

## Technical Specifications

### WaterWorld 48-13000

Specifications of the WaterWorld 48-13000 lithium battery are listed below. For more information please visit:

[www.ww-el.com](http://www.ww-el.com)



#### General Features

Net capacity	13000 Wh
Nominal voltage	51.2 V
Final charging voltage	56.8 V
Final discharging voltage	43.2 V
Maximum discharge rate	100 A (130 A in combination with the WW BatteryLink)
Weight	120 kg
Dimensions (LxBxH)	1300 mm x 253 mm x 213 mm
Volume	70 L
Battery chemistry	Lithium iron phosphate (LFP) LiFePO <sub>4</sub>

#### Use Information

Ambient temperature, discharging	-10°C up to +45°C
Ambient temperature, charging	-2°C up to +40°C
Ambient temperature, storage	-25°C up to +55°C
Typical storage time at 50% SOC	40 weeks without any load (battery turned off)
Max connections	Up to 1 Series 8 Parallel
Max quick charge	80 A
Protection class	IP65

#### Battery Composition

Battery enclosure material	Aluminium
Cell type	Cylindrical
Capacity per cell	6 Ah
Nominal voltage per cell	3.2 V
Cell connection	16S 22P
T-slot	Type 30

#### Information System in Combination with WW Drivetrain

Accurate SOC presentation	Yes
Battery status indicator	Yes
Error identification	Yes

#### Battery Management and Safety

On-off switch	Yes
Cell balancing	Yes
High current and short-circuit protection	Yes, up to 1000A
Deep discharge protection	Yes, cut off at 43.2 V
Protection against polarity reversal	Yes
Individual cell string voltage monitoring	Yes
Safety vent for each cell	Yes
Cell temperature monitoring	Yes
Temperature monitoring of battery electronics	Yes
Low temperature shut off	Yes
High temperature shut off	Yes

#### Lifetime Data

Cycle lifetime	>4000 cycles with 80% discharge depth at 25 °C to capacity loss of 20%
Average annual capacity loss	Approximately 2% at 25°C ambient temperature