

# MOTOR ENERGY

MOTORCYCLE, SCOOTER, SNOWMOBILE, ATV AND JET SKI BATTERY

**FIAMM**  
+ -

Starter & Mobility  
Power Solutions



**MOTOR  
ENERGY**  
AGM TECHNOLOGY

**MOTOR  
ENERGY**  
FB TECHNOLOGY

Bike applications are the most diverse, spanning from scooters and powerful motorcycles to niche applications like jet skis and snowmobiles. To provide effective solutions for all needs, FIAMM has created the new **Motor Energy** range, a concentrate of energy for engines.







# MOTOROLA ENERGY AGM TECHNOLOGY

The new AGM technology range  
for the most modern, high-performance motorbikes.



## SEALED VALVE-REGULATED GAS-RECOMBINATION BATTERY

Absorbed Glass Mat (AGM) technology eliminates dangerous leakages of electrolyte by using a very fine fibreglass separator which absorbs the electrolyte withholding it inside the battery. No risk of acid leakage during installation or use.

## OUTSTANDING STARTING POWER

Top power for safe starts in all conditions. The starting efficiency (A)/weight (kg) ratio of AGM batteries is the highest available today.

## MAINTENANCE-FREE

The implemented technology cuts water consumption virtually to zero. No top-ups needed for the entire life of the battery.

## RESISTANCE TO VIBRATIONS

The plate-mats are compressed and construction is perfected to make the battery extremely resistant to vibrations for a longer life.

## GUARANTEED PERFORMANCE EVEN AFTER PROLONGED STORAGE

The use of lead-calcium alloys in the grids makes self-discharging process much slower than traditional batteries. Starting efficiency is maintained over time.





## AGM TECHNOLOGY

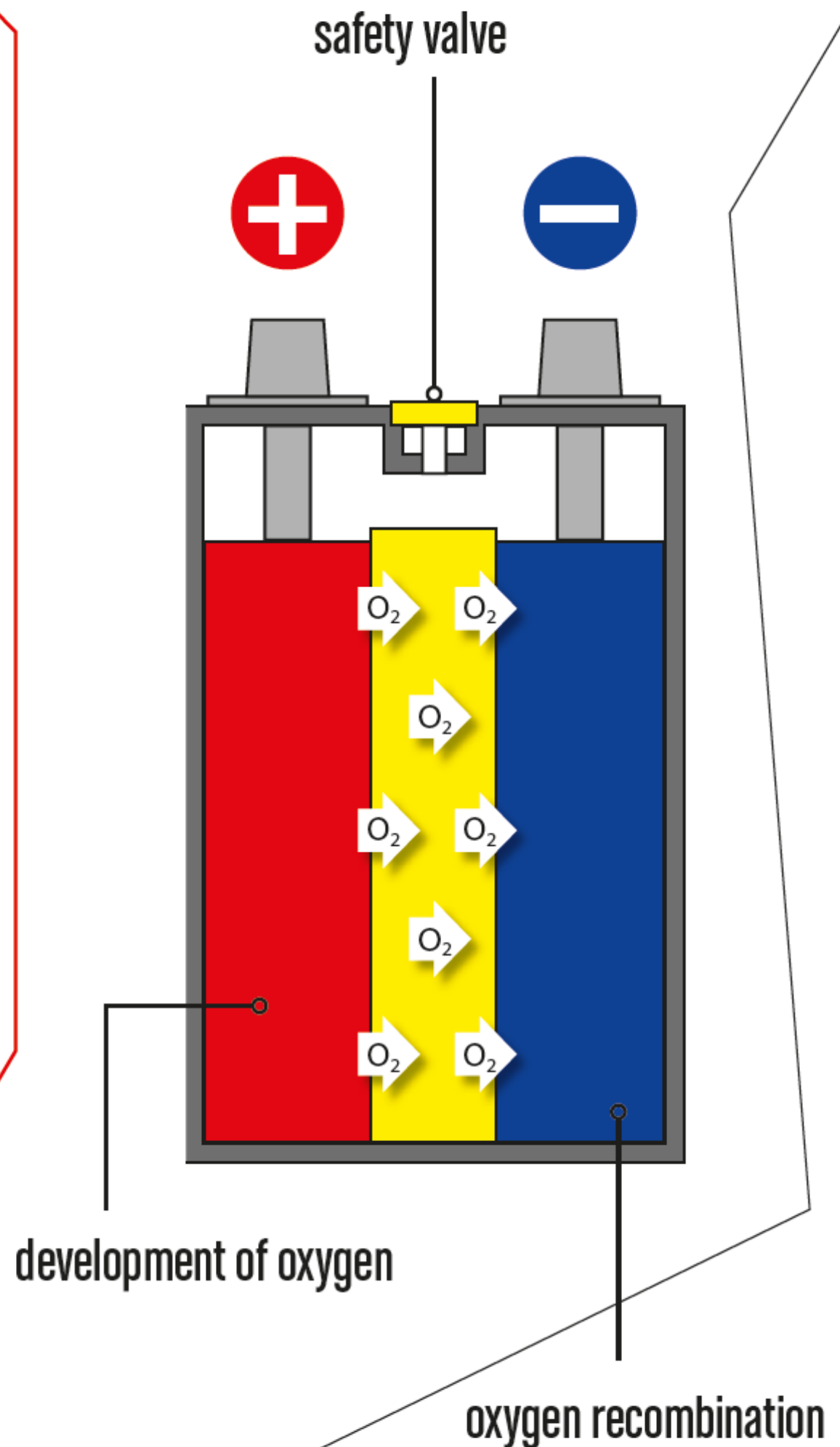
The key feature that sets this battery apart from a traditional one is AGM gas-recombination technology. Water dissociates into hydrogen and oxygen in a traditional flooded lead battery when it is recharged. The two gases are released through the caps and the level of electrolyte decreases in the battery.

