

GORE® Automotive Vents

for screw-in and snap-fit installation



INCREASE DURABILITY AND PERFORMANCE OF AUTOMOTIVE ELECTRONICS

Choose rugged GORE® PolyVents for screw-in and snap-fit installation to help improve the reliability and longevity of automotive electrical and electronic modules (EEMs), including those used in high-voltage applications. These durable, easy-to-integrate vents rapidly equalize pressure imbalances and provide sustained protection against water, automotive fluids, salts, dirt and mud.

GORE® Automotive Vents for screw-in installation

For power control units, converters, inverters, on-board chargers, ISGs, and e-axes/traction motors

- Can be removed for component maintenance
- UL94 V-0 rated housing and o-ring
- IPx9k rating — no protective wall needed
- For 3.0 mm housing walls with a counter nut, or 5.0 mm walls without a counter nut.

Standard Series: withstands typical automotive fluids and continuous temperatures up to 125 °C.

High Airflow Series: has 8x the typical airflow of our Standard Series, for very large components/electric motors/batteries for hybrids.

Both screw-in and snap-fit formats offer an independently-certified “Cleanliness Protected” (CP) option.

Ask us how that can help in high-voltage or ADAS applications, or anywhere you need to meet OEM Technical Cleanliness requirements.

GORE® Automotive Vents for snap-fit installation

For controllers, sensors/actuators, motors and hybrid/electric components.

- Secure, permanent installation
- UL94 HB rated housing and o-ring
- Chamfered through-hole
- IPx9k rating with a protective wall
- For 3.5–4.0 mm thick housing walls

Standard Series: withstands typical automotive fluids and continuous temperatures up to 125 °C.

High Temperature Series: for long-lasting resistance to chemicals and mineral oils even after extended exposure to temperatures up to 150 °C.

High Airflow Series: has 5x the typical airflow of our Standard Series, for very large components/electric motors/batteries for hybrids.

Compact Series: robust protection in a low-profile design, for extremely small components. Scannable Digital Matrix Code (DMC) for 100% airflow check and enhanced traceability.

Together, improving life



	Screw-In Standard Series	Screw-In High Airflow Series
Product Name (order number for samples)	AVS 1190	AVS 1191
Product Number (order number for series production)	AMF301190	AMF301191

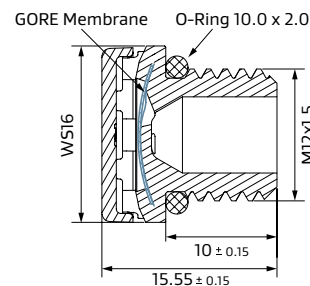
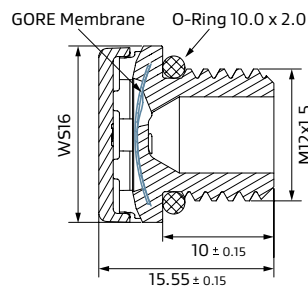


Product Performance Characteristics

Minimum Water Entry Pressure (WEP) ¹ at standard ambient temperature and pressure	≥ 60 kPa/30 sec	> 20 kPa/30 sec
Minimum/Maximum Airflow (by conversion to the normalized state 0 °C, 1013 hPa)	Minimum: > 15 l/h at 7 kPa Maximum: < 60 l/h at 7 kPa	Minimum: > 205 l/h at 7 kPa Maximum: < 520 l/h at 7 kPa
Typical Airflow (by conversion to the normalized state 0 °C, 1013 hPa)	~ 35 l/h at 7 kPa	~ 285 l/h at 7 kPa
Ingress Protection (IP)	<ul style="list-style-type: none"> • IP68 (1 m for 1 h) • IPX6K, IPX9K 	<ul style="list-style-type: none"> • IP68 (1 m for 1 h) • IPX6K • Depending on housing geometry: IPX9K
Operating temperatures	Tmin = -40 °C Tmax = +125 °C	Tmin = -40 °C Tmax = +125 °C
Membrane characteristic	Hydrophobic and oleophobic	Hydrophobic and oleophobic
Housing material	Polyamide (PA66+PA6 Blend)	Polyamide (PA66+PA6 Blend)
O-ring material	Silicone	Silicone
O-ring color	Dark gray	Dark gray
Laser marking for increased traceability	Yes	Yes

