



# RA12-120(12V120Ah)

## Specification

Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	120Ah@10hour-rate to 1.80V per cell @25°C
Weight	Approx. 33.5 Kg (Tolerance ±5.0%)
Internal Resistance	≤4.5 mΩ (Full Charge Condition @25°C)
Terminal	Default F12(M8), F5(M8) Optional
Max. Discharge Current	1200A (5 sec)
Short Circuit Current	2220A
Design Life	12 years
Max. Charging Current	36.0 A
Reference Capacity	C <sub>3</sub> 90.0Ah C <sub>5</sub> 102.0Ah C <sub>10</sub> 120.0Ah C <sub>20</sub> 127.2Ah
Standby Use 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	RITAR 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.



RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.



ISO 9001    ISO 14001    ISO 45001



MH 28539    BSTXD210316008513EC

## Dimensions

Length	407±2mm (16.0 inches)
Width	177±2mm (6.97 inches)
Height	225±2mm (8.86 inches)
Total Height	225±2mm (8.86 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°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	278.2	218.7	131.4	73.3	43.7	33.8	26.6	22.6	15.2	12.7	6.62
1.65V	262.9	209.1	126.2	70.8	42.3	32.8	25.9	22.1	15.0	12.5	6.52
1.70V	242.0	195.8	120.6	68.5	40.9	31.9	25.2	21.5	14.8	12.3	6.44
1.75V	221.6	182.2	115.3	66.0	39.5	31.0	24.5	20.9	14.6	12.2	6.36
1.80V	200.6	168.3	110.2	63.5	38.1	30.0	23.8	20.4	14.4	12.0	6.30
1.85V	163.9	139.6	94.9	56.9	34.9	27.7	22.1	19.0	13.5	11.3	5.98

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

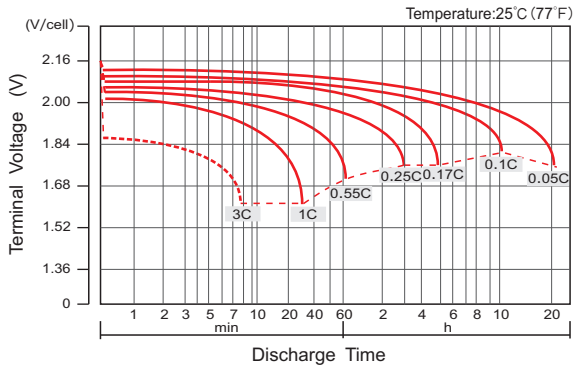
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	472.9	382.3	238.7	137.8	82.8	64.6	51.1	43.6	29.7	24.9	13.0
1.65V	455.5	371.0	231.6	133.8	80.5	62.9	49.9	42.7	29.4	24.6	12.9
1.70V	427.1	352.6	223.5	130.3	78.3	61.5	48.7	41.7	29.1	24.3	12.7
1.75V	398.0	332.9	215.9	126.3	75.9	59.9	47.6	40.8	28.7	24.0	12.6
1.80V	366.5	311.8	208.4	122.1	73.6	58.3	46.4	39.9	28.3	23.7	12.5
1.85V	304.9	262.4	181.3	110.2	67.8	54.1	43.3	37.3	26.6	22.4	11.8

(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<sub>10</sub> should reach 95% after the first cycle and 100% after the third cycle.

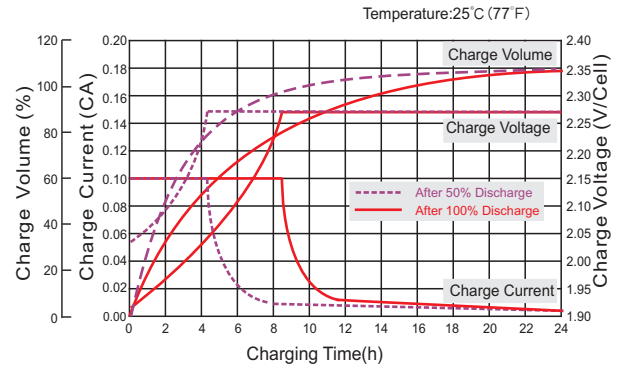
# RA12-120(12V120Ah)



