GORE® Battery Vents
MultiVent Series



REDUCE COMPLEXITY IN BATTERY PACK VENTING

Battery pack design must manage thermal-runaway evacuation, moisture protection and pressure equalization, often with multiple vents, thermal runaway valves, desiccants and drainage valves. That can increase material complexity and require more openings in the battery pack, adding additional space, installation, sealing and testing efforts while increasing the risk of water and moisture ingress, corrosion and other reliability issues.

GORE® Battery Vents – MultiVent Series combines thermal-runaway evacuation, moisture protection and pressure equalization in one vent.

Integrated Protection for EV Battery Venting Systems

Low Opening Pressure for Thermal Runaway Protection

- Opens at 50 mbar and provides 50 L/s airflow at 180 mbar for rapid gas evacuation. The valve reseals after the event.

Lower MVTR, Minimize Moisture Ingress

- Limits moisture ingress to <20 mg/day at 22°C and 50% rH, which is more than 10X lower MVTR than currently available dual vents for batteries in humid conditions.

Increased Airflow for Faster Pressure Equalization

- Provides up to 6x airflow during normal operation to help equalize pressure across the battery pack enclosure and enable the reduction of vents needed.

GORE® Battery Vents - MultiVent Series

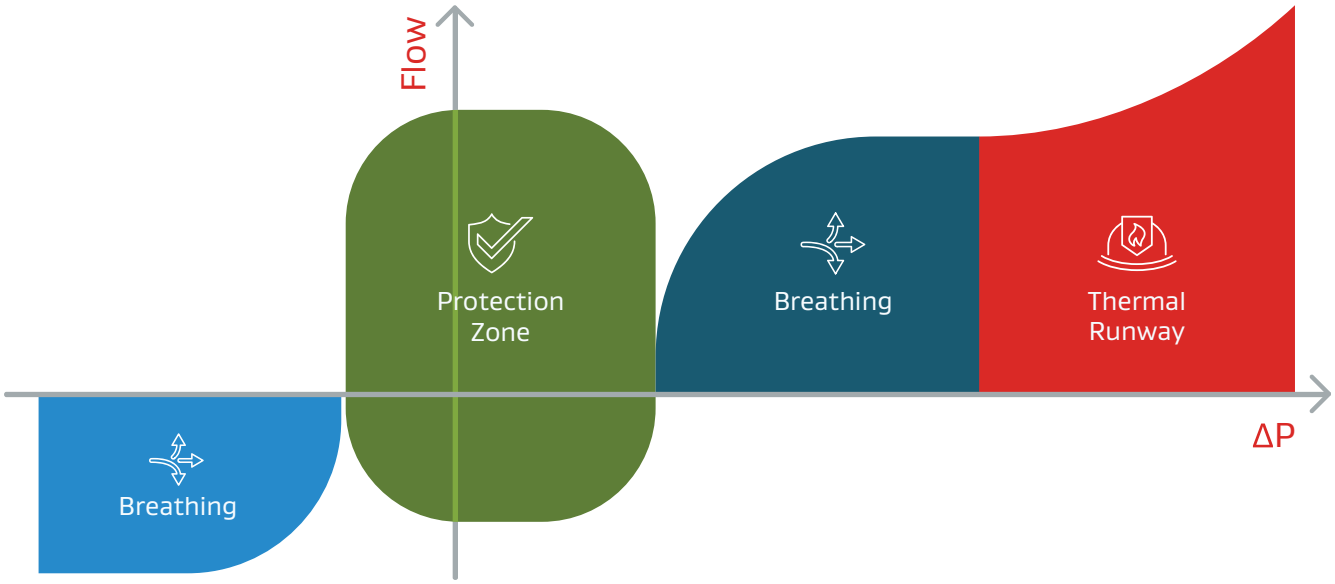
Preliminary Performance Characteristics*	Value
Overpressure equalization airflow in normal use	16 L/s @ +100 mbar
Underpressure equalization airflow in normal use	1,200 L/hr @ –100 mbar
Thermal runaway evacuation airflow	50 L/s @ 180 mbar
Thermal runaway opening pressure	50 mbar
Resealable after a thermal runaway event?	Yes
Pressure range with no airflow	–30 mbar < system closed < 50 mbar
Moisture ingress	<20 mg/day**
Ingress protection	IPX7, IPX8, IPX9K
Temperature resistance in normal use	–40°C to 90°C
Short temperature resistance	500°C short term
Part dimensions	77 × 55 × 22.5 mm
Integration method	3 × M5 hexagon socket button head screws
UL94 flammability rating	V0



* Final datasheet and specifications will be available upon completion of the full end design validation.
** At 22°C and 50% rH

Together, improving life

Integrated Protection for EV Battery Venting Systems



Underpressure
The relief valve opens and air passes through the membrane to equalize pressure while blocking water, dust and debris.

