

TECHNICAL SALES BULLETIN 024

02nd July 2020

Capillary Tube and Newton Rings (Double Glazing Guide)

Sealed Insulating glass units have been produced with an open capillary tube to provide pressure equalization during shipment if units are to be transported to a site that has an altitude difference of 250m more/less than the place of manufacture. Other factors include barometric pressure changes or temperature variations.

It is the responsibility of the customer to indicate on the order that capillary tubes need to be inserted. This must be accompanied by the specification sheet that indicates in what corner the tube should be installed.

Capillary tubes are to be installed in one of the top corners of the final glazed area facing down and sealed when temperatures are cool (15 - 21°C) (not subject to direct sunstrike), with the unit in a vertical position.

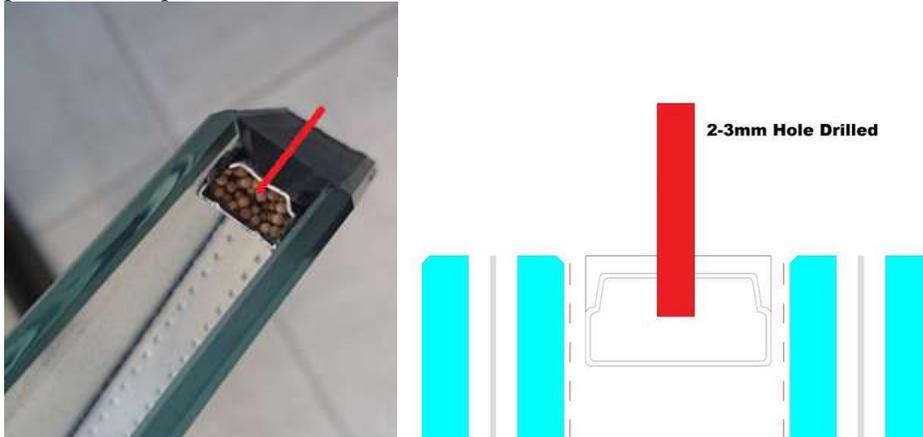


If no capillary tube is present and newton rings are seen (below image) the following process can be followed and the units are to be sealed when in the units are cool climate conditions (15 – 21°C) (not subject to direct sunstrike).



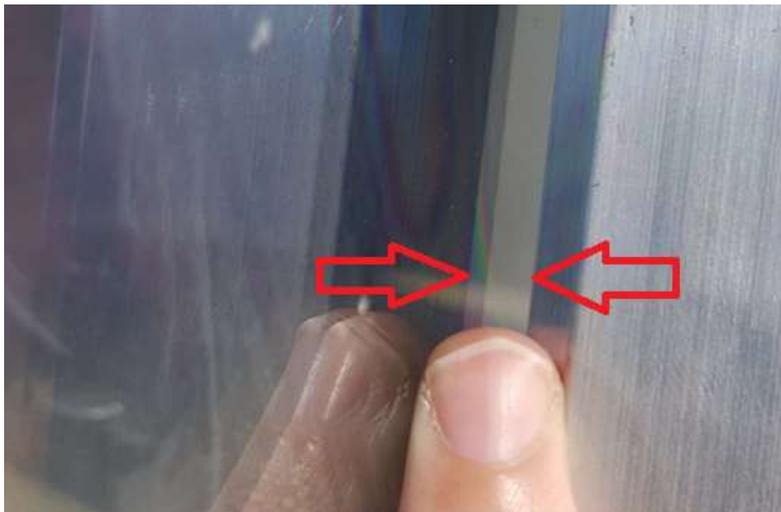
We recommend to eliminate the newton rings that are present is to remove some of the black secondary sealant to expose the SIG spacer. (See pictures below)

Then use a 2-3mm drill bit and only drill into the 1st part of the spacer (see below) and leave the unit to equalise the pressure for +/-15minutes and the rings should go away it is advised to leave the unit for longer (up to 5 hours for extreme cases) to ensure the inner & outer panels have “relaxed” and the pressure is equalized within the unit.



A straight edge can be used to see if the units has ‘relaxed’ by placing it diagonally over the vision area and inspecting the distance between straight edge and glass centre.

However, complete equalization of the airspace (no glass deflection) may not occur because of constant changes in atmospheric conditions. Windows constructed with toughened safety-glass can have a permanent bow due to the toughening process.



Then seal the hole after with the same sealant used to seal the SIG Unit. (Polyurethane or Silicone)
The same **must** be used or the unit **will** fail due to incompatible sealant being used.

It is highly recommended that TSB023 is followed as a design guide for SIG units for PG's 10 year warrantee to be valid.

The below table will act as a guide for spacerbar selection based on SIG Units size.

Spacer Bar Size Chart																		
	0.80m	1.00m	1.20m	1.40m	1.50m	1.60m	1.80m	2.00m	2.20m	2.40m	2.50m	2.60m	2.80m	3.00m	3.20m	3.40m	3.50m	3.60m
0.20m	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
0.40m	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
0.50m	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
0.60m	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
0.80m	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
1.00m	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
1.20m	6	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
1.40m	6	6	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1.50m	6	6	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1.60m	6	6	8	10	10	12	12	12	12	12	12	12	12	12	12	12	12	12
1.80m	6	6	8	10	10	12	12	12	12	12	12	12	12	12	12	12	12	12
2.00m	6	6	8	10	10	12	12	16	16	16	16	16	16	16	16	16	16	16
2.20m	6	6	8	10	10	12	12	16	16	16	16	16	16	16	16	16	16	16
2.40m	6	6	8	10	10	12	12	16	16	16	16	16	16	16	16	16	16	16