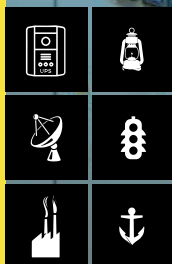


AGM BATTERIES FOR GENERAL USE [UPS, Security Systems, Telecom]



Our company ranks amongst the leaders in energy solutions companies in Greece, currently expanding in the global market. Northbatt specializes in batteries for industrial applications. (i.e. batteries for motive and reserve power).

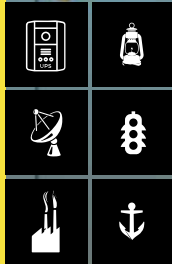
**General
Use AGM
[UPS,
Security
Systems,
Telecom]**



Having four decades of experience, Northbatt is committed to provide the most efficient solutions to cover its customer's industrial needs, giving power to people's life.

Our company has long-lasting collaborations, high quality product standards and comprehensive after-sales technical support, offering solutions for batteries, chargers and all the relevant equipment. Our products are designed to satisfy the needs for the following applications like industrial vehicles, forklifts, solar & renewable energy sources, IT information technology, utility networks, telecommunications, UPS, marine, etc. We proudly welcome you to our battery and energy solutions family!

**General
Use AGM
[UPS,
Security
Systems,
Telecom]**

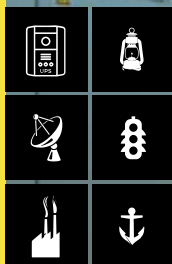


FEATURES AGM > VRLA

- **Sealed Maintenance Free:** No need for checking Electrolyte level and topping throughout its life. Sealed Construction ensures no leakage or seepage of electrolyte from terminal or casing.
- **Free From Orientation Constraints:** The sealed construction with immobilised electrolyte allows the battery to be installed in any position, horizontal vertical sideways – without any effect on its performance.
- **Eco Friendly:** The unique gas recombination technology effectively nullifies generation of gas during normal use, It is totally eco – friendly, ensuring clean and safe environment.
- **Good Service Life:** Between 8 to 12 Years life for small and medium monoblock range for stand by applications.
- **Low self Discharge :** very low Self discharge as compared to conventional flooded batteries.
- **Charge Retention & Recovery:** Excellent charge retention and recovery ability due to special design of plates and separator with an absolutely balanced electrolyte
- **Superior High Rate Discharge:** Very Low internal resistance and very high electrolyte – active material reactive interface – allows very high currents for short and medium duration.
- **High Reliability:** Tough construction and heavy duty design with superior corrosion resistant lead calcium tin alloy.

#NorthBatteries

General Use AGM [UPS, Security Systems, Telecom]



BENEFITS AGM > VRLA

- Saving of manpower for regular topping up and cleaning corroded terminals as in conventional batteries.
- Battery can be installed inside offices and working areas – no need for separate battery rooms , costly acid proof flooring etc. Battery can be installed in a cabinet also.
- No need for elaborate air exhaust systems as in conventional battery installation.
- Saving from transmission loss – Higher efficiency
Lower electricity consumption
Lower cost cabling
- Can be stored for 3 to 6 Months , depending upon ambient temperature before recharge and without any loss of efficiency or performance .
- Very long shelf life
- Leads to greatly improved ability to recover from deep discharge
- Required smaller capacity (as compared to flooded batteries) for high rate discharges up to 15mins/30mins/60mins duration
- Lower size, lower space requirement.

APPLICATIONS

STANDBY POWER

UPS System
Telecommunication System
Fire Alarm & Security System
Power Plants & substations
Railway Signalling

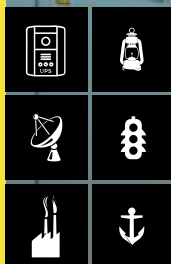
PORTABLE POWER

Search Light
Solar Lanterns
Marine & Offshore Equipment
Medical Electronics

NorthBatt



**General
Use AGM
[UPS,
Security
Systems,
Telecom]**



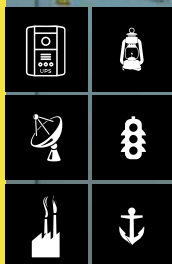
NORTHBATT EV MOTIVE AGM SPECIFICATION TABLE

