

High Discharge Rate AGM Battery

HR12-470W

CSBattery HR (High Rate) series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service. By using strong grids, thick plate and specially designed active material. It is with lower I.R, lower self discharge rate, high power, and longer service life. The HR series battery offers 30% more power output than the standard series. It is suitable for high power standby used, such as datacenter, UPS, EPS etc.

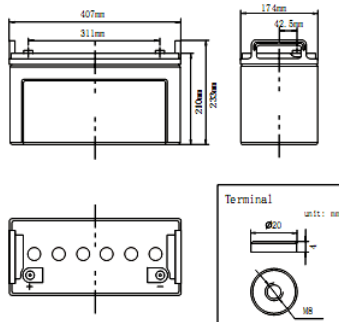
**12V
470W**

**AGM
Technology**

**High Rate
Discharge**



Dimensions & Weight



General Features

- Thicker plate with high Tin low Calcium alloy
- High Reliability and Good Quality
- Deep Discharge Recovery
- High Power Density
- Longer Service Life, in both Float or Cyclic

Technical Specifications

COMPLIED STANDARDS



Battery Dimensions	Length	407mm
	Width	174mm
	Height	210mm
	Total Height	233mm
Box Dimensions	Length	422mm
	Width	188mm
	Height	290mm
Quantity Per Box		1 PC per box
Net weight Per Cell		39 kg±3%
Net weight Per Box		39kg
Gross Weight		39.6kg

Nominal Voltage		12V
Watts/cell@15min		470W
Capacity 25°C (77°F)	10 hour rate (13.5A)	135Ah
	5 hour rate (24.6A)	123Ah
	1 hour rate (85.9A)	85.9Ah
Internal Resistance	Full Charged Battery 25°C	≤4.1m Ω
Capacity affected by Temperature (10 hour)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Self-Discharge 25°C (77°F) Capacity	after 3 month storage	90%
	after 6 month storage	80%
	after 12 month storage	62%
Charge (Constant Voltage) 25°C (77°F)	Float	Initial Charging Current Less than 27.0A Voltage 13.6-13.8V
	Cycle	Initial Charging Current Less than 27.0A Voltage 14.4-14.9V

Battery Discharge Table

Discharge Constant Power per Cell (Watts at 77° F25° C)

