

VRLA AGM battery

ATP HR12-500W-FR

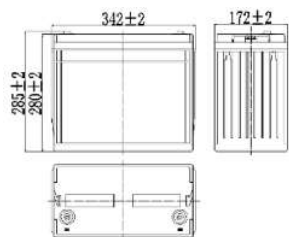


Atlantic Power High Rate series batteries are specially designed for applications that require high power output. With their high-power density and low internal resistance, the HR series are the right choice for your most demanding applications.

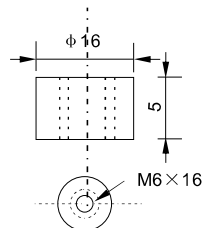
Specifications

Nominal Voltage		12V
Number of cell		6 cells
Rated capacity(15min.rat)		500 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		44kg(97.0lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity(20H R,25°C)		140Ah
Capacity(15min.rate,25°C)		500 Watts/cell
Terminal type		T16A
Internal resistance (Fully charged,25°C)		Approx.3.8m 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		42A
Maximum discharge current		1050A(5 sec.)
Designed floating life(20°C)		10years

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)

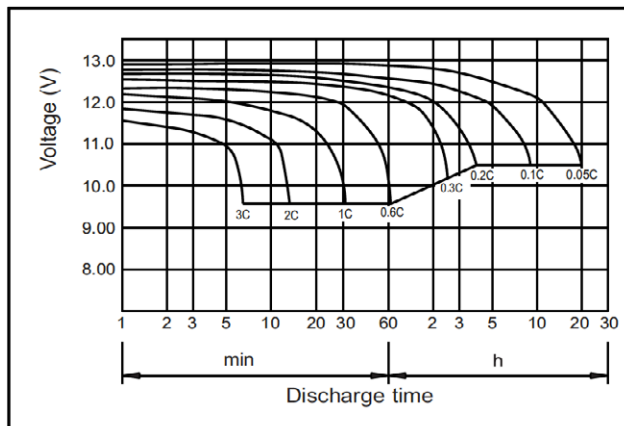
F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	328.6	269.2	215.2	152.6	113.4	92.8	53.1	38.1	30.6	26.7	22.8
1.67V/cell	313.8	260.8	206.7	147.3	110.2	90.4	52.6	37.7	30.4	26.4	22.6
1.70V/cell	302.1	253.3	202.5	145.2	108.1	89.1	52.6	37.6	30.3	26.3	22.5
1.75V/cell	292.6	244.9	196.1	141	105.4	87.2	51.5	37.3	30.1	26.2	22.4
1.80V/cell	276.7	231.1	185.5	136.7	101.6	84.6	50.1	36.3	29.2	25.3	21.8

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

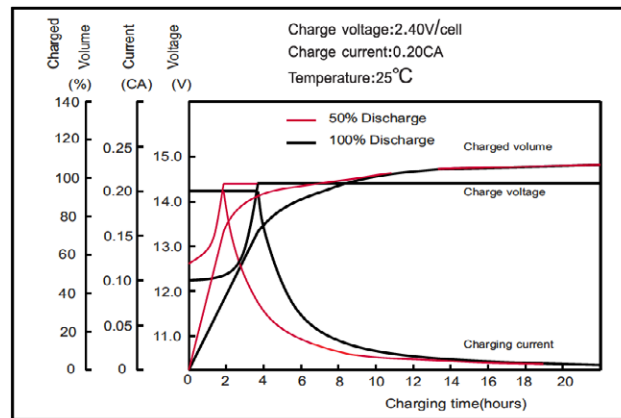
F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	619.1	519.4	415.5	294.7	219.4	179.1	103.5	74.9	60.4	52.8	45.2
1.67V/cell	590.4	504.6	398.6	285.1	212	174.9	102.6	74.3	59.9	52.4	44.7
1.70V/cell	575.6	488.7	391.1	279.8	208.8	171.7	102	74	59.7	52.2	44.6
1.75V/cell	550.1	471.7	377.4	273.5	203.5	168.5	100.4	73.6	59.3	51.7	44.3
1.80V/cell	519.4	447.3	357.2	262.9	196.1	163.2	97.8	71.3	57.5	50.2	42.9

