

DELTA lead-acid batteries of the CGD series are manufactured according to AGM technology (electrolyte absorbed in a fiberglass separator).

As part of the active mass, a carbon addition in the form of graphene is used what makes Delta CGD batteries resistant to deep discharges and high temperature stability under adverse operating conditions. This series also features an increased number of charge/discharge cycles and duration of operation in heavy-duty systems based on renewable energy sources.

The batteries are designed to operate both in buffer and cyclic modes. Recommended for use in autonomous power systems, as well as in conjunction with systems based on alternative energy sources.



**Battery construction**

Element	Positive plate	Negative plate	Case	Lid	Valve	Terminal	Separator	Electrolyte
Material	Lead dioxide	Lead	ABS		Rubber	Copper	Fiberglass	Acid

**Specifications**

Nominal voltage.....	12 V
Cell.....	6
Design life.....	15 years
Nominal capacity (25°C)	
10 hours rate (3,3 A; 1,8 V/cell).....	33 Ah
5 hours rate (5,61 A; 1,75 V/cell).....	28,1 Ah
1 hours rate (20,6 A; 1,65 V/cell).....	20,6 Ah
Self-discharge.....	3% capacity per month 20°C
Internal resistance (25°C).....	12 mΩ

**Operating temperature range**

Discharge.....	-20÷60°C
Charge.....	-10÷60°C
Storage.....	-20÷60°C
Maximum discharge current (25°C).....	330A (5sec)
Cycle mode (2,35÷2,4 V/cell)	
Max.charge current.....	16,5-33 A*
Temperature correction factor.....	30 mV/°C
Standby mode (2,25÷2,3 V/cell)	
Temperature correction factor.....	20 mV/°C

\*Charging with currents from 16,5A to 33A is possible by monitoring of battery temperature up to 25°C

**Application**

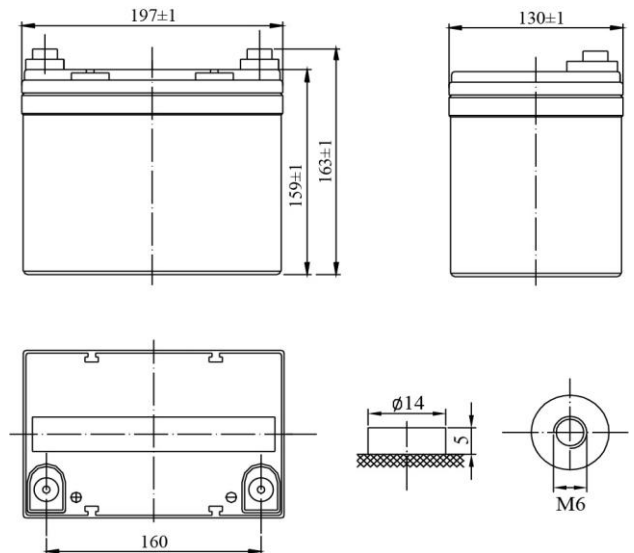
- Uninterruptible power supplies
- Communication and telecommunication systems
- Solar and wind power systems
- Autonomous power supply systems
- Other energy storage systems

**Performance & characteristics**

- Long service life;
- Deep discharge stability;
- Temperature stability of the battery;
- Excellent performance at low and high ambient temperatures;
- Unsurpassed number of charge/discharge cycles;
- Charge with high currents with minimal loss of capacity;
- A universal solution for any battery life.

**Dimensions (±2mm)**

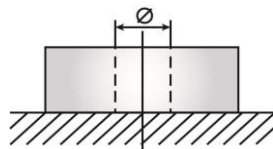
Length, mm.....	197
Width, mm.....	130
Height, mm.....	159
Height over terminals, mm.....	163
Weight (±3%), kg.....	10,3



