GORE® Protective Vents
Screw-In Series



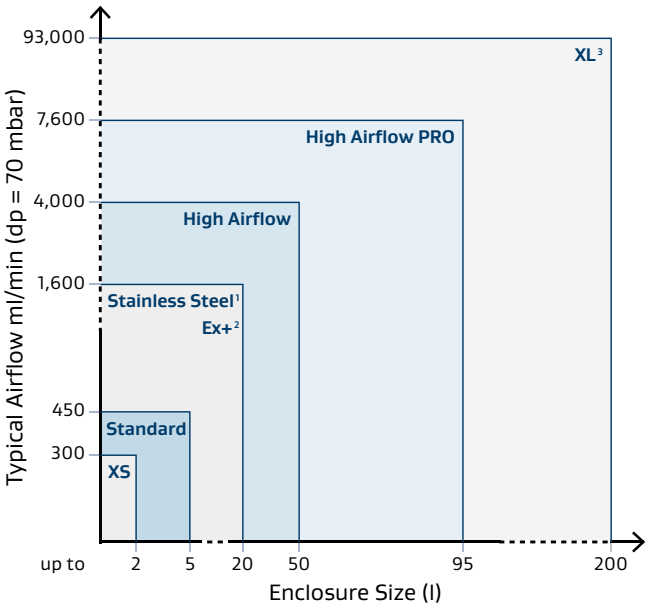
INCREASE DURABILITY IN HARSH ENVIRONMENTS

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.

GORE® PolyVent Screw-In Portfolio



1) IK10- rated
2) IECEx and ATEX certified
3) Equals 16 l/min (dp = 12 mbar)

The higher the airflow
→ the faster the pressure equalization
→ the lower the stress on the seal

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

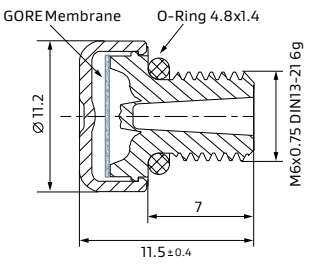
Product Name	PolyVent XS	PolyVent Standard	PolyVent Standard
Thread Size	M6x0.75	M12x1	M12x1.5
Product Number	PMF100600	PMF100319 (gray) PMF100318 (black)	PMF100321 (gray) PMF100320 (black)
			

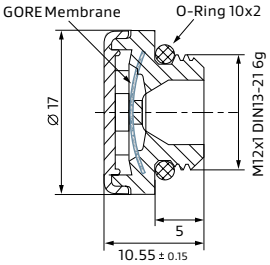
Product Performance Characteristics

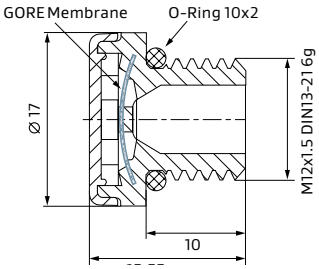
Typical airflow	300 ml/min (dp = 70 mbar)	450 ml/min (dp = 70 mbar)	450 ml/min (dp = 70 mbar)
Laminate: membrane | backing material	ePTFE | –	ePTFE | Polyester (PET)	ePTFE | Polyester (PET)
Membrane characteristic	Oleophobic	Oleophobic	Oleophobic
Vent body & cap: material	Polyamide (PA6/66)	Polyamide (PA66+PA6 Blend)	Polyamide (PA66+PA6 Blend)
Vent body & cap: color similar to	Black: RAL 9004	Black: RAL 9011 | Gray: RAL 7035	Black: RAL 9011 | Gray: 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	Stainless steel (SUS304) | M10510-017	n/a	Plastic | Gray | M10510-009
Traceability	Yes: Individually laser-marked	Yes: Individually laser-marked	Yes: Individually laser-marked
IECEx/ATEX Certification	No	No	No

Vent Design and Dimensions

Units are in mm



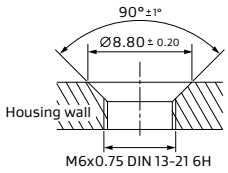


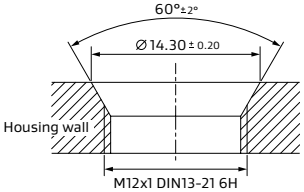


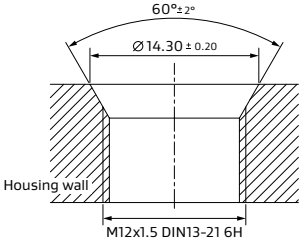
Recommended Installation

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
Through-hole diameter (chamfer still required)	6.2 ± 0.1 mm	–	12.2 ± 0.1 mm

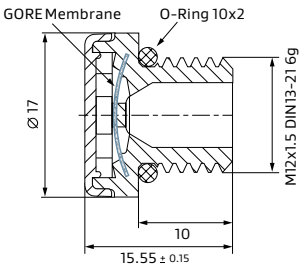
Product Name	PolyVent High Airflow	PolyVent High Airflow PRO	PolyVent High Airflow PRO
Thread Size	M12x1.5	M12x1	M12x1.5
Product Number	PMF100586 (gray) PMF100585 (black)	PMF300671 (gray) PMF300670 (black)	PMF300681 (gray) PMF300680 (black)
			

