

# STRIDENT<sup>+</sup> BATTERIES

## GP12-7FRW 12V 7Ah(20hr)



The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore maintenance-free and leak proof. Batteries should be used in an upright position only.

### Battery Construction

Component	Positive Plate	Negative Plate	Container	Cover	Safety Value	Terminal	Separator	Electrolyte
Raw Material	Lead Dioxide	Lead	ABS	ABS	Rubber	Copper	Fibreglass	Sulfuric Acid

### General Features

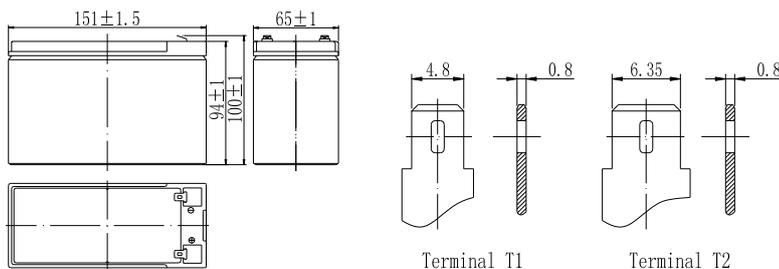
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99%.
- Freedom from electrolyte maintenance and water adding
- Not restricted for air transport (complies with IATA/ICAO Special Provision A67.
- UL-recognised
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications
- Maintenance-free operation
- Low self discharge.
- Fire rating of UL94 V-LO
- F2 Terminal

### Performance Characteristics

- Nominal Voltage: 12V
- Number of Cells: 6
- Design Life: 5 years
- Nominal Capacity 77°F (25°C)
  - 20 Hour Rate (0.115A, 10.5V): 7Ah
  - 10 Hour Rate (10.0A, 10.8V): 6.8Ah
  - 5 Hour Rate (17.5A, 10.5V): 5.65Ah
  - 1 Hour Rate (66.2A, 9.60V): 4.56Ah
- Internal Resistance
  - Fully Charged Battery 77°F (25°C) 28m Ohms
- Self-Discharge
  - 3% of capacity declined per month at 20° (average)
- Operating Temperature Range
  - Discharge: -20~60°C
  - Charge: -10~60°C
  - Storage: -20~60°C
- Max. Discharge Current 77°F (25°C): 105A (5s)
- Short Circuit Current: 350A
- Charge methods: Constant Voltage Charge 77°F (25°C)
  - Cycle use: 2.30—2.35VPC
  - Maximum charging current: 2.8A
  - Temperature Compensation: -30mV/°C
- Standby use: 2.23— 2.27V
  - Temperature compensation: -20mV/°C

### Dimensions and Weight

Length (mm/inch)	151/5.94
Width (mm/inch)	65/2.56
Height (mm/inch)	93.5/3.68
Total Height (mm/inch)	100/3.94
Approx. Weight (kg/lbs)	2.32/5.12



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### Discharge Data

Discharge Constant Current (Amperes at 77°F/25°C)									
End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	29.1	18.4	14.8	8.30	4.56	1.84	1.26	0.70	0.363
1.65V	27.5	17.5	14.2	7.90	4.40	1.80	1.22	0.69	0.350
1.70V	26.0	16.7	13.6	7.62	4.22	1.74	1.17	0.69	0.355
1.75V	24.4	15.7	13.0	7.24	4.04	1.68	1.13	0.68	0.350
1.80V	22.8	14.8	12.4	7.03	3.84	1.63	1.08	0.66	0.344

The above characteristics data are average values obtained with three charge/discharge cycles, not the minimum values.

Discharge Constant Power (watts at 77°F/25°C)									
End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20hr
1.60V	52.0	35.1	27.5	15.2	11.50	8.97	5.06	3.59	2.33
1.65V	49.4	33.3	26.5	14.6	11.00	8.59	4.94	3.50	2.29
1.70V	46.9	31.6	25.4	14.0	10.50	8.23	4.80	3.40	2.25
1.75V	44.5	29.8	24.3	13.4	10.10	7.99	4.65	3.30	2.21
1.80V	41.6	28.0	23.3	12.9	9.75	7.62	4.50	3.19	2.15

