

## PNB 122000 (12V200AH/C<sub>10</sub>)

(Power NEWMAX Premium Battery)



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

### PNB SERIES

AGM, VRLA for UPS, Telecommunication

“The Ultra Power of Newmax Lead-Acid Battery”

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 gassing. This series can be used for UPS, telecommunications, lighting systems and more.

#### 01 Longer Life 02 Maintenance Free 03 Leak Free 04 Safety

Advanced technology is used to produce batteries suited for long service life. High density, anti-corrosive lead calcium alloy is used to minimize impurities and resistance.

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

Ultra-porous Absorbent Glass Mat stores the electrolyte between the plates. Gas-tight sealed container makes it leak free.

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°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 stds.	
	<ul style="list-style-type: none"> <li>● IEC 60896-21/22 Stationary lead-acid batteries – Valve regulated types</li> <li>● BS EN 61427 Secondary cells and batteries for photovoltaic energy systems (PVES)</li> <li>● KS C 8518 Stationary sealed lead-acid batteries – Valve regulated types</li> </ul>

### 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.



#### FlexSealing™ Anti Explosion Filter

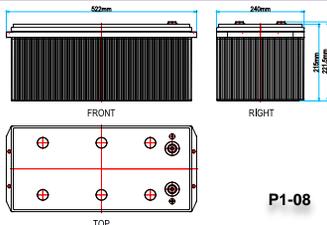
Patent pending proprietary cap filtering and sealing technology. Battery cell caps are sealed simultaneously using specially designed O-ring and explosion filters to prevent leakage and gassing more effectively than ever before.



#### 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.

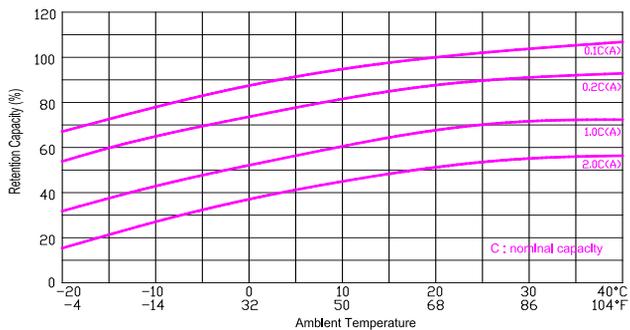
Standard



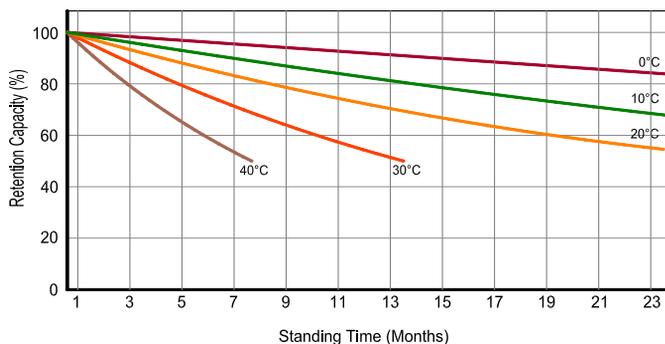
P1-08

Battery model	PNB 122000 (12V200AH / 10 HOUR RATE)			
Capacity (@25°C)	C <sub>10</sub> (1.80VPC)	C <sub>5</sub> (1.70VPC)	C <sub>3</sub> (1.65VPC)	C <sub>1</sub> (1.60VPC)
	200Ah	182Ah	166Ah	132Ah
Dimensions (mm/inch)	Length	Width	Height	Total Height
	522(20.55)	240(9.45)	215(8.47)	221(8.70)
Weight (kg/lbs)	58.5kg(128.97lbs) ± 3%			
Internal resistance (mΩ)	≤2.50mΩ (25°C, 77°F)			
Max. discharge current (5sec)	1600 A	Max. discharge current(continuous)		600 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 ≤2%		After 3 month ≤6%	After 6 month ≤12%
Max. short duration discharge current (0.1sec)	4,000A ± 10%			
Recommended charging (@25°C)	Cyclic use		Stand-by use (Floating)	
	2.40~2.50V/cell (±5.5mV/°C/Cell) / 80.0A max.		2.21~2.23V/cell (±3.3mV/°C/cell)	

