

## The EVO-Lution of traditional lead-acid batteries.

ecoFORCE AFB® (Advanced Flooded Battery) is the best solution for vehicles equipped with Start&Stop system which require a higher energy support than that offered by conventional SLI batteries. The battery is characterised by withstand to cycles two times higher (than a traditional battery): in queues or at traffic lights, ecoFORCE AFB® provides power to all electrical components when the engine is off and a reliable RE-starting of the car.

Batteries for **Start&Stop** applications must be replaced with **Start&Stop** batteries taking care to use the same technology.

### AGM -> AGM AFB/EFB -> AFB/EFB

#### Quality: Original Quality Spare Part

The Original Quality batteries are produced in the same production plants where also original equipment batteries are manufactured, all certified according to the Automotive Standard IATF 16949. They use the same technology, manpower, equipments according to the technical specifications of the OEM involved.

#### Technologies:

**AFB**

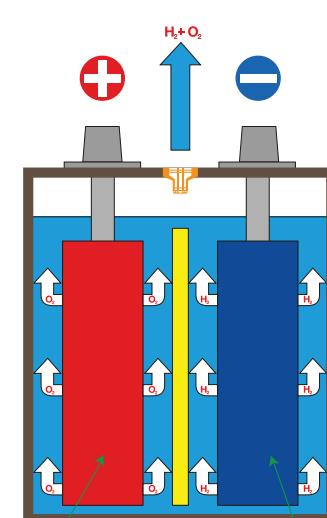
#### Main Advantages:

- OE technology and quality
- High resistance to the charging and discharging cycles (cycling resistance greater than conventional Pb-Ca batteries)
- The composition of the active mass negative specially designed to support the typical Start & Stop cycles
- Excellent starting power
- Longer lifecycles than conventional lead-calcium batteries (measured in terms of energy output)
- Maintenance-free

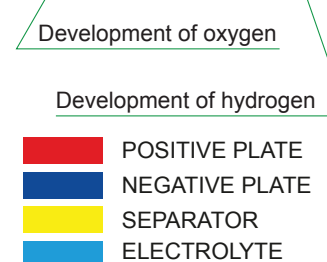
#### Applications:



**CAR WITH START & STOP**



**BATTERY OPERATION FLOODED HEAVY DUTY WHILE RECHARGING**



In this case, the battery is characterised by a cycling resistance two times greater than that of a conventional battery. In queues or at a traffic lights, ecoFORCEAFB powers all the electrical components when the engine is off and ensures reliable restarting as soon the clutch is engaged.



The main differences of an AFB battery with respect to a conventional free-acid battery are:

- 1 More electrolyte reserve;
- 2 Large electrolyte exchange surface;
- 3 Negative plates characterised by:
  - a. Special PbCaSn (Lead-Calcium-Tin) alloy grids
  - b. Negative active mass composition with more carbon
  - c. Expander compound specifically designed to withstand Start & Stop cycles
  - d. Organic fibre layer to contain expansion of active mass during cycling
- 4 Positive plates characterised by:
  - a. Special PbCaSn (Lead-Calcium-Tin) alloy grids
  - b. Grid specially studied to withstand corrosion and high temperatures (SARJ801)
  - c. Layer to contain expansion of active mass during cycling
- 5 Electrode flags protected against corrosion and situations of potential danger