

## VRLA Rechargeable Battery

# HR33-12 (HR33-12FR)



### FEATURES

- Maintenance free(no water topping-up required)
- No free acid(Non-spillable battery)
- Low self-discharge rate, lower than 3% capacity loss per month
- Can be used in any orientation(excluding used inverted)
- The battery is designed for high rate usage
- The power density at 5 min~15min discharging rate is 30% higher than BP series

### APPLICATION

- Electronic Medical Equipment
- Wheelchairs
- Lawn Mowers
- UPS
- Golf-Carts



### SPECIFICATIONS

Nominal Voltage	12 V
Nominal Capacity	31Ah @ 10 hour rate F.V.(1.75V/cell)
Approx. Weight	10.0Kg(22.05lbs.)
Terminals	B1 (Fitting M5 bolt & nut) , T2 and I1 are optional
Internal Resistance	≤7mΩ (Fully Charged )
Max. Discharge Current	420 A (5 sec.)
Max. Charge Current	9.30 A
Operating Temperature Range	Charge : 0°C~40°C(32°F~104°F) Discharge : -20°C~50°C(-4°F~122°F) Storage. : -20°C~40°C(-4°F~104°F)
Container Material	ABS(UL94-HB, UL94-V0 is optional)

ISO 9001	
ISO14001	
UL	
CE	
<ul style="list-style-type: none"> <li>• IEC61056</li> <li>• JIS C 8702</li> <li>• GB/T 19639</li> </ul>	

### DIMENSION(mm/inch)

### OUTER DIMENSIONS

### TERMINAL TYPE

#### Length

175±1.5 (6.89±0.06)

#### Width

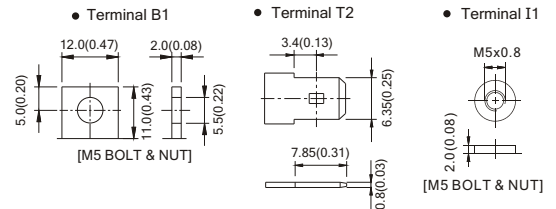
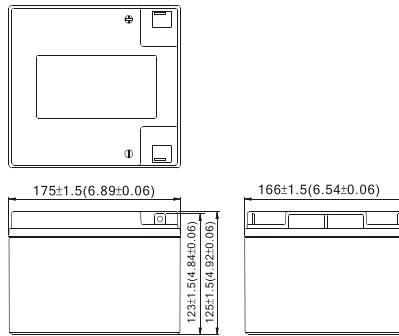
166±1.5 (6.54±0.06)

#### Container Height

123±1.5 (4.84±0.06)

#### Total Height

125±1.5 (4.92±0.06)



Terminal Hardware Initial Torque: B1(2.5Nm±5%),I1(4.0Nm±5%)

### Constant power discharge characteristics at 25 °C/77 °F

Unit: W

F.V. (V/cell) \ Discharge Time	5 Min	10 Min	15 Min	20 Min	30 Min	40 Min	50 Min	60 Min	120 Min
1.80V	1353.0	924.0	669.0	571.0	434.0	330.0	276.0	243.0	133.8
1.70V	1617.0	1031.0	728.0	605.0	452.0	342.0	285.0	248.0	136.4
1.60V	1733.0	1085.0	761.0	627.0	462.0	351.0	290.0	252.0	138.6
1.50V	1782.0	1106.0	777.0	637.0	468.0	355.0	294.0	255.0	139.3
1.40V	1815.0	1120.0	786.0	643.0	471.0	357.0	296.0	257.0	139.7
1.30V	1832.0	1130.0	792.0	647.0	474.0	359.0	298.0	257.0	140.1

### Constant current discharge characteristics at 25 °C/77 °F

Unit: A

F.V. (V/cell) \ Discharge Time	5 Min	10 Min	15 Min	20 Min	30 Min	40 Min	50 Min	60 Min	120 Min
1.80V	120.80	81.05	57.87	48.97	36.78	27.75	23.10	20.25	11.15
1.70V	147.00	90.44	62.98	51.89	38.31	28.76	23.85	20.67	11.37
1.60V	157.55	95.18	65.83	53.77	39.15	29.52	24.27	21.00	11.55
1.50V	162.00	97.02	67.21	54.63	39.66	29.86	24.60	21.25	11.61
1.40V	165.00	98.25	67.99	55.15	39.92	30.03	24.77	21.42	11.64
1.30V	166.55	99.12	68.51	55.49	40.17	30.19	24.94	21.42	11.68

All data shall be changed without prior notice, BB reserves the right to explain and update the information contained hereinto.