

VRLA AGM cells

ATP2-400AH

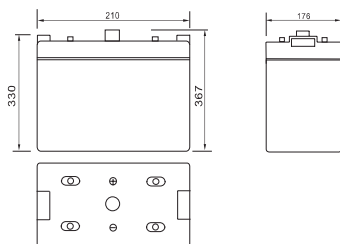


ATP VRLA AGM cells are designed with state-of-the-art AGM (Absorbent Glass Mat) technology, high-performance plates and electrolyte. With high performance features, this range is suitable for all general purpose applications offering stable quality and high reliability, long life, maintenance free operation and heavy duty gratings.

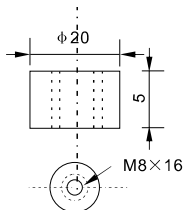
Specifications

Nominal Voltage		2V
Rated capacity (20 hour rate)		400Ah
Dimensions	Length	210±2mm(8.27inch)
	Width	176±2mm(6.93inch)
	Height	330±2mm(12.99inch)
	Total Height	367±2mm(14.45inch)
Approx. Weight		25.5kg(56.2lbs)± 3%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity (25°C)	10HR(10.8V)	400Ah
	3HR(10.8V)	300Ah
	1HR(10.5V)	220Ah
Terminal type		T20
Internal resistance (Fully charged, 25°C)		Approx. 0.6mΩ
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		80A
Maximum discharge current		2500A (5 sec.)
Designed floating life (20°C)		15 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)

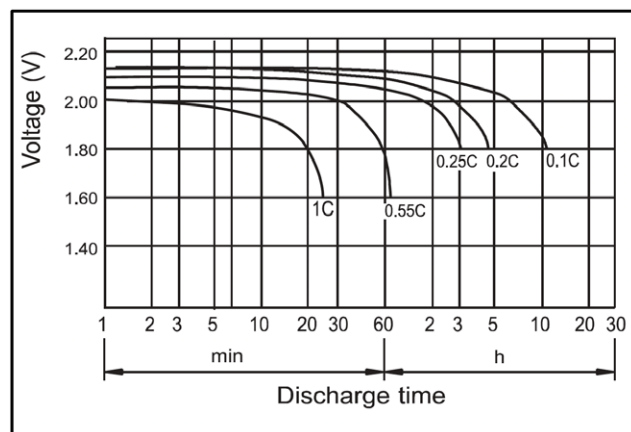
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	556	364	252	147	106	84.9	73.0	62.8	49.6	40.9	21.6
1.65V	543	357	244	147	105	84.4	72.6	62.5	49.3	40.8	21.5
1.70V	523	346	237	145	105	83.8	72.1	62.0	48.9	40.7	21.5
1.75V	505	337	229	143	104	83.2	71.6	61.6	48.6	40.5	21.3
1.80V	478	325	222	139	101	80.7	69.5	59.8	47.1	40.2	21.2

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

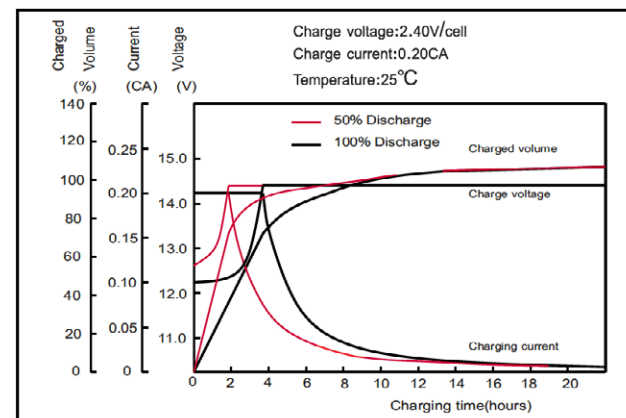
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	1017	681	479	284	208	166	144	124	98.6	81.4	43.2
1.65V	993	667	464	283	207	165	143	123	98.1	81.3	43.1
1.70V	956	647	450	280	205	164	142	122	97.4	81.0	43.0
1.75V	924	631	436	276	204	163	141	121	96.7	80.6	42.7
1.80V	875	608	421	269	198	158	137	118	93.8	80.0	42.4

