

ASTERION 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 ASTERION 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 (20 A; 1,8 V/cell).....	200 Ah
5 hours rate (36,2 A; 1,75 V/cell).....	181 Ah
1 hours rate (121 A; 1,65 V/cell).....	121 Ah
Self-discharge.....	3% capacity per month 20°C
Internal resistance (25°C).....	5 mΩ

Operating temperature range

Discharge.....	-20+60°C
Charge.....	-10+60°C
Storage.....	-20+60°C
Maximum discharge current (25°C).....	1600A (5sec)
Cycle mode (2,35÷2,4 V/cell)	
Max.charge current.....	100-200 A*
Temperature correction factor.....	30 mV/°C
Standby mode (2,25÷2,3 V/cell)	
Temperature correction factor.....	20 mV/°C

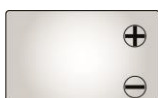
*Charging with currents from 100A to 200A is possible by monitoring of battery temperature up to 25°C

Application

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

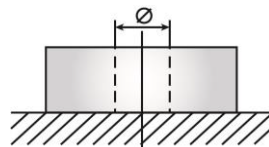
Layout

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Terminal type

Insert Ø8 mm

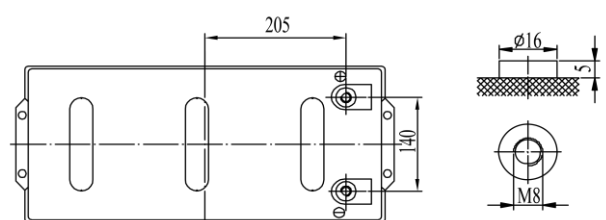
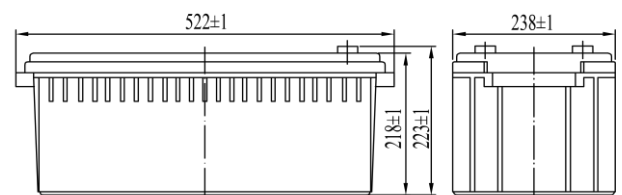


Performance & characteristics

- The presence of carbon in the form of graphene in the composition of the paste;
- 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.....	522
Width, mm.....	238
Height, mm.....	218
Height over terminals, mm.....	223
Weight (±3%), kg.....	62,5

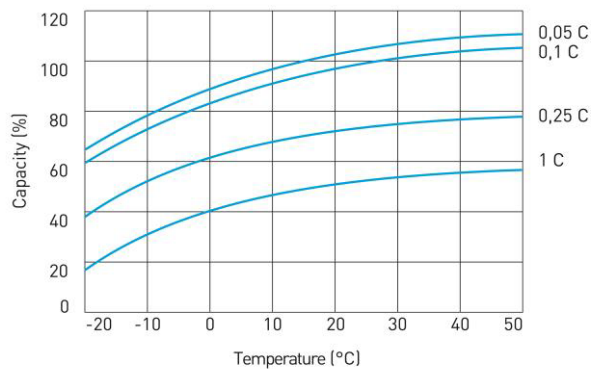
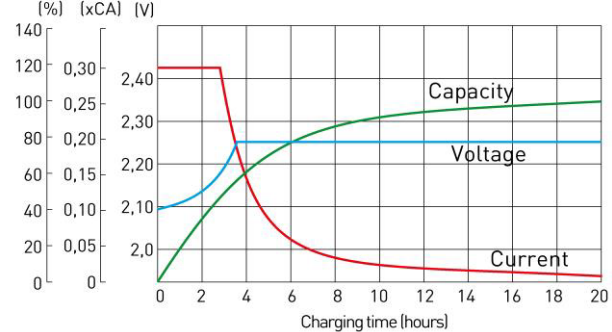
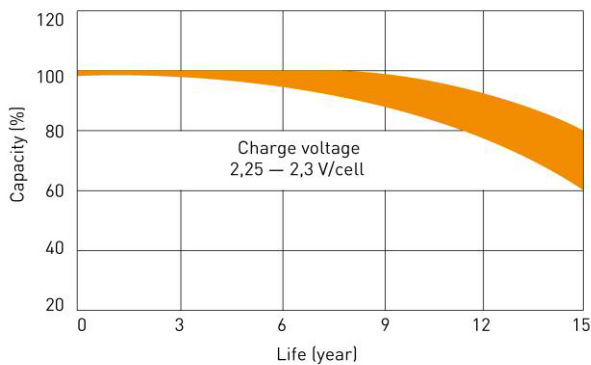


Discharge Constant Current, A (25°C)

V/cell	15 min	30 min	45 min	1 h	2 h	3 h	5 h	8 h	10 h
1,60	404	217	157	127	75,9	57,6	38,4	25,4	21,0
1,65	380	212	151	121	74,6	56,2	37,5	24,9	20,9
1,70	373	203	147	119	72,6	55,7	36,6	24,4	20,8
1,75	371	197	143	116	68,7	53,4	36,2	24,0	20,4
1,80	356	183	133	108	66,6	52,0	34,8	23,2	20,0

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	647	398	287	231	143	110	72,7	49,5	41,8
1,65	620	386	281	228	140	109	72,3	49,9	41,2
1,70	599	380	277	225	138	104	70,9	48,8	40,5
1,75	586	379	275	223	131	101	67,9	47,3	39,6
1,80	557	357	258	209	127	98,2	65,2	45,2	37,8

Temperature effects on capacity

Constant voltage charging characteristic (0.2C A ,25°C)

Life characteristics of Standby use

Cycle service life in relation to depth of discharge
