VRLA AGM battery

ATP HR12-540W-FR

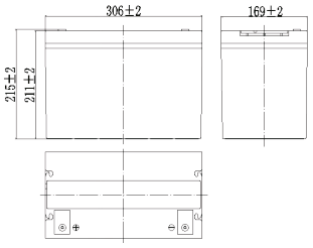
ATLANTIC POWERenergy

Atlantic Power High Rate series batteries are specially designed for applications that require high power output. With their high-power density and low internal resistance, the HR series are the right choice for your most demanding applications.

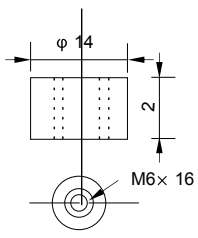
Specifications

Nominal Voltage		12V
Number of cell		6 cells
Rated capacity(15min.rat)		540 Watts/cell
Dimensions	Length	342±2mm(13.46inch)
	Width	172±2mm(6.77inch)
	Height	280±2mm(11.02inch)
	Total Height	285±2mm(11.2inch)
Approx. Weight		46.5kg(102.3lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity(20H R,25°C)		145Ah
Capacity(15min.rate,25°C)		540 Watts/cell
Terminal type		T16A
Internal resistance (Fully charged,25°C)		Approx.3.2m Ω
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%
	12 months	Remaining Capacity:65%
Nominal operating temperature		25°C ±3°C(77°F ±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		43.5A
Maximum discharge current		2015A(5 sec.)
Designed floating life(20°C)		10 years

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)

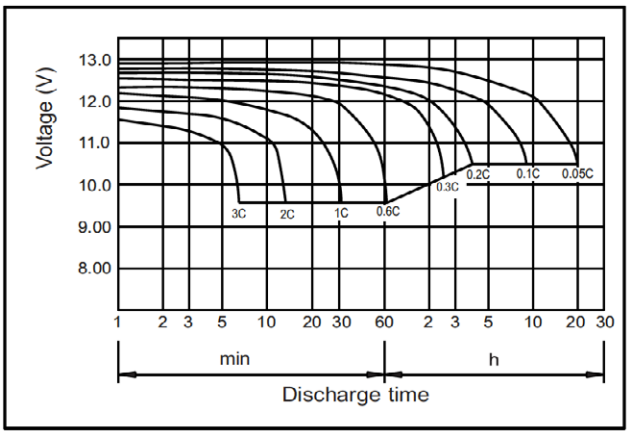
F.V/Time	5min	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V/cell	533.19	387.66	319.62	199.5	114.98	64.79	45.36	29.4	20.06	16.7	8.78
1.67V/cell	490.25	358.37	302.93	189.84	110.88	63.11	44.52	28.67	19.64	16.28	8.61
1.70V/cell	447.2	325.19	278.25	181.97	107.1	61.11	43.26	28.04	19.22	16.07	8.46
1.75V/cell	400.37	295.89	253.26	169.89	102.17	59.12	42.11	27.41	18.8	15.75	8.33
1.80V/cell	343.77	264.6	228.48	158.24	96.71	56.7	40.74	26.78	18.48	15.44	8.14

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

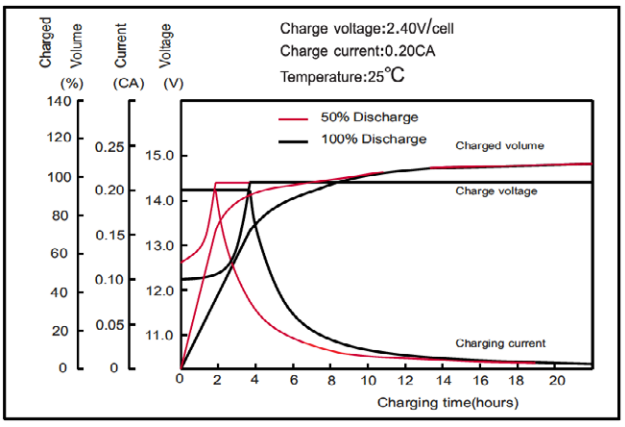
F.V/Time	5min	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V/cell	954.35	700.88	586.53	372.12	217.88	123.59	87.05	57.02	39.38	32.87	17.43
1.67V/cell	894.6	661.61	565.95	361.62	213.99	122.64	86.94	56.6	39.06	32.76	17.43
1.70V/cell	824.67	606.8	524.16	348.71	207.8	119.28	84.84	55.65	38.54	32.45	17.22
1.75V/cell	745.61	557.24	481.85	327.81	199.71	116.24	83.16	54.6	37.91	31.92	17.01
1.80V/cell	646.17	504.84	438.69	307.65	190.37	112.14	80.96	53.66	37.38	31.5	16.7

Note: The above characteristics data can be obtained within three charge or discharge cycles.

