

Industry Leader in VRLA AGM and GEL Batteries

Premium Power From Premium Battery

newmax[®]

**PROPRIETARY TECHNOLOGIES
OF NEWMAX BATTERY**



The Ultimate Premium Industrial Battery Of Korea - NEWMAX Battery



KOBATT **KOREA BATTERY CO., LTD.**
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KOBATT **KOREA BATTERY CO., LTD.**

NEWMAX BATTERY

30 years of professional battery manufacturing experience and know-how have made Daejin Battery Group one of the leading storage battery manufacturers in the world. We have been stubbornly insisting on using only the purest and the most refined materials in producing our premium grade batteries. This dedication to quality has placed us where we are now. We take pride in providing the industry leading standards in grid manufacturing and electrolyte refining technology that will dominate the VRLA battery industry in the next decades or so.

Our History

NEWMAX's history is a journey of evolution, spanning more than 30 years



- 2019** Transition to ISO45001(Occupational Health and Safety System) and Implementation of Smart Factory (MES, Manufacturing Execution System)
- 2018** Incorporated Korea Battery Co., Ltd. as a specialized sales headquarter. OHSAS 18001:2007 certification acquired
- 2017** New automatic production line installed for new SG/PNB series and automotive batteries
- 2016** CE certificate acquired for European market (SG series)
- 2015** Became official registered member of BCI (Battery Council International)
- 2013** Awarded one of the best exporters at the 50th annual trade day by the Korean government
- 2012** Awarded one of the best exporters at the 49th annual trade day by the Korean government
- 2011** Developed and Launched BM-series flooded battery for golf cart
- 2010** Developed and launched UPN series for premium standby power ISO 9001 / ISO 14001 acquired by BVQ international cert. Acquired Korean Industrial standards certification (KS cert)
- 2009** Established Daejin Battery Co.,Ltd (M&A of NB Corp) Developed and launching SG series deep cycle Gel (12v, 70~220ah) battery for solar power storage Acquired UL (Underwriters Laboratories) for global marketing and export
- 2005** Started to supply Korea Telecom company for telecommunications (PNB, PNGB)
- 2000** Developed and launched PNGB series (2v, 150ah~ 2000ah) for large capacity standby power
- 1998** Developed and launched PNC series (12v, 70~200ah) for mobility deep cycle & premium standby battery.
- 1995** Started export business to Asian countries.
- 1994** Developed and launched PNB series (12v, 70~220ah) for UPS, standby power
- 1993** Established NB Corporation & Newmax brand registered as trade mark
- 1989** Specialized VRLA factory built in Gumi City, Korea



PROPRIETARY TECHNOLOGIES OF NEWMAX BATTERY



DenseMax™ Grid Technology
Proprietary grid casting technology that condenses the lead grain in the grids increasing the density by 50% compared to a conventional gravity casting method. Higher density grids enable prolonged battery life even in the most severe operating environments.



MaxPress™ Grid Technology
Patent pending grid compressing technology which increases 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-rings and explosion filters to prevent leakage and gassing more effectively than ever before.

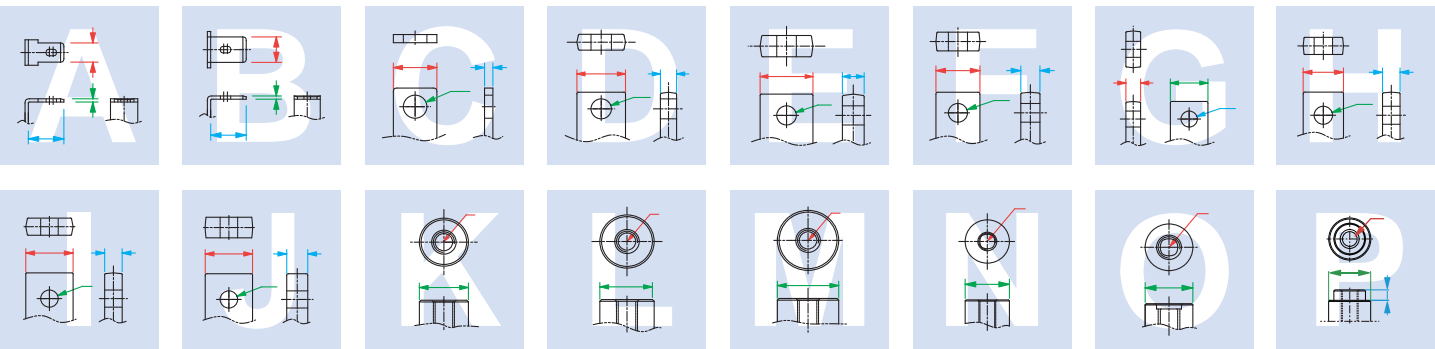


ActiveCarbon™
In every Newmax battery, proprietary micro carbon additive is used in the active material for both positive and negative plates to enhance charge acceptance and cycle endurance. ActiveCarbon™ works to strengthen charge pathways to improve performance consistency and enhance performance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



Highly Resistive Heat Protection Case
Specially formulated heat and flame resistant polypropylene 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 and complies to RoHs Compliant EU Directive 2002/95/EC. Additional UL94-V0 protection option also available.

TERMINAL TYPES



TERMINAL (mm)

(A) — / (B) — / (C) —

| Type | Size (mm) | | | | | | | | | | | | | | | |
|------|-----------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
| (A) | 4.75 | 6.30 | 12.00 | 15.00 | 17.50 | 23.00 | 9.00 | 23.00 | 27.00 | 27.00 | M6 | M6 | M6 | M8 | 5/16' | M8 |
| (B) | 0.80 | 0.80 | Φ6.5 | Φ6.3 | Φ6.3 | Φ10 | 23.00 | Φ10.5 | Φ10 | Φ10 | Φ13.0 | Φ15.5 | Φ17.5 | Φ21.0 | Φ18.5 | Φ20.0 |
| (C) | 8.60 | 8.60 | 2.30 | 5.00 | 7.00 | 10.00 | Φ10 | 10.00 | 10.00 | 12.00 | | | | | | 5.00 |

SG

+PLUS

SERIES

ACTIVE CARBON
PREMIUM BATTERY

Solar Gel Deep Cycle

New SG +PLUS series is genuine Maintenance-Free Sealed batteries developed specifically to satisfy the need for frequent deep cycles from Solar PV, solar streetlight and energy storage system. The brand new SG+PLUS series is a high quality product that has significantly improved life expectancy to meet the rapid changes in solar market and customers' needs.



