



Protective Vents

OPTIMAL VENT POSITIONING

Choosing the Optimal Position for Your Vent

SELECTING THE BEST POSITION FOR YOUR VENT DEPENDS ON ITS PRIMARY PURPOSE:

- **Equalizing pressure:**
To equalize pressure, it is best to position the vent in the area most protected from exposure to the outside environment.
- **Reducing condensation:**
To reduce condensation, it is usually best to position the vent near the top of a vertical wall of the housing so that the warm, humid air can easily escape as it rises. However, you should also take into account the location of components and areas that moisture will most likely damage, such as the lens of a street light or a printed circuit board. In this case, it is more important to place the vent near the critical area than near the top of the housing to eliminate potential condensation.

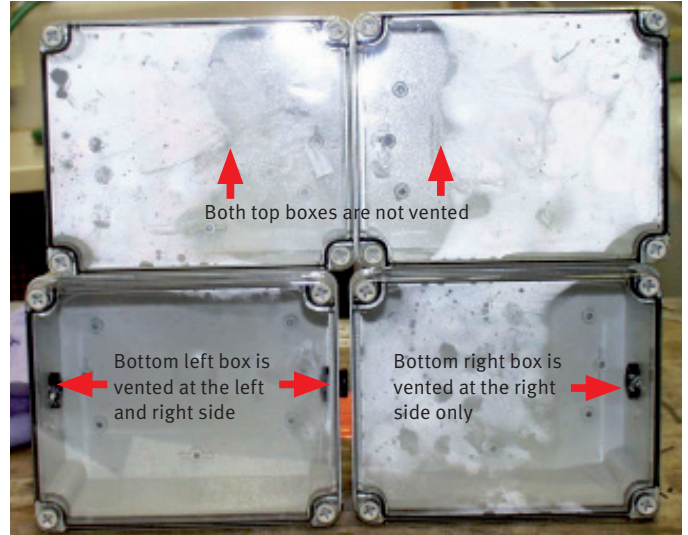
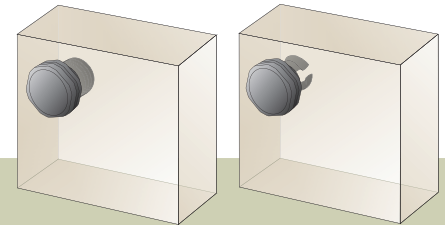


Figure 1: The position of the vent directly affects the amount of condensation.

POSITIONING OPTIONS FOR GORE POLYVENTS



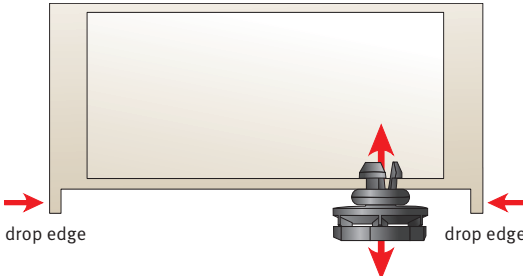
POSITION ON ENCLOSURE	ADVANTAGES	DISADVANTAGES
Top		<ul style="list-style-type: none"> • Rapid temperature changes create significant pressure differentials during heavy rain. The water can block the vent and reduce its ability to equalize pressure.
Vertical wall	<ul style="list-style-type: none"> • The open design of the vent body and cap and the membrane's dome shape enable water to wash particulates off the membrane. • Temperatures and humidity are usually higher at the top of an enclosure; therefore, a position on the vertical wall close to the top is the best position for venting. 	
Bottom	<ul style="list-style-type: none"> • Often the preferred location because of existing power supply openings, this position prevents rain from falling directly on the vent. • Cables can protect the vent from mechanical damage. • Integrating a drop edge into the enclosure keeps water away from the vent (Figure 2). 	<ul style="list-style-type: none"> • Heavy rain can collect in the vent cap and remain until it evaporates. • After liquid has evaporated, the residual dirt and dust provide an environment for plants, fungus, etc., to grow.

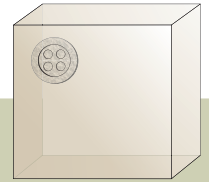
Figure 2: A drop edge on the enclosure blocks water from the vent.



Protective Vents

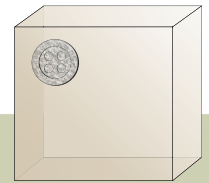
OPTIMAL VENT POSITIONING

POSITIONING OPTIONS FOR GORE® ADHESIVE VENTS INSIDE AN ENCLOSURE



POSITION ON ENCLOSURE	ADVANTAGES	DISADVANTAGES (IF NO ADDITIONAL MECHANICAL PROTECTION IS USED)
Top		<ul style="list-style-type: none"> Rain can block the vent, covering the enclosure's venting holes. To meet IP6x standard, the housing's venting holes must be less than 1 mm in diameter. Water, dust and dirt can block these holes.
Vertical wall	<ul style="list-style-type: none"> If a mounting bracket or additional vent cover is used, the housing can meet IP6x standard with holes larger than 1 mm in diameter. Gore recommends 2.5 to 3 mm to prevent the capillary effect of water. 	<ul style="list-style-type: none"> Rain can block venting holes due to capillary effect (sucking water into the housing through the holes). To meet IP6x standard, the housing's venting holes must be less than 1 mm in diameter. Water, dust and dirt can block these holes.
Bottom	<ul style="list-style-type: none"> Rain cannot block the vent. If a mounting bracket or additional vent cover is used, the housing can meet IP6x standard with holes larger than 1 mm in diameter. Gore recommends 2.5 to 3 mm to prevent the capillary effect of water. 	
Backside	<ul style="list-style-type: none"> If a mounting bracket or additional vent cover is used, the housing can meet IP6x standard with holes larger than 1 mm in diameter. Gore recommends 2.5 to 3 mm to prevent the capillary effect of water. 	<ul style="list-style-type: none"> Rain can block venting holes due to capillary effect (sucking water into the housing through the holes). To meet IP6x standard, the housing's venting holes must be less than 1 mm in diameter. Water, dust and dirt can block these holes.

POSITIONING OPTIONS FOR GORE® ADHESIVE VENTS OUTSIDE THE ENCLOSURE



POSITION ON ENCLOSURE	ADVANTAGES	DISADVANTAGES (IF NO ADDITIONAL MECHANICAL PROTECTION IS USED)
Top		<ul style="list-style-type: none"> Rain can cover the membrane and block the vent. Mechanical impact can damage the vent (e.g., scratching during transportation, installation, birds).
Vertical wall	<ul style="list-style-type: none"> Rain cannot block the vent. If a mounting bracket or additional vent cover is used, the housing can meet IP6x standard with holes larger than 1 mm in diameter. Gore recommends 2.5 to 3 mm to prevent the capillary effect of water. 	<ul style="list-style-type: none"> Mechanical impact can damage the vent (e.g., scratching during transportation, installation, birds).
Bottom	<ul style="list-style-type: none"> Rain cannot block the vent. 	<ul style="list-style-type: none"> Mechanical impact can damage the vent (e.g., scratching during transportation or installation).
Backside	<ul style="list-style-type: none"> Rain cannot block the vent. If a mounting bracket or additional vent cover is used, the housing can meet IP6x standard with holes larger than 1 mm in diameter. Gore recommends 2.5 to 3 mm to prevent the capillary effect of water. The enclosure provides mechanical protection for the vent. 	

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