



Physical Specifications

Brand	Virtec
Weight	12.5 kg
Length	197±2mm
Width	166±2mm
Height	170±2mm
Technology	AGM
Warranty	1 Year
Terminals	



12V 40Ah virtec Battery VR12400

Specifications

Model		VR12400
Normal Voltage	12 Volts(6cells in series)	
Normal Capacity (C20)	40 Ah (C ₂₀ 1.75V/cell)	
Terminal Type	Standard Terminal	NB
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	UL94:VO
Rated Capacity	40.0 AH/4.08A	(20hr, 1.80V/cell, 25°C / 77°F)
	38.5 AH/4.00A	(10hr, 1.80V/cell, 25°C / 77°F)
	31.5AH/6.89A	(5hr, 1.75V/cell, 25°C / 77°F)
	31.2AH/10.4A	(3hr, 1.75V/cell, 25°C / 77°F)
	24.4AH/24.4A	(1hr, 1.60V/cell, 25°C / 77°F)
Max Discharge Current	480A (5s)	
Internal Resistance	Approx9mΩ	
Discharge Characteristics	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F)
		Charge: 0 ~ 40°C (5 ~ 104°F)
		Storage: -15 ~ 50°C (5 ~ 104°F)
	Nominal Operating Temp.Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 2.1A.Voltage
	Standby Use	No limit on Initial Charging Current Voltage
	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.	

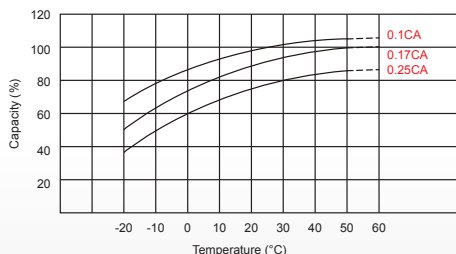
Constant Current Discharge (Amperes) at 25°C (77°F)

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	68.5	53.8	45.8	38.3	30.4	23.0	18.9	12.0	9.50	7.76	6.25	5.44	4.42	3.78	2.06
1.80V/cell	91.9	68.8	55.3	45.3	35.9	26.8	21.1	13.1	10.2	8.28	6.72	5.84	4.69	4.00	2.08
1.75V/cell	103.6	75.6	60.4	48.7	37.3	27.8	22.1	13.6	10.4	8.47	6.88	6.00	4.77	4.04	2.10
1.70V/cell	114.1	82.4	64.5	51.2	38.8	28.9	22.8	14.1	10.7	8.69	7.06	6.12	4.84	4.16	2.14
1.65V/cell	125.8	88.9	68.6	54.4	40.9	29.6	23.6	14.5	11.2	8.99	7.26	6.26	4.91	4.16	2.17
1.60V/cell	138.8	96.5	73.3	57.9	43.2	30.9	24.4	15.0	11.5	9.27	7.50	6.40	4.96	4.21	2.18

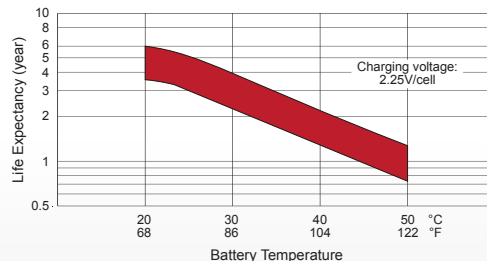
Constant Power Discharge (Watts) at 25°C (77°F)

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	125.2	99.4	85.4	72.2	58.0	44.3	36.4	23.3	18.5	15.2	12.3	10.7	8.73	7.47	4.08
1.80V/cell	166.2	125.5	101.8	84.1	67.4	51.1	40.5	25.3	19.8	16.1	13.1	11.4	9.23	7.90	4.11
1.75V/cell	183.4	135.7	109.8	89.6	69.4	52.5	42.2	26.1	20.1	16.4	13.4	11.7	9.36	7.97	4.15
1.70V/cell	196.4	144.6	115.6	93.4	71.8	54.4	43.4	27.1	20.6	16.8	13.7	11.9	9.49	8.05	4.23
1.65V/cell	213.5	154.6	122.0	98.5	75.1	55.3	44.5	27.7	21.4	17.3	14.0	12.2	9.61	8.20	4.28
1.60V/cell	230.0	164.0	128.3	103.8	78.8	57.3	45.9	28.5	22.0	17.8	14.5	12.4	9.69	8.27	4.29

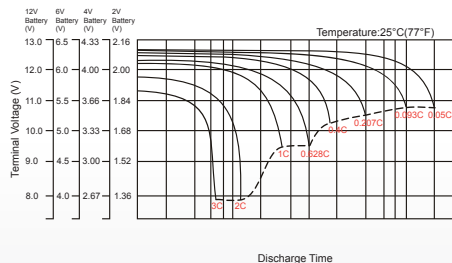
Temperature Effects in Relation to Battery Capacity



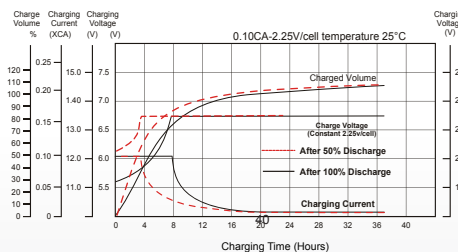
Effect of Temperature on Long Term Float Life



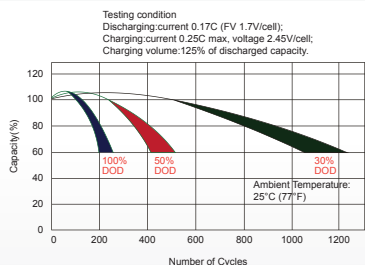
Discharge Characteristics



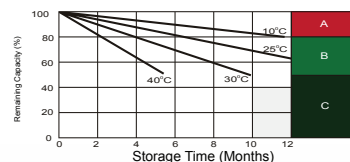
Float Charging Characteristics



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary required (Carryout supplementary charge before use if 100% capacity is required).
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.
- B** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.
- C**