



GORE® POLYVENTS “CP” FOR TECHNICAL CLEANLINESS IN EV ELECTRONIC COMPONENTS

Gore’s “Cleanliness Protected” (CP) option offers a new way to achieve and assure part cleanliness for EV high-voltage electronics and ADAS applications.

The CP option offers a new level of technical cleanliness for GORE® PolyVent parts for screw-in and snap-fit installation.

These Cleanliness Protected PolyVents can help to minimize the risk of contaminant-induced issues — such as contact point isolation, current leakage, short-circuits, voltage flashovers or similar — that could degrade the functionality of electrical / electronic components.

Gore’s CP option aligns with industry definitions for technical cleanliness such as ISO 16232 and VDA 19.1



In our CP option, the vents undergo an additional end-stage cleaning process that extracts particulates, and the cleaned vents are sealed to protect that level of cleanliness while your

order is in transit to you. The results of each cleaning process are analyzed and certified by an independent laboratory, and their certificate of cleanliness will be shipped with your order of cleaned and protected vents.

Proven performance + higher protection

The CP option doesn’t affect the performance of these GORE® PolyVents in any way: they still deliver proven reliability, responsive pressure equalization and robust protection against ingress of water and external contaminants. But now, the “Cleanliness Protected” option also offers you a higher level of protection against the chance of internal contaminants.

That means more support for Tiers and OEMs who must meet increasingly stringent cleanliness mandates to reduce the risk of shorts or other malfunctions in their higher-value or higher-voltage EV components such as 800V inverters or ADAS assemblies.



GORE® PolyVents for screw-in and snap-fit installation are now available with an optional “Cleanliness Protected” certification that can help you meet OEM requirements for technical cleanliness.

Optimizing cleanliness can minimize the chance of field failures in EV high-voltage components or ADAS sensors.

Gore's CP specifications align with industry expectations

After extensive testing and validation of this particulate extraction process, Gore developed its own rigorous "Cleanliness Protected" specifications for both screw-in and snap-fit PolyVents. Our PolyVent "CP" specifications align with the industry standards for technical cleanliness: ISO 16232 and VDA 19.1.

"Cleanliness Protected" Specification⁽¹⁾ for GORE® PolyVents For Screw-in and Snap-Fit Installation

Particle size (µm) (per VDA 19.1)	Size category (per ISO 16232)	Number of particles per 1000 cm ² part surface*		
		Metallic particles	Non-metallic particles	Fibers**
50 ≤ x < 100	E	130	500	n/a
100 ≤ x < 150	F	64	130	64
150 ≤ x < 200	G	64	130	64
200 ≤ x < 400	H	16	32	64
400 ≤ x < 600	I	4	8	64
600 ≤ x < 1000	J	0	For Screw-In CP Series: 4 For Snap-Fit CP Series: 0	32
1000 ≤ x < 1500	K	0	0	16
1500 ≤ x < 2000	L	0	0	8
2000 ≤ x < 3000	M	0	0	8
>3000	N	0	0	For Screw-In CP Series: 2 For Snap-Fit CP Series: 0

1. Detailed specification developed in separate documents.

Component cleanliness code acc. to ISO 16232

Metallic particles: CCC = A(E7/FG6/H4/I2/JKLMN00)

Non-metallic particles: For Screw-In CP Series: CCC = A(E9/FG7/H5/I3/J2/KLMNN00)

For Snap-Fit CP Series: CCC = A(E9/FG7/H5/I3/JKLMN00)

Fibers: For Screw-In CP Series: CCC = A(FGHI6/J5/K4/LM3/N1)

For Snap-Fit CP Series: CCC = A(FGHI6/J5/K4/LM3/N00)

Gravimetric result / 1000 cm² 7.0 mg

* Basis: For Screw-In CP Series: 29.89 cm² for AMF301190CP, AMF301191.

For Snap-Fit CP Series: 20.31 cm² for AMF300114CP, AMF300167CP and AMF300070CP; 13.85 cm² for AMF300200CP.

** Basis: Feret max. diameter for characterized fibers in the size classes.

Sealed to maintain "Cleanliness Protected" status

When the cleaning process has been completed, the Cleanliness Protected GORE® PolyVents are immediately sealed into a bag to prevent ingress of any new environmental particulates. The bag remains sealed from that moment until you are ready to open it and install your "CP" vents.

Independent third-party Cleanliness Certificate

An independent laboratory will certify the results of the "CP" process, and their Cleanliness Certificate will be shipped to you with your vents. The Cleanliness Certificate documents all three types of particulates that were extracted, and for each type, quantifies the size and number of particles that were removed.

What the Cleanliness Certificate will tell you:

To support your internal processes for Technical Cleanliness and Quality Assurance, the Cleanliness Certificate provides an extremely detailed, multi-page analysis of the results of the “CP” process. Along with photos of the largest particulates extracted, the Certificate includes:

- The Gore part number and number of parts that were cleaned, as well as the total part surface area in cm².
- The size distribution of the extracted Metallic, Non-metallic and Fiber particles.
- It also provides particle counts in three ways: total number for all parts, number per part, and calculates the count per 1,000 cm² of part surface area.



GORE® PolyVent Order Numbers: Traditional and “CP”

Whether you choose traditional GORE® PolyVents or Cleanliness Protected GORE® PolyVents, ordering is simple. Just append “CP” to the traditional order numbers — it’s that easy.

For Screw-In Installation

		Standard Series	High Airflow Series
Traditional GORE® PolyVent	Product Name (order number for samples)	AVS 1190	AVS 1191
	Product Number (order number for series production)	AMF301190	AMF301191
Cleanliness Protected GORE® PolyVent	Product Name (order number for samples)	AVS 1190CP	AVS 1191CP
	Product Number (order number for series production)	AMF301190CP	AMF301191CP

For Snap-Fit Installation

		Standard Series	High Temperature Series	High Airflow Series	Compact Series
Traditional GORE® PolyVent	Product Name (order number for samples)	AVS 14	AVS 67	AVS 70	AVS 200
	Product Number (order number for series production)	AMF300114	AMF300167	AMF300070	AMF300200
Cleanliness Protected GORE® PolyVent	Product Name (order number for samples)	AVS 14CP	AVS 67CP	AVS 70CP	AVS 200CP
	Product Number (order number for series production)	AMF300114CP	AMF300167CP	AMF300070CP	AMF300200CP

Contact Us

Ask us how Cleanliness Protected GORE® PolyVents can benefit your EV inverter, converter or onboard charger, or ADAS applications. To discuss options and solutions for your technical cleanliness requirements, contact your Gore representative or use the “Contact Us” link at gore.com/autovents.

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