

STARMAX

The world's leading battery brand



DEEP CYCLE GEL BATTERIES

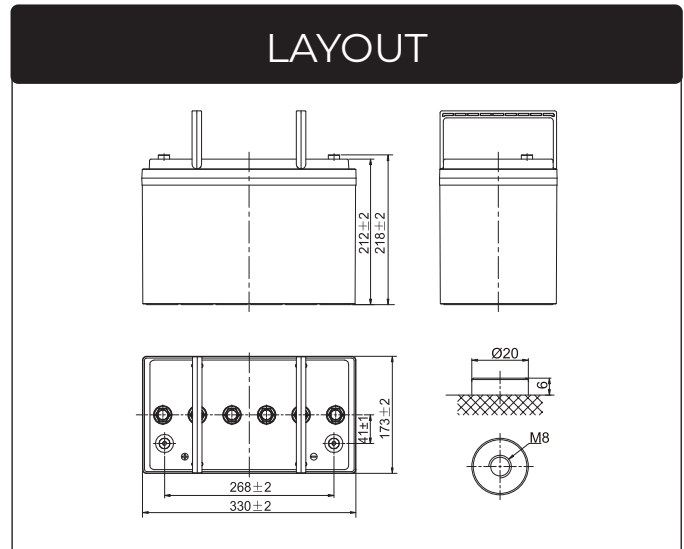
STG12-100 (12V 100AH)



www.starmaxbatteries.com

STG SERIES-GEL BATTERIES

STG12-100



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 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)	100Ah
Dimensions	Length	330±2mm (13.0 inches)
	Width	173±2mm (6.81 inches)
	Container height	212±2mm (8.35 inches)
	Total height	218±2mm (8.58 inches)
Approx. weight	31.2kg (68.8 lbs)	
Terminal	M8	
Container material	ABS	
Rated capacity (25°C)	100.0 Ah	C20(10.0A,1.80V/cell)
	90.0 Ah	C10(9.00A,1.80V/cell)
	79.5 Ah	C5(15.9A,1.75V/cell)
	71.1 Ah	C3(23.7A,1.75V/cell)
	57.0 Ah	C1(57.0A,1.60V/cell)
Max. discharge current	1000A (5s)	
Internal resistance (25°C)	Approx 6.9mΩ	
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 25A. Voltage 2.23V~2.27V at 25°C (77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 25A. Voltage 2.30V~2.37V at 25°C (77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 25A. 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.	

