

STARMAX

The world's leading battery brand



DEEP CYCLE GEL BATTERIES

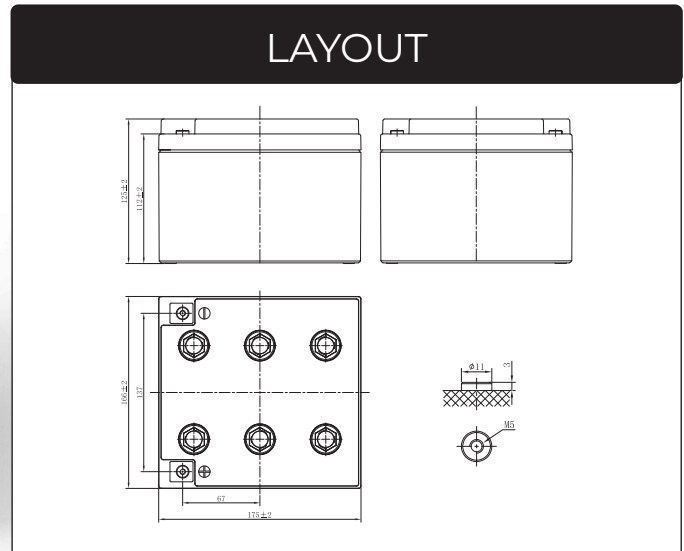
STG12-24 (12V 24Ah)



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STG SERIES-GEL BATTERIES

STG12-24



General Features

- ✓ Battery design life up to 6 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)	24Ah
Dimensions	Length	166±2mm (6.54 inches)
	Width	175±2mm (6.89 inches)
	Container height	125±2mm (4.92 inches)
	Total height	125±2mm (4.92 inches)
Approx. weight	8.50 Kg (18.7 lbs)	
Terminal	M5	
Container material	ABS	
Rated capacity (25°C)	24.0 Ah	C20(1.20A,1.80V/cell)
	21.9 Ah	C10(2.19A,1.80V/cell)
	19.2 Ah	C5(3.84A,1.75V/cell)
	16.7 Ah	C3(5.57A,1.75V/cell)
	14.0 Ah	C1(14.0A,1.60V/cell)
Max. discharge current	360A (5s)	
Internal resistance (25°C)	Approx 13.5mΩ	
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 6.0A. Voltage 2.23V~2.27V at 25°C (77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 6.0A.Voltage 2.30V~2.37V at 25°C (77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 6.0A.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.	

