



FT680-48

CYCLING CAPACITY

20 Hour Rate **60 Amp Hours**

RESERVE CAPACITY

Reserve @25 AMPS **120 Minutes** Reserve @75 AMPS **23 Minutes**

ELECTRICAL SPECIFICATIONS

Nominal Voltage	12 Volt
C100	66 AH
C20	60 AH
C5	53 AH
Short Circuit Current	2000 Amps
CCA	680 Amps
CA or MCA	810 Amps
PHCA	1320 Amps
Internal Resistance	5.5 mΩ

MECHANICAL SPECIFICATIONS

Group Size	48 / L3 / H6	
Terminal Type	AP	
Terminal Torque	See reverse side	
Height (w/ terminal)	7.48"	190 mm
Height (case only)	7.48"	190 mm
Width	6.89"	175 mm
Length	10.94"	278 mm
Weight	47.8 lbs	21.7 kg
Case Type	ABS Plastic - Flame Res. Rating UL94-HB	

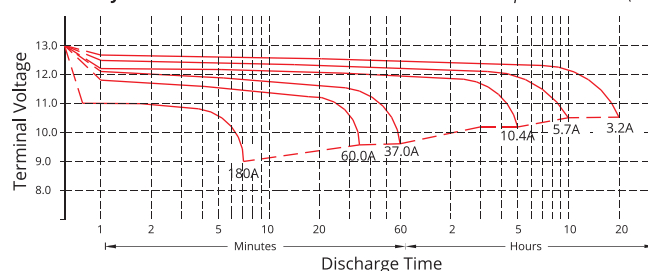
DISCHARGE TABLE (Constant Current)

Time	Amps	Rate
20hr	3.0	0.05 CA
10hr	5.7	0.10 CA
8hr	6.6	0.13 CA
5hr	10.4	0.25 CA
3hr	15.5	0.33 CA
2hr	20.5	0.50 CA
1hr	37.0	1.00 CA

DISCHARGE PROFILE (Constant Current)

12-Volt Battery

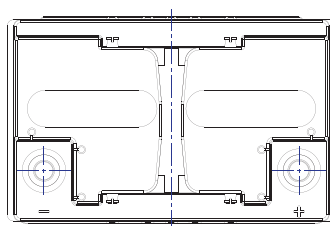
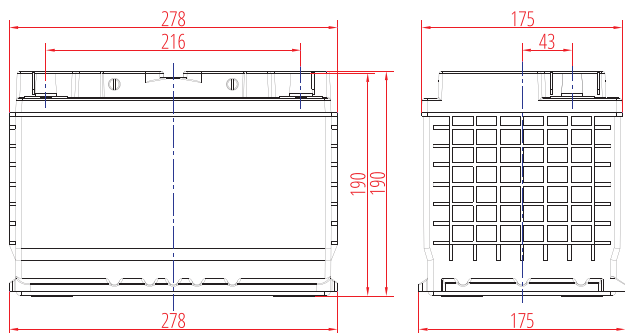
Temperature: 77°F (25°C)



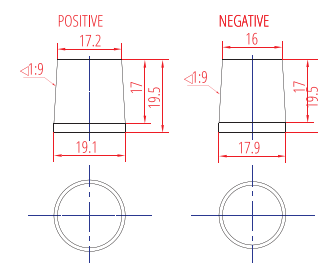
- All listed ratings are @ 100% SoC, T=77°F (25°C), 1.75VPC unless otherwise specified.

- Specifications listed are for estimation purposes only. Battery performance can vary depending on application. Battery design subject to change.

BATTERY & TERMINAL DIMENSIONS (All units shown in mm)



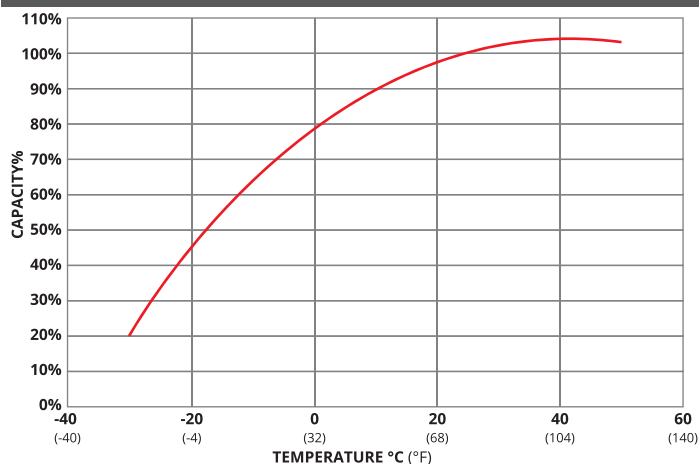
Terminal: AP



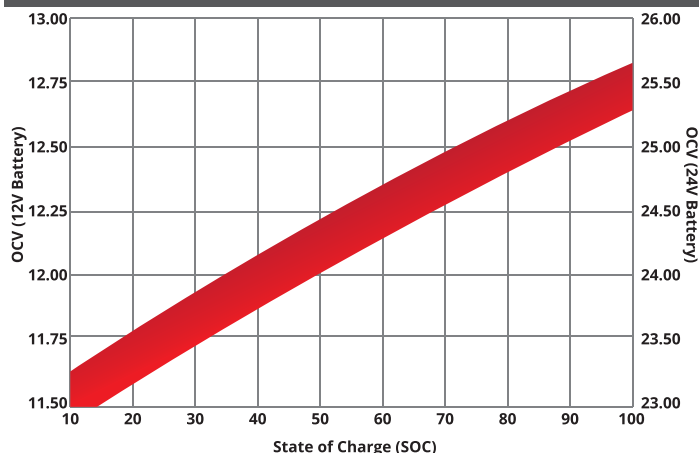
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TEMPERATURE vs CAPACITY

