

STARMAX

The world's leading battery brand



DEEP CYCLE GEL BATTERIES

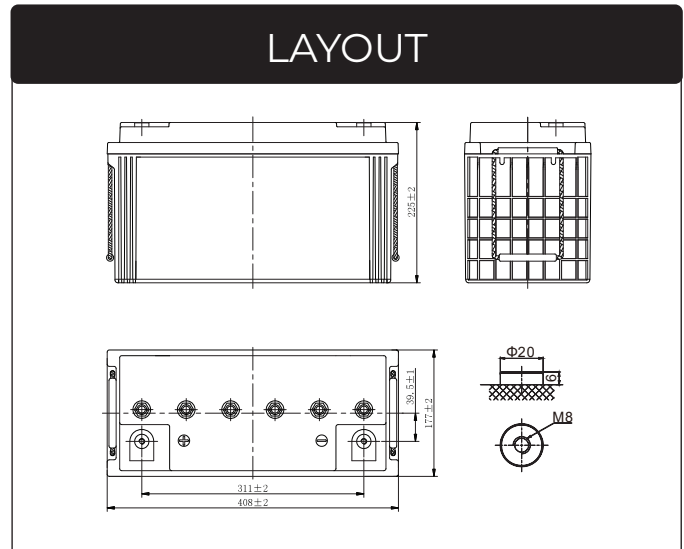
STG12-110 (12V 110AH)



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STG SERIES-GEL BATTERIES

STG12-110



General Features

- ✓ Battery design life up to 12 years
- ✓ Special plate design guarantees battery floating life more than 4000 times
- ✓ High thermal capacity reduce the risk of thermal out of control and drying hard, and the battery can be used in bad environment
- ✓ Little water losing, and no electrolyte stratification phenomenon

Applications

- ✓ Telecommunications
- ✓ Solar system
- ✓ Wind power system
- ✓ Engine starting
- ✓ Wheelchair, Floor cleaning machines, Golf trolley, Boats

Standards

- ✓ IEC 60896 Certified
- ✓ Classified as "Long Life" according to Eurobat
- ✓ UL, CE Certified
- ✓ Manufactured at Starmax® IATF16949, ISO 9001, ISO 14001 and ISO 45001 certified production facilities



SPECIFICATIONS

Rated Voltage	12V	
Nominal Capacity	(C ₂₀ ,1.80V/cell)	110Ah
Dimensions	Length	408±2mm (16.1 inches)
	Width	177±2mm (6.97 inches)
	Container height	225±2mm (8.86 inches)
	Total height	225±2mm (8.86 inches)
Approx. weight	34.5kg (76.1 lbs)	
Terminal	M8	
Container material	ABS	
Rated capacity (25°C)	110.0 Ah	C20(5.50A,1.80V/cell)
	105.0 Ah	C10(10.5A,1.80V/cell)
	93.0 Ah	C5(18.6A,1.75V/cell)
	83.1 Ah	C3(27.7A,1.75V/cell)
	66.5 Ah	C1(66.5A,1.60V/cell)
Max. discharge current	1100A (5s)	
Internal resistance (25°C)	Approx 7.0mΩ	
Operating temp. range	Discharge	-20~55°C (-4~131°F)
	Charge	-20~40°C (-4~104°F)
	Storage	-15~50°C (5~122°F)
Nominal operating temp. range	25±3°C (77±5°F)	
Standby Use	Initial Charging Current less than 50A. Voltage 2.23V~2.27V at 25°C (77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 50A. Voltage 2.30V~2.37V at 25°C (77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 50A. Voltage 2.40V~2.50V at 25°C (77°F)Temp. Coefficient -5mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self discharge	STG series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