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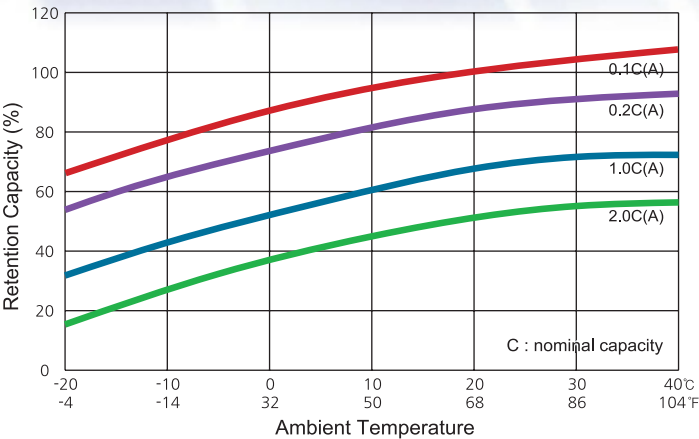
Patent pending proprietary cap filtering and sealing technology. Battery cell caps are sealed simultaneously using specially designed o-rings and explosion filters to prevent leakage and gassing more effectively than ever before.



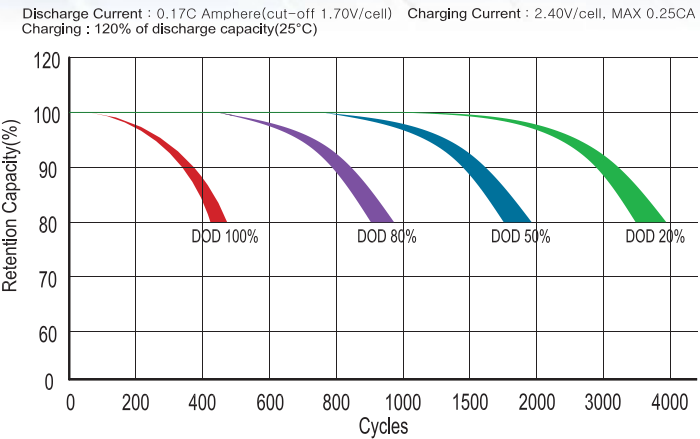
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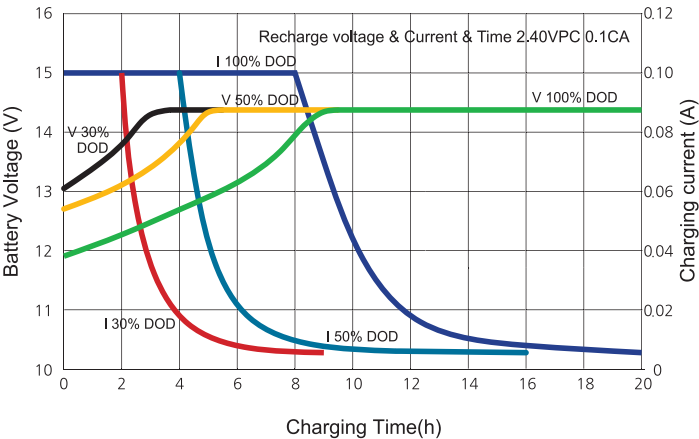
Effect Of Temperature On Capacity



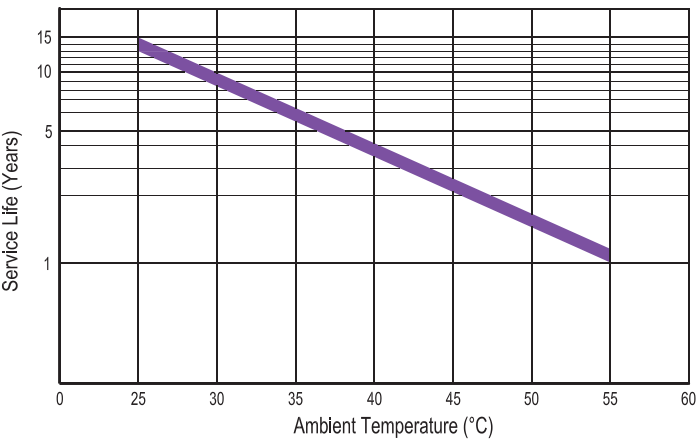
Cycle life characteristics (@25°C)



Dod % Vs Recharging Time Curve



Floating Life Characteristics



12 Voltage SG Series Battery Specifications

| Battery Type | Nominal Voltage | Capacity(AH) | | | | Dimension | | | | | | | | Approx. Weight | | Terminal type |
|--------------|-----------------|--------------|--------|--------|--------|-----------|--------|-------|--------|--------|--------|-----------|--------|----------------|------|---------------|
| | | 20HR | 10HR | 5HR | 1HR | Length | | Width | | Height | | T. Height | | | | |
| | | Final V.P.C | | | | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (Lb) | (kg) | |
| | | (1.80) | (1.80) | (1.70) | (1.60) | | | | | | | | | | | |
| SG 800H | 12 | 90 | 83 | 76 | 55 | 371 | 14.61 | 174 | 6.85 | 205 | 8.07 | 219 | 8.62 | 58.6 | 26.6 | N |
| SG 1000H | 12 | 100 | 93 | 84 | 61 | 371 | 14.61 | 174 | 6.85 | 205 | 8.07 | 219 | 8.62 | 67.4 | 30.6 | N |
| SG 1200H | 12 | 120 | 100 | 82 | 66 | 371 | 14.61 | 174 | 6.85 | 205 | 8.07 | 219 | 8.62 | 72.0 | 32.7 | N |
| SG 1500H | 12 | 150 | 139 | 126 | 91 | 524 | 20.63 | 241 | 9.49 | 215 | 8.46 | 221 | 8.70 | 95.4 | 43.3 | N |
| SG 2000H | 12 | 200 | 185 | 168 | 122 | 524 | 20.63 | 241 | 9.49 | 215 | 8.46 | 221 | 8.70 | 126.5 | 57.4 | N |
| SG 2200H | 12 | 220 | 200 | 182 | 131 | 524 | 20.63 | 241 | 9.49 | 215 | 8.46 | 221 | 8.70 | 132.2 | 60.0 | N |

