

# RA12-170FDG (12V170Ah)

RA12-170FDG is GEL Deep cycle battery superiorly designed for frequent cyclic discharge applications under extreme temperature. By using strong grid to insure reliable performance under frequent cyclic discharge use. 400 cycles could be available at 100% DOD. Offering extra-durable cyclic performance, high efficiency of recovery, that is more suitable for solar, mobility, E-toll, marine, deep discharge UPS etc..



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	170Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 50.0 Kg
Max. Discharge Current	1700 A (5 sec)
Internal Resistance	Approx. 5mΩ
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
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	34A
Equalization and Cycle Service	14.2 to 14.4VDC/unit Average at 25°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	Terminal F9
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



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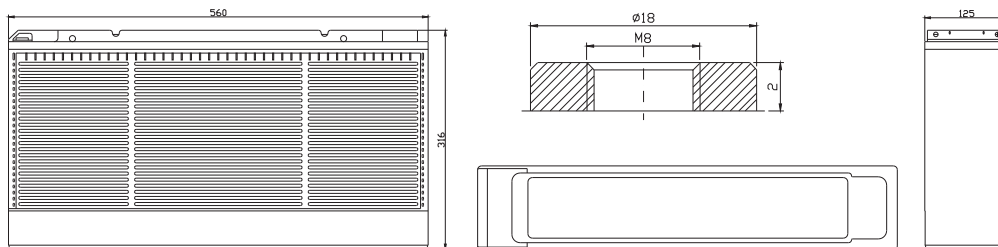


ISO9001:2000 Certificate

## Dimensions

Unit: mm Dimension: 560(L)×125(W)×316(H)

Terminal F9



## Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	426.21	305.01	244.84	164.08	100.03	59.855	41.371	33.906	27.753	19.117	16.164	8.8904
10.0V	413.89	290.21	239.82	161.49	99.57	59.405	41.213	33.749	27.590	18.962	16.009	8.7287
10.2V	401.62	279.97	236.05	161.64	98.64	58.955	40.896	33.592	27.427	18.806	15.853	8.5671
10.5V	364.88	261.42	227.40	159.14	97.72	58.505	40.737	33.278	27.100	18.651	15.698	8.4054
10.8V	333.17	241.19	212.05	153.62	95.412	57.455	39.628	32.493	26.610	18.340	15.542	8.2438
11.1V	287.75	218.06	192.39	145.29	90.641	54.905	37.884	30.924	25.468	17.563	15.076	7.7589

## Constant Power Discharge Characteristics: W (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	4408.4	3248.3	2693.3	1870.5	1155.9	705.49	492.32	404.16	331.10	228.26	193.16	106.60
10.0V	4321.5	3148.8	2650.0	1849.1	1153.1	701.75	492.49	403.64	330.25	227.16	191.94	104.74
10.2V	4272.2	3065.7	2620.2	1854.0	1144.2	697.52	490.34	402.77	329.12	225.67	190.24	102.80
10.5V	3935.0	2888.7	2528.7	1828.5	1133.9	692.46	488.44	399.01	325.20	223.81	188.37	100.87
10.8V	3625.7	2694.1	2364.3	1769.7	1113.0	683.63	475.13	389.92	319.32	220.08	186.51	98.925
11.1V	3221.2	2464.0	2152.8	1678.1	1065.4	658.23	454.61	371.08	305.61	210.75	180.91	93.106

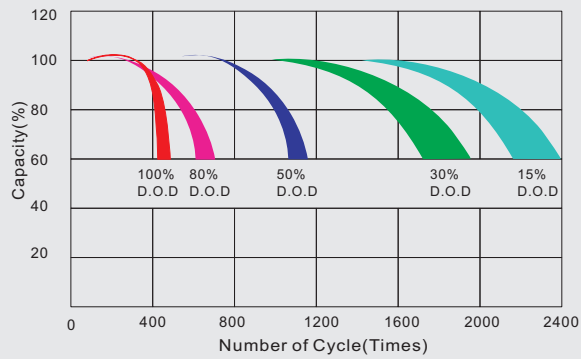
All mentioned values are average values.

# RA12-170FDG

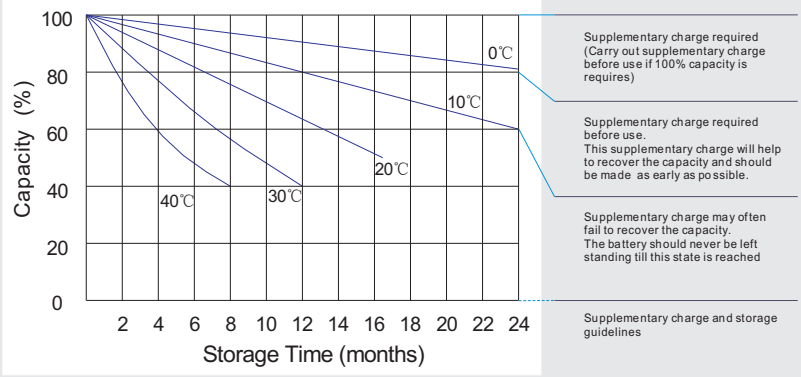
12V170Ah



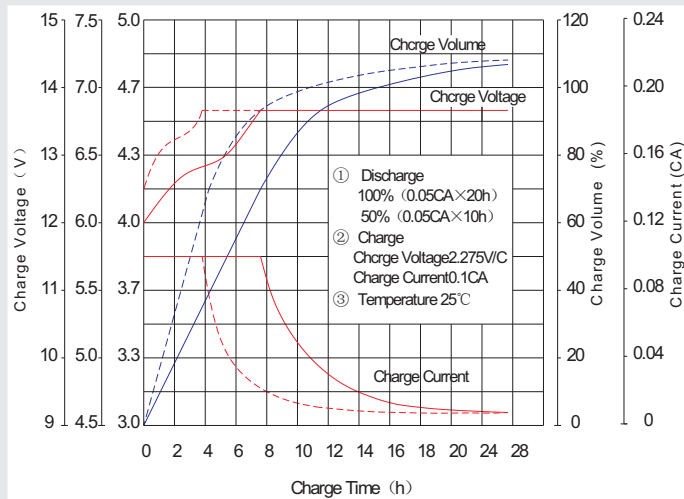
## Life characteristics of cyclic use



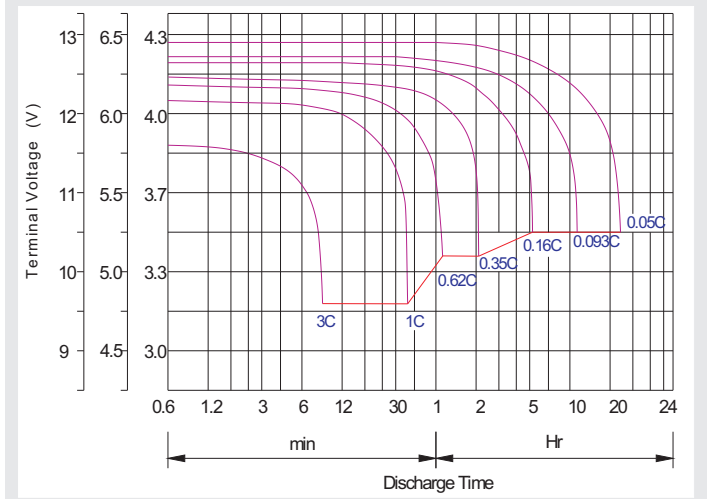
## Storage characteristic



## Charge characteristic curve for cyclic use



## Discharge characteristic curve



## Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

## Maintenance & Cautions

### Cycle service

- ※ Avoid battery over discharge, especially battery series connection use.
- ※ Charged with recommend voltage, ensure battery can be full recharged.
- In general, recharge capacity should be 1.1-1.15 times discharge capacity.
- ※ Effect of temperature on cycle charge voltage: -4mV/°C/Cell.
- ※ There are a number of factors that will affect the length of cyclic service.
- The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.
- Generally speaking, the most important factors is depth of discharge.

**Charge the batteries at least once every six months, if they are stored at 25°C.**

### Charging Method:

Constant Voltage	-0.2Cx2h+2.4~2.45V/Cellx24h, Max. Current 0.3CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h