

## KBHR1290 12V 9.0Ah

The Kaise HR batteries were specially designed for applications that demand a very high energy output. With an optimized design of the grids and an excellent formula for pasting the plates, the HR series can deliver up to 40% more than the standard series and designed for the flame retardant housing according UL-94-HB and 94-V0



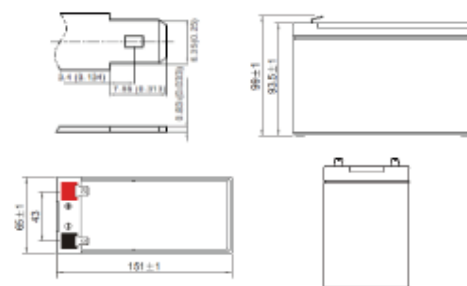
### Performance Characteristics

Nominal Voltage	12V	
Dimensions	Length (mm / inch)	151 / 5.95
	Width (mm / inch)	65 / 2.56
	Height (mm / inch)	93.5 / 3.68
	Total Height (mm / inch)	99 / 3.90
	Approx Weight (Kg / lbs)	2.66 / 5.87
Design Life	5 years	
Terminal	Faston F2	
Container Material	ABS	
Rated Capacity	33.8Watts / cell (15min, 1.6V / cell, 25°C / 77°F)	
	8.60Ah (20hr, 1.8V / cell, 25°C / 77°F)	
Max. Discharge Current	12A (5s)	
Internal Resistance	Approx 19mΩ	
Operating Temp. Range	Discharge : -15 – 55°C (5 – 131°F)	
	Charge : 0 – 40°C (32 – 104°F)	
	Storage : -15 – 40°C (5 – 104°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 1.8A	
	Voltage: 14.4V – 14.7V at 25°C (77°F)	
	Temp. Coefficient: -30mV/°C	
Standby Use	Initial Charging Current less than 1.8A	
	13.5V – 13.8V at 25°C (77°F)	
	Temp. Coefficient: -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Fully charged Kaise High Rate Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	
Flame Retardant	94-V0 / ABS: UL-94-HB	

### Discharge Constant Current (Amperes) at 77°F (25°C)

Voltage/cell	10min	15min	20min	30min	1h
1.80V	20.9	16.2	13.2	9.65	5.43
1.75V	22.1	17.2	13.9	10.0	5.61
1.70V	23.3	18.0	14.3	10.4	5.75
1.60V	25.0	18.9	15.1	10.9	5.96

### Dimensions and Terminal (Unit: mm (inches))



### Applications

UPS  
High power backup supply  
Electric facilities  
Power tools

### Certifications

ISO 9001:2008 ISO 14001:2008



### Discharge Current vs. Discharge Voltage

Final discharge voltage VCELL	1.8	1.75	1.7	1.6
Discharge current (A)	≤ 0.10A	0.250A ≥ 1 > 0.10A	0.550A ≥ 1 > 0.250A	1 > 0.550A

### Discharge Constant Power (Watts per cell) at 77°F (25°C)

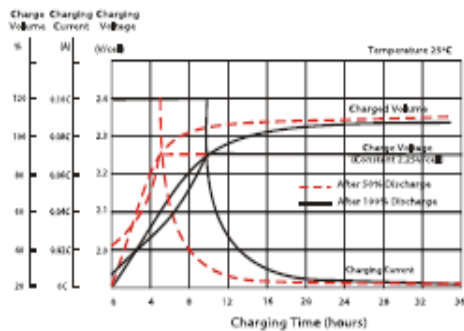
Voltage/cell	10min	15min	20min	30min	1h
1.80V	38.4	30.1	24.7	18.2	10.4
1.75V	40.1	31.6	25.7	18.8	10.7
1.70V	41.8	32.6	26.3	19.4	10.9
1.60V	43.6	33.6	27.2	20.0	11.2

[Note] The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

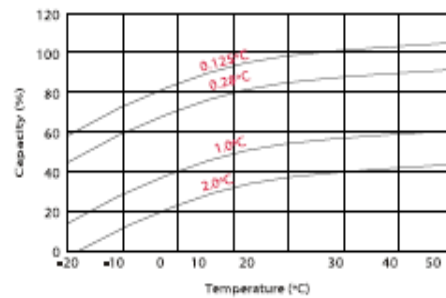
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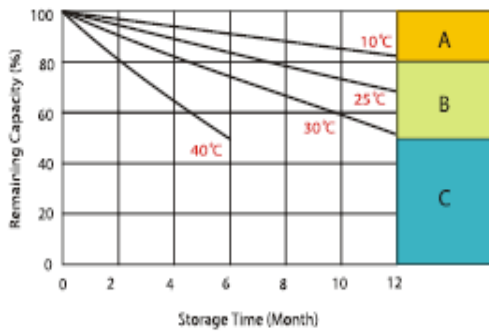
## Charging Characteristics (cycle use)



## Temperature Effects in Relation to Battery Capacity



## Self Discharge Characteristics

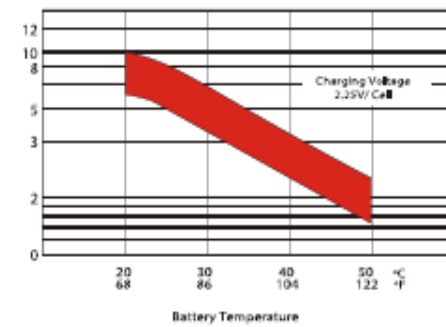


**A** No supplementary charge required  
(carry out supplementary charge before use if 100% capacity is required)

**B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.  
2. Charged for above 20 hours limited current 0.25CA and constant voltage 2.45V / cell.  
3. Charged for 8-10 hours at limited current 0.05 CA.

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

## Effect of Temperature on Long Term Float Life



IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.