Protective Vents

SCREW-IN SERIES

Increase outdoor enclosure durability in harsh environments

Venting Protection for Your Application

Harsh or changing environmental conditions cause seals to fail and allow contaminants to damage sensitive electronics. GORE® Protective Vents effectively equalize pressure and reduce condensation in sealed enclosures, while keeping out solid and liquid contaminants. They improve the safety, reliability and service life of outdoor electronic devices.

GORE® Vent Screw-In Series is engineered to provide oleophobic protection and withstand the mechanical stresses of challenging environments. Choose from a full range of sizes and performance options to meet all your application needs.

- **GORE® PolyVent XS** has a compact, low-profile design that meets some of the industry’s toughest standards, making it ideal for today’s smaller (up to 2 l) housings.

- **GORE® PolyVent Standard** offers reliable venting for volumes up to 5 l, and comes in two colors and two thread sizes for different wall thicknesses, with or without a counter nut.

- **GORE® PolyVent High Airflow** has the protection level of “Standard” – with nearly 10 times the airflow. For housings up to 50 l, it easily manages the strong pressure differentials caused by extreme weather.

- **GORE® PolyVent XL** maintains exceptionally high airflow in extra-large enclosures (volumes up to 200 l) and meets the most rigorous standards, such as solar resistance (IEC 62108).

- **GORE® PolyVent Stainless Steel** offers premium-level durability, corrosion- and chemical resistance, to reliably protect enclosures up to 20 l in the most extreme conditions.

- **NEW! GORE® PolyVent Ex+** is both IECEx and ATEX certified for equipment operating in potentially explosive environments and offers exceptional venting performance for enclosures up to 20 liters in volume.

Realize the Benefits of GORE® Vents Screw-In Series:

- **Easy to install:** ensures fast, foolproof integration for durable performance in any application.

- **Increased safety:** the rugged screw-in construction, improved cap design and O-ring keep the vent reliably secured in the housing.

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

- **Rugged durability:** engineered for chemical, UV and temperature resistance, and hydrolytic stability.

- **Product quality:** 100 % quality control, plus full traceability for all vents with thread size M6 and M12.

- **Flammability resistance:** All PolyVent caps, bodies and O-rings are rated UL 94 V-0. PolyVent XS, Stainless Steel and Ex+ also incorporate a UL 94 VTM-0 rated membrane.
## Product Information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>PolyVent XS</th>
<th>PolyVent Standard</th>
<th>PolyVent Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread Size</td>
<td>M6x0.75</td>
<td>M12x1</td>
<td>M12x1.5</td>
</tr>
<tr>
<td>Product Number</td>
<td>PMF100600</td>
<td>PMF100318 (black) / PMF100319 (grey)</td>
<td>PMF100320 (black) / PMF100321 (grey)</td>
</tr>
</tbody>
</table>

### Product Performance Characteristics

<table>
<thead>
<tr>
<th>Typical airflow</th>
<th>300 ml/min (dp = 70 mbar)</th>
<th>450 ml/min (dp = 70 mbar)</th>
<th>450 ml/min (dp = 70 mbar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laminate: membrane/</td>
<td>ePTFE / –</td>
<td>ePTFE / Polyester (PET)</td>
<td>ePTFE / Polyester (PET)</td>
</tr>
<tr>
<td>backing material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Membrane characteristic</td>
<td>Oleophobic</td>
<td>Oleophobic</td>
<td>Oleophobic</td>
</tr>
<tr>
<td>Vent body &amp; cap:</td>
<td>Polyamide (PA6/66)</td>
<td>Polyamide (PA6)</td>
<td>Polyamide (PA6)</td>
</tr>
<tr>
<td>material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wrench size</td>
<td>10 mm</td>
<td>16 mm</td>
<td>16 mm</td>
</tr>
<tr>
<td>O-Ring material</td>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</td>
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<tr>
<td>Counter nut:</td>
<td>n/a</td>
<td>n/a</td>
<td>Plastic / Grey / M10510-009</td>
</tr>
<tr>
<td>material / color /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>part number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traceability</td>
<td>Yes: Individually laser-marked</td>
<td>Yes: Individually laser-marked</td>
<td>Yes: Individually laser-marked</td>
</tr>
<tr>
<td>IECEx/ATEX Certification</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Design and Dimensions

Units are in mm

![Design and Dimensions Diagram](image)

### Recommended Installation

Units are in mm

- Install on a flat, vertical housing surface where water or other contaminants will not pool.
- Install vent with cap on exterior of housing.