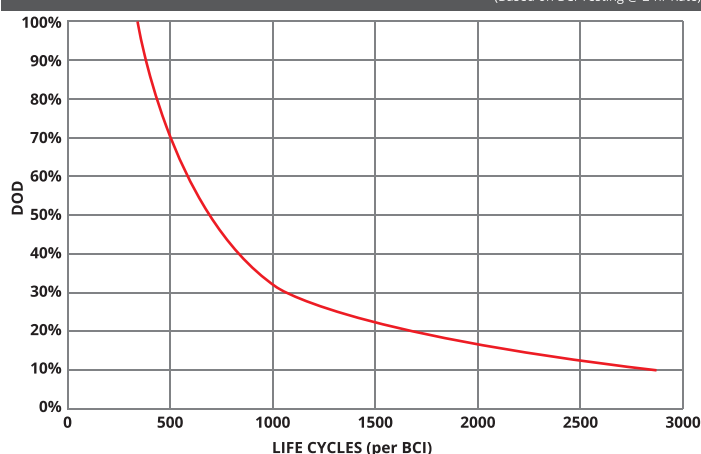


STATE of CHARGE (SOC) vs OPEN CIRCUIT VOLTAGE (OCV)

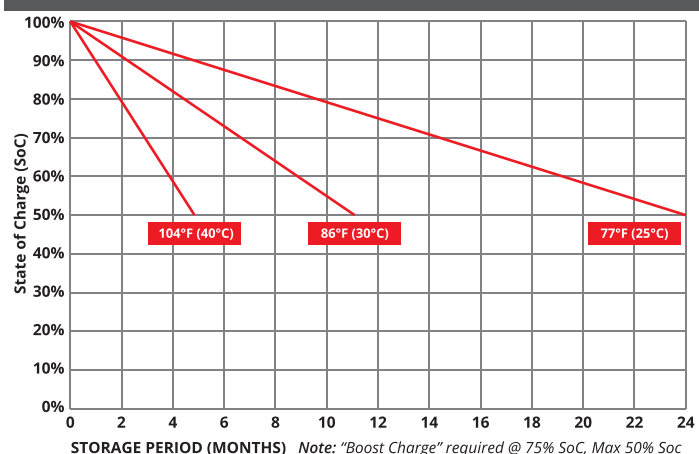


CYCLE LIFE vs DEPTH of DISCHARGE (DOD)

*(Based on BCI Testing @ 2-hr Rate)



SELF DISCHARGE vs TIME/TEMPERATURE



TEMPERATURE RANGE SPECIFICATIONS

Condition	Recommended	Maximum	Recommended	Maximum
Storage	5°F to 122°F	-40°F to 160°F	-15°C to 50°C	-40°C to 71°C
Operation	5°F to 104°F	-40°F to 160°F	-15°C to 40°C	-40°C to 71°C
Charge with TC	5°F to 122°F	-40°F to 160°F	-15°C to 50°C	-40°C to 71°C
Charge w/o TC	32°F to 104°F	5°F to 122°F	0°C to 40°C	-15°C to 50°C

*TC= Temperature Compensation

CHARGE VOLTAGES

	Battery Voltages			
Charge Stage	12V	24V	36V	48V
Bulk	14.4 - 14.7V	28.8 - 29.4V	43.2 - 44.1V	57.6 - 58.8V
Absorption	14.4 - 14.7V	28.8 - 29.4V	43.2 - 44.1V	57.6 - 58.8V
Float	13.6V	27.2V	40.8V	54.6V

TC Factor: (-2mV°F/cell) or (-4mV°C/cell)

TERMINAL TORQUE SPECS

Terminal Type	ft-lbs	in-lbs	Nm
AP, DT (AP), M6, M6M (Stud), TP07 (AP), TP08 (AP)	4.2 - 6.0	50-70	5.6 - 7.9
FR45	6.0 - 7.5	70-90	7.9 - 10.1
M8	7.1 - 8.0	85-95	9.6 - 10.7
DT (Stud), M10M (Stud)	9.2 - 10.4	110-125	12.2 - 14



9001:2008 Quality Management System
14001:2004 Environmental Management System
18001:2007 Occupational Health & Safety Management System



DELIVERY APPROVED!
**LAND, SEA
& AIR**

Fullriver batteries are sealed lead acid batteries made with Absorbed Glass Mat (AGM) technology. The electrolyte is absorbed into the fiberglass separator material rather than in a free-flowing liquid form. Fullriver batteries are non-spillable electric storage batteries. They are exempted from the requirements of DOT's hazardous materials regulations, since they adhere to the requirements of code 49 CFR Section 173.159(D) - (CLASSIFIED APPROVED: DOT, CFR, HMR49, IATA, ICAO67, IMDG27)