

## Renewable Energy Storage Batteries

### Features & Benefits

- Long life design for both cyclic and float applications
- Superb security and reliability
- Robust design inside and out
- Excellent deep discharge recovery fast recharge performance
- Extra long back-up times
- More cost effective than nearest equivalent



Narada's REX battery is designed for Renewable Energy Sources such as Solar and Wind Power. REX protects our environment using Green Technology and benefits the World's Urban and Rural Population by Generating Power Economically from a Clean Source of Energy. REX is a product developed by Narada's R&D with an "eXtra" in Performance and Life Span.

### Standards

Test standards

IEC60896-21/-22, IEC61427, YD/T 799 etc.

Safety standard, ventilation

EN 50272-2

Manufactured under system

ISO9001/TL9000 & ISO14001 by Narada

### Technical specifications

#### Electrical data

Nominal voltage	2 V
Number of cells	1
Rated capacity(25°C)	400 Ah - 40A for 10h to 1.80V/cell 480 Ah - 4A for 120h to 1.85V/cell
Internal resistance	0.30 mΩ (acc. to IEC 60896-21)
Short circuit current	6107 A (acc. to IEC60896-21)
Self discharge(25°C)	less than 2% per month
Design life at 20°C	20 years

#### Mechanical data

Weight ready for use	32 kg (70.5 lbs)
Length	227 mm (8.94 in)
Width	170 mm (6.69 in)
Height of monobloc	291 mm (11.46 in)
Total height	303 mm (11.93 in)
Terminal	M8 female
Terminal hardware torque	10 - 12 Nm

### Constant Current Discharge Data Units: Amperes (25°C,77°F)

End Voltage	Time (minutes)		Time (hours)										
	15	30	1	3	5	8	10	12	20	24	48	72	120
1.70V	489	365	237	107	74.3	51.2	42.8	36.3	22.1	19.0	9.85	6.74	4.28
1.75V	463	339	226	104	72.2	50.6	42.1	35.7	22.0	18.8	9.71	6.64	4.21
1.80V	436	317	212	101	70.5	49.6	41.2	34.8	21.5	18.5	9.49	6.49	4.12
1.83V	410	302	198	97.5	68.9	48.7	40.3	34.3	21.1	18.1	9.29	6.35	4.03
1.85V	387	283	191	95.6	68.2	48.2	40.1	34.0	20.9	17.9	9.23	6.32	4.01
1.90V	327	243	170	89.7	65.6	46.3	38.7	33.1	20.4	17.5	8.92	6.10	3.87

### Constant Power Discharge Data Units: Watts per cell (25°C,77°F)

End Voltage	Time (minutes)		Time (hours)										
	15	30	1	2	3	4	5	6	7	8	10	12	24
1.70V	881	699	475	310	222	179	153	131	115	101.9	83.6	76.1	38.7
1.75V	848	675	457	299	214	175	149	128	112	98.1	82.4	75.0	38.1
1.80V	808	651	446	294	206	170	145	125	108	95.6	81.1	73.8	37.5
1.83V	771	614	430	282	201	167	142	121	106	93.7	79.6	72.4	36.8
1.85V	736	579	406	270	195	163	138	118	103	92.4	78.0	71.0	36.1
1.90V	639	489	350	234	181	152	129	110	97.7	86.5	72.3	65.9	33.4

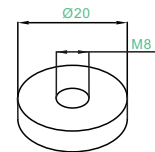
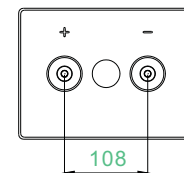
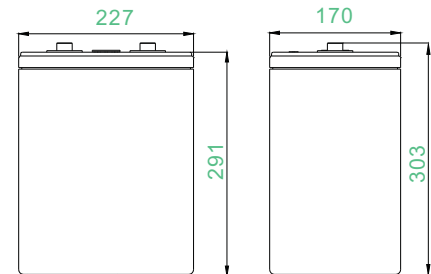
## Construction

Positive plate	Reinforced grids in a corrosion-resistant pure lead, high tin, low calcium alloy
Negative plate	Lead-calcium alloy grid
Separator	High density microporous glass mat with low electrical resistance
Container & lid	High strength ABS(HB). Optional flame retardant F V-0 and halogen-free versions available
Electrolyte	Sulphuric acid with a density of 1.28g/ml absorbed in AGM
Terminal design	Patented leak resistant seal configuration with brass insert
Safety valve	Calibrated opening pressure, the valve equipped with flame arrestors for increased operational safety and service life.

## Installation and operation

- Recommended float charge voltage compensation in function of temperature: 2.27V per cell at 25°C -3mV/°C/cell
- Cycle and equalize charge voltage: 2.35V per cell at 25°C -5mV/°C/cell
- CC-CV charge current: unlimited, otherwise 100A max. if T>25°C
- Preferred operating temperature range: 15°C to 25°C (68°F to 77°F)
- Maximum operating temperature range: -40°C to 50°C (-40°F to 122°F)
- A separate battery room is not necessary
- Reduced maintenance: no water addition required.

## Dimensions (mm)



Terminal Dimensions

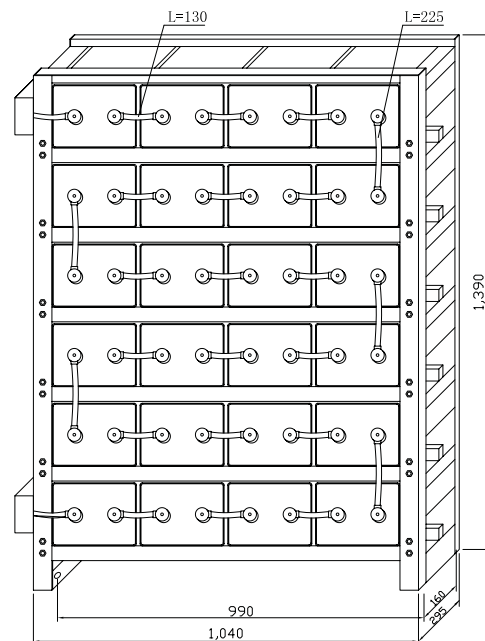
## Racking (optional)

Narada racks are constructed using strong, easy to assemble, powder-coated steel tubing and come complete with sliding cover terminal (take-off) plates.

Cell model: REX-400  
Number of cells: 24  
System Voltage: 48

Width* (mm)	Depth (mm)	Height (mm)	System weight (kg)
1040	295	1390	835

\* Please allow 100mm for terminal boxes



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