

STARMAX

The world's leading battery brand



DEEP CYCLE GEL BATTERIES

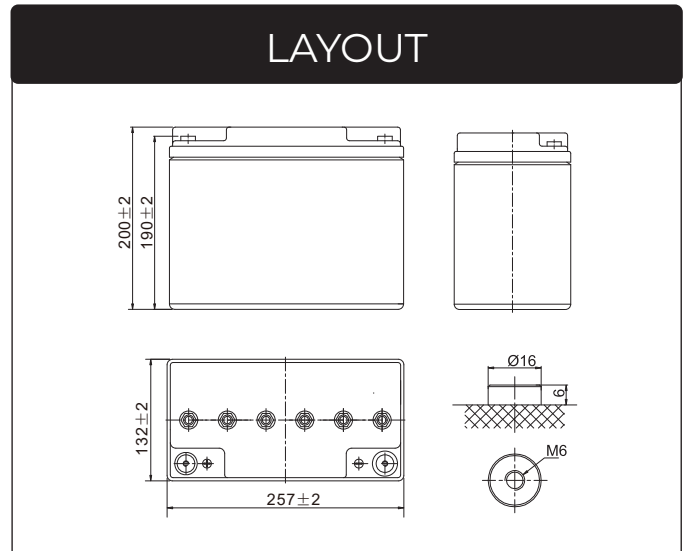
STG12-45 (12V 45Ah)



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STG SERIES-GEL BATTERIES

STG12-45



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)	45Ah
Dimensions	Length	257±2mm (10.1 inches)
	Width	132±2mm (5.20 inches)
	Container height	200±2mm (7.87 inches)
	Total height	200±2mm (7.87 inches)
Approx. weight	15.5kg (34.2 lbs)	
Terminal	M6	
Container material	ABS	
Rated capacity (25°C)	45.0 Ah	C20(2.25A,1.80V/cell)
	40.0 Ah	C10(3.50A,1.80V/cell)
	36.0 Ah	C5(6.20A,1.75V/cell)
	31.2 Ah	C3(10.4A,1.75V/cell)
	26.3 Ah	C1(26.3A,1.60V/cell)
Max. discharge current	450A (5s)	
Internal resistance (25°C)	Approx 13.0mΩ	
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 11.25A. Voltage 2.23V~2.27V at 25°C (77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 11.25A. Voltage 2.30V~2.37V at 25°C (77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 11.25A. 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.	

