

**ZR 2-500 2V 500Ah**

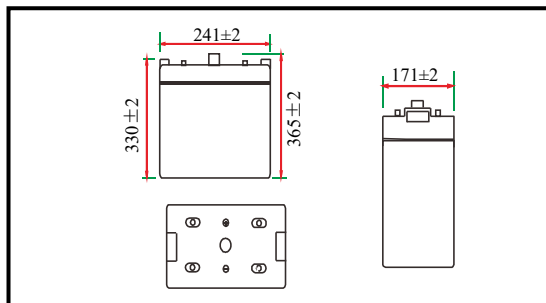
Valve Regulated Lead Acid Battery



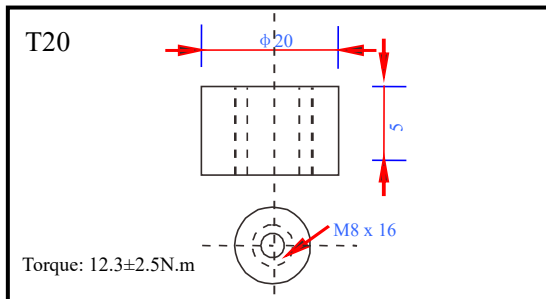
● Specifications

Nominal voltage	2V (1 cell per unit)	
Rated capacity (10HR)	500Ah/10.8V	
Dimensions	Length	241±2mm (9.49inch)
	Width	171±2mm (6.73inch)
	Height	330±2mm (12.99inch)
	Total height	365±2mm (14.37inch)
Approx. weight	31.50kg (69.40lbs)±3%	

● Outer dimensions (mm)



● Terminal type (mm)



● Characteristics

Capacity (25°C)	10HR (1.80V)	500Ah
	3HR (1.80V)	375Ah
	1HR (1.75V)	275Ah
Terminal type		T20
Internal resistance (Fully charged, 25°C)		Approx. 0.5mΩ
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)		2.25 to 2.30V Temperature compensation: -3mV/°C/Block
Cyclic charging voltage (25°C)		2.40 to 2.50V Temperature compensation: -5mV/°C/Block
Maximum charging current		100A
Maximum discharge current		3000A (5 sec.)
Design life	15 years for floating (25°C)	
	Eurobat (20°C) >12 years, very long life.	

● 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: Ampere/Block (at 25°C, 77°F)

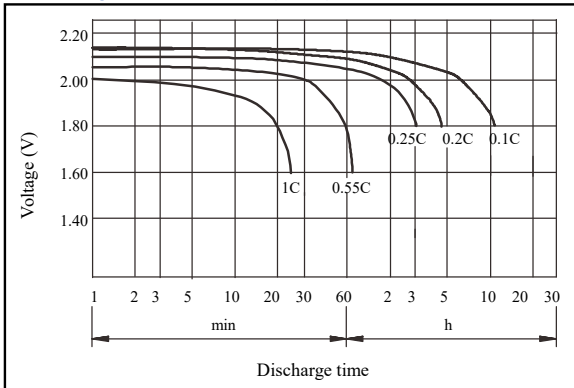
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
1.60V/cell	695	455	315	184	133	106	91.3	78.5	62.0	51.2	27.0
1.65V/cell	678	446	306	183	132	105	90.8	78.1	61.6	51.1	26.9
1.70V/cell	653	432	296	182	131	105	90.1	77.5	61.2	50.9	26.8
1.75V/cell	631	422	287	179	130	104	89.5	77.0	60.8	50.6	26.7
1.80V/cell	598	406	277	174	126	101	86.8	74.7	58.9	50.3	26.5

● Constant power discharge characteristics unit: Watt/Block (at 25°C, 77°F)

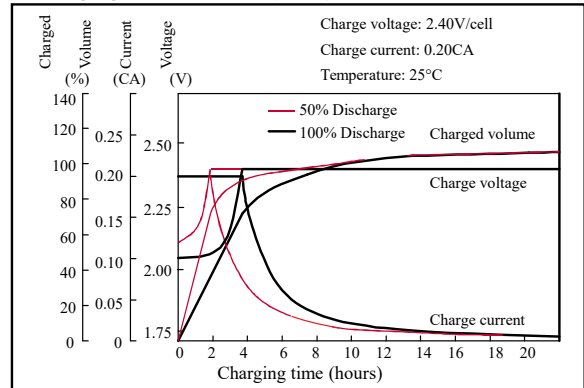
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
1.60V/cell	1272	851	599	356	260	208	180	155	123	102	54.0
1.65V/cell	1241	834	581	353	258	207	179	154	123	102	53.8
1.70V/cell	1196	808	563	350	257	205	178	153	122	101	53.7
1.75V/cell	1155	789	545	345	255	204	176	152	121	101	53.4
1.80V/cell	1094	760	527	336	247	198	171	147	117	100	53.0

Note 1: Above characteristics data can be obtained within three charge and discharge cycles.

