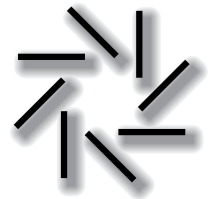


Valve Regulated Lead-Acid Rechargeable Batteries

# NP SERIES

## PRODUCT BROCHURE



# RELIABILITY IS YOUR SECURITY

Yuasa batteries are the trusted choice around the world for standby power in applications where system integrity is paramount. Yuasa's NP series incorporates high energy density, advanced plate technology and a sealed construction to provide complete peace of mind.

## FEATURES

- Superb recovery from deep discharge.
- Electrolyte suspension system.
- Gas Recombination.
- Multipurpose: Float or Cyclic use.
- Usable in any orientation (except continuous inverted).
- Superior energy density.
- Lead calcium grids for extended life.
- Manufactured world wide.
- Application specific designs.

## Technical Features

### Sealed Construction

Yuasa's unique construction and sealing technique ensures no electrolyte leakage from case or terminals.

### Electrolyte Suspension System

All NP batteries utilize Yuasa's unique electrolyte suspension system incorporating a microfine glass mat to retain the maximum amount of electrolyte in the cells.

The electrolyte is retained in the separator material and there is no free electrolyte to escape from the cells. No gels or other contaminants are added.

### Control of Gas Generation

The design of Yuasa's NP batteries incorporates the very latest oxygen recombination technology to effectively control the generation of gas during normal use.

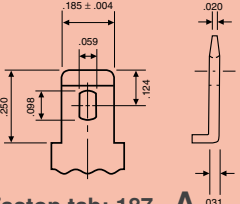
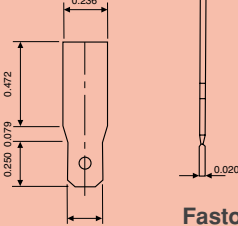
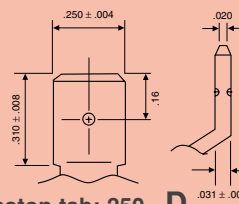
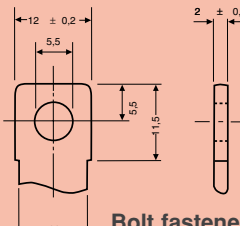
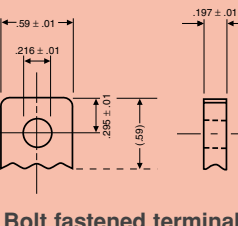
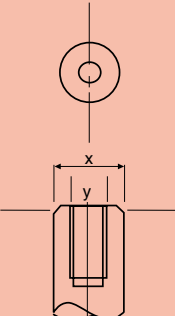
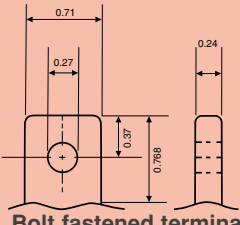
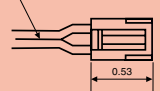
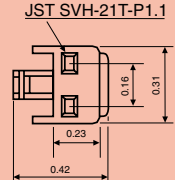
### Low Maintenance Operation

Due to the perfectly sealed construction and the recombination of gasses within the cell, the battery is almost maintenance free.

### Terminals

NP batteries are manufactured using a range of terminals which vary in size and type. Please refer to details as shown.

