

# FLB



FLB Battery Range

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# FIAMM

**F** IAMM FLB RANGE OF VALVE REGULATED BATTERIES HAS BEEN DESIGNED TO DELIVER THE HIGHEST PERFORMANCES WHILST COMBINING EXCELLENT RELIABILITY AND FLOAT-LIFE.

FLB HIGH ENERGY DENSITY ALLOWS COMPACT BATTERY LAYOUT AND FOOTPRINTS, THIS REDUCING THE INSTALLATION SPACE. FLB BLOCS CAN BE INSTALLED IN CABINETS OR RACKS. FLB 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. FLB RANGE IS NON-HAZARDOUS FOR AIR/SEA/RAIL/ROAD TRANSPORTATION AND IS 100% RECYCLABLE. FLB HAS A SELF-DISCHARGE RATE LESS THAN 2% PER MONTH, GUARANTEEING LONG SHELF-LIFE.



**MAIN APPLICATIONS:**



## **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 M5/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.

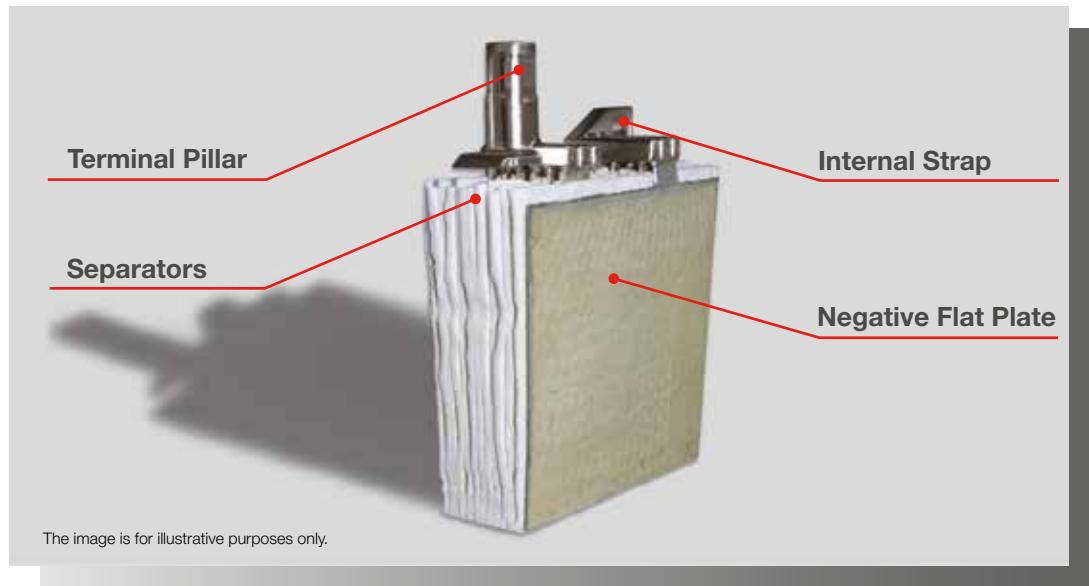
Flame arrestors prevent sparks or flames entering the battery

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

Heat sealed box to lid weld for superior integrity

Installation in any orientation (excluding permanently inverted)

## TECHNOLOGY



FIAMM FLB 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)	POWER (W/cell) 15 min to 1.67 VPC at 25°C	CAPACITY (Ah) 20 hrs to 1.75 VPC at 25°C	SHORT CIRCUIT CURRENT (A) IEC 60896 21-22	INTERNAL RESISTANCE (mOhm) IEC 60896 21-22	DIMENSIONS (mm)			TYPICAL WEIGHT (kg)
						Length	Width	Height	
12 FLB 100 P	12	103	26	768	16.4	166	175	125	9.4
12 FLB 150 P	12	156	40	1320	9.4	197	165	170	14
12 FLB 200 P	12	204	55	1550	8.3	229	138	212	19
12 FLB 250 P	12	257	70	2590	5.1	272	166	195	22
12 FLB 300 P	12	311	80	2600	4.7	261	174	217	26
12 FLB 350 P	12	374	95	3100	4.0	302	174	217	30
12 FLB 400 P	12	415	105	3400	3.6	341	174	217	34
12 FLB 450 P	12	477	120	3900	3.2	379	174	217	38
12 FLB 540 P	12	517	150	3660	3.4	338	174	277	45
12 FLB 550 P	12	552	160	3200	3.9	531	110	314	53
12 FLB 700 P	12	710	210	4510	2.8	558	126	321	61

## ELECTRICAL CHARACTERISTICS

Float Voltage: 2.26 V/cell at 25°C  
 Boost Voltage: 2.40 V/cell  
 Float Voltage Compensation with Temperature: -2.5 mV/cell/°C  
 Self-Discharge at 25°C: <2%/month

## STANDARDS

IEC 60896 Part 21 - VRLA methods of testing  
 IEC 60896 Part 22 - VRLA requirements  
 BS 6290 Part 4 - specifications for VRLA classification  
 BS633 / UL 94 V0 / IEC 707 FV0  
 Eurobat "10/12 years LONG LIFE"

