

ATPDG2-1500Ah

2V/1500Ah VRLA Gel Cell

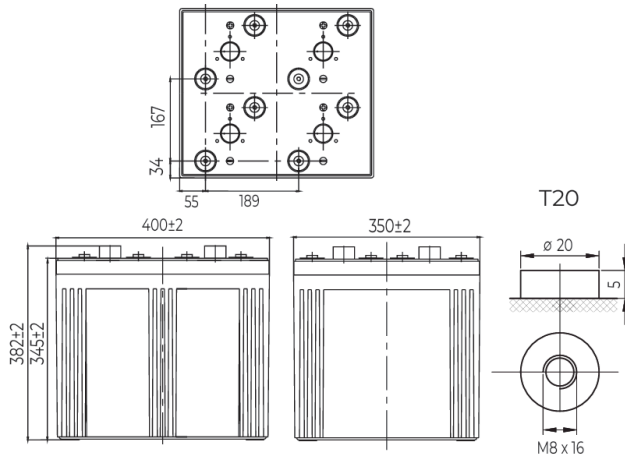


Atlantic Power ATPDG2 Power AGM GEL Series are manufactured following the highest demands in the deep cycle and renewable energy applications. The batteries use colloidal or foamed silica gel to immobilize the electrolyte, which further enhances the cycling stability.

General characteristics

Nominal Voltage		2V
Rated capacity (10-hour rate)		1500Ah
Dimensions	Length	400±2mm(15.75inch)
	Width	350±2mm(13.78inch)
	Height	345±2mm(13.58inch)
	Total Height	382±2mm(15.04inch)
Approx. Weight		96.5kg(212.7lbs) ±3%

Dimensions & terminal type (mm)



Specifications

Capacity (25°C)	10HR (10.8V)	1500Ah
	3HR (10.8V)	1125Ah
	1HR (10.5V)	825Ah
Terminal type	T20	
Internal resistance (Fully charged, 25°C)	Approx. 0.23m Ω	
Capacity affected by temperature (10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	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)	2.25 to 2.30V Temperature compensation: -3mV/°C	
Cyclic charging voltage(25°C)	2.40 to 2.45V Temperature compensation: -5mV/°C	
Maximum charging current	300A	
Maximum discharge current	7500A (5 sec.)	
Designed life, stand-by at 20°C	18 years	
Minimum Life Cycles at 25°C	1100-1200 cycles at 30% DoD 1200-1400 cycles at 20% DoD	
Efficiency value	≥ 85%	
Humidity range	Operating range ≤95% Storage range ≤85%	
Operating altitude	> 4000 meters above sea level	
Self-Discharge Rate (25°C)	≤3%/ Month	
Self-discharge time in storage at 25 °C	24 Months	
Optional accessories	Terminal protectors	
Battery container ABS UL94-HB	ABS UL94-HB (optional)	
Certification	CE	

Construction

Component	Positive plate	Negative plate	Container	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS (V-0 opt.)	AGM	Sulfuric Acid Gel	Rubber	Copper

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

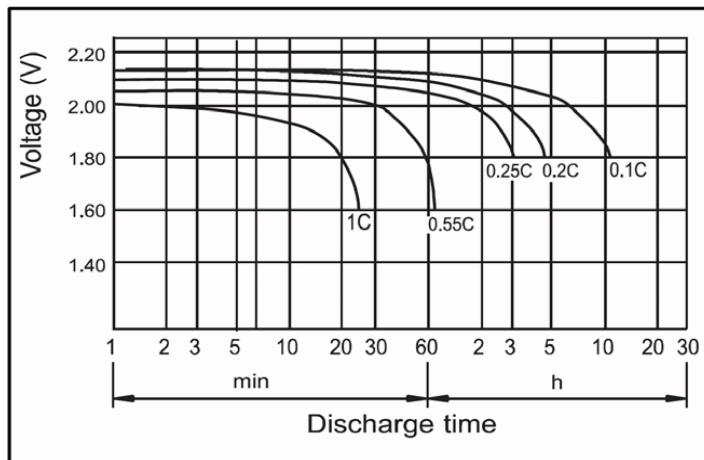
F.V/Time	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h	24h
1.60V	1305	900	540	392	309	257	226	181	153	80.2	68.9
1.65V	1279	882	537	389	307	256	225	179	152	80.0	68.7
1.70V	1240	855	533	387	305	254	224	178	152	79.8	68.5
1.75V	1210	837	525	384	303	252	222	177	151	79.3	68.1
1.80V	1165	810	511	376	294	244	215	172	150	78.8	67.7

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

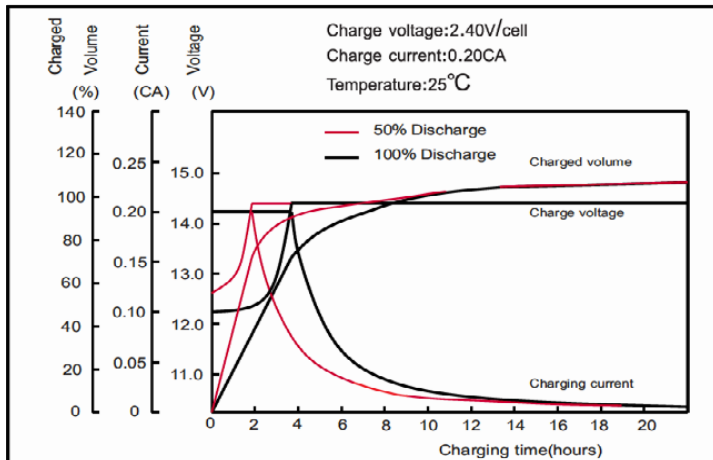
F.V/Time	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h	24h
1.60V	2440	1710	1043	768	606	506	446	359	304	160	138
1.65V	2392	1676	1037	763	602	503	443	357	303	160	138
1.70V	2318	1625	1028	758	598	500	440	355	302	160	138
1.75V	2262	1590	1012	753	594	496	437	352	301	159	137
1.80V	2179	1539	987	738	576	482	424	342	299	158	136