AGM technology exploits the recombination principle, instead. By using a special, very fine separator (Absorbent Glass Mat) seeped in a controlled amount of electrolyte, the oxygen released from the positive plate due to the dissociation of water during recharging can migrate to the negative plate where it is fixed to then recombine with hydrogen and form water again. In principle, this establishes a closed electrochemical cycle without gas emissions outside and without consuming water.

It is a simple system that requires high constructive accuracy and careful selection of components in order to work perfectly. Crucial are the plate-mat system compression and the purity of components.

-  positive plate
-  negative plate
-  separator mat seeped in electrolyte

## SEALED GAS-RECOMBINATION BATTERY OPERATION



# MOTOR ENERGY AGM Technology

## CASING

Oil and petrol-resistant lid and one-piece container.

## SAFETY VALVE

Reduces the risk of battery explosion in case of excessive gas build-up.

## FLAME ARRESTOR

To eliminate the risks caused by occasional sparks or naked flames outside the battery.

## SPECIAL CONNECTIONS

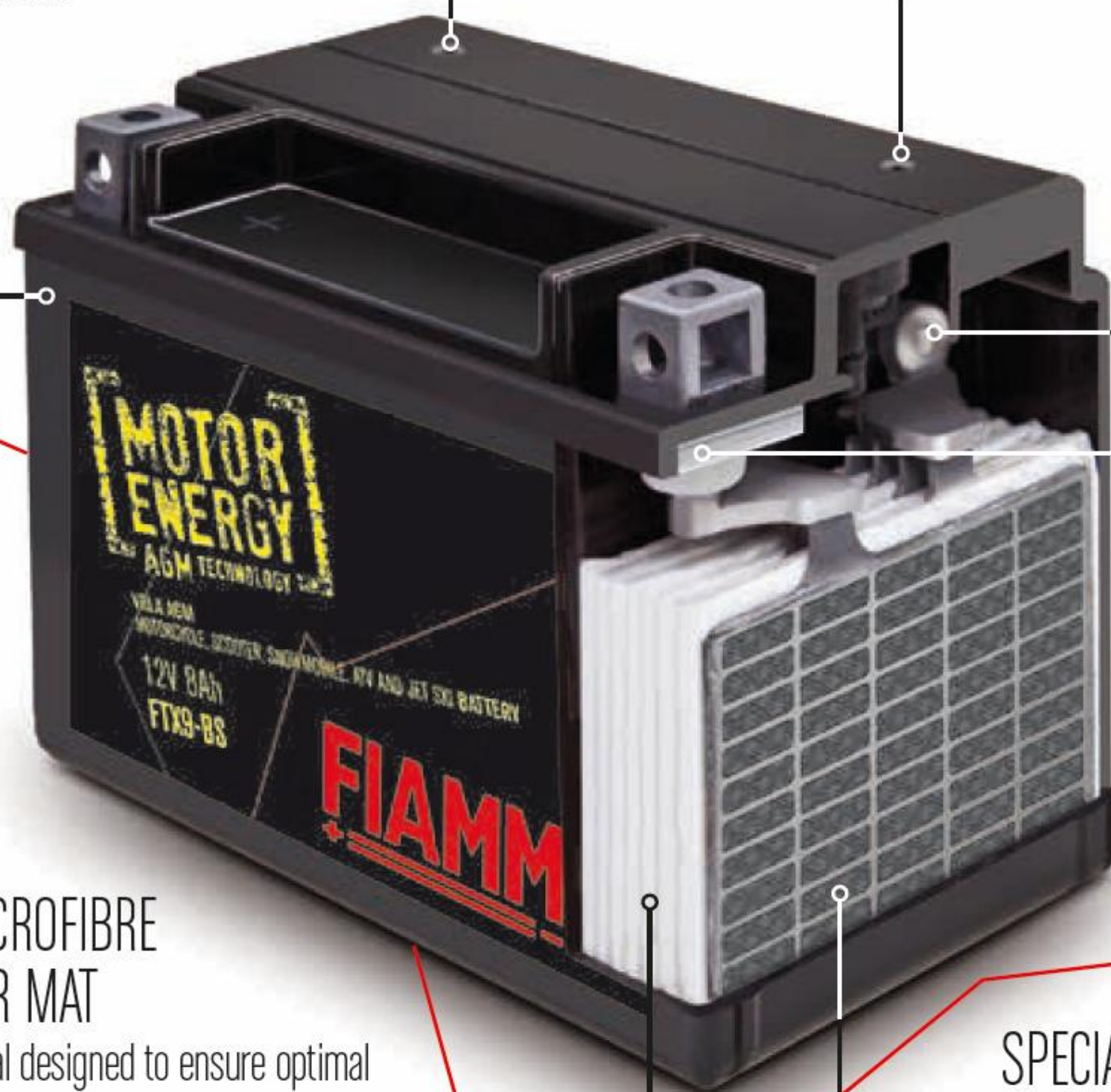
Reinforced cell-to-cell connections and plate-to-terminal connections for better current flow for starting the engine.