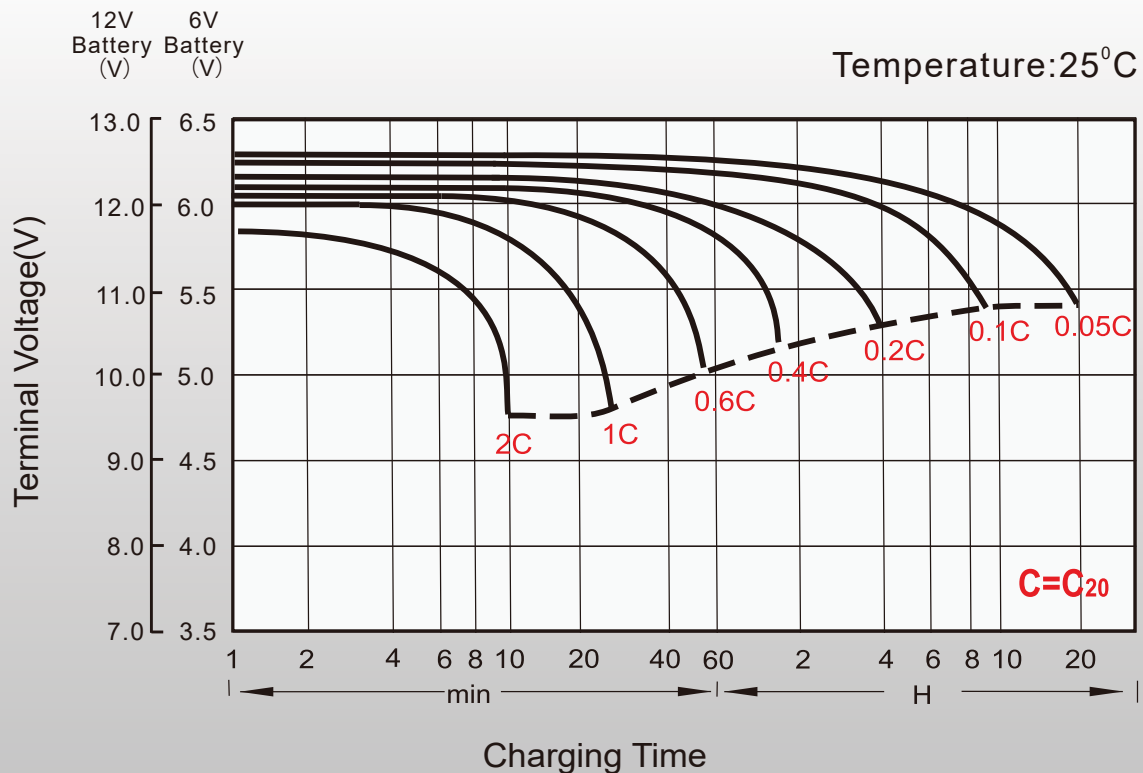
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	118.4	102.7	80.8	65.3	52.1	42.3	30.8	26.1	20.8	16.9	14.7	12.8	10.4	8.82	4.75
1.80V/cell	134.4	116.4	91.3	75.8	59.2	46.8	34.0	28.8	22.8	18.3	15.5	13.6	10.9	9.00	5.00
1.75V/cell	145.8	126.0	98.6	79.2	61.4	52.5	37.5	30.9	23.7	18.9	15.9	14.0	11.0	9.27	5.11
1.70V/cell	152.5	132.3	103.7	82.9	63.7	54.2	38.3	31.5	24.5	19.3	16.4	14.3	11.2	9.36	5.26
1.67V/cell	160.4	137.7	107.4	85.2	64.9	55.2	39.1	32.1	24.8	19.6	16.7	14.5	11.3	9.45	5.30
1.60V/cell	165.9	142.0	110.1	90.4	68.0	57.0	40.3	32.8	25.0	19.8	16.8	14.7	11.4	9.51	5.33

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	222.8	194.4	153.6	123.2	98.8	82.2	60.0	51.1	40.7	33.2	28.9	25.3	20.6	17.5	9.10
1.80V/cell	249.2	217.5	171.8	141.6	111.2	90.4	65.9	56.0	44.5	35.9	30.3	26.7	21.4	17.8	9.50
1.75V/cell	266.0	232.1	183.4	146.7	114.6	100.6	72.2	59.8	46.1	36.9	31.2	27.5	21.7	18.3	9.80
1.70V/cell	273.4	240.6	190.6	151.9	117.9	102.8	73.9	61.3	46.9	37.3	32.0	27.9	22.0	18.4	10.0
1.67V/cell	284.2	248.0	195.9	119.6	119.6	104.5	75.2	62.4	47.5	37.8	32.4	28.2	22.1	18.5	10.1
1.60V/cell	288.2	251.5	198.7	162.2	124.2	106.9	76.4	62.8	47.7	38.0	32.6	28.4	22.2	18.6	10.1

