

# PowerWalker PWB12-9

Valve-Regulated Lead Acid Battery

Standard industry format

High discharge capability

Reliable and safe sealing technology

Low self-discharge rate

Certified product



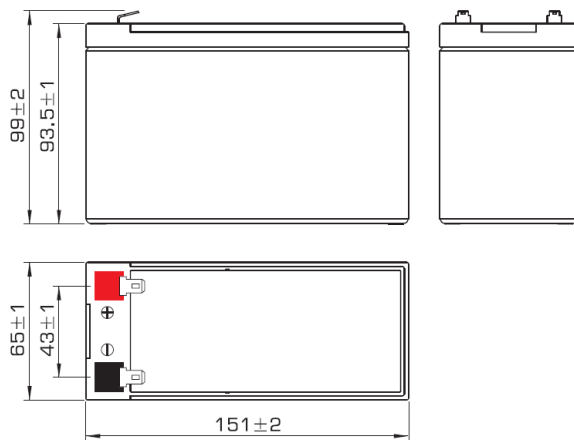
Item-No. 91010091

## Product Features

PowerWalker PWB12 battery series is designed to work with UPS solutions. It is a high quality valve-regulated lead acid battery with high corrosion resistance and special exhaust structure. The sealing technology with high discharge capacity offers long life, reliability and safety. Batteries are flexible for installation and maintenance and easy to handle.

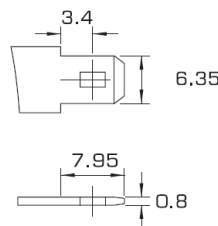
Design life is 3-5 years. The batteries feature low month self-discharge and low temperature coefficients, which means the battery will last long in good shape serving its purpose for the user.

## Dimensions



## Terminal

T2



ISO14001



ISO9001



Certified quality

Product specification are subject to change without further notice.

## Technical Details

### Product Features

<b>Model</b>	PowerWalker PWB12-9
<b>Capacity</b>	9Ah
<b>Nominal voltage</b>	12V
<b>Cells per unit</b>	6
<b>Internal resistance</b>	23mΩ
<b>Short-circuit current (5s)</b>	127.5A

### Discharging

<b>Maximum continuous discharge current</b>	45A
<b>Discharge temperature range</b>	-20 to 55 degC
<b>Capacity affected by temperature</b>	105% @ 40 degC; 100% @ 25 degC; 86% @ 0 degC

### Charging

<b>Maximum charging current</b>	2.7A
<b>Charging temperature range</b>	0 to 40 degC
<b>Float charging voltage</b>	13.5 to 13.8V
<b>Recommended float charging voltage</b>	13.6V
<b>Float charging temperature coefficient</b>	-18mV/degC
<b>Cycle use charging voltage</b>	14.4 to 15.0V
<b>Recommended cycle use charging voltage</b>	14.7V
<b>Cycle use charging temperature coefficient</b>	-30mV/degC

### Storage

<b>Storage temperature range</b>	-15 to 50 degC
<b>Month self discharge</b>	2% @ 20 degC

### Material

<b>Terminal</b>	T2 (250)
<b>Battery Container</b>	ABS (UL94-HB)
<b>Battery Cover</b>	ABS
<b>Positive Electrode Plate</b>	PbO <sub>2</sub> , Ca, Al, Sn
<b>Negative Electrode Plate</b>	Pb, Ca, Al, Sn
<b>Separator</b>	AGM
<b>Lead Parts</b>	Pb, Sn
<b>Electrolyte</b>	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O, Na <sub>2</sub> SO <sub>4</sub>
<b>Seal</b>	EPDM
<b>Safety Valve</b>	EPDM
<b>Sealant</b>	Epoxy resin
<b>Terminal</b>	Cu, Ag

### Logistic Data

<b>Dimensions (L x W x H)</b>	151 x 65 x 99 mm
<b>Approximated weight</b>	2.5kg
<b>Pieces / Box</b>	10
<b>Box weight</b>	25.6kg
<b>Box dimensions</b>	350 x 313 x 128 mm
<b>Item Number</b>	91010091
<b>EAN Code</b>	4260074978148

