



PILKINGTON
NSG Group Flat Glass Business

Technical Information

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GUIDELINES FOR PREVENTION OF THERMAL STRESS BREAKAGE IN ANNEALED GLASS

Glazing Details (Ref. Pilkington Brochure “Good Glazing Guidelines”)

Glass must be adequately supported with proper size, location, and type of setting blocks.

Adequate edge clearance and outer surface bite must be provided, without creating excessive edge cover.

Use wept or vented frames to prevent water or ice accumulation.

No contact is allowed between glass and any metal (frame, fastening screws, etc.).

Anti-walk blocks must be provided in dry glazing.

Framing system must be plane to prevent glass deflection, twisting, or bowing, and must be within allowable guidelines outlined in the above mentioned brochure.

Handling and Installation

Annealed glass must have clean-cut edges without chips, spalls, or other damage. Glass must be carefully handled during unpacking and installation to avoid edge damage. The use of a rolling block during installation is highly recommended to protect corners when rotating the glass.

Surface damage from other construction activities such as welding, sand blasting, etc. must be avoided.

Temporary construction situations, such as sunlight shining on glass covered with polyethylene film or with construction materials stacked behind the glazings may cause thermal stresses in excess of the maximum allowable level. This must be avoided.

In Service Conditions

HVAC system start-up must be carefully controlled, particularly in cold weather, to guard against thermally shocking the glass. HVAC vents should not direct hot or cold air directly against glass.

Any blinds, draperies or other window covering must be included in a thermal stress review. In general, blinds and draperies must be placed 2” away from the glass, vented top and bottom, or be provided with a lockout to prevent the blinds from turning more than 60° from the horizontal position.

Drop ceilings or blind pockets can act as heat traps and must also be included in a thermal stress review.

Placing objects (or signs) on or against the glass, which impede natural air circulation, may cause high temporary stress which can cause glass breakage.

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