

## Basic Specifications

Voltage:	12 Volt
Capacity:	20 hour rate: 12,3Ah 10 hour rate: 12Ah 5 hour rate: 10.5Ah
Cycles:	800 (50% DoD)
Appr. dimensions:	151x98x94/98mm (LxWxH) (±2mm)
Terminal:	Faston Tab 6.35mm T2
Container & lid:	ABS
Internal Resistance:	13mΩ (Fully charged)
Approximate weight:	3.9kg
Max charge current:	3.6A
Max discharge current:	180A (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	410	319	233	132	90,7	35,5	24,9	14,8	7,41
	1.75V	442	333	242	138	92,7	36,6	25,5	15,0	7,64
	1.70V	476	347	251	142	94,6	37,5	26,2	15,2	7,75
	1.65V	507	360	258	145	96,5	38,4	26,7	15,4	7,93
	1.60V	536	369	265	147	97,6	38,8	27,3	15,5	8,1

## 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	41,4	28,7	20,9	11,9	8	3	2,04	1,2	0,61
	1.75V	44,4	30	21,6	12,5	8,1	3	2,1	1,21	0,63
	1.70V	47,5	31,2	22,4	12,8	8,2	3,1	2,16	1,24	0,63
	1.65V	50,3	32,4	23	13,1	8,3	3,2	2,21	1,26	0,65
	1.60V	53,1	33,2	23,7	13,3	8,4	3,2	2,25	1,27	0,66

## 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.

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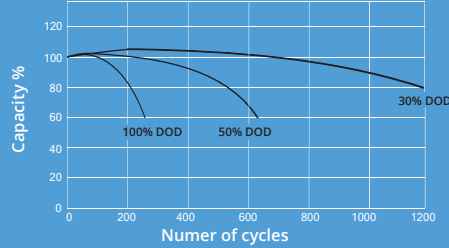


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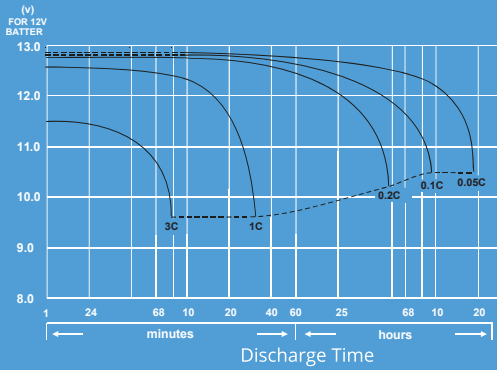
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### Cycle Service Life

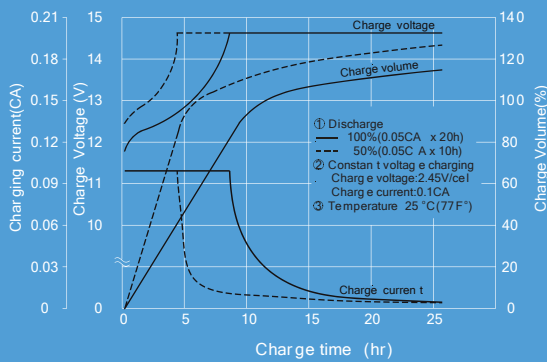
Testing Conditions:  
Discharge current: 0.4CA  
Final voltage: 1.75V/cell  
Charging current: 0.1CA  
Charging volume: 120% of discharge capacity  
Ambient temperature: 25°C



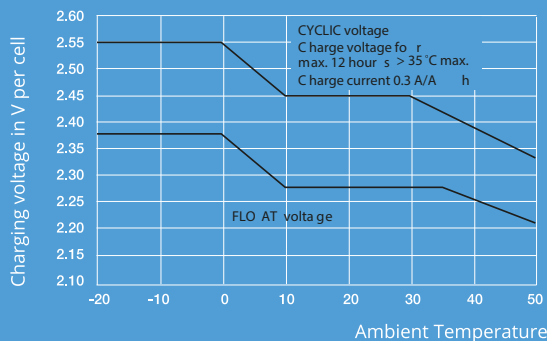
### Discharge Time VS. Discharge Current (25°C)



### 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
pbq C 200-12	200	522x238x223mm	62.5 kg
pbq C 250-12	250	520x269x227mm	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.

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