## Terminals

 <p><b>Faston tab: 187 A</b></p> <table border="1"> <thead> <tr> <th colspan="2">INCH = MM</th> </tr> </thead> <tbody> <tr><td>.250</td><td>6.35</td></tr> <tr><td>.185</td><td>4.70</td></tr> <tr><td>.124</td><td>3.15</td></tr> <tr><td>.098</td><td>2.50</td></tr> <tr><td>.059</td><td>1.50</td></tr> <tr><td>.031</td><td>0.80</td></tr> <tr><td>.020</td><td>0.50</td></tr> <tr><td>.031</td><td>0.10</td></tr> </tbody> </table>	INCH = MM		.250	6.35	.185	4.70	.124	3.15	.098	2.50	.059	1.50	.031	0.80	.020	0.50	.031	0.10	 <p><b>Faston tab: 187 B</b></p> <table border="1"> <thead> <tr> <th colspan="2">INCH = MM</th> </tr> </thead> <tbody> <tr><td>0.472</td><td>12.00</td></tr> <tr><td>0.250</td><td>6.35</td></tr> <tr><td>0.236</td><td>6.00</td></tr> <tr><td>0.185</td><td>4.70</td></tr> <tr><td>0.079</td><td>2.00</td></tr> <tr><td>0.020</td><td>0.50</td></tr> </tbody> </table>	INCH = MM		0.472	12.00	0.250	6.35	0.236	6.00	0.185	4.70	0.079	2.00	0.020	0.50	 <p><b>Faston tab: 250 D</b></p> <table border="1"> <thead> <tr> <th colspan="2">INCH = MM</th> </tr> </thead> <tbody> <tr><td>.310</td><td>7.90</td></tr> <tr><td>.250</td><td>6.35</td></tr> <tr><td>.16</td><td>4.0</td></tr> <tr><td>.031</td><td>0.8</td></tr> <tr><td>.020</td><td>0.5</td></tr> </tbody> </table>	INCH = MM		.310	7.90	.250	6.35	.16	4.0	.031	0.8	.020	0.5
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### Operation in any Orientation

The combination of sealed construction and Yuasa's unique electrolyte suspension system allows operation in any orientation, with no loss of performance or fear of electrolyte leakage. (Excluding continuous use inverted)

### Valve Regulated Design

The batteries are equipped with a simple, safe low pressure venting system which releases excess gas and automatically reseals should there be a build up of gas within the battery due to severe overcharge. Note. On no account should the battery be charged in a sealed container.

### Lead Calcium Grids

The heavy duty lead calcium alloy grids provide an extra margin of performance and life in both cyclic and float applications and give unparalleled recovery from deep discharge.

### Long Cycle Service Life

Depending upon the average depth of discharge, over a thousand discharge/charge cycles can be expected.