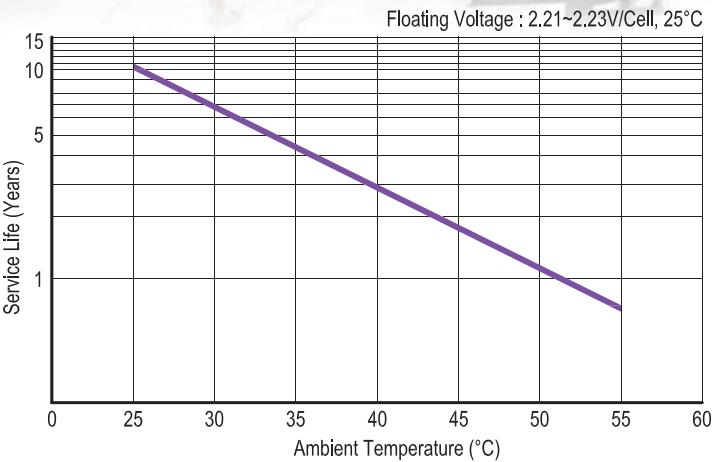
PNB SERIES

AGM, VRLA for UPS, Telecommunication

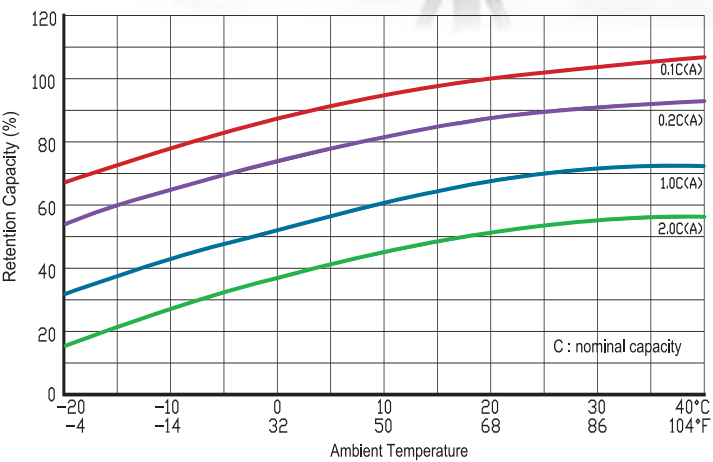
PNB Series is AGM and VRLA type batteries available in various capacities and dimensions which can be installed in any direction. The sealed structure is possible due to technology that prevents over pressuring from excess gas formation. This series can be used for UPS, telecommunications, lighting systems and more.



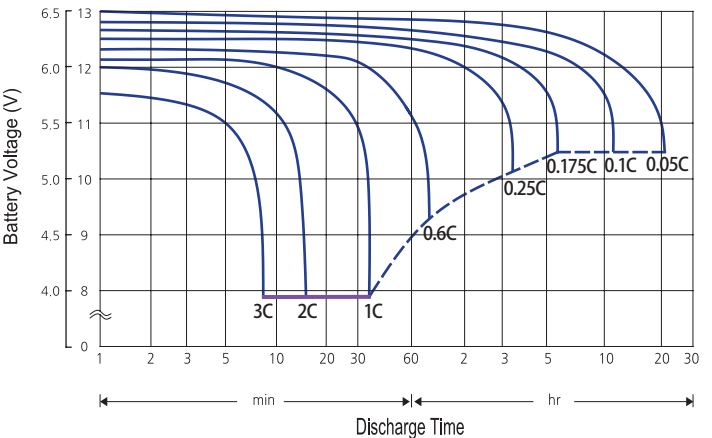
Floating Life Characteristic



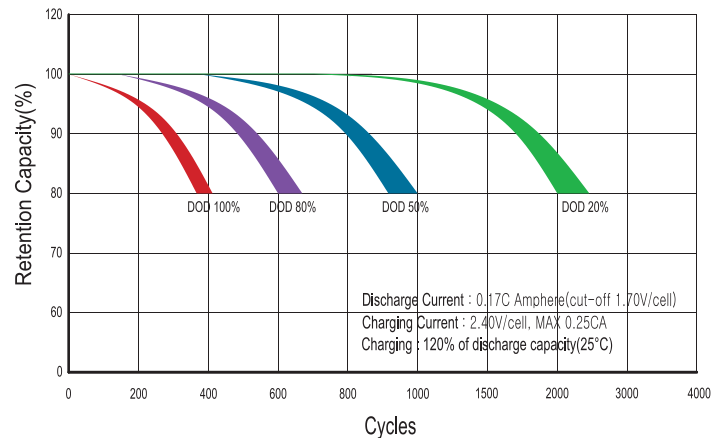
Effect of temperature on capacity



Discharge Time Vs Current



Cycle Life Characteristic



MaxPress™ Grid Technology

Patent pending grid compressing technology which increases 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.



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Highly Resistive Heat Protection Case

Specially formulated heat and flame resistant polypropylene 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 and complies to RoHS Compliant EU Directive 2002/95/EC. Additional UL94-V0 protection option also available.

12 Voltage PNB Series Battery Range Specifications

| Battery Type | Nominal Voltage | Capacity(AH) | | | | Dimension | | | | | | | | Approx. Weight | | Terminal type | |
|--------------|-----------------|--|------|-----|-----|-----------|--------|-------|--------|--------|--------|----------|--------|----------------|------|---------------|-----|
| | | 20HR | 10HR | 5HR | 1HR | Length | | Width | | Height | | T.Height | | | | | |
| | | Final V.P.C (1.80) (1.80) (1.70) (1.60) | | | | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (Lb) | (kg) | (S) | (O) |
| PNB 12400 | 12 | 42 | 40 | 36 | 26 | 197 | 7.76 | 166 | 6.54 | 170 | 6.69 | 170 | 6.69 | 28.9 | 13.1 | D | K |
| PNB 12650 | 12 | 68 | 65 | 59 | 42 | 325 | 12.80 | 166 | 6.54 | 175 | 6.89 | 175 | 6.89 | 46.5 | 21.1 | E | M |
| PNB 12700 | 12 | 72 | 68 | 65 | 45 | 350 | 13.78 | 166 | 6.54 | 175 | 6.89 | 175 | 6.89 | 50.7 | 23.0 | E | M |
| PNB 12800 | 12 | 90 | 83 | 76 | 55 | 371 | 14.61 | 174 | 6.85 | 205 | 8.07 | 219 | 8.62 | 58.6 | 26.6 | N | |
| PNB 121000 | 12 | 100 | 93 | 84 | 61 | 371 | 14.61 | 174 | 6.85 | 205 | 8.07 | 219 | 8.62 | 66.5 | 30.2 | N | |
| PNB 121200 | 12 | 120 | 100 | 82 | 66 | 371 | 14.61 | 174 | 6.85 | 205 | 8.07 | 219 | 8.62 | 71.6 | 32.5 | N | |
| PNB 121500 | 12 | 150 | 139 | 126 | 91 | 524 | 20.63 | 241 | 9.49 | 215 | 8.46 | 221 | 8.70 | 92.5 | 42.0 | N | |
| PNB 122000 | 12 | 200 | 185 | 168 | 122 | 524 | 20.63 | 241 | 9.49 | 215 | 8.46 | 221 | 8.70 | 125.0 | 56.7 | N | |
| PNB 122200 | 12 | 220 | 200 | 182 | 131 | 524 | 20.63 | 241 | 9.49 | 215 | 8.46 | 221 | 8.70 | 132.2 | 60.0 | N | |

