

## NP12-160Ah 12V160Ah

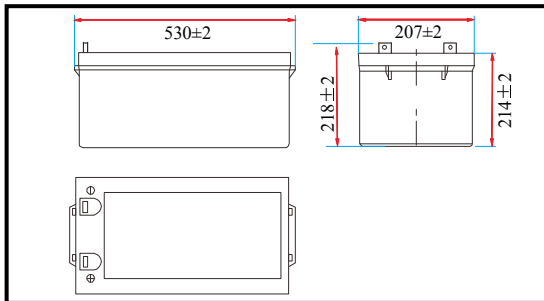
### Valve Regulated Lead Acid Battery



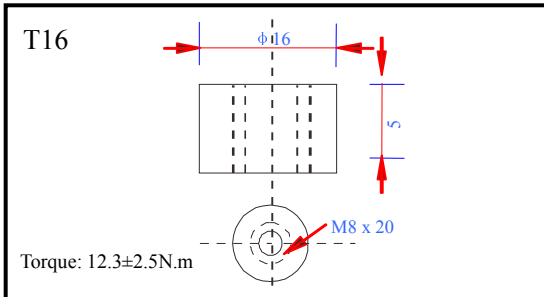
#### Specifications

Nominal voltage	12V (6 cells per unit)	
Rated capacity (10HR)	160Ah/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	50.00kg (110.23lbs)±3%	

#### Outer dimensions (mm)



#### Terminal type (mm)



#### Characteristics

Capacity (25°C)	10HR (10.8V)	160Ah
	3HR (10.8V)	120Ah
	1HR (10.5V)	90Ah
Terminal type		T16
Internal resistance (Fully charged, 25°C)		Approx. 3.5mΩ
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)		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		48A
Maximum discharge current		1200A (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)

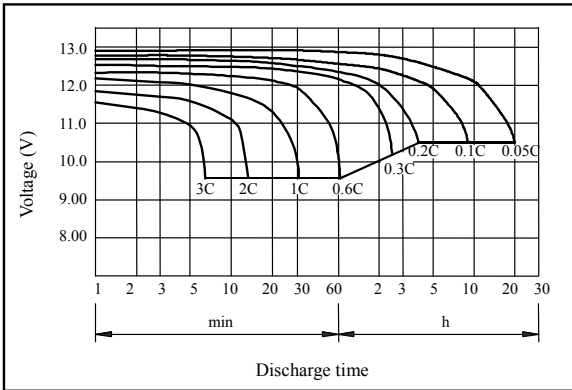
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
9.60V	269	161	98.9	58.5	42.1	33.6	28.7	25.0	19.7	16.3	8.63
9.90V	262	158	97.4	58.1	41.9	33.4	28.6	24.8	19.6	16.3	8.62
10.2V	253	153	94.9	57.6	41.6	33.2	28.4	24.7	19.5	16.2	8.59
10.5V	244	149	92.0	56.7	41.3	33.0	28.2	24.5	19.4	16.1	8.54
10.8V	231	144	89.0	55.3	40.0	32.0	27.3	23.7	18.8	16.0	8.48

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

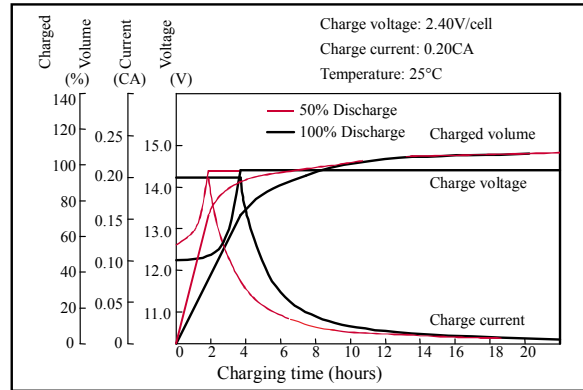
F.V/Time	15min	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h
9.60V	2951	1804	1127	677	495	395	340	295	235	194	104
9.90V	2881	1768	1110	673	492	393	338	293	233	194	103
10.2V	2774	1714	1082	667	489	390	335	291	232	194	103
10.5V	2680	1672	1048	657	485	388	333	289	230	192	102
10.8V	2538	1611	1015	640	471	376	323	281	223	191	102

