

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 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.

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 (LxWxH1/H2)	Weight
5.5HR-12	5,5	90x70x101/106mm	1,88kg
6.5HR-12	6,5	151x52x94/99mm	2,2kg
9HR-12	9,0	151x65x94/100mm	2,8kg
15HR-12	15,0	151x98x94/100mm	4,2kg
22HR-12	22,0	181x77x167mm	6,0kg
33HR-12	33,0	196x131x155/180mm	12kg
40HR-12	40,0	196x166x171mm	14,8kg
50HR-12	50,0	196x166x170mm	15,0kg
55HR-12	55,0	230x138x208/226mm	17,5kg



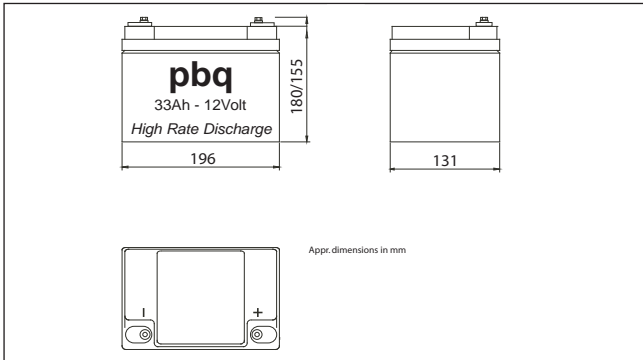
*pbq 5.5HR-12
Ideal substitute for wet starter batteries in scooters. Also frequently used for robotics and other high current applications.*



*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.*



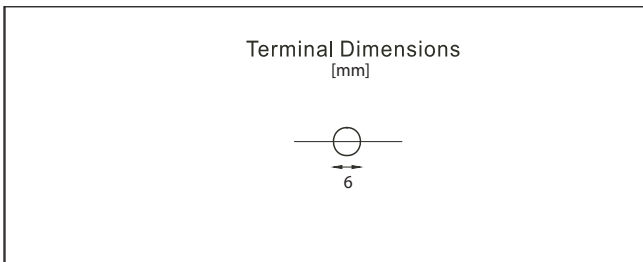
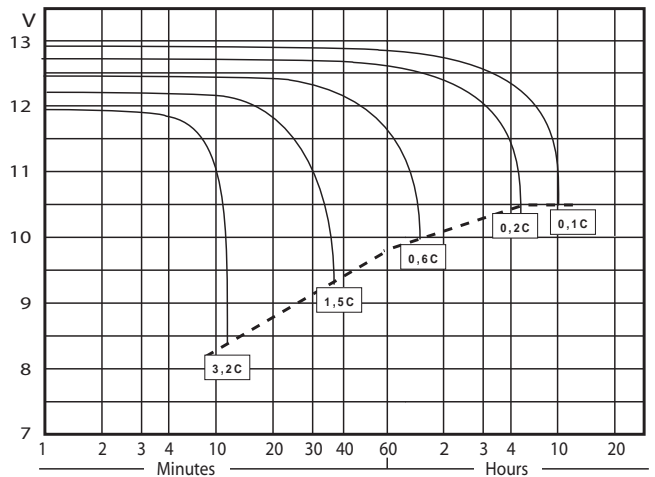
*pbq 22HR-12
High Rate Discharge version of the popular 18Ah VRLA battery. More power for your UPS systems without the need of extra shelves or cabinets.*



Voltage	: 12 Volt
Capacity	: 33Ah
Appr. dimensions	: 196x133x155/180mm (LxWxH)
Terminal	: M6 insert (<i>bolt supplied</i>)
Container & lid	: Flame retardant ABS
Approximate weight	: 12kg
Certificate(s)	: CE, UL
RoHS Compliant	: Yes

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

Capacity	
60 minute rate (261W)	: 261Wh
30 minute rate (457W)	: 228.5Wh
15 minute rate (870 W)	: 217.5Wh
5 minute rate (1676 W)	: 139.7Wh
Internal Resistance (fully charged) : 7mOhm	
Capacity versus temperature	
40°C	: 102%
25°C	: 100%
0°C	: 85%
-15°C	: 65%
Charge (constant voltage)	
Initial Charging current <14A	
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	40 min	45 min	50 min	60 min	90 min
End Voltage	11,1	1027	836	667	592	425	358	311	298	245	191
	10,8	1226	935	734	642	458	381	331	316	261	200
	10,5	1472	1045	828	691	515	408	371	338	289	209
	10,2	1567	1070	851	704	525	418	383	353	301	219
	9,6	1676	1149	890	734	547	440	403	368	316	235