

Metal Spacer Capillary Breather Tubes

Introduction

Sealed insulating glass units have always had to deal with changes in pressure and temperature. Pressure change can be the result of changing barometric pressure, changes in altitude or changes in temperature. Pressure rises and temperature drops will cause a sealed unit to bow inwards, whereas pressure decreases and temperature increases will cause units to bow outwards. Bowing causes visual distortion and can in some cases lead to glass fracture. A way of accommodating continuous pressure changes is to allow the pressure inside the sealed unit to be equalized with atmospheric pressure using capillary breather tubes.

Capillary Breather Tubes

A capillary breather tube is a small tube inserted into an insulating glass unit at the corner of the spacer to allow the unit to breathe during internal and external pressure changes.

Method to Accommodate “High Elevation” Pressure Differences

Units that arrive at their final destination at an altitude that is higher than their altitude at the time of manufacture, will show an increase in air space volume due to the drop in local barometric pressure (causing units to bow outwards), found at higher altitudes. The use of capillary breather tubes in insulated glass units is recommended to accommodate high elevation pressure differences if the change in altitude exceeds 800m between manufactured location & final destination.

After 24 hours at the destination with an open capillary tube in the insulated glass unit and with the unit in a vertical position for pressure equalization, the tube must be properly sealed by applying a dollop of compatible silicone sealant to the end of the tube.

The insulated glass unit must always be with the capillary tube at the top of the unit during transit and with the sealed tube at the top of the window when installed.



Capillary tube in double glazed unit



Seal end of tube

Note: It is the responsibility of a customer to notify Viridian Glass if capillary tubes are required to be fitted when placing any orders, otherwise the warranty will be voided if there are any unit failures.