### Float Service Life

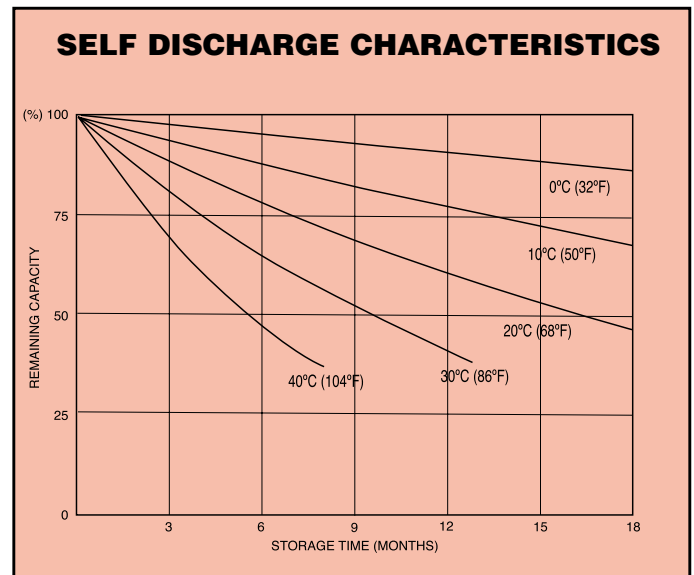
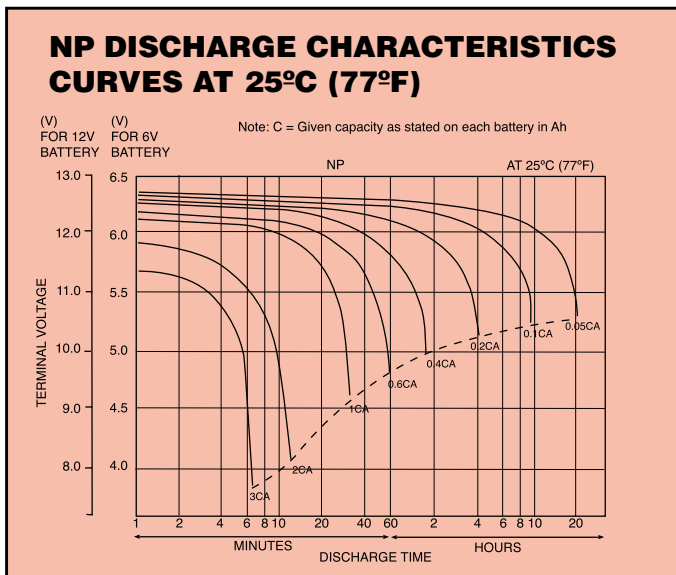
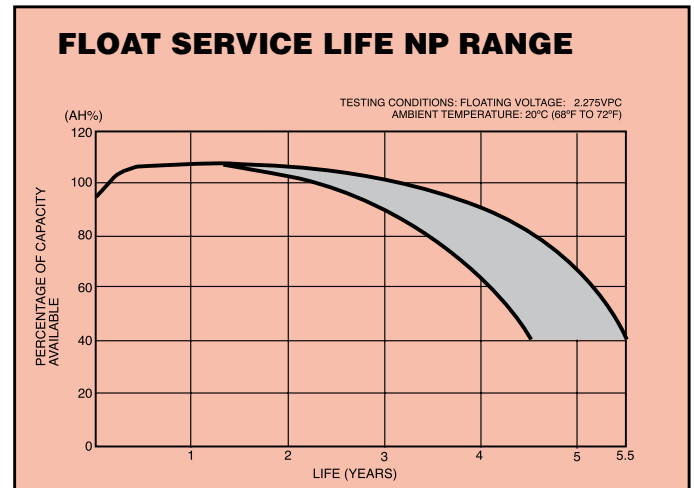
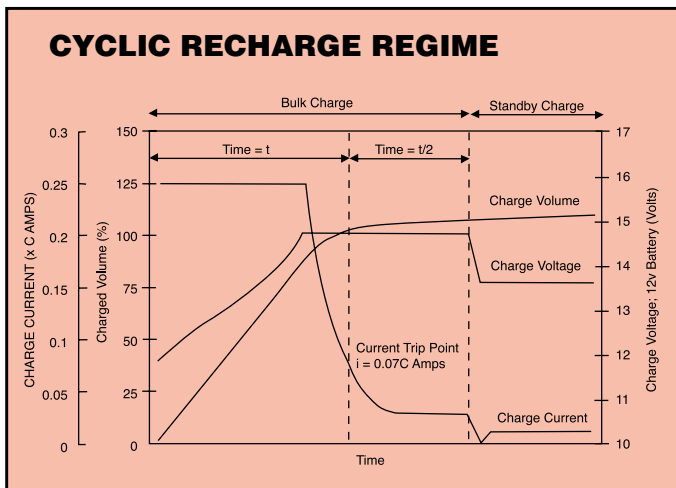
The expected service life is five years in float standby applications.

### Separators

The use of the special separator material provides a very efficient insulation between plates preventing inter-plate short circuits and prohibiting the shedding of active materials.

### Long shelf Life

The extremely low self discharge rate allows the battery to be stored for extended periods up to one year at normal ambient temperatures with no permanent loss of capacity.



## Operating Temperature Range

The batteries can be used over a broad temperature range permitting considerable flexibility in system design and location.

Charge – 15°C to 50°C

Discharge – 20°C to 60°C

Storage – 20°C to 50°C (fully charged battery)

## Applications

Yuasa NP batteries, having excellent deep discharge recovery characteristics coupled with long life on float standby, are ideal for numerous applications in both cyclic and standby modes.

## Charging For Float Standby Applications

Charged at 2.275 volts per cell continuous. The battery will seek its own current level and float fully charged. However, users should be aware that when charging from fully discharged, the battery can draw an initial charge current of approximately 2cA. Care should therefore be taken to ensure that this initial charge

