

## Yuasa NPC Range VRLA Batteries



- Double cyclic life
- Suitable for use in any orientation (excluding continuous use inverted)
- Standard case material is flame retardant to (UL94) HBO
- Manufactured within ISO9000 Quality Assurance Standard

### Description

#### AN ENHANCED NP DESIGN FOR CYCLIC APPLICATIONS

The Yuasa NPC range provide an extremely reliable and versatile valve regulated lead acid battery. Their unique construction and sealing techniques ensures that no electrolyte leakage can occur, and provides safe and effective operation in any orientation, and meets all requirements of the International Air Transport Association (I.A.T.A Dangerous Goods Regulations) to allow transportation by air.

They require low maintenance i.e. there is no need to check specific gravity or add water etc. All Yuasa NP batteries conform to BS EN61056-1 and IEC1056-1 regulations.

They are equipped with a safe, low pressure venting system which is designed to release excess gas and reseal automatically in the event the internal gas pressure rises to an unacceptable level, making the Yuasa NP range one of the safest valve regulated batteries available.

The Yuasa NPC range is typically suited for cyclic power applications, examples of which are:

- Wheelchairs
- Golf Trolleys
- Lights
- Communications
- Pumps
- Measuring Instruments
- Magnetic Lifts

### Product Specification

#### Voltage Range:

nominal voltages 6V and 12V ranges

#### Capacity Range:

nominal capacity  
6V range 8Ah - 12Ah  
12V range 17Ah - 65Ah

#### Charging

charging methods (recommended) constant voltage charging  
Two stage constant voltage charging

recommended charge current 0.25C (Max)  
recommended charge voltage 2.4 - 2.5Vpc  
(at 20°C)

**NOTE:** High ripple current will greatly reduce the service life of a battery

#### General:

operating temperature range  
charge -15 to +50°C  
discharge -20 to +60°C  
storage -20 to +50°C  
(fully charged condition)

Conforms to BS EN61056-1 / IEC1056-1

# Battery Selection Chart

## TABLE 1 CONSTANT CURRENT DISCHARGE PERFORMANCE DATA

20Hr Capacity	TOTAL AH DISCHARGE AT 20 DEG C						
	MINUTES		HOURS				
	10	30	1	3	5	10	20
8	2.46	3.81	4.80	6.16	6.80	7.44	8.00
12	3.68	5.71	7.20	9.24	10.20	11.16	12.00
17	5.22	8.09	10.20	13.09	14.45	15.81	17.00
24	7.37	11.42	14.40	18.48	20.40	22.32	24.00
30	9.21	14.28	18.00	23.10	25.50	27.90	30.00
38	11.67	18.09	22.80	29.26	32.30	35.34	38.00
65	19.96	30.94	39.00	50.05	55.25	60.45	65.00

Table 1, above, will allow battery selection to be made for Constant Current load conditions. It should be used by mapping the required load time to the batteries 20 hour capacity rate. The figure obtained is the total AH output available for that battery in the indicated time.

**Example:** Load condition 30A constant current  
Load time 30 minutes  
Load voltage, nominal 24V

1. Calculate total capacity required by multiplying load in hours by constant current load condition value, i.e  $0.5 \times 30 = 15\text{AH}$
2. Using table 1, load time column for "30 minutes", locate minimum battery capacity required i.e. 38AH
3. From table 2, below, select battery model and quantity, i.e. NPC38-12 times 2pcs.

## TABLE 2 GENERAL SPECIFICATION

Model	Nominal Voltage	Nominal Capacity (Ah)		Dimensions			
	(V)	(20Hr)	(10Hr)	L (mm)	W (mm)	Height over Terminals (mm)	Weight Approx (Kg)
NPC8-6	6	8	7.44	151	50	97.5	1.8
NPC12-6	6	12	11.16	151	50	97.5	2.05
NPC17-12	12	17	15.81	181	76	167	6.2
NPC24-12	12	24	22.32	175	166	125	8.8
NPC30-12	12	30	27.9	195	129	179	11.25
NPC38-12	12	38	35.34	197	165	170	14
NPC65-12	12	65	60.45	350	166	174	23

### CAUTION

Follow these precautions when using and charging these batteries:



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

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