

# HRL Series

## HRL12-360W 12V90Ah

Sacred Sun HRL batteries adopt new appearance and constructure design, automaticly welding+through the partition welding+heat sealing technolgy, full automatic production process with good consistency. It has excellent high power discharge, long floating backup time and fast charging performance. It can be widely used in data center, UPS, IDC room.

### Benefits

- Very long life according to EUROBAT Classification
- High power density, 30% higher than ordinary batteries
- Special lead paste formual and additives improve the battery service life
- Maximum charge efficiency
- Low self-discharge rate
- Wide range of power, easy sizing of batteries
- Easy installation and handling

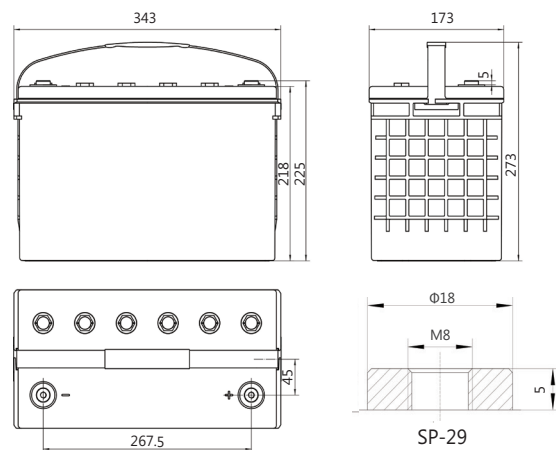
### Applications

- Data center
- UPS
- IDC room
- Emergency power
- HVDC system

### Standards

- IEC 60896-21/22
- JIS C8704-1/2
- EUROBAT guide

### Drawing



### Specifications

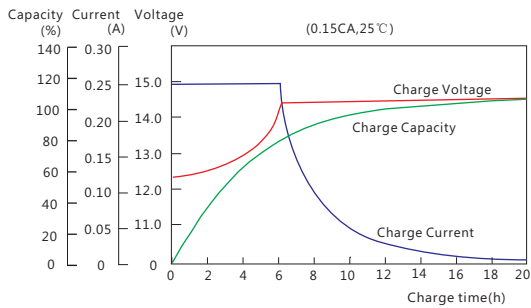
Battery Model	HRL12-360W			
Design Life (years, 25°C)	15			
Capacity (Ah, 25°C)	10min (1.60V)	15min (1.67V)	1HR (57A, 1.70V)	10HR(9.0A, 1.80V)
	470W/cell	360W/cell	57	90
Dimensions (mm)	Length	Width	Height	Total Height
	343	173	218	225
Approx. Weight (kg)	31.0			
Reference Internal Resistance (mΩ)	2.6±15%( full charged @ 25°C,testing device:HIOKIBT3562)			
Maximum Discharge Current (A/3 Sec.)	1090			
Self-Discharge (25°C)	≤ 2% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.35 (-3.5mV/°C/cell), max charge current:22.5A		2.25 (-3.5mV/°C/cell)	
Short Circuit Current (A)	3500			

## Discharge Data

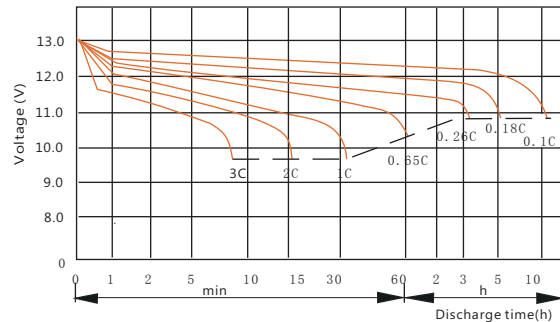
Constant Power Discharge Data (25°C, W/cell)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	620	470	374	292	238	200	158	116	93.0	75.0	54.3	42.0	35.0	30.2	24.0	19.7
1.65	600	460	366	286	234	196	155	114	91.8	74.4	53.8	41.7	34.8	30.0	23.8	19.5
1.67	570	455	360	280	230	195	152	113	90.7	73.8	53.4	41.4	34.5	29.7	23.6	19.4
1.70	560	448	352	274	225	188	148	110	89.4	73.0	52.8	40.8	34.2	29.4	23.3	19.2
1.75	520	425	333	258	213	180	140	106	86.2	71.2	51.5	39.8	33.4	28.7	22.8	18.7
1.80	490	396	310	238	198	166	132	100	82.3	69.0	50.0	38.7	32.4	27.8	22.0	18.2

Constant Current Discharge Data (25°C, A)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	350	272	210	160	130	106	83.0	60.6	48.2	38.8	28.0	21.7	18.0	15.5	12.2	10.0
1.65	345	265	204	157	126	104	81.0	59.4	47.4	38.3	27.6	21.4	17.8	15.3	12.0	9.8
1.67	340	260	200	153	124	102	79.5	58.4	46.7	37.8	27.3	21.0	17.6	15.0	11.8	9.7
1.70	320	253	194	148	120	98.8	77.5	57.0	45.8	37.4	27.0	20.8	17.4	14.8	11.6	9.6
1.75	290	236	180	138	113	92.8	72.7	54.0	43.8	36.0	26.0	20.2	16.8	14.4	11.4	9.4
1.80	265	217	165	126	104	85.5	67.0	50.5	41.4	34.7	25.0	19.4	16.2	13.8	11.0	9.0

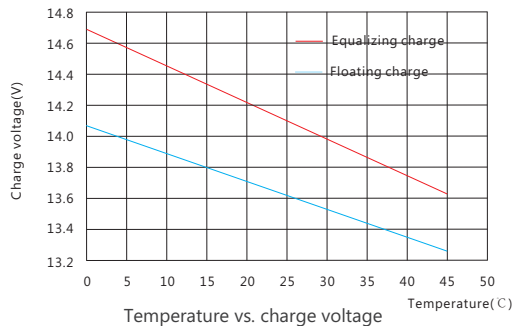
## Performance Curve



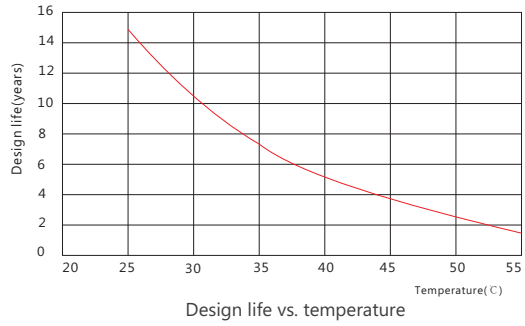
Charge performance



Discharge voltage vs. discharge time



Temperature vs. charge voltage



Design life vs. temperature

### Sacred Sun Power Sources Co., Ltd.

Add: No.1 Shengyang Road, Qufu 273100 PRC  
Tel: +86-537-4422313 Fax: +86-537-4411980  
Email: sales@sacredsunsun.com

### Sacred Sun Hong Kong Co., Limited

Add: RM 19C Lockhart CTR 301-307 Lockhart RD Wan Chai, Hong Kong  
Email: admin.hk@sacredsunsun.com

### Sacred Sun Asia Pacific Pte Ltd.

Add: 1 Ubi View, #04-12, Focus One, Singapore 408555  
Email: admin.sg@sacredsunsun.com

### Sacred Sun Europe SARRL

Add: ZAE Fontaine, 33210 Fargues, France  
Email: admin.eu@sacredsunsun.com

### Sacred Sun MEA FZE

Add: No. 311 office, Building LOB 14, JAFZA, Dubai, UAE  
Email: admin.ae@sacredsunsun.com