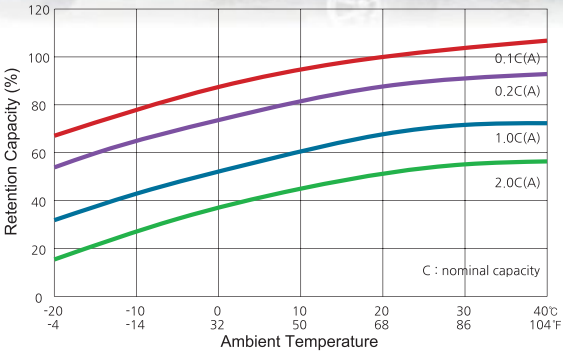
PNC SERIES

Mobility Deep Cycle

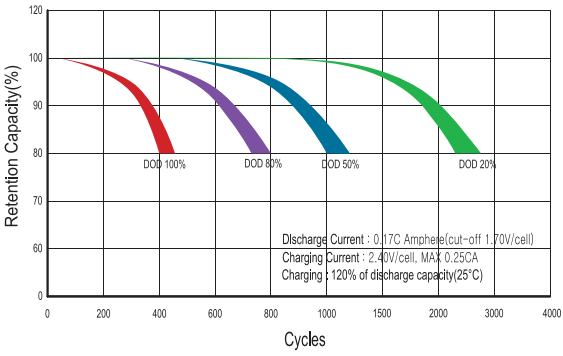
The truly maintenance free PNC Series is designed specifically for deep cycle mobile power units such as electric wheelchairs and scooters. Our unique lead plate design is optimized for exceptional performance in deep cycle applications.



Effect Of Temperature On Capacity



Cycle Life Characteristic



12 Voltage PNC Series Battery Range Specifications

| Battery Type | Nominal Voltage | Capacity(AH) | | | | Dimension | | | | | | | | Approx. Weight | | Terminal type | |
|--------------|-----------------|--|-----|-----|-----|-----------|--------|-------|--------|--------|--------|----------|--------|----------------|------|---------------|-----|
| | | 10HR | 5HR | 3HR | 1HR | Length | | Width | | Height | | T.Height | | | | | |
| | | F i n a l V . P . C (1.75) (1.70) (1.67) (1.60) | | | | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (Lb) | (kg) | (S) | (O) |
| PNC 12400 | 12 | 40 | 37 | 33 | 26 | 197 | 7.76 | 166 | 6.54 | 170 | 6.69 | 170 | 6.69 | 31.5 | 14.3 | D | K |
| PNC 12500P | 12 | 50 | 46 | 42 | 33 | 197 | 7.76 | 166 | 6.54 | 170 | 6.69 | 170 | 6.69 | 32.6 | 14.8 | D | K |
| PNC 12550 | 12 | 55 | 51 | 46 | 36 | 229 | 9.02 | 138 | 5.43 | 208 | 8.19 | 213 | 8.39 | 39.7 | 18.0 | L | |
| PNC 12700 | 12 | 70 | 64 | 58 | 46 | 325 | 12.80 | 166 | 6.54 | 175 | 6.89 | 175 | 6.89 | 50.7 | 23.0 | E | M |
| PNC 12800 | 12 | 80 | 75 | 68 | 54 | 332 | 13.07 | 174 | 6.85 | 215 | 8.46 | 239 | 9.46 | 63.8 | 29 | F | N |
| PNC 121000 | 12 | 100 | 94 | 85 | 67 | 332 | 13.07 | 174 | 6.85 | 215 | 8.46 | 239 | 9.46 | 70.4 | 32 | F | N |
| PNC 121200 | 12 | 120 | 113 | 102 | 80 | 500 | 19.69 | 180 | 7.09 | 195 | 7.68 | 224 | 8.82 | 87.1 | 39.5 | H | N |
| PNC 121500 | 12 | 150 | 141 | 128 | 101 | 500 | 19.69 | 260 | 10.24 | 196 | 7.72 | 225 | 8.86 | 101.4 | 46.0 | H | N |
| PNC 122000 | 12 | 200 | 188 | 170 | 134 | 500 | 19.69 | 260 | 10.24 | 196 | 7.72 | 225 | 8.86 | 132.3 | 60.0 | H | N |

DenseMax™ Grid Technology

Proprietary grid casting technology that condenses the lead grain in the grids increasing the density by 50% compared to a conventional gravity casting method. Higher density grids enable prolonged battery life even in the most severe operating environments.

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Patent pending proprietary cap filtering and sealing technology. Battery cell caps are sealed simultaneously using specially designed o-rings and explosion filters to prevent leakage and gassing more effectively than ever before.

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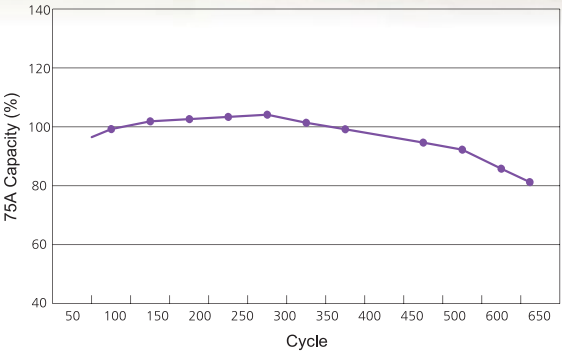
BM SERIES

Golf Cart / Electric Vehicle

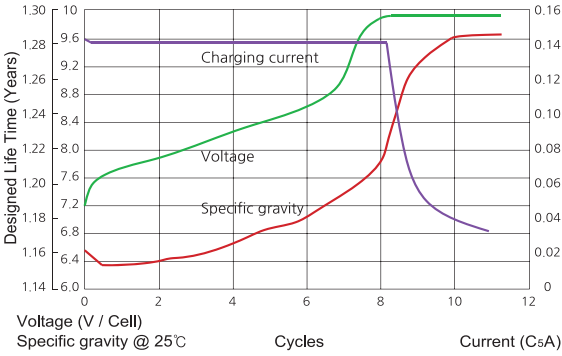
Our BM series batteries are built to provide an ultra-long life while withstanding a bumpy ride on some of the world's roughest and mountainous golf courses located in South Korea. These batteries will provide a lively ride throughout the round.