## GLASS MICROFIBRE SEPARATOR MAT

Porous material designed to ensure optimal electrolyte retention, which combined with the safety valve prevents leakage of liquid or gas.

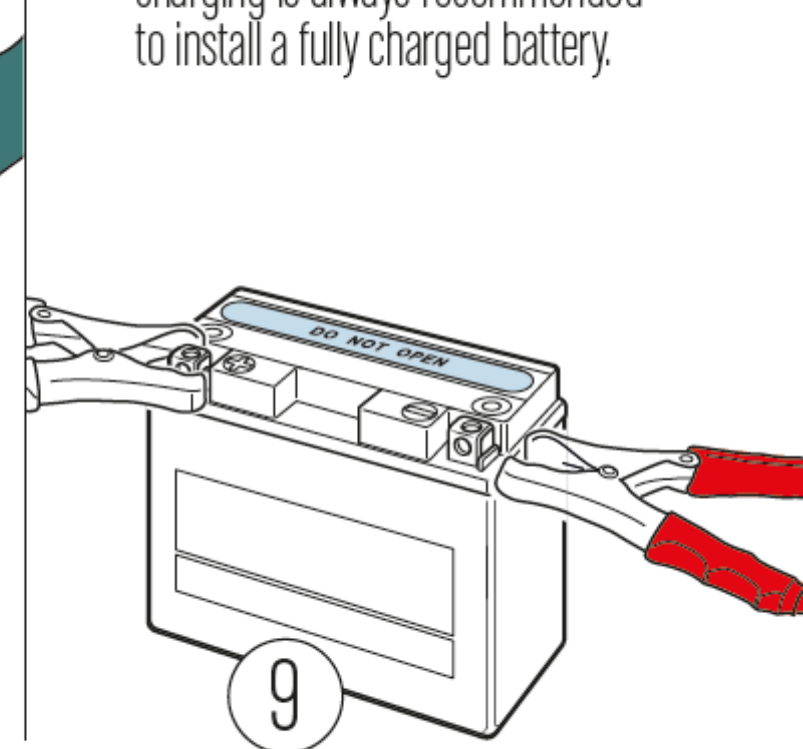
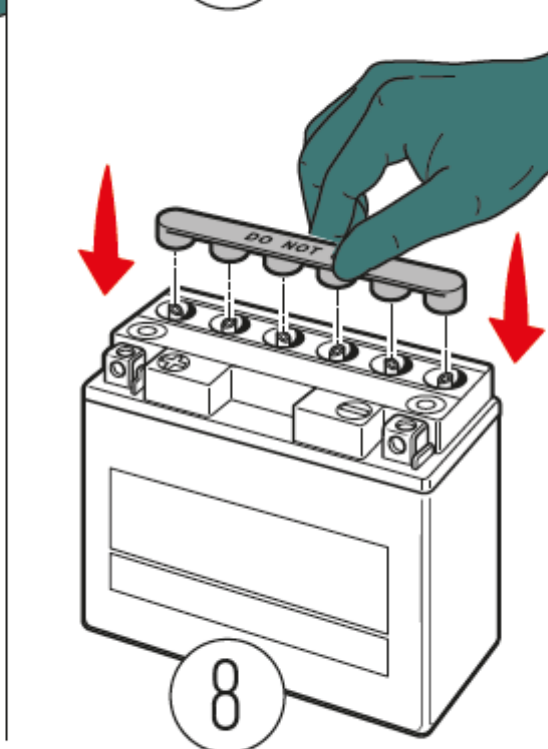
