

## NP12-180Ah 12V180Ah

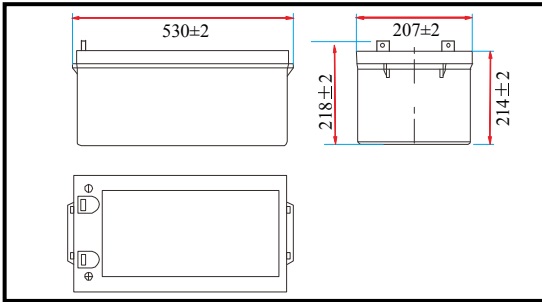
### Valve Regulated Lead Acid Battery



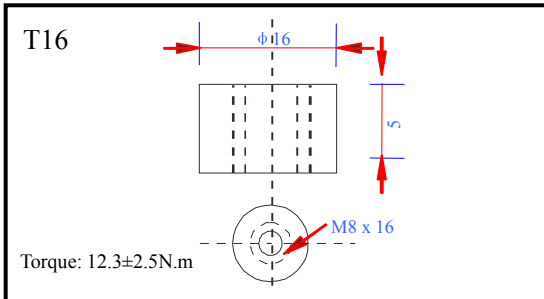
#### Specifications

Nominal voltage	12V (6 cells per unit)	
Rated capacity (10HR)	180Ah/10.8V	
Dimensions	Length	530±2mm (20.87inch)
	Width	207±2mm (8.15inch)
	Height	214±2mm (8.43inch)
	Total height	218±2mm (8.58inch)
Approx. weight	54.00kg (119.05lbs)±3%	

#### Outer dimensions (mm)



#### Terminal type (mm)



#### Characteristics

Capacity (25°C)	10HR (10.8V)	180Ah
	3HR (10.8V)	135Ah
	1HR (10.5V)	100Ah
Terminal type		T16
Internal resistance (Fully charged, 25°C)		Approx. 3.2mΩ
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/Block
Cyclic charging voltage (25°C)		14.50 to 15.00V Temperature compensation: -30mV/°C/Block
Maximum charging current		54A
Maximum discharge current		1300A (5 sec.)
Design life	10 years for floating (25°C)	
	Eurobat (20°C): 10-12 years, 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
9.60V	302	181	111	65.8	47.4	37.8	32.3	28.1	22.2	18.3	9.71
9.90V	295	177	110	65.4	47.1	37.6	32.1	27.9	22.1	18.3	9.69
10.2V	284	172	107	64.8	46.8	37.3	31.9	27.7	21.9	18.2	9.66
10.5V	275	168	103	63.8	46.4	37.1	31.7	27.5	21.8	18.1	9.61
10.8V	260	162	100	62.2	45.0	36.0	30.7	26.7	21.1	18.0	9.54

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

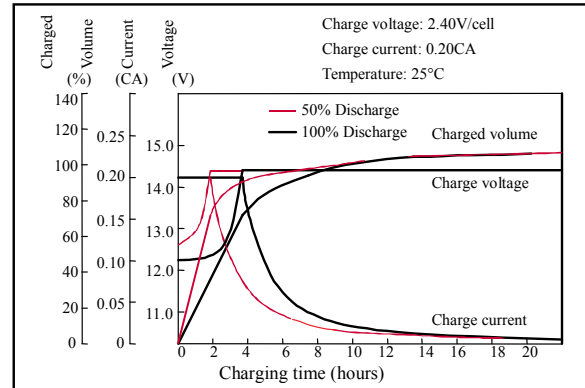
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
9.60V	3320	2030	1268	762	557	445	382	332	264	219	117
9.90V	3241	1989	1249	757	554	442	380	330	262	218	116
10.2V	3121	1928	1217	750	550	439	377	328	261	218	116
10.5V	3015	1882	1179	739	546	436	374	326	259	216	115
10.8V	2856	1813	1141	720	530	423	363	316	251	215	114

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

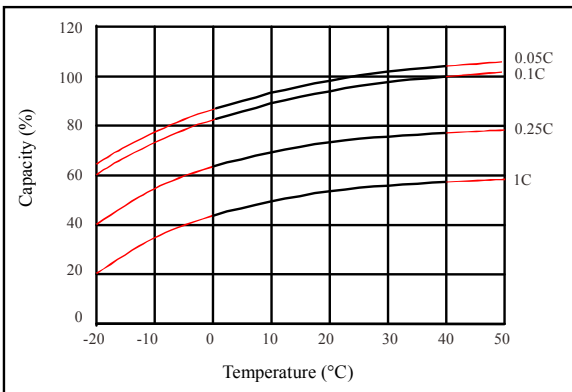
### ● Discharge characteristics (25°C)



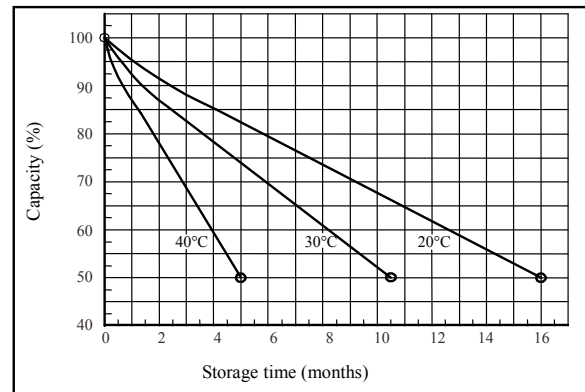
### ● Charging characteristics (25°C)



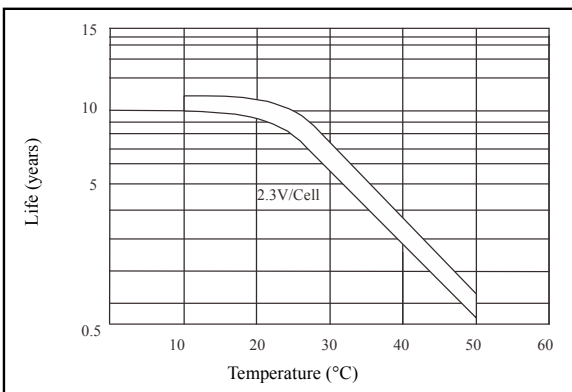
### ● Temperature effects on capacity



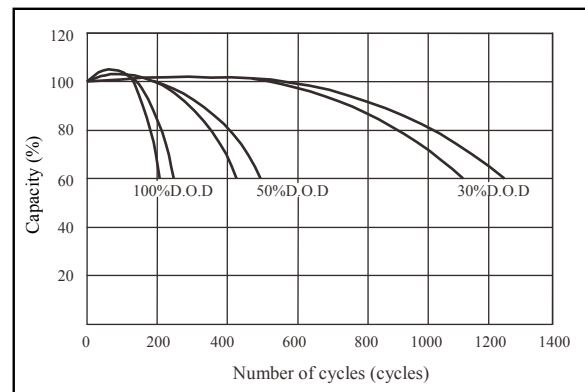
### ● Self-discharge characteristics



### ● 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