Constant current discharge in Amperes at 25 degC

cut-off voltage	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85Vpc	22,7	16,7	13,2	10,8	8,03	5,09	4,82	3,52	2,79	2,04	1,61	1,34	1,15	0,92	0,76	0,413
1.80Vpc	24,6	17,5	13,8	11,1	8,34	6,01	4,91	3,58	2,84	2,07	1,63	1,36	1,16	0,93	0,77	0,415
1.75Vpc	26,6	18,4	14,3	11,5	8,43	6,13	5,00	3,64	2,88	2,10	1,66	1,38	1,18	0,94	0,76	0,425
1.70Vpc	28,6	19,3	14,8	11,8	8,62	6,25	5,08	3,70	2,91	2,13	1,68	1,39	1,19	0,95	0,79	0,426
1.67Vpc	29,7	19,8	15,1	12,0	8,74	6,32	5,14	3,73	2,95	2,15	1,69	1,40	1,20	0,96	0,79	0,429
1.60Vpc	32,4	21,0	15,8	12,5	9,01	6,49	5,26	3,81	3,02	2,19	1,72	1,43	1,22	0,97	0,80	0,435

Constant power discharge in Watts per cell at 25 degC

cut-off voltage	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85Vpc	43,1	31,9	25,4	20,8	15,5	11,4	9,37	6,87	5,47	4,01	3,17	2,65	2,27	1,79	1,46	0,79
1.80Vpc	46,5	33,4	26,3	21,3	15,8	11,6	9,51	6,96	5,54	4,07	3,21	2,68	2,29	1,81	1,48	0,80
1.75Vpc	49,8	34,8	27,1	21,9	16,2	11,8	9,65	7,06	5,61	4,12	3,25	2,71	2,32	1,83	1,49	0,81
1.70Vpc	53,2	36,2	27,9	22,4	16,4	12,0	9,79	7,16	5,69	4,17	3,29	2,74	2,35	1,85	1,51	0,82
1.67Vpc	55,2	37,1	28,4	22,7	16,6	12,1	9,87	7,21	5,93	4,20	3,31	2,76	2,37	1,86	1,52	0,82
1.60Vpc	59,6	39,0	29,5	23,5	17,0	12,4	10,1	7,33	5,83	4,27	3,37	2,80	2,40	1,89	1,54	0,83

\*values are within 2% error margin

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BlueWalker GmbH

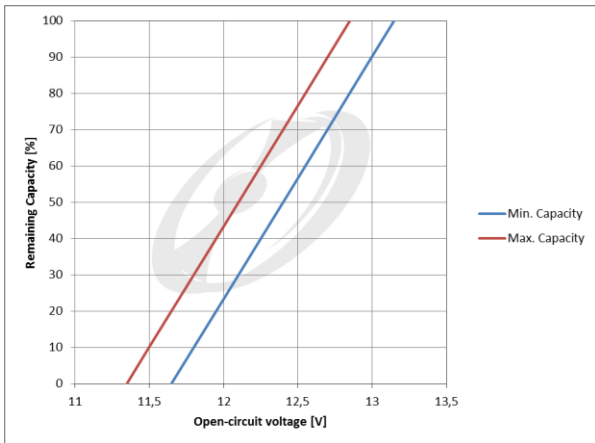
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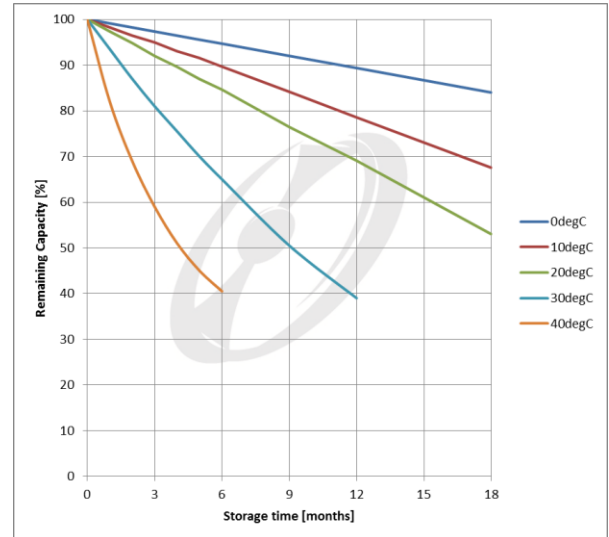
**Voltage to Capacity**