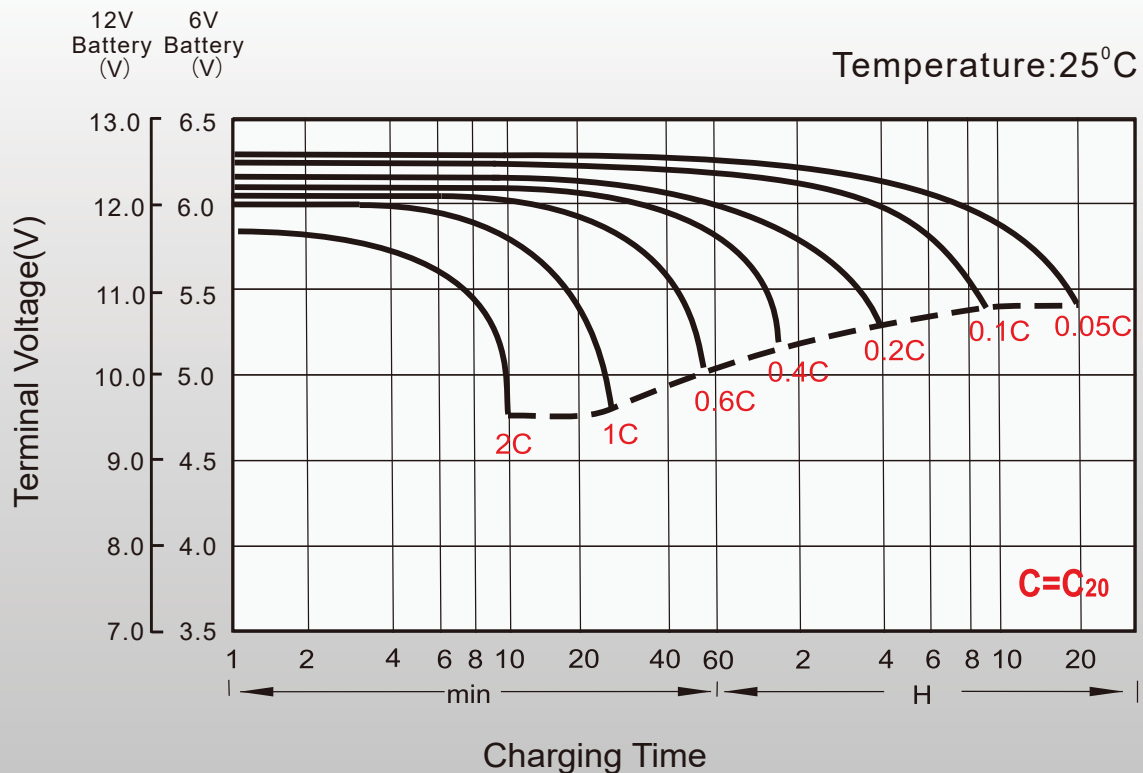
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	123.2	102.5	91.3	76.3	60.9	49.4	36.8	30.5	24.2	19.7	17.1	15.0	12.1	10.3	5.32
1.80V/cell	150.8	123.5	108.3	88.5	69.0	54.6	40.6	33.6	26.6	21.4	18.0	15.8	12.7	10.5	5.50
1.75V/cell	166.6	133.8	115.9	92.6	71.7	61.2	44.4	36.0	27.7	22.1	18.6	16.4	12.9	10.8	5.73
1.70V/cell	182.0	143.8	123.2	96.9	74.3	63.3	46.1	37.5	28.5	22.4	19.1	16.6	13.1	10.9	5.85
1.67V/cell	191.4	149.5	127.5	99.6	75.8	64.4	47.0	38.3	28.9	22.8	19.5	16.9	13.2	11.0	5.93
1.60V/cell	213.5	163.8	138.0	105.6	79.5	66.5	48.0	38.8	29.4	23.2	19.8	17.2	13.4	11.1	5.97

Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	229.2	192.7	173.0	145.6	117.2	95.9	71.7	59.6	47.5	38.7	33.7	29.5	24.0	20.4	10.6
1.80V/cell	275.6	228.9	202.8	167.5	131.9	105.4	78.7	65.3	51.9	41.9	35.4	31.1	25.0	20.7	10.9
1.75V/cell	299.3	244.4	214.5	173.5	135.9	117.3	85.6	69.7	53.8	36.9	36.4	32.1	25.3	21.3	11.4
1.70V/cell	321.1	258.9	225.6	179.6	139.8	120.6	88.1	71.9	55.1	37.3	37.2	32.5	25.7	21.5	11.6
1.67V/cell	333.9	266.9	231.8	183.6	141.8	122.0	89.2	72.8	55.4	37.8	37.9	32.8	25.8	21.6	11.7
1.60V/cell	362.8	286.4	246.8	191.7	147.3	124.7	90.6	73.6	56.2	38.0	38.3	33.0	26.0	21.7	11.8