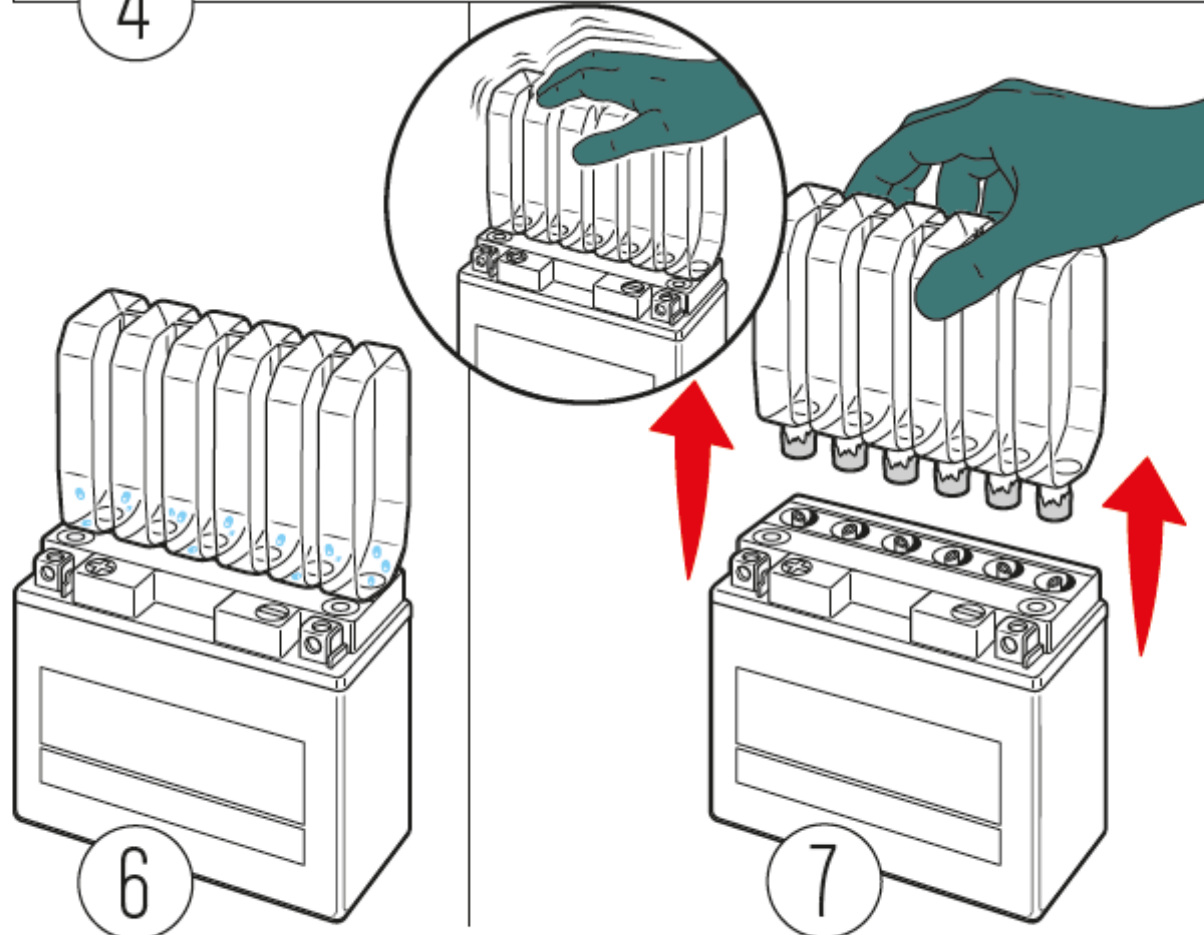
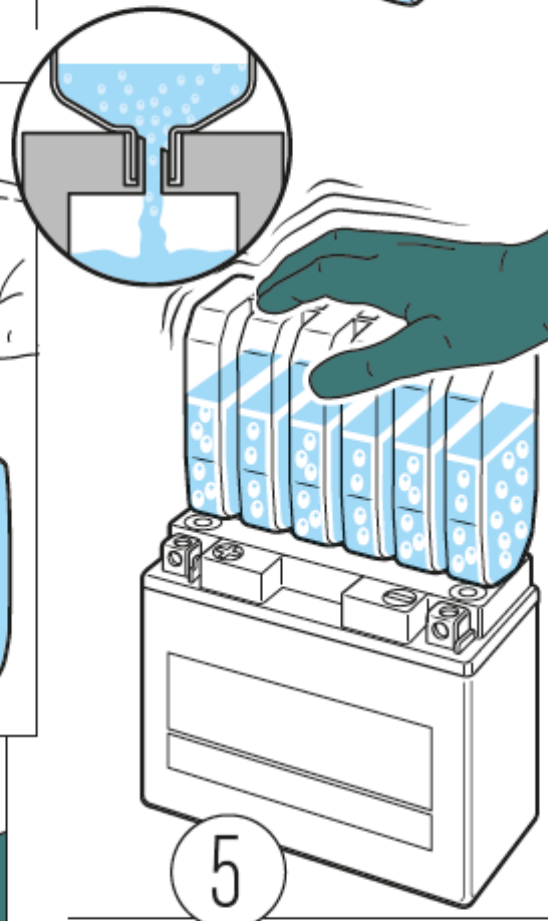
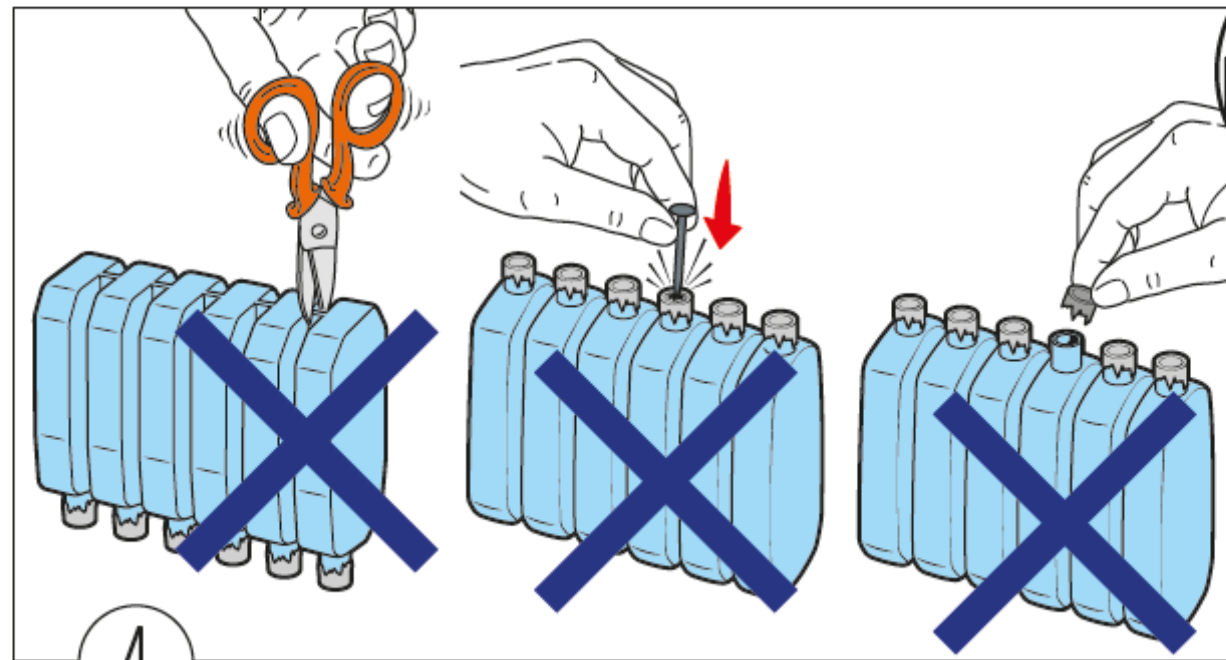
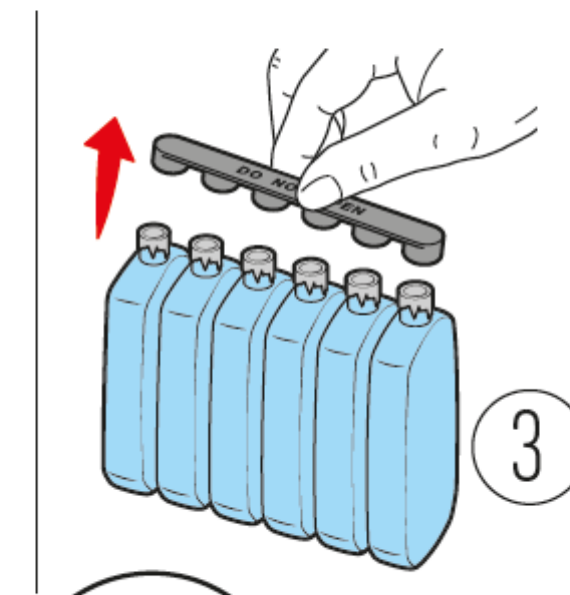
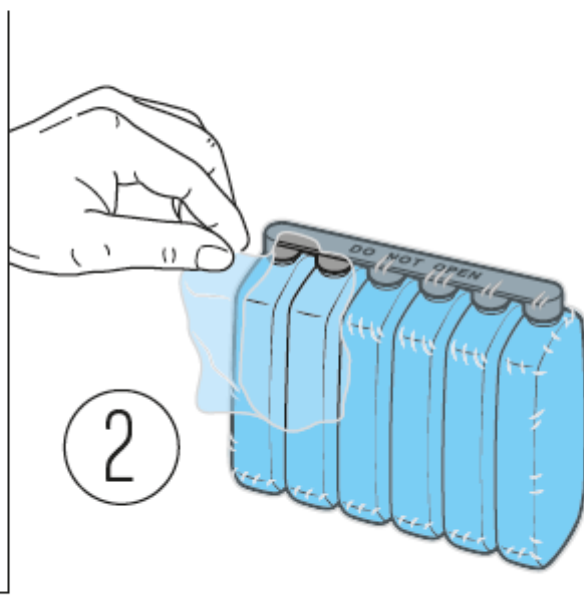
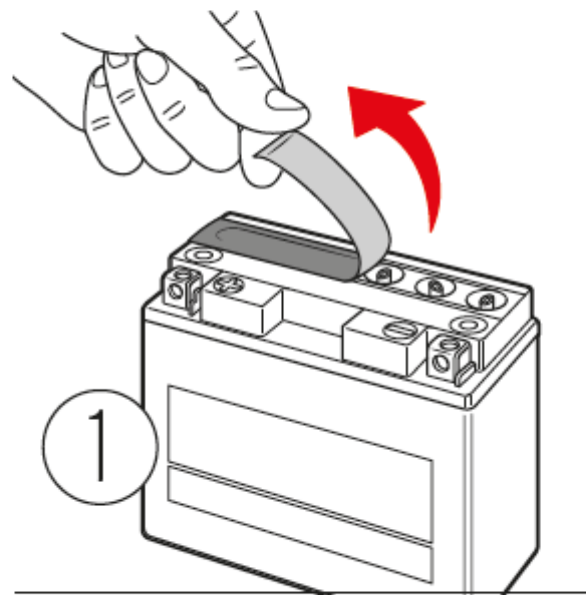
## SPECIAL ACTIVE MASS FORMULA