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

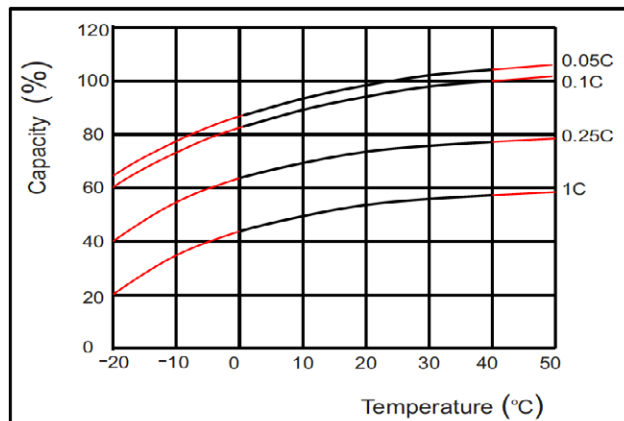
Discharge characteristics(25°C)



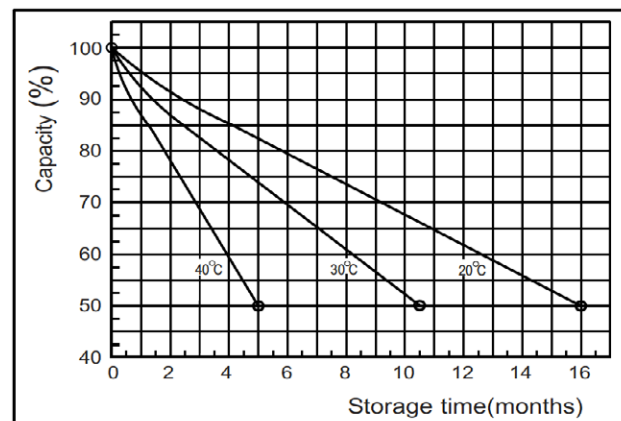
Charging characteristics



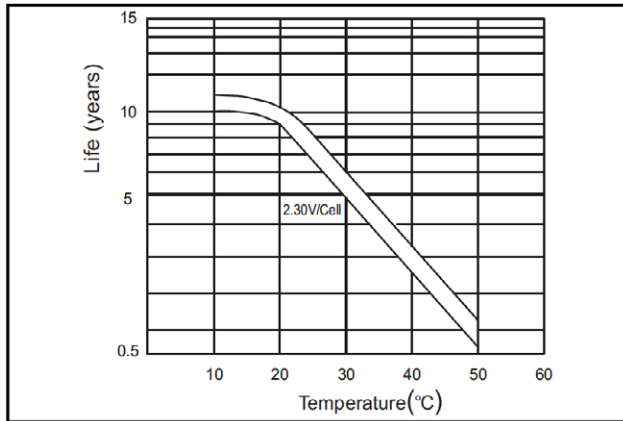
Effect of Temperature on Capacity



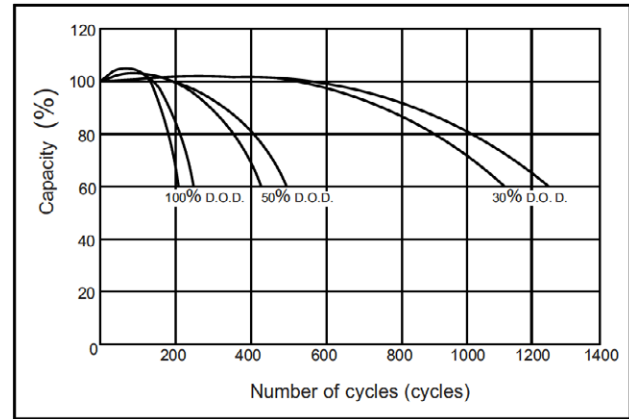
Self-discharge characteristics



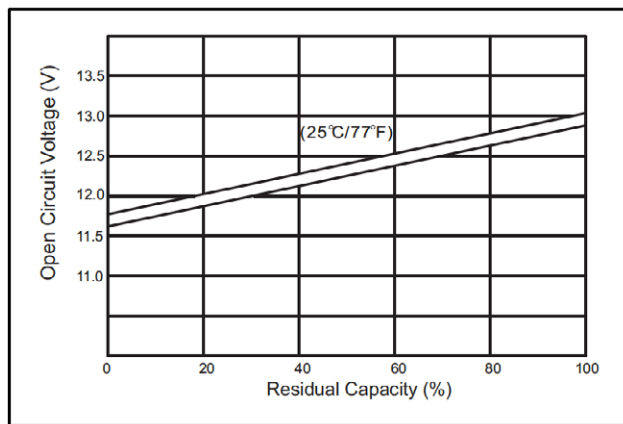
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25't)



The relationship for Charging voltage and Temperature