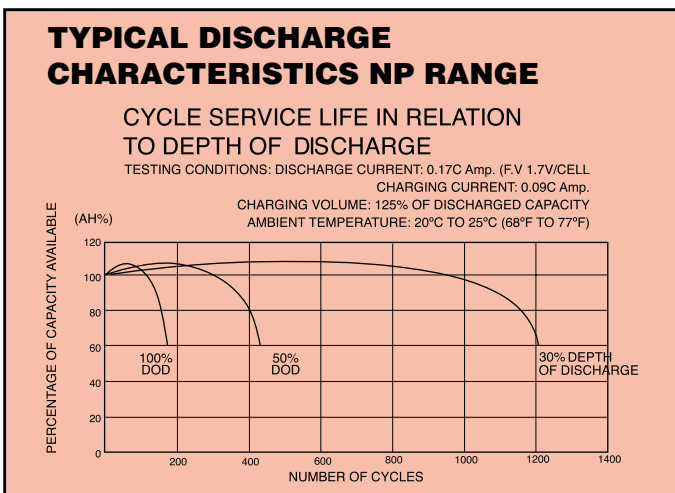
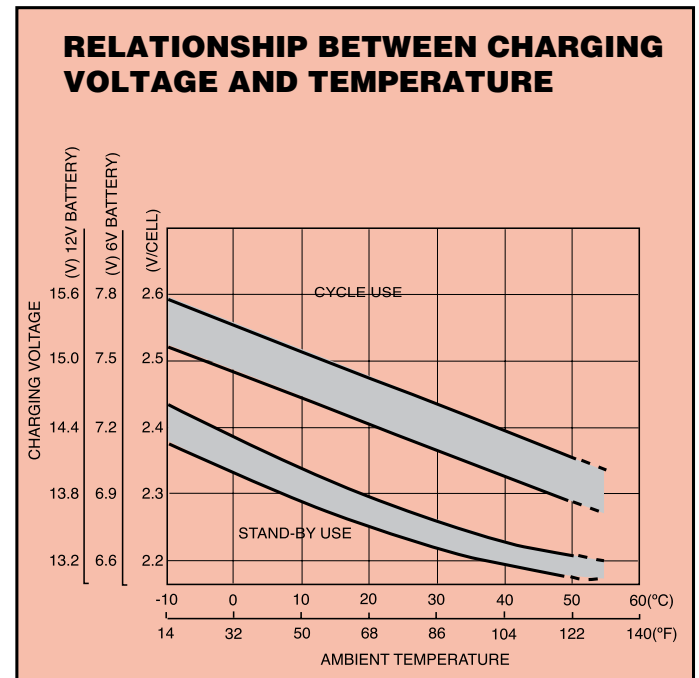
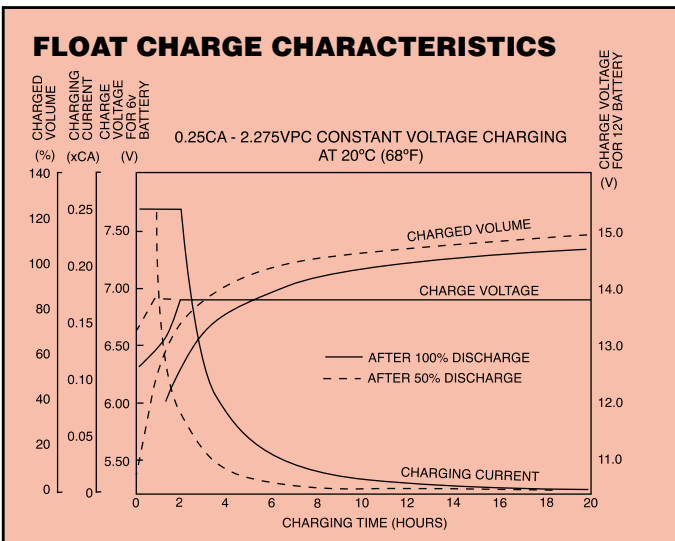
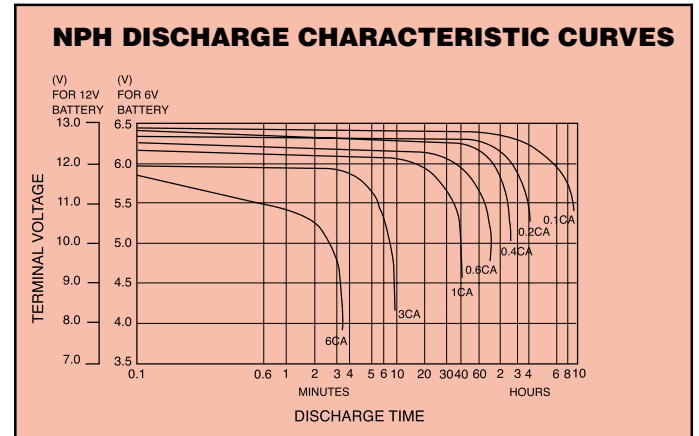
current (if uncontrolled) is within the output capability of the equipment. Final charge current at 2.275 volts per cell is typically between 0.0005cA to 0.004cA.