Open-circuit voltage vs. remaining capacity



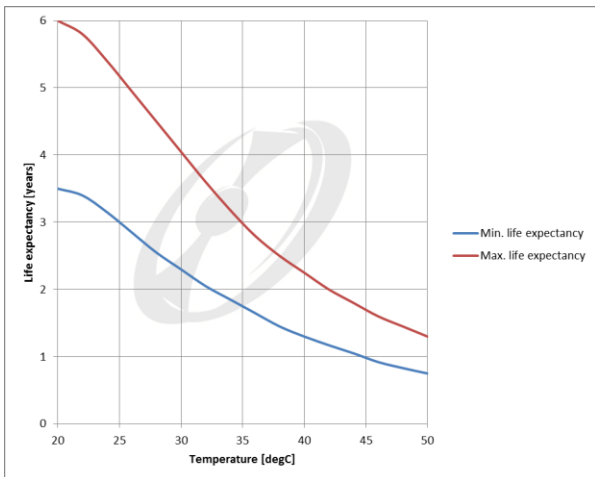
**Self-discharge characteristics**

Storage time vs. remaining capacity



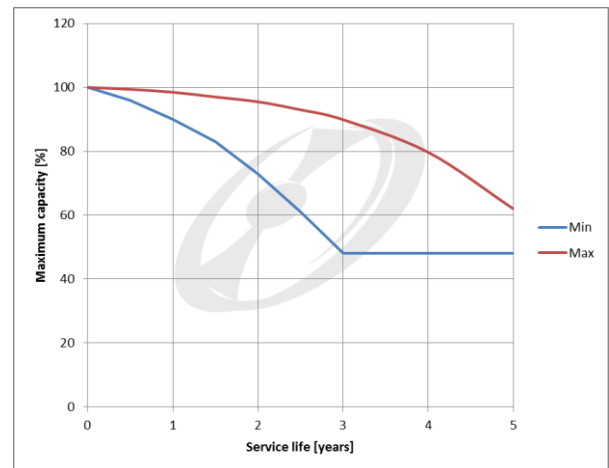
**Life expectancy to Temperature**

Expected service life vs. Temperature of operation



**Float service life**

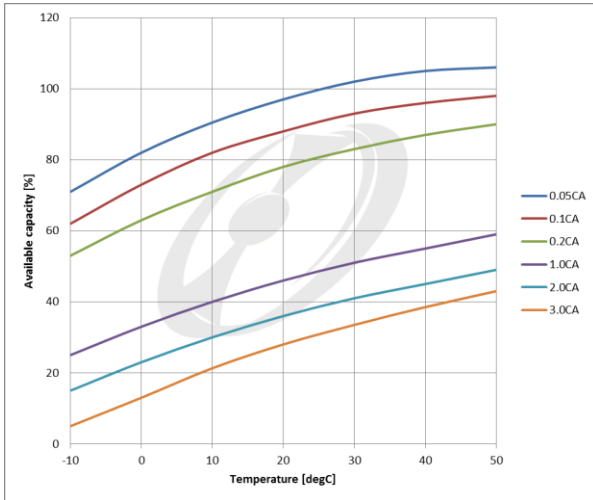
Discharge time vs. Battery voltage



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**Available capacity in discharging conditions**