<table>
<thead>
<tr>
<th>Torque</th>
<th>0.3 ± 0.1 Nm</th>
<th>0.7 ± 0.1 Nm</th>
<th>0.7 ± 0.1 Nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through-hole diameter</td>
<td>–</td>
<td>–</td>
<td>12.2 ± 0.1 mm</td>
</tr>
<tr>
<td>Product Name</td>
<td>PolyVent High Airflow</td>
<td>PolyVent XL</td>
<td>PolyVent Stainless Steel</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Thread Size</td>
<td>M12x1.5</td>
<td>M32x1.5</td>
<td>M12x1.5</td>
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<td></td>
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<tr>
<td>Typical airflow</td>
<td>4000 ml/min (dp = 70 mbar)</td>
<td>16 l/min (dp = 12 mbar)</td>
<td>1600 ml/min (dp = 70 mbar)</td>
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<tr>
<td>Laminate</td>
<td>ePTFE / Polyester (PET)</td>
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</tr>
<tr>
<td>Oleophobic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyamide (PA6)</td>
<td>Polycarbonate (PC)</td>
<td>Stainless steel (1.4404 / 316L)</td>
<td>Stainless steel (1.4404 / 316L)</td>
</tr>
<tr>
<td>Black: RAL 9011 / Grey: RAL 7035</td>
<td>Grey: RAL 7035</td>
<td>Metallic</td>
<td>Metallic</td>
</tr>
<tr>
<td>16 mm</td>
<td>70 mm</td>
<td>18 mm</td>
<td>18 mm</td>
</tr>
<tr>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</td>
</tr>
<tr>
<td>Plastic / Grey / M10510-009</td>
<td>Stainless steel (1.4404/316L)/M10510-016</td>
<td>Nickel-plated brass / M10510-008</td>
<td>n/a</td>
</tr>
<tr>
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<td>No</td>
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<tr>
<td>Counter nut: part number</td>
<td>n/a</td>
<td>Plastic / Grey / M10510-010</td>
<td>Stainless steel (1.4404/316L) / M10510-016</td>
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</tr>
<tr>
<td>O / 14.3 ± 0.2</td>
<td>0.2</td>
<td>15.55 ± 0.15</td>
<td>15.55 ± 0.15</td>
</tr>
<tr>
<td>M12x1.5 DIN13-21 6H</td>
<td>60° 2°</td>
<td>160° 3°</td>
<td>160° 3°</td>
</tr>
<tr>
<td>O / 14.3 ± 0.2</td>
<td>0.2</td>
<td>15.55 ± 0.15</td>
<td>15.55 ± 0.15</td>
</tr>
<tr>
<td>M32x1.5 DIN13-22 6H</td>
<td>60° 2°</td>
<td>160° 3°</td>
<td>160° 3°</td>
</tr>
<tr>
<td>O / 14.3 ± 0.2</td>
<td>0.2</td>
<td>15.55 ± 0.15</td>
<td>15.55 ± 0.15</td>
</tr>
<tr>
<td>M12x1.5 DIN13-21 6H</td>
<td>60° 2°</td>
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**Protective Vents**

**SCREW-IN SERIES**

### Environmental Performance

**Ingress Protection Testing**
Vent protection against ingress of particulates and water

**Temperature Testing**
Vent durability for a range of temperatures

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

**Salt Fog Testing**
Vent resistance to salty environments

**Corrosive Gas Testing**
Vent durability in corrosive gas environment (e.g., NOx, SOx, H2S, Cl)

**Vibration Testing**
Vent resistance against vibration

**Flammability and UV Resistance Testing**
Not applicable to Stainless Steel Materials: All non-metal PolyVent caps / bodies

**Solar Industry Testing**
PolyVent XL only

**Explosive Environments Testing**
PolyVent Ex+ only

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

### About W. L. Gore & Associates

Well-known for its waterproof, breathable GORE-TEX® fabric, Gore is a technology-driven company focused on product innovation. We engineer creative solutions especially for challenging applications where other products fail. Founded in 1958, Gore employs approximately 10,000 associates in 30 countries worldwide.

Learn more at gore.com.

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**Germany** +49 89 4612 2211  
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**Japan** +81 3 6746 2570  
**Korea** +82 2 393 3411  

### Protective Vents

**Environmental Performance**

- **Ingress Protection Testing**
  - Method:
  - IEC 60529
  - Ratings:
  - IP65
  - IP66
  - IP67
  - IP68 (extended immersion: 2 meters for 1 hour; or up to 7.2 hours for PolyVent XS)
  - IP69k (available for all vents except for PolyVent XS)

- **Temperature Testing**
  - Method:
  - IEC 60068-2-1 (to -40 °C)
  - IEC 60068-2-2 (to +125 °C, or +150 °C for PolyVent XS)
  - IEC 60068-2-14 (cycling: -40 °C to +125 °C, or to +150 °C for PolyVent XS)

- **Humidity Testing**
  - Method:
  - IEC 60068-2-78
  - Test conditions:
  - 85 °C
  - 85 % relative humidity
  - 1,000 hours

- **Salt Fog Testing**
  - Method:
  - IP67
  - IP66
  - IP65
  - IEC 60068-2-11 (salt fog)
  - IEC 60068-2-52 (cyclic salt fog)

- **Corrosive Gas Testing**
  - Method:
  - IEC/EN 60079-0
  - IEC/EN 60079-7
  - IEC/EN 60079-31
  - ATEX directive 2014/34/EU
  - Ex II 2G Ex eb IIC Gb
  - Ex II 2D Ex tb IIIC Db

- **Vibration Testing**
  - Method:
  - ETSI EN 300 019-2-2
  - IEC 60068-2-64

- **Flammability and UV Resistance Testing**
  - Not applicable to Stainless Steel Materials
  - Method:
  - UL 94 V-0
  - UL 94 V-0 and UL 746C f1
  - UL 94 V-0 and IECEx standards

- **Solar Industry Testing**
  - Method:
  - IEC 62108 10.8
  - (humidity freeze – high temperature / humidity followed by freezing temperature)
  - IEC 62108 10.9
  - (hail impact)

- **Explosive Environments Testing**
  - Method:
  - ATEX directive 2014/34/EU
  - Ex II 2G Ex eb IIC Gb
  - Ex II 2D Ex tb IIIC Db

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