



RT 12180H (12V18.0Ah) (72.1w/cell)

HR (High Rate) series is especially designed for heavy load discharge applications with 5 years design life in float service. By using strong grids and specially designed active material the HR series offers stable performance during high current discharge requirements. The HR series offers 30% more power output than the standard range. Suitable for UPS/EPS where high current loads are required.

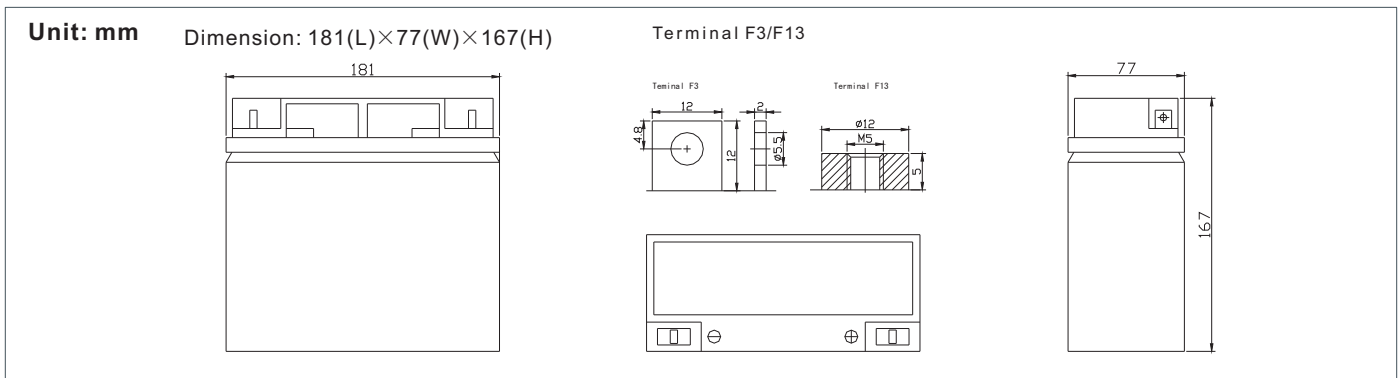


Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	72.1W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 5.6 Kg(Tolerance±3%)
Max. Discharge Current	180A (5 sec)
Internal Resistance	Approx. 12 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	13.7 to 13.9 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	5.4 A
Equalization and Cycle Service	14.6 to 14.8 VDC/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	Faston tabF3/F13
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



Dimensions



Constant Current Discharge Characteristics : A(25°C)

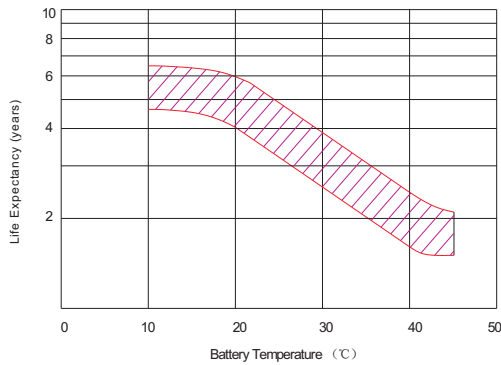
F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	78.4	58.0	52.1	37.8	31.0	22.9	12.9	10.2
10.0V	77.3	57.5	51.3	37.0	30.1	22.4	12.7	10.0
10.2V	75.0	54.1	48.6	35.5	29.4	21.8	12.3	9.8
10.5V	72.4	50.0	44.4	33.7	28.2	21.1	11.9	9.7
10.8V	66.8	46.4	39.7	32.2	27.4	18.4	11.4	9.4
11.1V	61.3	42.9	36.6	30.7	26.7	16.8	11.0	9.1

Constant Power Discharge Characteristics : W(25°C)

