

VRLA Gel Type Cell

ATP-DG2-2000AH



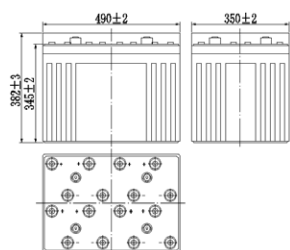
ATP-DG Series are manufactured following the highest demands in the deep cycle and renewable energy applications. The batteries use colloidal or foamed silica gel to immobilize the electrolyte, which further enhances the cycling stability. Available in top and front terminal types.



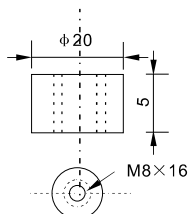
Specifications

Nominal Voltage		2V
Rated capacity (20 hour rate)		2000Ah
Dimensions	Length	490±2mm(19.29inch)
	Width	350±2mm(13.78inch)
	Height	345±2mm(13.58inch)
	Total Height	382±2mm(15.04inch)
Approx. Weight		131kg(288.8lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



For front terminal version, consult dimensions with the manufacturer.

Characteristics

Capacity (25°C)	10HR(10.8V)	2000Ah
	3HR(10.8V)	1500Ah
	1HR(10.5V)	1160Ah
Terminal type		T20
Internal resistance (Fully charged, 25°C)		Approx. 0.2mΩ
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		400A
Maximum discharge current		10000A(5 sec.)
Designed floating life(20°C)		18 years

Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Gel	Rubber	Copper

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

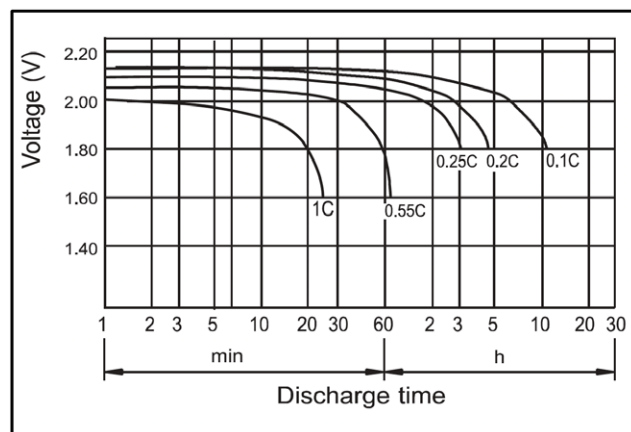
F.V/Time	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h	24h
1.60V	1740	1200	721	522	412	343	302	241	204	107	91.8
1.65V	1705	1176	716	519	410	341	300	239	203	107	91.6
1.70V	1653	1140	710	516	407	338	298	238	203	106	91.4
1.75V	1613	1116	699	512	404	336	296	236	201	106	90.8
1.80V	1554	1080	682	502	392	326	287	229	200	105	90.2

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

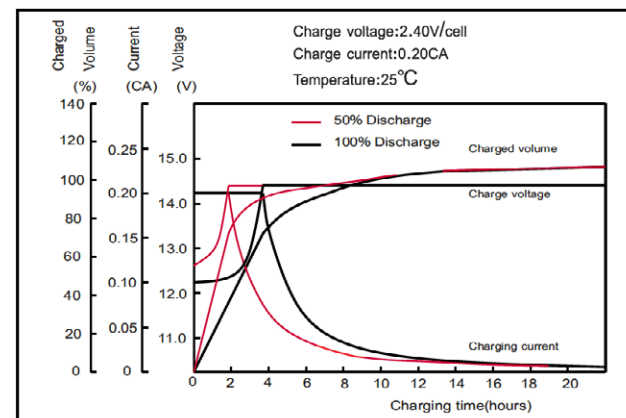
F.V/Time	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h	24h
1.60V	3254	2280	1391	1024	808	675	595	479	405	214	185
1.65V	3189	2234	1383	1018	803	671	591	476	404	213	184
1.70V	3091	2166	1370	1011	797	667	587	473	403	213	184
1.75V	3016	2120	1350	1004	792	662	583	470	401	211	183
1.80V	2906	2052	1315	983	768	642	566	456	398	210	181