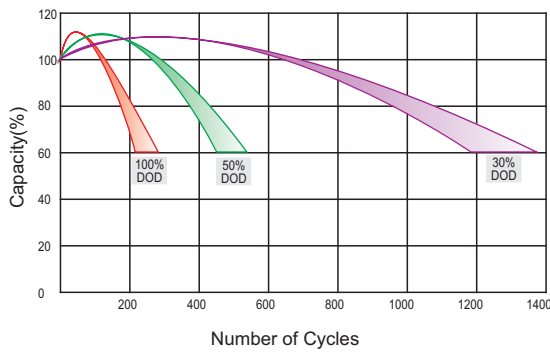
## Discharge Characteristics Curve



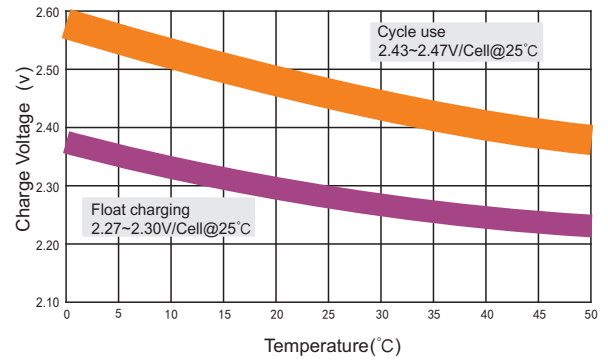
## Charge Characteristic Curve For Standby Use(IU)



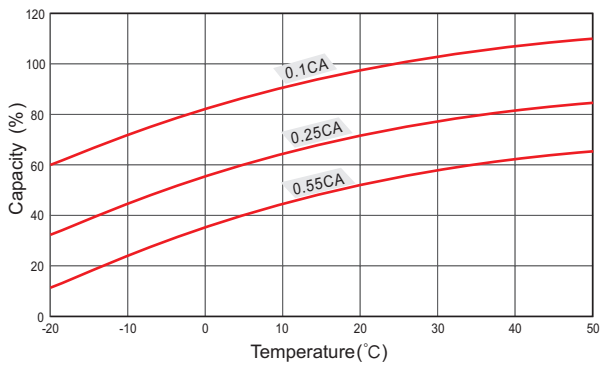
## Cycle Life In Relation To Depth Of Discharge



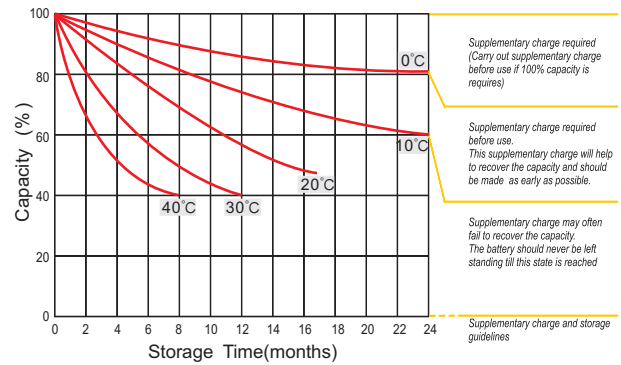
## Relationship Between Charging Voltage And Temperature



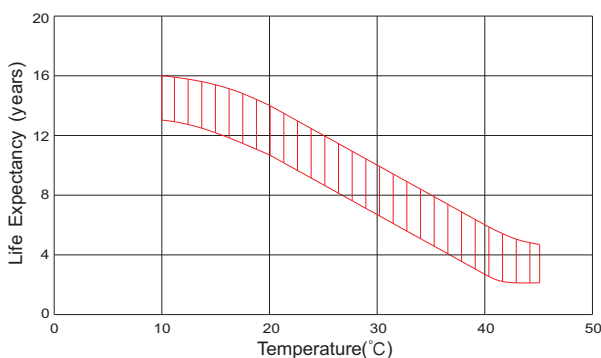
## Temperature Effects On Capacity



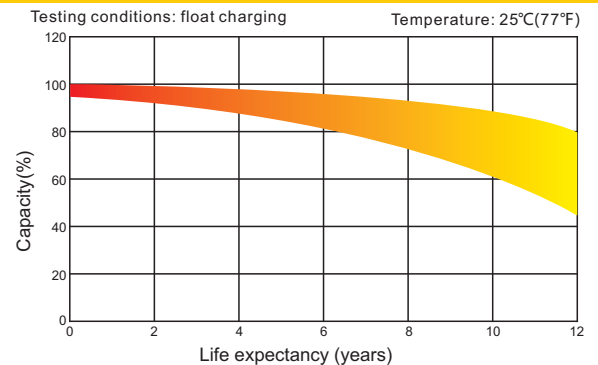
## Storage Characteristics



## Effect Of Temperature On Long Term Life



## Life Characteristics Of Standby Use



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