



SG 2000H

Power Lead carbon Premium Battery

SG SERIES
Solar Gel Deep Cycle



*** The color and the printed specifications of the products are subject to change without prior notice.

NEWMAX Solar gel batteries are true maintenance-free sealed batteries engineered specially to satisfy the need for frequent deep cycles from PVs and renewable energy storage applications. We are confident that our technology-intensive, long-lasting, and environment friendly SG batteries will provide stability and efficiency for your everyday renewable energy needs.

01 Longer Life 02 Maintenance Free 03 Leak Free 04 Safety

High density, anti-corrosion lead calcium alloy is used in harmony with the GEL electrolyte to reduce the sulfation effect significantly.

NEWMAX battery has a gas recombining design that doesn't need maintenance until the end of its life.

Gel Technology is applied to prevent leakage. They won't spill even if the battery is tipped upside down.

Specially designed anti-explosion filter and safety valves prevent gas leakage when overcharged.

General Feature

◆ Plate	Paste type
◆ Battery type	Sealed and Maintenance free / Non-spillable construction design
◆ Case/cover mat	High-stiffness engineering PP plastic (Heat Deflection Temp. 140℃) RoHS Compliant EU Directive 2002/95/EC
◆ Safety performance	Safety valve & flame arrestor installation for explosion proof.
◆ High quality, high reliability and low self discharge rate	◆ Exceptional deep discharge recovery performance
◆ Flexibility design for multiple install positions (Position Free, GEL Technology)	
◆ Designed in accordance with and published in compliance with applicable IEC and BS EN, KS stds.	
◆ IEC 60896-21/22 Stationary lead-acid batteries – Valve regulated types	
◆ BS EN 61427 Secondary cells and batteries for photovoltaic energy systems (PVES)	
◆ KS C 8518 Stationary sealed lead-acid batteries – Valve regulated types	

Technical Feature



Fahrenheit-Schutz™ Heat Protection Case
Specially Formulated heat and flame resistant PP case material is used to effectively block ambient heat thus preventing heat related malfunctions such as thermal runaway. This proprietary high rigidity case material has heat deflection rating of 140°C.



MaxPress™ Grid Technology
Patent pending grid compressing technology which increase the density of the lead grain of the grids. The grain density is typically 400% greater than that of the conventional casting method. This up-to-date grid technology enables our batteries to survive even the toughest deep discharge and PSoC applications.



ThixoPure™ GEL Technology
Application of refined pure thixotropic colloidal silica GEL technology to battery electrolyte has greatly increased the cycle life by both preventing plate stratification and providing extra temperature protection against heat and cold. We are the first Korean company to successfully commercialize the GEL technology in the VRLA battery industry.

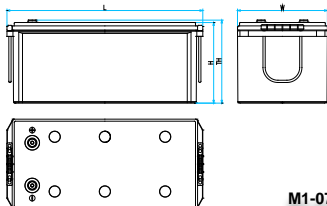
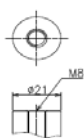


FlexSealing™ Anti Explosion Filter
Patent pending proprietary cap filtering and sealing technology. Battery cell caps are sealed simultaneously using specially designed O-ring and explosion filters to prevent leakage and gassing more effectively than ever before.



Active Carbon™
In every NEWMAX battery, proprietary active carbon additive is used in the active material for both positive and negative plates to enhance charge acceptance and cycle endurance. Active Carbon™ works to strengthen charge pathways to improve performance consistency and enhance performance at partial state of charge(PSoC) environment.

Operating temperature range		
Discharge	Charge	Storage
-20℃~60℃	0℃~50℃	-20℃~60℃



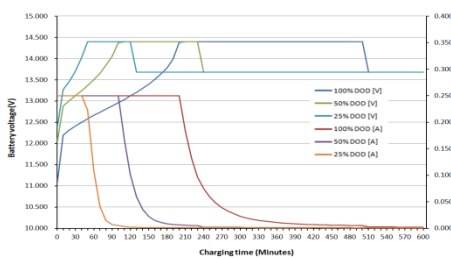
Standard

M1-07

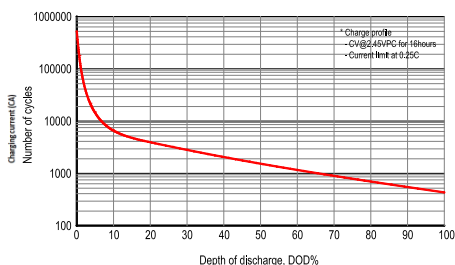
Battery model	SG 2000H (12V200AH / 20 HOUR RATE)			
Capacity (@25℃)	C ₂₀ (1.80VPC)	C ₁₀ (1.80VPC)	C ₅ (1.70VPC)	C ₁ (1.60VPC)
	200Ah	185Ah	178Ah	127Ah
Dimensions (mm/inch)	Length	Width	Height	Total Height
	524(20.63)	242(8.52)	215(8.46)	222(8.74)
Weight (kg/lbs)	57.4kg(126.54 lbs) ± 5%			
Internal resistance (mΩ)	≤2.59mΩ (25℃, 77°F), Full charged			
Max. discharge current (5sec)	1,480A	Max. discharge current(continuous)		555 A
Capacity affected by Temperature	@30℃ (86°F)	@25℃ (77°F)	@10℃ (50°F)	@-10℃ (14°F)
	105%	103%	95%	78%
Self discharge (@25℃, 77F)	After 1 month ≤2%		After 3 month ≤6%	
Max. short duration discharge current (0.1sec)	3,700A ± 10%			
Recommended charging (@25℃) Solar system	1 st Bulk step		3 rd Floating step	
	0.20~0.25C CC		2.28V/cell CV	
	2 nd Absorption step			
	2.40V/cell CV, (cut-off A : 0.005C)			