Protection Zone
The vent remains sealed within the specified pressure range.

Overpressure
The larger valve opens to release pressure, then reseals the housing.

Thermal Runaway
The valve opens fully for high-flow gas evacuation, then reseals after the event.

Lithium-ion Battery Packs For:

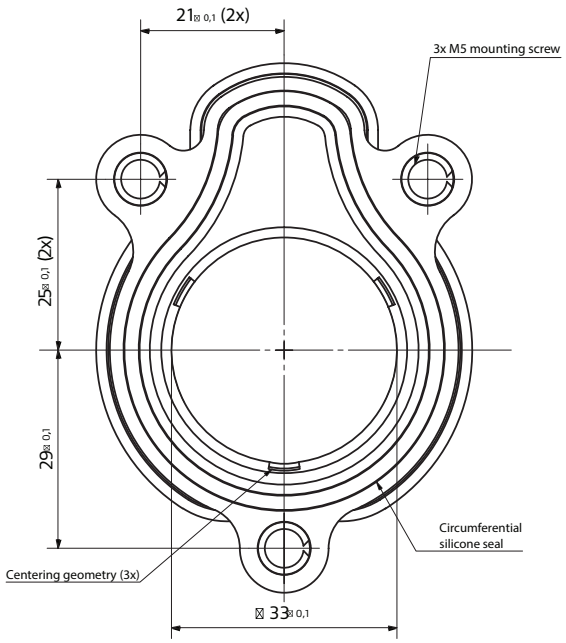

Battery Electric Vehicles (BEV)


Plug-in Hybrid Electric Vehicles (PHEV)


Heavy Duty Equipment


Battery Energy Storage System (BESS)

Design & Dimensions



Certifications, Standards, & Validations

Quality & Automotive Standards

- Quality management system certified to ISO 9001
- Automotive quality management system certified to IATF 16949
- PPAP available / supported
- Validation protocol based on LV 124

Material & Regulatory Compliance

- GADSL requirements
- Material reporting via IMDS
- REACH and RoHS compliance

Product Performance

- Flammability classification: UL 94 V-0

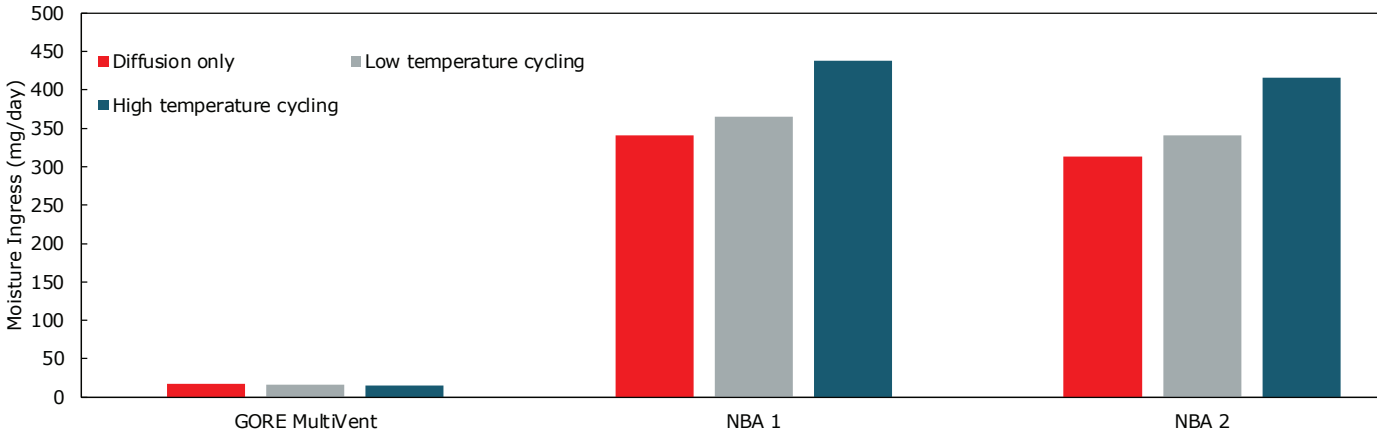
The Gore Advantage

Backed by Gore's materials science expertise and real-world collaboration:

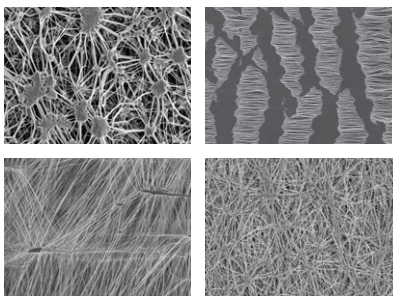
Simplified Integration: One part in one opening helps simplify design, assembly and enclosure integrity testing while reducing the number of venting components to integrate.