75A Discharge Cycle Life Characteristics



Charging Characteristics



BM Series Battery Range Specifications

| Battery Type | Nominal Voltage | Capacity(AH) | | | Exterior Dimension | | | | | | | | Liquid amount (ℓ) | Weight (KG) | Terminal type |
|--------------|-----------------|--------------|-----|-----------|--------------------|--------|-------|--------|--------|--------|----------|--------|--------------------|-------------|---------------|
| | | 20HR | 5HR | 75A (min) | Length | | Width | | Height | | T.Height | | | | |
| | | | | | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | | | |
| BM 6210 | 6 | 210 | 156 | 96 | 260 | 10.24 | 183 | 7.20 | 247 | 9.72 | 279 | 10.98 | 6.0 | 26.5 | Standard |
| BM 6225 | 6 | 225 | 185 | 115 | 260 | 10.24 | 183 | 7.20 | 247 | 9.72 | 279 | 10.98 | 5.7 | 28.6 | Standard |
| BM 6240 | 6 | 240 | 195 | 132 | 260 | 10.24 | 183 | 7.20 | 247 | 9.72 | 279 | 10.98 | 5.4 | 30.7 | Standard |
| BM 8170 | 8 | 170 | 141 | 72 | 260 | 10.24 | 183 | 7.20 | 247 | 9.72 | 279 | 10.98 | 5.4 | 28.8 | Standard |
| BM 8190 | 8 | 190 | 155 | 90 | 260 | 10.24 | 183 | 7.20 | 247 | 9.72 | 279 | 10.98 | 5.2 | 31.6 | Standard |
| BM 12150 | 12 | 150 | 114 | 60 | 331 | 13.03 | 183 | 7.20 | 247 | 9.72 | 279 | 10.98 | 7.8 | 38.0 | Standard |
| BM 12165 | 12 | 165 | 135 | 70 | 331 | 13.03 | 183 | 7.20 | 247 | 9.72 | 279 | 10.98 | 7.6 | 42.1 | Standard |

Case & Cover

- Use of Polypropylene(PP) Resin.
- A special saddle plate installed for prevention of a short on the bottom from withdrawal of active substances.
- A design which keeps the electrolytes from being leaking.

Plates

- Made from 99.99% or higher purity lead processed into an active substance.
- Use an antimony alloy metal with higher corrosion-resistance on the board
- The negative plate uses highly porous and deep cycle-resistant additives.
- A special additive applied the positive plate for a long service life

Separators

- Use a highly porous and corrosion-resistant PVC material
- A glass fiber applied to the surface to prevent withdrawal of active substances
- Low electric resistance and excellent physical traits

Electrolytes / Cap

- Electrolytes contain highly pure, refined sulphuric acid (KS M 1203 No.3 or higher)
- Cap has a structure that can filter acid haze and gas generated during the recharge step 3, and discharge only the gas.
- Uses a filter that can prevent an explosion from inflammation of the interior

PNGB SERIES

2V block UPS, Deep Cycle Gel

The PNGB series has a completely sealed gas-recombining structure which has a relatively long life. It is available in various capacities and dimensions. This series is fit for both floating and deep cycle service, such as UPS, telecommunication and lighting systems. They are usable in a wide temperature range, from -20°C to 50°C and can be used in various services including high-rate discharge.



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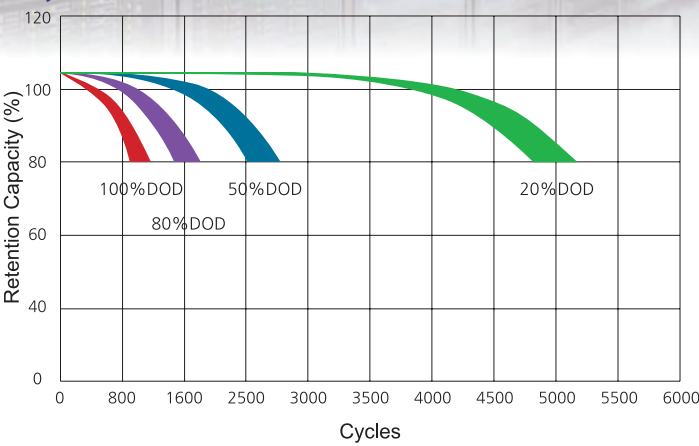
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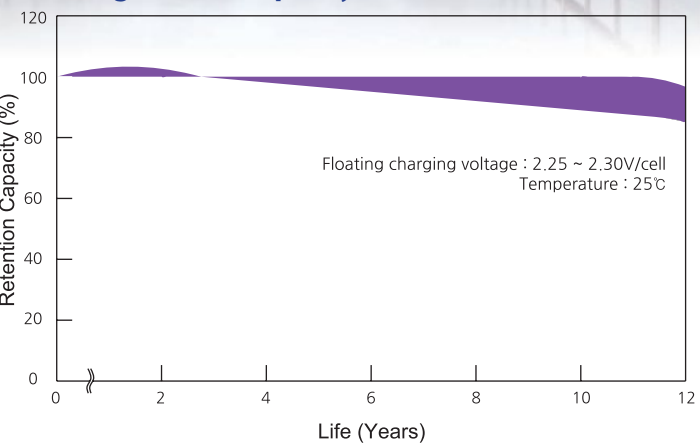
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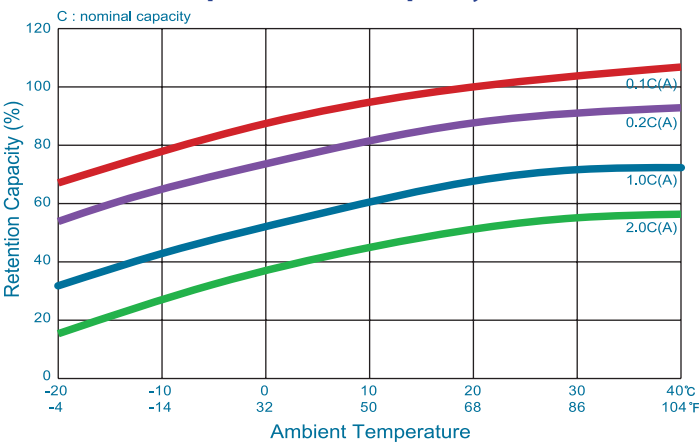
Cycle Life Dod %



