

# FAT



FAT Battery Range

**FIAMM**  
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FIAMM.COM

**F** IAMM FAT RANGE OF VALVE REGULATED BATTERIES HAS BEEN DESIGNED FOR HIGH RELIABILITY AND SAFETY FRONT TERMINAL TELECOM INSTALLATIONS.

FAT BATTERY RANGE HAS FRONT TERMINAL DESIGN IDEAL FOR INSTALLATION ON CABINET 19" AND 23"; IT ALLOWS EASY ACCESS FOR MAINTENANCE REDUCING THE INSTALLATION FOOTPRINT AND MAXIMISING THE ENERGY DENSITY. FAT USES PROVEN VRLA TECHNOLOGY WITH 99% INTERNAL RECOMBINATION EFFICIENCY, IS NON-SPILLABLE AND MAINTENANCE FREE THEREFORE REQUIRES NO TOPPING UP OF ELECTROLYTE DURING ITS FLOAT-LIFE. FAT RANGE IS COMPLIANT WITH THE HIGHEST RECOGNISED INTERNATIONAL STANDARDS, NON-HAZARDOUS FOR AIR/SEA/ RAIL/ROAD TRANSPORTATION AND IS 100% RECYCLABLE. FAT HAS A SELF-DISCHARGE RATE LESS THAN 2% PER MONTH, GUARANTEEING LONG SHELF-LIFE.



#### MAIN APPLICATIONS:



TELECOMMUNICATION



INDUSTRIAL UPS



UTILITIES AND INDUSTRY



RAILWAYS



OIL & GAS

## SPECIFICATIONS

Special lead calcium tin alloy grid, designed to resist corrosion and provide short recharge time

VRLA AGM technology using low resistance high microporous fiberglass separators

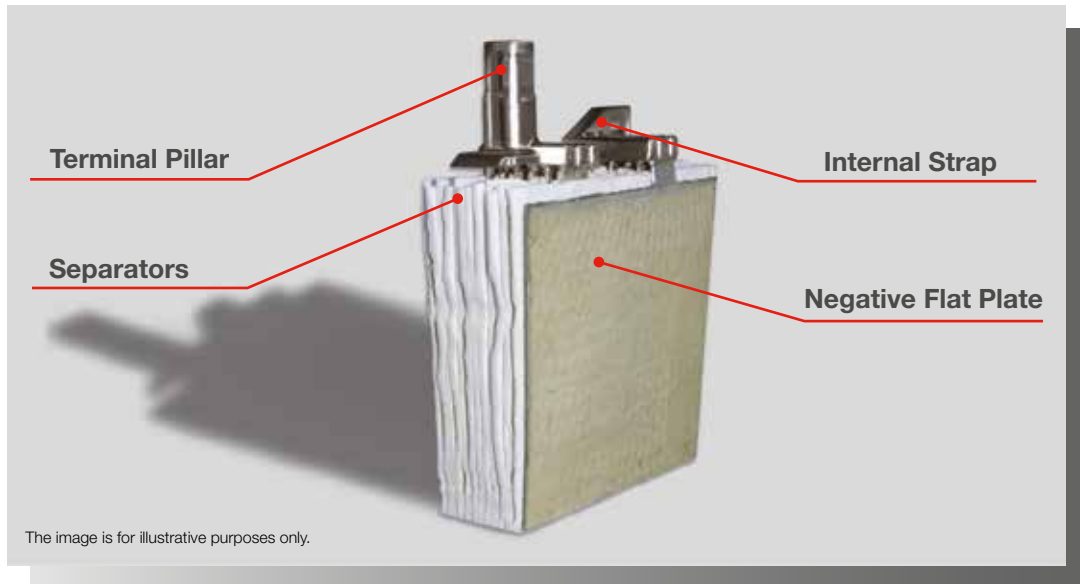
Leak resistant post seal, threaded female M6/M8 terminals with high conductivity and maximum torque resistance

One-way safety relief valves allow gas to escape and prevent the ingress of oxygen and flame arrestors prevent sparks or flames entering the battery

Flame retardant ABS plastic to IEC 707 FV0 and UL94 FV0 (LOI greater than 28%)

Installation in any orientation (excluding permanently inverted)

## TECHNOLOGY



FIAMM FAT RANGE USE AGM (ABSORBED GLASS MAT) TECHNOLOGY. THE ELECTROLYTE IS ABSORBED IN FIBERGLASS SEPARATORS WITH 99% INTERNAL GAS RECOMBINATION EFFICIENCY. BLOCS ARE GRANTS NON-SPILLABLE AND MAINTENANCE FREE THEREFORE REQUIRES NO TOPPING UP OF ELECTROLYTE DURING ITS WHOLE LIFE. LOW SELF-DISCHARGE ALLOWS 6 MONTHS SHELF LIFE.

