

# SG 2000H (12V200AH/C<sub>20</sub>)

Power Solar Gel Premium Battery



## Solar Gel Deep Cycle



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

### Solar gel PP Series

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.

#### General feature

❖ Plate	Paste type
❖ Battery type	Sealed and Maintenance free operation / Non-spillable construction design
❖ Case/cover material	High-stiffness engineering plastic (Heat Deflection Temp. 140°C) 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 standards	

- 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

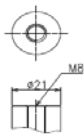
**01 Long Life**      **02 Maintenance Free**      **03 Leak free**      **04 Safety**

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

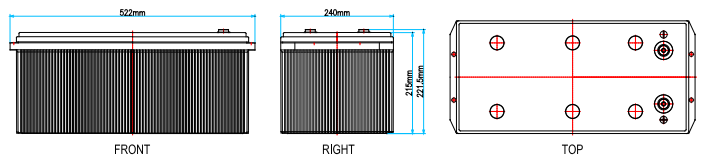
NEWMAX Battery has a gas re-combining design that doesn't need maintenance until the end of its life.

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.



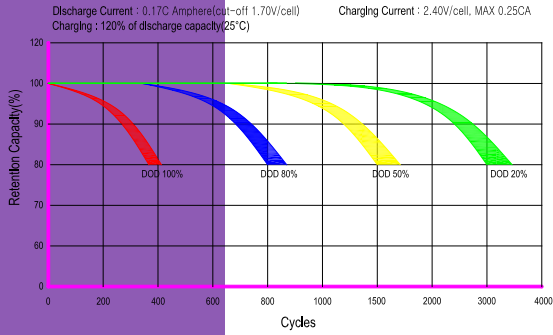
Standard



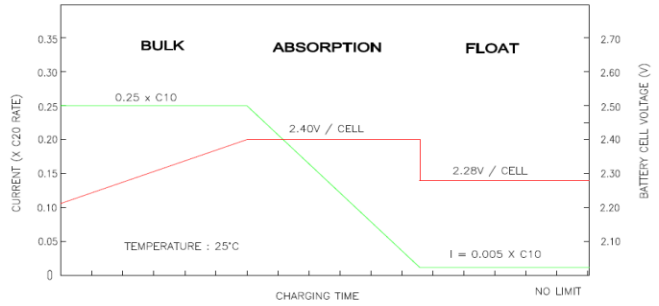
M1-07

Battery model	SG 2000H (12V200AH / 20 HOUR RATE)			
Capacity (@25°C)	C <sub>20</sub> (1.80VPC)	C <sub>10</sub> (1.75VPC)	C <sub>5</sub> (1.70VPC)	C <sub>1</sub> (1.60VPC)
	200Ah	190Ah	174Ah	132Ah
Dimensions (mm/inch)	Length	Width	Height	Total Height
	522(20.55)	240(9.45)	215(8.47)	221(8.70)
Weight (kg/lbs)	57.0kg(125.66lbs) ± 3%			
Internal resistance (mΩ)	≤2.50mΩ (25°C, 77°F)			
Max. discharge current (5sec)	1456 A	Max. discharge current(continuous)		546 A
Capacity affected by Temperature	@30°C (86°F)	@25°C (77°F)	@10°C (50°F)	@-10°C (14°F)
	105%	103%	95%	78%
Self discharge (@25°C, 77°F)	After 1 month 3%		After 3 month 8%	After 6 month 15%
Max. short duration discharge current (0.1sec)	3,640A ± 10%			
Recommended charging (@25°C) Solar system	1 <sup>st</sup> Bulk step	2 <sup>nd</sup> Absorption step		3 <sup>rd</sup> Floating step
	0.20~0.25C CC	2.40V/cell CV, (cut-off A : 0.005C <sub>20</sub> )		2.28V/cell CV

