

## HR12520W

Valve-regulated lead-acid battery



## HIGH RATE SERIES

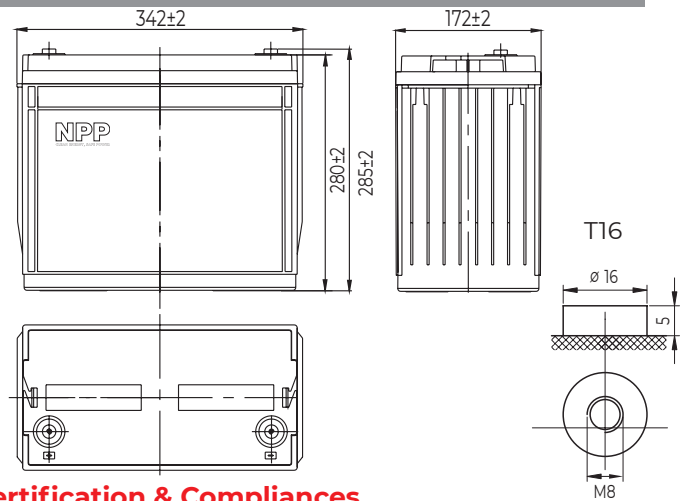
### Characteristics

Nominal voltage	12V (6 cell per unit)	
Nominal power at 15 min. rate 1.67V/cell (25°C)	520W	
Capacity (25°C)	10 Hours rate/10.8V	145Ah
	5 Hours rate/10.8V	131Ah
Terminal type	T16	
Torque	12.3±2.5N.m	
Approx. internal resistance (25°C)	3.4 mΩ	
Dimensions	Length	342±2mm (13.46inch)
	Width	172±2mm (6.77inch)
	Height	280±2mm (11.02inch)
	Total height	285±2mm (11.20inch)
Design Life (stand-by)	JIS at 25°C	10 years
	Eurobat at 20°C	10-12 years
Weight	47.00kg (103.61lbs)±3%	
Nominal operating temperature	25±3°C (77°F±5)	
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	13.5V~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)	41.6A	
Max. discharge current for 5 seconds	1200A	
Self discharge rate (25°C)	≤3%/month	
Battery container ABS UL94-HB	V-0 optional	

### Overview

NPP Power High Rate series batteries are specially designed for applications that require high power output. With their high-power density and low internal resistance, the HR series are the right choice for your most demanding 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 (V-0 opt.)	AGM	Sulfuric Acid	Rubber	Copper

### Constant current discharge characteristics at 25°C

(Ampere/cell)

F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	356	280	229	171	121	95.6	54.8	39.3	31.6	27.6	23.5
1.67V/cell	339	271	221	165	118	93.2	54.3	38.9	31.4	27.3	23.3
1.70V/cell	327	263	216	162	115	91.8	53.9	38.8	31.3	27.2	23.2
1.75V/cell	317	254	209	158	113	90.0	53.2	38.5	31.1	27.0	23.1
1.80V/cell	299	240	198	153	109	87.2	51.7	37.4	30.1	26.2	22.4

### Constant power discharge characteristics at 25°C

(Watts/cell)

F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	678	535	440	324	237	185	107	77.3	62.4	54.5	46.6
1.67V/cell	647	520	422	313	229	180	106	76.7	61.8	54.1	46.2
1.70V/cell	630	503	414	308	226	177	105	76.4	61.6	53.9	46.1
1.75V/cell	603	486	399	301	220	174	103	75.9	61.2	53.4	45.8
1.80V/cell	569	461	378	289	212	168	101	73.6	59.3	51.9	44.3

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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