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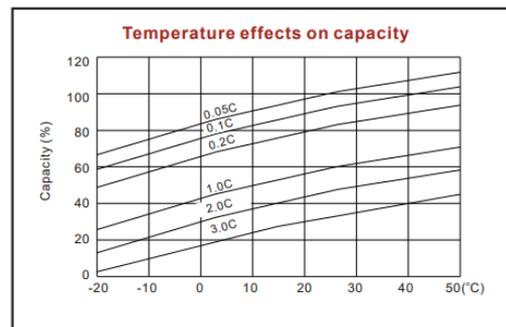
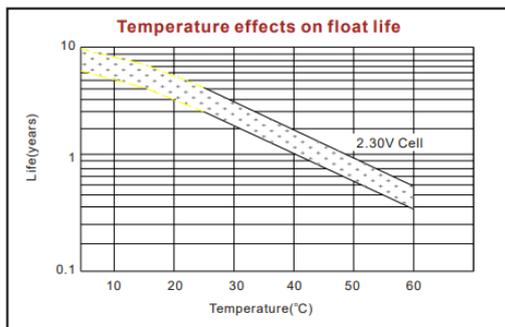
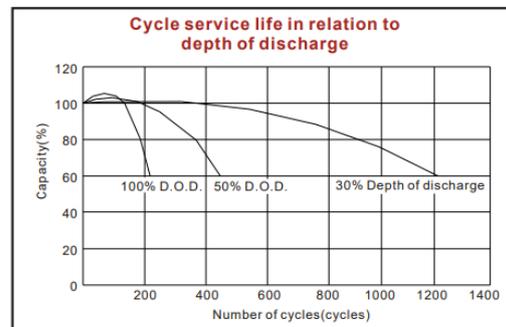
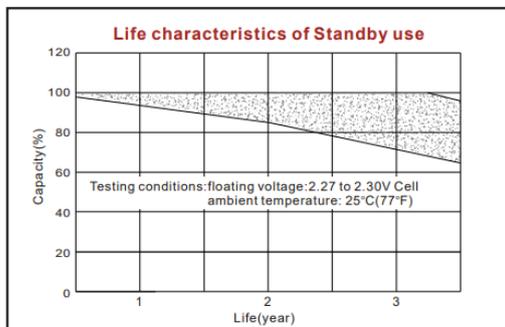
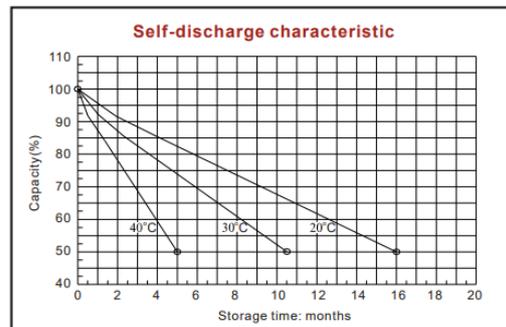
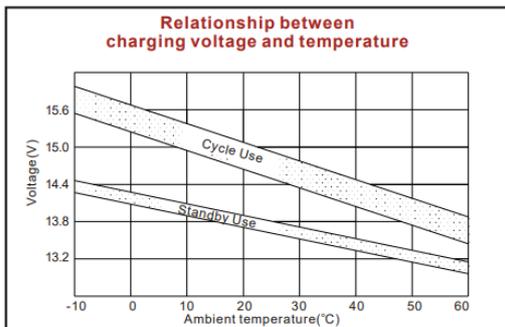
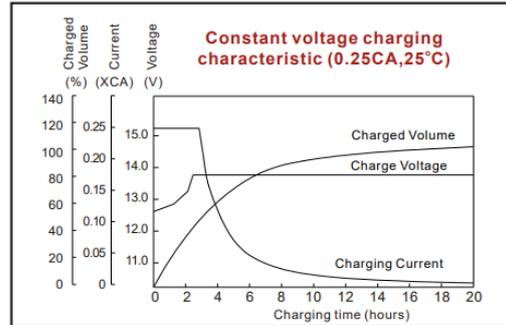
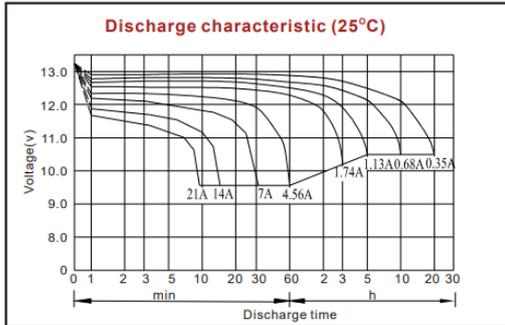
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