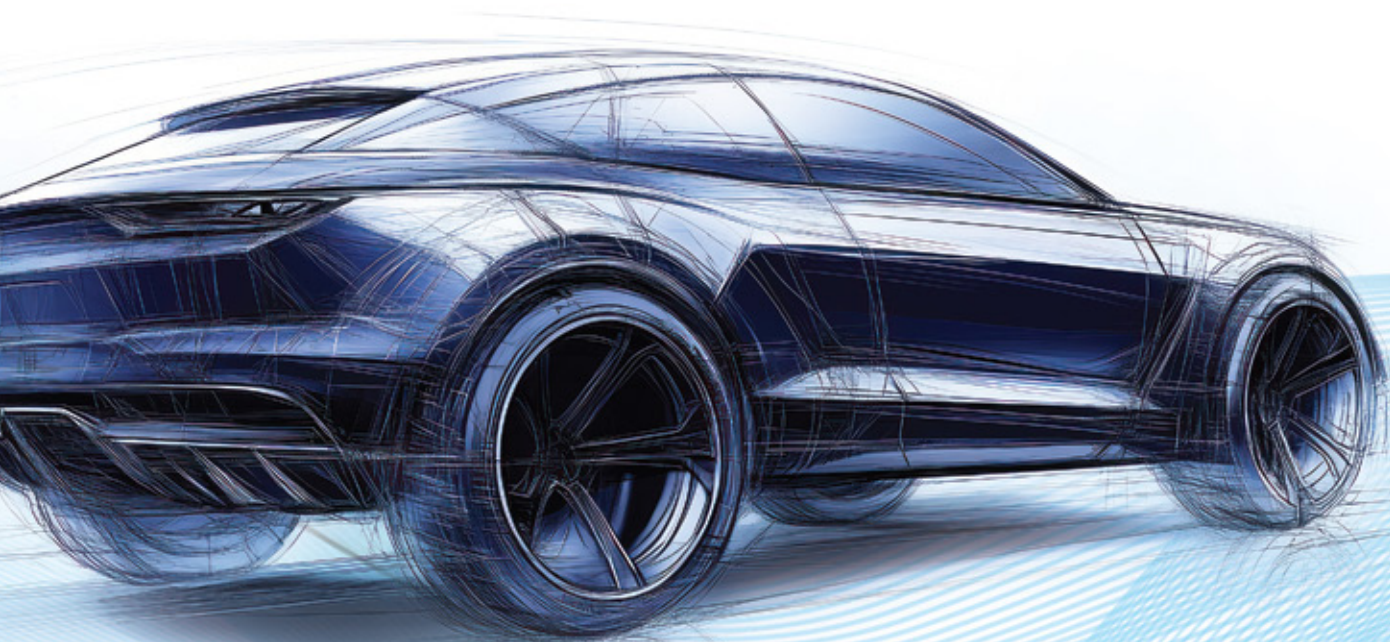


Vernay VoltaVent[®]

Elevating Battery Venting Systems and Safety



An Integral Venting Solution for Battery Systems

The Vernay VoltaVent® marks a significant advancement in battery technology, addressing critical needs in energy storage and safety. By intelligently managing the internal pressure of the battery pack at critical moments, such as during thermal runaway, VoltaVent® swiftly vents hot gases to prevent explosions and then reseals. This innovative flow control solution approach enhances the safety of battery-operated devices and extends their operational life and reliability.

The added "protection zone" makes the Vernay VoltaVent® unique. Within a set pressure range there is no exchange of air. By limiting this exchange of air, the amount of moisture that enters the battery pack is significantly reduced.



Application Range

- Battery Electric Vehicle (BEV) Manufacturers
- Hybrid Electric Vehicle (HEV) Manufacturers
- Commercial Vehicles
- Off-Highway Applications
- Energy Storage Systems

Enhanced Battery Safety and Reliability

Thermal Runaway: Advanced venting technology instantly relieves pressure build-up during thermal runaway. After high-flow emergency degassing, the valve reseals to prevent propagation and maintain battery pack integrity.

Moisture and Dust Protection: Achieve superior battery pack integrity with IP68 and IP69K compliance, ensuring protection against environmental challenges.

Strategic Advantage

Innovative Technology: Leverage patented technology to stay ahead of industry standards and regulatory requirements.

Global Support, Local Expertise: Benefit from Vernay's extensive global network of design, manufacturing, and service centers, offering localized support with global insights.