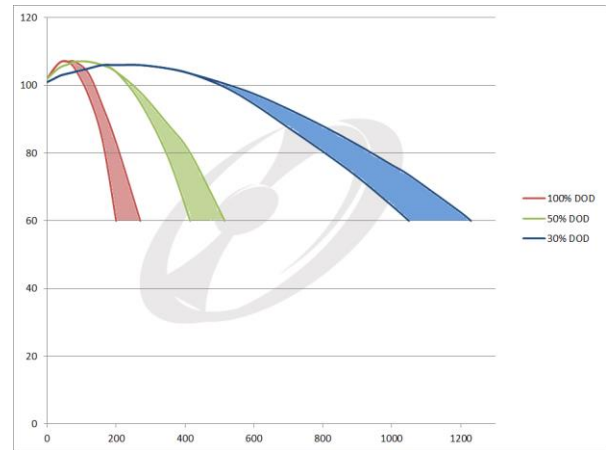
Available capacity vs. discharging temperature and discharging current



**Cycle Life in relation to Depth of Discharge**

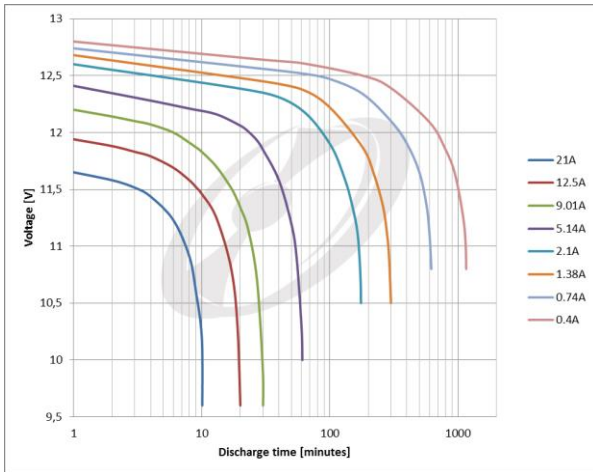
Remaining capacity vs. amount of cycles

Discharge current: 0.17C (FV 1.7Vpc)  
 Charging current: 0.25C max @ 2.45Vpc  
 Charging volume: 125% of discharged capacity  
 Ambient Temperature: 25degC



