

## KBHR12820 12V 82Ah

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.



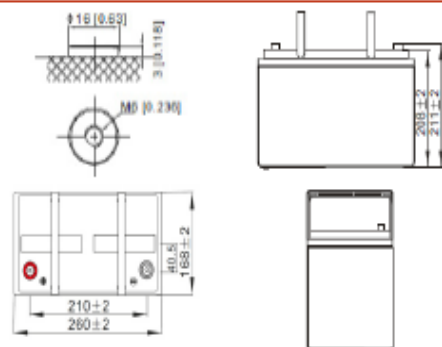
### Performance Characteristics

Nominal Voltage	12V	
Dimensions	Length (mm / inch)	260 / 10.24
	Width (mm / inch)	168 / 6.61
	Height (mm / inch)	208 / 8.19
	Total Height (mm / inch)	211 / 8.31
Approx. Weight	(Kg / lbs) 24.0 / 52.92	
Design Life	10 years	
Terminal	M6	
Container Material	ABS	
Rated Capacity	324 AWatts / Cell (15min, 1.6V / cell, 25°C / 77°F)	
	82.0Ah (20hr, 1.8V / cell, 25°C / 77°F)	
Max. Discharge Current	1230A (5s)	
Internal Resistance	Approx 4.5mΩ	
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 2A. Voltage: 14.4V-15.0V at 25°C (77°F) Temp. Coefficient: -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage 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.	

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

Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.8V	158.9	138.1	89.5	52.9	21.4	13.9	7.86	4.10
1.75V	178.4	150.2	93.3	54.3	21.9	14.2	8.00	4.17
1.70V	193.4	160.1	98.1	56.9	22.4	14.6	8.14	4.24
1.6V	210.6	171.2	102.3	57.5	22.8	14.8	8.28	4.31
1.6V	227.3	180.7	106.3	58.8	23.1	15.1	8.43	4.36

### 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)	1 ≤ 0.1CA	0.25CA ≥ 1 > 0.1CA	0.65CA ≥ 1 > 0.25CA	1 > 0.65CA

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

Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.8V	307.7	269.0	176.4	105.2	42.9	28.1	16.1	8.42
1.75V	342.2	290.0	182.2	107.2	43.7	28.6	16.3	8.53
1.70V	366.8	305.4	189.6	109.5	44.4	29.1	16.5	8.61
1.6V	396.5	324.6	196.7	112.0	44.9	29.4	16.7	8.72
1.6V	423.4	339.1	202.3	113.5	45.1	29.7	16.8	8.73

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