




Physical Specifications

Brand	Virtec
Weight	6.2 kg
Length	181mm
Width	76 mm
Height	165 mm
Technology	AGM
Warranty	1 Year
Terminals	



12V 18Ah virtec Battery VT12180

Specifications

Model		VT12180
Normal Voltage	12 Volts	
Normal Capacity (C20)	18 Ah	
Terminal Type	M5 - Insert Terminals	
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	UL94:VO
Rated Capacity	18.0 AH//0.90A	(20hr, 1.80V/cell, 25°C / 77°F)
	16.7 AH//1.67A	(10hr, 1.80V/cell, 25°C / 77°F)
	15.3 AH//3.06A	(5hr, 1.75V/cell, 25°C / 77°F)
	13.8AH//4.59A	(3hr, 1.75V/cell, 25°C / 77°F)
	11.3AH//11.3A	(1hr, 1.60V/cell, 25°C / 77°F)
Max Discharge Current	270A (5s)	
Internal Resistance	Approx 16mΩ	
Discharge Characteristics	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F)
		Charge: 0 ~ 40°C (5 ~ 104°F)
		Storage: -15 ~ 40°C (5 ~ 104°F)
	Nominal Operating Temp.Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 5.4A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
	Standby Use	No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C
Capacity affected by Temperature	40°C (104°F) 103%	
	25°C (77°F) 100%	
	0°C (32°F) 86%	
Design Floating Life at 20°C	3-5 Years	
Self Discharge	Virtec batteries may be stored for up to 6 months at 25°C(°77F) and then a refresh charge is required. For higher temperatures the time interval will be shorter.	

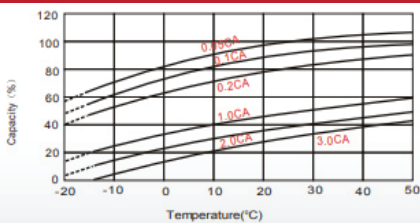
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	34.3	26.0	22.7	19.9	15.6	11.6	9.36	5.56	4.17	3.39	2.87	2.49	1.98	1.63	0.89
1.80V/cell	41.9	30.8	26.5	22.7	17.2	12.7	10.1	5.97	4.39	3.54	2.98	2.57	2.03	1.67	0.90
1.75V/cell	47.5	33.8	28.4	24.1	18.1	13.3	10.6	6.18	4.55	3.64	3.04	2.62	2.07	1.70	0.91
1.70V/cell	52.7	36.8	30.3	25.4	18.9	13.8	10.9	6.34	4.67	3.73	3.11	2.68	2.10	1.72	0.92
1.65V/cell	57.2	39.2	32.2	26.6	19.8	14.3	11.3	6.51	4.75	3.79	3.17	2.72	2.12	1.74	0.93
1.60V/cell	60.9	41.7	34.1	28.0	20.5	14.9	11.7	6.69	4.86	3.87	3.22	2.76	2.15	1.76	0.94

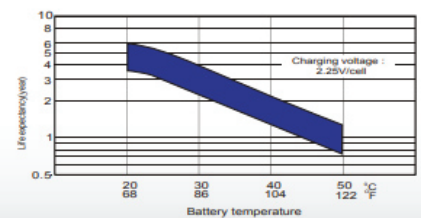
Constant Power Discharge (Watts) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	65.0	49.8	43.8	38.7	30.5	22.9	18.5	11.1	8.33	6.79	5.77	5.01	3.99	3.31	1.81
1.80V/cell	78.7	58.5	50.9	43.9	33.5	24.9	20.0	11.8	8.74	7.08	5.97	5.16	4.10	3.38	1.82
1.75V/cell	88.4	63.7	54.3	46.4	35.1	26.0	20.9	12.2	9.02	7.24	6.07	5.25	4.15	3.4	1.83
1.70V/cell	97.2	68.9	57.5	48.7	36.6	26.9	21.5	12.5	9.24	7.40	6.20	5.34	4.20	3.45	1.84
1.65V/cell	104.7	72.8	60.7	50.8	38.1	27.8	22.2	12.8	9.39	7.51	6.30	5.41	4.24	3.48	1.86
1.60V/cell	110.4	77.0	63.9	53.2	39.4	28.8	22.9	13.1	9.57	7.65	6.38	5.47	4.28	3.51	1.87

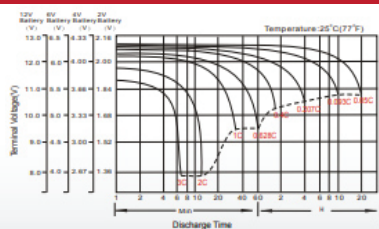
Temperature Effects in Relation to Battery Capacity



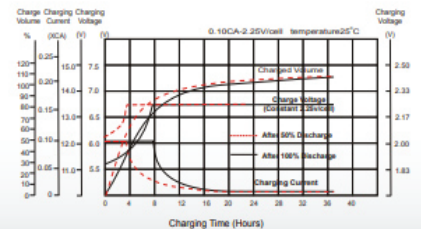
Effects of Temperature on long Term Float Life



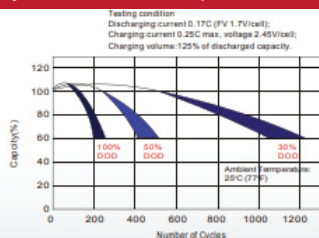
Discharge Characteristics



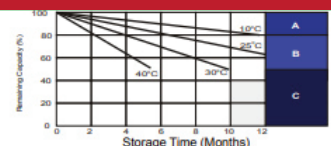
Float Charging Characteristics



Cycle Life Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary required
Carry supplementary charge before use if 100% capacity is required.
- B** Supplementary charge required before use. Optional charging way as below:
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.25V/cell.
3. Charged for 8-10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing if this is reached.