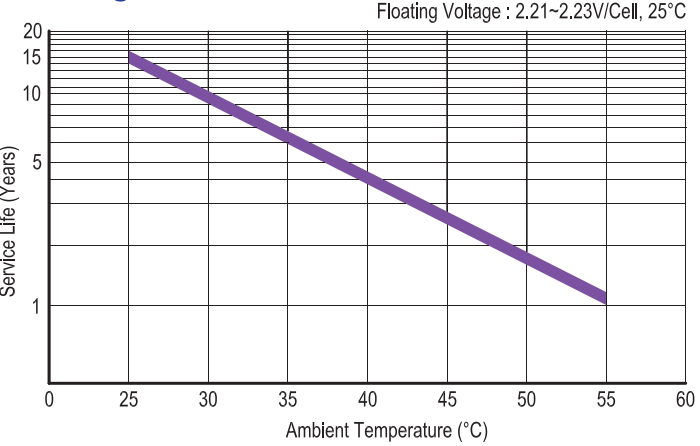
Floating Life For Capacity Characteristic



Effect Of Temperature On Capacity



Floating Life Characteristics



2 Voltage PNGB Series Battery Range Specifications

| Battery Type | Nominal Voltage | Capacity(AH) | | | | Dimension | | | | | | | | Approx. Weight | | Terminal type | |
|--------------|-----------------|--------------|--------------|--------|--------|-----------|--------|-------|--------|--------|--------|----------|--------|----------------|------|---------------|-----|
| | | 10HR | 5HR | 3HR | 1HR | Length | | Width | | Height | | T.Height | | | | | |
| | | Final (1.80) | V.P.C (1.70) | (1.65) | (1.60) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (Lb) | (kg) | (S) | (O) |
| PNGB 21000 | 2 | 100 | 90 | 83 | 66 | 106 | 4.17 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 17.4 | 7.9 | I | P |
| PNGB 21200 | 2 | 120 | 108 | 99 | 79 | 106 | 4.17 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 20.5 | 9.3 | I | P |
| PNGB 21500 | 2 | 150 | 135 | 124 | 99 | 106 | 4.17 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 22.9 | 10.4 | I | P |
| PNGB 22000 | 2 | 200 | 180 | 166 | 131 | 106 | 4.17 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 27.6 | 12.5 | I | P |
| PNGB 22500 | 2 | 250 | 225 | 207 | 164 | 195 | 7.68 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 35.5 | 16.1 | I | P |
| PNGB 23000 | 2 | 300 | 270 | 248 | 197 | 195 | 7.68 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 41.9 | 19.0 | I | P |
| PNGB 24000 | 2 | 400 | 360 | 331 | 263 | 195 | 7.68 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 51.8 | 23.5 | I | P |
| PNGB 25000 | 2 | 500 | 450 | 414 | 329 | 289 | 11.38 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 66.1 | 30.0 | I | P |
| PNGB 26000 | 2 | 600 | 540 | 497 | 394 | 289 | 11.38 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 76.1 | 34.5 | I | P |
| PNGB 27000 | 2 | 700 | 630 | 580 | 460 | 382 | 15.04 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 91.7 | 41.6 | I | P |
| PNGB 28000 | 2 | 800 | 720 | 662 | 526 | 382 | 15.04 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 101.9 | 46.2 | I | P |
| PNGB 29000 | 2 | 900 | 810 | 745 | 591 | 471 | 18.54 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 119.7 | 54.3 | I | P |
| PNGB 210000 | 2 | 1000 | 900 | 828 | 657 | 471 | 18.54 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 131.0 | 59.4 | I | P |
| PNGB 212000 | 2 | 1200 | 1080 | 994 | 788 | 471 | 18.54 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 143.7 | 65.2 | I | P |
| PNGB 214000 | 2 | 1400 | 1260 | 1159 | 920 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 188.5 | 85.5 | I | |
| PNGB 216000 | 2 | 1600 | 1440 | 1325 | 1051 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 215.2 | 97.6 | I | |
| PNGB 218000 | 2 | 1800 | 1620 | 1490 | 1183 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 235.2 | 107 | I | |
| PNGB 220000 | 2 | 2000 | 1800 | 1656 | 1314 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 253.1 | 115 | I | |

UPN SERIES

2V Deep Cycle Premium Gel with Longer Life

The Newmax UPN Series is an ultra efficient premium quality UPS battery series. This innovative and technology intensive product has proven to last up to 60% longer than its predecessor, the PNGB series. Constant drive for true innovation was the key to the success of our UPN series.



DenseMax™ Grid Technology

Proprietary grid casting technology that condenses the lead grain in the grids increasing the density by 50% compared to a conventional gravity casting method. Higher density grids enable prolonged battery life even in the most severe operating environments.



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-rings and explosion filters to prevent leakage and gassing more effectively than ever before.



ActiveCarbon™

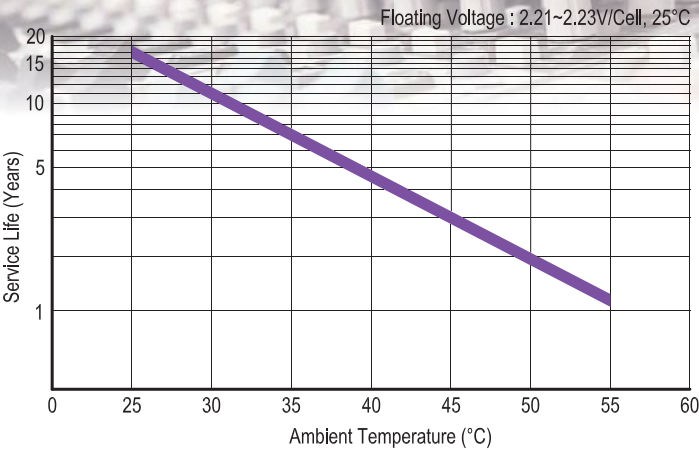
In every Newmax battery, proprietary micro carbon additive is used in the active material for both positive and negative plates to enhance charge acceptance and cycle endurance. ActiveCarbon™ works to strengthen charge pathways to improve performance consistency and enhance performance at partial state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



