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HR SERIES-HIGH RATE **BATTERIES**

HR 12200W

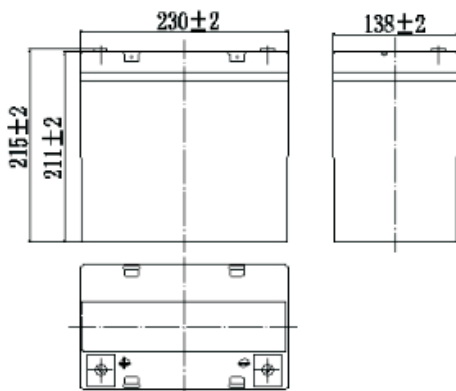


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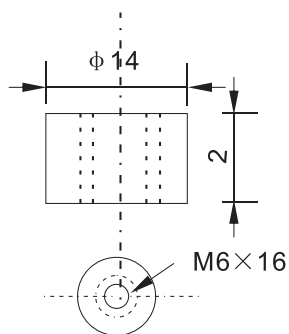
HR 12200W



Outer Dimensions (mm)



Terminal Type (mm)



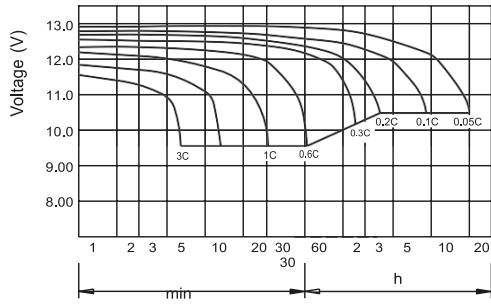
SPECIFICATIONS

Nominal Voltage	12V	
Number of Cell	6 cells	
Rated Capacity (15min. rat)	200 Watts/cell	
Dimensions	Length	230±2mm(9.06inch)
	Width	138±2mm(5.43inch)
	Height	211±2mm(8.31inch)
	Total Height	215±2mm(8.46inch)
Approx. Weight	17.3kg (38.1lbs)±3%	

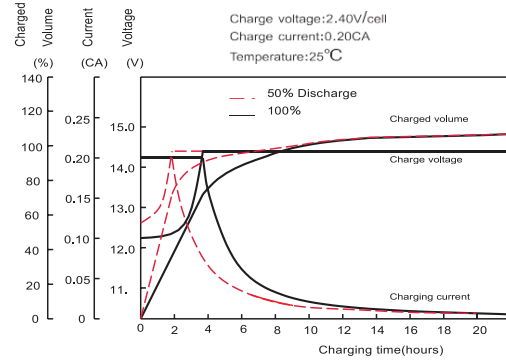
CHARACTERISTICS

Capacity (20HR, 25°C)	55Ah	
Capacity (15min.rate, 25°C)	200 Watts/cell	
Terminal Type	T14	
Internal Resistance (Fully Charged, 25°C)	Approx. 6.5mΩ	
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	16.5A	
Terminal Material	Copper	
Maximum Discharge Current	550A(5 sec)	
Design Floating Life(20°C)	10 Years	

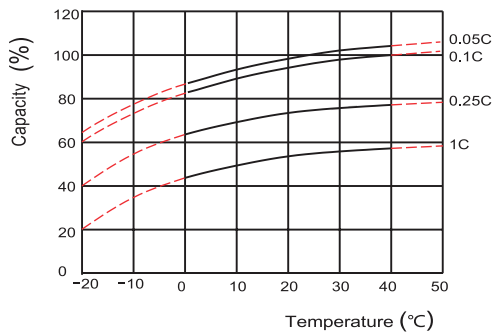
Discharge Characteristics



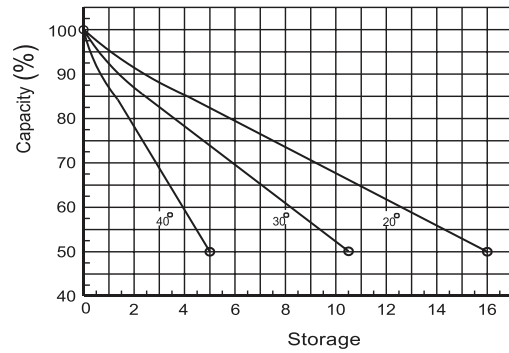
Charging Characteristics (25°C)