Designed to increase battery life and reliability.





# INSTRUCTIONS FOR ACTIVATING, CHARGING AND INSTALLING THE **AGM BATTERY**



- 1 Place the battery on a flat surface and remove the protective foil.
- 2 Remove the protective film from the acid container.
- 3 Remove the cap and keep it for later use.
- 4 Do not open, cut, or pierce the acid container.
- 5 Turn the acid container vertically upside down and press it onto the battery.
- 6 The seals will break and the acid will start pouring out. Keep the container turned upside down for at least **20 minutes**.
- 7 When the acid has drained out, tap the container delicately to pour out any residues and remove the container carefully.
- 8 Use the acid container cap to close the battery holes and press all holes well.
- 9 The battery charge state will be about 70-80% after activation. Re-charging is always recommended to install a fully charged battery.







# MOTOR ENERGY

FB TECHNOLOGY

The new FB technology range for scooters and small motorcycles.



## DRY CHARGE BATTERIES WITH ACID BOTTLE INCLUDED

The advantage is that the battery can be activated whenever it is needed. Dry charge batteries can be stored for a long time. The acid bottle provided with the battery allows it to be prepared for use at any time.

## FB TECHNOLOGY

Top starting power, always. Special additives specifically formulated to reduce damage caused by sulphation of plates during deep discharge of the battery, guaranteeing starting even in difficult conditions. (This technology is implemented in all FB models).