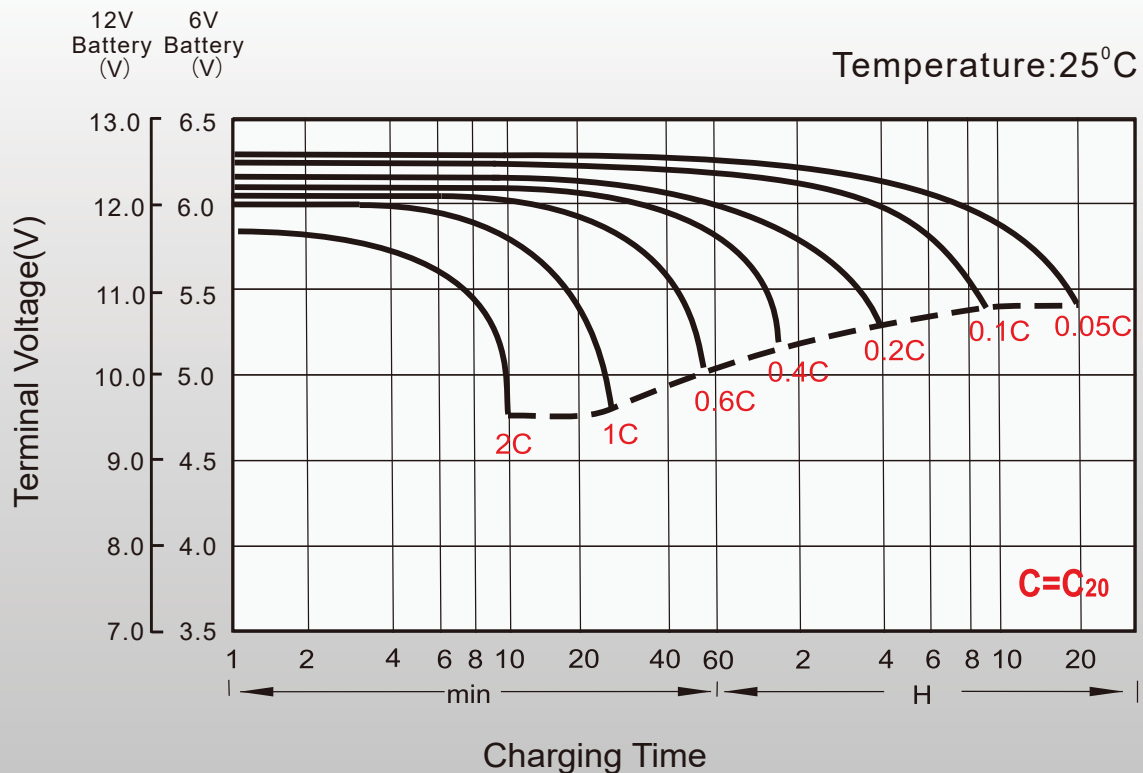
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	14.4	11.3	8.61	7.21	4.57	3.49	2.89	2.49	2.15	1.90	1.72	1.57	1.48	0.82
1.80V/cell	16.5	12.6	9.50	7.96	4.95	3.73	3.06	2.62	2.26	1.99	1.80	1.65	1.55	0.85
1.75V/cell	18.5	13.9	10.3	8.52	5.24	3.94	3.20	2.72	2.34	2.06	1.86	1.70	1.58	0.87
1.70V/cell	19.9	14.9	10.9	9.01	5.56	4.11	3.31	2.81	2.42	2.13	1.91	1.75	1.62	0.88
1.67V/cell	20.8	15.4	11.3	9.35	5.70	4.24	3.39	2.86	2.46	2.16	1.94	1.77	1.64	0.89
1.60V/cell	22.5	16.5	12.1	9.93	5.93	4.41	3.52	2.95	2.52	2.21	1.98	1.81	1.67	0.90

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

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	27.5	21.8	16.7	14.0	8.94	6.83	5.68	4.92	4.26	3.78	3.42	3.13	2.96	1.63
1.80V/cell	31.1	24.1	18.3	15.4	9.63	7.29	5.99	5.15	4.46	3.95	3.57	3.28	3.09	1.69
1.75V/cell	34.6	26.2	19.6	16.4	10.2	7.68	6.26	5.33	4.60	4.07	3.68	3.37	3.14	1.73
1.70V/cell	36.9	27.9	20.7	17.3	10.7	7.98	6.45	5.48	4.75	4.20	3.78	3.46	3.21	1.75
1.67V/cell	37.9	28.6	21.3	17.8	11.0	8.20	6.59	5.58	4.82	4.25	3.83	3.50	3.25	1.76
1.60V/cell	40.6	30.4	22.7	18.8	11.3	8.49	6.81	5.74	4.92	4.33	3.89	3.57	3.31	1.78