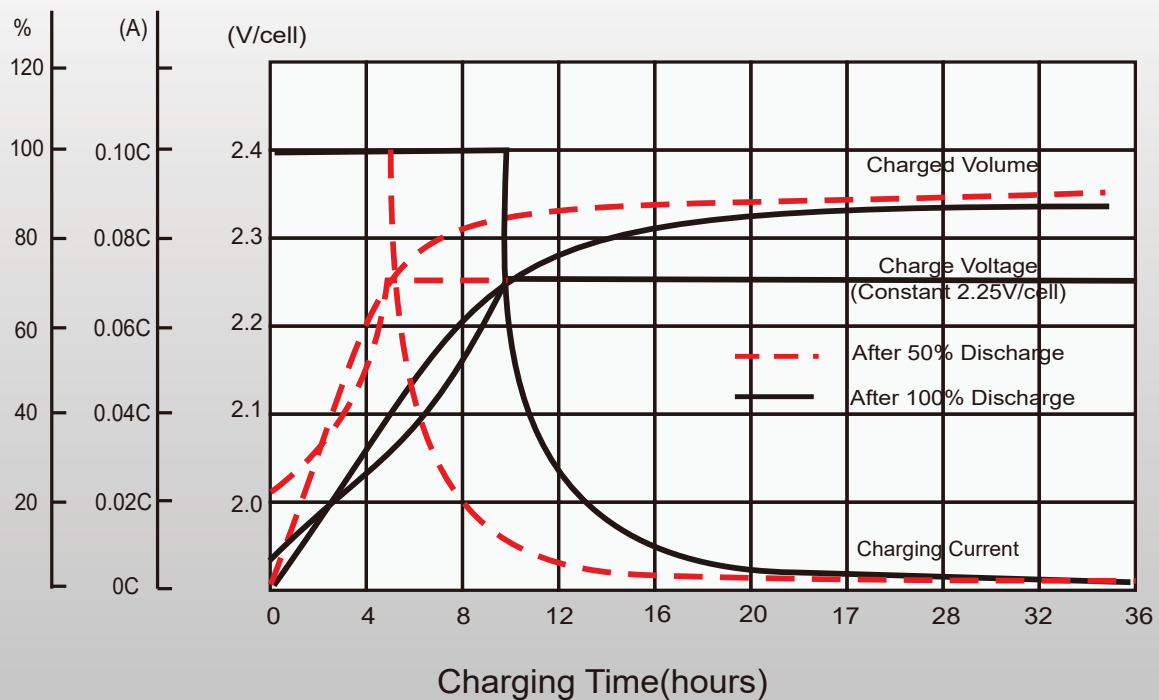
Discharge Characteristics



Float Charging Characteristics

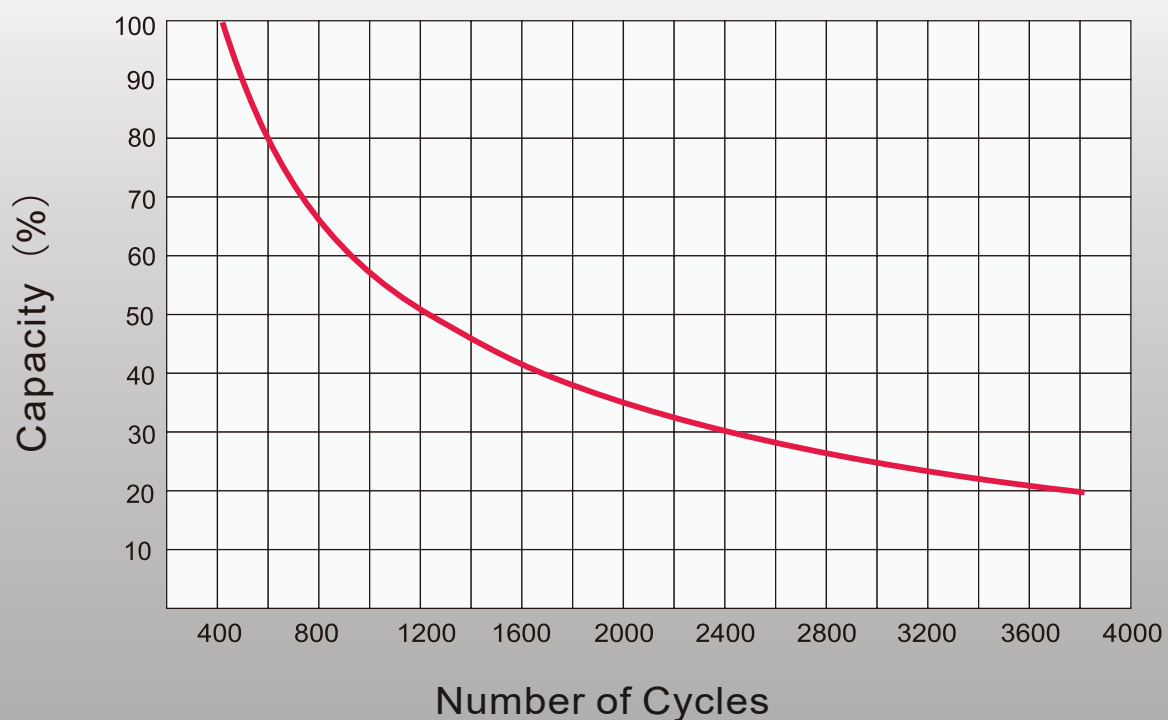
Charge Volume
Charging Current
Charging Voltage

