



2nd Generation Membrane -Screw-in Vent

The Durable Barrier for the Sealed Enclosure

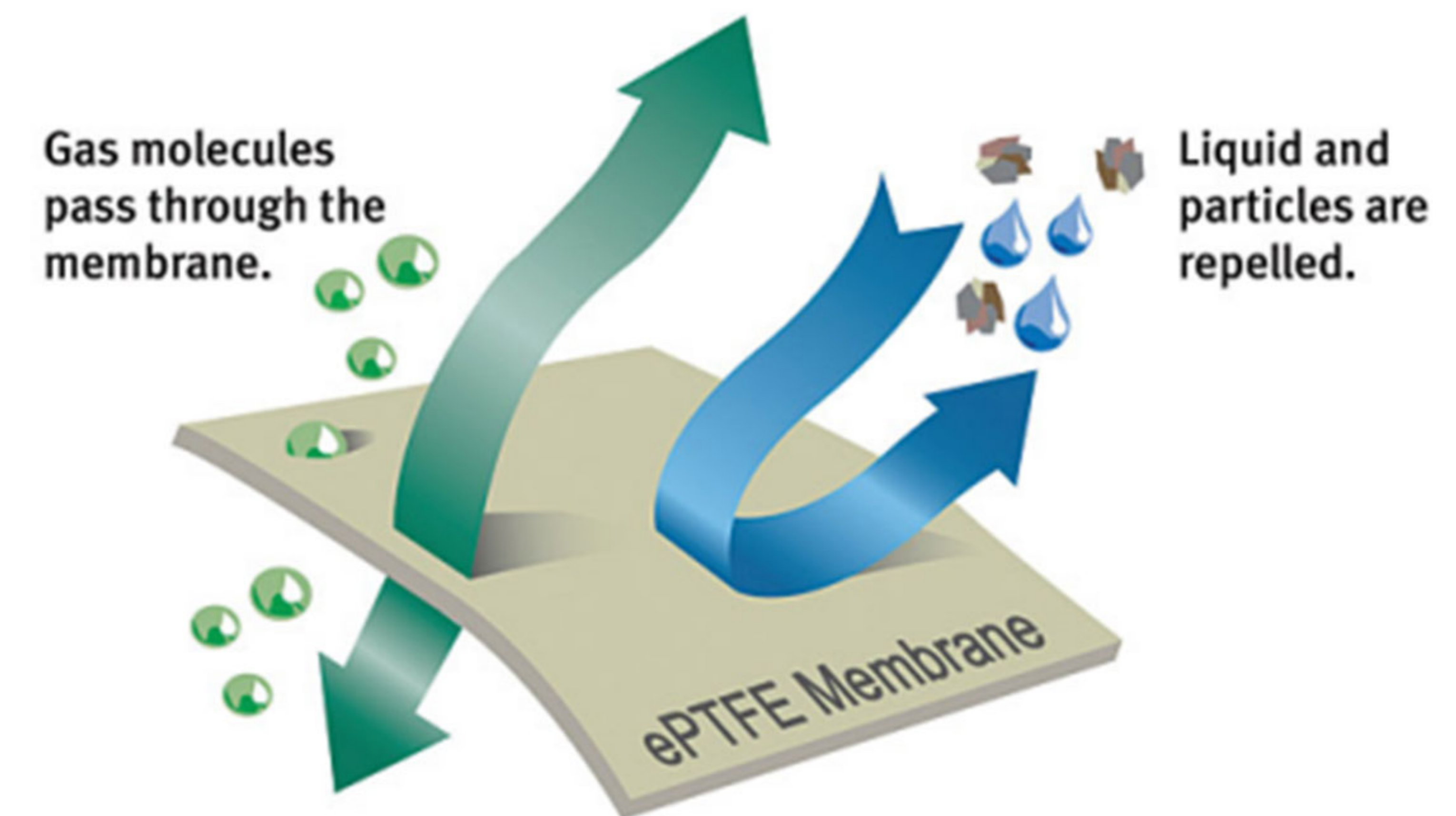
A Milesight Technology Moment

Introduction

Reliability and safety are two of the basic requirements of the cameras' operation. But large parts of cameras would continuously exposed to harsh environments such as rainstorms, dust, sand and high winds inevitably. The sealed condition will be broke once the inside pressure varies with the change of the environment. As the result, corrosive liquids, salt and particulates may enters the enclosure and damage the internal electronics. To solve the problems and prolong the life span of the network cameras, Milesight introduces the 2nd generation membrane-Screw-in Vent in the Mini PTZ Bullet Network Camera.

What is Screw-in Vent?

Screw-in vents are made from over-molding of ePTFE membrane and plastic particles in the mold. The 1st generation membrane ePTFE membrane, which has a node-and-fibril construction with billions of pores 700 times larger than an air molecule and 20,000 times smaller than a drop of water that allows gas molecules (air) to pass through while completely repelling water and solid particles, is upgraded to the 2nd generation membrane screw-in vent taking into consideration of the more stable and safer functionality. With the screw design, the screw-in vent keeps the advantages of the ePTFE membrane while perfects its functionality. The advanced screw-in vent guarantees the excellent sealing performance, at the same time, ensures the vents fixed on the housing in the process of installation and application. As a small part of the camera which leads to a big result, the screw-in vent features strong durability improving the capacity to fit all kinds of complicated environment. And the most advanced technology make certain of the best service life of the vents.



How the Screw-in Vent Works?




The screw-in vent is engineered specifically to withstand the mechanical stress of rugged environments, and makes differential pressure caused by the temperature change no longer imposing a negative impact on the equipment housing. The major function part of screw-in vents lies in ePTFE membrane which present its microporous structure under the micro environment. According to the magnitude differential in quality and size among the gas molecules and the liquid and dust particles, the screw-in vent just allows gas molecules go through while keeps liquid and dust particles out. The day and night temperature difference and the internal heat of the running machine cause the change of pressure putting stress on the housing seals, which leads to water and contaminant damage. The constant airflow equalizes the housing's internal pressure, thereby eliminating vacuum and preventing premature failure of the seals. Moreover, the internal heat generated would also change the water which produced easily into water vapor. On the basis of the principle of capillary action, the water vapor is small enough to penetrated to the outside. When the water vapor condense into water droplets, the water particles become larger. Due to the effect of water surface tension (water molecules pull against each other), water molecules cannot smoothly break away from water droplets to permeate to the inside. Thus, the camera is able to eliminate fogging and condensation phenomenon, and prevent the sensitive electronics from being damaged. The screw-in design better integrates with the camera, which will not easily peel off, guaranteeing longer life span of the cameras.

Advantages That the Screw-in Vent will Bring

- Effectively resist the influence of water, salt and other corrosive liquids to protect sensitive electronic component;
- Allow water vapor pass through screw-in vent to reduce fogging and eliminate condensation phenomenon;
- Balance internal and external pressure of the camera by allowing air flow in and out easily;
- Prolong the life span of the network camera.

Conclusion

The 2nd generation membrane-Screw-in Vent with revolutionary screw structure create a way for the circulation of the gas molecules while repelling liquid and particles. Under the protection, the stability and safety of the internal environment are kept to the most. So that the running of the cameras will not be troubled by the unexpected liquid or particles.



About Milesight

Milesight, established in 2011, is a high-tech company specializing in the design and manufacture of best-in-class IP surveillance solutions with superior image quality, exceptional flexibility and reliability for the global market. Milesight markets its products through a worldwide network of distributors and resellers, offering excellent pre/after-sales and technical support services that exceed customers' expectation.

For more information about Milesight, please visit our website www.milesight.com.