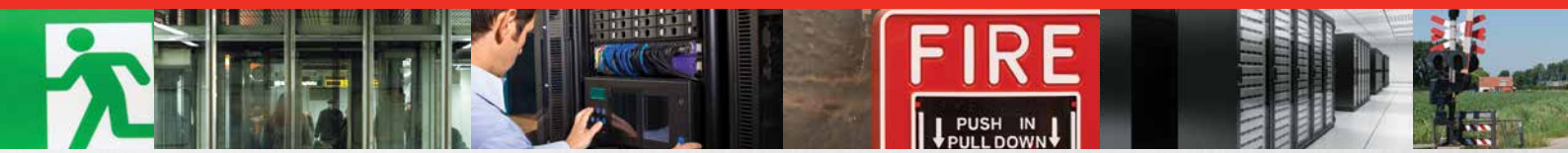
NP Series



Valve Regulated Lead-Acid ***Rechargeable Batteries***

YUASA

RELIABILITY IS YOUR SECURITY.

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

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 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 and there is no free electrolyte to escape from the cells. No gels or other contaminants are added.

Recombination Technology

The design of Yuasa's NP batteries incorporates the very latest oxygen recombination technology to effectively eliminate the need for watering during normal use.

FEATURES

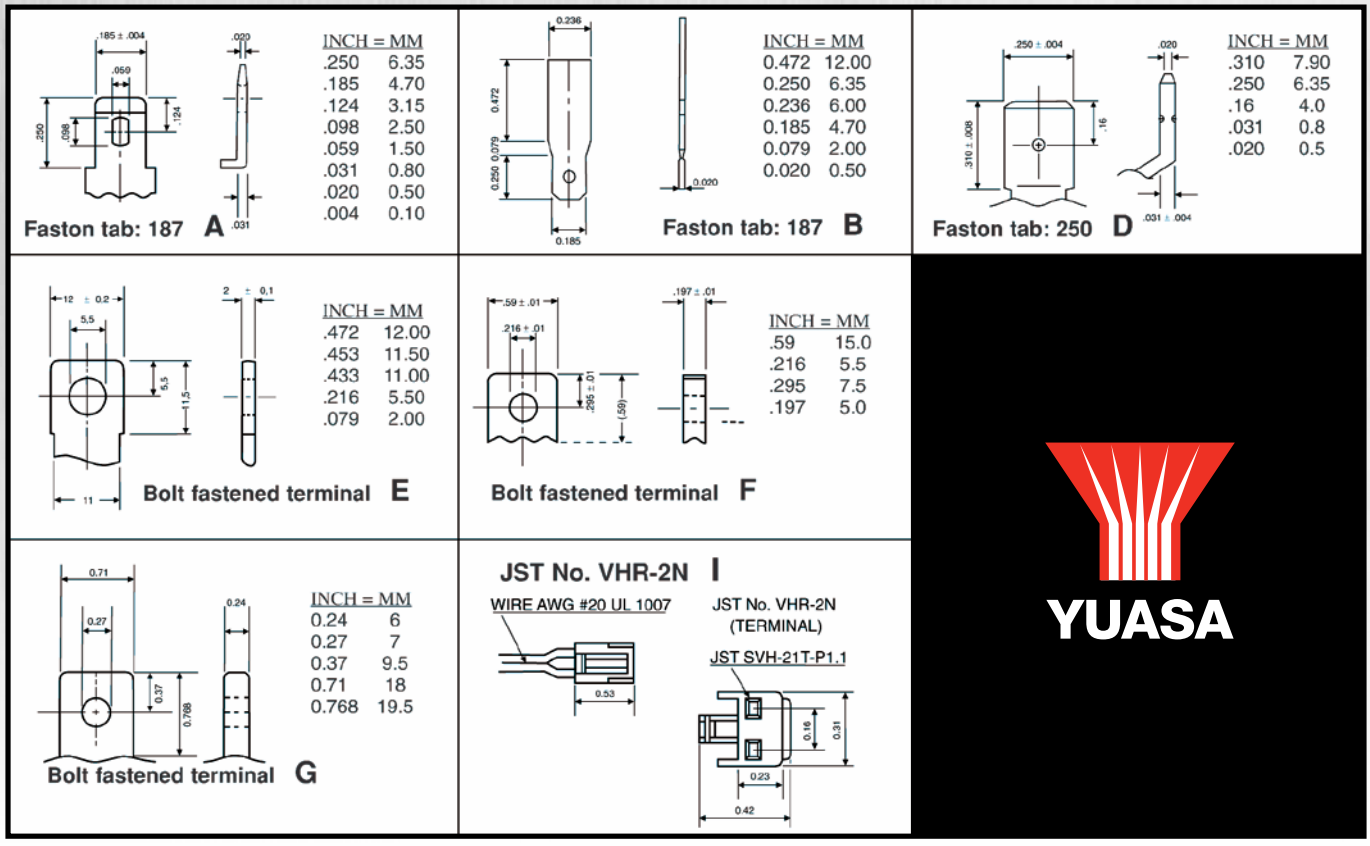
- Superb recovery from deep discharge
- Electrolyte suspension system.
- No watering due to gas recombination
- Multipurpose: float or cyclic use
- Usable in any orientation but not continuously inverted
- Superior energy density
- Thick lead calcium grids for extended life
- Manufactured under stringent Yuasa quality assurance systems
- Application specific designs

