



Insulating Glass Units

Description

Dual Seal insulating glass units are manufactured individually from an extensive range of glass specifications providing increased thermal insulation, improved solar control and a selection of colours, allowing versatility in design and optimum effectiveness in the control of the energy balance within buildings. In general there are four main categories of glass arrangements incorporated within the Dual Seal range;

Type	Glass Unit Construction
Low emissivity	Outer pane clear Inner pane low emissivity coated
Solar control + low emissivity	Outer pane body tinted Inner pane low emissivity coated
Solar control + low emissivity	Outer pane solar control coated Inner pane low emissivity coated
Solar control + low emissivity	Outer pane solar control and low emissivity coated Inner pane clear

Further combinations of glasses may be possible on request. Obscure or opaque glass may be included in a variety of ways to the above unit constructions. Triple glazing units are also possible where additional thermal insulation is required. The panes of glass in a unit are separated by specially profiled aluminium spacer, which is filled with a protective desiccant, designed to adsorb any moisture within the cavity throughout the life of the unit, and prevent condensation on the internal surfaces. The perimeter of the unit is dual-sealed as standard, comprising of a primary seal which is highly resistant to the passage of moisture vapour and a secondary seal which maintains the integrity of the unit. Should a unit be required for certain glazing situations where the edge seal is exposed to daylight, a secondary seal of silicone is necessary to resist the degradation caused by UV solar radiation. This is often applicable to stepped edge units, but can also apply to standard flush edge units installed as ribbon windows or flying corners, and any structurally bonded or clamped units. Dual Seal units may be specified with argon cavity gas in order to enhance the centre pane thermal performance. Warm edge spacer profiles may also be included to improve the thermal insulation at the perimeter edge and subsequently the overall installed U value of the insulating glass unit.

Structural Glazing

It is important to forward any information regarding the requirement for structural glazing at the quotation stage, as it will require silicone sealant and may affect the seal depth, since this has to be suitable to support applicable live and dead loads.

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Manufacturing sizes

In general it is possible to manufacture insulating glass units to any size up to that of the raw glass stock sheet size. However, there are limitations on the minimum glass thickness that may be used in large sizes, since the glass must be able to sustain any applicable live loads and also be practical and safe to process, transport and handle. For further information, see the Dual Seal Glass 'Insulating Glass Unit Specifications'.

Shapes

Certain shapes are possible to process, please submit enquiries.
A rigid template may be required for irregular or asymmetrical shapes.

Dimensional Tolerances

A. Unit sizes

The tolerances on length and width of 6 to 12mm float glass are $\leq 3000\text{mm} \pm 2\text{mm}$, $> 3000\text{mm} \pm 3\text{mm}$.

B. Typical standard sightline

12 mm, + 2 mm, - 2 mm

C. Unit thickness

Glass thickness of 6 mm + 6 mm or more plus cavity, + 1.5 mm, - 1.5 mm

Quality

Dual Seal insulating glass units are manufactured and tested to comply with EN 1279: parts 1 to 6: Glass in building – Insulating glass units.

Visual Inspection is in accordance with Glass and Glazing Federation 4.10: Appearance/Visual Quality Specification for Insulating Glass Units and Maintenance.

Glazing

The installation of Dual Seal units should be in accordance with B.S. 8000: Code of Practice for Glazing and B.S. 6262: Glazing for Buildings.

Thermal Insulation

It is possible to achieve U values as low as 1.0 W/m²K in double glazing units and 0.5 W/m²K with triple glazing units, providing the required glass coatings can be incorporated and the necessary cavity widths are practical within the glazing rebate width.

The information quoted in this publication is only relevant to the performance of Dual Seal Glass products. This publication gives a general description of the products and materials. It is the responsibility of the user to ensure that their use is appropriate for any particular application and that such application complies with all relevant local and national legislation, standards, codes of practice and other requirements. Dual Seal Glass hereby disclaims all liability however arising from any error, or omission from this publication and for all consequences of relying on it.

Dual Seal Glass Ltd.
403, Leeds Road, Huddersfield, HD2 1XU

sales@dualsealglass.co.uk
www.dualsealglass.co.uk

