## 12LC-180

12 V 193 Ah



Q-Batteries Akku 12LC-180 battery is a special deep cycle battery which is designed for intensive cyclic discharge usage. Because of the very thick lead plates it's possible to achieve more cycles and longer lifetime.

#### Application:

Electric wheelchair, caravan/marine, cleaning machines, golf cart, vehicle lifts, solar energy system, u.v.m.











#### Specification:

Voltage Per Unit 12 V

Capacity 193 Ah @20hr-rate to 1.8V per cell @25°C

Cells Per Unit 6

Weight ca. 53 kg +/- 3% Max. Discharge Current 1800 A (5 sec.) Internal Resistance ca. 4 m  $\Omega$ 

internal nesistance ca. 4111 2 2

Operating Temperature Range Discharge: Charge: Storage:

Normal  $-15^{\circ}\text{C} - 50^{\circ}\text{C} - 10^{\circ}\text{C} - 50^{\circ}\text{C} - 20^{\circ}\text{C} - 50^{\circ}\text{C}$ 

Operating Temperature Range 25°C ± 5°C

Self Discharge Valve Regulated Lead Acid (VRLA) batteries can be stored for

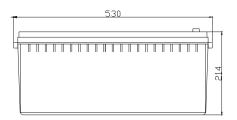
more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.

Terminal F12 (M8 bolt)

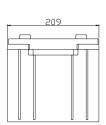
Container Material A.B.S. (UL94-HB)

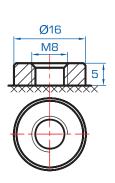
#### Dimensions: 55

530 Length x 209 Width x 214 mm Height







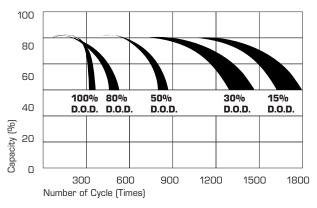




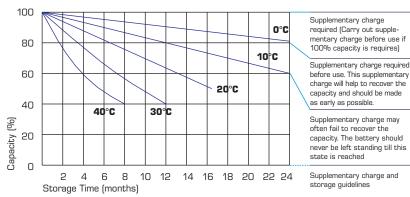
### Constant current discharge characteristics: A (25°C)

5 Min.	10 Min.	15 Min.	30 Min.	1 HR	2 HR	3 HR	4 HR	5 HR	8 HR	10 HR	20 HR
519.5	387.9	320.0	202.8	117.0	70.01	48.39	39.66	32.46	22.36	18.91	10.40
504.5	369.1	313.5	199.4	116.5	69.48	48.20	39.47	32.27	22.18	18.72	10.21
494.9	356.1	308.5	197.7	115.4	68.96	47.83	39.29	32.08	22.00	18.54	10.02
454.2	328.6	293.8	192.7	114.3	68.43	47.65	38.92	31.70	21.81	18.36	9.83
418.8	299.6	276.3	184.3	111.6	67.20	46.35	38.01	31.12	21.45	18.18	9.64
376.4	267.8	247.8	172.6	106.0	64.22	44.31	36.17	29.79	20.54	17.63	9.07
	519.5 504.5 494.9 454.2 418.8	519.5 387.9 504.5 369.1 494.9 356.1 454.2 328.6 418.8 299.6	519.5 387.9 320.0   504.5 369.1 313.5   494.9 356.1 308.5   454.2 328.6 293.8   418.8 299.6 276.3	519.5 387.9 320.0 202.8   504.5 369.1 313.5 199.4   494.9 356.1 308.5 197.7   454.2 328.6 293.8 192.7   418.8 299.6 276.3 184.3	519.5 387.9 320.0 202.8 117.0   504.5 369.1 313.5 199.4 116.5   494.9 356.1 308.5 197.7 115.4   454.2 328.6 293.8 192.7 114.3   418.8 299.6 276.3 184.3 111.6	519.5 387.9 320.0 202.8 117.0 70.01   504.5 369.1 313.5 199.4 116.5 69.48   494.9 356.1 308.5 197.7 115.4 68.96   454.2 328.6 293.8 192.7 114.3 68.43   418.8 299.6 276.3 184.3 111.6 67.20	519.5 387.9 320.0 202.8 117.0 70.01 48.39   504.5 369.1 313.5 199.4 116.5 69.48 48.20   494.9 356.1 308.5 197.7 115.4 68.96 47.83   454.2 328.6 293.8 192.7 114.3 68.43 47.65   418.8 299.6 276.3 184.3 111.6 67.20 46.35	519.5 387.9 320.0 202.8 117.0 70.01 48.39 39.66   504.5 369.1 313.5 199.4 116.5 69.48 48.20 39.47   494.9 356.1 308.5 197.7 115.4 68.96 47.83 39.29   454.2 328.6 293.8 192.7 114.3 68.43 47.65 38.92   418.8 299.6 276.3 184.3 111.6 67.20 46.35 38.01	519.5 387.9 320.0 202.8 117.0 70.01 48.39 39.66 32.46   504.5 369.1 313.5 199.4 116.5 69.48 48.20 39.47 32.27   494.9 356.1 308.5 197.7 115.4 68.96 47.83 39.29 32.08   454.2 328.6 293.8 192.7 114.3 68.43 47.65 38.92 31.70   418.8 299.6 276.3 184.3 111.6 67.20 46.35 38.01 3112	519.5 387.9 320.0 202.8 117.0 70.01 48.39 39.66 32.46 22.36   504.5 369.1 313.5 199.4 116.5 69.48 48.20 39.47 32.27 22.18   494.9 356.1 308.5 197.7 115.4 68.96 47.83 39.29 32.08 22.00   454.2 328.6 293.8 192.7 114.3 68.43 47.65 38.92 31.70 21.81   418.8 299.6 276.3 184.3 111.6 67.20 46.35 38.01 3112 21.45	519.5 387.9 320.0 202.8 117.0 70.01 48.39 39.66 32.46 22.36 18.91   504.5 369.1 313.5 199.4 116.5 69.48 48.20 39.47 32.27 22.18 18.72   494.9 356.1 308.5 197.7 115.4 68.96 47.83 39.29 32.08 22.00 18.54   454.2 328.6 293.8 192.7 114.3 68.43 47.65 38.92 31.70 21.81 18.36   418.8 299.6 276.3 184.3 111.6 67.20 46.35 38.01 31.12 21.45 18.18

# Life characteristics of cyclic use:



# Storage characteristic:



### Capacity Factors with different Temperature:

Batte	ery Type	-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL	6V & 12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
Battery	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM	6V & 12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
Battery	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

#### Charging Method:

Charge the batteries at least once every six months, if they are stored at 25°C

Constant Voltage (V)	-0.2C x 2h + 2.4–2.45V/Cell x 24h, max. Current 0.3CA
Constant Current (A)	-0.2C x 2h + 0.1CA x 12h
Fast	-0.2C x 2h + 0.3CA x 4.0h