**Effect of temperature on capacity**

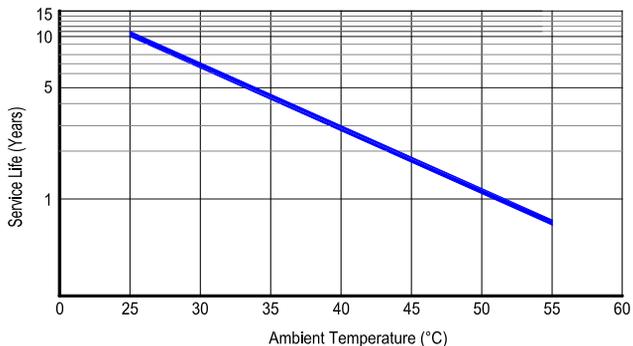


**Self discharge**

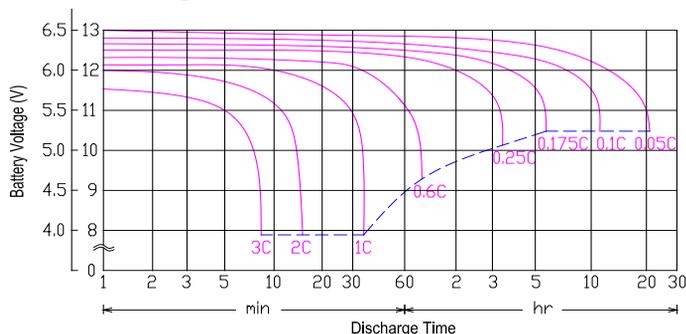


**Floating life characteristics**

Floating Voltage : 2.21~2.23V/Cell, 25°C

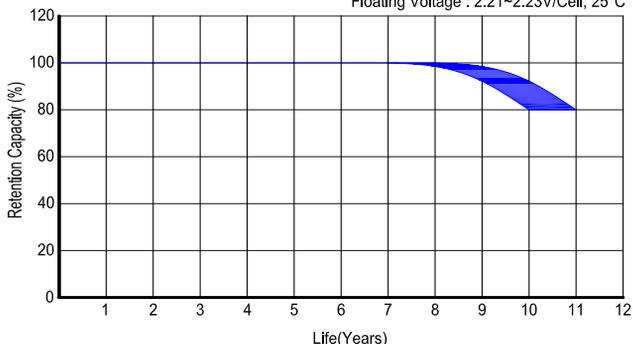


**Discharge time vs current**

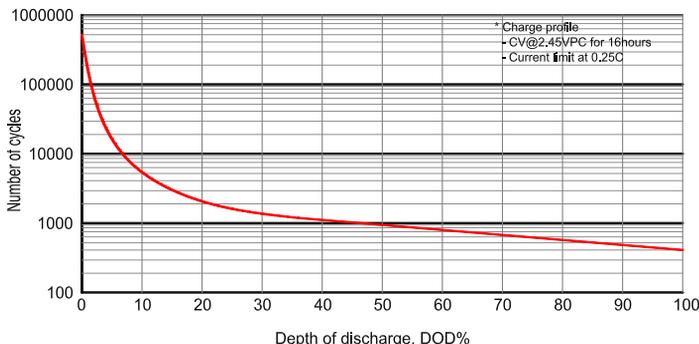


**Floating life for capacity characteristics**

Floating Voltage : 2.21~2.23V/Cell, 25°C



**Cycle life vs DOD % (@25°C)**



**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
1.85V	184	182	177	171	146	128	101	47.3	31.1	20.8	18.3	9.92
1.80V	269	257	229	206	173	146	114	51.1	34.0	22.2	20.0	10.8
1.75V	312	288	251	222	179	155	119	51.7	34.9	22.7	20.0	10.8
1.70V	354	315	269	236	187	160	123	53.3	36.4	23.3	20.0	10.8
1.65V	394	342	288	250	197	164	127	55.2	36.7	23.7	20.1	10.9
1.60V	442	375	311	266	209	172	131	57.0	38.1	24.1	20.3	11.0

**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
1.85V	341	336	328	318	274	242	192	90.9	60.2	40.5	35.7	19.3
1.80V	484	463	412	374	317	270	213	97.6	65.1	43.0	38.8	21.0
1.75V	546	513	449	401	328	286	223	98.4	66.7	43.7	38.9	21.0
1.70V	601	537	481	423	340	293	229	101	69.4	45.1	38.9	21.0
1.65V	660	589	506	444	354	298	239	104	70.3	46.1	39.1	21.1
1.60V	722	628	536	467	374	312	241	107	72.0	46.2	39.6	21.4