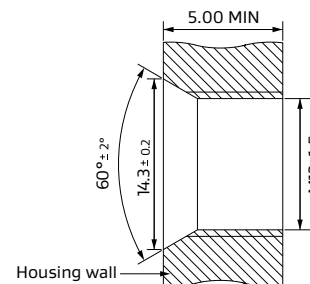
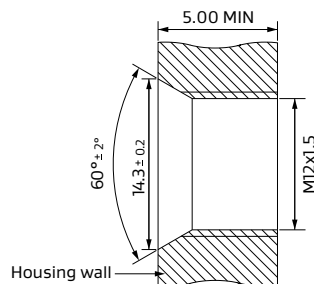
Design & Dimensions

Units are in mm



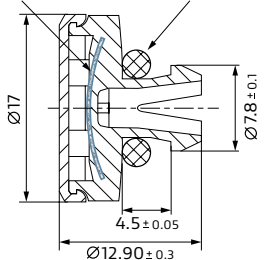
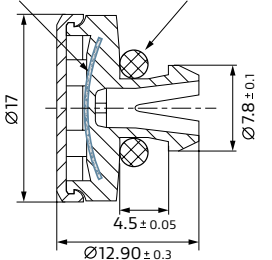
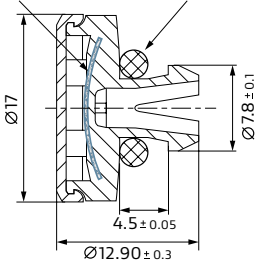
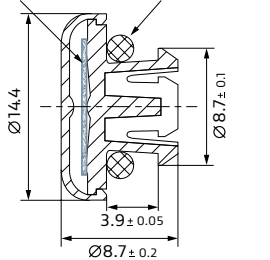
Recommended Installation

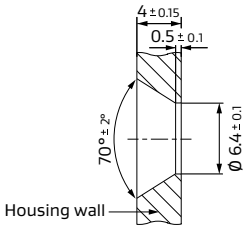
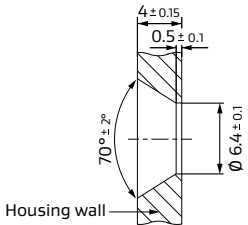
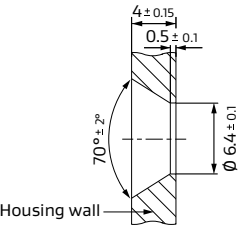
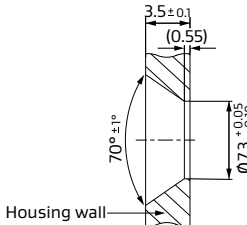
Please contact your
Gore representative
for more detailed
installation drawings.



1. WEP (Water Entry Pressure) Resistance: WEP Resistance measures how much pressurized water a membrane can withstand before it leaks.

Snap-Fit Standard Series	Snap-Fit High Temperature Series	Snap-Fit High Airflow Series	Snap-Fit Compact Series
AVS 14	AVS 67	AVS 70	AVS 200
AMF300114	AMF300167	AMF300070	AMF300200
			