Application Engineering Support: Global engineering expertise and local technical support to help you optimize designs, speed validation, and ensure reliable venting performance.

10X Lower Moisture Ingress Than Available Dual Vents



Moisture protection is often the tradeoff in battery pack venting. Conventional approaches may address thermal-runaway evacuation and pressure equalization, but they allow more moisture into the pack. GORE® Battery Vents – MultiVent Series helps address that limitation while combining high airflow with low moisture ingress in a single vent.



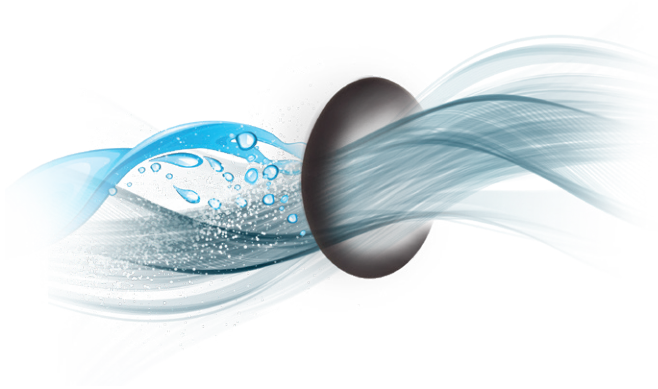
Why the GORE® Membrane Matters

GORE® Battery Vents – MultiVent Series incorporates the proven performance benefits of the GORE® Membrane.

Gore microporous membrane is engineered with billions of pores. These pores are 700X larger than an air molecule to support airflow and pressure equalization. At 20,000X smaller than a drop of water, these pores help block the entry of liquids, dirt and debris.

The GORE® Membrane Is:

- Chemically inert
- Non-shedding
- UV-resistant
- Temperature resistant
- Hydrophobic and oleophobic



What GORE® MultiVent Series Can Offer You

GORE® MultiVent is engineered on the same GORE® Membrane technology behind GORE® Automotive Vents, already installed in billions of automotive applications worldwide. With worldwide technical support and testing centers based in the US, Germany, Japan and China, our application engineers are ready to work in close partnership with your design team, from pack architecture through manufacturing integration.

Gore's Sustainability Commitment

We use our materials science expertise to create products that improve the quality of life and address sustainability challenges for generations to come. We believe that one of the greatest contributions we can make to sustainability is through innovations that have a positive impact on human health as well as the planet.

For more information, please visit gore.com/about/responsible-enterprise

About Gore

W. L. Gore & Associates is a global materials science company dedicated to transforming industries and improving lives. Since 1958, Gore has solved complex technical challenges in demanding environments — from outer space to the world's highest peaks to the inner workings of the human body. With approximately 12,000 Associates and a strong, team-oriented culture, Gore generates annual revenues of $5.6 billion.

For more information, please visit gore.com

FOR INDUSTRIAL USE ONLY. Not for use in food, drug, cosmetic or medical device manufacturing, processing or packaging operations. All technical information and advice given here are based on Gore's previous experiences and/or test results. Gore gives this information to the best of its knowledge, but assumes no legal responsibility. Customers are asked to check the suitability and usability in the specific application, since the performance of the product can only be judged when all necessary operating data are available. The above information is subject to change and is not to be used for specification purposes. Gore's terms and conditions of sale apply to the sale of the products by Gore.

W. L. Gore & Associates, Inc. is certified according to IATF 16949, ISO 9001 and ISO 14001 standards.

GORE, *Together, improving life* and designs are trademarks of W. L. Gore & Associates. © 2026 W. L. Gore & Associates GmbH

INTERNATIONAL CONTACTS

Australia +61 2 9473 6800
China +86 21 5172 8299
EMEA +49 89 4612 2211
India +91 22 6768 7000

Japan +81 3 6746 2570
Korea +82 2 393 3411
Mexico +52 81 8288 1281
Singapore +65 6733 2882

South America +55 11 5502 7800
Taiwan +886 2 2173 7799
USA +1 410 506 7812

W.L. Gore & Associates, Inc.
401 Airport Road, Elkton, MD 21922
T +1 800 523 4673 **F** +1 410 506 8749 **E** automotive.us@wlgore.com
gore.com/autovents

AUTO-188-R2-DSH-EN-OCT26