ROVON POWER

RoveGEL

DG12-90

12V 90Ah

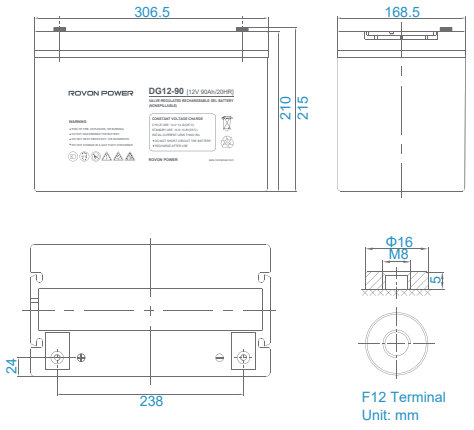
Deep Cycle Gel Valve Regulated Lead Acid Battery

RoveGEL (Deep Cycle GEL) series is pure GEL battery with 15 years floating design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented Gel electrolyte, the RoveGEL series offers excellent recovery capability after deep discharge under frequent cyclic discharge use, and can deliver 450 cycles at 100% DOD.



Specification	
Cells Per Unit	6
Voltage Per Unit	12
Capacity	90Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 28.5 kg (Tolerance ±3.0%)
Internal Resistance	Approx. 6.5 mΩ
Terminal	F15(M6) / F12(M8)
Max. Discharge Current	900A (5 sec)
Design Life	15 years (floating charge)
Maximum Charging Current	18.0 A
Reference Capacity	C3 61.5Ah C5 70.5Ah C10 78.9Ah C20 90.0Ah
Float Charging Voltage	13.6V~13.8V @25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.2V~14.4V @25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	ROVON Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional

Dimensions



Length
306.5±1mm (12.1 inches)

Width
168.5±1mm (6.63 inches)

Height
210±1mm (8.27 inches)

Total Height
215±1mm (8.46 inches)

Terminal M5 Value
6-7 N*m

Terminal M6 Value
8-10 N*m

Terminal M8 Value
10-12 N*m

Constant Current Discharge Characteristics: A (25°C)

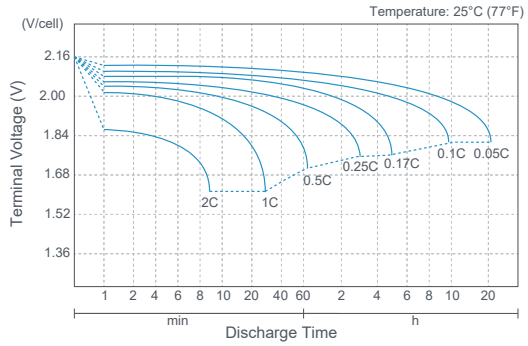
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	166.8	130.5	85.8	50.3	30.1	20.8	17.2	14.5	9.90	8.21	4.95
1.65V	158.7	127.9	84.4	50.1	29.9	20.7	17.1	14.4	9.82	8.13	4.77
1.70V	153.1	125.9	83.7	49.6	29.6	20.5	17.1	14.3	9.74	8.05	4.64
1.75V	143.0	121.2	83.9	49.1	29.4	20.5	16.9	14.1	9.66	7.97	4.50
1.80V	131.9	113.1	83.2	48.0	28.9	19.9	16.5	13.9	9.50	7.89	4.23
1.85V	119.3	102.6	78.7	45.6	27.6	19.0	15.7	13.3	9.09	7.66	4.05

Constant Power Discharge Characteristics: W/cell (25°C)

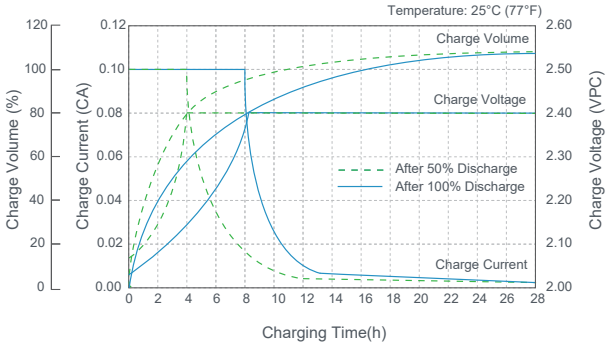
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	296	237	161	96.9	59.1	41.2	34.2	28.8	19.7	16.4	8.75
1.65V	287	233	159	96.7	58.8	41.2	34.1	28.7	19.6	16.2	8.60
1.70V	279	231	159	95.9	58.4	41.0	34.1	28.6	19.5	16.1	8.44
1.75V	263	223	160	95.0	58.0	40.9	33.8	28.3	19.3	15.9	8.28
1.80V	246	208	159	93.3	57.3	39.8	33.0	27.8	19.0	15.8	8.12
1.85V	225	190	151	89.3	55.1	38.0	31.4	26.6	18.2	15.3	7.65