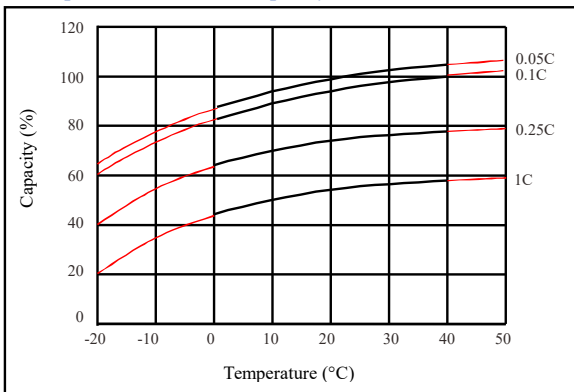
● Discharge characteristics (25°C)



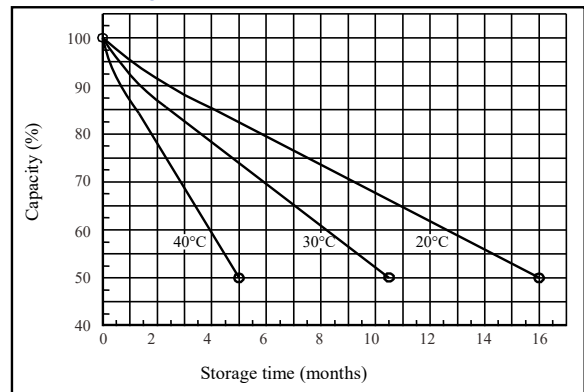
● Charging characteristics (25°C)



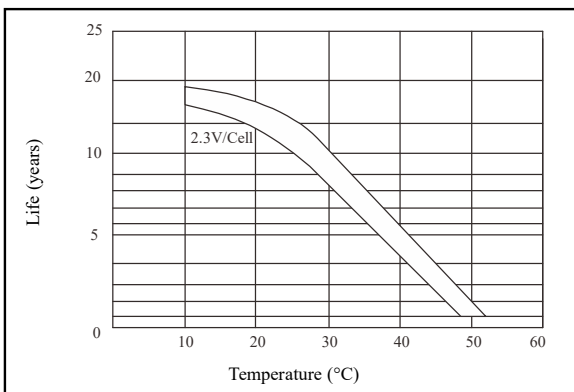
● Temperature effects on capacity



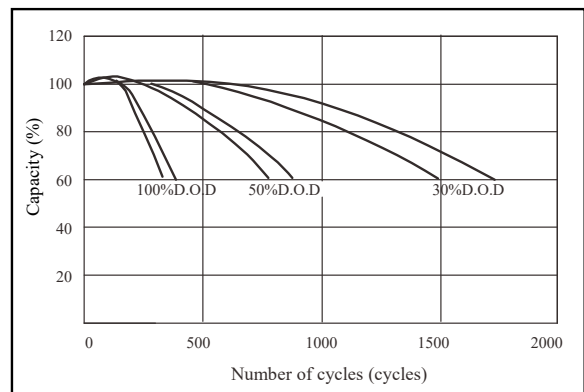
● Self-discharge characteristics



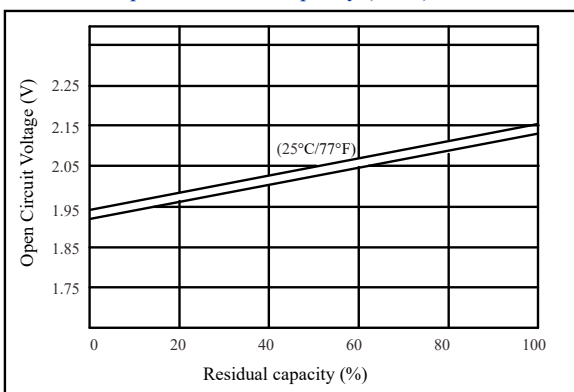
● Floating life on temperature



● Cycle life on D.O.D (25°C)



● Relationship for OCV and capacity (25°C)



● Relationship for charging voltage and temperature

