

# NP Series



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## Valve Regulated Lead Acid Batteries

**0.8-130 Ah**

**NP Series**



- 5 & 10 Year Design Life
- 
- Maintenance Free
- 
- Superb Deep Discharge Recovery
- 
- Security from Electrolyte Leakage
- 
- Superior Energy Density
- 
- Disposal Service
- 
- Made in U.K.

### Specification

Utilising the latest advance design Oxygen Recombination Technology, Yuasa have applied their 70 years experience in the lead acid battery field to produce a new generation of Sealed Lead Acid batteries.

#### Sealed Construction

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

#### Electrolyte Suspension System

All NP batteries utilise 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 by meniscus effect 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 NP batteries incorporates the very latest oxygen recombination technology to effectively control the generation of gas during normal use.

#### Absolute Maintenance Free Operation

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

#### Terminals

NP batteries are manufactured using a range of terminals which vary in size and type.

#### Operation in any Orientation

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

#### New Venting System

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. However, 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 200 discharge/charge cycles can be expected.

#### Float Service Life

The expected service life is three to five years for NP and 7 to 10 years for the NPL range, 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 recommended operating temperature is 20 °C to 25 °C.

*High Temperature* will reduce battery service life often quite dramatically and in extreme cases will cause Thermal Runaway, resulting in possible oxygen/hydrogen gas production and battery swelling. Batteries are irrecoverable from this condition and should be replaced.

Temperature (°C)	20	25	30	35	40	45	50
% Expected Float Life	100%	100%	80%	60%	40%	20%	10%

*Low Temperature* will have little effect on the battery service life but will reduce the battery performance i.e. 65% output capacity at 10 °C.

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OUTPUT VOLTAGE & CURRENT RATINGS							NP
Nominal Voltage	Nominal Capacity 20 hour rate	Dimensions			Weight Approx	Model Number	
		Length	Width	Height Over Terminal			
6 V	1.2 Ah	97.0 mm	25.0 mm	54.5 mm	0.31 kg	NP1.2-6	
6 V	2.8 Ah	134.0 mm	34.0 mm	64.0 mm	0.60 kg	NP2.8-6	
6 V	4.0 Ah	70.0 mm	47.0 mm	105.5 mm	0.85 kg	NP4-6	
6 V	7.0 Ah	151.0 mm	34.0 mm	97.5 mm	1.32 kg	NP7-6	
6 V	10.0 Ah	151.0 mm	50.0 mm	97.5 mm	1.93 kg	NP10-6	
6 V	12.0 Ah	151.0 mm	50.0 mm	97.5 mm	2.05 kg	NP12-6L	
6 V	130.0 Ah	350.0 mm	166.0 mm	174.0 mm	22.82 kg	NPL130-6IFR	
12 V	0.8 Ah	96.0 mm	25.0 mm	61.5 mm	0.35 kg	NP0.8-12 <sup>7</sup>	
12 V	1.2 Ah	97.0 mm	48.0 mm	54.5 mm	0.57 kg	NP1.2-12	
12 V	2.0 Ah	150.0 mm	20.0 mm	89.0 mm	0.71 kg	NP2-12	
12 V	2.1 Ah	178.0 mm	34.0 mm	64.0 mm	0.83 kg	NP2.1-12	
12 V	2.3 Ah	178.0 mm	34.0 mm	64.0 mm	0.94 kg	NP2.3-12	
12 V	2.8 Ah	134.0 mm	67.0 mm	64.0 mm	1.10 kg	NP2.8-12	
12 V	3.2 Ah	134.0 mm	67.0 mm	64.0 mm	1.17 kg	NP3.2-12	
12 V	4.0 Ah	90.0 mm	70.0 mm	106.0 mm	1.57 kg	NP4-12L	
12 V	5.0 Ah	90.0 mm	70.0 mm	102.0 mm	2.00 kg	NPH5-12	
12 V	7.0 Ah	151.0 mm	65.0 mm	97.5 mm	2.65 kg	NP7-12	
12 V	12.0 Ah	151.0 mm	98.0 mm	97.5 mm	4.09 kg	NP12-12	
12 V	17.0 Ah	181.0 mm	76.0 mm	167.0 mm	5.97 kg	NP17-12I	
12 V	18.0 Ah	180.0 mm	76.0 mm	167.0 mm	6.21 kg	NP18-12B	
12 V	24.0 Ah	175.0 mm	166.0 mm	125.0 mm	8.92 kg	NP24-12I	
12 V	24.0 Ah	166.0 mm	175.0 mm	125.0 mm	8.85 kg	NPL24-12I	
12 V	24.0 Ah	175.0 mm	166.0 mm	125.0 mm	8.85 kg	NPL24-12IFR	
12 V	38.0 Ah	197.0 mm	165.0 mm	170.0 mm	13.93 kg	NP38-12I	
12 V	38.0 Ah	197.0 mm	164.0 mm	170.0 mm	14.50 kg	NPL38-12I	
12 V	38.0 Ah	197.0 mm	164.0 mm	170.0 mm	14.50 kg	NPL38-12IFR	
12 V	65.0 Ah	350.0 mm	166.0 mm	174.0 mm	22.82 kg	NP65-12I	
12 V	65.0 Ah	350.0 mm	166.0 mm	174.0 mm	23.80 kg	NPL65-12I	
12 V	65.0 Ah	350.0 mm	166.0 mm	174.0 mm	23.80 kg	NPL65-12IFR	
12 V	78.0 Ah	380.0 mm	166.0 mm	174.0 mm	27.50 kg	NPL78-12IFR	

### Notes

1. NPL range have 10 year design life, all other models are 5 year design life.
2. NPH models have a higher rate of discharge than all other models - contact technical sales for details.
3. B suffix - Bolt on terminals.
4. FR suffix - fire resistant.
5. I suffix - threaded insert terminal.
6. Units with no suffix have spade terminals.
7. 0.8-12 -flying leads with JST connector.
8. IFR Suffix is BS6290 part 4 compliant.

### 20 Hour Rate Capacity Selection Chart