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

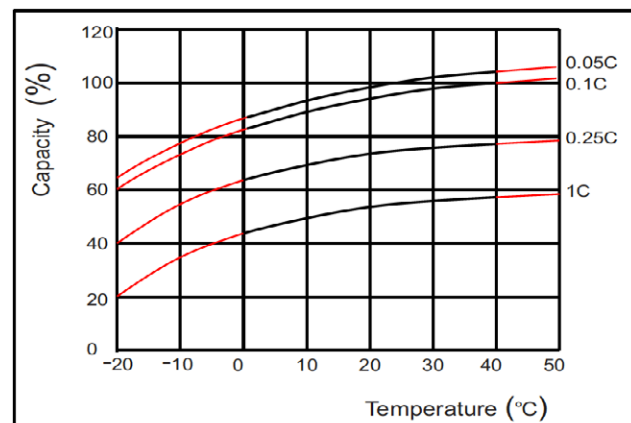
Discharge characteristics(25°C)



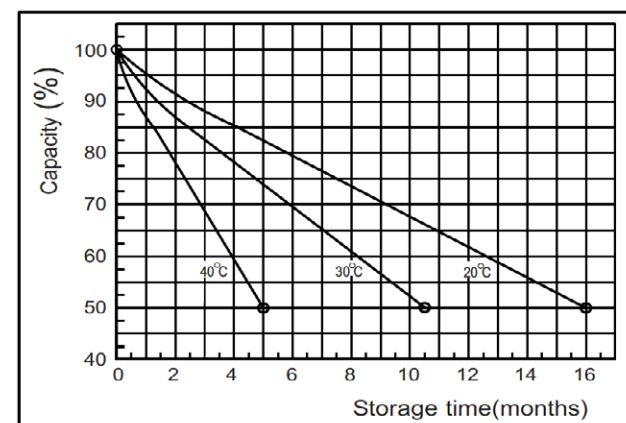
Charging characteristics



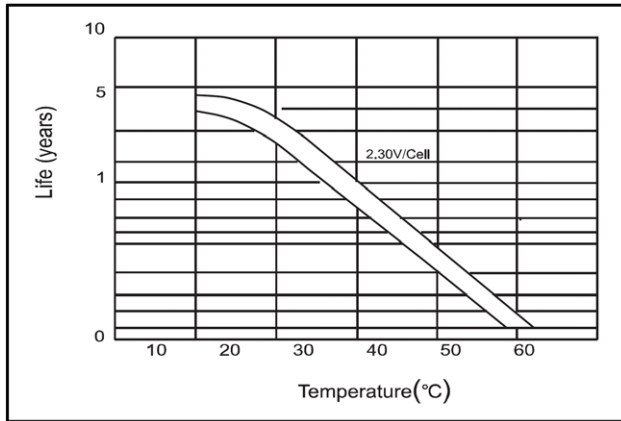
Effect of Temperature on Capacity



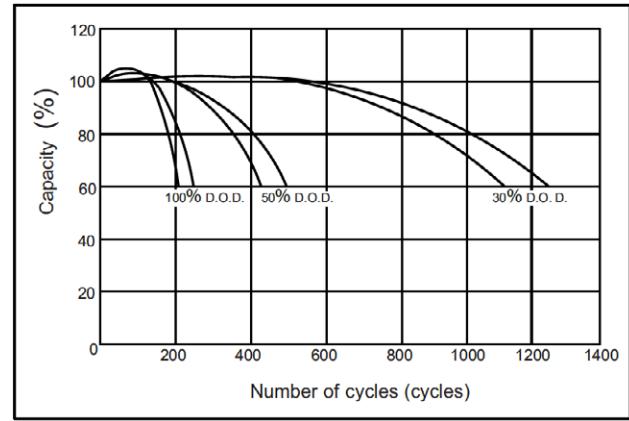
Self-discharge characteristics



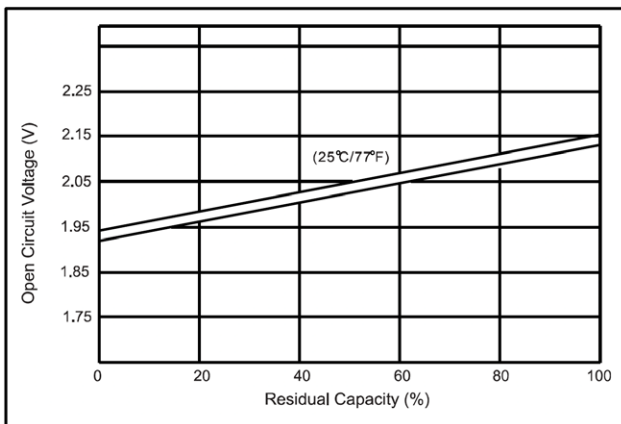
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25't)



The relationship for Charging voltage and Temperature