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 below:



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)

Thick 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 1000 discharge/charge cycles can be expected.

Float Service Life

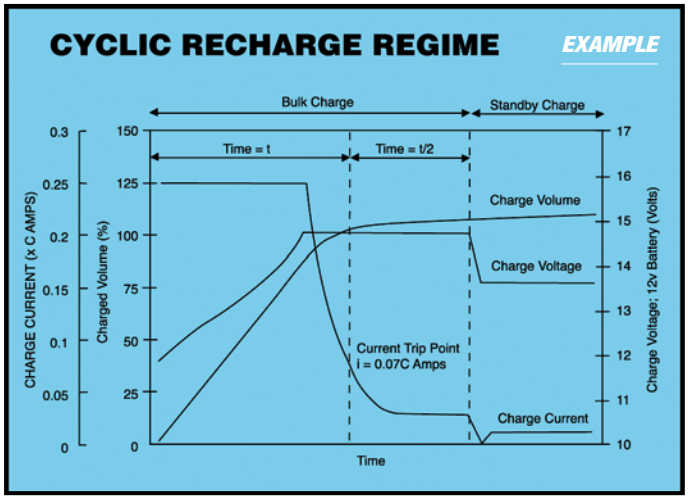
The expected service life is five years in float standby applications.

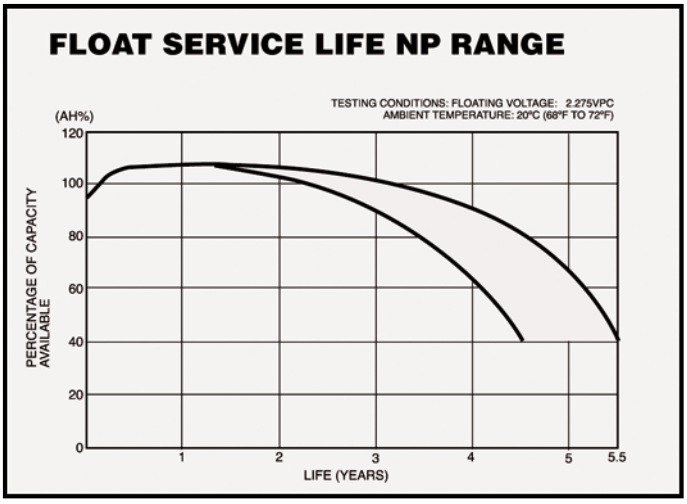
Separators

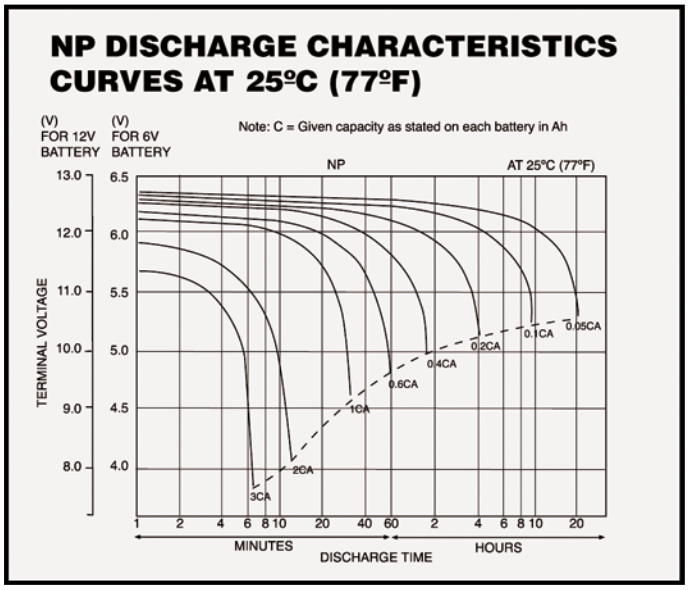
The use of the special separator material provides a very efficient insulation between plates preventing inter-plate short circuits and prohibiting the shedding of active materials.

