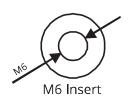
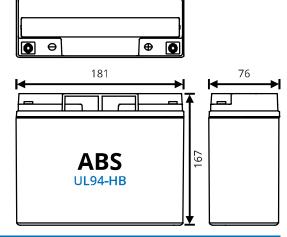


# HR 22-12 - High Rate Series



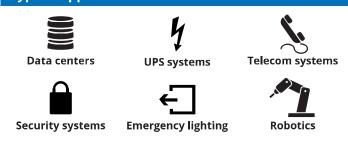




### **Technical Specifications**

Newigalveltage	12 V
Nominal voltage	12 V
Nominal capacity (1.60V/c, 25ºC)	20Hr: 23.6 Ah
	1Hr: 13.4 Ah
Nominal power (1.60V/c, 25°C)	10Min: 124.7 W/cell
Internal resistance	≤8.0mΩ (fully charged)
Maximum charge current	6.6 A
Maximum discharge current	330 A (max. 5 sec)
Float use / cyclic use	13.5 - 13.8V / 14.4 - 15.0V
Operating temperature range	-15°C ~ 50°C
Designlife (20°C)	3 - 5 years in float (Eurobat)
Standard terminal	M6 Insert (5.4 Nm torque)
Housing material	ABS (UL94 HB)
<b>Dimensions Length</b>	181 mm
Dimensions Width	76 mm
Dimensions Height	167 mm
Approximate Weight	6.70 kg
Packing	2 pcs / box

# **Typical applications**



### **Features**

- Absorbent Glassmat Technology (AGM)
- Valve Regulated Lead Acid (VRLA)
- Maintenance free
- UL94-HB Flame retardant casing
- UL certified
- Low self discharge
- Classified as non-spillable and Non Dangerous goods by IATA,
  FAA, ADR, IMDG
- Can be discharged or stored in any position without leakage
- Cannot be charged while terminals are downwards

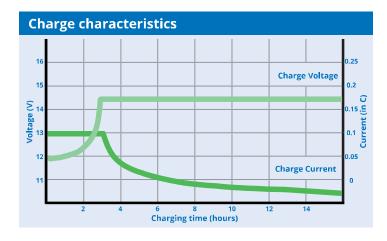
Constant Current Discharge (Amps) at 25°C (77°F)									
F.V/TIME	5 Min	10 Min	15 Min	30 Min	60 Min	3 Hr	5 Hr	10 Hr	20 Hr
1.80V/cell	82.5	56.8	41.8	21.5	12.5	5.43	3.72	2.17	1.13
1.75V/ce <b>ll</b>	89.2	60.1	43.7	22.8	12.8	5.48	3.74	2.19	1.14
1.70V/cell	96.6	62.6	45.0	23.5	13.0	5.52	3.76	2.21	1.15
1.65V/ce <b>ll</b>	101.0	64.2	45.8	24.0	13.2	5.56	3.79	2.23	1.17
1.60V/cell	104.0	65.0	46.3	24.3	13.4	5.60	3.81	2.24	1.18

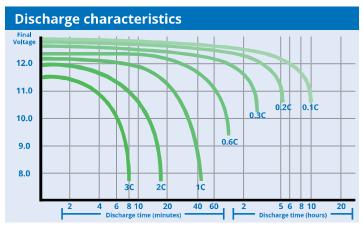
Constant Power Discharge (Watts) per Cell* at 25°C (77°F )									
F.V/TIME	5 Min	10 Min	15 Min	30 Min	60 Min	3 Hr	5 Hr	10 Hr	20 Hr
1.80V/cell	169.5	108.8	80.2	42.7	25.8	10.8	7. <b>4</b> 2	4.40	2.25
1.75V/cell	181.0	116.2	85.2	45.2	26.2	10.9	7.52	4.45	2.30
1.70V/cell	188.2	120.7	88.2	46.8	26.3	11.1	7.57	4.47	2.33
1.65V/cell	192.2	123.3	89.8	47.8	26.7	11.2	7.63	4.50	2.36
1.60V/cell	194.2	124.7	90.8	48.3	26.8	11.3	7.68	4.53	2.38

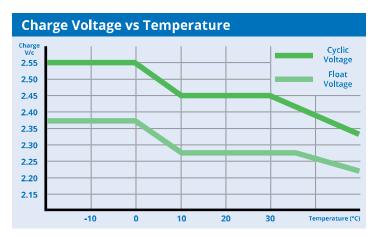
<sup>\*:</sup> Battery consists of 6 cells

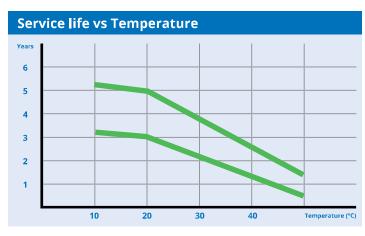


## HR 22-12 - High Rate Series









### **Certifications and Standards**

ISO ISO ABS 9 0 0 1 14001 UL94-HE





#### **High Rate series**

Pbq High Rate AGM batteries are ideal for applications that require high (start) currents. The main advantage of a High Rate battery over a battery from the General Purpose range, is that these are able to deliver more power within a shorter time from a similar battery casing, without sacrificing battery service life. Pbq High Rate batteries have, just like batteries from the General Purpose series, a EUROBAT design life of 3 - 5 years.

In order to be able to deliver high currents in a short period of time, pbq High Rate batteries contain additional lead plates in the same housing. As a result, pbq High Rate batteries have a higher energy density and are therefore able to provide reliable emergency power. Compared to AGM batteries from the General Purpose battery series, High Rate batteries are on average able to deliver up to 30% more power from the same housing.

#### Innovative technology

In order to keep grid-corrosion and current per cm2 at acceptable levels, the pbq HR Discharge batteries are constructed around a larger area for both positive and negative material. This is done by adding extra plates in the same volume. Rather than use electrolyte with a higher specific gravity, a method rejected by pbq since this will reduce the functional life of the batteries to unacceptable levels.

### **High-quality accessories**

Charging or discharging a battery in an incorrect manner has a major detrimental effect on its service life and performance, resulting in worse performance and earlier replacement than otherwise would have been necessary. This is not benificial to the reliable operation of your application. That is why pbq offers a variety of high-quality accessories to compliment your battery system, allowing for better performance and longer service life. Ask you pbq distributor for more information.

Model	Voltage (V)	Capacity (Ah)	Dimensions lxwxh (mm)	Weight (kg)
pbq HR 6.5-12	12	6.5	151x51x101	2.00
pbq HR 9-12	12	9.0	151x65x102	2.70
pbq HR 22-12	12	22.0	181x76x167	6.70
pbq HR 40-12	12	40.0	165x125x175	9.60
pbq HR 50-12	12	50.0	197x165x171	14.30