

STARMAX

The world's leading battery brand



DEEP CYCLE GEL BATTERIES

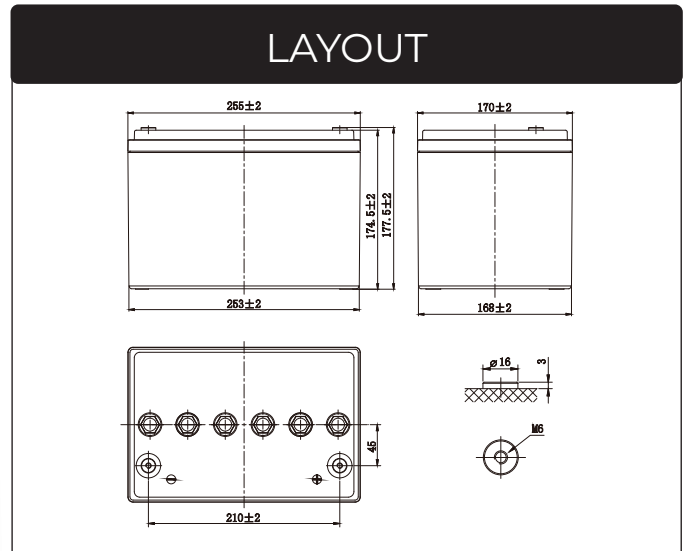
STG12-60 (12V 60AH)



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STG SERIES-GEL BATTERIES

STG12-60



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)	60Ah
Dimensions	Length	255±2mm (10.0 inches)
	Width	170±2mm (6.69 inches)
	Container height	174.5±2mm (6.87 inches)
	Total height	177.5±2mm (6.99 inches)
Approx. weight	18.5kg (40.8 lbs)	
Terminal	M6	
Container material	ABS	
Rated capacity (25°C)	60.0 Ah	C20(3.00A,1.80V/cell)
	55.0 Ah	C10(5.50A,1.80V/cell)
	48.7 Ah	C5(9.74A,1.75V/cell)
	43.5 Ah	C3(14.5A,1.75V/cell)
	34.8 Ah	C1(34.8A,1.60V/cell)
Max. discharge current	600A (5s)	
Internal resistance (25°C)	Approx 9.8mΩ	
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 15A. Voltage 2.23V~2.27V at 25°C (77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 15A. Voltage 2.30V~2.37V at 25°C (77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 15A. 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.	

