

Basic Specifications

Voltage:	12 Volt
Capacity:	20 hour rate: 40Ah 10 hour rate: 38Ah 5 hour rate: 34Ah
Cycles:	650 (50% DoD)
Appr. dimensions:	198x166x171 mm (LxWxH) (±2mm)
Terminal:	M6 insert
Container & lid:	Flame retardant ABS
Internal Resistance:	8mΩ (Fully charged)
Approximate weight:	13.3kg
Max charge current:	12A
Max discharge current:	480A (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)	5 Min	10 Min	15 Min	30 Min	1 Hr	3 Hr	5 Hr	10 Hr	20 Hr
End Voltage	1.80V	1479	958	757	408	267	115	82,8	42,9	22,5
	1.75V	1663	1078	835	450	273	118	84,3	44,1	23,6
	1.70V	1782	1155	886	477	278	120	85,7	45,3	24,5
	1.65V	1848	1197	914	492	282	122	86,9	46,4	25,4
	1.60V	1881	1219	931	499	285	123	87,8	47,2	26,1

Discharge data in Amperes (25°C)

	(V/cell)	5 Min	10 Min	15 Min	30 Min	1 Hr	3 Hr	5 Hr	10 Hr	20 Hr
End Voltage	1.80V	134	86,3	64,4	34,2	22,5	9,43	6,61	3,7	1,95
	1.75V	151	96,2	71,1	37,9	23,2	9,64	6,76	3,87	2,03
	1.70V	161	102	75,5	39,2	23,7	9,83	6,88	3,98	2,07
	1.65V	167	106	77,8	41,4	24,1	10	6,97	4,07	2,12
	1.60V	171	108	79	42	24,4	10,1	7,06	4,12	2,14

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

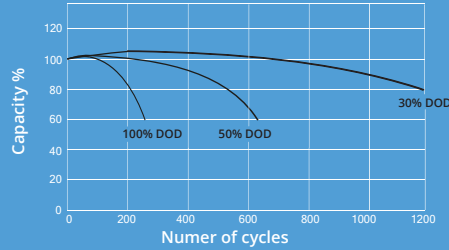
It is advised to use a 2- or 3-step charger that starts its charge cycle at 14,5 – 14,9V at 25°C. This slightly higher voltage helps in a better conversion of PbO₂ (LeadOxide) to pure Pb (Lead) and will ensure a low internal resistance of the battery. 2 and 3 step chargers will drop the voltage when the battery reaches around 80% of its capacity and overcharging will thus be prevented.

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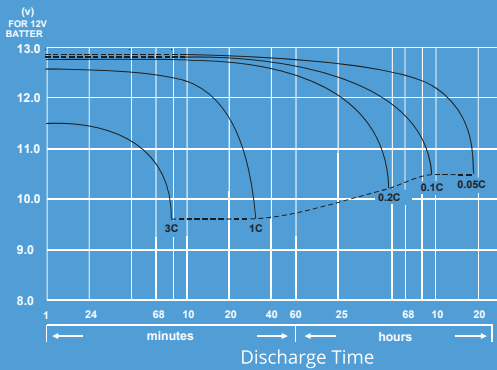
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Cycle Service Life

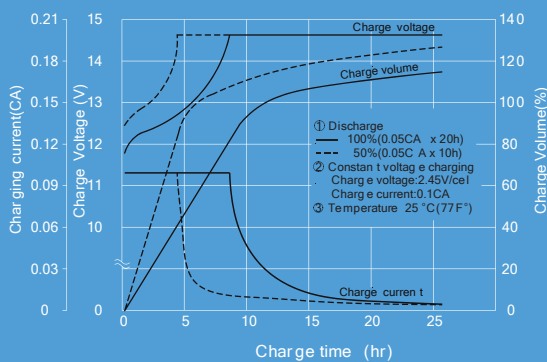
Testing Conditions:
Discharge current: 0.4CA
Final voltage: 1.75V/cell
Charging current: 0.1CA
Charging volume: 120% of discharge capacity
Ambient temperature: 25°C



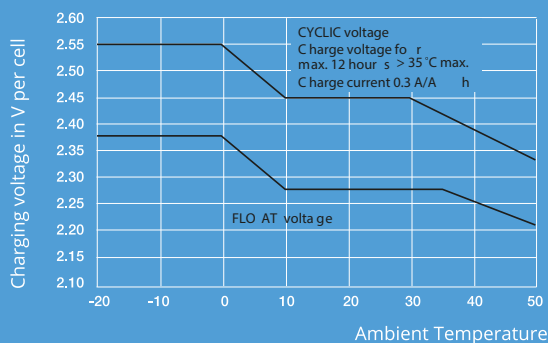
Discharge Time VS. Discharge Current (25°C)



Battery Charging Characteristics



Charging voltage and temperature



Models available

Model pbq	Capacity in Ah	Dimensions (±2mm) (LxWxH1/H2)	Weight
pbq C 225-6	225	243x187x276mm	33 kg
pbq C 9-12	9	151x65x100mm	2.8 kg
pbq C 10-12	10	151x65x118.5mm	3.3 kg
pbq C 12-12	12	151x98x100 mm	3.9 kg
pbq C 18-12	18	181x76x167mm	6.1 kg
pbq C 20-12	20	181x77x167mm	6.6 kg
pbq C 26-12	26	166x175x125mm	9.3 kg
pbq C 33-12	33	195x129x179mm	10.5 kg
pbq C 38-12	38	198x166x171mm	13.3 kg
pbq C 50-12	50	198x166x171mm	14.3 kg
pbq C 55-12	55	226x135x214mm	17 kg
pbq C 60-12	63	278x175x190mm	21.2 kg
pbq C 75-12	75	260x170x205mm	24 kg
pbq C 80-12 AJ	80	353x175x190mm	24.8 kg
pbq C 90-12	90	306x169x215mm	29 kg
pbq C 110-12	110	330x171x222mm	30 kg
pbq C 120-12	120	407x175x224mm	37 kg
pbq C 135-12	135	341x173x287mm	40 kg
pbq C 150-12	150	482x170x240mm	44.5 kg
pbq C 160-12	160	530x209x220mm	55.5 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.

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