BATTERY TYPE	NOMINAL VOLTAGE (V)	CAPACITY (Ah) 10 H to 1.8 VPC at 68°F	NOMINAL DIMENSIONS (in.)			TYPICAL WEIGHT (lbs)	TERMINAL TYPE
			Length	Width	Height		
12FAT60*	12	60	11.02	4.10	7.22	31	Female M6
12FAT100/19	12	100	15.55	4.25	10.83	75	Female M8
12FAT100	12	100	21.97	4.96	9.06	95	Female M8
12FAT145	12	145	16.55	6.81	10.03	120	Female M8
12FAT155	12	155	21.97	4.96	12.64	129	Female M8
12FAT180	12	180	21.97	4.96	12.64	134	Female M8

\* dark blue plastic color

## ELECTRICAL CHARACTERISTICS

Float Voltage: 2.27 V/cell at 68°F

Boost Voltage: 2.35 V/cell

Float Voltage Compensation with Temperature: -1.39 mV/cell/°F

Self-Discharge at 68°F: <2%/month

## STANDARDS

Telcordia (Bellcore) SR-4228

Telcordia (Bellcore) TR-NWT-001200

Telcordia (Bellcore) TR-NWT-000909

UL Recognized

UL 94 Class V-0 - flame retardant

IEC 60896 Part 21 - VRLA methods of testing

IEC 60896 Part 22 - VRLA requirements

Eurobat "Long Life" - 12 years and longer

BS 6290 Part 4 - specifications for VRLA classification

BS 6334 method FV0 - flame retardant

## DISCHARGE DATA - CURRENTS

Model	Constant Current Discharge Rates Amperes to 1.67 Vpc at 77°F (25°C)										
	Hours										
	1	2	3	4	5	6	7	8	10	12	20
12 FAT 60	37.6	22.6	16.5	13.3	11.2	9.71	8.55	7.66	6.29	5.37	3.35
12 FAT 100/19	65.3	38.0	27.8	22.0	18.4	15.7	14.0	12.7	10.3	8.86	5.59
12 FAT 100	65.3	38.0	27.8	22.0	18.4	15.7	14.0	12.7	10.3	8.86	5.59
12 FAT 145	98.0	57.9	41.5	32.7	27.2	23.4	20.6	18.5	15.3	13.2	8.53
12 FAT 155	101	59.0	43.1	34.1	28.5	24.4	21.6	19.6	15.9	13.7	8.66
12 FAT 180	127	73.9	53.0	41.6	34.4	29.3	25.6	22.8	18.8	16.0	10.1

Model	Constant Current Discharge Rates Amperes to 1.75 Vpc at 77°F (25°C)										
	Hours										
	1	2	3	4	5	6	7	8	10	12	20
12 FAT 60	36.3	22.0	16.2	13.1	11.0	9.51	8.41	7.57	6.23	5.32	3.33
12 FAT 100/19	62.5	37.1	27.1	21.5	18.0	15.4	13.7	12.5	10.2	8.67	5.51
12 FAT 100	62.5	37.1	27.1	21.5	18.0	15.4	13.7	12.5	10.2	8.67	5.51
12 FAT 145	94.0	56.5	40.7	32.1	26.7	23.0	20.2	18.1	15.1	13.0	8.45
12 FAT 155	96.9	57.5	42.0	33.3	27.9	23.8	21.2	19.4	15.8	13.4	8.55
12 FAT 180	123	72.2	51.6	40.6	33.5	28.6	24.9	22.3	18.3	15.6	9.83