0.1CA-2.25V/cell Temperature: 25°C

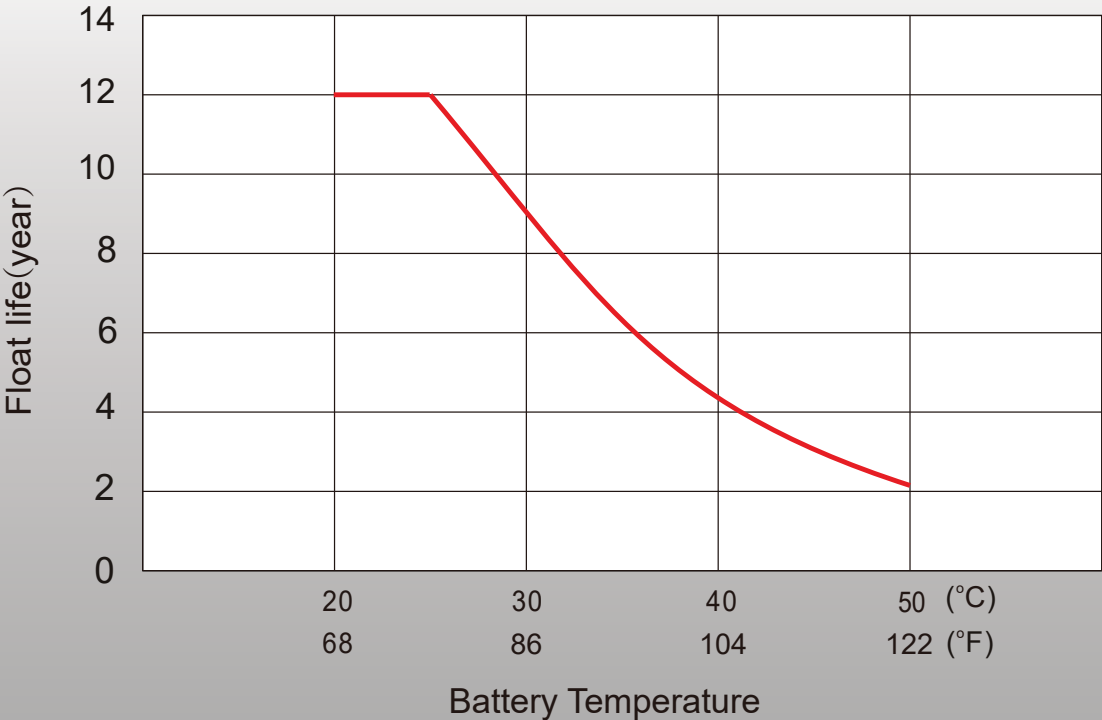


Cycle Life in Relation to Depth of Discharge

Acc.to IEC 896-2 (25 °C / 77 °F)



Effect of Temperature on Long Term Float Life





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