

## Basic Specifications

Voltage:	12 Volt
Capacity:	20 hour rate: 128Ah 10 hour rate: 120Ah 5 hour rate: 99.5Ah
Cycles:	650 (50% DoD)
Appr. dimensions:	407x175x224mm (LxWxH) (±2mm)
Terminal:	M8 insert
Container & lid:	Flame retardant ABS
Internal Resistance:	4mΩ (Fully charged)
Approximate weight:	37kg
Max charge current:	36A
Max discharge current:	650A (5 sec.)
Operating temp. range:	-20°C ~ +50°C
Self discharge:	lower than 3% per month

## Typical Applications

- Wheelchairs and scooters
- Golf trolleys & buggies
- Lifts, elevators & hoists
- Electric bikes / steps
- Solar and wind energy
- Tools

## Discharge data in Watts per battery (25°C)

	(V/cell)	10 Min	15 Min	30 Min	1 Hr	3 Hr	5 Hr
End Voltage	1.80V	344	301	194	122	52,5	36,8
	1.75V	368	324	201	126	53,6	37,2
	1.70V	388	336	208	129	54,5	38,1
	1.65V	410	348	215	135	56	38,7
	1.60V	432	359	221	139	58,6	39,3

## Discharge data in Amperes (25°C)

	(V/cell)	10 Min	15 Min	30 Min	1 Hr	3 Hr	5 Hr	10 Hr
End Voltage	1.80V	189	162	103	64,4	27,8	19,2	12
	1.75V	202	174	105	66,5	30,2	19,9	12,1
	1.70V	214	182	109	68,7	30,7	20,6	12,3
	1.65V	236	189	113	70	31,2	20,9	12,5
	1.60V	240	190	117	70,5	31,7	20,9	12,6

## Cyclic series

The pbq cyclic batteries differ from standard batteries in several ways: the lead plates are made of another alloy and the grids are shaped differently than those found in standard VRLA batteries. Functional life of cyclic batteries is normally calculated as the number of discharges versus the depth of the discharge (DoD – Depth Of Discharge).

### What is the functional life of a cyclic battery?

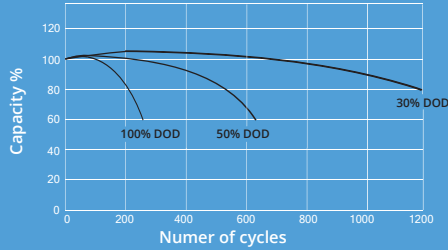
pbq cyclic VRLA batteries offers an exceptionally good functional life with well over 1.200 cycles at 30% DoD. However, the deeper the discharge, the fewer the total number of cycles obtainable from the battery. It is therefore best to select the battery such that a depth of discharge between 30% and 50% will be reached during normal use or use the largest battery that fits your budget and physical space.

### Charging cyclic batteries

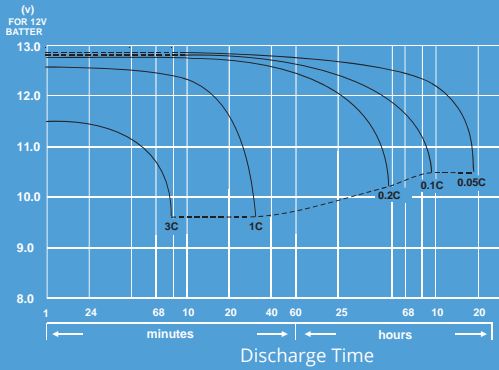
It is advised to use a 2- or 3-step charger that starts its charge cycle at 14,5 – 14,9V at 25°C. This slightly higher voltage helps in a better conversion of PbO<sub>2</sub> (LeadOxide) to pure Pb (Lead) and will ensure a low internal resistance of the battery. 2 and 3 step chargers will drop the voltage when the battery reaches around 80% of its capacity and overcharging will thus be prevented.

### Cycle Service Life

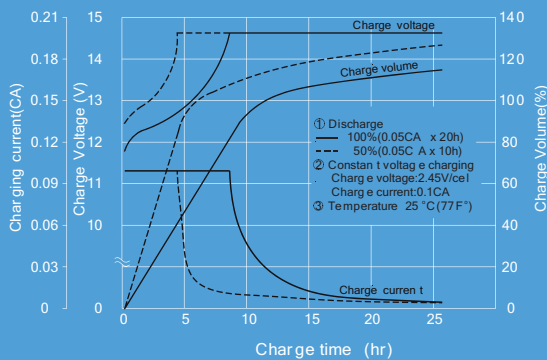
Testing Conditions:  
Discharge current: 0.4CA  
Final voltage: 1.75V/cell  
Charging current: 0.1CA  
Charging volume: 120% of discharge capacity  
Ambient temperature: 25°C



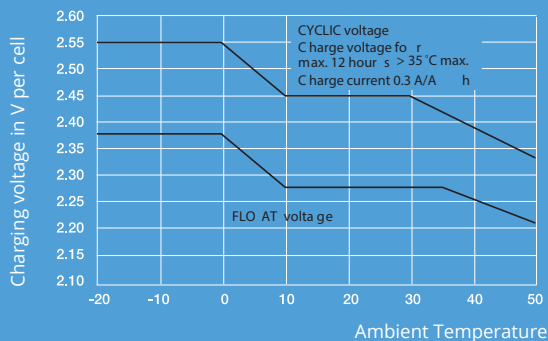
### Discharge Time VS. Discharge Current (25°C)



### Battery Charging Characteristics



### Charging voltage and temperature



### Models available

Model pbq	Capacity in Ah	Dimensions (±2mm) (LxWxH1/H2)	Weight
pbq C 9-12	9	151x65x100mm	2,8 kg
pbq C 12-12	12	151x98x100	4,2 kg
pbq C 18-12	18	181x77x167mm	5,8 kg
pbq C 20-12	20	181x77x167mm	6,6 kg
pbq C 26-12	26	175x166x125mm	9,6 kg
pbq C 33-12	33	197x131x172mm	10,5 kg
pbq C 33-12F	33	195x129x179mm	11,5 kg
pbq C 40-12	40	197x165x170mm	13,1 kg
pbq C 50-12	50	198x166x171mm	14,3 kg
pbq C 55-12	55	228x137x209mm	17 kg
pbq C 60-12	63	275x171x188mm	20,7 kg
pbq C 75-12	75	260x170x207mm	24,4 kg
pbq C 80-12	80	350x166x174mm	24,8 kg
pbq C 90-12	90	306x169x222mm	29 kg
pbq C 110-12	110	330x171x222mm	30 kg
pbq C 120-12	120	407x171x222mm	37 kg
pbq C 150-12	150	341x173x287mm	40 kg
pbq C 160-12	160	530x209x215mm	55,5 kg
pbq C 200-12	200	522x238x218mm	65,5 kg
pbq C 250-12	250	520x269x226mm	74 kg



### Certificates



### Features

- Absorbent Glassmat Technology
- 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 the terminal is downward.