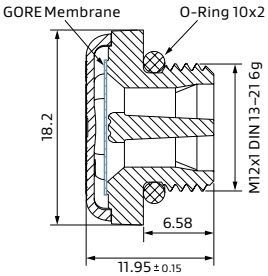
Product Performance Characteristics

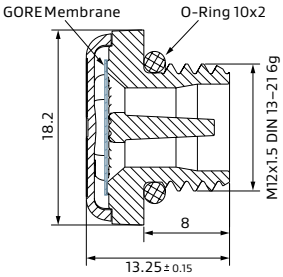
Typical airflow	4000 ml/min (dp = 70 mbar)	7600 ml/min (dp = 70 mbar)	7600 ml/min (dp = 70 mbar)
Laminate: membrane | backing material	ePTFE | Polyester (PET)	ePTFE | Polyester (PET)	ePTFE | Polyester (PET)
Membrane characteristic	Oleophobic	Oleophobic	Oleophobic
Vent body & cap: material	Polyamide (PA66+PA6 Blend)	Polyamide (PA66+PA6 Blend)	Polyamide (PA66+PA6 Blend)
Vent body & cap: color similar to	Black: RAL 9011 | Gray: RAL 7035	Black: RAL 9011 | Gray: RAL 7035	Black: RAL 9011 | Gray: RAL 7035
Wrench size	16 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	Plastic | Gray | M10510-009	n/a	Plastic | Gray | M10510-009
Traceability	Yes: Individually laser-marked	Yes: Individually laser-marked and DMC code	Yes: Individually laser-marked and DMC code
IECEx/ATEX Certification	No	No	No

Vent Design and Dimensions

Units are in mm



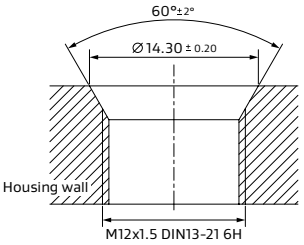


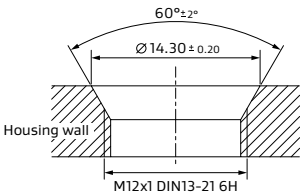


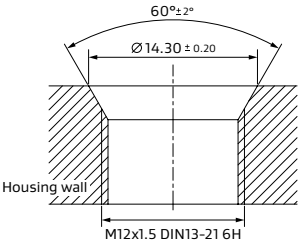
Recommended Installation

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	0.7 ± 0.1 Nm	1.0 ± 0.4 Nm	1.0 ± 0.4 Nm
Through-hole diameter (chamfer still required)	12.2 ± 0.1 mm	–	12.2 ± 0.1 mm

Product Name	PolyVent Stainless Steel	PolyVent Ex+	PolyVent XL
Thread Size	M12x1.5	M12x1.5	M32x1.5
Product Number	PMF200444	PMF200400	PMF200542



IK10-Rated



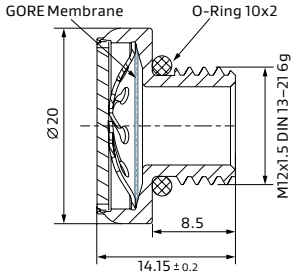


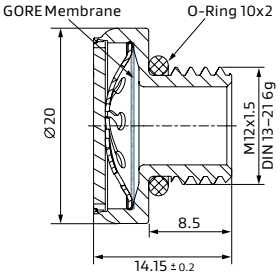
Product Performance Characteristics

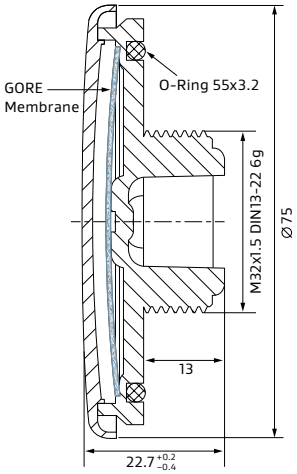
Typical airflow	1600 ml/min (dp = 70 mbar)	1600 ml/min (dp = 70 mbar)	16 l/min (dp = 12 mbar)
Laminate: membrane | backing material	ePTFE | –	ePTFE | –	ePTFE | Polyester (PET)
Membrane characteristic	Oleophobic	Oleophobic	Oleophobic
Vent body & cap: material	Stainless steel (1.4404/316L)	Stainless steel (1.4404/316L)	Polycarbonate (PC)
Vent body & cap: color similar to	Metallic	Metallic	Gray: RAL 7035
Wrench size	18 mm	18 mm	70 mm
O-Ring material	Silicone 60 Shore A	Silicone 60 Shore A	Silicone 60 Shore A
Counter nut: material | color | part number	Nickel-plated brass | M10510-008	n/a	Plastic | Gray | M10510-010
Traceability	Yes: Individually laser-marked	Yes: Individually laser-marked	No
IECEx/ATEX Certification	No	Yes	No

Vent Design and Dimensions

Units are in mm







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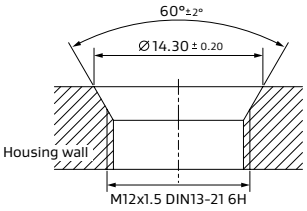
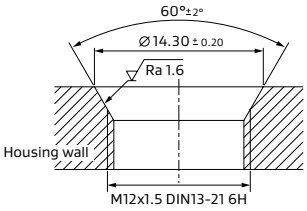
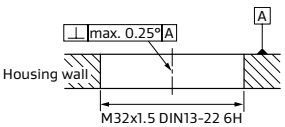
- Install vent with cap on exterior of housing.







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

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



A materials science company dedicated to transforming industries and improving lives

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 more than 13,000 Associates and a strong, team-oriented culture, Gore generates annual revenues of $5.3 billion.

Gore develops products and technologies that address complex product and process challenges in a variety of markets and industries, including aerospace, automotive, pharmaceutical, mobile electronics and more. Through close collaboration with industry leaders across the globe, Gore enables customers to design their products and processes to be safer, cleaner, more productive, reliable, durable and efficient across a wide range of demanding environments.

Learn more at gore.com/protectivevents

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