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HR SERIES-HIGH RATE **BATTERIES**

HR 12330W

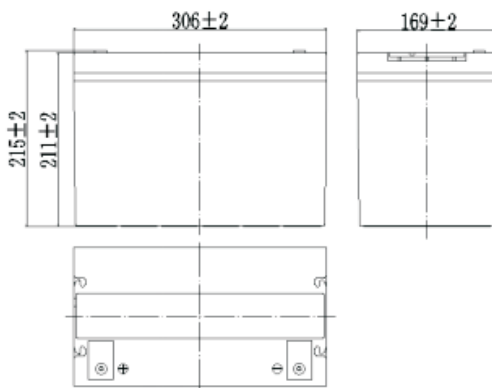


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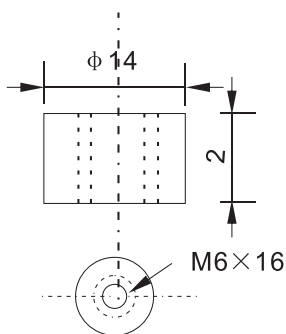
HR 12330W



Outer Dimensions (mm)



Terminal Type (mm)



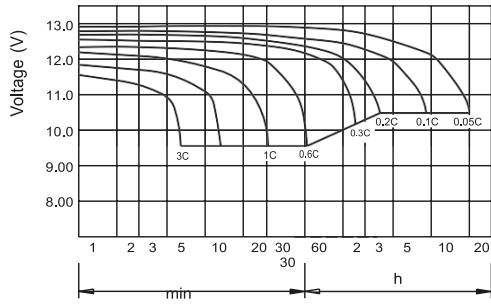
SPECIFICATIONS

Nominal Voltage	12V	
Number of Cell	6 cells	
Rated Capacity (15min. rat)	330 Watts/cell	
Dimensions	Length	306±2mm(12.05inch)
	Width	169±2mm(6.65inch)
	Height	211±2mm(8.31inch)
	Total Height	215±2mm(8.46inch)
Approx. Weight	28.5kg (62.8lbs)±3%	

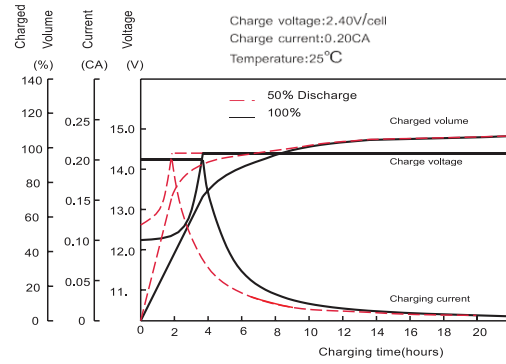
CHARACTERISTICS

Capacity (20HR, 25°C)	100Ah	
Capacity (15min.rate, 25°C)	330 Watts/cell	
Terminal Type	T14	
Internal Resistance (Fully Charged, 25°C)	Approx. 5mΩ	
Capacity Affected by Temperature (10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-Discharge (25°C)	3 months	Remaining Capacity: 91%
	6 months	Remaining Capacity: 82%
	12months	Remaining Capacity: 65%
Nominal Operating Temperature	25±3°C (77±5°F)	
Operating Temperature Range	Discharge	-15°C~50°C(5°F~122°F)
	Charge	-10°C~50°C(14°F~122°F)
	Storage	-20°C~50°C(4°F~122°F)
Float Charging Voltage (25°C)	13.50 to 13.80V Temperature Compensation: -18mV/°C	
Cyclic Charging Voltage (25°C)	14.50 to 15.00V Temperature Compensation: -30mV/°C	
Maximum Charging Current	30A	
Terminal Material	Copper	
Maximum Discharge Current	800A(5 sec)	
Design Floating Life(20°C)	10 Years	

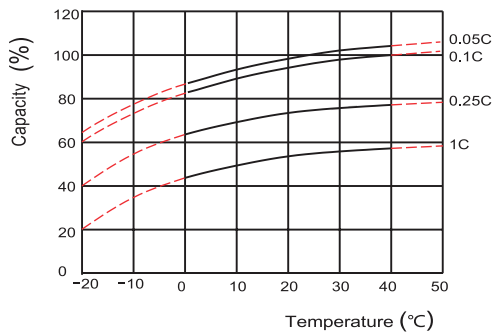
Discharge Characteristics



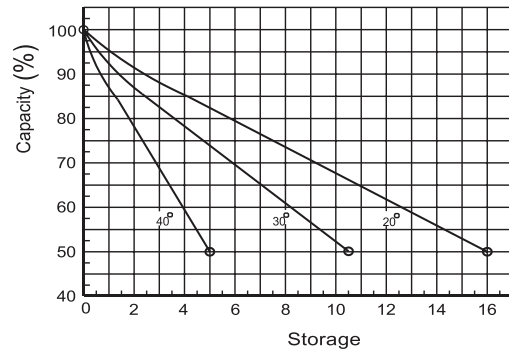
Charging Characteristics (25°C)