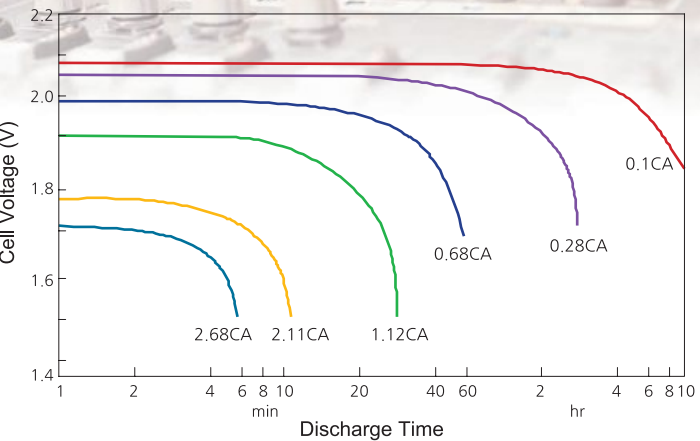
Highly Resistive Heat Protection Case

Specially formulated heat and flame resistant polypropylene 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 and complies to RoHs Compliant EU Directive 2002/95/EC. Additional UL94-V0 protection option also available.

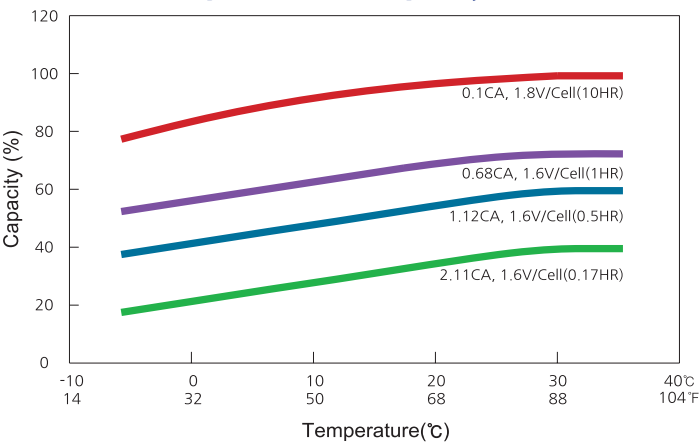
Floating Life Characteristics



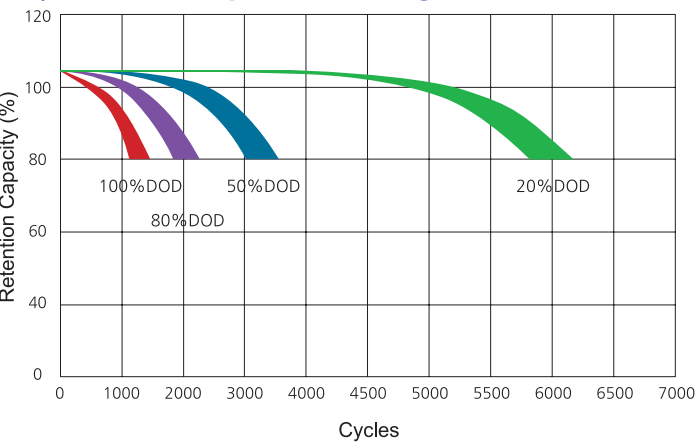
Discharge Time Vs Current



Effect Of Temperature On Capacity



Cycle Life Vs Depth Of Discharge@25°C



2 Voltage UPN Series Battery Specifications

| Battery Type | Nominal Voltage | Capacity(AH) | | | | Dimension | | | | | | | | Approx. Weight | | Terminal type | |
|--------------|-----------------|--------------|----------|----------|----------|-----------|--------|-------|--------|--------|--------|----------|--------|----------------|------|---------------|-----|
| | | 10HR | 5HR | 3HR | 1HR | Length | | Width | | Height | | T.Height | | | | | |
| | | Final (1.80) | V (1.70) | P (1.65) | C (1.60) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | (inch) | (Lb) | (kg) | (S) | (S) |
| UPN 150 | 2 | 150 | 139 | 130 | 103 | 106 | 4.17 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 25.1 | 11.4 | I | P |
| UPN 200 | 2 | 200 | 185 | 173 | 137 | 106 | 4.17 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 29.8 | 13.5 | I | P |
| UPN 250 | 2 | 250 | 231 | 216 | 172 | 195 | 7.68 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 38.6 | 17.5 | I | P |
| UPN 300 | 2 | 300 | 278 | 259 | 206 | 195 | 7.68 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 45.0 | 20.4 | I | P |
| UPN 400 | 2 | 400 | 370 | 346 | 274 | 195 | 7.68 | 170 | 6.69 | 326 | 12.83 | 364 | 14.33 | 56.2 | 25.5 | I | P |
| UPN 500 | 2 | 500 | 463 | 432 | 343 | 289 | 11.38 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 71.7 | 32.5 | I | P |
| UPN 600 | 2 | 600 | 555 | 518 | 412 | 289 | 11.38 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 84.9 | 38.5 | I | P |
| UPN 700 | 2 | 700 | 648 | 605 | 480 | 382 | 15.04 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 102.5 | 46.5 | I | P |
| UPN 800 | 2 | 800 | 740 | 691 | 549 | 382 | 15.04 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 112.0 | 50.8 | I | P |
| UPN 900 | 2 | 900 | 833 | 778 | 617 | 471 | 18.54 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 130.1 | 59.0 | I | P |
| UPN 1000 | 2 | 1000 | 925 | 864 | 686 | 471 | 18.54 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 143.7 | 65.2 | I | P |
| UPN 1200 | 2 | 1200 | 1100 | 1037 | 823 | 471 | 18.54 | 171 | 6.73 | 326 | 12.83 | 364 | 14.33 | 154.0 | 70.0 | I | P |
| UPN 1400 | 2 | 1400 | 1295 | 1210 | 960 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 209.4 | 95.0 | I | |
| UPN 1600 | 2 | 1600 | 1480 | 1382 | 1098 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 231.5 | 105 | I | |
| UPN 1800 | 2 | 1800 | 1665 | 1555 | 1235 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 255.7 | 116 | I | |
| UPN 2000 | 2 | 2000 | 1850 | 1728 | 1372 | 472 | 18.58 | 335 | 13.19 | 329 | 12.95 | 366 | 14.41 | 277.8 | 126 | I | |

MRV SERIES

Dual Purpose AGM for Marine and RV Application

WHY AGM?

