

## 6FM90T D-X 12V 90Ah(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, leak proof and usable in any position.



### Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

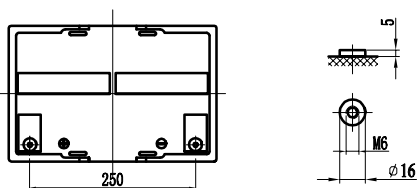
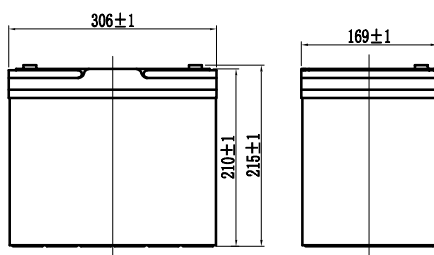
### General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

### Dimensions and Weight

Length(mm / inch)	306 / 12.05
Width(mm / inch)	169 / 6.65
Height(mm / inch)	210 / 8.27
Total Height(mm / inch)	215 / 8.46
Approx. Weight(Kg / lbs)	29 / 63.9

\* Weight deviation:  $\pm 3\%$



### Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	10 years
Nominal Capacity 77°F(25°C)	
20 hour rate (4.50A, 10.8V)	90Ah
10 hour rate (8.86A, 10.8V)	88.6Ah
5 hour rate (16.1A, 10.5V)	80.5Ah
1 hour rate (61.1A, 9.6V)	61.1Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	$\leq 5.9\text{mOhms}$
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	800A(5s)
Short Circuit Current	2000A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	2.40-2.45VPC
Maximum charging current	27A
Temperature compensation	-30mV/°C
Standby use	2.20-2.30VPC
Temperature compensation	-20mV/°C

### Discharge Constant Current (Amperes at 77°F25°C)

End Point Volts/Cell	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V	210	168	97.6	73.2	61.1	26.7	17.1	8.98	4.65
1.65V	200	157	92.7	70.1	55.8	25.7	16.9	8.96	4.61
1.70V	179	149	87.8	66.6	55.2	24.8	16.6	8.93	4.54
1.75V	168	138	85.2	64.2	53.8	24.0	16.1	8.90	4.52
1.80V	157	128	82.1	61.8	51.6	22.9	15.6	8.86	4.50

### Discharge Constant Power (Watts at 77°F25°C)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	491	359	299	184	142	115	64.7	47.8	32.1
1.65V	479	350	294	176	136	110	63.3	47.7	31.7
1.70V	430	332	276	167	126	105	61.0	46.3	31.3
1.75V	405	330	273	163	125	101	59.0	45.0	30.5
1.80V	372	302	259	159	123	99.5	58.3	44.8	30.1

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.  
All data shall be changed without notice, Vision reserves the right to explain and update the information contained hereinto.

