

# NEWSTAR

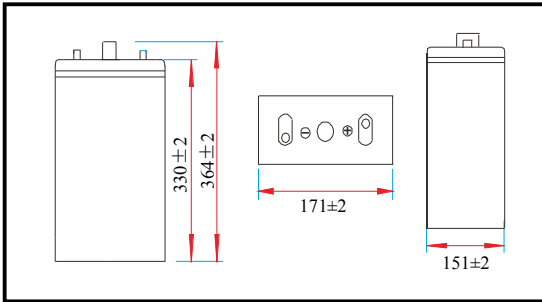
## NP2-300Ah 2V300Ah

### Valve Regulated Lead Acid Battery

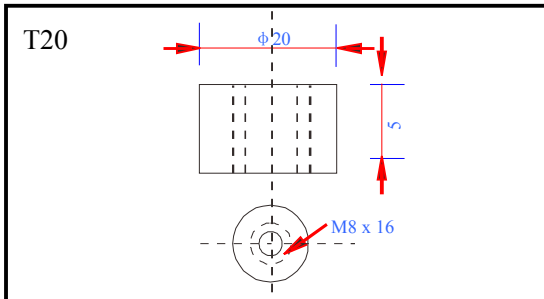
#### ● Specifications

Nominal voltage	2V (1 cell per unit)	
Rated capacity (10HR)	300Ah/10.8V	
Dimensions	Length	171±2mm (6.73inch)
	Width	151±2mm (5.94inch)
	Height	330±2mm (12.99inch)
	Total height	364±2mm (14.33inch)
Approx. weight	18.00kg (39.70lbs)±3%	

#### ● Outer dimensions (mm)



#### ● Terminal type (mm)



#### ● 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	417	273	189	111	79.6	63.6	54.8	47.1	37.2	30.7	16.2
1.65V/cell	407	268	183	110	79.1	63.3	54.5	46.8	37.0	30.6	16.2
1.70V/cell	392	259	178	109	78.5	62.8	54.1	46.5	36.7	30.5	16.1
1.75V/cell	379	253	172	107	78.0	62.4	53.7	46.2	36.5	30.4	16.0
1.80V/cell	359	244	166	105	75.7	60.5	52.1	44.8	35.4	30.2	15.9

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

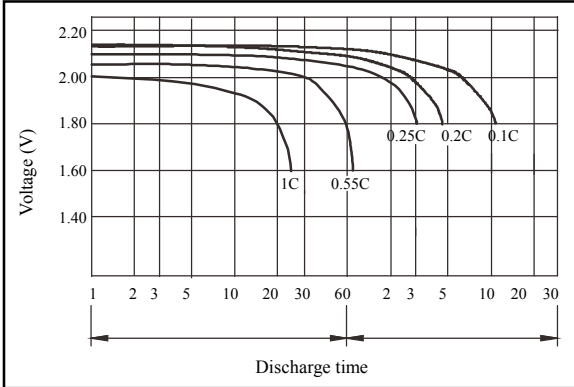
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
1.60V/cell	763	511	359	213	156	125	108	92.8	74.0	61.1	32.4
1.65V/cell	745	500	348	212	155	124	107	92.3	73.6	61.0	32.3
1.70V/cell	717	485	338	210	154	123	107	91.7	73.0	60.8	32.2
1.75V/cell	693	473	327	207	153	122	106	91.0	72.5	60.4	32.0
1.80V/cell	656	456	316	202	148	119	103	88.3	70.4	60.0	31.8

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

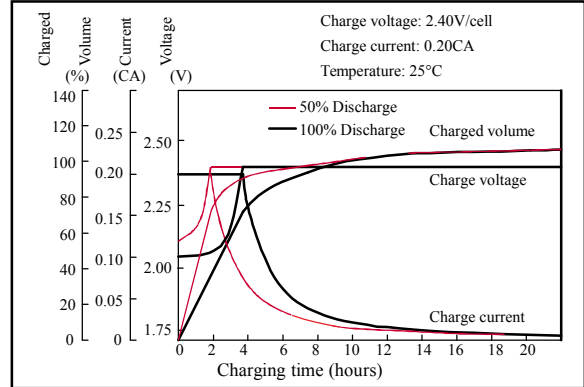
#### ● Characteristics

Capacity (25°C)	10HR (1.80V)	300Ah
	3HR (1.80V)	225Ah
	1HR (1.75V)	165Ah
Terminal type		T20
Internal resistance (Fully charged, 25°C)		Approx. 0.7mΩ
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		60A
Maximum discharge current		2100A (5 sec.)
Design life	15 years for floating (25°C)	
	Eurobat (20°C) >12 years, very long life.	