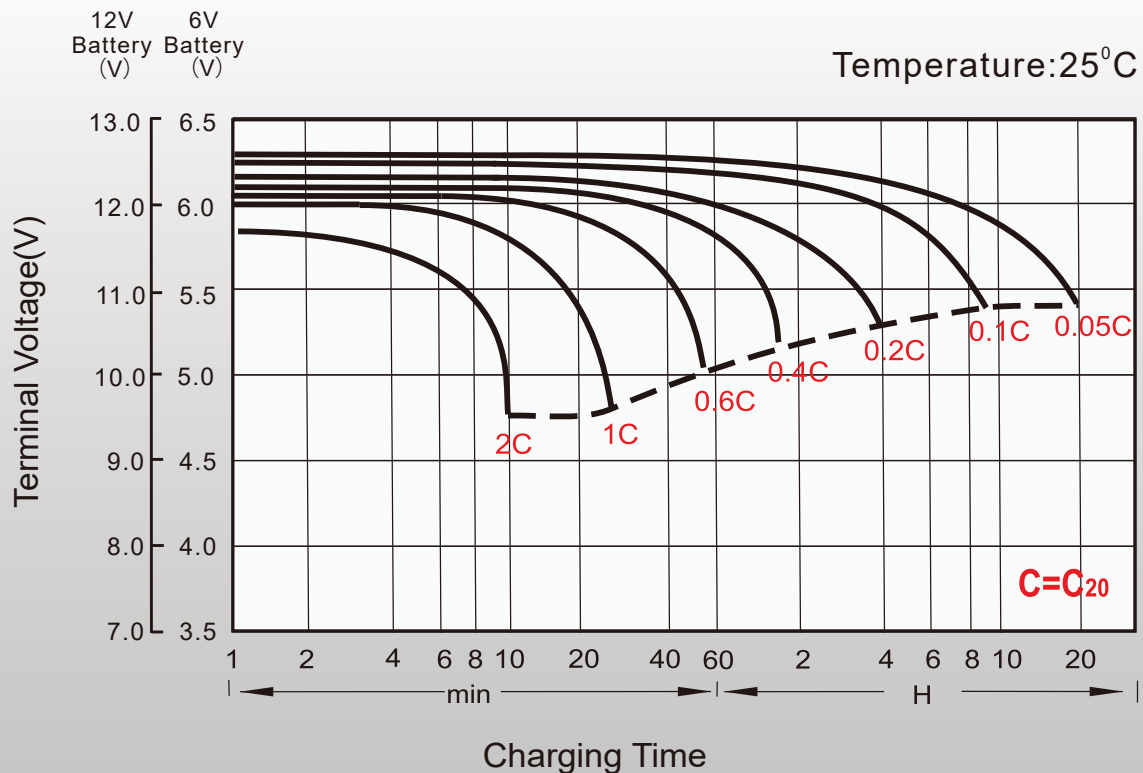
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	52.6	45.6	34.9	29.9	22.8	19.1	14.7	12.1	9.23	7.64	6.60	5.69	4.55	3.75	2.16
1.80V/cell	59.8	51.7	40.6	33.4	25.1	21.1	15.9	13.1	9.89	8.10	6.93	5.98	4.76	4.00	2.25
1.75V/cell	64.8	56.0	43.8	36.7	27.2	22.5	16.7	13.9	10.4	8.48	7.20	6.19	4.92	4.09	2.30
1.70V/cell	67.8	58.8	43.8	39.8	29.3	24.3	17.8	14.8	11.0	8.84	7.47	6.42	5.10	4.18	2.33
1.67V/cell	71.3	61.2	46.7	40.9	29.9	24.8	18.2	15.1	11.2	8.98	7.58	6.51	5.14	4.22	2.35
1.60V/cell	73.7	63.1	48.9	43.7	32.1	26.3	18.9	15.7	11.7	9.32	7.81	6.67	5.25	4.28	2.38

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	99.0	86.4	68.3	57.6	44.2	37.1	28.6	23.7	18.1	15.0	13.0	11.3	9.04	7.49	4.31
1.80V/cell	110.8	96.7	76.4	63.7	48.4	40.8	30.8	25.5	19.3	15.9	13.6	11.8	9.45	7.95	4.48
1.75V/cell	118.2	103.2	81.5	69.5	51.9	43.4	32.3	26.9	20.3	16.6	14.1	12.2	9.73	8.13	4.57
1.70V/cell	121.5	106.9	84.7	74.2	55.5	46.3	34.0	28.5	21.4	17.2	14.6	12.5	10.0	8.29	4.63
1.67V/cell	126.3	110.2	87.1	75.8	56.3	47.1	34.6	29.0	21.7	17.4	14.8	12.7	10.1	8.36	4.66
1.60V/cell	128.1	111.8	88.3	80.4	60.0	49.8	35.9	30.0	22.5	18.0	15.2	13.0	10.3	8.43	4.72

