

## FEATURES

- Low gas emissions  
99% plus recombination
- Excellent recovery from deep discharge
- Leak proof – Sealed batteries
- ABS resin case to UL94-HB standard
- Road transport to UN2800 (Batteries, Wet, Non-Spillable)
- Air Transport to Special Provision 'A67' 'IATA' & 'ICAO'. (Batteries, Wet, Non-Spillable)

## RS PRO Lead Acid Battery 12V, 42Ah

RS Stock No.: 122-4862



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

## Product Description

RS PRO Lead acid batteries are suitable for use across a number of industries as well as for cyclic products. They are sealed and have many uses, and are ideal for regular charge/discharge duty. These batteries are long life rechargeable batteries.

## General Specifications

<b>Technology</b>	AGM
<b>Container Material</b>	(UL94-HB) conform
<b>Application</b>	Cyclic products

## Electrical Specifications

<b>Capacity</b>	42Ah
<b>Nominal Voltage</b>	12V
<b>Terminal Type</b>	T6
<b>Cells Per Unit</b>	6V
<b>Voltage Per Unit</b>	12V
<b>Max. Discharge Current</b>	504A (5 sec)
<b>Max. Charging Current Limit</b>	12.6A
<b>Float charging Voltage</b>	13.5VDC to 13.8VDC/unit Average at 25°C
<b>Internal Resistance</b>	9.1mOhm
<b>Equalization and Cycle Service</b>	14.4VDC to 15.0VDC/unit Average at 25°C
<b>Self-Discharge</b>	The batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.

## Mechanical Specifications

<b>Dimensions</b>	197mm x 165mm x 170mm
<b>Height</b>	197mm
<b>Length</b>	165mm
<b>Width</b>	170mm
<b>Weight</b>	14.5kg

## Operation Environment Specifications

<b>Operating Temperature Range</b>	Discharge : -20°C to 55°C Charge : 0°C to 40°C Storage : -20°C to 50°C
<b>Nominal Operating Temperature Range</b>	25 ±3°C (77 ±5°F)

## Approvals

<b>Compliance/Certifications</b>	UL94-HB
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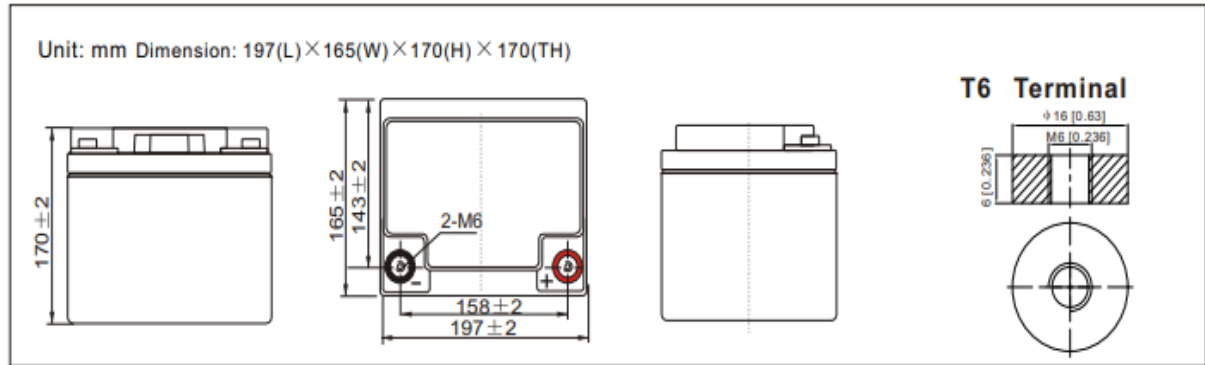
### Constant Current Discharge Characteristics : A (25 °C) Amps

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	61.5	51.7	43.2	33.1	25.1	21.0	13.0	9.72	7.86	6.69	5.83	4.76	3.96	2.23
1.80V/cell	78.6	62.5	51.5	38.4	28.7	23.5	14.2	10.54	8.52	7.18	6.25	5.05	4.20	2.25
1.75V/cell	86.3	68.3	55.2	40.8	30.2	24.6	14.7	10.95	8.80	7.37	6.43	5.14	4.24	2.27
1.70V/cell	94.1	72.9	58.3	42.3	31.2	25.3	15.3	11.2	9.01	7.55	6.56	5.21	4.28	2.31
1.65V/cell	101.6	77.5	61.9	44.4	32.5	26.2	15.8	11.6	9.21	7.76	6.70	5.29	4.37	2.34
1.60V/cell	110.3	82.9	65.5	46.5	33.8	27.1	16.3	11.8	9.42	7.94	6.85	5.34	4.42	2.36