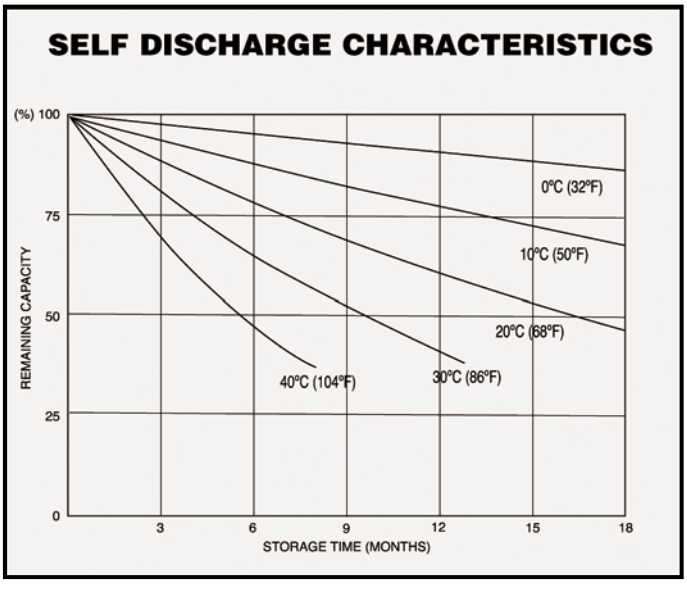
Long shelf Life

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.

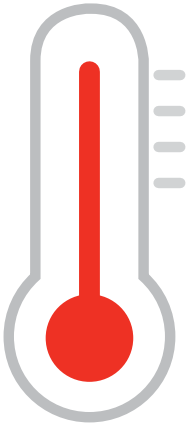








OPERATING TEMPERATURE RANGE.



Yuasa NP batteries can be used over a broad temperature range enabling 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

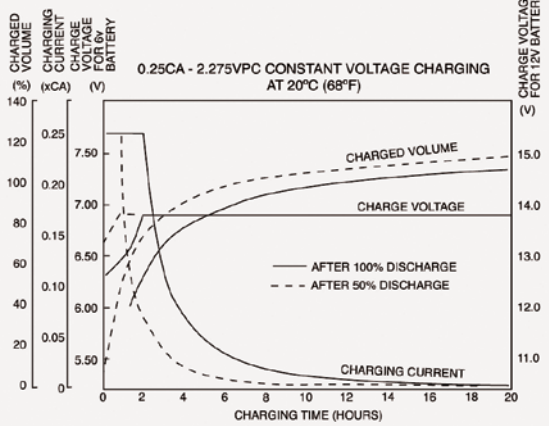
Yuasa NP batteries, have excellent deep discharge recovery characteristics coupled with long life on float standby making them ideal for a diverse range of applications in both cyclic or standby modes.

Charging For Float Standby Applications

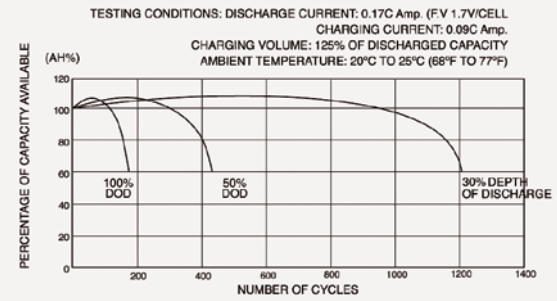
Charged at 2.275 volts per cell continuous. The battery will seek its own current level and float fully charged. However, users should be aware that when charging from fully discharged, the battery can draw an initial charge current of approximately twice of its normal capacity.

Care should be taken to ensure this initial charge current (if ungoverned) is within the output capability of the equipment. Float charge current at 2.275 volts per cell is typically 0.001C(Amperes).

