



# HRL Series

## HRL12-360W (12V90Ah)

Alpha House powered by Sacred Sun HRL batteries feature a new design and structure, utilising automatic welding, through-partition welding, and heat sealing technology. The fully automated production process ensures excellent consistency. These batteries offer high power discharge, long floating backup time, and fast charging performance, making them ideal for use in data centres, UPS systems, and IDC rooms.



### Benefits

- Very long life according to EUROBAT Classification
- High power density, 30% higher than ordinary batteries
- Special lead paste formula 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

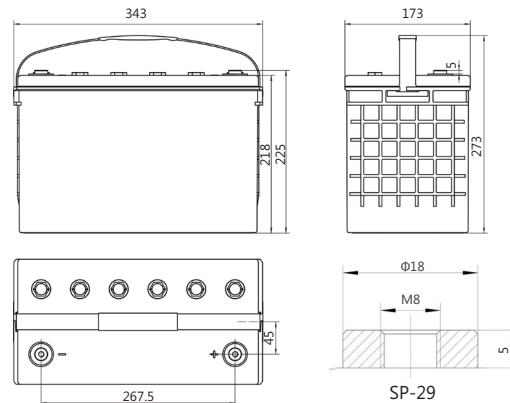
### Applications

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

### Standards

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

### Drawing



### Specifications

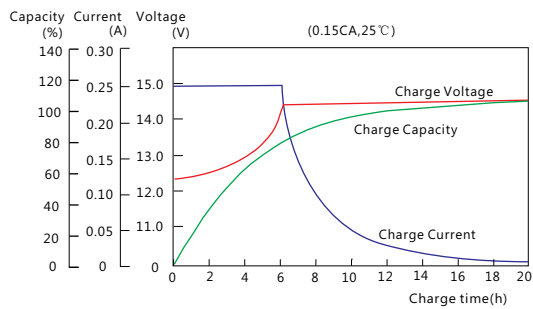
Battery Model	HRL12-360W			
Design Life (years, 25°C)	15			
Capacity (Ah, 25°C)	10min (1.60V)	15min (1.67V)	1HR (65.1A, 1.70V)	10HR(9.0A, 1.80V)
	469	360	65.1	90
Dimensions (mm)	Length	Width	Height	Total Height
	343	173	218	225
Approx. Weight (kg)	31.1			
Reference Internal Resistance (mΩ)	2.6 ( fully 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(-4mV/°C/cell), max charge current: 27A		2.27 (-3mV/°C/cell)	
Short Circuit Current (A)	2930			

## Discharge Data

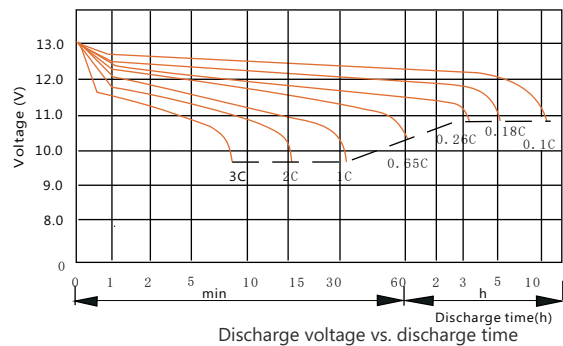
Constant Power Discharge Data (25°C, W/cell)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	635	469	374	314	263	217	176	132	100	74.3	54.3	41.2	35.1	30.2	23.9	19.7
1.65	620	460	366	307	257	212	173	130	98.8	73.6	53.8	40.8	34.8	30.0	23.7	19.5
1.67	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

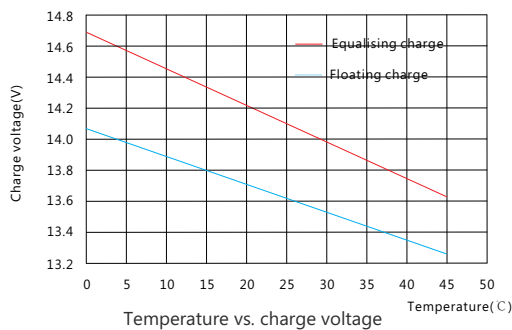
## Performance Curve



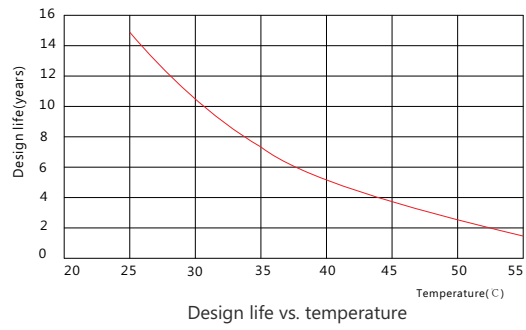
Charge performance



Discharge voltage vs. discharge time



Temperature vs. charge voltage



Design life vs. temperature



Disclaimer: The manufacturer reserves the right to amend and/or vary the specifications and parameters of the product and apply updates accordingly at any time. It is the sole responsibility of the buyer and user of the product to ensure all applicable product specifications referred to are valid, applicable and up to date at all times. All product specifications are available upon written request to Alpha House Ltd. All batteries must be installed, used and maintained at all times in accordance with standard BS EN IEC 62485-2:2018, and specifically installed, used and maintained at all times in accordance with manufacturer's guidelines and product specification documentation. (All top terminal, front terminal and top vented batteries must be positioned horizontally, plumb and level at all times unless specified otherwise by the manufacturer. Further details are available upon written request to Alpha House Ltd.)