



## aquagen

### Recombination system for stationary batteries

#### Typical applications:

- For all flooded lead acid and NiCd batteries

#### Your benefits:

- Reduced maintenance costs and ventilation requirements – integral catalyst for greatly extended water refilling intervals (virtually maintenance-free)
- Optimum recombination efficiency (similar to that of sealed valve regulated batteries) – bi-directional valve reduces loss of gases and aerosols in consideration of HOPPECKE operating conditions
- Maximum safety – integrated flame arrestor
- Minimum cost – single investment. No replacement needed during the battery lifetime

## aquagen

## The unique recombination system

Patented  
technology

### Functional description

- When the aquagen recombination system is used, the hydrogen and oxygen gases which evolve during water decomposition are fed into the aquagen recombination system.
- By means of an integral catalyst, these gases are re-combined to form water vapor. This water vapour condenses on the sides of the aquagen recombination system. The condensed drops of water flow downwards and are returned to the cell.

### The efficiency of this recombination is up to 99%.

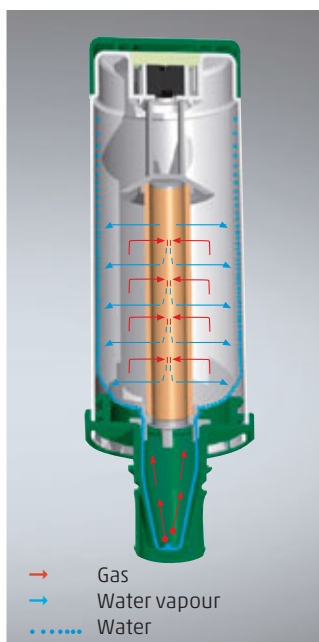
- Because of this level of efficiency, water refilling is drastically reduced to a level where total freedom from maintenance is possible.
- Another benefit from the use of the aquagen recombination system is a considerable reduction in ventilation requirements according to EN 50272-2/DIN VDE 0510 Part 2 (European standards).

### Freedom from maintenance with no restrictions

- The recombination of hydrogen and oxygen is an exothermal process in which heat is released.
- With sealed batteries, this recombination takes place internally at the negative plates. This increased temperature inside sealed batteries leads to negative life-reducing effects, especially at the electrodes. To minimize these negative effects, sealed batteries are subjected to various limitations in operation.
- When the aquagen recombination system is used, the recombination does not take place at the active components (electrodes) and not within the battery.
- The aquagen recombination system is fitted to the battery as an external component. This avoids any temperature rise inside the battery. The separation of the recombination process from the cells' active components allows maximization of freedom from maintenance, similar to sealed batteries, without reducing life expectancy and with no restrictions on operation of the battery.
- The aquagen H version is available for capacities up to 340 Ah and for applications with restrictions due to dimensions (e.g. height with reference to battery assembly, and depth with reference to cell size).



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Recombination principle  
aquagen



aquagen H

**Please note: not applicable for use with electrolyte circulation.**

