

VRLA Gel Type Cell

ATP-DG2-1000AH

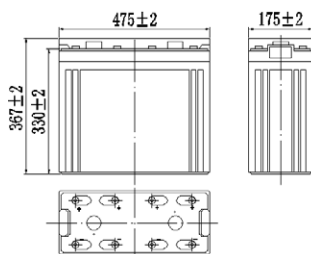


ATP-DG Series are manufactured following the highest demands in the deep cycle and renewable energy applications. The batteries use colloidal or foamed silica gel to immobilize the electrolyte, which further enhances the cycling stability. Available in top and front terminal types.

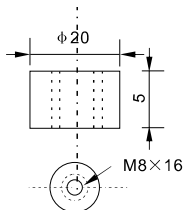
Specifications

Nominal Voltage		2V
Rated capacity (20 hour rate)		1000Ah
Dimensions	Length	475±2mm(18.70inch)
	Width	175±2mm(6.89inch)
	Height	330±2mm(12.99inch)
	Total Height	367±2mm(14.45inch)
Approx. Weight		63kg(138.9lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



For front terminal version, consult dimensions with the manufacturer.

Characteristics

Capacity (25°C)	10HR(10.8V)	1000Ah
	3HR(10.8V)	750Ah
	1HR(10.5V)	550Ah
Terminal type		T20
Internal resistance (Fully charged, 25°C)		Approx. 0.3mΩ
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		200A
Maximum discharge current		5500A(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)

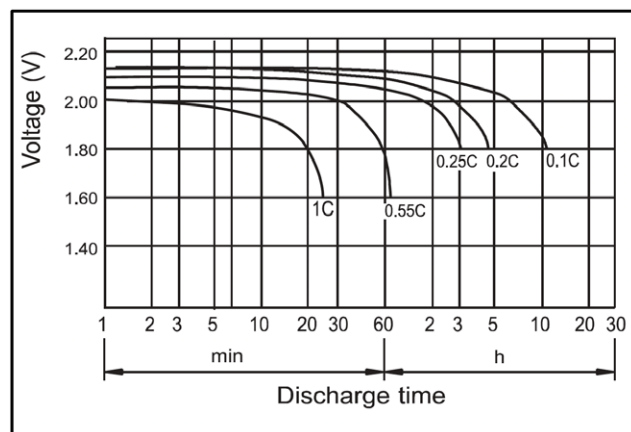
F.V/Time	15min	30min	60min	2h	3h	4h	Sh	6h	8h	10h	20h
1.60V	1250	870	600	360	261	206	171	151	120	102	53.4
1.65V	1220	853	588	358	260	205	170	150	120	102	53.3
1.70V	1175	827	570	355	258	203	169	149	119	101	53.2
1.75V	1135	806	558	350	256	202	168	148	118	101	52.9
1.80V	1075	777	540	341	251	196	163	144	114	100	52.5

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

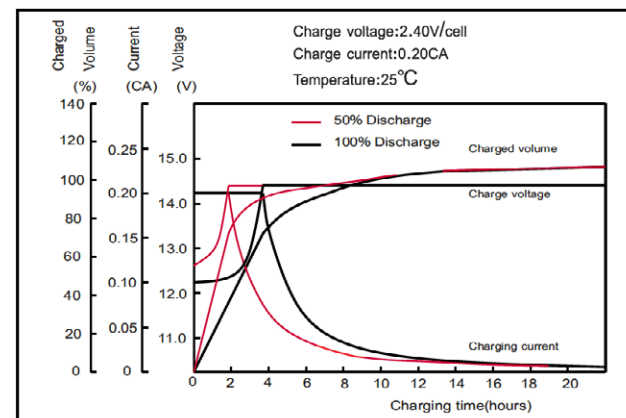
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	2288	1627	1140	695	512	404	338	297	240	203	107
1.65V	2233	1594	1117	691	509	401	336	296	238	202	107
1.70V	2150	1546	1083	685	505	399	333	294	236	202	106
1.75V	2077	1508	1060	675	502	396	331	292	235	200	106
1.80V	1967	1453	1026	658	492	384	321	283	228	199	105