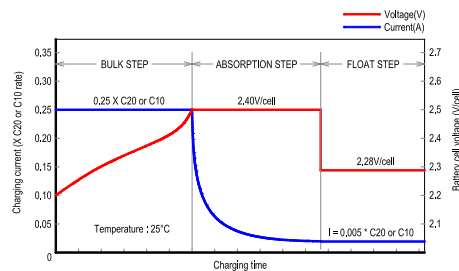
DOD % vs charging time curve (@25°C)



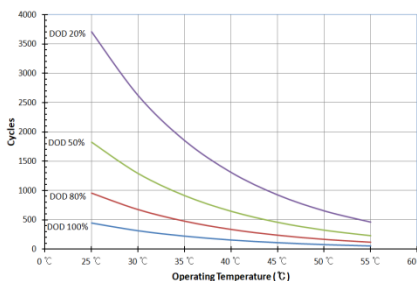
Cycle life vs detail DOD% (@25°C)



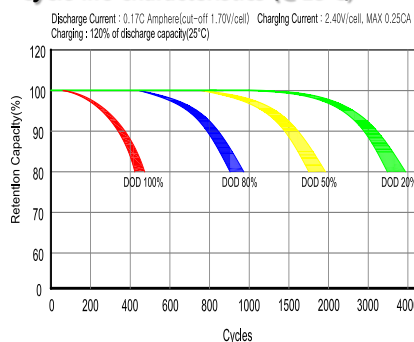
Solar charging characteristics (@25°C)



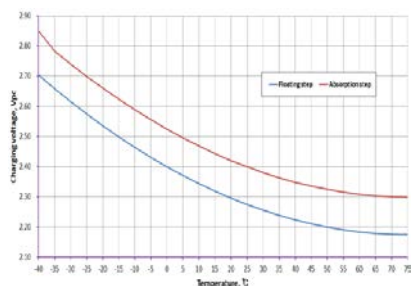
Relationship between cycle life & temp.



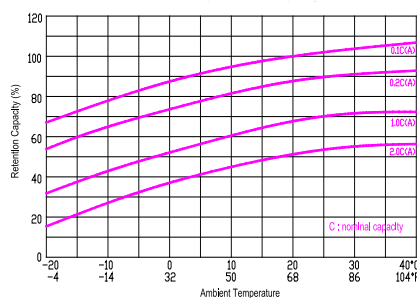
Cycle life characteristics (@25°C)



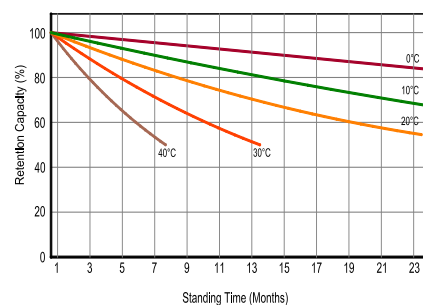
Relationship between charging voltage & temp. (For solar system)



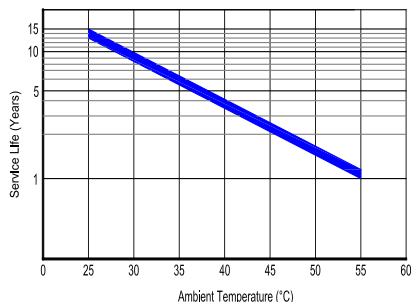
Effect of temperature on capacity



Self discharge



Relationship between Floating life & temp.



Discharge ratings – Amperes @ 25°C

V/cell	Minutes						Hours						
	5	10	15	20	30	45	1	2	3	5	8	10	20
1.85V	356	281	232	198	178	132	106	63.0	44.8	32.3	20.8	16.9	9.18
1.80V	415	317	257	216	194	144	115	66.7	47.0	34.4	22.6	18.5	10.0
1.75V	471	357	288	239	209	152	119	68.6	47.9	35.3	22.9	18.9	10.0
1.70V	528	386	302	248	216	155	122	69.5	48.9	35.6	23.3	19.0	10.0
1.65V	580	404	313	255	220	158	124	70.3	49.7	36.0	23.6	19.2	10.1
1.60V	646	426	323	259	225	163	127	71.1	50.1	36.3	23.8	19.4	10.2

Discharge ratings – Watts / Block @ 25°C

V/cell	Minutes						Hours						
	5	10	15	20	30	45	1	2	3	5	8	10	20
1.85V	4,018	3,261	2,737	2,352	2,172	1,636	1,324	760	542	388	252	205	111
1.80V	4,616	3,588	2,968	2,543	2,328	1,747	1,404	784	556	397	257	208	112
1.75V	5,140	3,925	3,212	2,707	2,433	1,805	1,446	815	571	409	263	212	112
1.70V	5,640	4,150	3,317	2,770	2,467	1,831	1,466	822	576	413	266	215	113
1.65V	6,046	4,353	3,423	2,836	2,514	1,865	1,490	830	583	418	270	219	115
1.60V	6,397	4,485	3,482	2,882	2,553	1,893	1,505	838	590	423	273	222	117