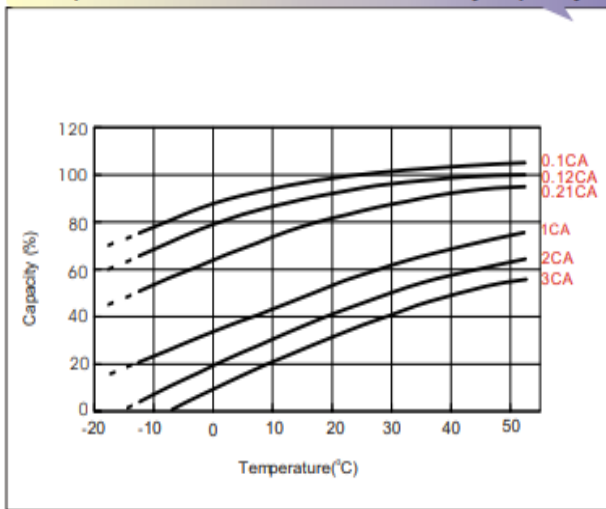
### Constant Power Discharge Characteristics : W (25 °C) Watts

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	114.7	97.5	82.4	63.6	48.7	40.7	25.4	19.0	15.4	13.1	11.5	9.42	7.85	4.46
1.80V/cell	144.6	116.1	96.7	72.9	55.1	45.3	27.5	20.5	16.6	14.1	12.3	9.97	8.31	4.50
1.75V/cell	157.0	125.6	102.7	77.1	57.7	47.2	28.5	21.2	17.1	14.4	12.6	10.14	8.39	4.53
1.70V/cell	168.7	133.1	108.0	79.5	59.4	48.6	29.5	21.7	17.5	14.7	12.9	10.27	8.47	4.62
1.65V/cell	180.8	140.6	114.0	83.1	61.6	50.1	30.3	22.3	17.8	15.1	13.1	10.42	8.63	4.67
1.60V/cell	192.9	148.6	119.5	86.3	63.6	51.4	31.1	22.7	18.2	15.4	13.4	10.51	8.72	4.69

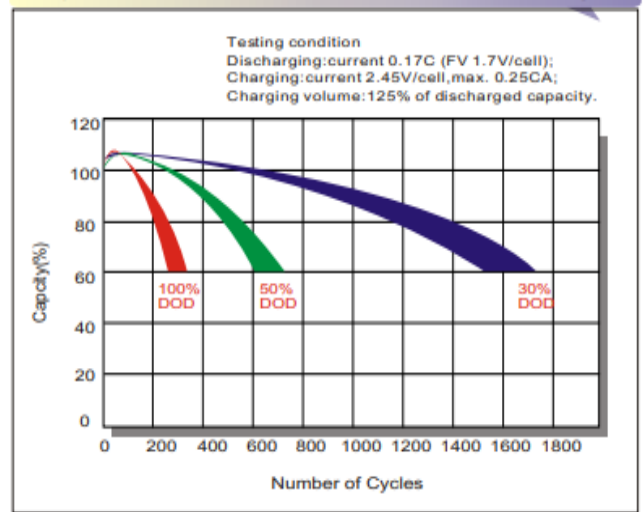
## Dimensions



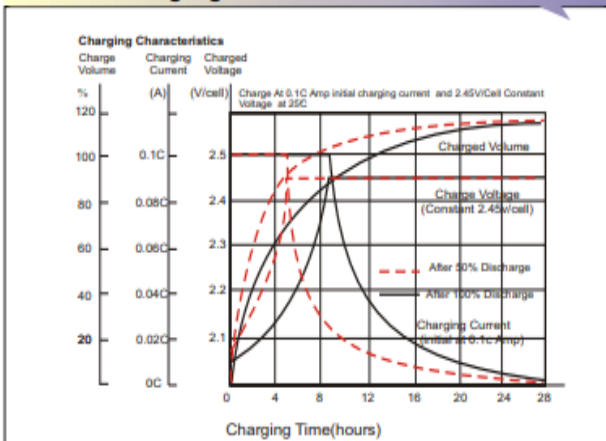
## Temperature Effects in Relation to Battery Capacity



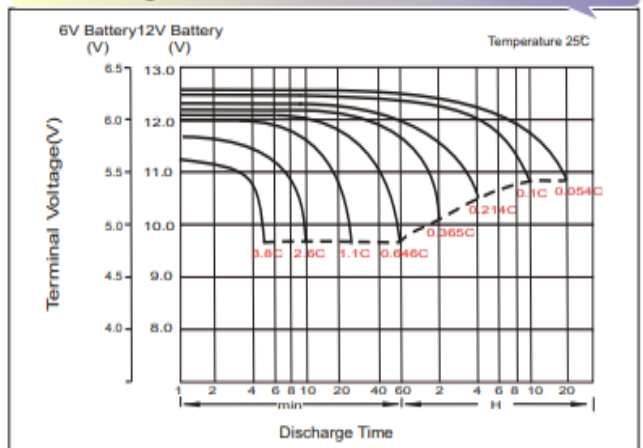
## Cycle Life in Relation to Depth of Discharge



## Float Charging Characteristics



## Discharge Characteristics



## Available Capacity Subject to Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%

## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.80V	1.75V	1.60V
Discharge Current (A)	(A) $\leq 0.2C$	$0.2C < (A) < 1.0C$	(A) $\geq 1.0C$

**Charge the batteries at least once every six months, if they are stored at 25°C.**

## Charging Method

Constant Voltage	-0.2Cx2h+2.4~2.45V/Cellx24h,Max. Current 0.3CA
Constant Current	0.1C until the voltage reaching 14.4V,then 0.1Cx4h