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

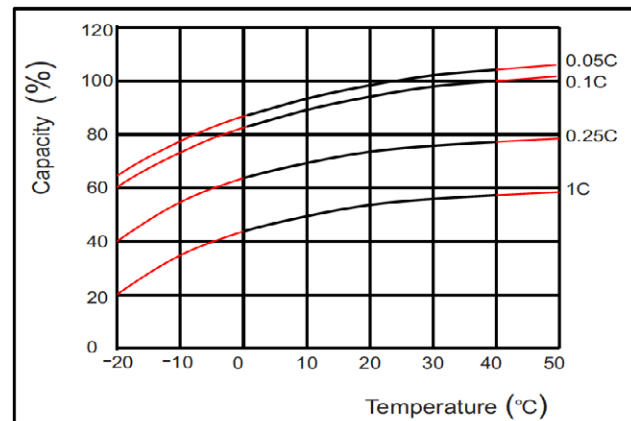
Discharge characteristics(25°C)



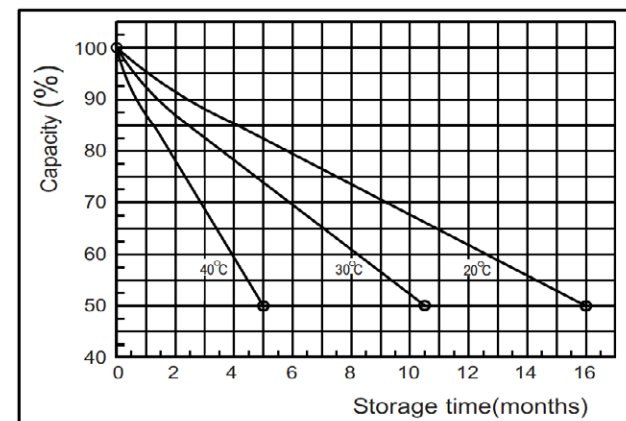
Charging characteristics



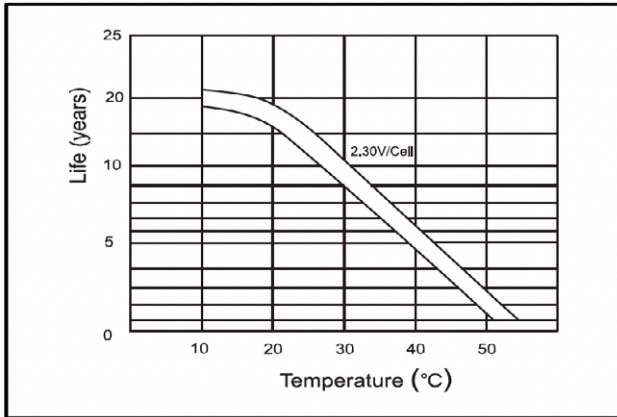
Effect of Temperature on Capacity



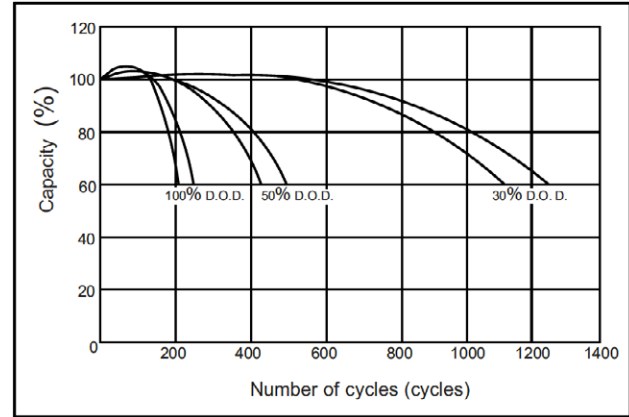
Self-discharge characteristics



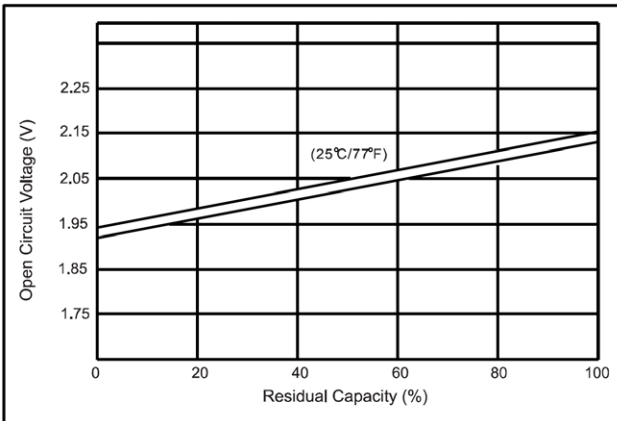
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25't)



The relationship for Charging voltage and Temperature