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

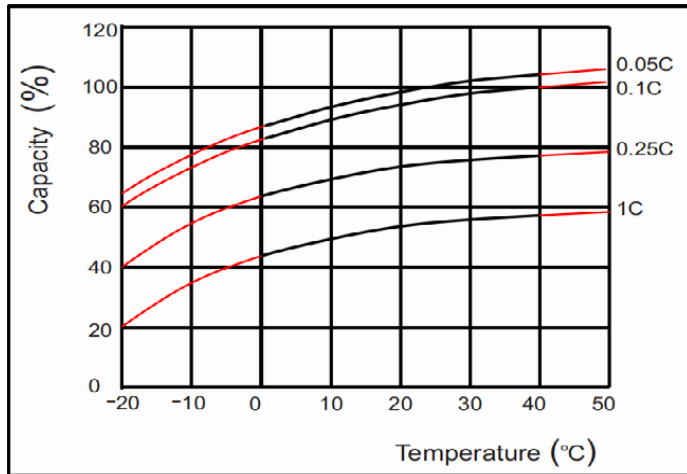
Discharge characteristics(25°C)



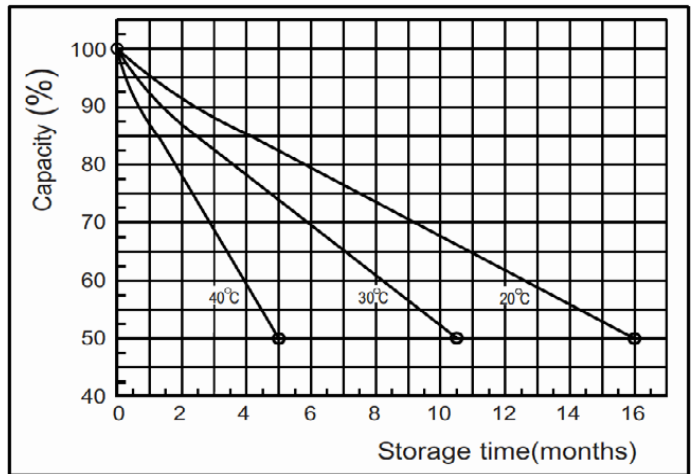
Charging characteristics



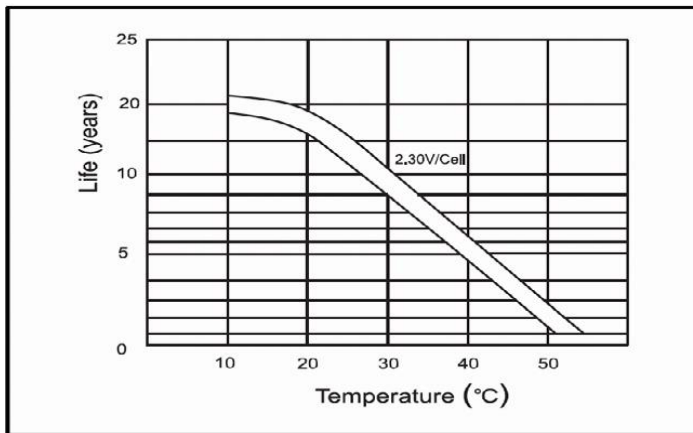
Effect of Temperature on Capacity



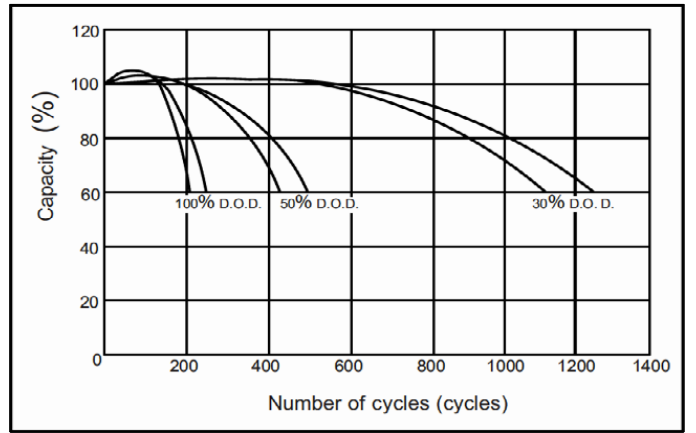
Self-discharge characteristics



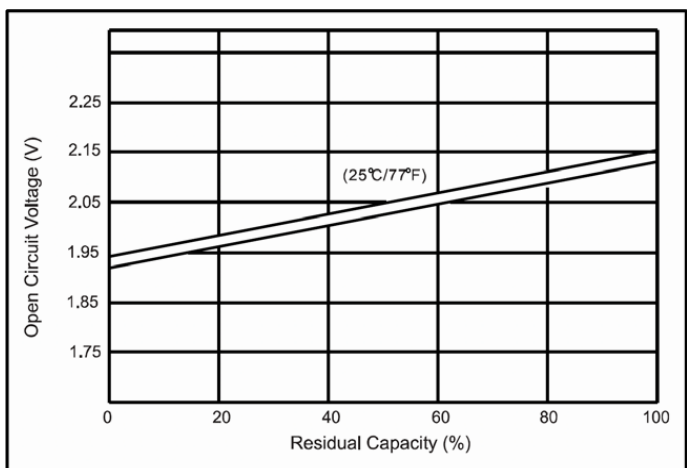
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25°C)



The relationship for Charging voltage and Temperature