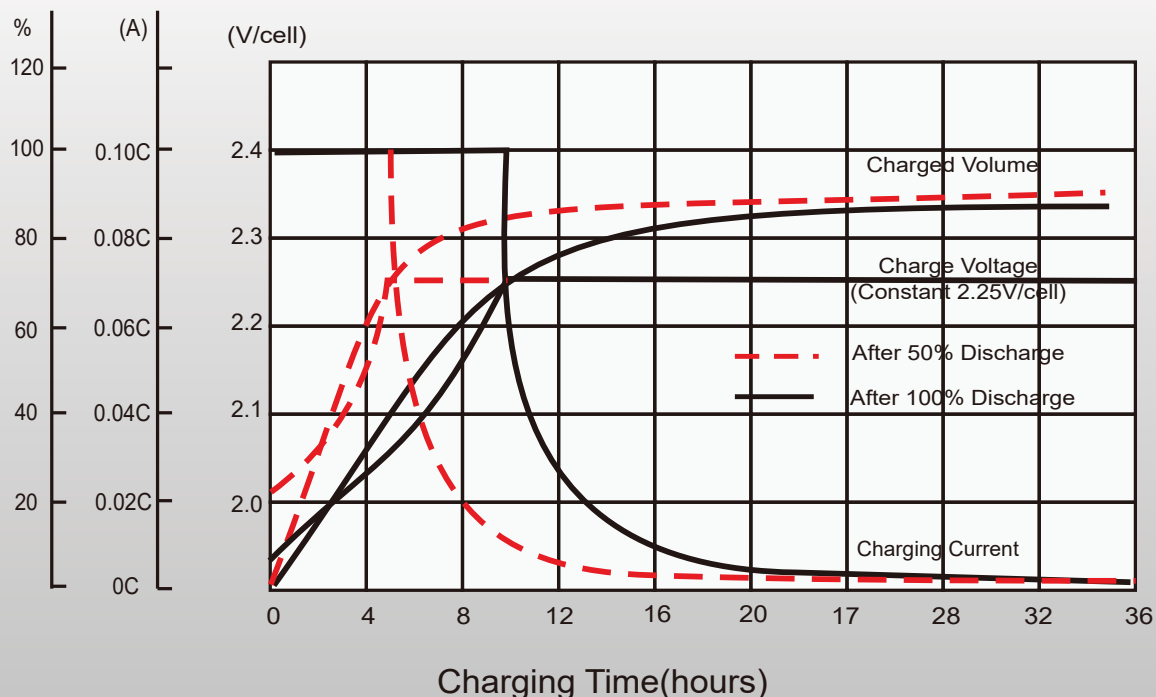
Discharge Characteristics



Float Charging Characteristics

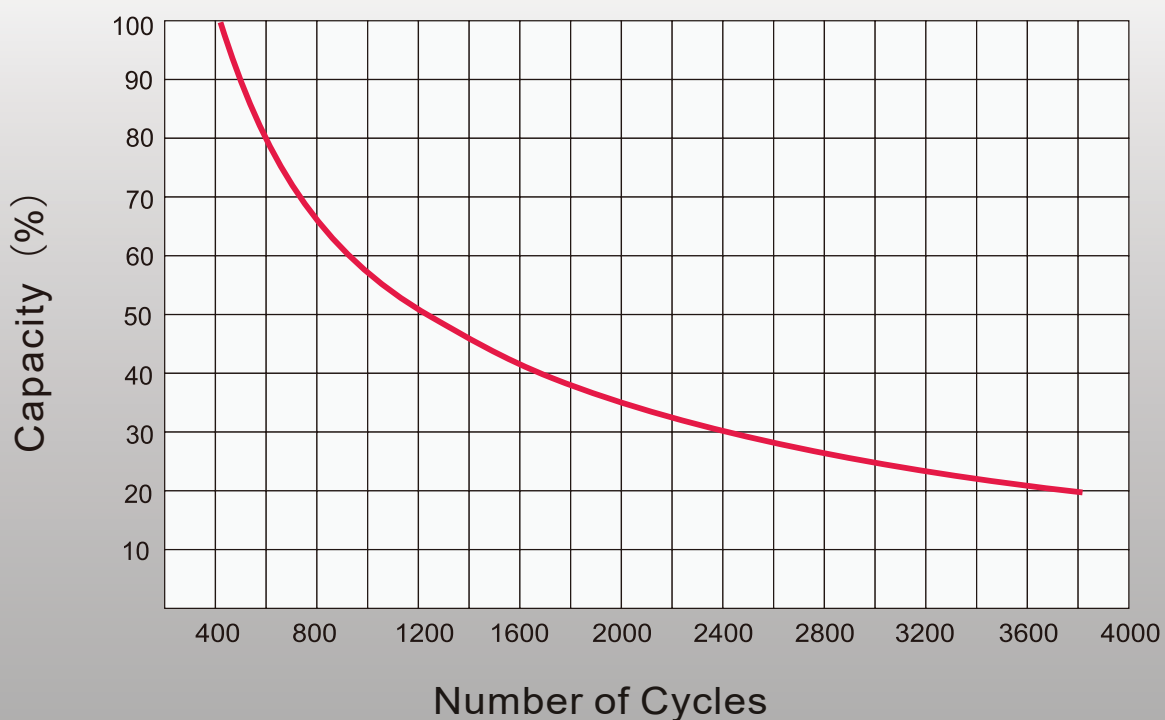
Charge Volume
Charging Current
Charging Voltage