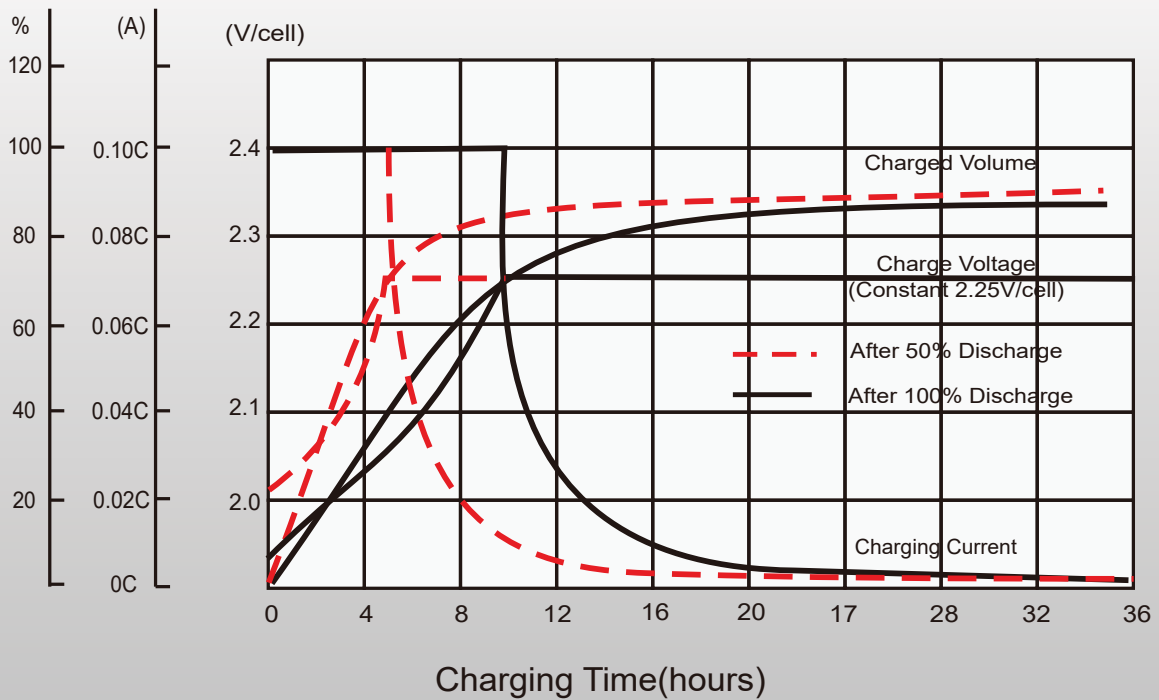
Discharge Characteristics



Float Charging Characteristics

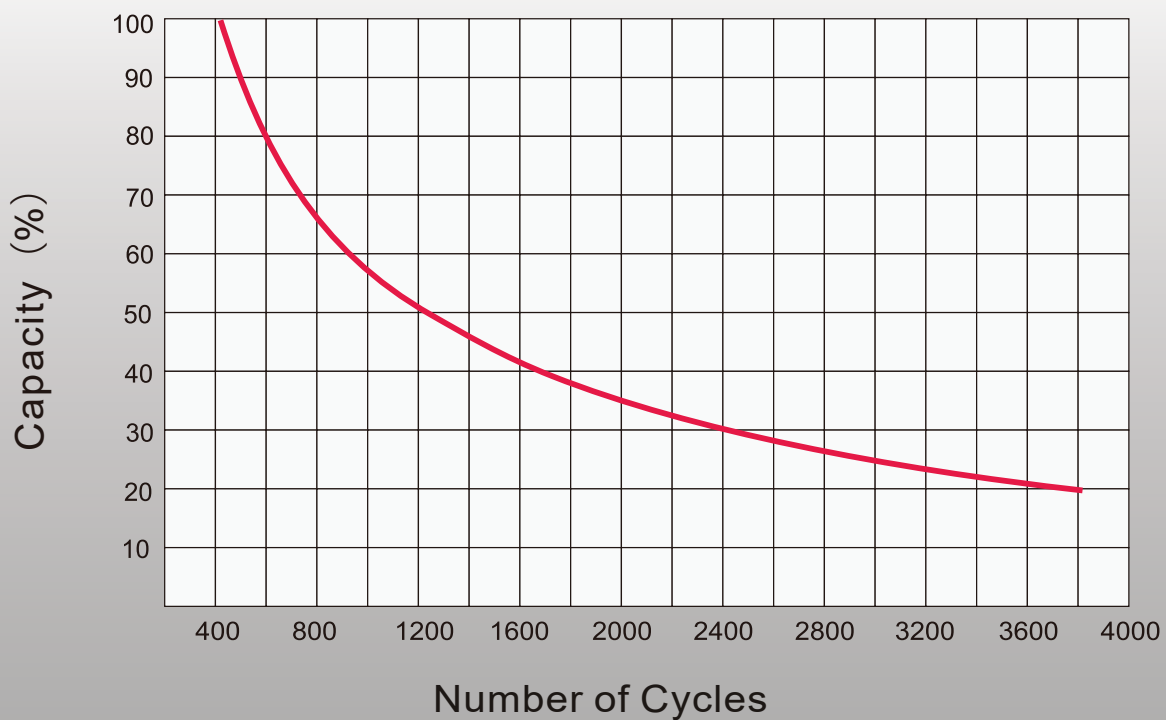
Charge Volume
Charging Current
Charging Voltage