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

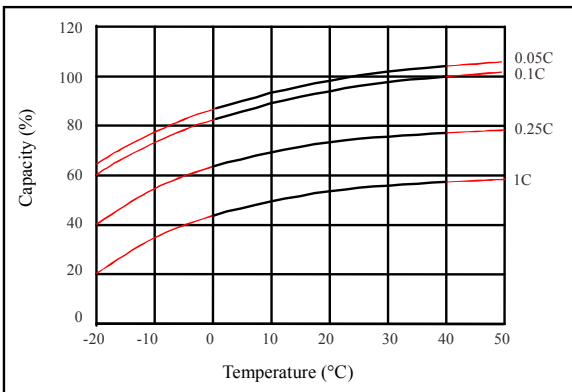
### ● Discharge characteristics (25°C)



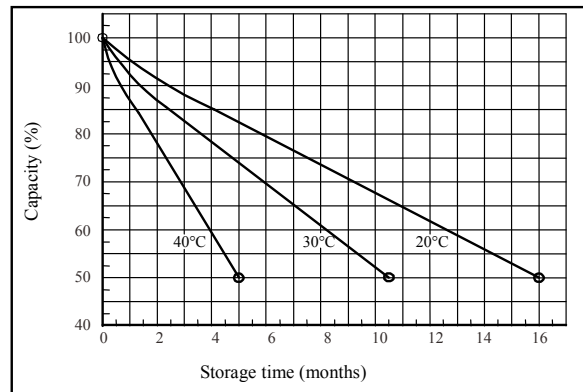
### ● Charging characteristics (25°C)



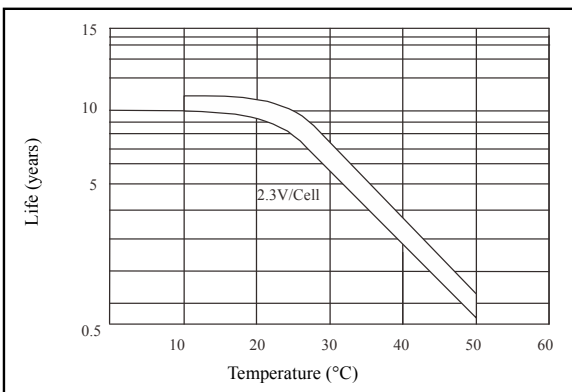
### ● Temperature effects on capacity



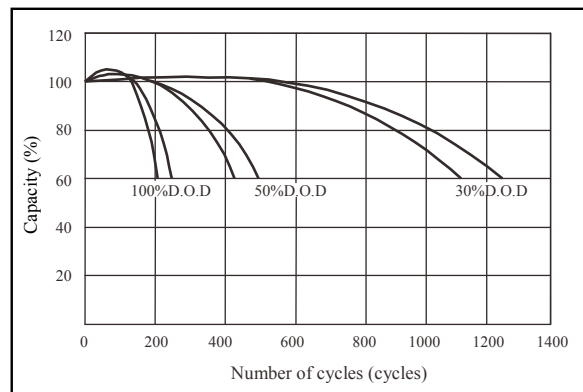
### ● Self-discharge characteristics



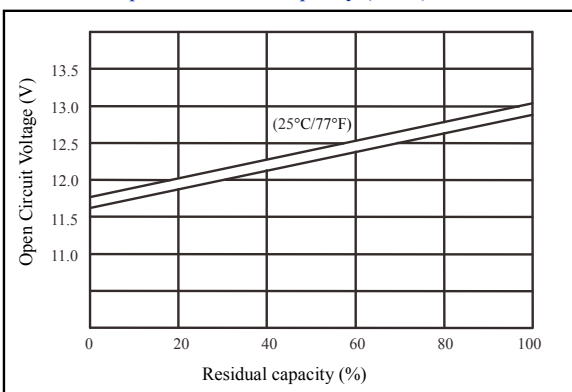
### ● Floating life on temperature



### ● Cycle life on D.O.D (25°C)



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



### ● Relationship for charging voltage and temperature