Northbatt Code	V	AH	DIMENSIONS				Recom. max. Charge Current	Recom. max. Discharge Current (5 sec)	Weight	TERMINALS	
			L	W	H	T.H				TYPE	LAYOUT
			(mm)				A	A	(kg)		
		C20								Up to 10 Years Lifetime	
1.3-6	6	1.3	97	24	52	58	0.39	12	0.28	F1	C
3.2-6	6	3.2	134	34	61	67	0.96	32	0.61	F1	C
4.5-6	6	4.5	70	47	101	107	1.25	45	0.75	F1	B
7.0-6	6	7	151	34	94	100	2.10	70	0.98	F1	C
12.0-6	6	7	151	50	94	100	3.60	120	1.75	F1	C
3.2-8	8	3.2	134	36	63	69	0.96	32	0.61	F1	E
1.3-12	12	1.3	98	43	53	58	0.325	13	0.54	F1	E
2.3-12	12	2.3	178	35	61	67	0.575	23	0.88	"1	C
3.3-12	12	3.3	134	66	62	67	0.99	33	1.23	F1	E
5.0-12	12	5	90	70	101	107	1.125	75	1.53	F1, F2	C
6.0-12	12	6	151	50	96	101	1.80	60	1.80	F1	F
7.0-12	12	7	151	65	95	101	1.75	105	2.02	F1, F2	F
7.2-12	12	7.2	151	65	95	101	1.80	108	2.10	F2	F
7.5-12	12	7.5	151	65	94	100	1.88	113	2.14	F2	F
9.0-12	12	9	151	65	95	101	2.25	135	2.50	F2	F
12-12	12	12	151	98	95	101	3.60	120	3.46	F1, F2	F
18-12	12	18	181	76	167	167	4.50	270	5.00	M5	D
26-12	12	26	166	175	125	125	6.50	390	7.70	M5	D
		C10								10 - 12 Years Lifetime	
33-12	12	33	195	130	163	168	8.30	396	10.00	M6-B	C
40-12	12	40	197	165	170	170	12.00	400	12.52	M6-B	C
55-12	12	55	229	138	212	215	13.80	660	17.50	M6-B	C
65-12	12	65	350	167	179	179	19.50	650	20.45	M6-B	C
80-12 S	12	80	260	168	211	214	20.00	800	22.80	M6-B	C
80-12	12	80	350	166	175	175	20.00	800	24.00	M6-B	C
100-12	12	100	330	171	216	219	25.00	1.000	29.50	M8	C
120-12	12	120	407	176	225	225	36.00	1.200	34.00	M8	C
150-12	12	150	485	172	240	240	45.00	1.500	43.00	M8	C
200-12	12	200	522	240	218	223	50.00	2.000	57.50	M8	E

Standby use voltage
13.5V-13.8V @25 C
Temperature
compensation: -3mV/C/Cell
Cycle use voltage 14.4 V-
15.0 V @ 25 C
Temperature
compensation: -4mV/C/Cell
Operating temperature rang
Discharge: -20 C ÷ 60 C
Charge: 0 C ÷ 50 C
Storage: -20 C ÷ 60 C
Normal operating
temperature range 25 C
±5 C

Advantage : International
size - Matches
dimension of any
International equipment.
High Rate performance -
matches or betters
High Rate performance of
equivalent
international types.

General Use AGM [UPS, Security Systems, Telecom]



CHARGE LIMITS

“

Table (2) shows the charge voltage and limit current . The charge voltage of the battery has to be reduced with increasing temperature and increased with decreasing temperature. Accordingly, charging with a given voltage requires increased charge current when the temperature is high and reduced charge current at a lower temperature.

- a) Even under high temperature, a charging voltage of 2.2V/cell is required.
- b) Even under low temperature, the charging voltage must be set at less than 2.45V/cell so as to prevent gas generation from the battery.
- c) The battery life will be shortened as service temperature rises.

CHARGER

“

‘Constant Potential’ charges with current limit facility only, are recommended for normal continuous operation.

CHARGE PARAMETERS

“

Recharge Voltages : Batteries to be recharged in CC-CV mode only.

TABLE 2

CHARGING PHASE	Voltage setting per 12 V unit for ambient temperature 25°C	Current Setting
Float	13.5-13.8V	Maximum : 0.25 CA Recom. : 0.1CA
Absorption	14.4-15.0V	

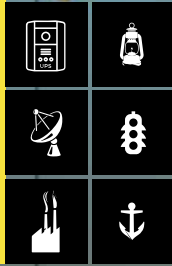
Temperature Compensation:

(Reference 25°C)