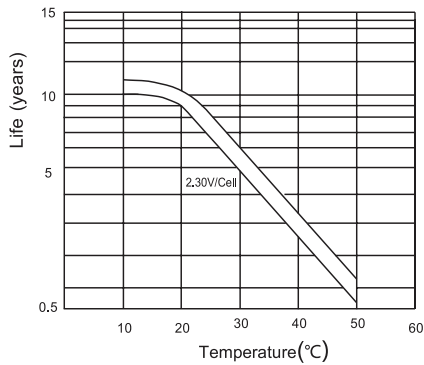
Effect of Temp on Capacity



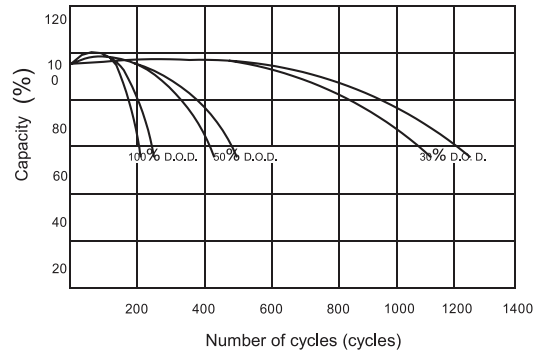
Self-Discharge Characteristics



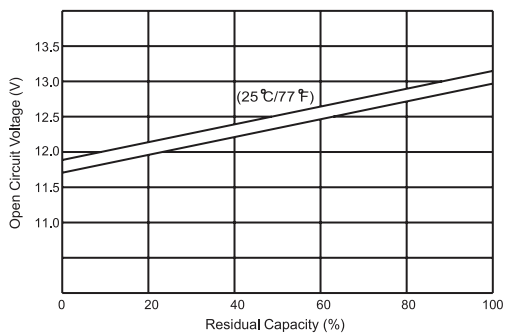
Floating Life on Temperature



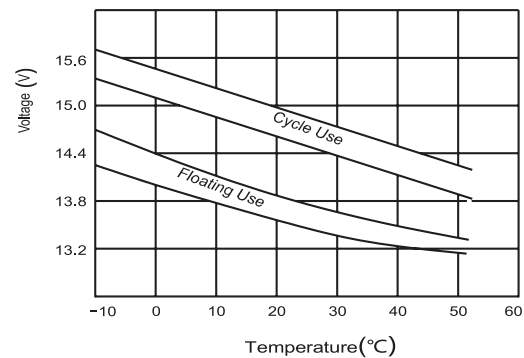
Cycle Service Life on D.O.D (25°C)



Relationship for OCV and Capacity (25°C)



Relationship for Charging Voltage and Temp



Construction

Component	Positive Plate	Negative Plate	Container	Cover	Separator	Electrolyte	Safety Valve	Terminal
Raw material	Lead Dioxide	Lead	ABS	ABS	AGM	Sulfuric Acid	Rubber	Copper

Constant Current Discharge Characteristics Unit: A(25°C, 77°F)

F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	215	176	141	99.8	74.4	60.7	34.7	24.9	20.1	17.4	14.9
1.67V/cell	206	171	135	96.6	72.0	59.2	34.4	24.7	19.9	17.3	14.8
1.70V/cell	200	166	132	94.8	70.6	58.2	34.2	24.6	19.8	17.2	14.7
1.75V/cell	192	160	128	92.5	68.9	57.1	33.7	24.4	19.7	17.1	14.6
1.80V/cell	181	151	121	89.1	66.4	55.3	32.8	23.7	19.1	16.6	14.2

Constant Power Discharge Characteristics Unit: W(25°C, 77°F)

F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	405	340	272	193	144	117	67.7	49.1	39.5	34.5	29.5
1.67V/cell	386	330	261	186	139	114	67.1	48.6	39.2	34.2	29.3
1.70V/cell	376	320	256	183	136	112	66.7	48.4	39.0	34.1	29.2
1.75V/cell	360	309	247	179	133	110	65.7	48.1	38.7	33.9	29.0
1.80V/cell	340	292	234	172	128	107	64.0	46.7	37.6	32.8	28.1



Starmax Corporation

1585 Cliveden Avenue, Delta, British Columbia
V3M 6M1, Canada

Phone: +1 888 669 1310

Email: info@starmaxbatteries.com

Website: www.starmaxbatteries.com

