



RA12-120 (12V120Ah)

RA12-120 is a general purpose battery with 10 years design life time in float charging use. As with all Ritar batteries, all RA models are rechargeable, highly efficient, leak proof and maintenance free.

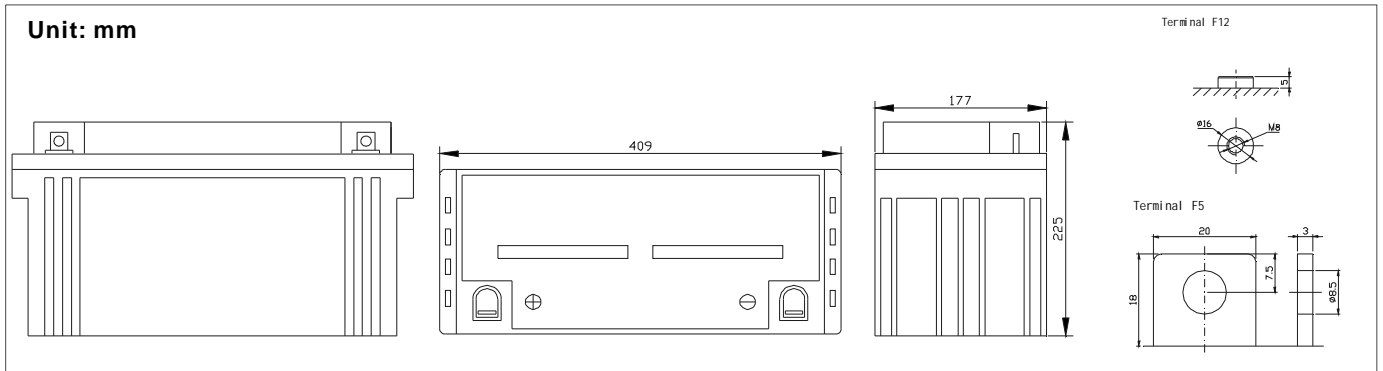


Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	120Ah @ 10hr-rate to 1.75V per cell @ 25°C
Weight	Approx. 36 Kg
Max. Discharge Current	600 A (5 sec)
Internal Resistance	Approx. 4.5 mΩ
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
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	36 A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C
Self Discharge	RITAR batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
Terminal	Faston F5/F12
Container Material	A.B.S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.



Dimensions



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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	449	322	234	138	78.0	47.9	31.3	25.9	20.4	14.8	12.5	6.6
1.67V	437	306	229	136	77.6	47.5	31.2	25.8	20.3	14.6	12.4	6.5
1.70V	412	295	226	135	76.9	47.2	31.0	25.7	20.2	14.5	12.2	6.4
1.75V	370	272	215	131	76.2	46.8	30.8	25.4	19.9	14.4	12.1	6.2
1.80V	334	248	198	125	74.4	46.0	30.0	24.8	19.6	14.2	12.0	6.1
1.85V	290	222	178	117	70.7	43.9	28.7	23.6	18.7	13.6	11.6	5.8

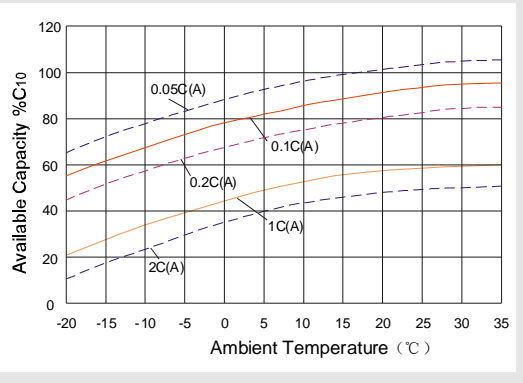
Constant Power Discharge Characteristics Unit: W(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	805	588	433	260	148.7	91.8	60.2	49.9	39.4	28.6	23.4	12.4
1.67V	788	562	424	256	148.0	91.4	60.1	49.8	39.1	28.4	23.2	12.2
1.70V	744	543	418	253	146.9	90.6	59.8	49.6	39.0	28.2	23.0	12.1
1.75V	670	502	399	248	145.4	89.8	59.4	49.2	38.6	28.0	22.8	12.0
1.80V	603	456	367	236	141.8	88.4	58.0	47.9	38.0	27.4	22.6	11.9
1.85V	520	405	327	221	134.4	84.4	55.1	45.6	36.1	26.4	21.8	11.4

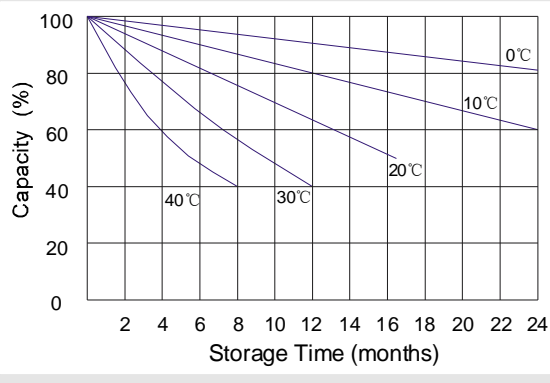
All mentioned values are average values.