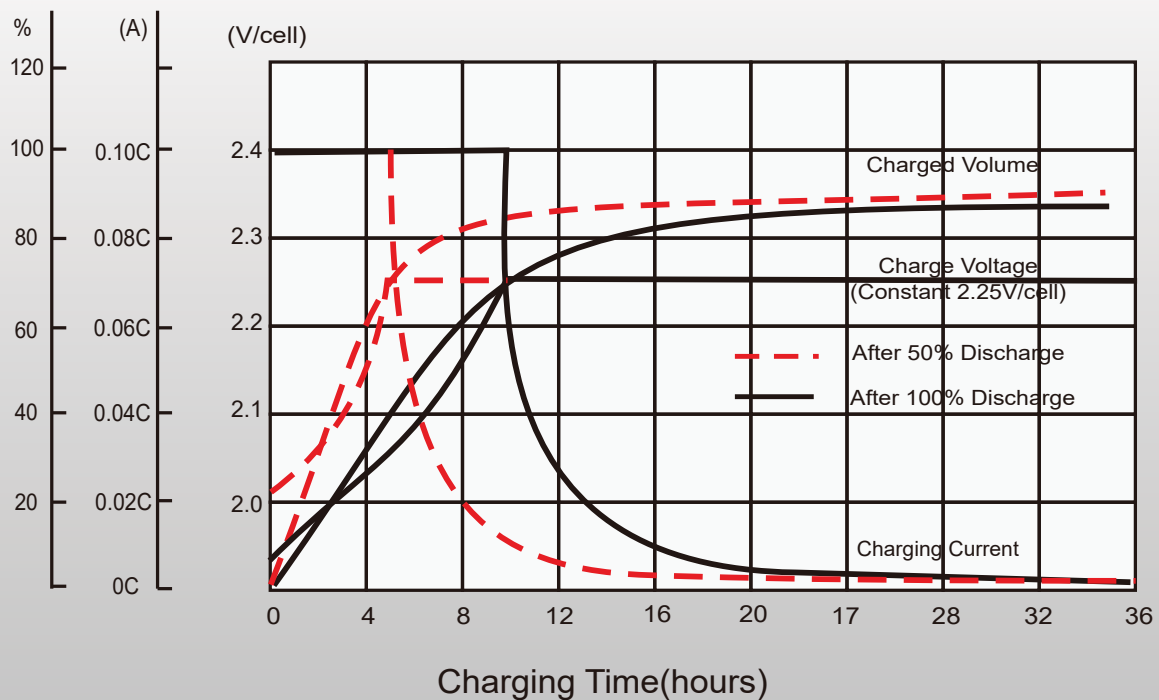
Discharge Characteristics



Float Charging Characteristics

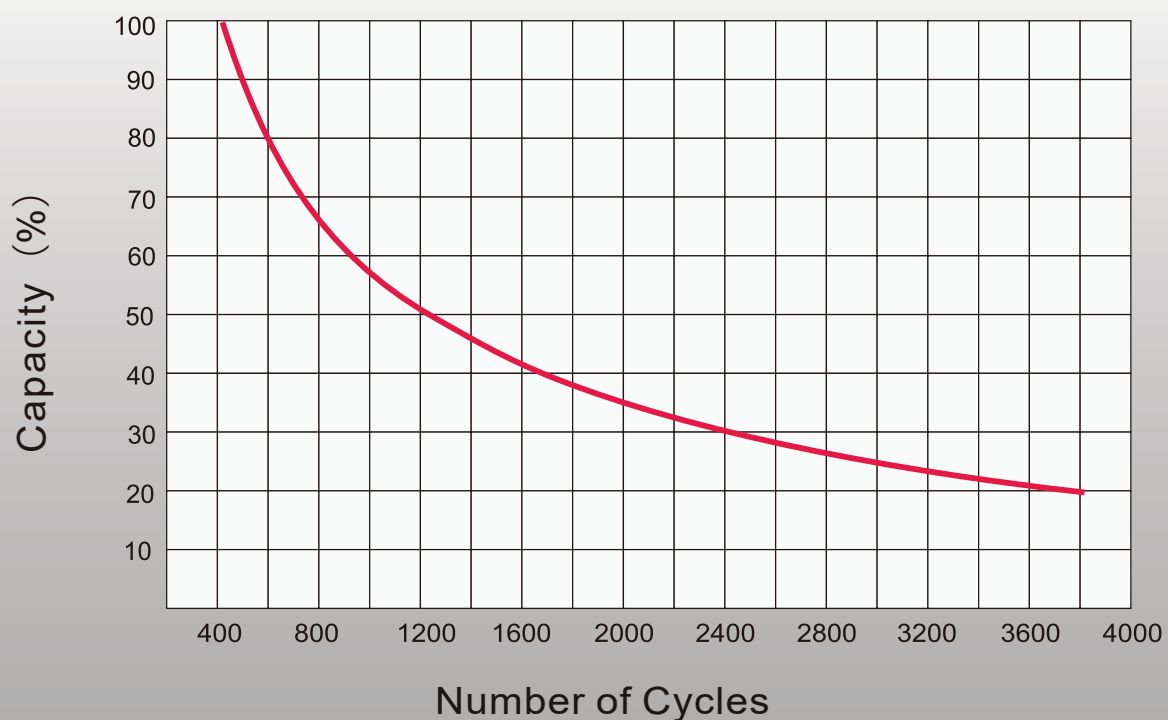
Charge Volume
Charging Current
Charging Voltage

