GORE® Protective Vents
Screw-In Series



INCREASE DURABILITY IN HARSH ENVIRONMENTS

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 safety, reliability and service life of outdoor electronic devices.

GORE® Protective Vents 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.

Venting solution for any application

- **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 exceptional durability, chemical and corrosion resistance, to reliably protect enclosures up to 20 l in the most rugged environments. IK10 (IEC 62262) performance.
- **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.

Benefits of GORE® Protective Vents Screw-In Series:

- **Simple to install:** ensures fast and safe 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.
- **Reduces condensation:** by allowing air exchange

Together, improving life

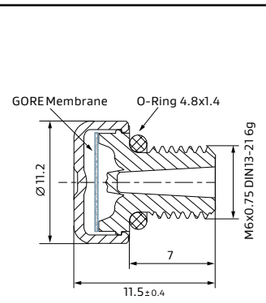
Product Information

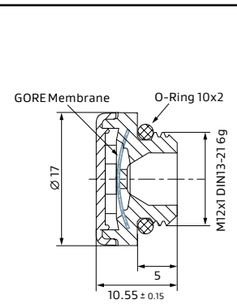
Product Name	PolyVent XS	PolyVent Standard	PolyVent Standard	PolyVent High Airflow	PolyVent XL	PolyVent Stainless Steel	PolyVent Ex+
Thread Size	M6x0.75	M12x1	M12x1.5	M12x1.5	M32x1.5	M12x1.5	M12x1.5
Product Number	PMF100600	PMF100319 (gray) PMF100318 (black)	PMF100321 (gray) PMF100320 (black)	PMF100586 (gray) PMF100585 (black)	PMF200542	PMF200444	PMF200400
						 IK10-Rated	

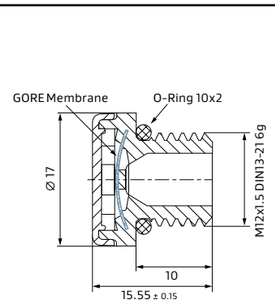
Product Performance Characteristics							
Typical airflow	300 ml/min (dp = 70 mbar)	450 ml/min (dp = 70 mbar)	450 ml/min (dp = 70 mbar)	4000 ml/min (dp = 70 mbar)	16 l/min (dp = 12 mbar)	1600 ml/min (dp = 70 mbar)	1600 ml/min (dp = 70 mbar)
Laminate: membrane | backing material	ePTFE | –	ePTFE | Polyester (PET)	ePTFE | Polyester (PET)	ePTFE | Polyester (PET)	ePTFE | Polyester (PET)	ePTFE | –	ePTFE | –
Membrane characteristic	Oleophobic	Oleophobic	Oleophobic	Oleophobic	Oleophobic	Oleophobic	Oleophobic
Vent body & cap: material	Polyamide (PA6/66)	Polyamide (PA66+PA6 Blend)*	Polyamide (PA66+PA6 Blend)*	Polyamide (PA66+PA6 Blend)*	Polycarbonate (PC)	Stainless steel (1.4404/316L)	Stainless steel (1.4404/316L)
Vent body & cap: color similar to	Black: RAL 9004	Black: RAL 9011 | Gray: RAL 7035	Black: RAL 9011 | Gray: RAL 7035	Black: RAL 9011 | Gray: RAL 7035	Gray: RAL 7035	Metallic	Metallic
Wrench size	10 mm	16 mm	16 mm	16 mm	70 mm	18 mm	18 mm
O-Ring material	Silicone 60 Shore A	Silicone 60 Shore A	Silicone 60 Shore A	Silicone 60 Shore A	Silicone 60 Shore A	Silicone 60 Shore A	Silicone 60 Shore A
Counter nut: material | color | part number	Stainless steel (SUS304) | M10510-017	n/a	Plastic | Gray | M10510-009	Plastic | Gray | M10510-009	Plastic | Gray | M10510-010	Nickel-plated brass | M10510-008	n/a
Traceability	Yes: Individually laser-marked	Yes: Individually laser-marked	Yes: Individually laser-marked	Yes: Individually laser-marked	No	Yes: Individually laser-marked	Yes: Individually laser-marked
IECEx/ATEX Certification	No	No	No	No	No	No	Yes

