	50.0	28.9	20.3	13.8	9.1	8.1	4.42	0.98
1.75V	129.9	79.1	53.0	49.1	28.3	19.9	13.5	8.9	8.0	4.34	0.96
1.80V	125.0	76.1	51.0	47.2	27.2	19.1	13.0	8.6	7.7	4.25	0.94

### Discharge Constant Power per Cell (Watts at 25°C)

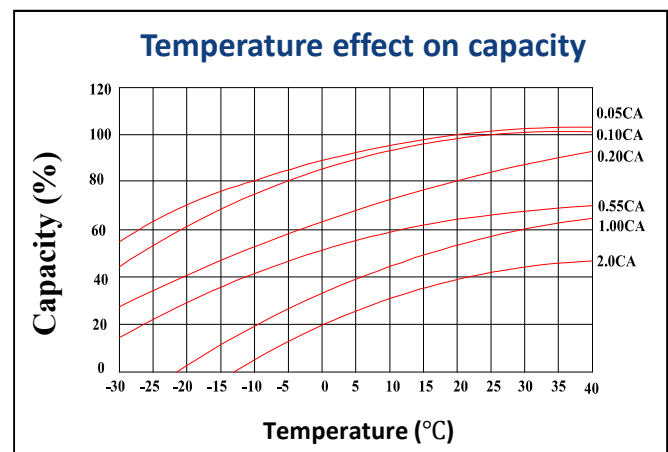
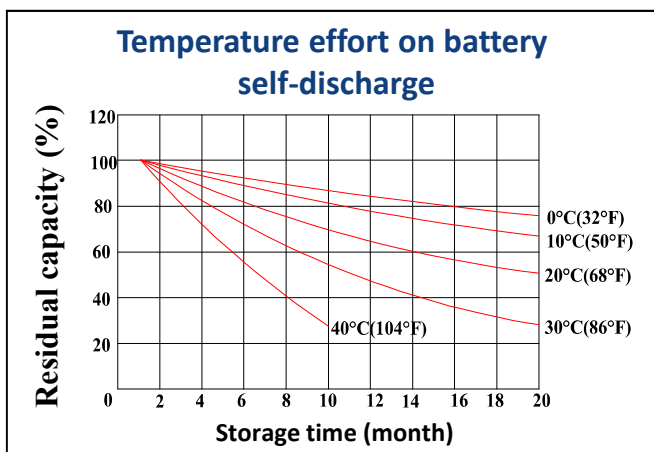
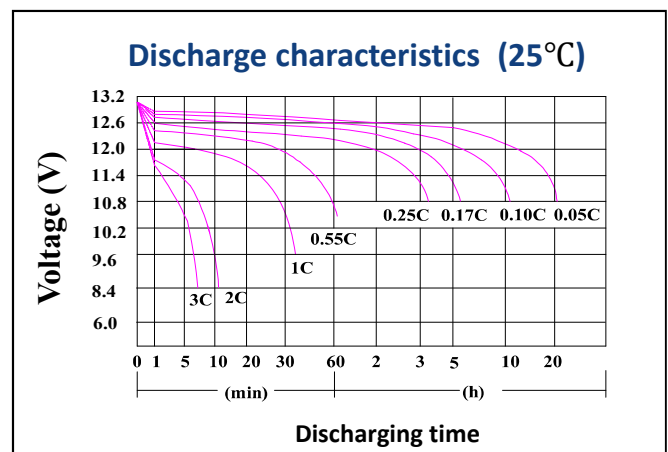
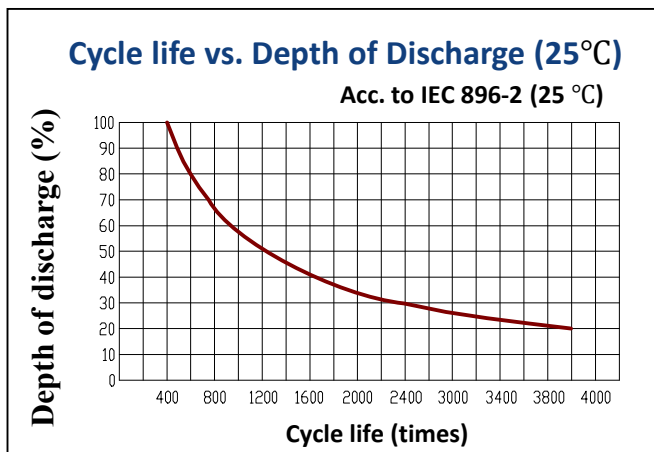
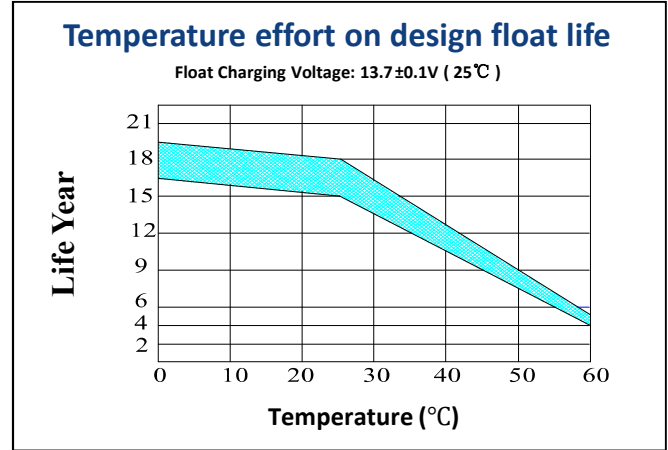
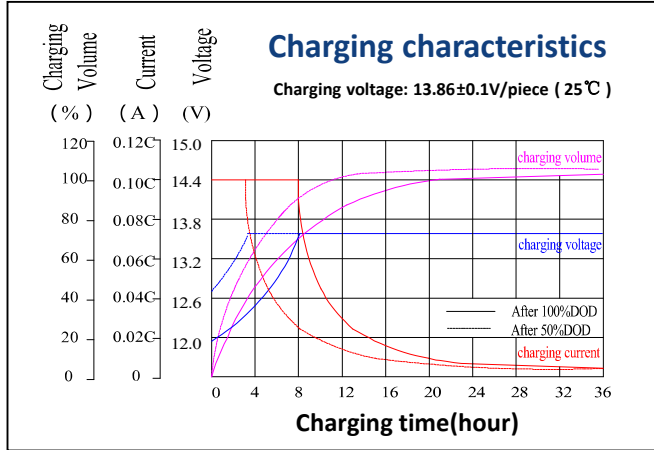
F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	264.6	161.1	108.0	99.9	57.7	40.5	27.5	18.2	16.2	8.8	1.96
1.65V	259.8	158.2	106.0	98.1	56.6	39.8	27.0	17.8	15.9	8.7	1.93
1.70V	255.0	155.2	104.1	96.3	55.6	39.0	26.5	17.5	15.6	8.5	1.89
1.75V	250.1	152.3	102.1	94.4	54.5	38.3	26.0	17.2	15.3	8.3	1.85
1.80V	240.5	146.4	98.2	90.8	52.4	36.8	25.0	16.5	14.7	8.2	1.82



# VTD12-85 (12V 85AH/20HR)

## Deep Cycle AGM Battery

### Performance Characteristics



### Battery Construction

Component	Positive Plate	Negative Plate	Container & Cover	Safety Valve	Terminal	Separator	Electrolyte	Pillar Seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	ABS (UL94-VO optional)	Flame Si-Rubber and aging resistant	M5	Advanced AGM separator for high pressure cell design	Dilute high purity sulfuric acid	Two layers epoxy resin seal