

# NP12-20Ah

Valve-regulated lead-acid battery



# GENERAL PURPOSE SERIES

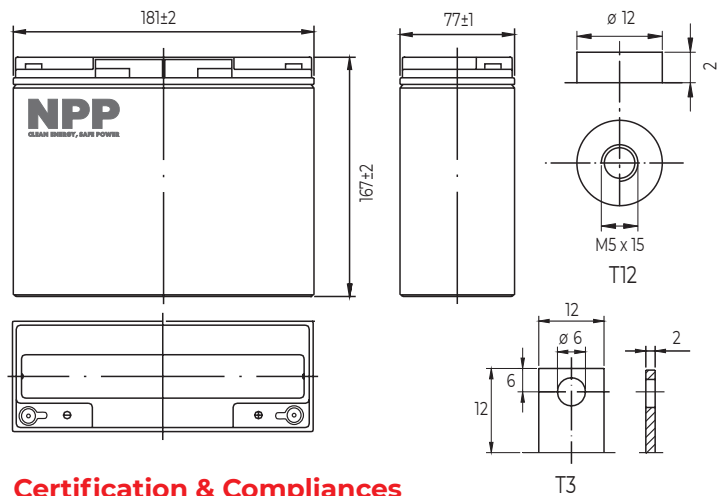
## Characteristics

Nominal voltage	12V (6 cells per unit)	
Nominal capacity at 20 hours rate/10.5V (25°C)	20Ah	
Capacity (25°C)	10 Hours rate/10.5V	18.7Ah
	1 Hour rate/9.60V	12Ah
Terminal type	T3/T12	
Torque	3.0±0.6N.m	
Approx. internal resistance (25°C)	12.0mΩ	
Dimensions	Length	181±2mm (7.13inch)
	Width	77±1mm (3.03inch)
	Height	167±2mm (6.57inch)
	Total height	167±2mm (6.57inch)
Design Life (stand-by)	JIS at 25°C	5 years
	Eurobat at 20°C	3-5 years
Weight	5.50kg (11.00lbs)±4%	
Nominal operating temperature	25°C±3 (77±5°F)	
Operating temperature range	Discharge	-15°C~50°C (5°F~122°F)
	Charge	-10°C~50°C (14°F~122°F)
	Storage	-20°C~50°C (-4°F~122°F)
Float charging voltage at 25°C	13.6V~13.8V	
Cyclic charging voltage at 25°C	14.5V~15.0V	
Temperature compensation	Float charge	-18 mV/°C/Block
	Cycle charge	-30 mV/°C/Block
Max. charging current (A)	6A	
Max. discharge current for 5 seconds	300A	
Self discharge rate (25°C)	≤3%/month	
Battery container ABS UL94-HB	V-0 optional	

## Overview

NPP Power General Purpose series batteries are designed with state-of-the-art AGM (absorbent glass mat) technology, high-performance plates and electrolyte. With excellent value and characteristics, this range is suitable for all general purpose applications.

## Dimensions & Terminal Type (mm)



## Certification & Compliances



Compliant to: EUROBAT, RoHS, WEEE's and Reach. Manufactured according to IEC 60896-21 / 22

## Construction

Component	Positive Plate	Negative plate	Container	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	AGM	Sulfuric Acid	Rubber	Copper

## Constant current discharge characteristics at 25°C

(Ampere/battery)

F.V/Time	5min	10min	15min	30min	60min	2hr	3hr	4hr	5hr	10hr	20hr
9.60V	76.4	48.4	37.8	21.3	13.1	7.17	4.96	4.10	3.49	1.89	1.02
9.90V	74.1	46.9	36.9	20.9	12.9	7.12	4.93	4.08	3.47	1.89	1.01
10.2V	71.1	45.0	35.5	20.2	12.6	7.06	4.89	4.05	3.44	1.88	1.01
10.5V	68.0	43.1	34.3	19.7	12.3	6.95	4.86	4.02	3.42	1.87	1.00
10.8V	64.2	40.7	32.5	19.0	11.9	6.78	4.71	3.90	3.32	1.83	0.98

## Constant power discharge characteristics at 25°C

(Watts/battery)

F.V/Time	5min	10min	15min	30min	60min	2hr	3hr	4hr	5hr	10hr	20hr
9.60V	853	546	431	244	152	83.8	58.9	48.8	41.7	22.7	12.2
9.90V	827	530	421	239	149	83.3	58.5	48.5	41.4	22.6	12.1
10.2V	793	508	405	232	146	82.6	58.1	48.2	41.1	22.5	12.1
10.5V	759	486	391	226	143	81.4	57.7	47.9	40.8	22.4	12.0
10.8V	716	459	371	218	138	79.3	56.0	46.4	39.6	21.9	11.8

The above characteristics represent average values and can be obtained within three charge and discharge cycles. The batteries must be fully charged before testing. The data in this document is subject to change without notice and become contractual only after written confirmation. Please contact NPP Power for the latest available version.