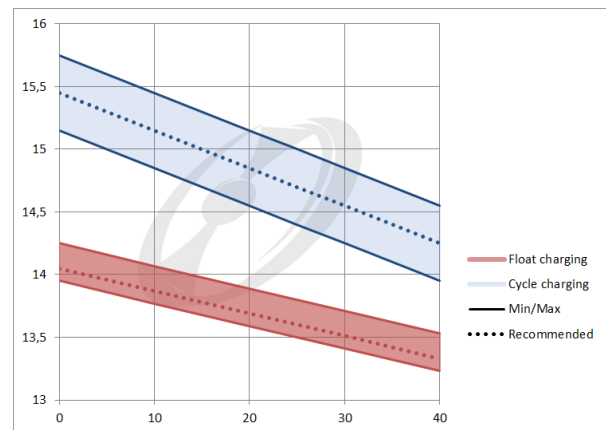
**Discharge characteristics**

Discharge time vs. Battery voltage



**Recommended charging voltage**

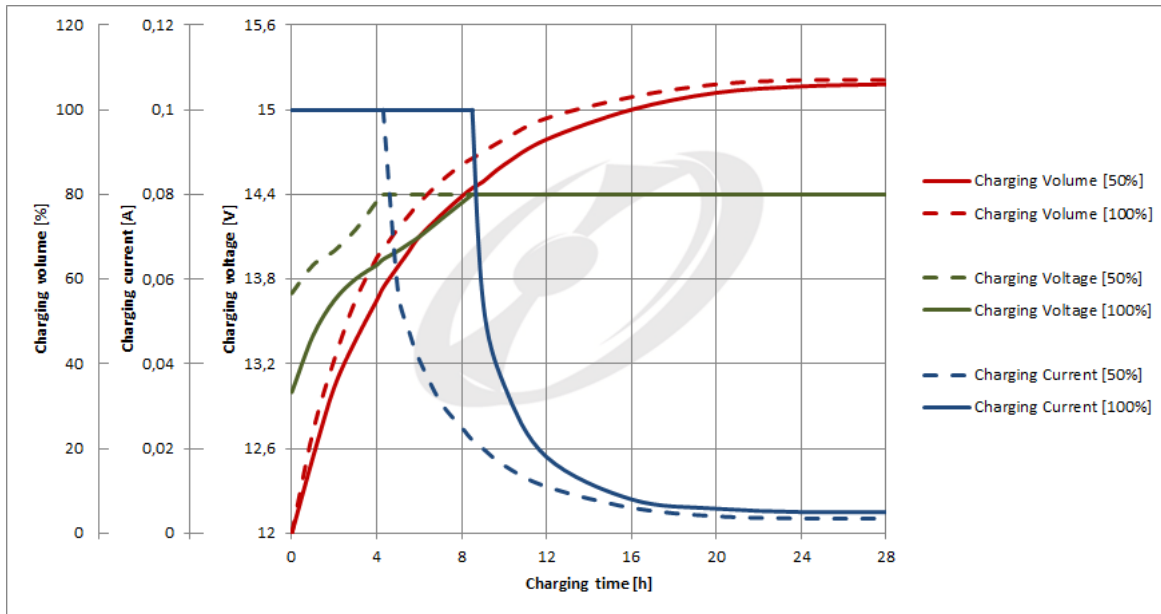
Charging voltage vs. Temperature



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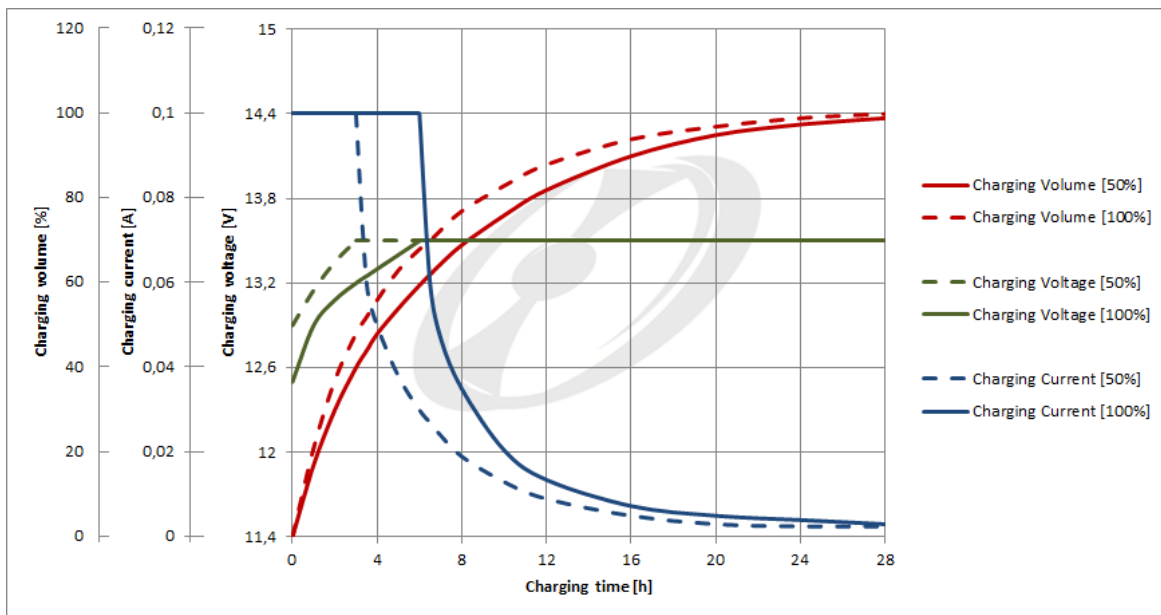
**Cycle use charging characteristics**

Charging volume, Charging current, Charging voltage vs. Charging time



**Float charging characteristics**

Charging volume, Charging current, Charging voltage vs. Charging time



**Cautions**

- Do not use batteries for application other than those specified
- Do not attempt to disassemble the battery
- Do not dispose the battery in water nor fire and do not heat the battery
- Do not short batteries
- Do not charge in a sealed container
- If the voltage of the battery string is above 45VDC please be sure to wear the insulated gloves during work
- There is sulfuric acid in the battery, avoid contact of the acid with skin, cloths and especially eyes. If eyes were in contact with the sulfuric acid, please wash with a lot of clean water and consult a physician immediately

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