

# RNG-BATT-GEL12-100 (12V 100AH/10HR)

## Gel Specifications



Renogy Gel batteries are capable of delivering high currents on demand and offer long service life with very low self-discharge. They are designed for frequent and cyclic discharge. They are suitable for various applications including electric vehicles, solar/wind energy system, UPS battery backup, telecommunication systems, medical equipment, and more.

### Specifications

<b>Capacity (25°C)</b>	10Hr(10A,1.75V)	5Hr (18.6A,1.75V)	3Hr(14.16A,1.75V)	1Hr(60.0A,1.70V)
	100Ah	93Ah	85Ah	60Ah
<b>Dimensions</b>	Length	Width	Height	Total Height
	13.2 inches	6.8 inches	8.5 inches	8.6 inches
<b>Approx. Weight</b>	60 lbs. ± 3%			
<b>Internal Resistance</b>	7.1mΩ			
<b>Self Discharge</b>	≤2% per month (25°C)			
<b>Charge Voltage 25°C</b>	Cycle Use		Float Use	
	14.2V(-24mV/°C),max charge current:15A		13.5V(-18mV/°C)	
<b>Operating Temperature</b>	-25°C to 45°C			
<b>Shelf Life</b>	9 months at 25°C			
<b>Material</b>	ABS Containers and Covers			

## Discharge Charts

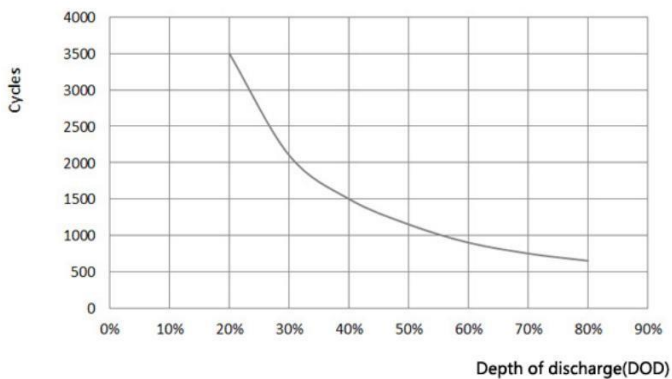
### Constant Current Discharge (Amperes) at 25°C

End Voltage (V/cell)	5min	10min	15min	20min	30min	45 min	1h	1.5h	2h	3h	5h	10h	20h
1.60	335.0	236.0	181.0	148.0	110.0	80.00	63.50	47.30	37.30	26.80	17.63	9.600	5.130
1.65	315.0	227.0	175.0	144.0	107.0	78.00	61.90	46.50	36.90	26.50	17.40	9.500	5.100
1.70	292.0	216.0	169.0	140.30	104.0	76.00	60.00	45.60	36.20	26.20	17.20	9.400	5.050
1.75	262.0	201.0	162.0	135.0	101.0	74.00	58.70	45.00	35.30	25.70	17.00	9.300	5.000
1.80	237.0	184.0	153.9	129.0	97.00	72.50	57.10	43.50	34.50	25.20	16.60	9.100	4.900

### Constant Current Discharge (Watts) at 25

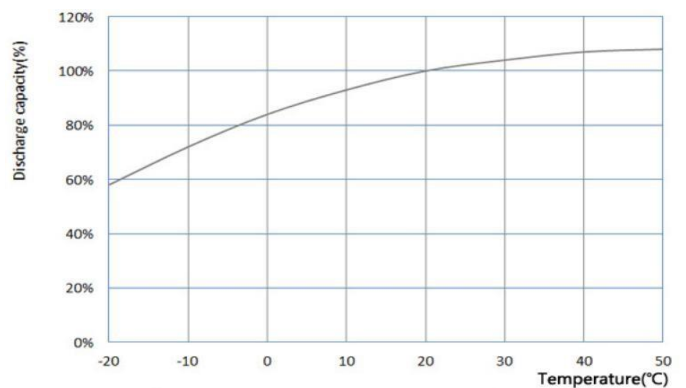
End Voltage (V/cell)	5min	10min	15min	20min	30min	45 min	1h	1.5h	2h	3h	5h	10h	20h
1.60	565.0	422.0	329.0	272.4	204.0	151.0	119.0	88.00	69.70	50.580	33.30	18.80	10.38
1.65	540.0	410.0	323.0	266.9	201.0	147.6	117.0	87.06	69.13	50.13	33.07	18.55	10.32
1.70	509.0	394.0	315.0	261.5	197.0	144.5	116.0	86.13	68.44	49.69	32.87	18.36	10.27
1.75	467.0	372.0	304.0	253.6	192.0	141.5	113.5	85.12	67.68	49.28	32.62	18.16	10.20
1.80	429.0	346.9	290.0	244.0	186.0	139.0	111.0	83.50	66.50	48.50	32.30	17.95	10.00

### Cycle vs Depth of Discharge



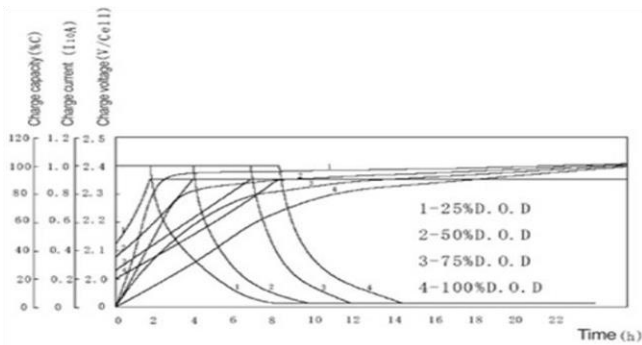
Cycle Vs Discharge depth

### Temperature vs Capacity



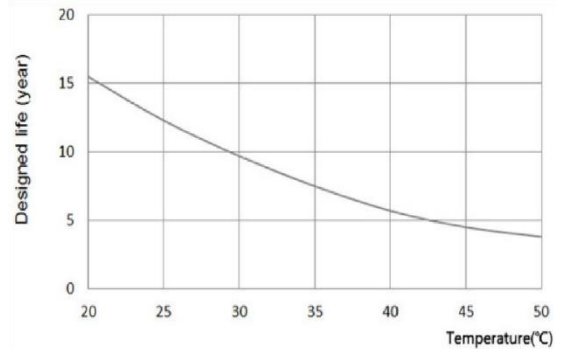
Temperature Vs capacity

## Charge Performance



Charge performance

## Designed Life vs Temperature



Designed life Vs temperature

## Maintenance and Cautions

- Avoid over-discharging batteries, especially when they are in series connections
- Charge the batteries with recommended voltages, ensure the battery can be fully charged
- Generally, recharge capacity should be  $1.1 \sim 1.5$  \* the discharge capacity
- The effect of temperature on cycle charge voltage:  $-4 \text{ mV} / ^\circ\text{C} / \text{Cell}$
- Length of cycle services is significantly affected by depth for discharge (primarily), along with ambient temperature, discharge rate, and the way the battery is recharged.