**Layout B**



**Terminal type Insert Ø6 mm**

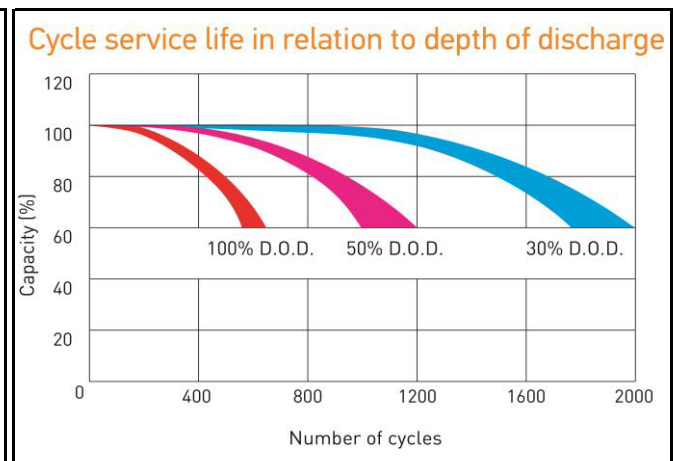
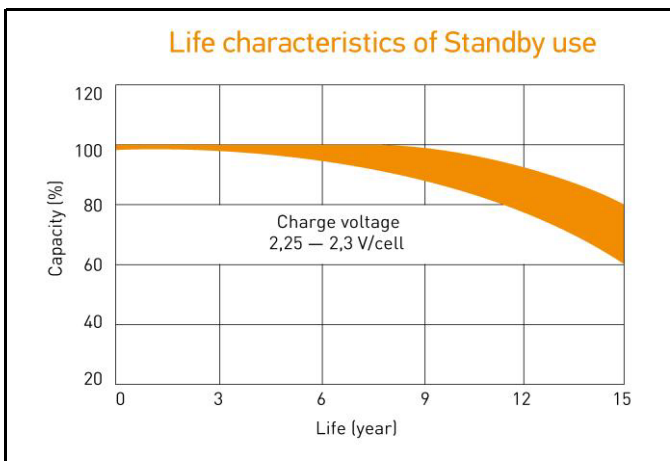
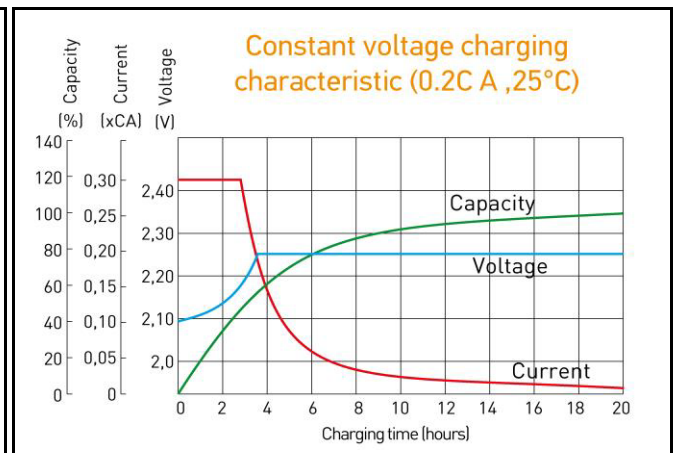
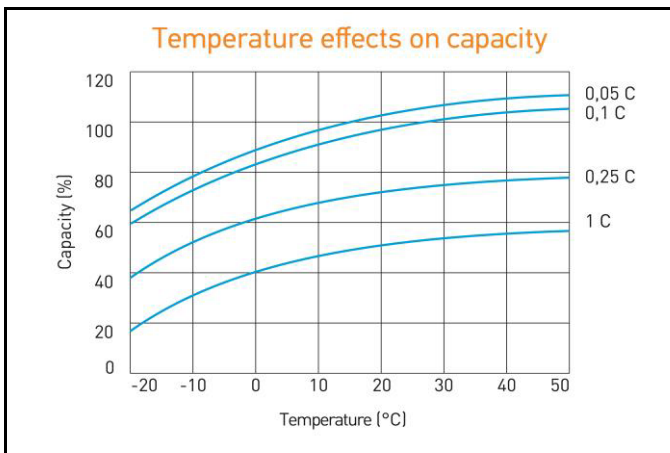


**Discharge Constant Current, A ( 25°C)**

V/cell	15 min	30 min	45 min	1 h	2 h	3 h	5 h	8 h	10 h
1,60	63,0	38,3	26,5	20,6	20,6	12,0	6,11	4,00	3,32
1,65	62,0	38,0	25,9	19,9	19,9	11,6	5,91	3,96	3,28
1,70	60,0	37,2	25,4	19,5	19,5	11,4	5,65	3,90	3,21
1,75	55,5	36,2	24,9	19,2	19,2	11,1	5,61	3,84	3,15
1,80	52,1	34,5	24,0	18,8	18,8	10,5	5,40	3,78	3,07

**Discharge Constant Power, W/cell ( 25°C)**

V/cell	15 min	30 min	45 min	1 h	2 h	3 h	5 h	8 h	10 h
1,60	113	63,3	47,6	39,7	39,7	24,7	11,7	7,60	6,67
1,65	112	62,1	46,8	39,2	39,2	24,2	11,4	7,58	6,63
1,70	107	60,8	46,2	38,9	38,9	24,0	11,3	7,52	6,60
1,75	98,8	59,4	45,4	38,4	38,4	23,8	11,0	7,42	6,58
1,80	89,0	57,7	42,4	34,7	34,7	23,4	10,8	7,37	6,57



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