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 **NOW WITH IK10 PERFORMANCE** offers exceptional durability, chemical and corrosion resistance, to reliably protect enclosures up to 20 l in the most rugged environments.

- 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.

Increase outdoor enclosure durability in harsh environments

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 cap, body and O-ring materials 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></th>
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<tbody>
<tr>
<td>Thread Size</td>
<td>M6x0.75</td>
<td>M12x1</td>
<td>M12x1</td>
<td>M12x1.5</td>
<td>M12x1.5</td>
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<td>M12x1.5</td>
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<td>Product Number</td>
<td>PMF100600</td>
<td>PMF100318 (black)</td>
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<td>PMF100585 (black) / PMF100586 (grey)</td>
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### 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>
<th>4000 ml/min (dp = 70 mbar)</th>
<th>16 l/min (dp = 12 mbar)</th>
<th>1600 ml/min (dp = 70 mbar)</th>
<th>1600 ml/min (dp = 70 mbar)</th>
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<tbody>
<tr>
<td>Laminated membrane/ backing material</td>
<td>ePTFE / -</td>
<td>ePTFE / Polyester (PET)</td>
<td>ePTFE / Polyester (PET)</td>
<td>ePTFE / Polyester (PET)</td>
<td>ePTFE / Polyester (PET)</td>
<td>ePTFE / -</td>
<td>ePTFE / -</td>
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<tr>
<td>Membrane characteristic</td>
<td>Oleophobic</td>
<td>Oleophobic</td>
<td>Oleophobic</td>
<td>Oleophobic</td>
<td>Oleophobic</td>
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<tr>
<td>Wrench size</td>
<td>10 mm</td>
<td>16 mm</td>
<td>16 mm</td>
<td>16 mm</td>
<td>16 mm</td>
<td>18 mm</td>
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<tr>
<td>O-Ring material</td>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</td>
<td>Silicone 60 Shore A</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: material/ color</td>
<td>Stainless steel (SUS304) / M10510-017</td>
<td>a/a</td>
<td>Plastic / Grey / M10510-009</td>
<td>Plastic / Grey / M10510-010</td>
<td>Stainless steel (1.4404 / 316L)</td>
<td>Nickel-plated brass (M10510-006)</td>
<td>a/a</td>
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</table>

### Traceability

- Yes: Individually laser-marked
- No

### IECEx/ATEX Certification

- No
- Yes: Individually laser-marked

### Design and Dimensions

#### Units are in mm

<table>
<thead>
<tr>
<th>Recommended Installation</th>
<th>Units are in mm</th>
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<tbody>
<tr>
<td>Install on a flat, vertical housing surface where water or other contaminants will not pool.</td>
<td></td>
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<tr>
<td>Install vent with cap on exterior of housing.</td>
<td></td>
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<tr>
<td><strong>Torque</strong></td>
<td><strong>Through-hole diameter</strong></td>
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<tr>
<td>0.3 ± 0.1 Nm</td>
<td>6.2 ± 0.1 mm</td>
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<tr>
<td>0.7 ± 0.1 Nm</td>
<td>-</td>
</tr>
<tr>
<td>0.7 ± 0.1 Nm</td>
<td>12.2 ± 0.1 mm</td>
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<tr>
<td>0.7 ± 0.1 Nm</td>
<td>33 ± 0.5 mm</td>
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<tr>
<td>5 Nm</td>
<td>12.2 ± 0.1 mm</td>
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<tr>
<td>0.9 ± 0.3 Nm (for IK10: 5.0 ± 0.5 Nm)</td>
<td>-</td>
</tr>
<tr>
<td>0.9 ± 0.3 Nm (required)</td>
<td>-</td>
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</tbody>
</table>
Protective Vents

SCREW-IN SERIES

Environmental Performance

Ingress Protection Testing
Vent protection against ingress of particulates and water
Method:
- IEC 60529
Ratings:
- IP65
- IP66
- IP67
- IP68 (extended immersion: 2 meters for 1 hour; or up to 72 hours for PolyVent XS)
- IP69k (available for all vents except for PolyVent XS)

Temperature Testing
Vent durability for a range of temperatures
Methods:
- IEC 6068-2-1 (to -40 °C)
- IEC 6068-2-2 (to +125 °C, or +150 °C for PolyVent XS)
- IEC 6068-2-14 (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 6068-2-78
Test conditions:
- 85 °C
- 85 % relative humidity
- 1,000 hours

Salt Fog Testing
Vent resistance to salty environments
Methods:
- IEC 6068-2-11 (salt fog)
- IEC 6068-2-52 (cyclic salt fog)

Corrosive Gas Testing
Vent durability in corrosive gas environment (e.g., NOx, SOx, H2S, Cl2)
Method:
- GR-3108-CORE

Vibration Testing
Vent resistance against vibration
Methods:
- ETSI EN 300 019-2-2
- IEC 60068-2-64

Flammability and UV Resistance Testing
Not applicable to Stainless Steel Materials
Resistance to open flame, radiant heat and ultraviolet light
Methods:
- UL 94 V-0 and UL 746C f1
All non-metal PolyVent caps/bodies materials
- UL 94 V-0
All PolyVent O-ring materials
- UL 94 VTM-0
GORE™ Membranes in PolyVent XS, Stainless Steel and Ex

Solar Industry Testing
Durability in solar applications
PolyVent XL only
Methods:
- IEC 62108 10.8
(humidity freeze – high temperature / humidity followed by freezing temperature)
- IEC 62108 10.9
(hail impact)

Explosive Environments Testing
Durability in explosive environment acc. to IECEx and ATEX
PolyVent Ex+ only
Methods:
- ATEx directive 2014/34/EU
- IEC/EN 60079-0
- IEC/EN 60079-7
- IEC/EN 60079-31
Classification:
Ex II 2G Ex eb IIC Gb
Ex II 2D Ex tb IIC Db

Mechanical Impact Testing
PolyVent Stainless Steel only
Vent resistance against external mechanical impact when using a 60° chamfer and 5.0 ± 0.5 Nm torque
Method:
- IEC 62262 (IK code: IK10)

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 9,500 Associates and a strong, team-oriented culture, Gore generates annual revenues that exceed $3 billion.

Learn more at gore.com.

International Contacts

<table>
<thead>
<tr>
<th>Country</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>Australia</td>
<td>+61 2 9473 6800</td>
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<tr>
<td>Benelux</td>
<td>+31 49 89 4612 2211</td>
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<td>Brazil</td>
<td>+55 11 5502 7800</td>
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<td>China</td>
<td>+86 21 5172 8299</td>
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<td>France</td>
<td>+33 1 5695 6565</td>
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<td>Germany</td>
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<td>India</td>
<td>+91 22 6768 7000</td>
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<td>Italy</td>
<td>+39 045 6209 250</td>
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<td>Japan</td>
<td>+81 3 6746 2570</td>
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<td>Korea</td>
<td>+82 2 393 3411</td>
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<td>Mexico</td>
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<td>Scandinavia</td>
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<td>USA</td>
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