VTG6-250 (6V 250Ah/20HR)
High Temperature Deep Cycle GEL Battery

The Valiant VTG series deep cycle Gel battery uses an advanced nano gel electrolyte with Super-C additive and heavy-duty plate design to provide longer service life in deep cycle applications. The VTG series provides optimum and reliable service under extreme temperatures and frequent power failures making it highly suited for out door applications such as off-grid solar systems, RV, and telecom/UPS systems.

6V 250Ah | **GEL Technology** | **Deep Cycle**

Applications

- Off-grid solar systems
- RV and Marine
- UPS/Telecom
- Floor Scrubber
- Wheel chair, Golf cart

General Features

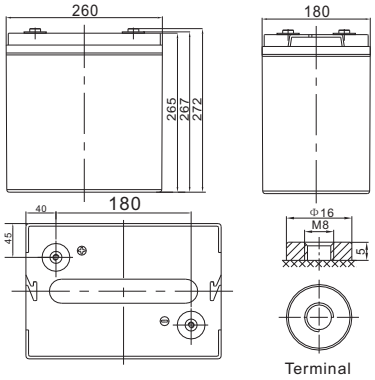
- Operating range of -40 to+ 60 ℃
- Deep discharge recovery,1600 cycles @50%DOD
- 2-3 year full warranty in most applications
- Longer life and greater stability in extreme temperatures

COMPLIED STANDARDS

IEC 60896-21/22	JIS C8704
YD/T799	BS6290 part4
GB/T 19638	CE

Dimensions & Weight

Length(mm/inch)	260/10.24
Width(mm/inch)	180/7.09
Height(mm/inch)	265/10.44
Total Height(mm/inch)	272/10.71
Weigt(kg/lbs)(±3%)	34.7/76.5



Technical Specifications

Nominal Voltage		6V (3 cells per unit)
Design Floating Life @ 25℃		20 Years
Nominal Capacity @ 25℃	20 hour rate@12.5A, 5.4V	250Ah
Capacity @ 25℃	10 hour rate (22.5A, 5.4V)	225Ah
	5 hour rate (39.8A, 5.25V)	199Ah
	1 hour rate (138.9A, 4.8V)	138.9Ah
Internal Resistance	Full Charged Battery@ 25℃	≤2.5mΩ
Ambient Temperature	Discharge	-25°C ~ 60°C
	Charge	-25°C ~ 60°C
	Storage	-25°C ~ 60°C
Max.Discharge Current		@ 25°C 750A(5s)
Capacity affected by Temperature (10 hour)	40℃	108%
	25℃	100%
	0℃	90%
	-15℃	70%
Self-Discharge@25℃per Month		3%
Charge (Constant Voltage) @ 25°C	Standby Use	Initial Charging Current Less than 50A Voltage 6.8-6.9V
	Cycle Use	Initial Charging Current Less than 50A Voltage 7.2-7.45V

Battery Discharge Table

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	321.8	204.9	151.3	138.9	88.1	61.9	42.1	27.8	24.8	13.50	3.00
1.65V	315.9	201.2	148.5	136.4	86.5	60.8	41.3	27.3	24.3	13.25	2.94
1.70V	310.1	197.4	145.8	133.8	84.9	59.6	40.5	26.8	23.9	13.00	2.89
1.75V	304.2	193.7	143.0	131.3	83.3	58.5	39.8	26.3	23.4	12.75	2.83
1.80V	292.5	186.3	137.5	126.3	80.1	56.3	38.3	25.3	22.5	12.50	2.78

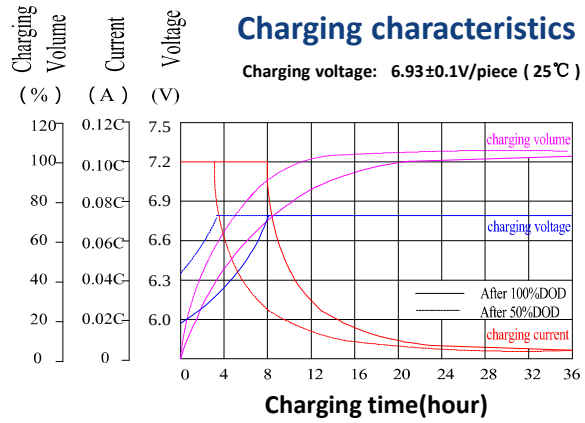
Discharge Constant Power per Cell (Watts at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h	100h
1.60V	619.4	394.4	291.2	267.3	169.7	119.1	81.0	53.5	47.6	26.0	5.77
1.65V	608.1	387.2	285.9	262.5	166.6	116.9	79.5	52.5	46.8	25.5	5.66
1.70V	596.8	380.0	280.6	257.6	163.5	114.8	78.0	51.5	45.9	25.0	5.56
1.75V	585.6	372.9	275.3	252.8	160.4	112.6	76.6	50.6	45.0	24.5	5.45
1.80V	563.1	358.5	264.7	243.0	154.2	108.3	73.6	48.6	43.3	24.1	5.34