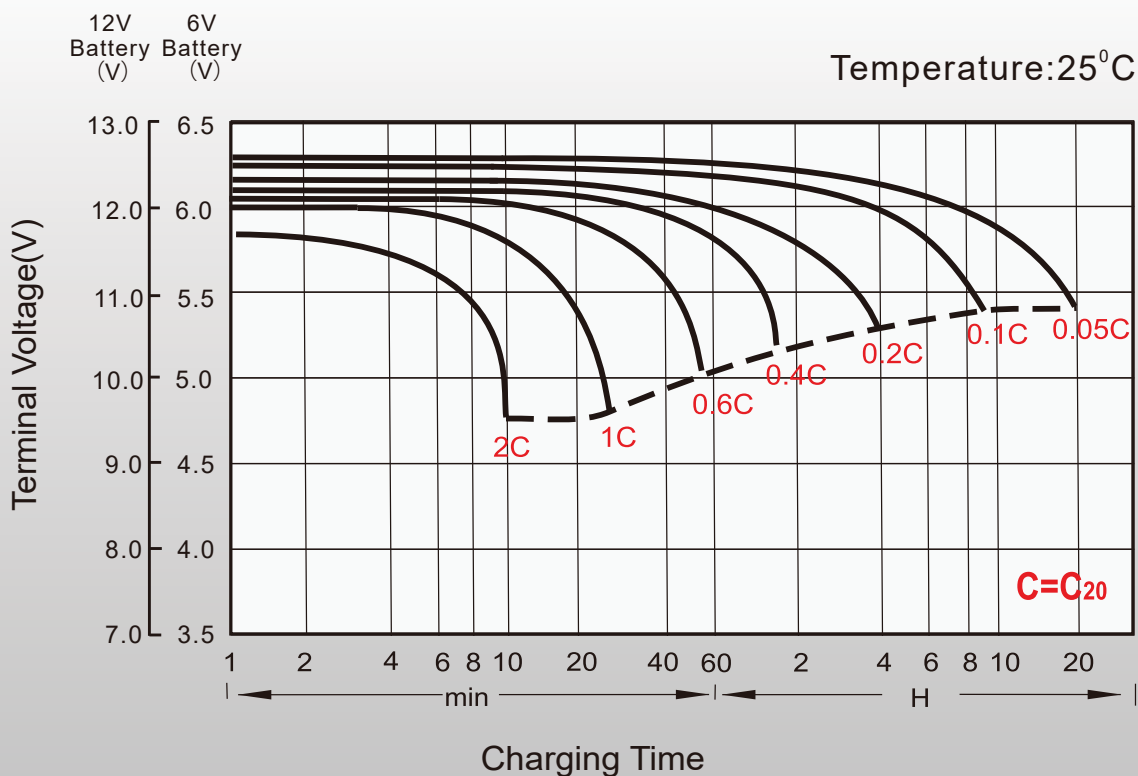
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	72.4	62.8	49.4	44.6	32.6	25.9	20.0	16.0	12.7	10.3	8.97	7.85	6.36	6.36	2.79
1.80V/cell	82.2	71.1	55.8	48.6	34.6	28.6	21.3	17.6	13.9	11.2	9.45	8.30	6.63	5.50	3.00
1.75V/cell	89.1	77.0	60.2	49.6	35.8	32.1	23.3	18.9	14.5	11.6	9.74	8.57	6.74	5.67	3.03
1.70V/cell	93.2	80.9	63.4	49.9	36.4	33.1	23.8	19.2	14.7	11.6	9.85	8.59	6.81	5.67	3.05
1.67V/cell	98.0	84.2	65.6	51.3	37.1	33.7	24.3	19.6	14.9	11.8	10.0	8.71	6.86	5.72	3.07
1.60V/cell	101.4	86.8	67.3	52.1	37.6	34.8	24.9	20.0	15.1	12.0	10.2	8.85	6.92	5.78	3.11

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	136.2	118.8	93.9	85.3	62.8	50.2	38.9	31.2	24.9	20.3	17.7	15.5	12.6	10.7	5.54
1.80V/cell	152.3	132.9	105.0	92.1	66.1	55.2	41.2	34.2	27.2	21.9	18.5	16.3	13.1	10.9	5.96
1.75V/cell	162.6	141.9	112.1	93.3	68.1	61.5	44.8	36.5	28.2	22.6	19.0	16.8	13.3	11.2	6.02
1.70V/cell	167.1	147.1	116.5	93.1	68.6	62.9	45.6	37.0	28.5	22.5	19.2	16.8	13.3	11.2	6.04
1.67V/cell	173.7	151.6	119.7	95.1	63.9	63.9	46.4	37.6	28.8	22.8	19.5	17.0	13.4	11.3	6.08
1.60V/cell	176.1	153.7	121.4	95.5	69.9	65.3	47.2	38.1	29.0	23.1	19.8	17.2	13.5	11.3	6.15

