Water, dust, dirt, cleaning agents and most oils are repelled by the oleophobic membrane, thereby protecting expensive and sensitive electronics.

The free-flow of gases makes GORE™ Membrane Vents indispensable when it comes to designing a waterproof battery powered device. By allowing hydrogen gas to diffuse through the membrane vent, the concentration of hydrogen inside the case is kept below potentially explosive levels.

With over 50 million vents installed worldwide in automotive and electronic applications, GORE™ Membrane Vents are proven to be a reliable, rugged and cost effective solution.

All GORE™ Membrane Vents incorporate the unique GORE-TEX® expanded PTFE membrane from the world leaders in ePTFE technology, W. L. Gore & Associates.
**Screw-In Vent: POV/M12 x1,5**

### Membrane Characteristic
- Hydrophobic and Oleophobic
- Oil Rating 3 (AATCC 118-1997 ASTM)
- Water entry pressure of the membrane ≥ 0.6 bar/60 sec

### Ingress Protection class of the installed POV/M12 x1,5
- IP65 - Water jets
- IP67 - 1 meter water submersion for 30 minutes
- IP69K - High pressure spray

### Temperature Resistance (DIN IEC 68-2-14, Na)
- Cycle test
  - Cycles: 400
  - T dwell = 20 min, t change<10 sec.

POV/M12 x1,5 vents are designed for service temperature range of -40°C to 125°C.

### UV and Climate Resistance
- Industrial climate test (DIN 50-0-18) Test criteria SFW 2,0 S
  - Cycle 9
- UV and climate resistance: other than a little yellowing of the top surface, no significant change in mechanical characteristics.

### Salt Spray Test (DIN 50-0-21)
- No penetration of salt crystals through the membrane into the housing.

### 85/85 Storage Test (DIN IEC 60068-2-3: 85°C, 85% r.H. dwell time 1000 hours)
- No significant change in mechanical characteristics.

### Available Designs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Plastic</th>
<th>Color</th>
<th>O-Ring</th>
<th>Typical Airflow @ dp=70mbar in ml/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMF100320</td>
<td>PA6 GF10 / UL-V0</td>
<td>Black</td>
<td>Silicone 50° Shore A / UL-V0</td>
<td>400</td>
</tr>
<tr>
<td>PMF100321</td>
<td>PA6 GF10 / UL-V0</td>
<td>Grey</td>
<td>Silicone 50° Shore A / UL-V0</td>
<td>400</td>
</tr>
<tr>
<td>M10510-007 (Backing Nut)</td>
<td>PA6 GF10 / UL-V0</td>
<td>Black</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Design and Dimensions**

**Recommended Installation**

- Maximum applied torque: 0.6 – 0.8 Nm.

- Recommendations for through holes (require backing nut):
  - Through hole ID 12.2 mm / Chamfer OD 14.0 mm.
  - For more information on installation recommendation for thinner walls and trough hole, please see Gore Technical Bulletins: Additional installation recommendations for POV/M12 x1,5.

**For customized design please contact us**

W. L. Gore & Associates
Gore Technical Venting Solutions
www.gore.com/ventsolutions
Email: vents@wlgore.com

Sales & Customer Service Sites

<table>
<thead>
<tr>
<th>Country</th>
<th>Phone</th>
<th>Country</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>+54 351 488 6427</td>
<td>Netherlands</td>
<td>+49 (0) 89 46 12 22 11</td>
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<tr>
<td>Australia</td>
<td>+61 2 9473 6800</td>
<td>Singapore</td>
<td>+65 6 275 4673</td>
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<tr>
<td>China</td>
<td>+86 21 6247 1999</td>
<td>Sweden</td>
<td>+46 (0) 31 70 67 800</td>
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<td>France</td>
<td>+33 (0) 156 95 65 65</td>
<td>Taiwan</td>
<td>+886 2 8771 7799</td>
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<td>UK</td>
<td>+44 (0) 1506 460123</td>
</tr>
<tr>
<td>Italy</td>
<td>+39 04 56 20 92 40</td>
<td>USA</td>
<td>+1 410 392 4440</td>
</tr>
</tbody>
</table>

**Note:** The optimal performance of any GORE™ Membrane Vent is dependent on how it is handled and incorporated into the final product. This includes elements as the device design, sealing method and assembly method. While Gore is able to provide general guidelines based upon our experience with the GORE™ Membrane Vent, it is ultimately the responsibility of the device manufacturer to validate each product and its performance for its intended electronic application. Contact one of our technical sales associates today for assistance in determining the best GORE™ Membrane Vent for your specific electronic application. Specifications are subject to change without notice.

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**Protective Vents**

**SCREW-IN SERIES**

### 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**

- **Typical airflow**
  - 300 ml/min (dp = 70 mbar)
  - 450 ml/min (dp = 70 mbar)
  - 450 ml/min (dp = 70 mbar)
- **Laminate: membrane / backing material**
  - ePTFE / –
  - ePTFE / Polyester (PET)
  - ePTFE / Polyester (PET)
- **Membrane characteristic**
  - Oleophobic
  - Oleophobic
  - Oleophobic
- **Vent body & cap: material**
  - Polyamide (PA6/66)
  - Polyamide (PA6)
  - Polyamide (PA6)
- **Vent body & cap: color**
  - Black: RAL 9004
  - Black: RAL 9011 / Grey: RAL 7035
  - Black: RAL 9011 / Grey: RAL 7035
- **Wrench size**
  - 10 mm
  - 16 mm
  - 16 mm
- **O-Ring material**
  - Silicone 60 Shore A
  - Silicone 60 Shore A
  - Silicone 60 Shore A
- **Counter nut: material / color / part number**
  - n/a
  - Plastic / Grey / M10510-009
  - Plastic / Grey / M10510-009
- **Traceability**
  - Yes: Individually laser-marked
  - Yes: Individually laser-marked
  - Yes: Individually laser-marked

### Design and Dimensions

**Units are in mm**

- **GORE® Membrane O-Ring 10x2**
  - M6x0.75 DIN13-21 6g
  - Ø 11.2 x 1.4
- **GORE® Membrane O-Ring 4.8 x 1.4**
  - M12x1.5 DIN13-21 6H
  - Ø 17
- **GORE® Membrane O-Ring 10x2**
  - M12x1.5 DIN13-21 6H
  - Ø 17

**Recommended Installation**

**Units are in mm**

- **Recommended torque**
  - 0.3 ± 0.1 Nm
  - 0.7 ± 0.1 Nm
  - 0.7 ± 0.1 Nm
  - 5 Nm
  - 0.9 ± 0.3 Nm
- **Through-hole diameter**
  - –
  - 12.2 ± 0.1 mm
  - 12.2 ± 0.1 mm
  - 33 ± 0.5 mm
  - 12.2 ± 0.1 mm

**Environmental Performance**

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.

**Ingress Protection Testing**

Vent protection against ingress of particulates and water

**METHOD:**
- **IEC 60529**
  - IP66
  - IP67
  - IP68 (extended immersion: 2 meters for 1 hour)
  - IP69k (for Standard, High Airflow, XL and Stainless Steel vents)

**Temperature Testing**

Vent durability in a range of temperatures

**METHODS:**
- **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**

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

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

**Test conditions:**
- 85 °C
- 85% relative humidity
- 1,000 hours