## Charging For Cyclic Applications

See cyclic recharge regime graph.

## NPH

High performance batteries specially designed for applications requiring high rate discharge, supplying up to 50% more power (Watts) for short durations when compared to conventional NP models.



## CAUTION

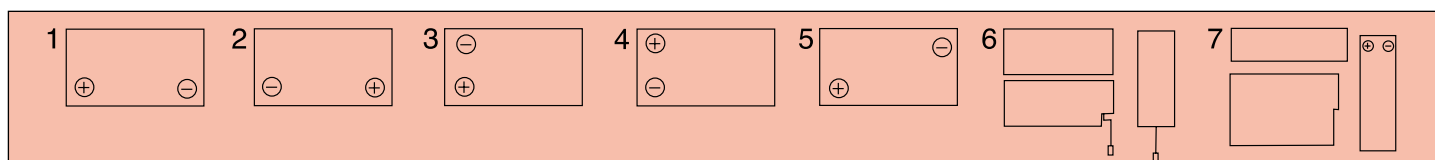
- Do not Short Circuit
- Do not charge in a sealed container
- Service life and operational characteristics will be affected by temperature
- AC Ripple reduces service life

## General Specifications

Model	Volts	Rated AH Capacity (20 hr rate)**	Nominal Dimensions (mm)				Weight (kg)	Layout	Terminal
			L	W	H	Total H			
NP1-6*	6	1.0	51	42.5	51	54.5	0.25	5	A
NP1.2-6		1.2	97	25	50	54.5	0.31	1	A
NP2.8-6*		2.8	134	34	59	64	0.57	1	A
NP3-6		3.0	134	34	59	64	0.63	1	A
NP4-6		4.0	70	47	101	105.5	0.87	5	A
NP7-6		7.0	151	34	93	97.5	1.26	1	A
NP10-6		10.0	151	50	93	97.5	1.93	1	A
NP12-6		12.0	151	50	94	97.5	2.05	1	D
NP0.8-12		12	0.8	96	25	61.5	61.5	0.35	6
NP1.2-12	1.2		97	48	54.5	54.5	0.58	3	A
NP2-12	2.0		150	20	89	89	0.70	7	B
NP2.1-12*	2.1		178	34	60	64	0.74	1	A
NP2.3-12	2.3		178	34	60	64	0.95	1	A
NP2.6-12	2.6		134	67	60	64	1.12	3	A
NP2.8-12*	2.8		134	67	60	64	1.12	3	A
NP3.2-12*	3.2		134	67	60	64	1.20	3	A
NP4-12	4.0		90	70	102	105.5	1.67	1	A
NPH5-12	5.0		90	70	97.5	106	2.00	1	D
NP7-12	7.0		151	65	93	97.5	2.65	4	A/D
NP7-12FR <sup>1</sup>	7.0		151	65	93	97.5	2.65	4	A
NP12-12	12.0		151	98	93	97.5	4.05	4	D
NP18-12B	17.2		181	76	167	167	6.20	2	E
NP24-12B	24.0		175	166	125	125	8.65	2	E
NP26-12*	26.0		175	166	125	125	9.00	2	E
NP38-12	38.0		197	165	170	170	14.20	2	F
NP65-12	65.0		350	166	174	174	23.00	2	G

\* Available upon special request. Contact Yuasa for more information. \*\* Final Voltage: 1.75V/cell, Temperature: 25°C. <sup>1</sup> Flame retardant case.

## Layouts





## ENERGY FOR THE WORLD



**Standby Power Solutions**  
Australia 1300 364 877  
New Zealand 0800 236 8879

Outlet Contact Details: