DG12-180(12V180Ah)

RITAR®

Specification

Cells Per Unit	6
Voltage Per Unit	12V
Capacity	180Ah@20hour-rate to 1.75V per cell @25℃
Weight	Approx. 51.0 Kg (Tolerance±5%)
Internal Resistance	≤7.0 mΩ(Full Charge Condition @25℃)
Terminal	Default F12(M8), F16(M8)&L6 Optional
Max. Discharge Current	1800A (5 sec)
Design Life	15 years
Max. Charging Current	36.0 A
Reference Capacity	C_3 119.1Ah C_5 135.0Ah C_{10} 158.0Ah C_{20} 180.0Ah
Float Charging Voltage	13.38 V~13.50 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.20 V~14.40 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -40℃~60℃ Charge: 0℃~50℃ Storage: -40℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) GEL batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 2% at 25℃.Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

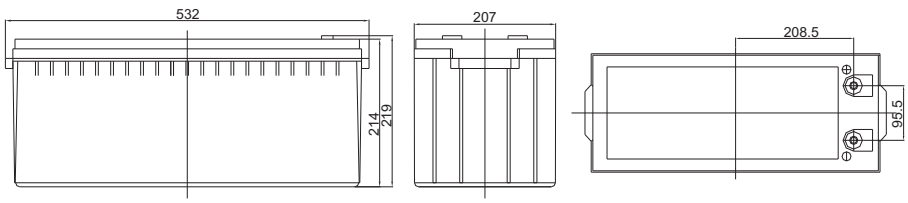


DG (Deep Cycle GEL) series is pure GEL battery with 15 years floating design life , it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented GEL electrolyte, the DG series offers excellent recovery capability after deep discharge under frequent cyclic discharge use, and it can offers 2 times cyclic life than the standard series. It is suitable for solar & wind system, marine, deep discharge UPS etc.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008519EC

Dimensions



F12 Terminal

Length	532±2mm (20.9 inches)
Width	207±2mm (8.15 inches)
Height	214±2mm (8.43 inches)
Total Height	219±2mm (8.62 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

Constant Current Discharge Characteristics :A(25℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	294.7	239.0	156.8	97.7	59.7	44.8	35.7	30.0	20.3	16.7	9.37
1.65V	278.5	228.5	150.5	94.4	57.8	43.4	34.8	29.2	20.0	16.5	9.22
1.70V	256.4	214.0	143.9	91.3	55.9	42.2	33.8	28.4	19.7	16.3	9.11
1.75V	234.7	199.1	137.5	88.0	54.0	41.0	32.9	27.7	19.5	16.0	9.00
1.80V	212.4	183.9	131.5	84.6	52.0	39.7	32.0	27.0	19.1	15.8	8.91
1.85V	173.6	152.6	113.2	75.9	47.7	36.7	29.7	25.2	17.9	14.9	8.46

Constant Power Discharge Characteristics : W/Cell (25℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	500.9	417.8	284.8	183.7	113.2	85.5	68.6	57.8	39.6	32.8	18.4
1.65V	476.6	401.6	275.8	178.7	110.1	83.4	67.0	56.5	39.1	32.4	18.2
1.70V	452.3	385.3	266.8	173.7	107.1	81.3	65.4	55.2	38.7	32.0	18.0
1.75V	421.5	363.8	257.6	168.3	103.8	79.2	64.0	54.0	38.2	31.7	17.8
1.80V	388.2	340.7	248.7	162.8	100.6	77.1	62.4	52.8	37.7	31.3	17.6
1.85V	322.9	286.7	216.3	147.0	92.7	71.6	58.2	49.4	35.4	29.5	16.8

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.
The battery must be fully charged before the capacity test. The C_{20} should reach 95% after the first cycle and 100% after the third cycle.

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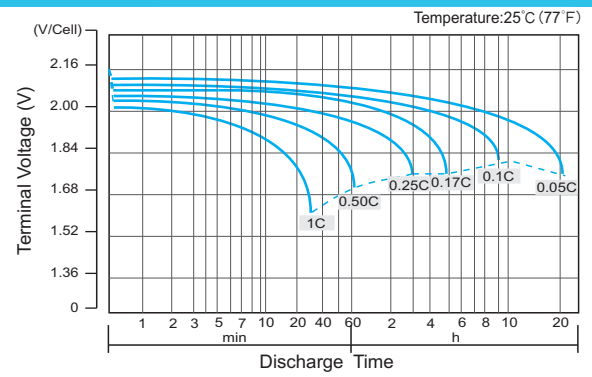
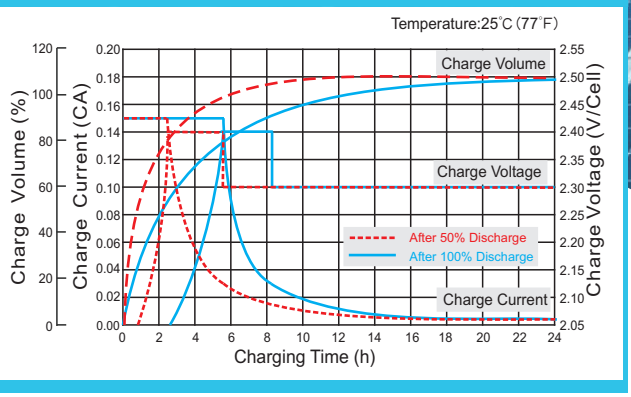
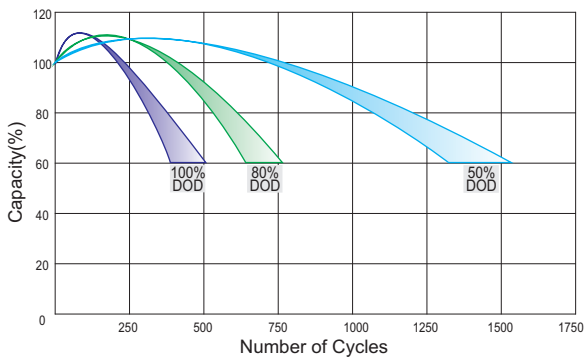
Discharge Characteristics Curve



