

## KBHR12450 12V 45Ah

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.

### Performance Characteristics

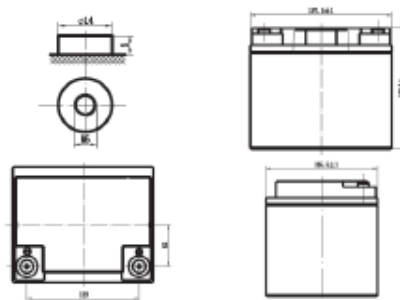
Nominal Voltage	12V	
Dimensions	Length (mm / inch)	197.5 / 7.78
	Width (mm / inch)	165.5 / 6.52
	Height (mm / inch)	170 / 6.69
	Total Height (mm / inch)	170 / 6.69
Approx. Weight	[Kg / lbs] 14.8 / 32.6	
Design Life	10 years	
Terminal	M6	
Container Material	ABS	
Rated Capacity	21Watts / Cell	(10min, 1.6V / cell, 25°C / 77°F)
	46.6Ah/2.33A	(20hr, 10.5V / cell, 25°C / 77°F)
	45.0Ah/45.0A	(10hr, 10.8V / cell, 25°C / 77°F)
Max. Discharge Current	450A (5s)	
Internal Resistance	Approx 6.1 mΩ	
Operating Temp. Range	Discharge : -20 - 60°C (-4 - 140°F)	
	Charge : -10 - 60°C (14 - 140°F)	
	Storage : -20 - 60°C (-4 - 140°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 13.5A.	
	Voltage: 2.40V - 2.43V at 25°C (77°F) Temp. Coefficient: -30mV/°C	
Standby Use	No limit on Initial Charging Current	
	2.20V - 2.30V 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.	

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

Volts/cell	5min	10min	15min	20min	25min	30min	45min	1h
1.80V	138	97.1	76.9	61.7	52.6	46.5	34.9	27.5
1.75V	144	101	79.7	63.7	54.1	47.8	35.8	28.1
1.70V	155	107	84.6	67.6	57.4	50.7	37.8	29.6
1.67V	165	114	89.5	71.5	60.8	53.6	39.8	31.1
1.60V	176	121	94.4	75.5	64.1	56.5	41.9	32.6



### 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 V <sub>CELL</sub>	1.8	1.75	1.7	1.6
Discharge current (A)	I ≤ 0.1CA	0.25CA ≥ I > 0.1CA	0.55CA ≥ I > 0.25CA	I > 0.55CA

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

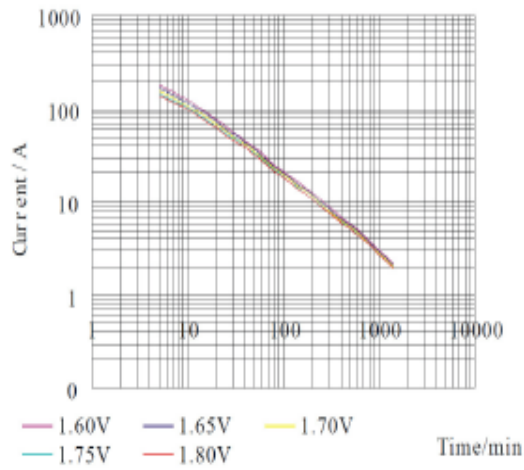
Volts/cell	5min	10min	15min	20min	25min	30min	45min	1h
1.80V	259	179	145	116	98.1	86.4	63.5	51.6
1.75V	272	187	151	120	102	89.6	65.7	53.2
1.70V	286	195	157	125	106	92.9	67.8	54.8
1.67V	299	203	163	129	109	96.1	70.0	56.4
1.60V	312	211	168	134	113	99.3	72.1	58.0

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

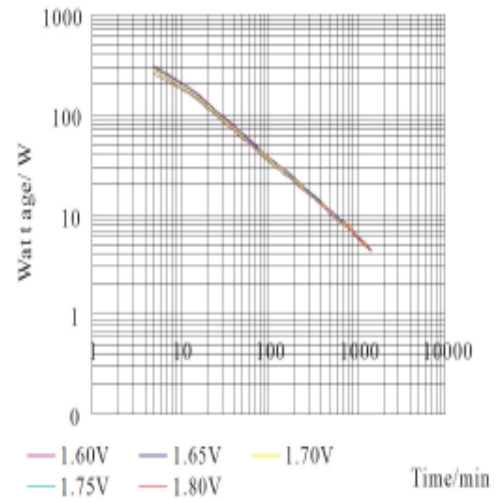
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## Constant Current Discharge



## Constant Power Discharge



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

