

**High Discharge Rate Batteries**

The range of special High Discharge models offer excellent characteristics for applications that require very high discharge rates. Designed for a functional life of 4-5 years at 25°C in backup applications, these batteries are ideal for space limited applications requiring more power than can be delivered by a standard battery. For example, the 9Ah version has dimensions equal to those of a standard 7Ah but contains nearly 30% more energy.

The pbq 22HR-12 is a 22Ah battery especially designed for customer requiring a battery in the shape of a standard 18Ah but with increased capacity. Imagine the case where you change your computer system and find out that a controlled shutdown takes longer that your UPS is able to deliver! Just exchange the standard batteries with the pbq 22HR-12 and you instantly gain more backup time. Being able to deliver a 100A current during 5 minutes and even much higher start-up currents makes this battery also ideally suited as a stand-by power source for electric motors, cooling equipment etc.

The 15HR-12 is a very popular model for electric bikes and scooters since it is shaped like a standard 12Ah but offers 25% more capacity and is able to cope with the high inrush currents usually associated with electric motors. With an internal resistance of less than 12mOhm the voltage during discharge remains higher than when using standard 12Ah cyclic or stand-by, batteries. The compact form-factor ensures that this battery can be used as a direct replacement for standard 12Ah batteries.

In order to keep grid-corrosion and current per cm<sup>2</sup> 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.

**Typical applications:**

- UPS systems
- Wheel chairs, golf charts
- Electric bikes, scooters and other vehicles
- Tools
- (emergency) lights, pumps and valves

**Models available**

Model pbq...	Capacity in Ah	Dimensions(±2mm) (LxWxH1/H2)	Weight
5.5HR-12	5,5	90x70x102/106mm	1.88kg
6.5HR-12	6,5	151x52x94/99mm	2.2kg
9HR-12	9,0	151x65x94/100mm	2.8kg
15HiR-12	15,0	151x98x94/100mm	4.2kg
22HiR-12	22,0	181x77x167mm	6.1kg
33HiR-12	33,0	175x166x123/125mm	10kg
40HR-12	40,0	196x166x171mm	14.8kg
50HiR-12	50,0	196x166x170mm	15.0kg
55HiR-12	55,0	230x138x208/226mm	17.5kg



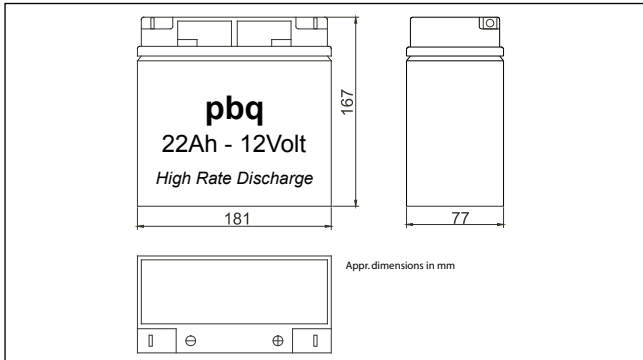
*pbq 5.5HR-12  
Ideal substitute for wet starter batteries in scooters. Also frequently used for robotics and other high current applications.*



*pbq 15HR-12  
High Rate Discharge version of the popular 12Ah VRLA battery. Electric bikes, scooters and UPS systems run 25% longer compared to a standard 12Ah.*



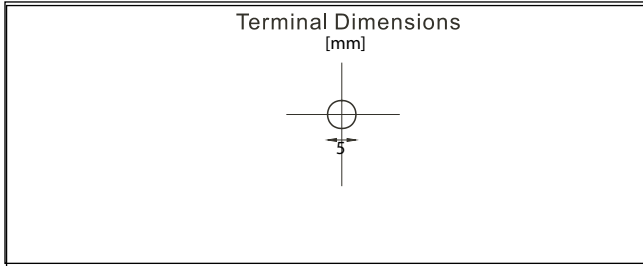
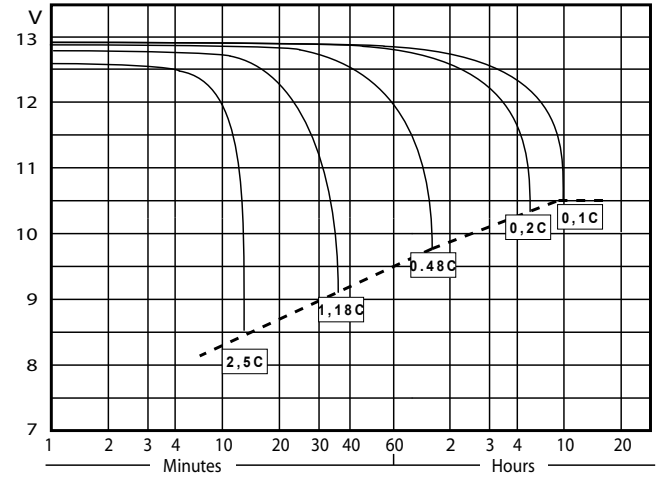
*pbq 22HR-12  
High Rate Discharge version of the popular 18Ah VRLA battery. More power for your UPS systems without the need of extra shelves or cabinets.*



Voltage	: 12 Volt
Capacity	: 22Ah
Appr. dimensions	: 181x77x167mm (LxWxH) (±2mm)
Terminal	: M5 Nut and Bolt ( <i>supplied</i> )
Container & lid	: ABS
Approximate weight	: 6.1kg
Certificate(s)	: CE, UL
RoHS Compliant	: Yes

- Typical Applications:**
- Golf trolleys
  - Agricultural trolleys
  - Lifts & hoists
  - Garden tools
  - Lifting platforms
  - Sensors
  - UPS systems

<b>Capacity</b>	
30 minute rate (300W)	: 150Wh
15 minute rate (498W)	: 125Wh
5 minute rate (879W)	: 73.25Wh
<b>Internal Resistance (fully charged)</b> : 10mOhm	
<b>Capacity versus temperature</b>	
40°C	: 102%
25°C	: 100%
0°C	: 85%
-15°C	: 65%
<b>Charge (constant voltage)</b>	
Initial Charging current <5,5A	
Float use: 13.5 - 13.8 Volt. -20mV/°C	
Cyclic use: 14.1 - 14.4 Volt. -30mV/°C	



Discharge data watt/battery

	Discharge time	5 min	10 min	15 min	20 min	30 min	45 min	60 min	90 min
End Voltage	11.1	650	478	382	339	243	178	141	109
	10.8	730	535	420	367	262	189	149	115
	10.5	767	598	474	396	295	212	165	119
	10.2	804	612	487	403	300	219	172	125
	9.6	879	658	510	420	313	231	181	134