



AGM BATTERY NL Series

NL2-450 (2V 450AH)



The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates 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.

Battery Construction

COMPONENT	POSITIVE PLATE	NEGATIVE PLATE	CONTAINER	COVER	SAFETY VALVE	TERMINAL	SEPARATOR	ELECTROLYTE
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper/Plug	Fiberglass	Sulfuric acid

Performance Characteristics

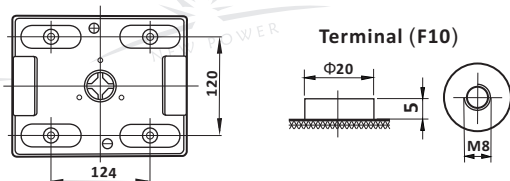
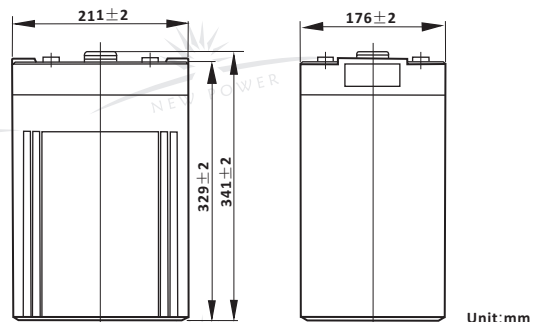
- **Nominal Voltage** 2V
- **Number of Cell** 1
- **Nominal Capacity (77°F/25°C)**
 - 10 Hour rate (45A, 1.8V) 450Ah
 - 5 Hour rate (81A, 1.75V) 405Ah
 - 3 Hour rate (115A, 1.70V) 345Ah
 - 1 Hour rate (270A, 1.60V) 270Ah
- **Internal Resistance**
 - Fully charged battery (77°F/25°C) 0.7mΩ
- **Capacity affected by temperature (20 hour rate)**
 - 104°F (40°C) 102% 32°F (10°C) 85%
 - 77°F (25°C) 100% 5°F (-15°C) 65%
- **Self-Discharge 68°F (20°C)**
 - Capacity after 3 month storage 90%
 - Capacity after 6 month storage 80%
 - Capacity after 12 month storage 60%
- **Max. discharge current 77°F/25°C** 2000A(5S)
- **Charge Methods: constant voltage charge 77°F/25°C**
 - Cycle use 2.35 ~ 2.45V
 - Max. Current 90A
 - Standby use 2.25 ~ 2.30V

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.**
- **A recognized component of CE and UL**
- **Computer designed lead, calcium tin alloy grid for high power density.**
- **Long service life, float or cyclic applications.**
- **Maintenance-free operation.**
- **Low self discharge**
- **Design life 15 years**

Dimensions and Weight

Type	Length	Width	Height	Total Height	Approx. Weight
SI Units	210mm	176mm	330mm	367mm	28Kg
English Units	8.27inch	6.93inch	13.0inch	14.45inch	61.7lbs



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

V/cell	10min	15min	30min	45min	1h	3h	5h	10h
1.60	866	663	462	359	270	123	85.2	47.0
1.65	821	630	441	345	258	119	84.0	46.5
1.70	774	597	420	330	246	115	82.5	46.0
1.75	726	564	398	312	234	111	81.0	45.5
1.80	678	530	375	296	220	106	79.5	45.0

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

V/cell	10min	15min	30min	45min	1h	2h	3h	5h
1.60	1433	1068	842	678	532	359	256	158
1.65	1350	1010	800	648	510	342	247	155
1.70	1266	951	756	615	486	327	234	153
1.75	1182	893	713	582	462	317	224	149
1.80	1100	834	669	548	437	289	206	141

(Note: The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.)