Model	Constant Current Discharge Rates Amperes to 1.80 Vpc at 77°F (25°C)										
	Hours										
	1	2	3	4	5	6	7	8	10	12	20
12 FAT 60	35.3	21.6	15.9	12.9	10.9	9.43	8.34	7.48	6.18	5.27	3.30
12 FAT 100/19	60.9	36.4	26.7	21.3	17.8	15.3	13.5	12.3	10.0	8.55	5.45
12 FAT 100	60.9	36.4	26.7	21.3	17.8	15.3	13.5	12.3	10.0	8.55	5.45
12 FAT 145	91.5	55.3	40.0	31.7	26.5	22.9	20.1	18.0	15.0	12.9	8.40
12 FAT 155	94.4	56.4	41.4	33.0	27.7	23.7	21.0	19.1	15.5	13.3	8.45
12 FAT 180	118	69.7	50.2	39.7	32.8	27.9	24.5	21.8	18.0	15.4	9.72

## DISCHARGE DATA - POWER

Model	Constant Power Discharge Watt per cell to 1.67 Vpc at 77°F (25°C)										
	Hours										
	1	2	3	4	5	6	7	8	10	12	20
12 FAT 60	69.8	42.4	31.1	25.2	21.3	18.5	16.3	14.6	12.1	10.3	3.15
12 FAT 100/19	121	71.5	52.6	41.7	34.9	30.0	26.7	24.2	19.7	17.0	10.7
12 FAT 100	121	71.5	52.6	41.7	34.9	30.0	26.7	24.2	19.7	17.0	10.7
12 FAT 145	183	109	78.9	62.3	52.0	44.7	39.4	35.4	29.4	25.2	16.0
12 FAT 155	188	111	81.5	64.7	54.1	46.5	41.3	37.5	30.5	26.3	16.6
12 FAT 180	238	140	100	79.3	65.6	56.0	49.0	43.6	36.1	30.8	19.6

Model	Constant Power Discharge Watt per cell to 1.75 Vpc at 77°F (25°C)										
	Hours										
	1	2	3	4	5	6	7	8	10	12	20
12 FAT 60	68.8	42.1	31.0	25.1	21.1	18.3	16.3	14.6	12.1	10.2	6.31
12 FAT 100/19	119	71.0	52.0	41.4	34.7	29.7	26.3	24.1	19.7	16.8	10.7
12 FAT 100	119	71.0	52.0	41.4	34.7	29.7	26.3	24.1	19.7	16.8	10.7
12 FAT 145	179	108	78.1	61.8	51.4	44.3	39.0	35.1	29.1	24.9	16.0
12 FAT 155	184	110	80.6	64.1	53.7	46.0	40.8	37.4	30.5	26.0	16.5
12 FAT 180	234	138	99.1	78.1	64.6	55.1	48.1	43.1	35.5	30.3	19.1

Model	Constant Power Discharge Watt per cell to 1.80 Vpc at 77°F (25°C)										
	Hours										
	1	2	3	4	5	6	7	8	10	12	20
12 FAT 60	68.0	41.8	30.8	25.0	21.1	18.4	16.3	14.6	12.0	10.2	6.28
12 FAT 100/19	117	70.4	51.8	41.4	34.7	29.8	26.4	24.0	19.5	16.7	10.7
12 FAT 100	117	70.4	51.8	41.4	34.7	29.8	26.4	24.0	19.5	16.7	10.7
12 FAT 145	176	107	77.6	61.7	51.6	44.6	39.2	35.1	29.2	25.1	16.0
12 FAT 155	182	109	80.3	64.2	53.9	46.1	40.9	37.2	30.3	25.9	16.5
12 FAT 180	227	135	97.4	77.2	63.9	54.4	47.8	42.6	35.1	30.1	19.0