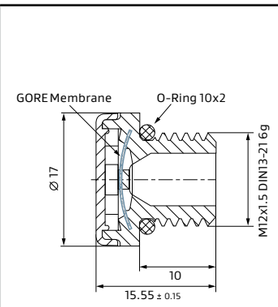
Vent Design and Dimensions

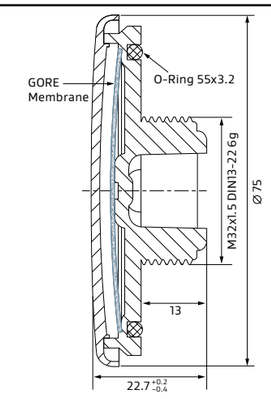
Units are in mm

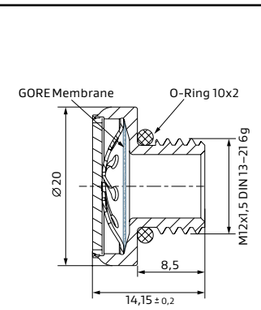


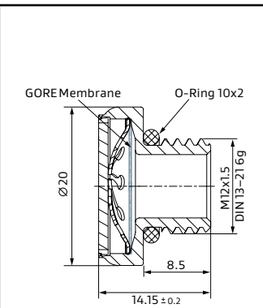








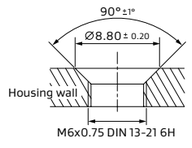


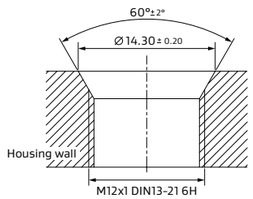


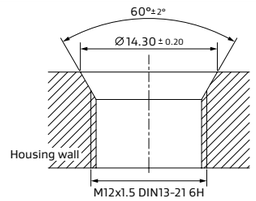
Recommended Installation

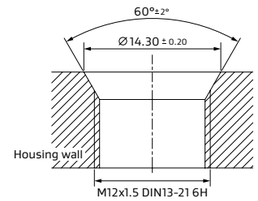
Units are in mm

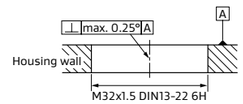
- Install on a flat, vertical housing surface where water or other contaminants will not pool.
- Install vent with cap on exterior of housing.

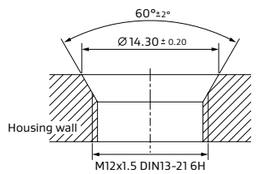


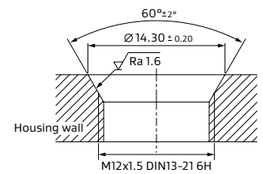












Torque	0.3 ± 0.1 Nm	0.7 ± 0.1 Nm	0.7 ± 0.1 Nm	0.7 ± 0.1 Nm	5 Nm	0.9 ± 0.3 Nm (for IK10: 5.0 ± 0.5 Nm)	0.9 ± 0.3 Nm (required)
Through-hole diameter (chamfer still required)	6.2 ± 0.1 mm	–	12.2 ± 0.1 mm	12.2 ± 0.1 mm	33 ± 0.5 mm	12.1 ± 0.1 mm	–

RoHS Information

Product Stewardship RoHS Status: W. L. Gore & Associates declares that we do not intentionally add substances listed in RoHS Directive 2011/65/EU in its current valid version including all valid amendments to GORE® Protective Vents.

Recommendation for storage

Gore recommend to store products in cool dry conditions (20–25 °C / 30–50% RH) and out of direct sun light, preferably in the original packaging.

* Gore can offer validated products with same fit, form, function using dual source thermoplastic material PA6T/66.

Environmental Performance

GORE® Protective 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

METHODS:
- **IEC 60529**
  - IP65
  - IP66
  - IP67
  - IP68 (extended immersion: 2 meters for 1 hour; or up to 72 hours for PolyVent XS)
- **ISO 20653**
  - IP69K (available for all vents except for PolyVent XS)

Temperature Testing

Vent durability for 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)

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)

Humidity Testing

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

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

TEST CONDITIONS:
- 85 °C
- 85% relative humidity
- 1000 hours

Solar Industry Testing

PolyVent XL only

Durability in solar applications

METHODS:
- **IEC 62108 10.8** (humidity freeze – high temperature | humidity followed by freezing temperature)
- **IEC 62108 10.9** (hail impact)

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+

Salt Fog Testing

Vent resistance to salty environments

METHODS:
- **IEC 60068-2-11** (salt fog)
- **IEC 60068-2-52** (cyclic salt fog)

Vibration Testing

Vent resistance against vibration

METHODS:
- **ETSI EN 300 019-2-2**
- **IEC 60068-2-64**

Corrosive Gas Testing

Vent durability in corrosive gas environment (e.g., NO_x, SO_x, H_2S, Cl_x)

METHOD:
- **GR-3108-CORE**

Explosive Environments Testing

PolyVent Ex+ only

Durability in explosive environment acc. to IECEx and ATEX

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 IIIC Db

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GORE® Protective Vent(s) are manufactured under the generic industrial ISO 9001 quality system. No other certifications can be provided by Gore for this GORE® Protective Vent. All technical information given is 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.

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