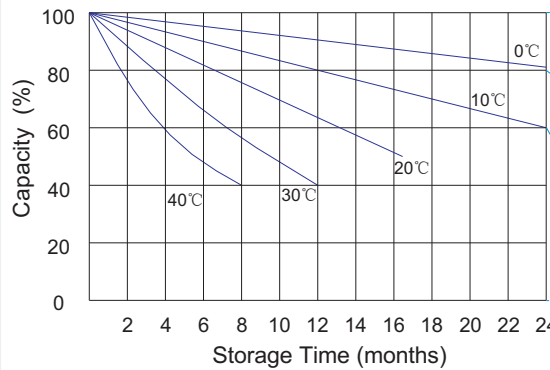
F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	848	634	573	441	343	253	143	113
10.0V	847	632	569	433	335	249	142	112
10.2V	827	602	543	420	332	247	141	112
10.5V	807	565	505	407	324	243	138	111
10.8V	761	530	495	390	314	216	135	110
11.1V	714	495	486	373	304	201	132	109

All mentioned values are average values(Tolerance±2%).

Effect of temperature on long term float life



Storage characteristic



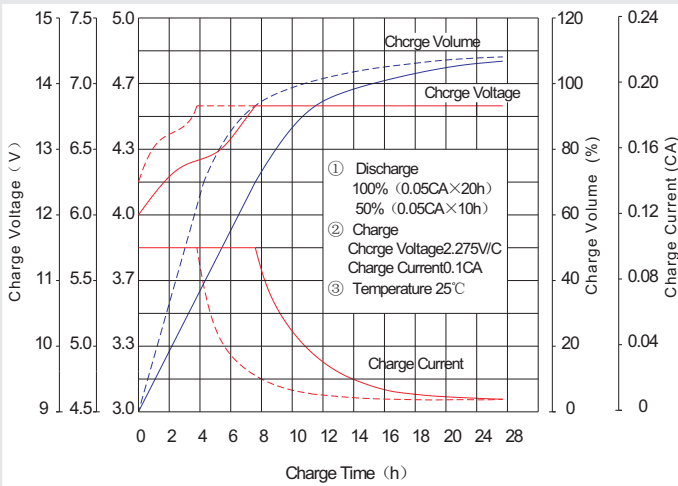
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

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

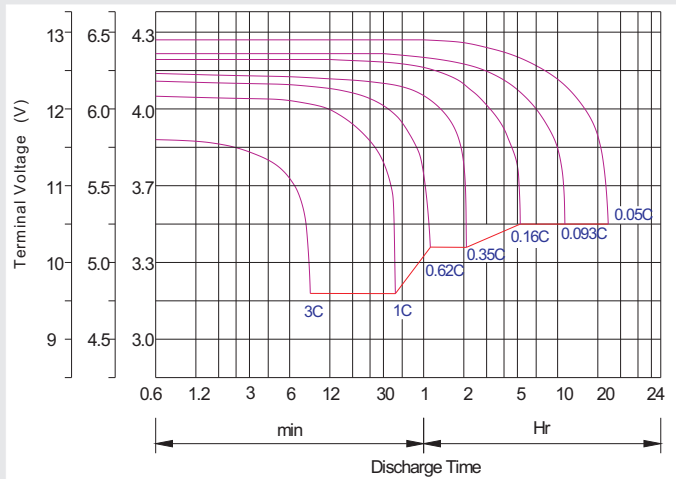
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

Charge characteristic Curve for standby 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

Float Service:
※ Every month, recommend inspection every battery voltage.
※ Every three months, recommend equalization charge for one time.
Equalization charge method:
Discharge: 100% rate capacity discharge.
Charge: Max. current 0.3CA, constant voltage 2.4-2.45V/Cell charge 24h.
※ Effect of temperature on float charge voltage: -3mV/°C/Cell.
※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.

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

Charging Method:

Constant Voltage	-0.2Cx2h + 2.4~2.5V/Cellx24h, Max. Current 0.3CA
Constant Current	-0.2Cx2h + 0.1CAx 12h
Fast	-0.2Cx2h + 0.3CAx4.0h