0.1CA-2.25V/cell Temperature: 25°C

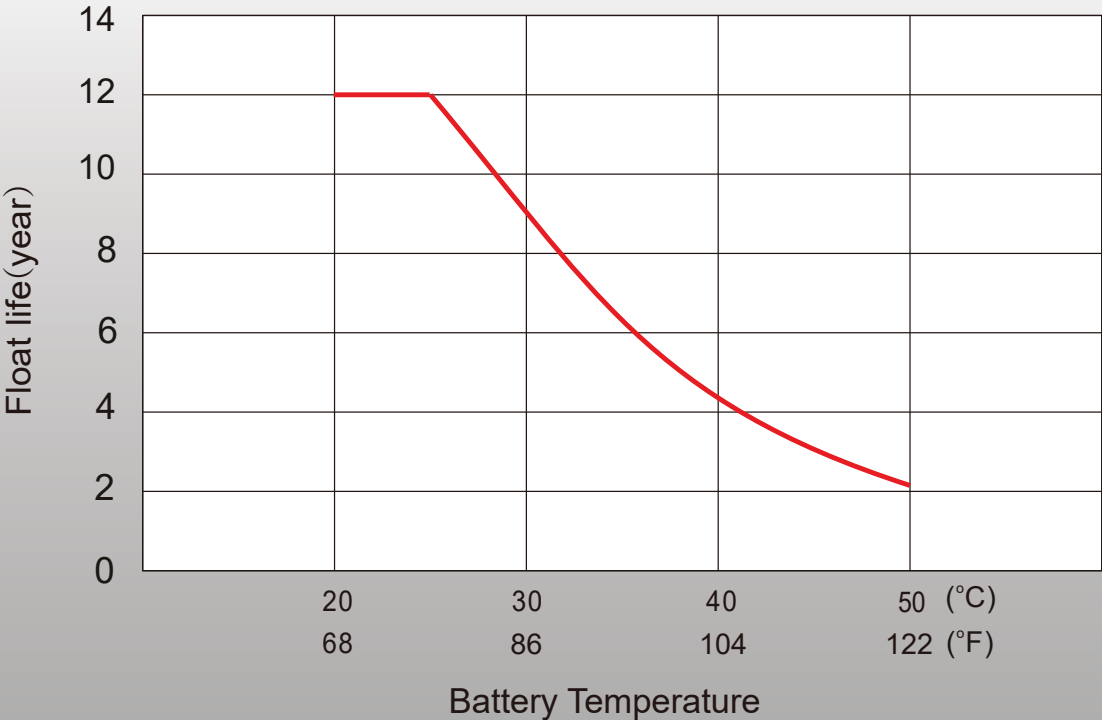


Cycle Life in Relation to Depth of Discharge

Acc.to IEC 896-2 (25 °C / 77 °F)



Effect of Temperature on Long Term Float Life





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