NEWMAX MARINE AGM batteries are designed to handle today's increased stress and load :

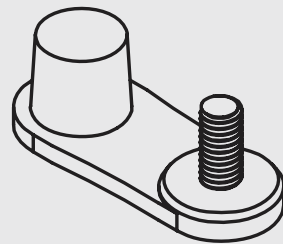
- Only 15% of consumers of automobile industry worldwide are "very satisfied" with the performance and power of conventional lead-acid batteries.
- Today's marine and vehicle systems and accessories require more electric power than ever before.
- The power consumption of today's boats and RVs is considerable even when they are parked.
- No leakage of electrolyte even when physically damaged (safer for the driver and the environment)

Market trends clearly show the increased demand for advanced battery technology :

- Significantly increased share of AGM batteries versus standard MF type batteries over the last 10 years
- OEM's are now rapidly adopting AGM technology to meet high demand of power and reliability
- Provides excellent resistance to wave pounding for boats and vibration from road corrugation for RVs.
- Consumers naturally want superior performance, safety and durability from their batteries.



Terminal Type: Dual Marine Terminal
(Standard SAE + Stud)



ActiveCarbon™

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



MaxPress™ Grid Technology

Patent pending grid compressing technology which increases 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.



FlexSealing™ Anti Explosion Filter

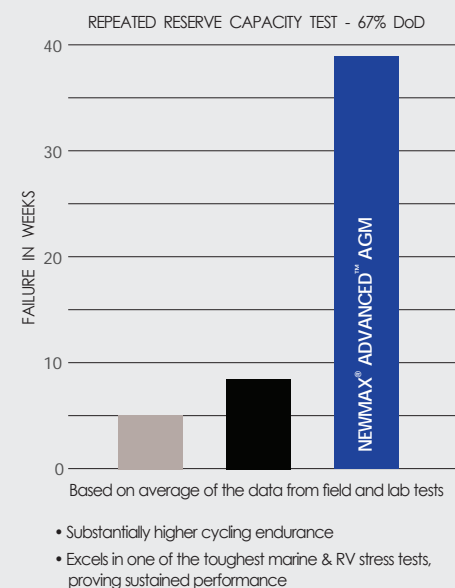
Patent pending proprietary cap filtering and sealing technology. Battery cell caps are sealed simultaneously using specially designed o-rings and explosion filters to prevent leakage and gassing more effectively than ever before.



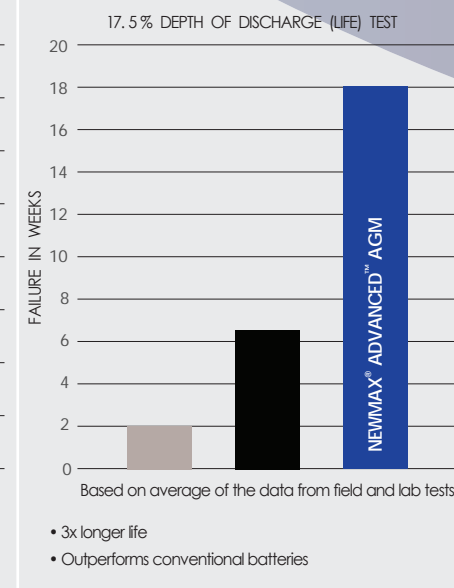
Highly Resistive Heat Protection Case

Specially formulated heat and flame resistant polypropylene 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 and complies to RoHs Compliant EU Directive 2002/95/EC. Additional UL94-V0 protection option also available.

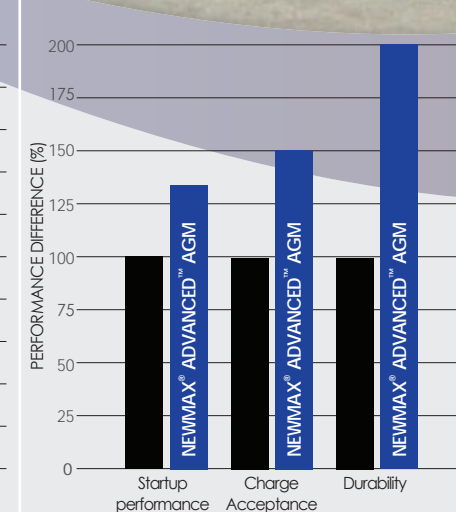
ENDURANCE



LIFE



COMPARISON CHART



■ Conventional MF Type ■ EFB Type ■ NEWMAX ADVANCED AGM

THE NEWMAX MARINE AGM DIFFERENCE

| | |
|----------------------------------|---|
| Lasting Power | <ul style="list-style-type: none">• 3x longer cycle life compared to conventional MF type batteries.• 2x longer battery life compared to EFB type batteries. |
| Maximum Durability and Stability | <ul style="list-style-type: none">• vibration rating Provides superb resistance to wave pounding• Excellent active material protection against road corrugation. |
| Faster Recharge | <ul style="list-style-type: none">• Recharges faster with ActiveCarbon™ Technology |
| Maintenance Free | <ul style="list-style-type: none">• Non-spillable, AGM provides protection against leakage.• Environmentally Friendly, Recyclable |

| BCI Group | Model | Voltage | Capacity | | | | | Dimensions | | | | | | | | Weight | | Terminal Type | Hold down |
|-----------|-------|---------|-----------------|----------------|------------------|--------------|--------------|------------|-----|-----|-----|-----|-----|-----|-----|--------|-----|---------------|-----------|
| | | | Ampere Hour@C20 | Ampere Hour@C5 | CA(MCA) (Ampere) | CCA (Ampere) | RC (Minutes) | Inches | | | | mm | | | | Lbs | Kgs | | |
| | | | | | | | | L | W | H | TH | L | W | H | TH | | | | |
| 24 | MRV24 | 12 | 80 | 65 | 680 | 550 | 140 | 10.2 | 6.8 | 8.4 | 9.3 | 258 | 172 | 214 | 235 | 52.8 | 24 | Dual Marine | B0 |
| 27 | MRV27 | 12 | 90 | 75 | 760 | 620 | 170 | 12.1 | 6.8 | 8.3 | 9.1 | 308 | 172 | 212 | 232 | 59.4 | 27 | Dual Marine | B0 |
| 31 | MRV31 | 12 | 100 | 88 | 900 | 750 | 205 | 13 | 6.8 | 8.5 | 9.3 | 330 | 172 | 216 | 236 | 66 | 30 | Dual Marine | B0 |