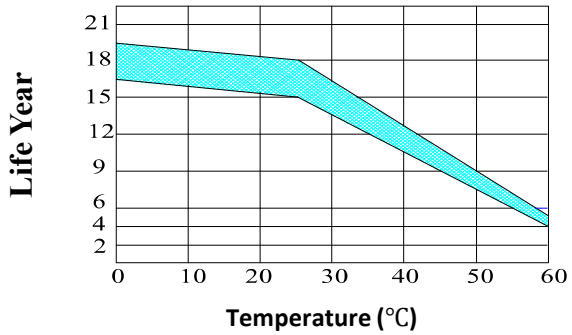
VTG6-250 (6V 250Ah/20HR)
High Temperature Deep Cycle GEL Battery

Performance Characteristics

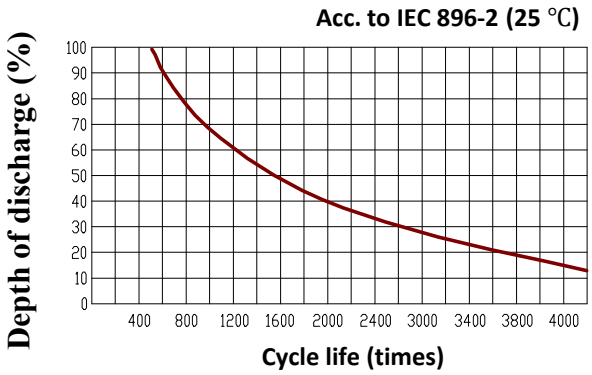
Charging characteristics



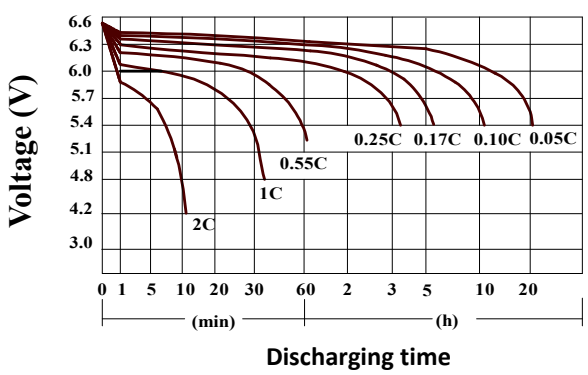
Temperature effort on design float life



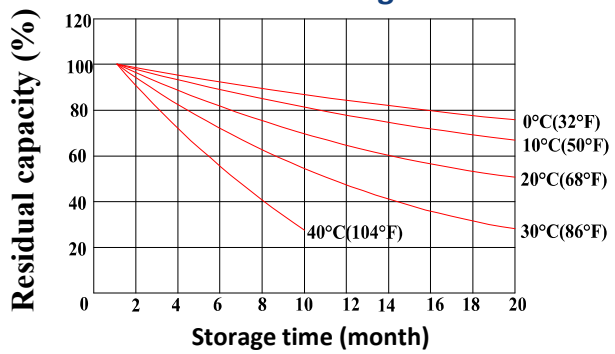
Cycle life vs. Depth of Discharge (25°C)



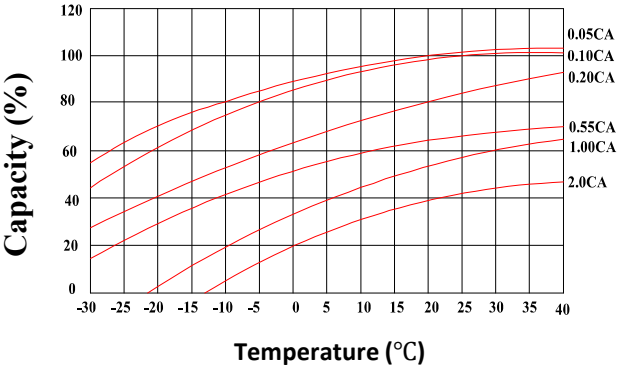
Discharge characteristics (25°C)



Temperature effort on battery self-discharge



Temperature effect on capacity



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	Fire resistant ABS (UL94-V0 optional)	Flame Si-Rubber and aging resistant	Female Copper Insert M8	Advanced AGM separator for high pressure cell design	Silicon Gel	Two layers epoxy resin seal