

# BG-12400NB

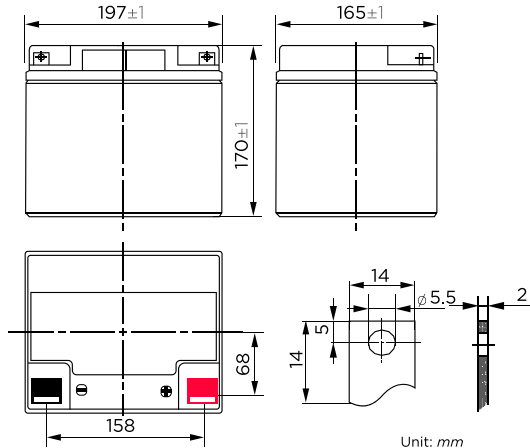
(12V 40Ah/10hr)

Rechargeable Sealed Lead Acid Battery



Technical Specification Sheet

These rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.



Unit: mm

## Performance Characteristics

<b>Capacity 77°F(25°C)</b>	20 hour rate (2.1A, 10.8V)	42Ah
	10 hour rate (4A, 10.5V)	40Ah
	5 hour rate (6.8A, 10.5V)	34Ah
	1 hour rate (25A, 9.6V)	25Ah
<b>Internal Resistance</b>	Full charged Battery 77°F(25°C): 10mΩ	
<b>Capacity affected by Temperature (20 hour rate)</b>	104°F(40°C)	102%
	77°F(25°C)	100%
	32°F(10°C)	85%
	5°F(-15°C)	65%
<b>Self-Discharge 68°F(20°C)</b>	Capacity after 3 month storage	90%
	Capacity after 6 month storage	80%
	Capacity after 12 month storage	60%
<b>Max. discharge current 77°F(25°C): 400A(5S)</b>		
<b>Charge (Constant Voltage)</b>	Float: 13.6-13.8 V/77°F(25°C)	
	Cycle: 14.4-14.7 V/77°F(25°C) Max. Current: 10A	

## SPECIFICATION

<b>Nominal voltage</b>	_____	12V
<b>Number of cells</b>	_____	6
<b>Length (mm/inch)</b>	_____	197/7.76
<b>Width (mm/inch)</b>	_____	165/6.5
<b>Height (mm/inch)</b>	_____	170/6.69
<b>Total Height (mm/inch)</b>	_____	170/6.69
<b>Approx. Weight (kg/lbs)</b>	_____	12.5/27.5

## General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

## Discharge Constant Current (Amperes at 77°F 25°C)

End Points Volts/Cell	5 min	10 min	15 min	30 min	1h	3h	5h	10h	20h
1.60V	130	92.0	72.0	42.0	25.0	10.2	7.00	4.14	2.18
1.65V	123	87.4	69.3	40.7	24.2	10.1	6.90	4.09	2.17
1.70V	118	82.7	66.5	39.1	23.3	10.0	6.85	4.05	2.15
1.75V	109	78.1	63.2	37.2	22.1	9.85	6.80	4.00	2.13
1.80V	100	71.0	58.0	34.9	20.8	9.71	6.70	3.95	2.10

## Discharge Constant Power (Watts at 77°F 25°C)

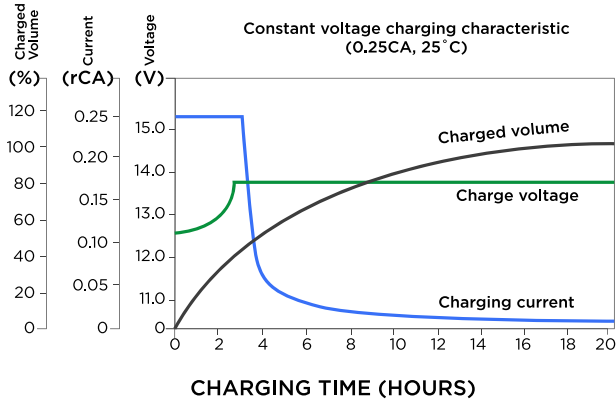
End Points Volts/Cell	5 min	10 min	15 min	30 min	45 min	1h	2h	3h	5h
1.60V	232	155	113	69.4	54.2	44.5	28.5	19.3	13.7
1.65V	218	146	107	65.9	51.7	42.6	27.6	18.8	13.5
1.70V	203	137	101	62.3	49.1	40.7	26.7	18.3	13.2
1.75V	189	128	94.0	58.7	46.5	38.7	25.6	17.7	12.9
1.80V	175	119	88.1	55.1	43.8	36.6	24.5	17.1	12.6

## Battery Construction

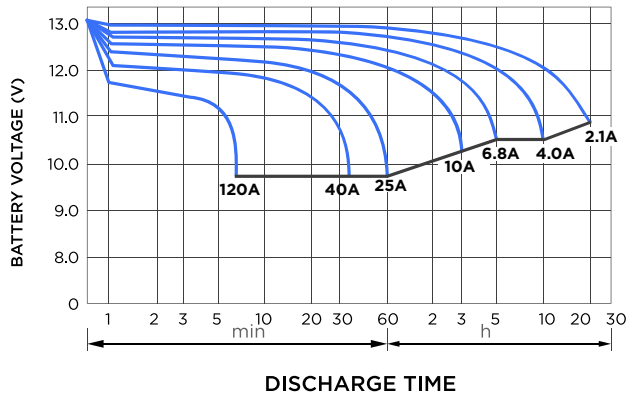
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid



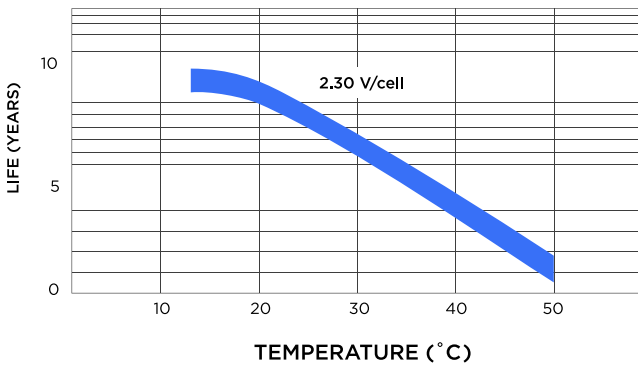
### Charge characteristic curve



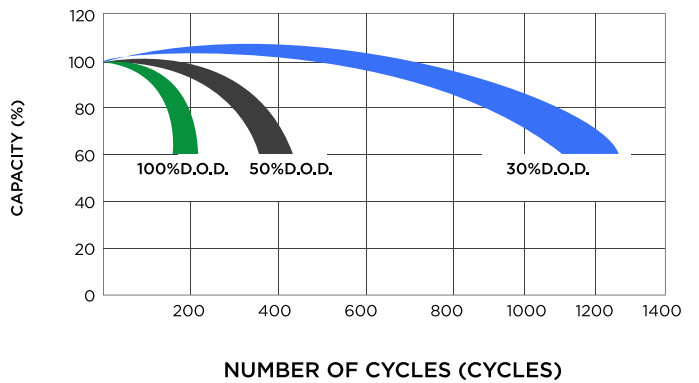
### Discharge characteristic (25°C)



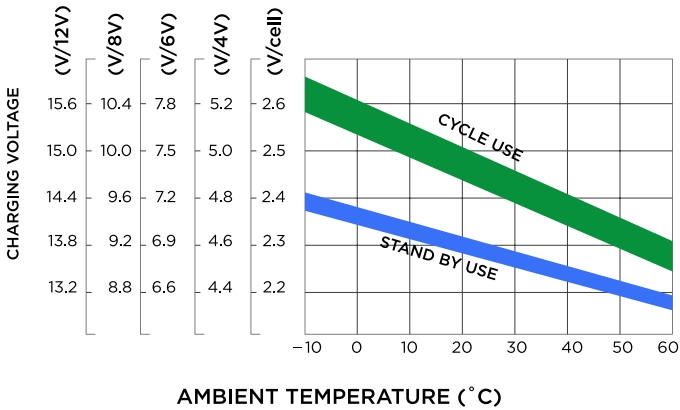
### Temperature effects on float life



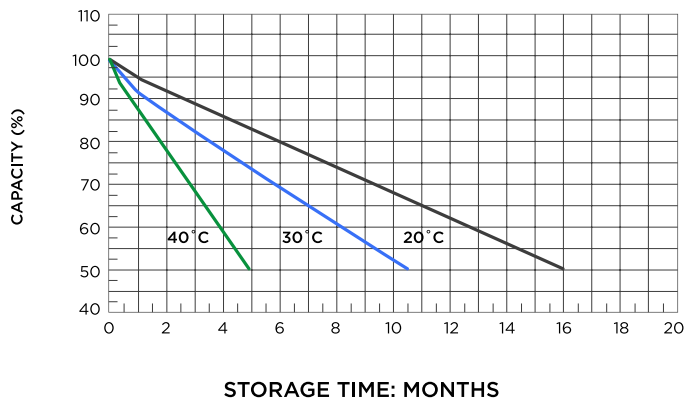
### Cycle service life in relation to depth of discharge



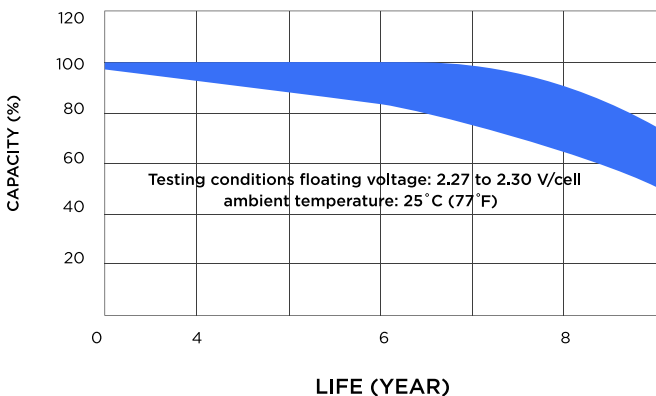
### Relationship between charging voltage and temperature



### Self-discharge characteristic



### Life characteristics of standby use



### Temperature effects on capacity