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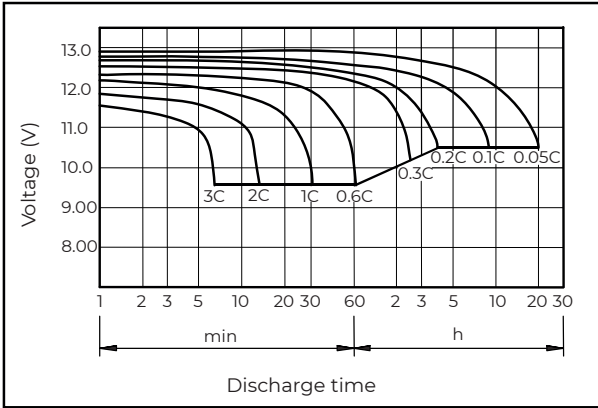
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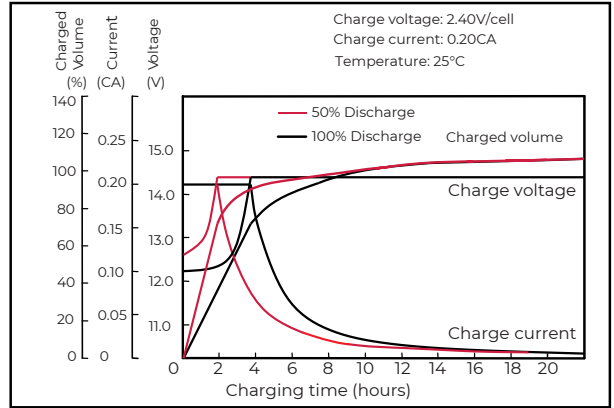
# GENERAL PURPOSE

## SERIES

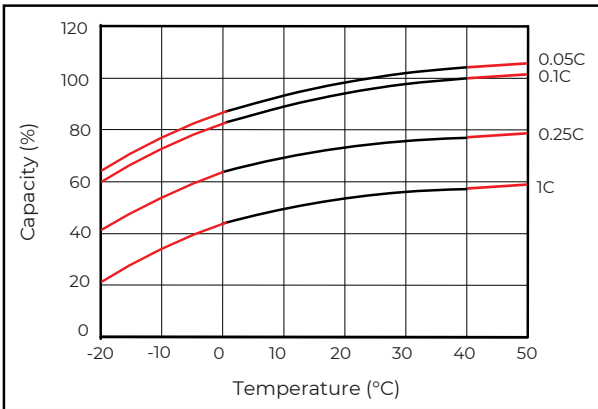
**Discharge characteristics (25°C)**



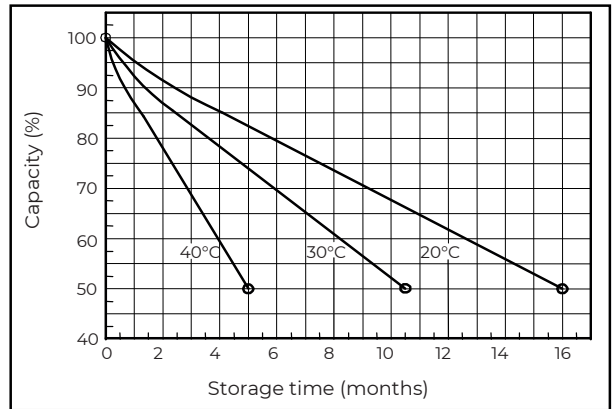
**Charging characteristics (25°C)**



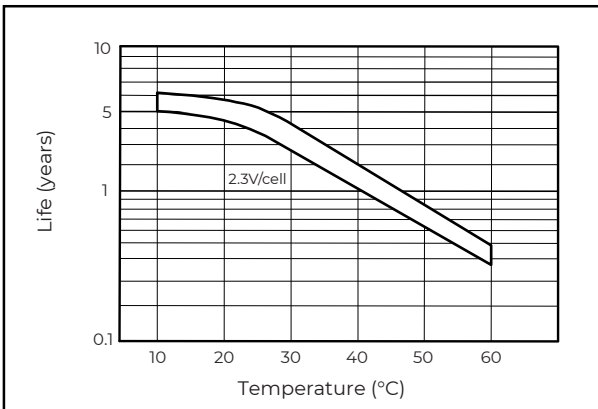
**Temperature effects on capacity**



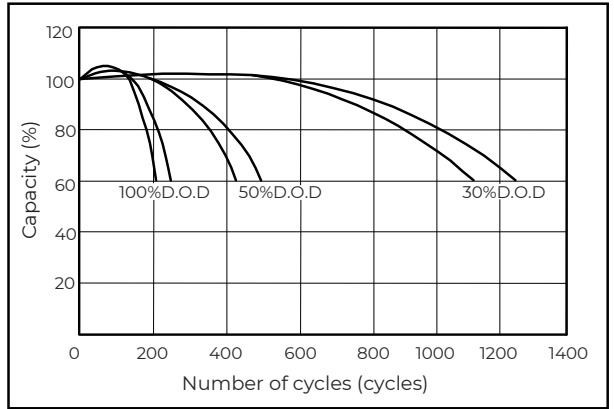
**Self-discharge characteristics**



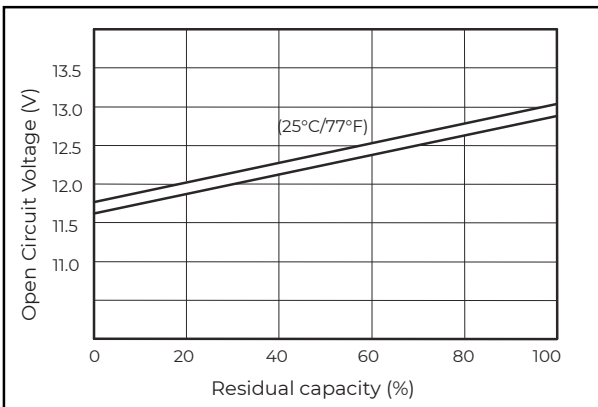
**Floating life on temperature**



**Cycle life on D.O.D (25°C)**



**Relationship for OCV and capacity (25°C)**



**Charging voltage VS temperature**