> 60 kPa/30 sec	> 60 kPa/30 sec	> 30 kPa/30 sec	> 80 kPa/60 sec
Minimum: > 15 l/h at 7 kPa Maximum: < 60 l/h at 7 kPa	Minimum: > 15 l/h at 7 kPa Maximum: < 60 l/h at 7 kPa	Minimum: > 105 l/h at 7 kPa Maximum: < 260 l/h at 7 kPa	Minimum: > 15 l/h at 7 kPa Maximum: < 45 l/h at 7 kPa
~35 l/h at 7 kPa	~35 l/h at 7 kPa	~160 l/h at 7 kPa	~28 l/h at 7 kPa
<ul style="list-style-type: none"> • IP68 (1 m for 1 h) • Depending on housing geometry: IPX6K, IPX9K 	<ul style="list-style-type: none"> • IP68 (1 m for 1 h) • Depending on housing geometry: IPX6K, IPX9K 	<ul style="list-style-type: none"> • IP68 (1 m for 1 h) • Depending on housing geometry: IPX6K 	<ul style="list-style-type: none"> • IP68 (1 m for 1 h) • Depending on housing geometry: IPX6K, IPX9K
$T_{min} = -40\text{ °C}$ $T_{max} = +125\text{ °C}$ (+140 °C for max 168 hrs)	$T_{min} = -40\text{ °C}$ $T_{max} = +150\text{ °C}$	$T_{min} = -40\text{ °C}$ $T_{max} = +125\text{ °C}$	$T_{min} = -40\text{ °C}$ $T_{max} = +140\text{ °C}$
Hydrophobic and oleophobic	Hydrophobic and oleophobic	Hydrophobic and oleophobic	Hydrophobic and oleophobic
PBT-I-GF30 hydrostabilized	PBT-I-GF30 hydrostabilized	PBT-I-GF30 hydrostabilized	PBT-I-GF30 hydrostabilized
EPDM 40 IRHD-M	Silicone 50 IRHD-M	EPDM 45 IRHD-M	Silicone 50 Shore A
Black	Red	Black	Red
Yes	Yes	Yes	Yes

<p>GORE Membrane O-Ring 5.23 x 2.62</p>  <p>Ø17 Ø7.8 ± 0.1 4.5 ± 0.05 Ø12.90 ± 0.3</p>	<p>GORE Membrane O-Ring 5.23 x 2.62</p>  <p>Ø17 Ø7.8 ± 0.1 4.5 ± 0.05 Ø12.90 ± 0.3</p>	<p>GORE Membrane O-Ring 5.23 x 2.62</p>  <p>Ø17 Ø7.8 ± 0.1 4.5 ± 0.05 Ø12.90 ± 0.3</p>	<p>GORE Membrane O-Ring 6.70 x 2.13</p>  <p>Ø14.4 Ø8.7 ± 0.1 3.9 ± 0.05 Ø8.7 ± 0.2</p>
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 <p>Housing wall</p>	 <p>Housing wall</p>	 <p>Housing wall</p>	 <p>Housing wall</p>
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Environmental Performance

GORE® Automotive Vents for screw-in and snap-fit installation have been extensively tested according to the following performance standards. Please contact your Gore representative for more detailed information.

Thermal Shock Resistance Test

Vent durability under changing temperature conditions

METHOD: ISO 16750-4

TEST CONDITIONS:

- cycling temperatures between T_{min} and T_{max} within 30 seconds
- 30 minutes conditioning at each temperature
- minimum 500 cycles

Ice-Water-Shock Resistance Test

(not applicable for AMF300070)

Vent resistance to repeated thermal shock by submersion in ice water

METHOD: ISO 16750-4

TEST CONDITIONS:

- heating to T_{max} for 60 minutes
- rapid submersion in 5% NaCl ice water for 5 minutes
- 20 cycles

Climate Resistance Test

Vent durability in hot, humid environments

METHOD: DIN-EN-60068-2-67

TEST CONDITIONS:

- 85 °C temperature
- 85% relative humidity
- 1,000 hours

Vibration and Mechanical Shock Resistance Test

Vent performance after exposure to mechanical shocks at various temperatures

METHOD: ISO 16750-3

Product performance depends on sinusoidal and temperature profile, pulse shape and duration, number of shocks and peak acceleration. Compact Series meets the harshest severity levels.

Fluid Resistance Test

Vent protection against typical automotive chemical loads

METHOD: ISO 16750-5

Product performance depends on application method (i.e., cotton cloth, brush, spray, immersion, pouring) and the specific contaminant applied.

Temperature Resistance Test

Vent durability under high and low temperature conditions

METHOD: ISO 16750-4

TEST CONDITIONS:

- T_{max} for 2,000 hours
- T_{min} for 168 hours

Salt Spray Resistance Test

Vent resistance to salt, water and mist over an extended period

METHOD: DIN EN 60068-2-11

TEST CONDITIONS:

- Profile Ka

Contact Us

To discuss options and solutions for your newest application, call your local Gore representative or send your inquiry from our website: gore.com/autovents

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