

# BANSHEE™

"IT'S NOT A BATTERY, IT'S A BANSHEE"

## SEALED MARINE BATTERY

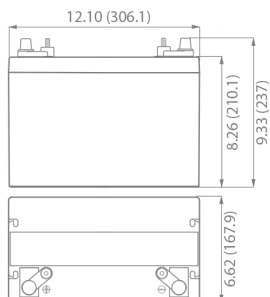


DC (Deep Cycle) series batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharge. By using strong grids, thick plate and specially active material are designed for repeated deep-discharge applications. The DC series batteries offer 30% more cyclic life than the standby series. It is suitable for solar and wind renewable energy storage, mobility and medical equipment, V, telecom, broadband and cable TV, UPS systems etc.

### Specification

#### AGM Deep cycle 12V90AH

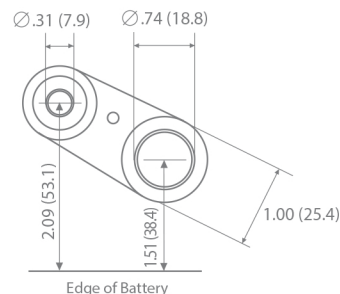
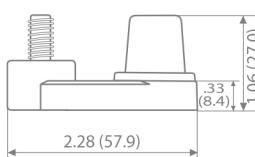
Cells Per Unit	6
Voltage Per Unit	12
Capacity	95Ah@10hr-rate to 1.75V per cell @25 °C
Weight	Approx. 27.0 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 6.0 mΩ
Terminal	F15(M6)/F12(M8)
Max. Discharge Current	1000A (5 sec)
Design Life	12 years (floating charge)
Max. Charging Current	30.0 A
Reference Capacity	C3 76.4AH C5 86.1AH C10 95.2AH C20 100.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	Maxpower 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.



L: 12.10 in (306.1 mm)  
W: 6.61 in (167.9 mm)  
H: 8.26 in (210.1 mm)  
TH: 9.33 in (237 mm)  
Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

### Terminals

#### Marine Combo Post



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

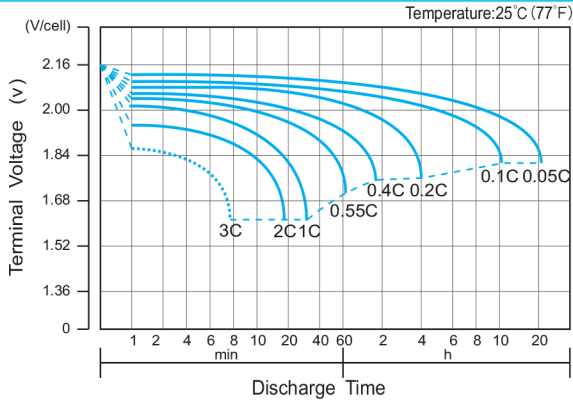
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	223.8	180.9	107.8	60.74	36.17	28.17	22.10	18.80	12.06	10.00	5.183
1.65V	206.1	169.1	102.1	58.67	34.96	27.31	21.44	18.21	11.96	9.905	5.155
1.70V	191.0	159.1	96.83	56.79	34.03	26.15	20.78	17.72	11.77	9.714	5.090
1.75V	175.3	149.0	93.01	55.00	32.72	25.48	20.21	17.22	11.58	9.619	5.000
1.80V	159.5	136.4	89.58	52.56	31.60	25.00	19.74	17.00	11.39	9.524	4.952
1.85V	124.8	112.9	75.96	46.91	28.90	23.27	18.51	15.65	10.73	8.952	4.905

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

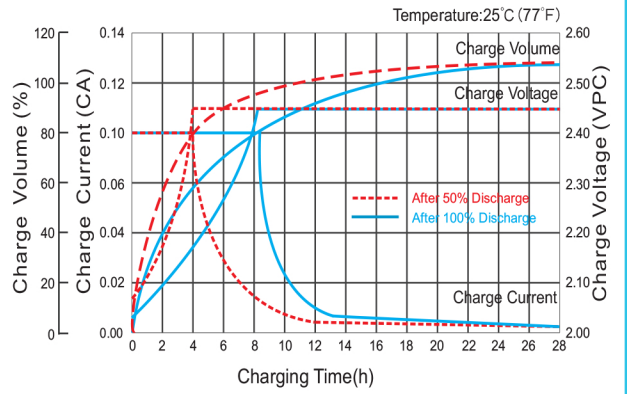
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	381.0	315.5	195.9	114.0	68.39	53.50	42.59	35.58	23.50	19.61	10.35
1.65V	366.9	306.8	191.3	112.1	66.54	52.17	41.56	34.62	23.31	19.42	10.25
1.70V	342.4	290.4	182.1	108.8	64.88	50.17	40.23	33.76	23.03	19.05	10.16
1.75V	318.6	274.1	175.7	105.8	62.57	48.93	39.29	32.99	22.65	18.86	9.977
1.80V	293.6	253.4	170.0	101.4	61.15	48.65	38.53	32.54	22.28	18.67	9.885
1.85V	232.9	212.9	145.8	91.10	56.31	45.38	36.27	30.10	21.05	17.63	9.792