## LOW MAINTENANCE

A special lead alloy reduces water consumption, the self-discharge of the battery and need for maintenance, as a consequence.

## COMPLETE RANGE: 12 V & 6 V

More than 50 models of batteries for all types of motorbikes.





# MOTOR ENERGY FB Technology

## TERMINALS

Corrosion-resistant to guarantee longer battery life.

## REMOVABLE CAPS

For easy servicing.

## SPECIAL CONNECTIONS

Reinforced cell-to-cell connections to guarantee the best current flow for starting.

## CASING

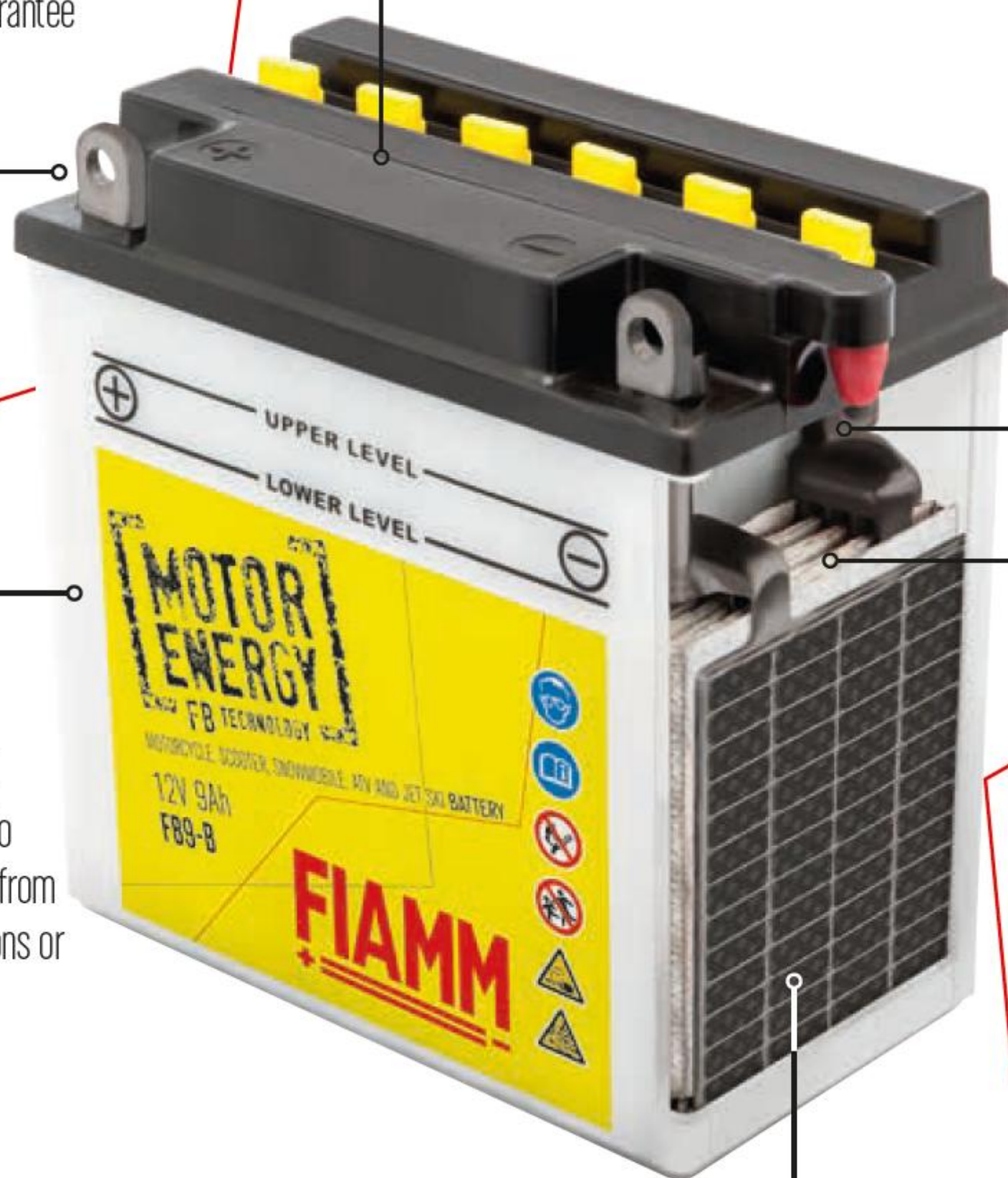
Oil and petrol-resistant lid and one-piece container to protect the battery plates from damage caused by collisions or vibrations.

## SEPARATOR MAT

Made of special material for boosted starting power.

