



# AGM BATTERY ND Series

**NM12-180D (12V 180AH)**



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

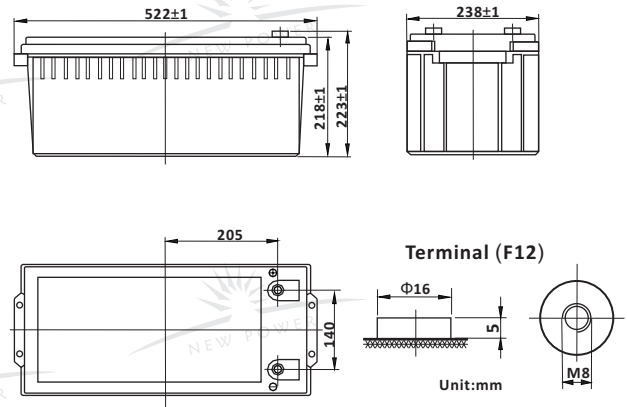
- **Nominal Voltage** ..... 12V
- **Number of Cell** ..... 6
- **Nominal Capacity (77°F /25°C)**
  - 20 Hour rate (9.3A, 10.8V) ..... 186Ah
  - 10 Hour rate (18A, 10.8V) ..... 180Ah
  - 5 Hour rate (32A, 10.5V) ..... 160Ah
  - 1 Hour rate (115A, 9.6V) ..... 115Ah
- **Internal Resistance**
  - Fully charged battery (77°F /25°C) ..... 4mΩ
- **Capacity affected by temperature (10 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** ..... 950A(5S)
- **Charge Methods: constant voltage charge 77°F /25°C**
  - Cycle use ..... 14.4 ~ 14.7V
  - Max. Current ..... 45A
  - Standby use ..... 13.6 ~ 13.8V

## 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 10 years**

## Dimensions and Weight

Type	Length	Width	Height	Total Height	Approx. Weight
SI Units	522mm	238mm	218mm	223mm	55.5Kg
English Units	20.55inch	9.37inch	8.58inch	8.78inch	122.3lbs



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

V/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.60	395	315	195	115	48.5	33.5	18.4	9.55
1.65	372	295	188	113	47.8	33.0	18.3	9.50
1.70	349	275	181	111	47.0	32.5	18.3	9.45
1.75	325	253	178	109	46.2	32.0	18.2	9.40
1.80	300	230	170	106	45.2	31.4	18.0	9.30

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

V/cell	10min	15min	30min	45min	1h	2h	3h	5h
1.60	630	510	337	241	223	123	87.7	60.5
1.65	605	492	324	236	219	121	86.5	60.2
1.70	579	477	312	231	214	118	85.3	59.7
1.75	550	461	299	227	210	117	84.1	59.4
1.80	520	425	282	222	205	115	83.2	58.7

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