DG12-90 12V 90Ah

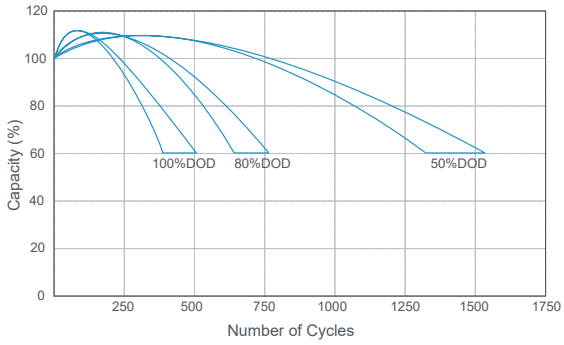
Discharge Characteristics Curve



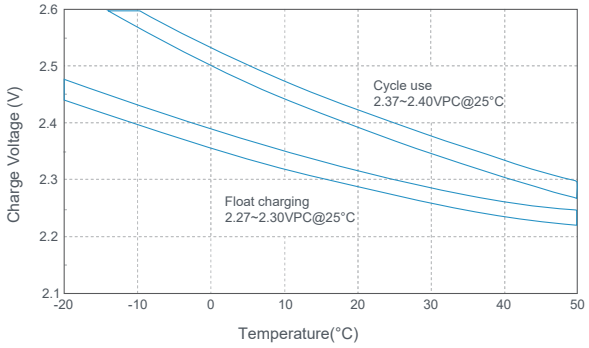
Charge Characteristic Curve for Cycle Use (IU)



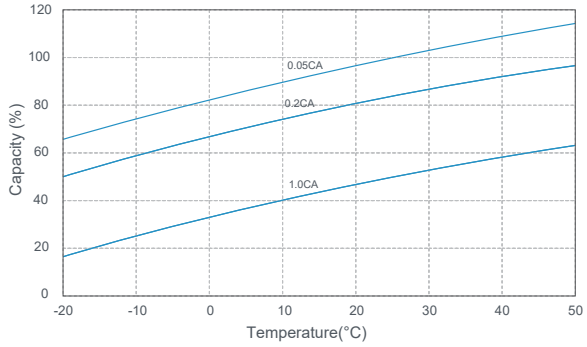
Cycle Life in Relation to Depth of Discharge



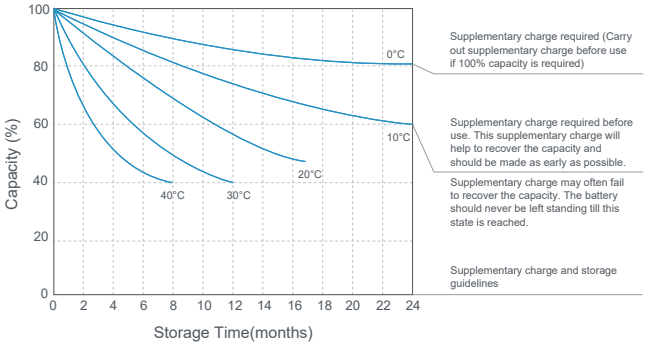
Relationship Between Charging Voltage and Temperature



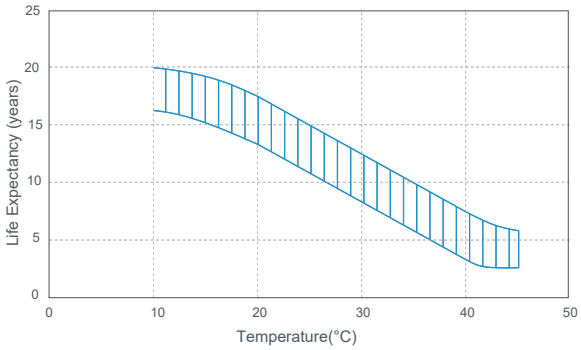
Temperature Effects on Capacity



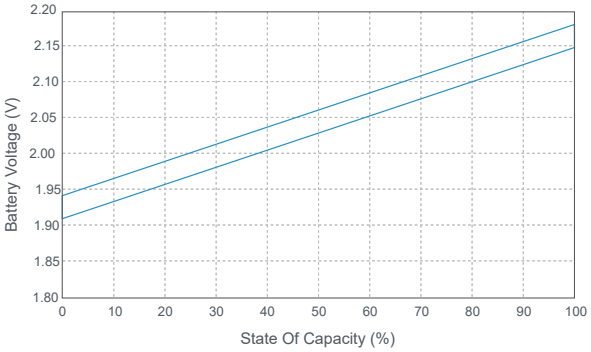
Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge (20°C)



Specifications are subject to change without prior notice. ROVON reserves the right to interpret and update this information.