

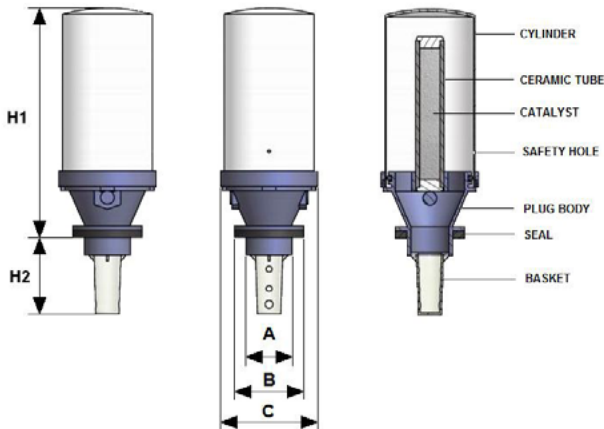
RecPlug 1

Recombination Vent Cap for Flooded Lead Acid Batteries

Standard Recombination Plug RecPlug1

Reduce the frequency of water refilling and requirements for ventilation.

SBS's solution is characterized by a simple, reliable construction. Placement of the recombination device directly within the gas containing portion of the battery allows the flow of gasses through the catalytic and absorptive deposits. This effectively eliminates the flow of gasses from the battery into the atmosphere. Such construction significantly improves safety associated with battery use, preventing, under normal conditions, the flow of gas into the immediate surroundings and eliminating the risk of ignition and the need for water refilling. The device is economical from both an installation and a maintenance perspective.



Main Features

- **LIFETIME** – More than 20 years. Flooded batteries with recombination plugs have much longer life than VRLA batteries, in which it is not possible to add makeup water.
- **SAFETY** – Increased safety of operation of cells with liquid electrolyte (electrolyte fumes and poisonous gases do not leak from the battery into the immediate surroundings). None of the gases capable of causing explosions are released into the surrounding area.
- **ECONOMY** – Significantly reduced the frequency of water refilling (12–15 years topping-up interval), recombination plugs are optimized to work for the full lifetime of the battery.
- **FLEXIBLE** – The ability to match type of plug to specific capacity of batteries.

Principle of Operation

Operation of lead acid batteries results in the electrolysis of water and releases hydrogen and oxygen as part of this process. These gases in air may form explosive mixtures. Additionally the electrolysis reduces the amount of water in the electrolyte, which must be frequently replenished in the battery. The conversion of hydrogen and oxygen into steam is an exothermic process. The heat emitted during the recombination process inside a VRLA sealed battery significantly accelerates the degradation of the lead electrodes immersed in the electrolyte. Therefore, when the process is preferably performed away from the recombination with the electrodes and within the recombination plugs, we increase the life of the entire battery. Water vapor then condenses on the walls of plug after cooling and the water flows back in to the battery. Recombination plugs reduce the maintenance task of frequently replenishing the electrolyte level in the battery and increases the safety of the battery in areas with limited ventilation.

CONSTRUCTION AND TECHNICAL DATA

Type	Cell capacity	Max. Charging Voltage	Dimensions				
			Diameter			Height	
			A	B	C	H1	H2
	Ah	[V/cell]	mm				
VR-STT1-VC2V1-500AH	up to 500*	2.4 ± 1%	23	35	52	85	31
VR-STT1-VC2V501+AH	above 501	2.4 ± 1%	23	35	52	105	31

*Will not fit on STT12V50 or STT12V100 batteries