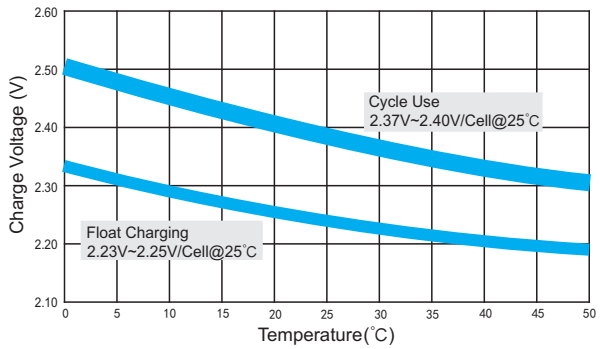
Charge Characteristic Curve for Cycle Use(IUU)



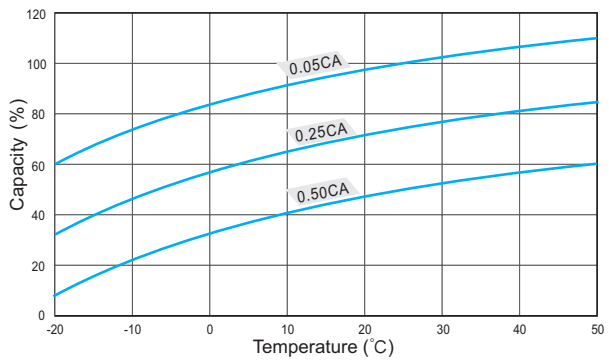
Cycle Life in Relation to Depth of Discharge



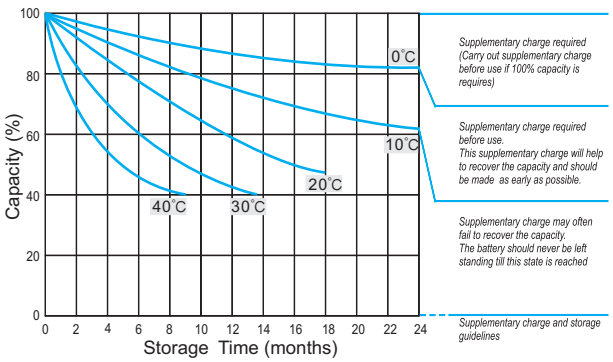
Relationship Between Charging Voltage and Temperature



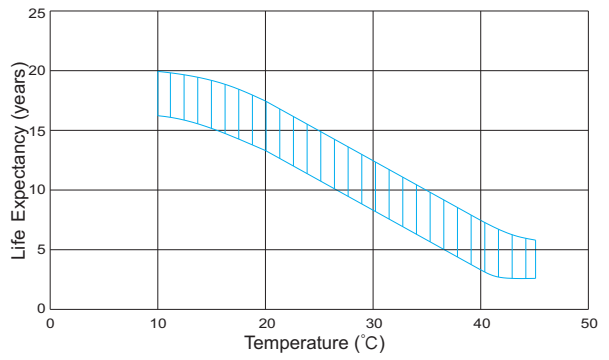
Temperature Effects on Capacity



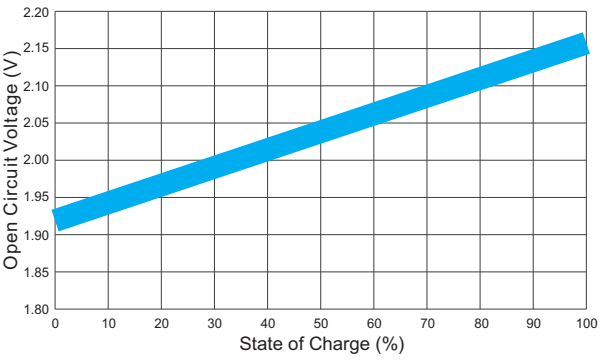
Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge(20℃)



(Note) All above information shall be changed without prior notice, RITAR reserves the right to explain and update the latest information.

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