0.1CA-2.25V/cell Temperature: 25°C

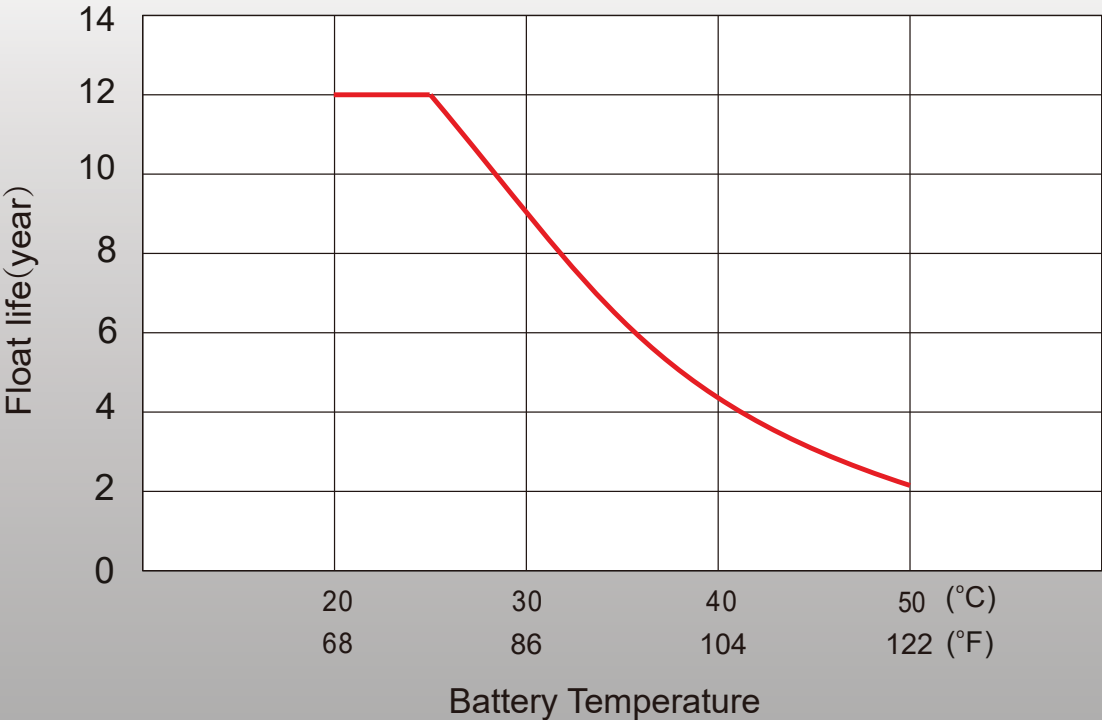


Cycle Life in Relation to Depth of Discharge

Acc.to IEC 896-2 (25 °C / 77 °F)



Effect of Temperature on Long Term Float Life





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