Float: -18mV/°C /12V Unit

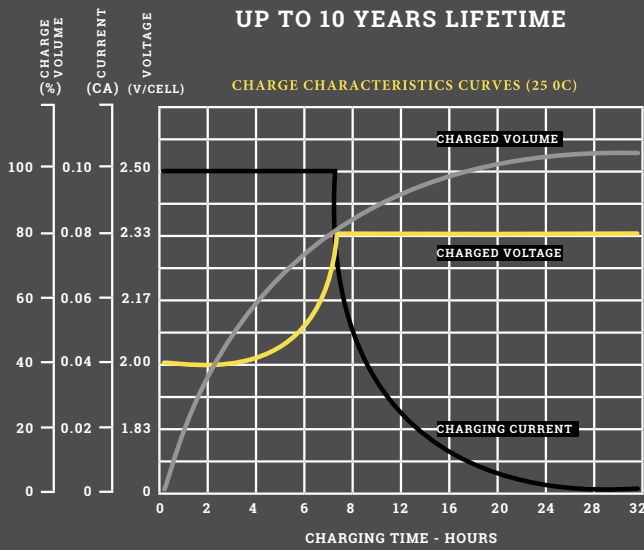
Cyclic: -30mV/°C/12V Unit

General Use AGM [UPS, Security Systems, Telecom]

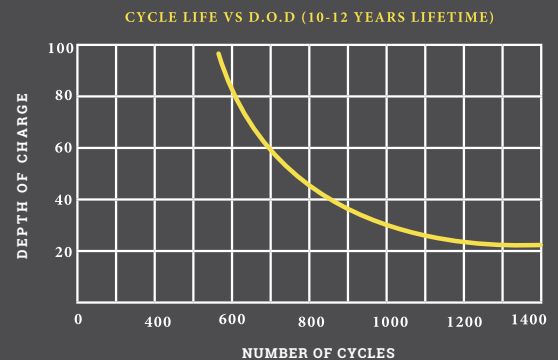
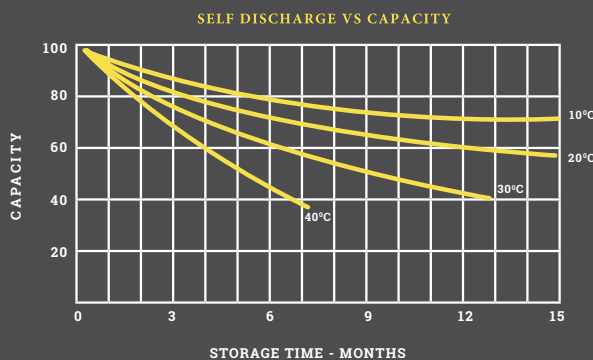
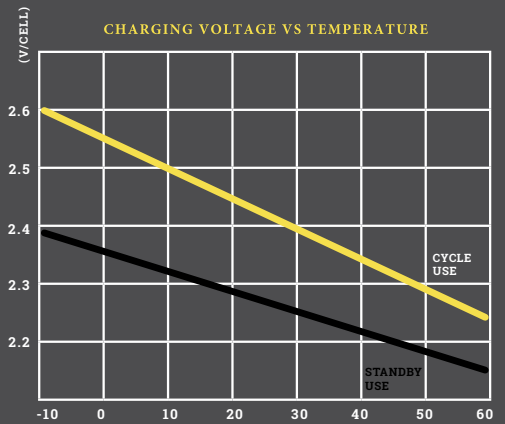
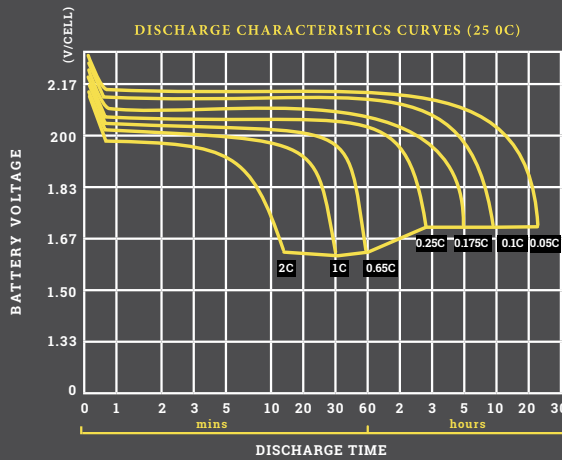
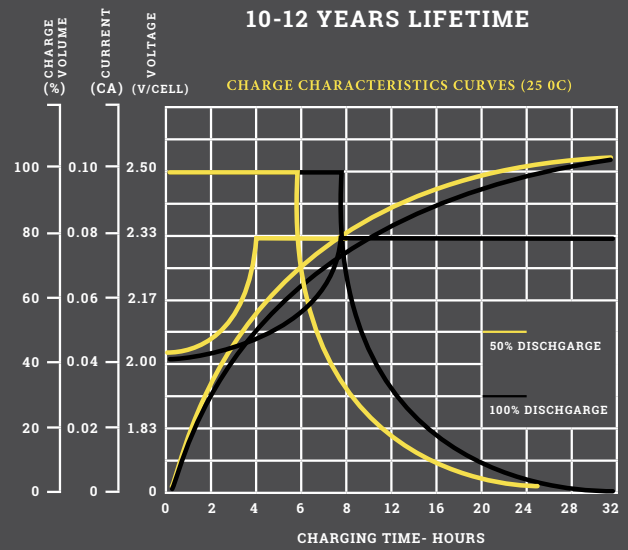