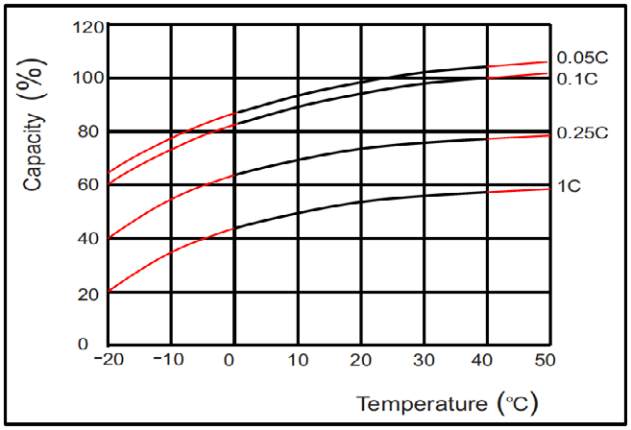
Discharge characteristics(25°C)



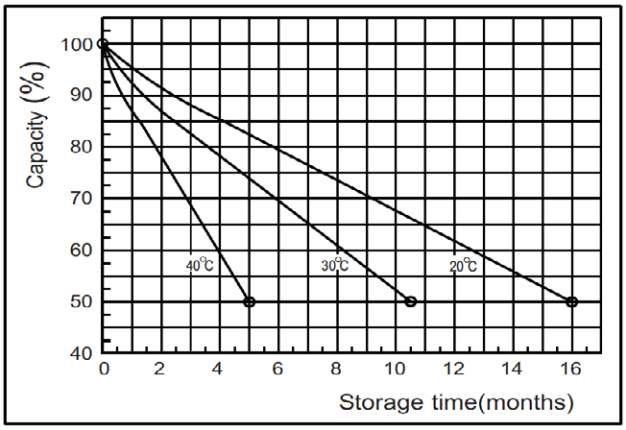
Charging characteristics



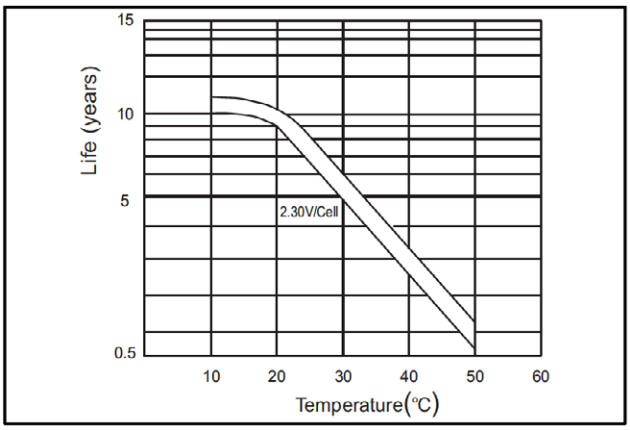
Effect of Temperature on Capacity



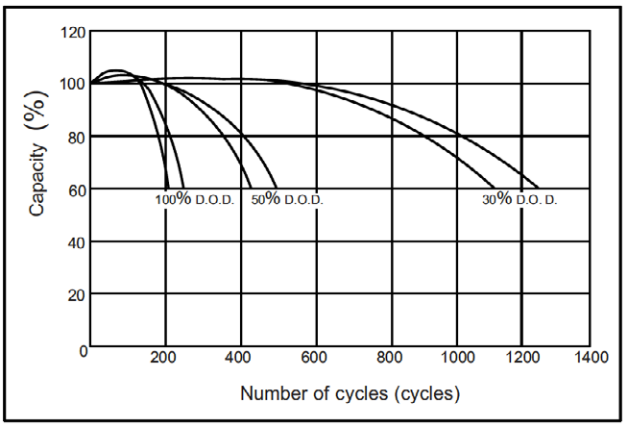
Self-discharge characteristics



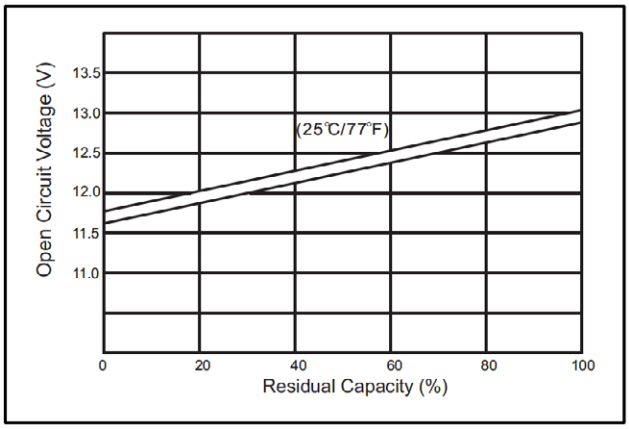
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25't)



The relationship for Charging voltage and Temperature