Venting for Protection

Harsh or changing environmental conditions cause pressure changes that can stress outdoor enclosure seals to failure, allowing contaminants to enter and damage sensitive electronics.

GORE® Protective Vents effectively equalize pressure and reduce condensation in sealed enclosures, while keeping out solid and liquid contaminants. They can improve the safety, reliability and service life of outdoor electronic devices.

A VENTING PORTFOLIO FOR ANY APPLICATION

GORE® Protective Vents Snap-In Series delivers robust venting performance and consistent, long-lasting protection, even in very harsh environments. Engineered for use in high-throughput (semi- or fully-automated) production lines, they also allow quick and easy manual installation. All Snap-In Series vents are manufactured with 100% in-line quality inspections; most are individually laser-marked for full product traceability. Four PolyVent performance options meet diverse application needs:

- **GORE® PolyVent Supra** is the low-profile solution for enclosures with limited space for vent installation, and volumes up to 0.5 liters.

- **GORE® PolyVent Hysi** offers fast, economical integration, and the option to inside-mount for nearly-invisible installation. For enclosure volumes up to 2 liters.

- **GORE® PolyVent Standard** offers reliable performance in many applications, for enclosure volumes up to 5 liters.

- **GORE® PolyVent High Airflow**, in hydrophobic or oleophobic versions, delivers high airflow for enclosure volumes up to 30 liters.

Fast, reliable installation and durable protection for enclosures of all sizes

REALIZE THE BENEFITS OF GORE® VENTS SNAP-IN SERIES:

- **Fast installation on any production line**: automated, semi-automated or manual.

- **Reliable performance**: snap-in construction securely seats and seals the vent to the housing.

- **Durable protection**: even after immersion, the GORE™ Membrane blocks contaminant ingress.

- **Rugged durability**: engineered for chemical and temperature resistance, and hydrolytic stability.
# Protective Vents

**SNAP-IN SERIES**

## Product Information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>PolyVent Supra</th>
<th>PolyVent Hysi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>VE0006GSV</td>
<td>PMF100271</td>
</tr>
</tbody>
</table>

### Product Performance Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>PolyVent Supra</th>
<th>PolyVent Hysi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical airflow</td>
<td>35 ml / min (dp = 70 mbar)</td>
<td>200 ml / min (dp = 70 mbar)</td>
</tr>
<tr>
<td>Laminate: membrane / backing material</td>
<td>ePTFE / Polyester (PET)</td>
<td>ePTFE / -</td>
</tr>
<tr>
<td>Membrane characteristic</td>
<td>Oleophobic</td>
<td>Oleophobic</td>
</tr>
<tr>
<td>Vent body &amp; cap: material</td>
<td>Silicone</td>
<td>Outer hull: Silicone / Carrier ring: TPE</td>
</tr>
<tr>
<td>Vent body &amp; cap: color</td>
<td>Black</td>
<td>Outer hull: clear / Carrier ring: black</td>
</tr>
<tr>
<td>O-ring material</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Installed height (to the inside)</td>
<td>1.5 mm</td>
<td>1.4 mm</td>
</tr>
<tr>
<td>Installed height (to the outside)</td>
<td>1.5 mm</td>
<td>0.0 mm (when inside-mounted)</td>
</tr>
<tr>
<td>Traceability</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Design and Dimensions

**Units are in mm**

**GORE™ Membrane**

- Φ 12.25 ± 0.2
- Φ 11
- H: 6.8 ± 0.25

**Housing wall**

- H: 5.5
- H: 6.8 ± 0.25

### Recommended Installation

**Units are in mm**

- Install on a flat, vertical housing surface where water or other contaminants will not pool.
- PolyVent Supra, Standard and High Airflow are designed to be installed from outside the enclosure.
- PolyVent Hysi is designed to be mounted from inside the enclosure. (It can also be mounted from outside, but inside-mounting is recommended.)

## Environmental Performance

GORE® Vents Snap-In Series have been tested by independent laboratories and have been verified to meet these performance standards. All certificates are available upon request.

### Ingress Protection Testing

Vent protection against ingress of particulates and water

**METHOD:**
- IEC 60529
  - IP65 (PolyVent Supra only)
  - IP66 (PolyVent Hysi, Standard and High Airflow only)
  - IP67
  - IP68 (extended immersion: 2 meters for 1 hour)
  - IP69K (PolyVent Standard and High Airflow only)

### Temperature Testing

Vent durability in a range of temperatures

**METHODS:**
- IEC 60068-2-1
  - (to -40 °C)
- IEC 60068-2-2
  - (to +125 °C; PolyVent Hysi only: to +85 °C)
- IEC 60068-2-14
  - (cycling: -40 °C to +125 °C; PolyVent Standard and High Airflow only)

### Humidity Testing

Vent durability in hot, humid environments (accelerated aging test)

**METHOD:**
- IEC 60068-2-78

**TEST CONDITIONS:**
- 85 °C
- 85% relative humidity
- 1,000 hours
Corrosive Gas Testing
Vent durability in corrosive gas environment (e.g., NOx, SOx, H2S, Clx)
Method:
• GR-3108-CORE

Vibration Testing (not applicable to PolyVent Supra and Hysi)
Vent resistance against vibration
Method:
• ETSI EN 300 019-2-2
• IEC 60068-2-64

Flammability Testing
Resistance to open flame and radiant heat
Method:
• UL 94-HB
PolyVent Standard and High Airflow caps and bodies

UV Resistance Testing (not applicable to PolyVent Supra)
Vent resistance to ultraviolet light
Method:
• ASTM G155-05a (1,000 hours)
Protective Vents

SNAP-IN SERIES

THE SCIENCE BEHIND THE SOLUTION

GORE® Protective Vents incorporate a membrane of expanded polytetrafluoroethylene (ePTFE). This unique membrane is constructed with billions of pores 700 times larger than an air molecule. These pores allow air to flow freely in and out of the housing, which prevents stress on seals. At the same time, the membrane pores — which are 20,000 times smaller than a drop of water — serve as a barrier against water, dirt and debris. GORE® Protective Vents can be designed with a variety of specific properties for maximum performance in any venting application.

The GORE™ Membrane is:
• chemically inert
• UV-resistant
• non-shedding
• temperature-resistant

ROHS INFORMATION

W. L. Gore & Associates declares that the products listed in this document are below the thresholds established in EU Commission Decision Directive 2011/65/EC, Directive 2002/95/EC (RoHS) and Directive 2003/11/EC.

ABOUT W. L. GORE & ASSOCIATES

Well known for waterproof, breathable GORE-TEX® fabric, Gore is a technology-driven company focused on product innovation. The company’s portfolio includes everything from high-performance fabrics and implantable medical devices to industrial manufacturing components and aerospace electronics. Gore products have remained at the forefront of creative solutions because they are engineered specifically for challenging applications requiring durable performance where other products fail.

For almost thirty years, Gore has delivered venting solutions for a variety of applications installed in rugged environments throughout the world — applications such as solar, lighting, security, telecommunication and other electronic systems; automotive and heavy-duty vehicles; and chemical and agricultural packaging. Engineered with the latest materials and technology, GORE® Protective Vents are backed by years of research and testing to help extend product life and enhance reliable performance — all to ensure that these venting products maximize performance and extend the life of products used in the most demanding applications.

Headquartered in the United States, Gore employs approximately 10,000 associates in 30 countries worldwide. In Europe, Gore started its first business operations only a few years after the Enterprise’s founding in 1958.

Learn more at gore.com.

INTERNATIONAL CONTACTS

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