



**HRL series**

**HRL 12540W 12V 540W**



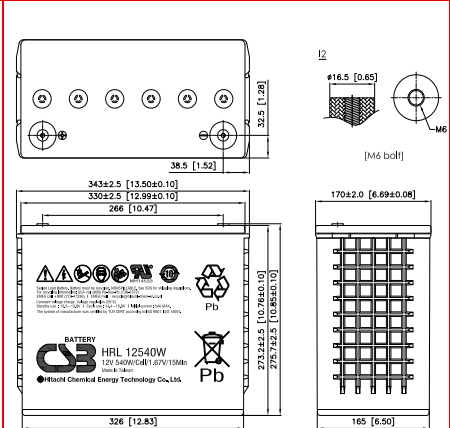
**Valve Regulated Lead Acid Battery**

Maintenance-Free Sealed Lead Acid Battery.  
Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99%.

**Design for Standby Power Applications**

<p><b>【Design Life】</b> Up to 10 Years in Standby Service at 25°C Eurobat (20°C) : 10-12 years, Long Life</p> <p><b>【Operating Temperature Range】</b> Nominal Operating Temperature : 25°C (77°F) Discharge : -15°C ~ 50°C (5°F~122°F) Charge: -15°C ~ 40°C (5°F~104°F) Storage: -15°C ~ 40°C (5°F~104°F)</p>	<p><b>【Float Charging Voltage】</b> 13.5 ~ 13.8 VDC/Unit at 25°C (77°F)</p> <p><b>【Equalization Charging Voltage】</b> 14.4 ~ 15.0 VDC/Unit at 25°C (77°F)</p> <p><b>【Self Discharge】</b> Less than 10% after 90 days, can be stored up to 6 months at 25°C (77°F); Fully recharging is required before usage, and charged sooner if stored at higher temperature than 25°C (77°F).</p>
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Specification		Design according with IEC 60896-21/22:2004	
Nominal Voltage	12V (6 cells per unit)		
Nominal Capacity	540W @15min-rate to 1.67V per cell @25°C (77°F)		
Weight	Approx. 43.90 Kg (96.76 lbs)		
Maximum Discharge Current	800A (5sec)		
Internal Resistance	Approx. 2.60 mΩ		
Short Circuit Current	3523A		
Maximum Charge Current	54A		
Terminal types	I2 thread lead alloy terminal to accept M6 bolt		
Terminal breaking Torque	138.6 Kgf-cm / 120.3 Lbf-in / 13.58 N-m		
Container Material	PP (UL 94-HB) & Flame Retardant (94-V0) available upon request		
Dimensions	Length (L)	343.0±2.5 mm	13.50±0.10 inch
	Width (W)	170.0±2.0 mm	6.69±0.08 inch
	Container Height (h)	273.2±2.5 mm	10.76±0.10 inch
	Overall Height (H)	275.7±2.5 mm	10.85±0.10 inch



Constant Current Discharge Characteristics Unit: A (25°C, 77°F)												
F.V/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	720	572	530	498	436	394	308	256	187	134	106	75.5
1.67V	608	517	480	452	406	370	294	245	181	132	105	74.3
1.70V	564	493	457	430	392	354	286	240	178	129	103	73.8
1.75V	501	440	416	398	365	327	270	228	172	126	101	72.0
1.80V	430	391	375	362	323	296	252	209	161	120	97.9	70.3
1.85V	379	340	320	304	282	265	222	187	147	111	90.3	66.2

Constant Power Discharge Characteristics Unit: W (25°C, 77°F)												
F.V/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	6874	5883	5483	5176	4688	4186	3421	2716	2057	1518	1224	885
1.67V	6207	5325	5026	4794	4282	3885	3250	2630	2006	1492	1210	865
1.70V	5768	4937	4717	4544	4016	3661	3097	2564	1988	1480	1201	863
1.75V	5225	4639	4390	4196	3766	3472	2951	2454	1925	1441	1174	849
1.80V	4561	4310	4032	3818	3442	3233	2723	2306	1846	1385	1129	824
1.85V	4227	3643	3482	3356	3146	3010	2443	2104	1715	1295	1061	784

Please refer to the official site for the latest rating confirmation. URL: [www.csb-battery.com](http://www.csb-battery.com)

Issued: 180205

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Recognized under UL 1989,  
and certified by ISO 9001, 14001.