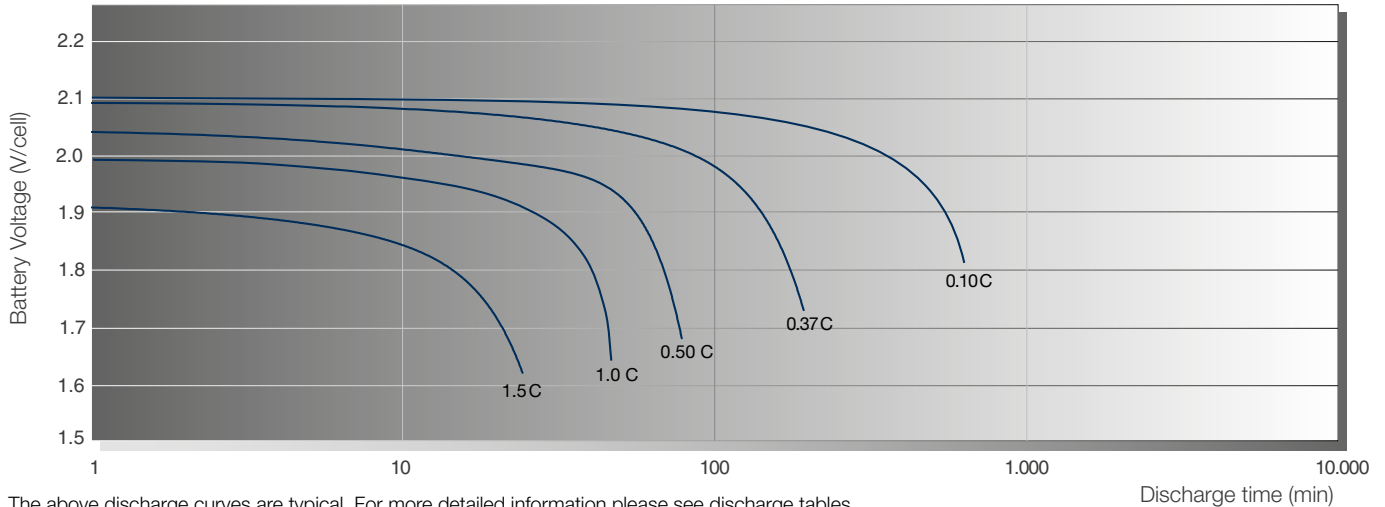
## CERTIFICATIONS

ISO 9001  
Quality Management System  
ISO 14001  
Environmental Management System  
OHSAS 18001  
Workplace Safety & Health

## ACCESSORIES

RVS  
(remote venting system) for applications which require remote gassing  
Rack for battery installation  
(standard and anti-seismic)  
Cabinets for battery installation  
(including electrical protections and disconnection)  
Battery monitoring systems

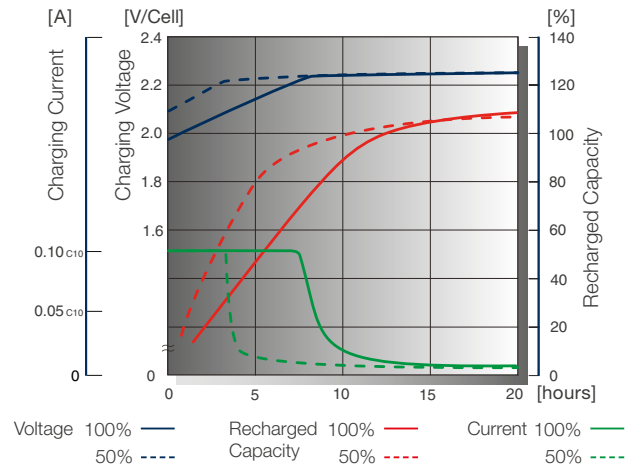
### DISCHARGE CURVES at different current / final voltage (at 77°F)



The above discharge curves are typical. For more detailed information please see discharge tables.

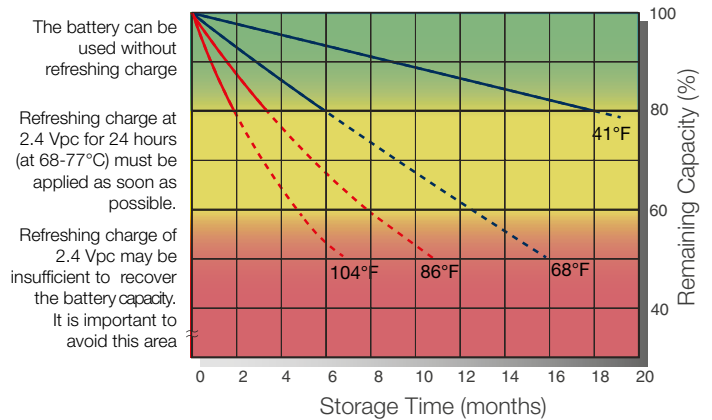
### TYPICAL CHARGE CURVES

Battery Voltage and Charge Time for Standby Use (at 77°F)



### STORAGE

Capacity loss during storage at various temperatures



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