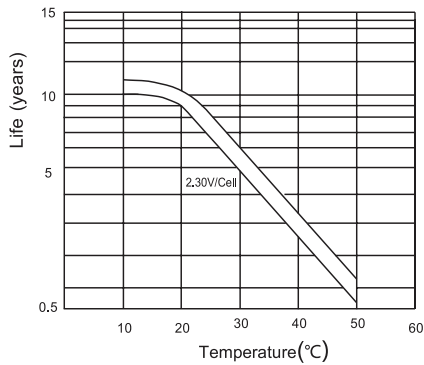
Effect of Temp on Capacity



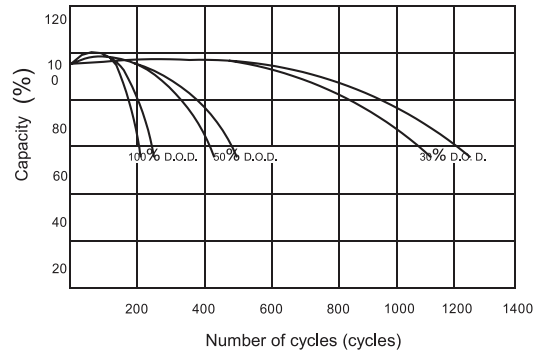
Self-Discharge Characteristics



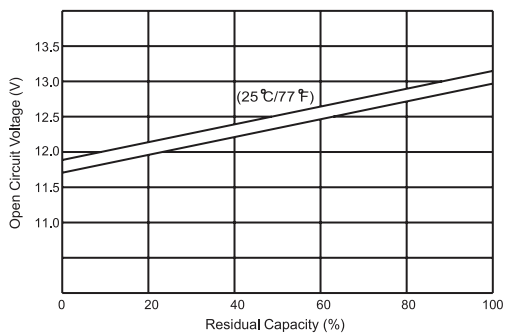
Floating Life on Temperature



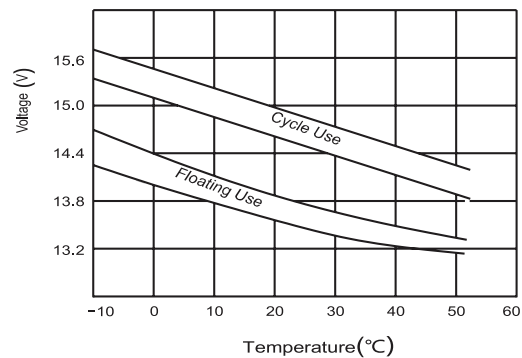
Cycle Service Life on D.O.D (25°C)



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	131	107	85.5	60.6	45.1	36.8	20.1	14.4	11.6	10.1	8.64
1.67V/cell	125	104	82.1	58.6	43.7	35.9	19.9	14.3	11.5	10.0	8.56
1.70V/cell	122	101	80.4	57.6	42.9	35.4	19.8	14.2	11.5	9.97	8.53
1.75V/cell	116	97.1	77.7	56.2	41.8	34.7	19.5	14.1	11.4	9.90	8.47
1.80V/cell	110	92.0	73.6	54.1	40.3	33.6	19.0	13.7	11.0	9.60	8.22

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	246	206	165	117	87.1	71.1	39.2	28.4	22.9	20.0	17.1
1.67V/cell	235	200	158	113	84.3	69.3	38.8	28.2	22.7	19.8	17.0
1.70V/cell	228	194	155	111	82.8	68.2	38.6	28.0	22.6	19.7	16.9
1.75V/cell	219	187	150	108	80.8	66.9	38.0	27.8	22.4	19.6	16.8
1.80V/cell	206	177	142	104	77.8	64.8	37.1	27.0	21.8	19.0	16.3



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