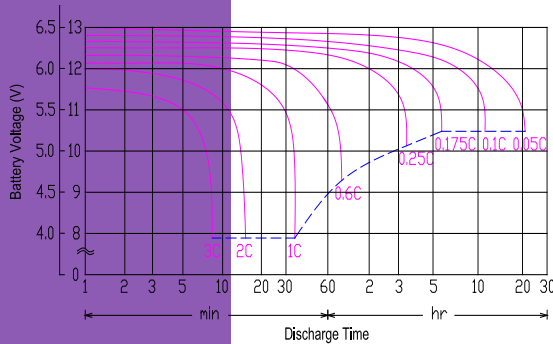
**Cycle life characteristics**



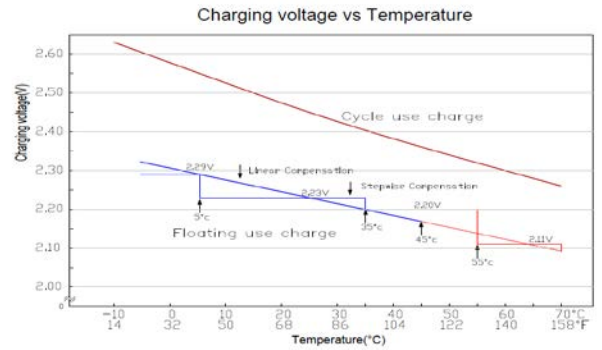
**Solar charging characteristics**



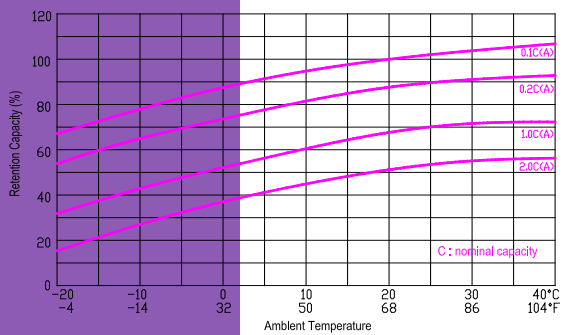
**Discharge time vs current**



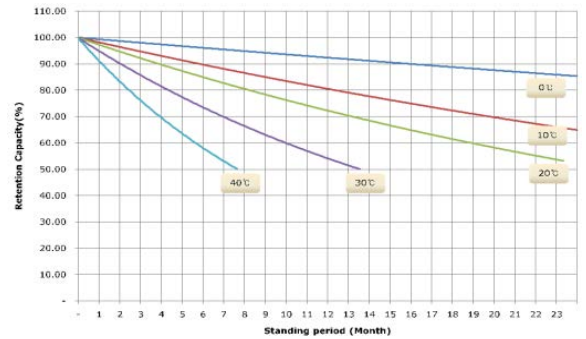
**Charge voltage and Temperature**



**Effect of temperature on capacity**



**Self discharge**



**Constant current discharge ratings – Amperes per cell @ 25°C**

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	377	313	292	237	196	166	125	46.9	30.7	20.3	17.7	9.3
1.85V	449	345	336	271	218	185	128	48.7	31.9	21.2	18.4	9.6
1.80V	523	412	361	288	224	191	129	50.6	32.6	21.9	19.0	10.0
1.75V	564	435	375	296	228	197	130	52.5	33.5	22.5	19.3	10.2
1.70V	609	457	389	302	231	198	130	53.4	35.3	23.2	20.1	10.5
1.65V	628	466	394	308	234	199	131	55.3	35.9	24.1	20.9	10.9
1.60V	646	476	397	310	234	199	132	56.2	37.1	24.7	21.4	11.3

**Constant power discharge ratings – Watts per cell @ 25°C**

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	731	607	566	459	386	327	245	92	61	41	35	19
1.85V	871	670	651	527	429	365	252	96	63	42	37	19
1.80V	1015	799	700	558	441	376	254	100	64	44	38	20
1.75V	1094	844	728	575	450	387	256	103	66	45	39	20
1.70V	1181	886	754	587	456	390	256	105	70	46	40	21
1.65V	1219	904	765	597	461	391	258	109	71	48	42	22
1.60V	1253	923	771	601	461	392	260	111	73	49	43	23