0.1CA-2.25V/cell Temperature: 25°C

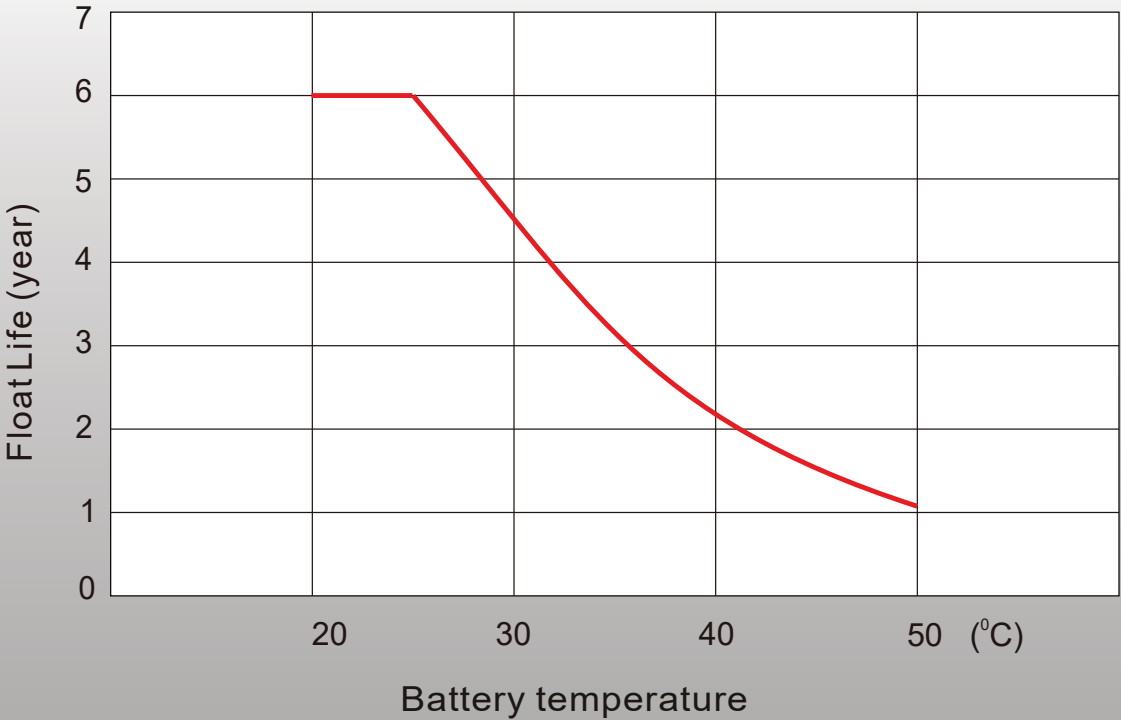


Cycle Life in Relation to Depth of Discharge

Acc.to IEC 896-2 (25 °C / 77°F)



Effect of Temperature on Long Term Float Life





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