## CERTIFICATIONS

ISO 9001  
Quality Management System

ISO 14001  
Environmental Management System

OHSAS 18001  
Workplace Safety & Health

## ACCESSORIES

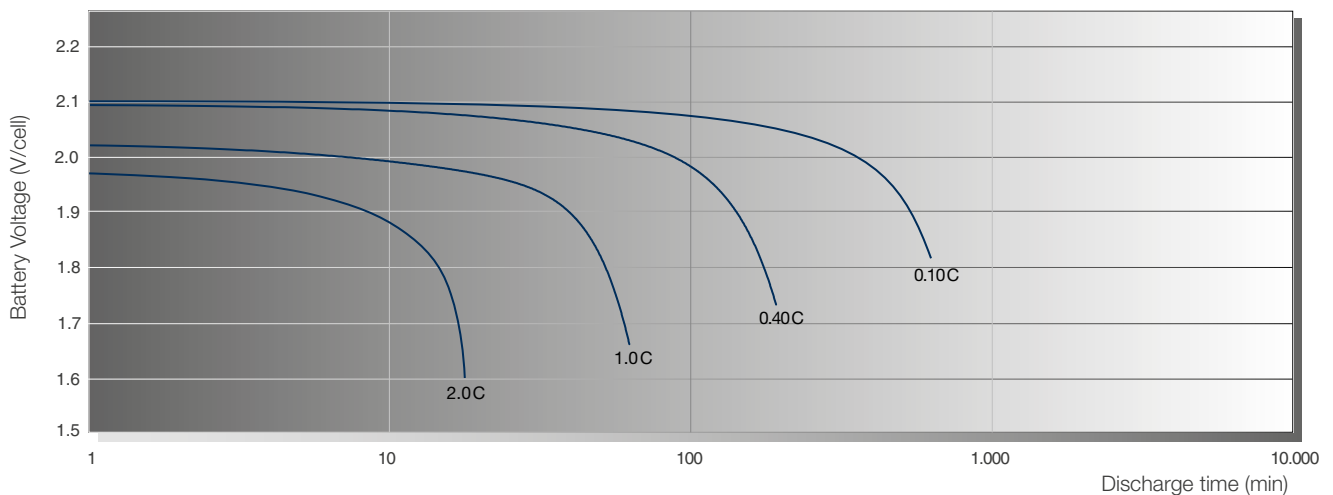
RVS  
(remote venting system) for IP rated applications which require remote gassing (except for 12FLB150P - 200P)

Rack for battery installation  
(standard and anti-seismic)

Cabinets for battery installation  
(including electrical protections and disconnection)

Battery monitoring systems

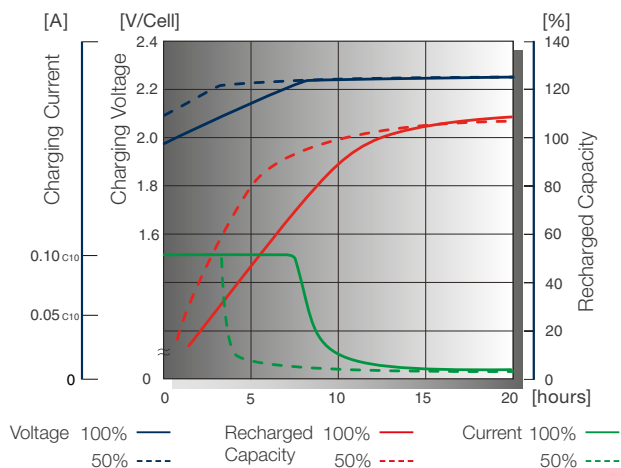
### DISCHARGE CURVES at different current / final voltage (at 25°C)



The above discharge curves are typical. For more detailed information please see the specific product sheets.

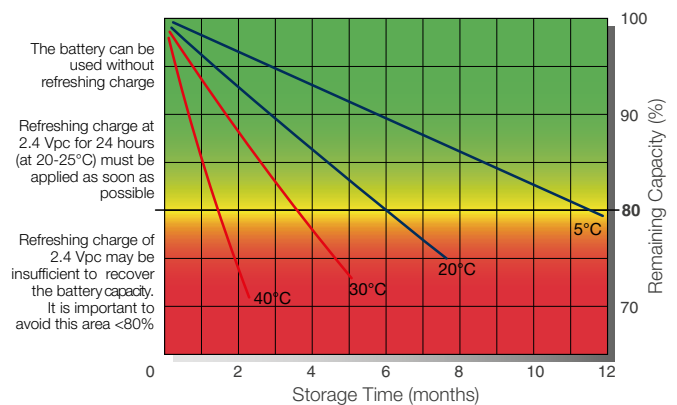
### TYPICAL CHARGE CURVES

Battery Voltage and Charge Time for Standby Use (at 25°C)



### STORAGE

Capacity loss during storage at various temperatures



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