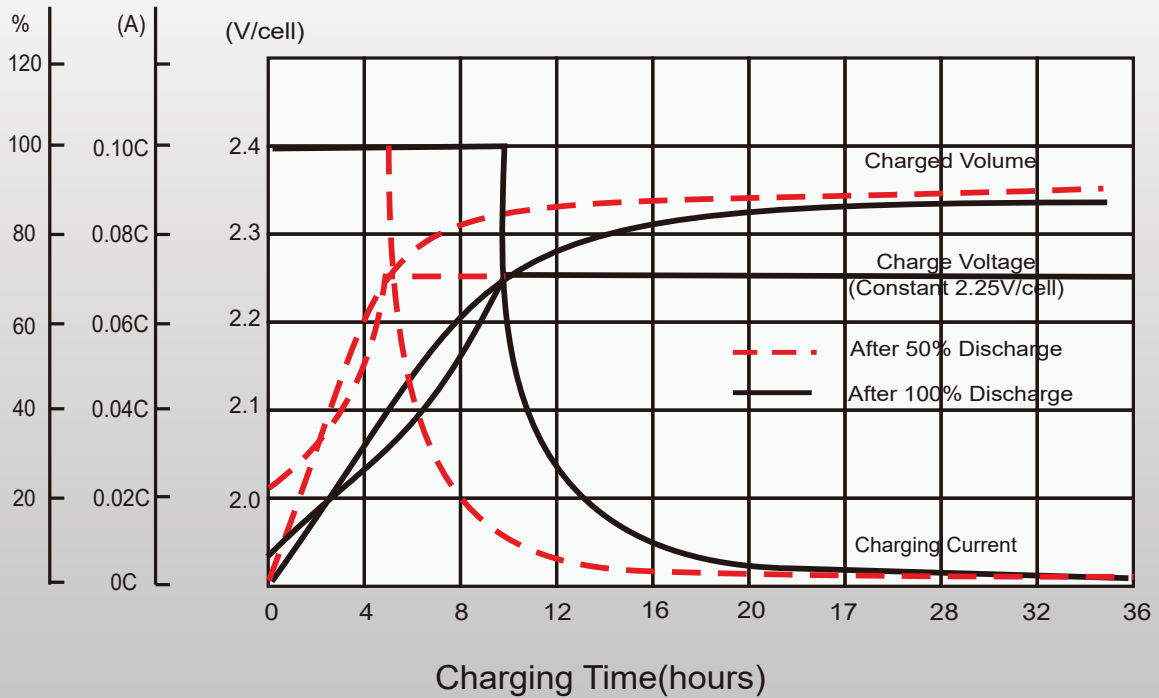
Discharge Characteristics



Float Charging Characteristics

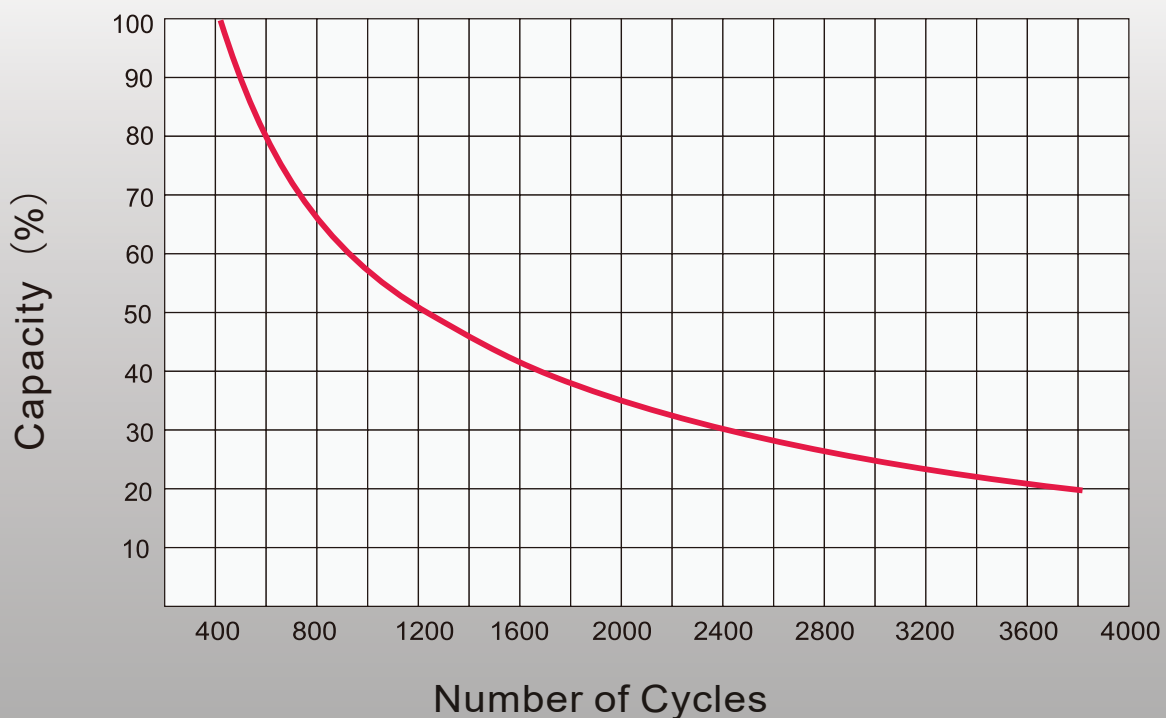
Charge Volume
Charging Current
Charging Voltage