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

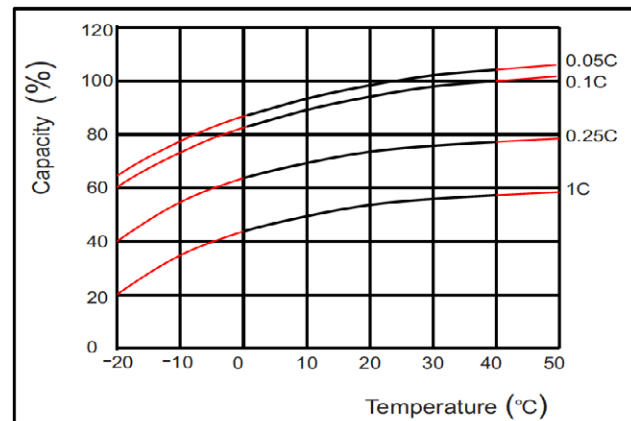
Discharge characteristics(25°C)



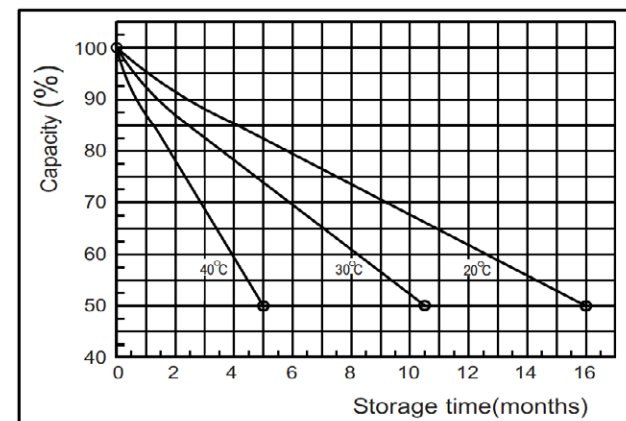
Charging characteristics



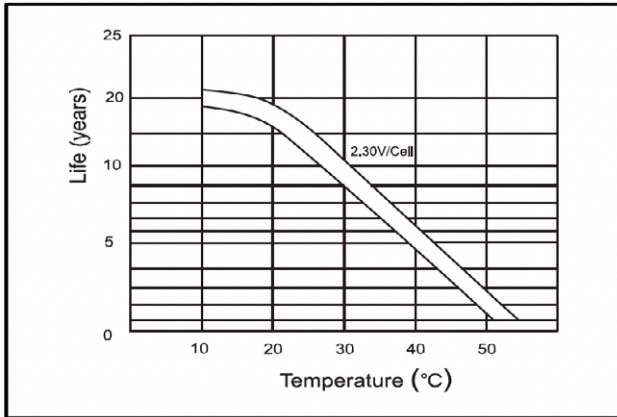
Effect of Temperature on Capacity



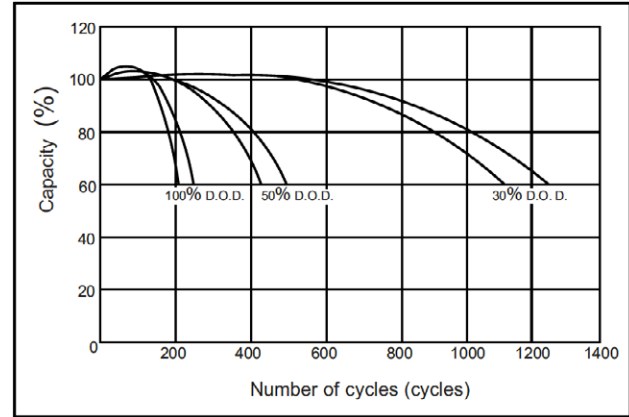
Self-discharge characteristics



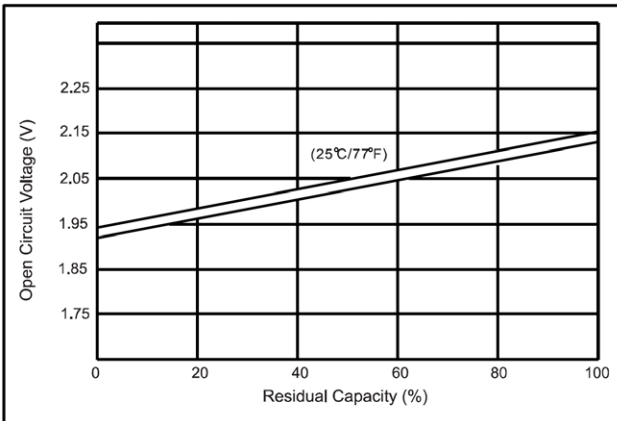
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25't)



The relationship for Charging voltage and Temperature

