TechDirect™ Specifications

TPS 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 by using capillary breather tubes.

Capillary Breather Tubes

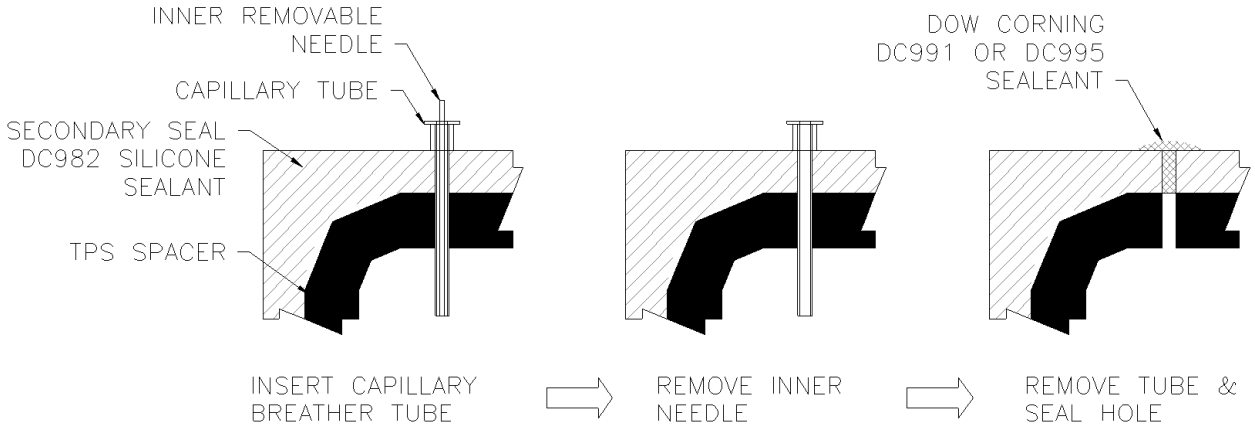
Capillary breather tubes are 2mm diameter x 75mm long stainless steel tube with the inner removable needle. They are inserted into the edge seal and TPS spacer in the upper corner of an insulating glass unit. The inner needle is removed from the tube to allow the unit to breathe during internal and external 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 and 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 is carefully removed from the unit and the hole in the DC982 silicone secondary seal must be properly sealed with Dow Corning 991 or 995 one part silicone sealant 2 (see details below).

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



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Notes:

1. It is the customer's responsibility to notify Viridian Glass if the change in altitude exceeds 800m between Viridian manufacturing plant which is at 40m above Australian Height Datum and the final destination, for capillary tubes to be fitted during manufacture. If the procedure is not followed, the warranty may be void.
2. Any other types of sealants used to seal the hole in the secondary seal must be checked for compatibility with the components of IGUs and approved by an authorised representative of Viridian.
3. Compatibility Test: two cartridges of the proposed sealant must be submitted for testing. The test results will be available in 20 weeks from the date of submission.
4. Incompatible sealants will void the Viridian warranty and severely limit any liability Viridian may have for the product.