



# HRL Series

## HRL12-550W (12V140Ah)

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

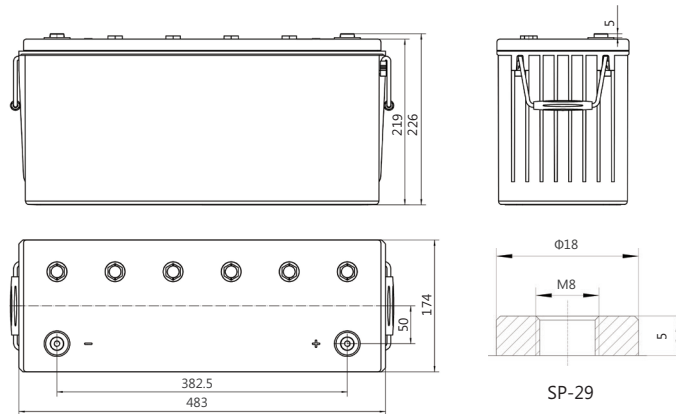
### Applications

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

### Standards

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

### Drawing



### Specifications

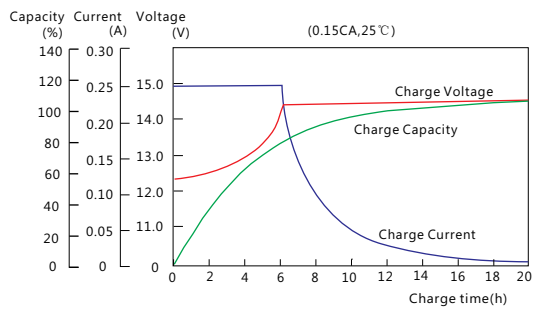
Battery Model	HRL12-550W			
Design Life (years, 25°C)	15			
Capacity (Ah, 25°C)	10min (1.60V)	15min (1.67V)	1HR (99A, 1.70V)	10HR(14.0A, 1.80V)
	724	550	99	140
Dimensions (mm)	Length	Width	Height	Total Height
	483	174	219	226
Approx. Weight (kg)	46.5			
Reference Internal Resistance (mΩ)	2.2 ( fully charged @ 25°C)			
Maximum Discharge Current (A/3 Sec.)	1630			
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: 42A		2.27 (-3mV/°C/cell)	
Short Circuit Current (A)	4300			

## Discharge Data

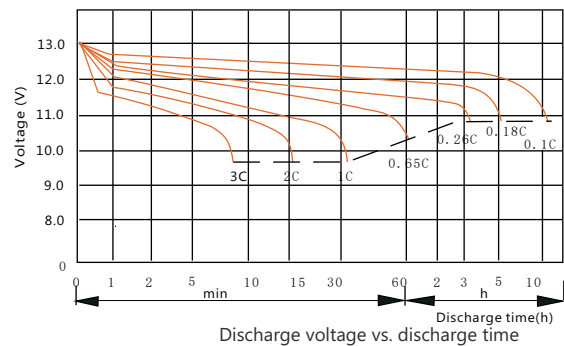
Constant Power Discharge Data (25°C, W/cell)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	940	724	561	468	406	343	259	197	148	111	82.2	61.6	52.7	45.4	35.9	29.6
1.65	929	717	555	463	401	338	256	196	147	110	81.8	61.3	52.4	45.2	35.7	29.4
1.67	920	711	550	458	397	334	254	194	146	110	81.5	61.0	52.2	45.0	35.6	29.3
1.70	909	703	543	452	391	328	251	193	145	109	81.1	60.7	51.9	44.7	35.4	29.1
1.75	882	684	527	438	377	314	245	188	142	108	80.0	59.8	51.3	44.2	34.9	28.7
1.80	849	662	507	420	360	298	237	183	139	106	78.8	58.8	50.5	43.5	34.4	28.3

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	553	414	315	258	221	183	136	103	76.8	57.4	42.4	31.7	27.0	23.2	18.3	15.0
1.65	544	407	310	254	217	180	134	101	76.0	56.9	42.0	31.4	26.8	23.0	18.1	14.9
1.67	537	402	305	250	213	177	133	100	75.3	56.5	41.7	31.2	26.6	22.9	18.0	14.8
1.70	528	396	299	245	209	173	131	99	74.4	55.9	41.4	30.9	26.4	22.7	17.9	14.7
1.75	506	380	286	234	199	164	126	95.9	72.4	54.7	40.5	30.2	25.8	22.2	17.5	14.4
1.80	481	363	270	221	188	153	120	92.4	70.0	53.2	39.5	29.4	25.2	21.7	17.1	14.0

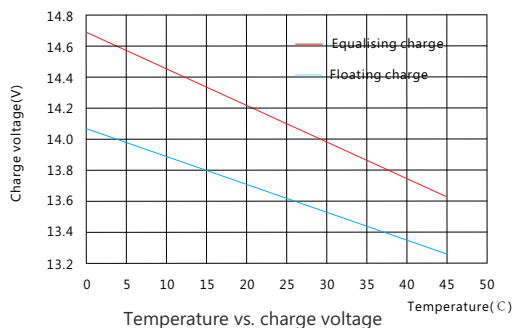
## Performance Curve



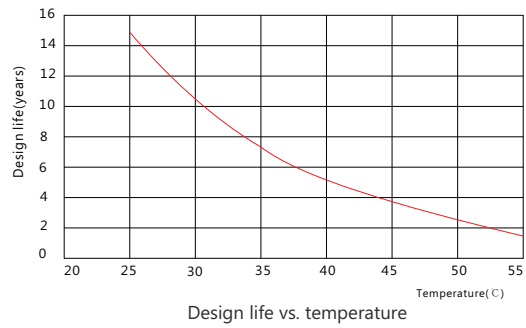
Charge performance



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.)