



## **3. DOUBLE GLAZING (INSULATING GLASS)**

### **3.1 General Information**

FIRST GLASS offers insulating glass, using Solar reflective glass, tinted glass, coloured films, ceramic frit patterns and Low-E coatings, filled with either dehydrated air or special gases to help designers achieve specific designs, transmission levels and solar control options.

### **3.2 Technical Information**

#### **3.2.1 Insulating Glass Unit Construction**

Insulating glass increases a window's thermal performance. It is constructed with two or more glass panes, separated by a desiccant-filled spacer and sealed with a silicone or polysulphide sealant. The desiccant absorbs any moisture in the insulating glass unit. The spacers have continuous corners with a single joint which gives additional protection against moisture infiltration.

#### **3.2.2 Insulating Glass Benefits**

- Controls HVAC costs – Insulating the inner pane from extreme temperatures outside reduces air-to-air heat transfer and room-side heat gain and loss.
- Increases occupant comfort – Keeping the inner glass pane insulated from the external environment keeps the inner pane at an even temperature thus reducing the uncomfortable zone near windows.
- Lowers direct solar heat gain – Using tinted glass to control solar energy transmittance provides a lower shading coefficient and reduced glare from bright sunlight.
- Increases the Sound insulation.

#### **3.2.3 Insulating Glass**

FIRST GLASS offers a big range of Insulated glass solutions using different products, providing the customers with a solution that meets the visual, thermal, and optical properties required.

FIRST GLASS Technical Department offers consultants, clients and owners a free service to help engineer and provide a solution for the glass needed.



### **3.3 Installation Guidelines**

FIRST GLASS recommends that all glass products provided must be installed according to the guidelines and procedures as set out in the Glass and Glazing Federation Glazing Manual and British Standard BS 6262.

Copies can be made available on request.

Warranty conditions may be adversely affected if glass products are not installed according to those codes of practice.