(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<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

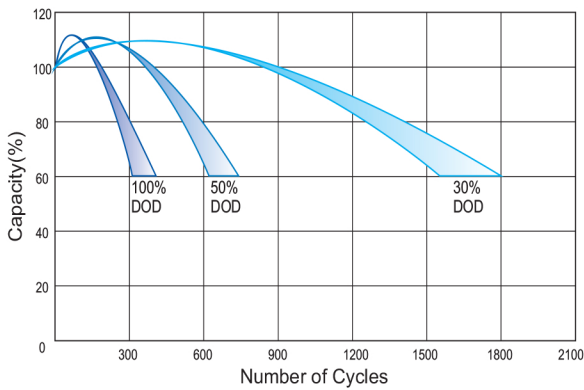
### Discharge Characteristics Curve



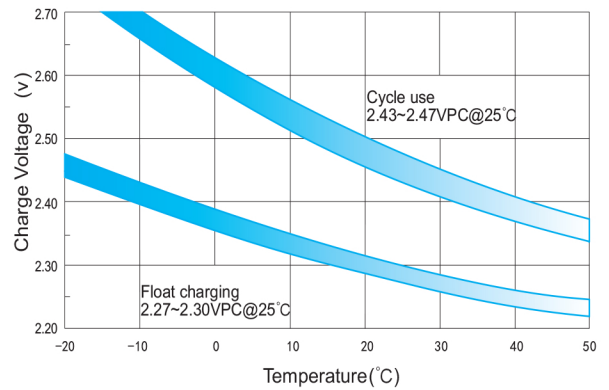
### Charge Characteristic Curve for Cycle Use (IU)



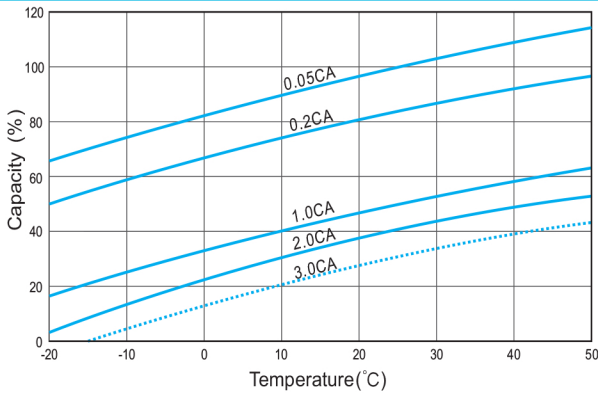
### Cycle Life in Relation to Depth of Discharge



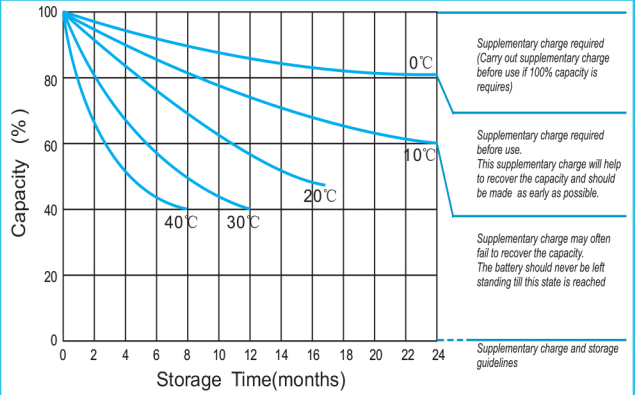
### Relationship Between Charging Voltage and Temperature



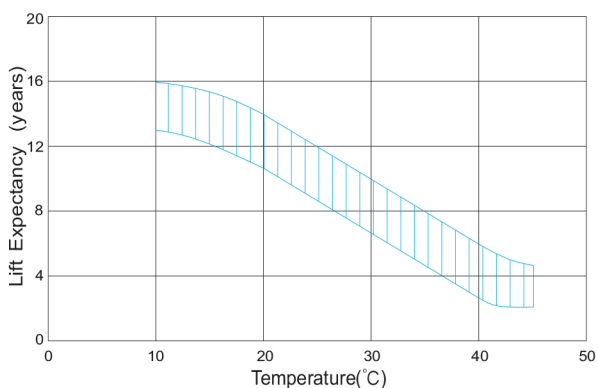
### Temperature Effects on Capacity



### Storage Characteristics



### Effect of Temperature on Long Term Life



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