Temperature effects curve



Storage characteristic



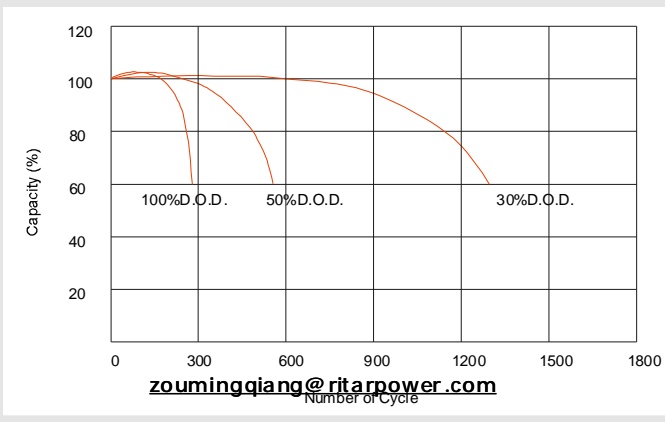
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.

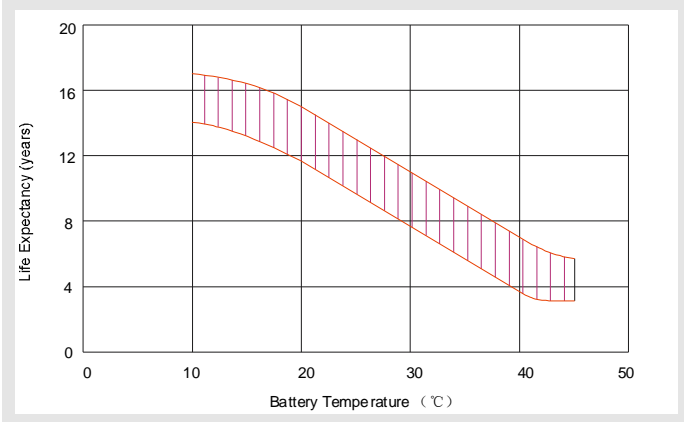
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

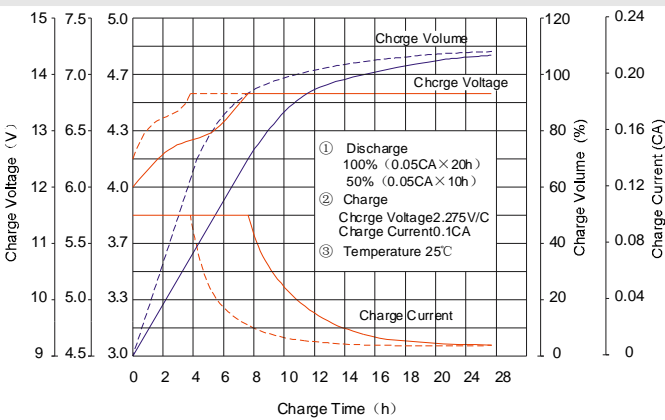
Life characteristics of cyclic use



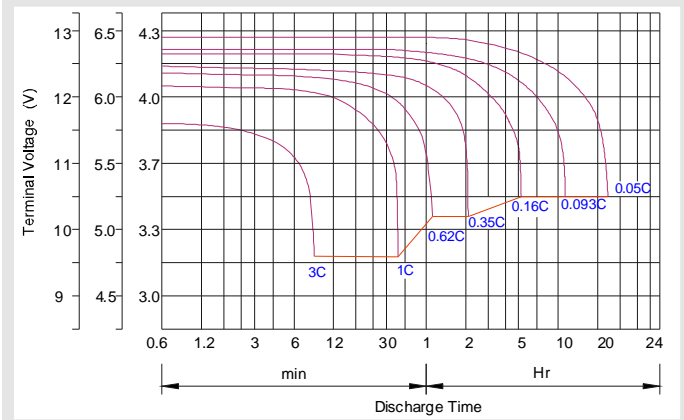
Effect of temperature on long term float life



Charge characteristic Curve for standby use



Discharge characteristic Curve



Charging Procedures(12V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	14.7	14.4~15.0	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

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

Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C

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

Charging Method:

Constant Voltage	-0.2Cx2h +14.4~15.0V,24h,Max. Current 0.3CA
Constant Current	-0.2Cx2h +0.1CAx12h
Fast	-0.2Cx2h +0.3CAx4h

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