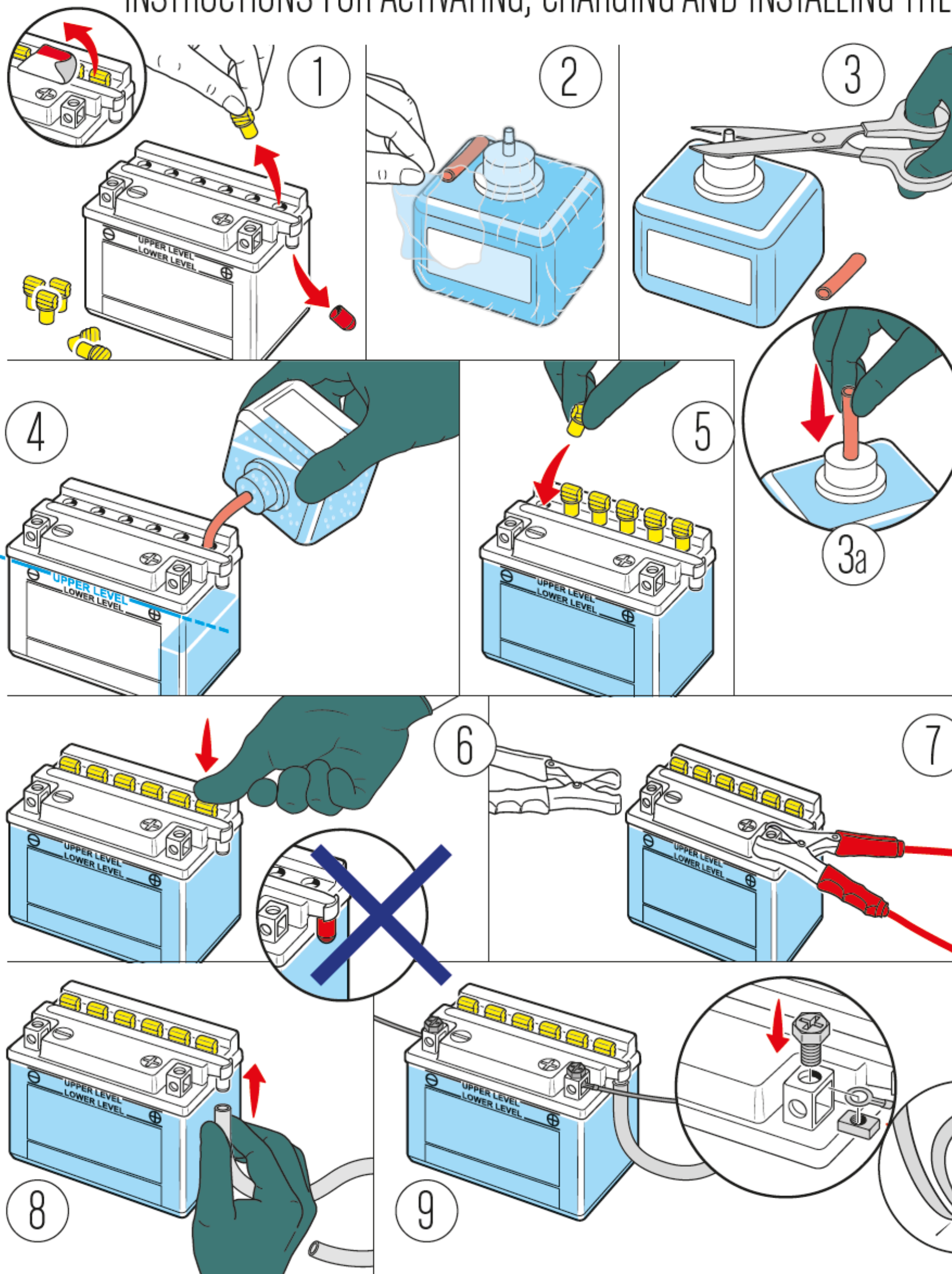
## DRY CHARGE PLATES

Provide 70-80% of the charge state after initial activation by filling with acid.





# INSTRUCTIONS FOR ACTIVATING, CHARGING AND INSTALLING THE FLOODED BATTERY



- 1 Position the battery on a flat surface. Remove the upper caps and the breather cap.
- 2 Remove the protective film from the acid container.
- 3 Cut the acid container and apply the tube provided.
- 4 Insert the tube into each hole in the battery and slowly pour in the acid up to the **UPPER LEVEL (no higher)**.
- 5 Position the caps on the holes and let the battery stand for **30 minutes** for the plates to activate.
- 6 Press or screw the caps back fully. Leave the breather cap open.
- 7 The battery charge state will be about 70-80% after activation. Recharging is always recommended to install a fully charged battery.
- 8 Apply the breather tube (if provided).
- 9 Check that the tube is intact and not squeezed. Check that connection to the electric system is correct. Check that the fastening screws are tight.



**MOTOR ENERGY**  
AGM TECHNOLOGY

**MOTOR ENERGY**  
FB TECHNOLOGY

Find your MOTOR ENERGY.  
Choose the right battery for your needs here.





# MOTOR ENERGY starter battery range

## AGM (factory activated)

FIAMM code	FIAMM reference	Capacity 10h (Ah)	Dimensions LxWxH	Layout
7904470	FTZ7S-12B	6	113x70x105	- [ ] [ ] [ ] [ ] +
7904471	FTZ10S-12B	8,6	150x87x93	+ [ ] [ ] [ ] [ ] -
7904472	FTZ14S-12B	11,2	150x87x110	+ [ ] [ ] [ ] [ ] -
7904473	FT19-12B	19*	181x76x167	- [ ] [ ] [ ] [ ] +