PERFORMANCE CURVES

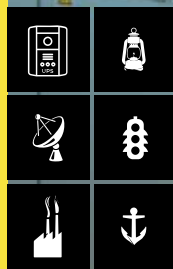
UP TO 10 YEARS LIFETIME



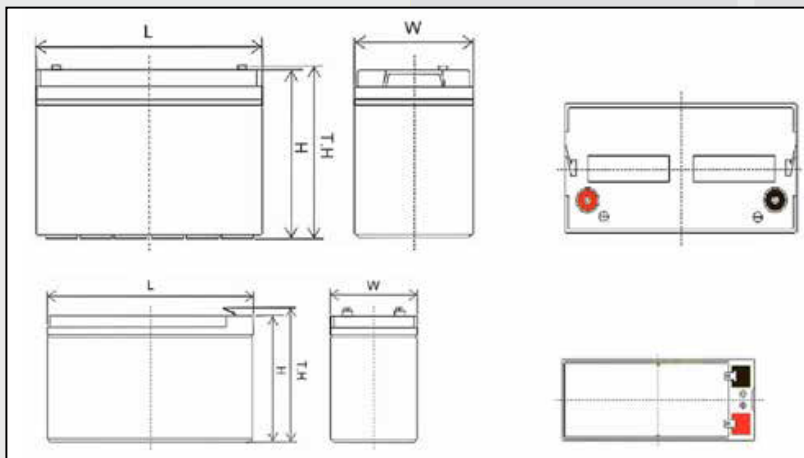
10-12 YEARS LIFETIME



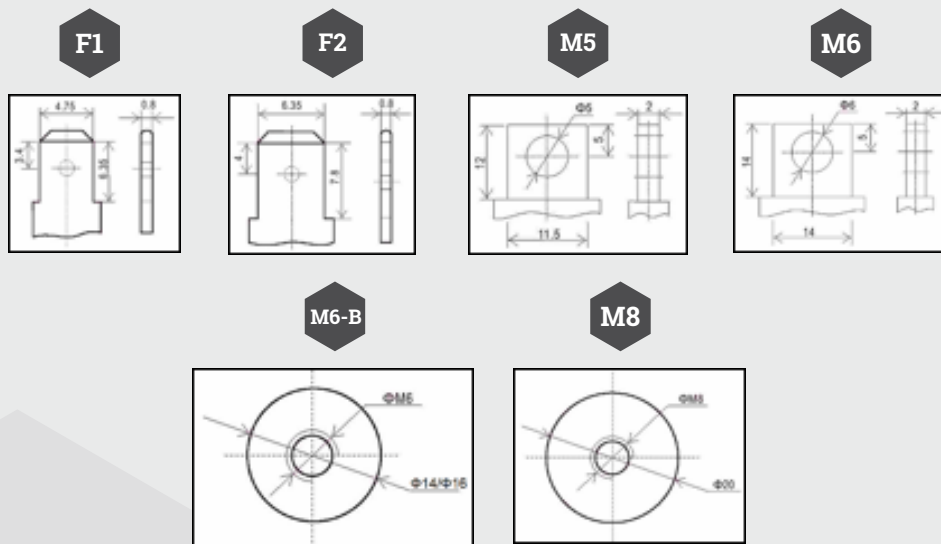
**General
Use AGM
[UPS,
Security
Systems,
Telecom]**



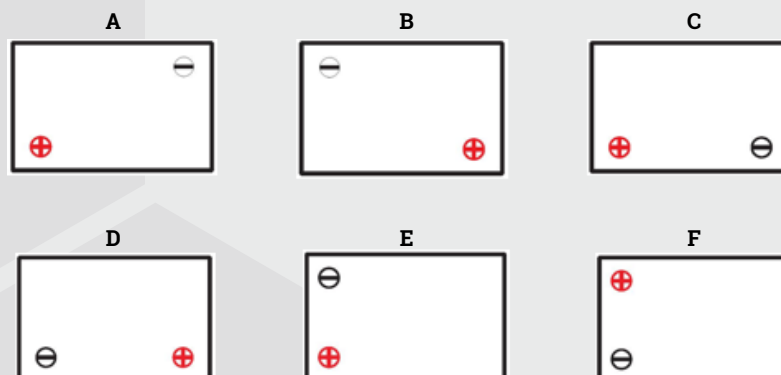
BATTERY DIMENSIONS



TERMINAL TYPES - LAYOUTS



TERMINAL TYPE



TERMINAL LAYOUT