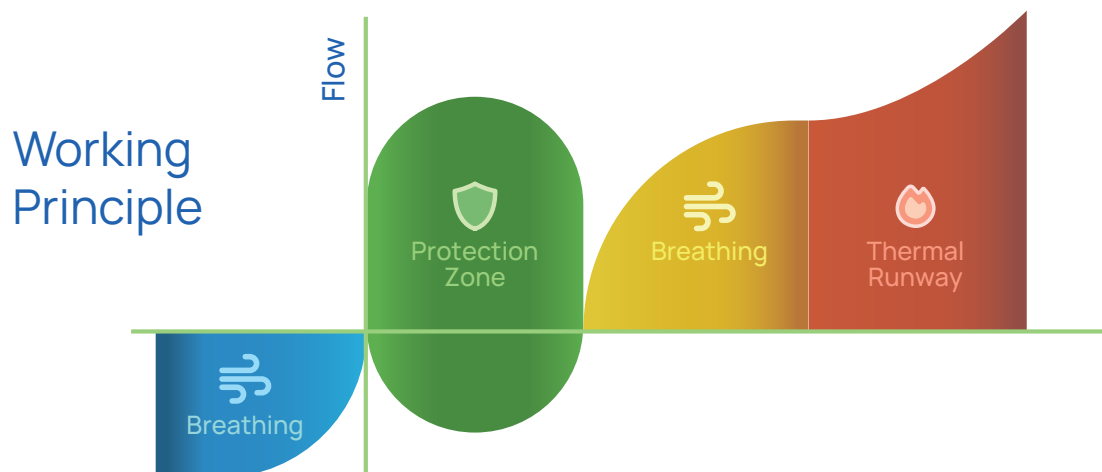
Reliability Through End-of-Life Testing: The unique protection zone of the VoltaVent® allows customers to perform a 100% functional test of the valve and battery pack integrity.

Optimized Performance and Efficiency

Protection Zone: With its unique, patented protection zone, the VoltaVent® can control the pressure in the battery pack in a predefined pressure region. This seals the battery pack in normal operation, only compensating the pressure in the battery pack if it exceeds the predefined limits. This significantly reduces the amount of moisture that can accumulate in the battery pack.

Pressure Equalization: Compensation for pressure fluctuations that occur during normal operation. For example, due to temperature differences or a change of altitude/ambient pressure when the vehicle drives over a mountain pass.

Customizable Solutions: Tailored configurations to meet specific requirements, ensuring seamless integration with your vehicle designs and specifications.



Overpressure Release

- Opening Pressure: 55 mbar
- Flow: 3.000 L/min at +180 mbar

Underpressure Release

- Opening Pressure: -30 mbar
- Flow: 2 L/min at -70 mbar

Dimensions

- 77x55x22,5 mm

Operating Temperature

- -40° C / 120° C

IP-Rating (ISO 20653)

- IPX6, IPX8 and IPX9k

Flammability

- UL 94-V0

Media resistance

- ISO 19453-5 / ISO 16750-5

Criteria provided are for reference targets and are not specifications.

Silver Edison Award Winner

Vernay VoltaVent® received the prestigious Silver Award in the Smart Transportation Battery Solutions Category of the 2024 Edison Awards. This honor places Vernay among a distinguished group of finalists, all selected by a panel of esteemed peers, including top executives, academics, and innovation leaders from around the globe. This recognition is a reflection of the team's hard work, dedication, and relentless pursuit of innovation that makes a difference.





Global Resources

With a global footprint, Vernay is always within reach. Our operations include engineering, testing, manufacturing, sales, and support capabilities strategically located in the United States, Italy, the Netherlands, Japan, and China. In addition, we have local sales engineers in each region to support our customers according to their languages and customs. We are able to provide coordinated global logistics and supply chain solutions to meet the needs of our customers worldwide.



For inquiries, reach out to our sales team at sales@vernay.com

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About Vernay

Vernay Laboratories has been a technology leader in the design, development and manufacture of customized flow-control components since its founding in 1946. The company also formulates its own compounds to address each specific application.

Vernay's products play a vital role in millions of automobiles, medical devices and consumer products. Today, Vernay produces more than one billion components per year, drawing from a library of more than 33,000 elastomeric materials and compound formulations. Vernay operates six plants around the world in the U.S., Netherlands, Italy and China. For more information, visit www.vernay.com.