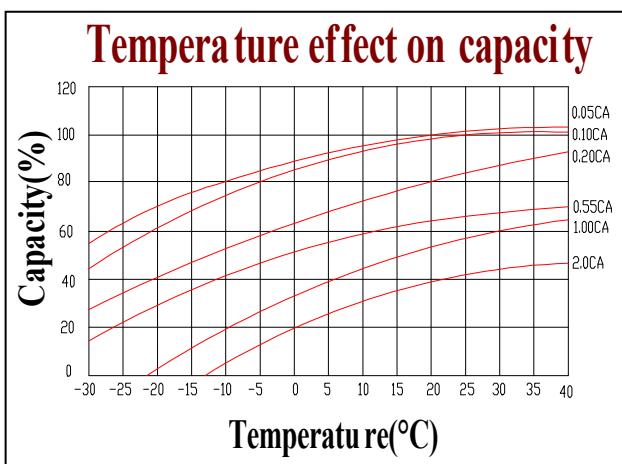
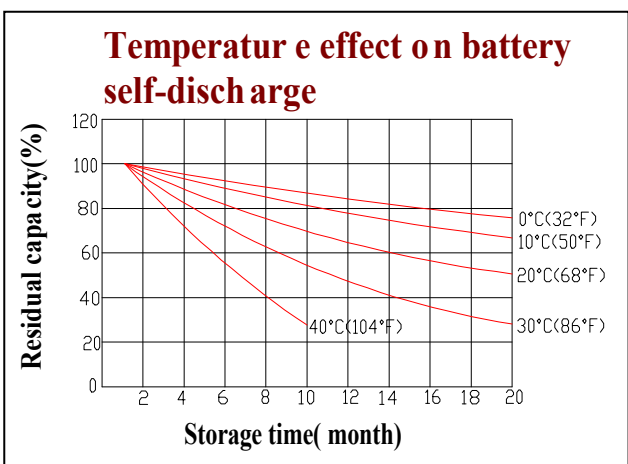
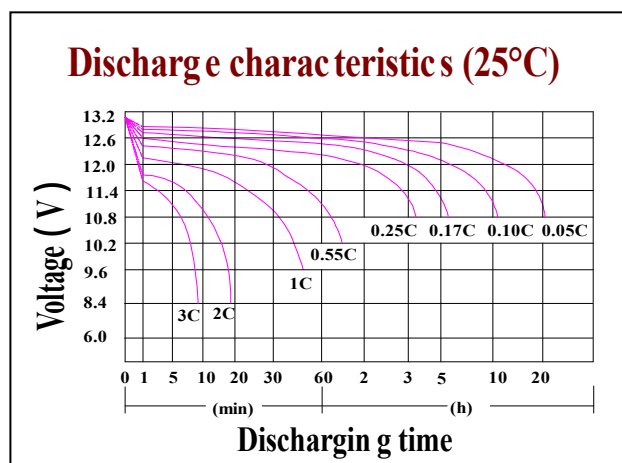
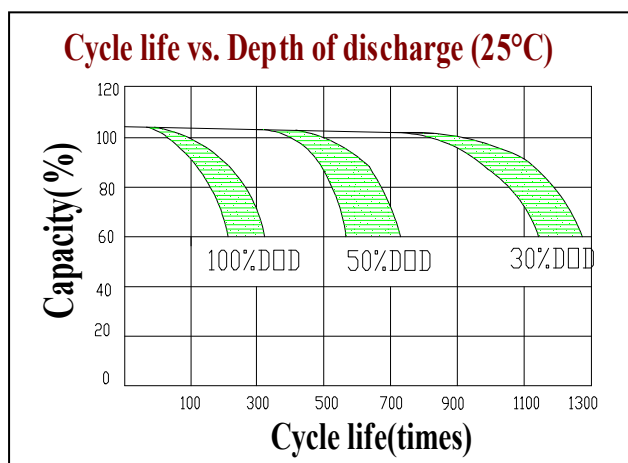
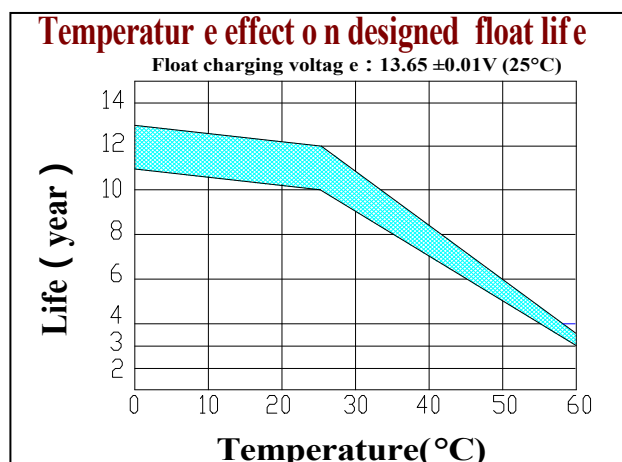
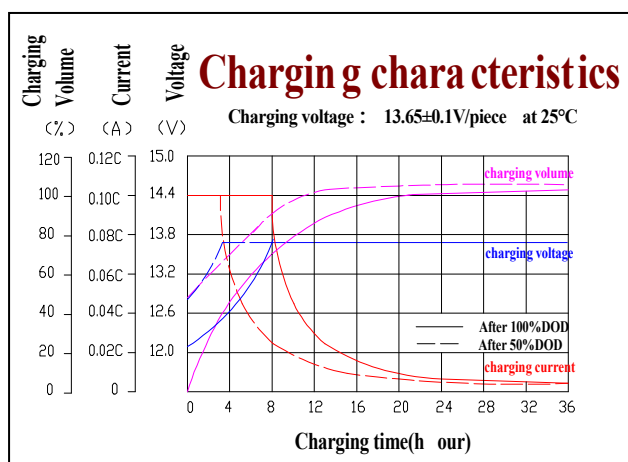
F.V/Time	5min	10min	15min	20min	25min	30min	45min	60min	90min	2h	3h	10h
1.60V	714.5	609.2	479.1	392.1	332.4	290.9	243.6	169.0	141.3	107.0	77.4	27.7
1.67V	701.3	598.2	470.0	387.2	326.2	285.4	239.2	165.9	138.8	105.1	76.2	27.1
1.70V	688.5	587.1	461.9	380.1	320.2	280.2	234.8	162.7	135.9	102.9	74.6	26.8
1.75V	675.3	576.0	453.1	368.1	314.3	275.0	230.4	159.9	133.4	101.0	73.3	26.1
1.80V	649.6	553.9	435.6	352.5	302.1	264.4	221.6	153.6	128.4	97.2	70.5	25.2

Discharge Constant Current per Cell (Amperes at 77° F 25° C)

F.V/Time	5min	10min	15min	20min	25min	30min	45min	60min	90min	2h	3h	10h
1.60V	383.1	326.7	256.9	210.3	178.2	156.0	130.6	90.6	75.8	57.4	41.5	14.9
1.67V	376.1	320.7	252.2	207.6	174.9	153.0	128.3	88.9	74.4	56.4	40.8	14.5
1.70V	369.2	314.8	247.6	203.8	171.7	150.2	125.9	87.2	72.9	55.2	40.0	14.3
1.75V	362.1	308.9	242.9	197.4	168.5	147.5	123.5	85.7	71.5	54.2	39.3	14.0
1.80V	348.3	297.0	233.6	189.0	162.0	141.8	118.8	82.4	68.9	52.1	37.8	13.5

Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **CSBattery** for the latest information.

Performance Characteristics



Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Si-Rubber	Copper	Fiberglass	Sulfuric acid