\*20 h

## AGM (with pack acid bottle)

FIAMM code	FIAMM reference	Capacity 10h (Ah)	Dimensions LxWxH	Layout
7904474	FTR4A-BS	2,3	113x48x85	- [ ] [ ] [ ] [ ] +
7904475	FTX4L-BS	3	113x70x85	- [ ] [ ] [ ] [ ] +
7904476	FTX5L-BS	4	113x70x105	- [ ] [ ] [ ] [ ] +
7904477	FTZ7S-BS	6	113x70x105	- [ ] [ ] [ ] [ ] +
7904478	FTX7L-BS	6	113x70x130	- [ ] [ ] [ ] [ ] +
7904479	FTX7A-BS	6	150x87x93	+ [ ] [ ] [ ] [ ] -
7904480	FT7-BS	6,5	150x65x93	+ [ ] [ ] [ ] [ ] -
7904481	FT9-BS	8	150x70x105	+ [ ] [ ] [ ] [ ] -
7904482	FTZ10S-BS	8,6	150x87x93	+ [ ] [ ] [ ] [ ] -
7904483	FTX9-BS	8	150x87x105	+ [ ] [ ] [ ] [ ] -
7904485	FT12A-BS	10	150x87x105	+ [ ] [ ] [ ] [ ] -
7904486	FT12B-BS	10	150x70x130	+ [ ] [ ] [ ] [ ] -
7904487	FTZ12S-BS	11	150x87x110	+ [ ] [ ] [ ] [ ] -
7904488	FTX12-BS	10	150x87x130	+ [ ] [ ] [ ] [ ] -
7904489	FTX14-BS	12	150x87x145	+ [ ] [ ] [ ] [ ] -
7904490	FTZ14S-BS	11,2	150x87x110	+ [ ] [ ] [ ] [ ] -
7904491	FTX16-BS	14	150x87x161	+ [ ] [ ] [ ] [ ] -
7904492	FBTX20L-BS	18	175x87x155	- [ ] [ ] [ ] [ ] +
7904493	FTX20CH-BS	18	150x87x161	+ [ ] [ ] [ ] [ ] -





## FLOODED 12V (with pack acid bottle)

FIAMM code	FIAMM reference	Capacity 10h (Ah)	Dimensions LxWxH	Layout
7904436	FB4L-B	4	120x70x92	
7904437	12N5-3B	5	120x60x130	
7904454	12N5.5-3B	5.5	135x60x130	
7904453	FB7B-B	7	150x60x130	
7904438	FB7L-B	8	135x75x133	
7904439	FB7-A	8	135x75x133	
7904441	FB9-B	9	135x75x139	
7904442	12N9-3B	9	135x75x139	
7904443	FB9L-A2	9	135x75x139	
7904444	12N10-3A	10	135x90x145	
7904446	FB10L-B	11	135x90x145	
7904447	FB12A-A	12	134x80x160	
7904448	FB12AL-A	12	134x80x160	
7904449	FB12A-B	12	134x80x160	
7904450	FB14L-A2	14	134x89x166	
7904451	FB14-A2	14	134x89x166	
7904452	FB14L-B2	14	136x91x168	
7904455	FB16B-A	16	160x90x161	
7904456	FB16AL-A2	16	205x70x162	
7904458	FB16-B	19	175x100x155	
7904459	FB16CL-B	19	175x100x175	
7904460	F50-N18L-A	20	205x90x162	

## FLOODED 12V (Dry)




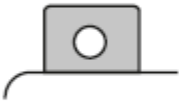







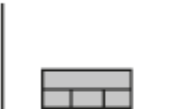






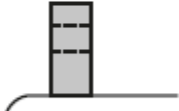
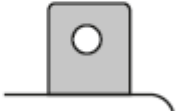





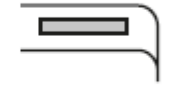

FIAMM code	FIAMM reference	Capacity 20h (Ah)	Dimensions LxWxH	Layout
7904457	51814	19	186x82x173	
7904461	F60-N24AL-B	24	186x126x170	
7904462	53030	30	186x130x171	
7904463	53211	32	233x131x167	

## FLOODED 6V (with pack acid bottle)

FIAMM code	FIAMM reference	Capacity 10h (Ah)	Dimensions LxWxH	Layout
7904464	6N4-2A-4	4	70x70x95	
7904465	6N6-3B	6	98x56x110	
7904466	B39-6	7	127x50x123	
7904467	B49-6	10	90x82x160	
7904468	6N11A-1B	11	120x60x130	
7904469	B38-6A	13	118x82x160	



# TERMINALS

TYPE	FRONT	SIDE	TOP	BATTERY TYPE				
M02				FB9L-A2	FB16AL-A2			
M04				FTX4L-BS FB4L-B FBX16-BS	FTX5L-BS FB16B-A	FTX7L-BS FTX12-BS	FTX7A-BS FTX14-BS	FBTX20L-BS FB7L-B
M05				FTX9-BS	FB16CL-B	FTZ7S-BS	FTZ7S-12B	
M06				12N5-3B 12N5.5-3B FB7B-B FB7-A	FB7L-B 12N9-3B 12N10-3A FB12A-A	FB12AL-A FB12A-B FB16-B B38-6A	6N6-3B B39-6 B49-6 6N11A-1B	FB9-B FB10L-B
M07				F50-N18L-A				
M08				FB14L-A2	FB14-A2	FB14L-B2		
M11				FT19-12B	51814	53030	F60-N24AL-B	
M12				FT7-BS FTZ12S-BS	FT9-BS FTZ14S-BS	FT12A-BS FTZ10S-BS	FT12B-BS FTZ14S-12B	FTZ10S-BS FTX20CH-BS
14				FTR4A-BS				







FIAMM S.p.A.  
V.le Europa, 75  
36075 Montecchio Maggiore (VI)  
Italy

Tel +39 0444 709311  
Fax +39 0444 699237  
e-mail: [info.starter@fiamm.com](mailto:info.starter@fiamm.com)  
[www.fiamm.com](http://www.fiamm.com)

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