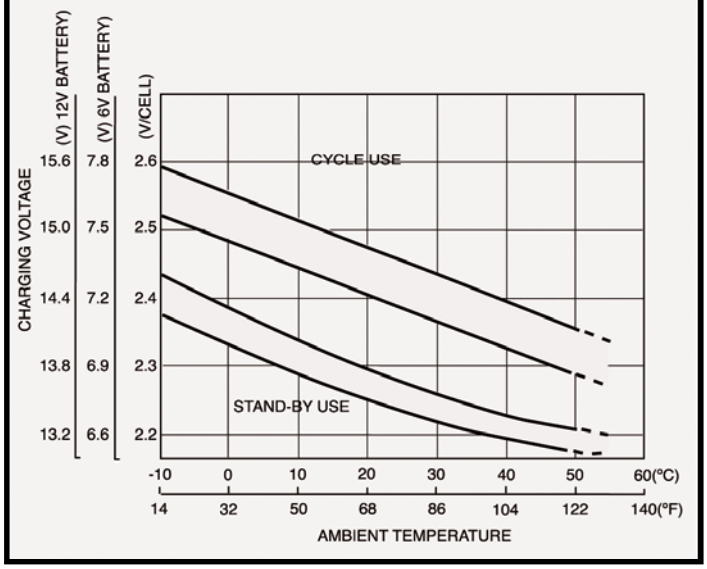
FLOAT CHARGE CHARACTERISTICS



TYPICAL CYCLE SERVICE LIFE IN RELATION TO DEPTH OF DISCHARGE



RELATIONSHIP BETWEEN CHARGING VOLTAGE AND TEMPERATURE

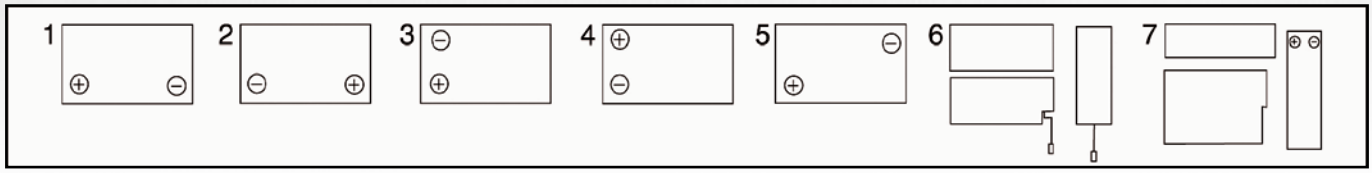


General Specifications

Item No	Product Type	Volts	Rated AH Capacity (20 hr rate)^	Nominal Dimensions (mm)				Weight (kg)	Layout	Terminal Size	Terminal Type
				L	W	H	TOTAL H				
6V											
175002	NP1.2-6FR	6	1.2	97	25	50	54.5	0.31	1	4.75mm	A
175010	NP3-6FR	6	3	134	34	59	64	0.63	1	4.75mm	A
175013	NP4-6FR	6	4	70	47	101	105.5	0.87	5	4.75mm	A
175018	NP7-6FR	6	7	151	34	93	97.5	1.26	1	4.75mm	A
175003	NP10-6FR	6	10	151	50	93	97.5	1.93	1	4.75mm	A
12V											
175000	NP0.8-12FR	12	0.8	96	25	61.5	61.5	0.35	6	VHR-2N	I
175001	NP1.2-12FR	12	1.2	97	48	54.5	54.5	0.58	3	4.75mm	A
175008	NP2-12FR	12	2	150	20	89	89	0.70	7	4.75mm	B
175006	NP2.3-12FR	12	2.3	178	34	60	64	0.95	1	4.75mm	A
175007	NP2.8-12FR	12	2.8	134	67	60	64	1.4	3	4.75mm	A
175012	NP4-12FR	12	4	90	70	102	105.5	1.67	1	4.75mm	A
175019	NPH5-12FR	12	5*	90	70	97.5	106	2.00	1	6.35mm	D
175017	NP7.2-12LFR	12	7.2	151	65	93	97.5	2.65	4	6.35mm	D
175016	NP7.2-12FR	12	7.2	151	65	93	97.5	2.65	4	4.75mm	A
175004	NP12-12FR	12	12	151	98	93	97.5	4.05	4	6.35mm	D
175005	NP18-12BFR	12	17.2	181	76	167	167	6.20	2	M5 BOLT	E
175009	NP24-12BFR	12	24	175	166	125	125	8.65	2	M5 BOLT	E
175011	NP38-12FR	12	38	197	165	170	170	14.20	2	M5 BOLT	F
175014	NP65-12FR	12	65	350	166	174	174	23.00	2	M6 BOLT	G

^Final Voltage: 1.75V/cell, Temperature: 25˚C. * Rated AH capacity at 10 hour rate. FR = flame retardant case.

Battery Layouts



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