0.1CA-2.25V/cell Temperature: 25°C

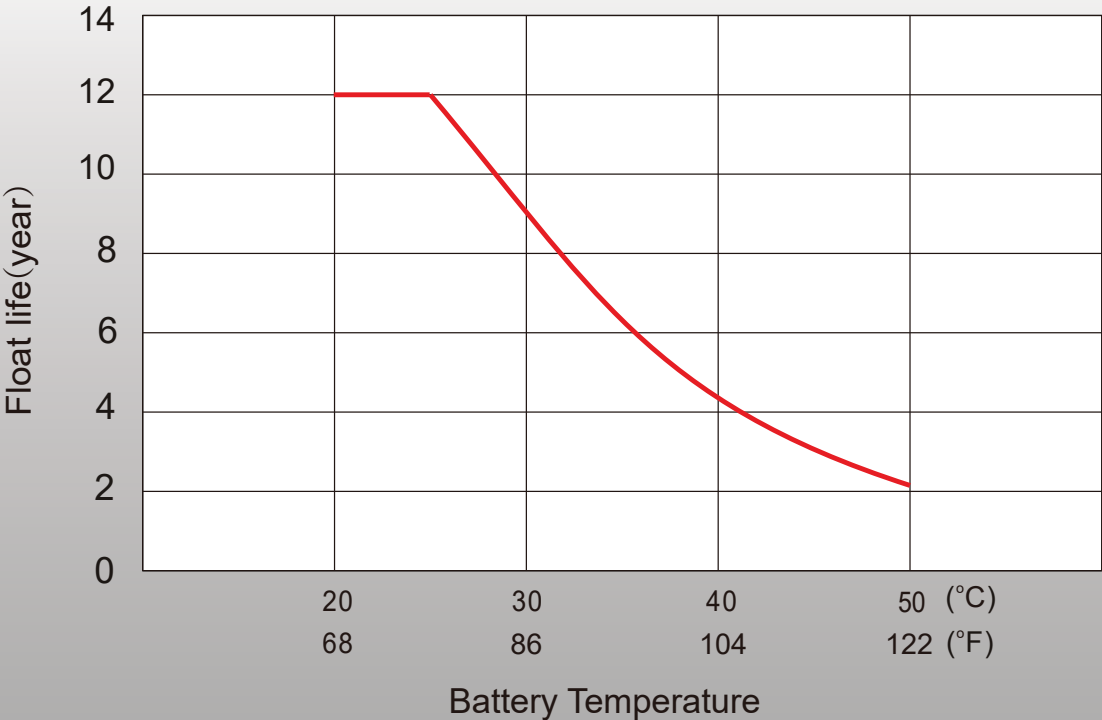


Cycle Life in Relation to Depth of Discharge

Acc.to IEC 896-2 (25 °C / 77 °F)



Effect of Temperature on Long Term Float Life





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