

# HRL Series

## HRL12-360W 12V90Ah

Sacred Sun HRL batteries adopt new appearance and constructure design, automatically welding+throug 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

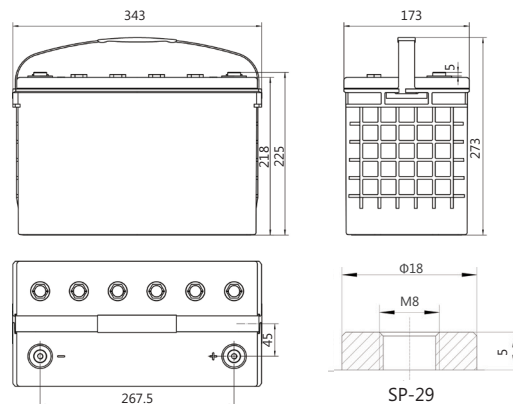
### Applications

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

### Standards

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

### Drawing



### Specifications

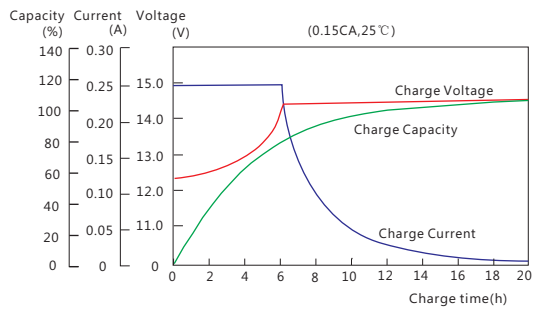
Battery Model	HRL12-360W			
Design Life (years, 25°C)	15			
Capacity (Ah, 25°C)	10min (1.60V)	15min (1.67V)	1HR (65.1A, 1.70V)	10HR(9.0A, 1.80V)
	469	360	65.1	90
Dimensions (mm)	Length	Width	Height	Total Height
	343	173	218	225
Approx. Weight (kg)	30.2			
Reference Internal Resistance (mΩ)	2.9 ( fully charged @ 25°C)			
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)	2930			

## Discharge Data

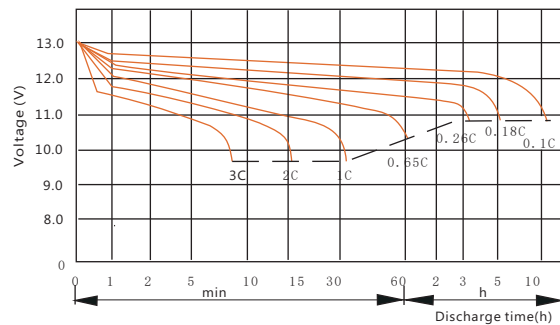
Constant Power Discharge Data (25°C, W/cell)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	635	469	374	314	263	217	176	132	100	74.3	54.3	41.2	35.1	30.2	23.9	19.7
1.65	620	460	366	307	257	212	173	130	98.8	73.6	53.8	40.8	34.8	30.0	23.7	19.5
1.67	611	455	360	302	252	207	170	129	97.7	73.0	53.4	40.5	34.5	29.7	23.5	19.4
1.70	599	448	352	295	245	200	167	127	96.4	72.2	52.8	40.0	34.2	29.5	23.3	19.2
1.75	566	422	333	278	230	185	159	122	93.3	70.3	51.5	39.0	33.4	28.8	22.8	18.7
1.80	530	395	310	258	211	167	150	116	89.5	68.1	50.0	37.8	32.4	28.0	22.1	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	371	266	210	173	143	116	92.5	68.6	51.8	38.4	28.0	21.2	18.0	15.5	12.2	10.0
1.65	362	260	204	168	139	112	90.6	67.4	51.0	37.9	27.6	20.9	17.8	15.3	12.0	9.90
1.67	355	255	200	165	136	109	89	66.4	50.3	37.5	27.3	20.7	17.6	15.1	11.9	9.80
1.70	346	248	194	160	131	105	86.9	65.1	49.4	36.9	27.0	20.4	17.4	14.9	11.8	9.70
1.75	324	233	180	149	121	96.0	82.1	62.0	47.4	35.7	26.1	19.7	16.8	14.5	11.4	9.40
1.80	299	215	165	136	110	86.0	76.5	58.5	45.0	34.2	25.1	18.9	16.2	14.0	11.0	9.00

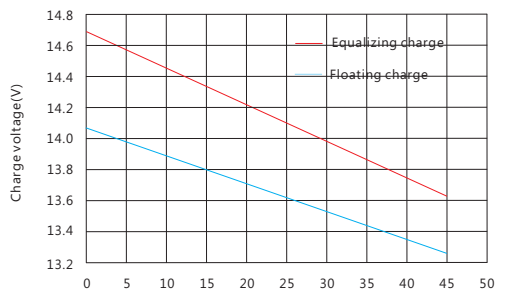
## Performance Curve



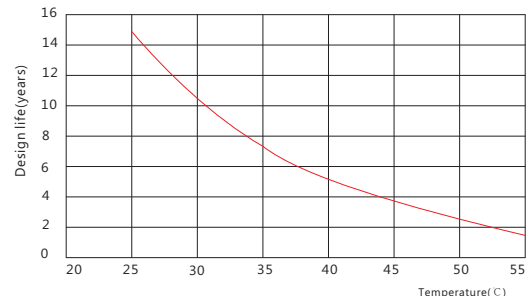
Charge performance



Discharge voltage vs. discharge time



Temperature vs. charge voltage



Design life vs. temperature

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