RECOMBINATION PLUG

RecPlug 3

Recombination plug RecPlug 3 combine the advantages of RecPlug1 and RecPlug2 – more than 20 years of lifetime stability, reliability and predictability of action– possible minimum water loses and small risk of cell explosion after spark ignitation outside of cell. To meet these expectations, the company developed a new generation recombination plug with flame arrestor section for external gas recombination in lead acid batteries.

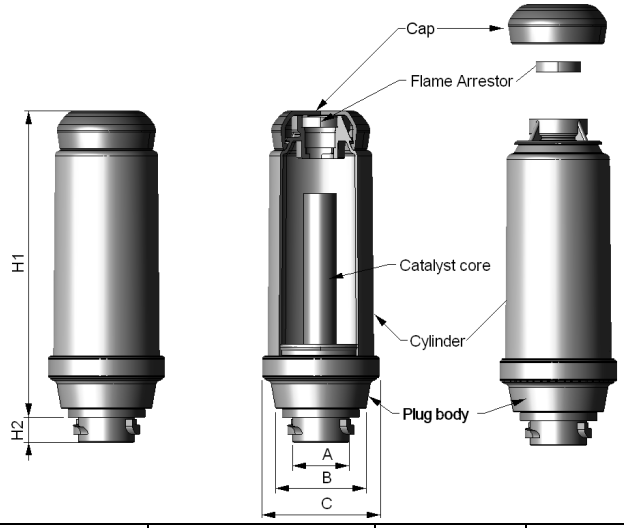
MAIN FEATURES

- **LIFETIME** – more than 20 years. Classic SLA batteries with recombination plug have much longer life than VRLA batteries, in which it is not possible to refill water.
- **SAFETY**- reduced emission of harmful gases from the liquid electrolyte, fading the flame back, atmospheric pressure inside plug protects the system from mechanical damage as a result of uncontrolled growth or drop in pressure, the possibility of charging the battery at increased voltage with new design plug.
- **ECONOMY**- significantly reduced the frequency of water refilling recombination plugs are optimized to work in full lifetime of the battery.
- **FLEXIBLE** - the ability to match amount of plugs to specific capacity of batteries.

PRINCIPLE OF OPERATION

When using lead acid battery as a result of electrolysis of an aqueous electrolyte solution are separated hydrogen and oxygen. These gases in air may form explosive mixtures. Additionally the electrolysis reduces the amount of water in the electrolyte, which must be relatively frequently replenish in the battery. The conversion of hydrogen and oxygen in steam is an exothermic process. The heat emitted during the recombination process inside the sealed battery significantly accelerates the degradation of the lead electrodes immersed in an electrolyte. Therefore, the process is preferably carried away from the recombination with the electrodes, thus increasing the life of the entire battery. The innovative design of the gases generated during the electrolysis of water from the electrolyte when it reaches the plug in a controlled manner are converted into steam. Water vapor then condenses on the walls of plug. After cooling, as the water flows back into the battery. In order to achieve the most efficient gas recombination plug except the construction of a special catalyst system. In order to maintain safe operation of the system is mounted flame arrestor in the plug in addition to the single fuse hydrogen, in the sintered form. In such designed plug gas emissions is minimal and safe for the surrounding environment. New recombination plug, while maintaining the proper operation, maintenance reduces the frequency of replenishing the electrolyte level in the battery. New design of recombination plug increases the safety of the battery, while maintaining the level of gas recombination at the highest possible level.

CONSTRUCTION AND TECHNICAL DATA



Application	Type	Cell capacity	Max. Charging voltage	Dimensions				
				Diameter			Height	
				A	B	C	H1	H2
		Ah	[V/cell]	mm				
OPzS	RecPlug 3-500	up to 500	2.4 ±1%	25	40	53	132	11
OPzS	RecPlug 3-1000	from 501 to 800	2.4 ±1%	25	40	53	132	11
OPzS/SOPzS	RecPlug 3-1500	All	2.4 ±1%	25	40	53	132	11

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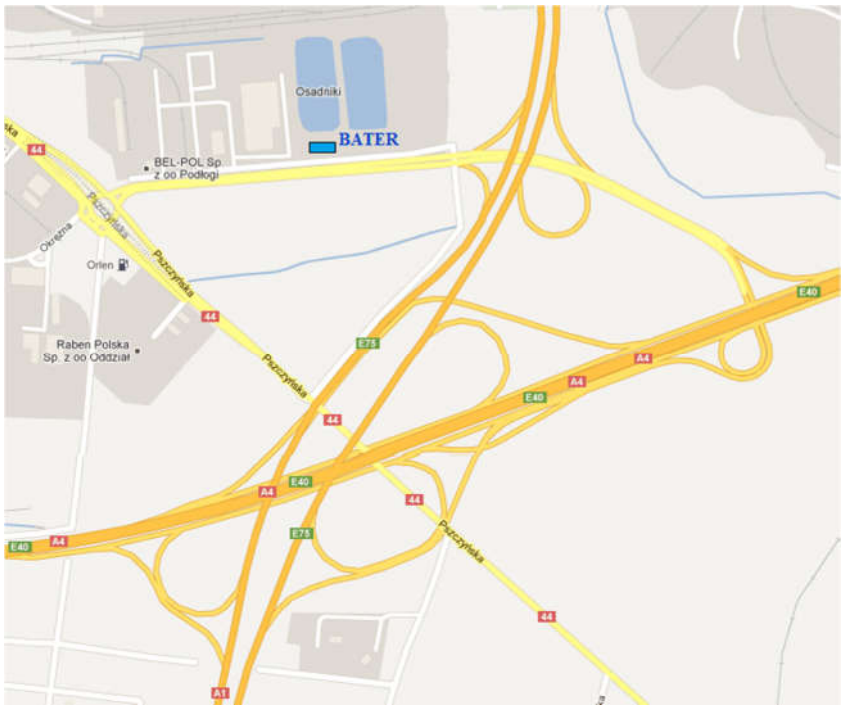

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