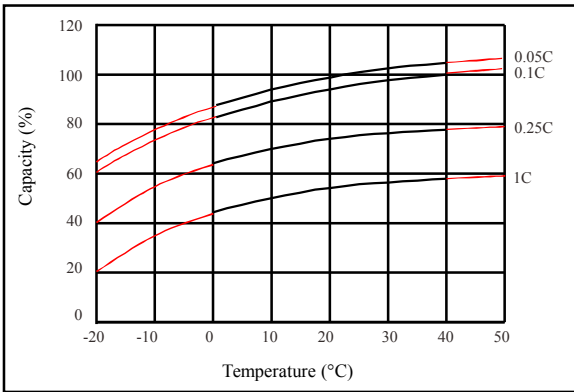
## ● Discharge characteristics (25°C)



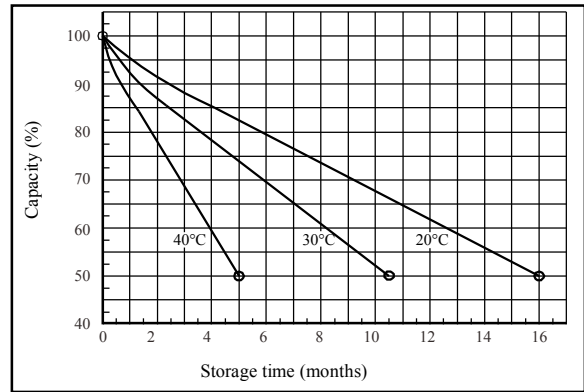
## ● Charging characteristics (25°C)



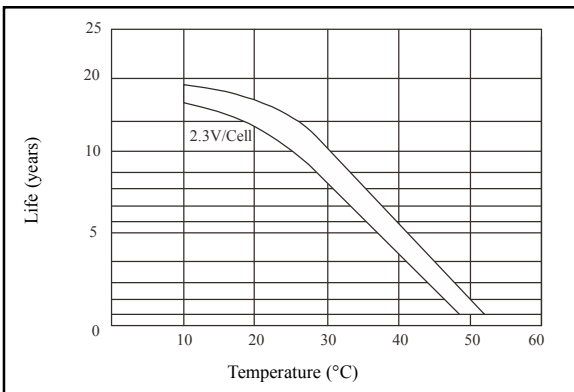
## ● Temperature effects on capacity



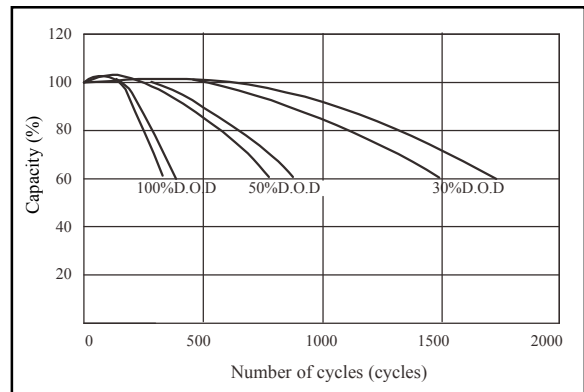
## ● Self-discharge characteristics



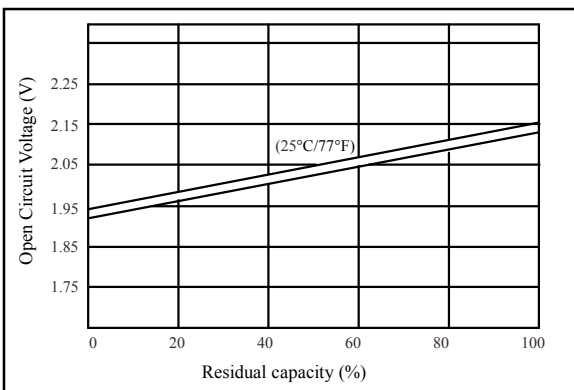
## ● Floating life on temperature



## ● Cycle life on D.O.D (25°C)



## ● Relationship for OCV and capacity (25°C)



## ● Relationship for charging voltage and temperature

