Alitherm 700 Windows

Designed for use as fixed lights and open out windows, (including **Parallel Opening**) internally or externally beaded, for domestic and commercial applications. The system also allows for a **Topswing Fully Reversible** casement.

Thermal breaks are formed with polyamide strips PA 6.6 25 reinforced with glass fibre, fitted between aluminium extrusions. All profiles are extruded from aluminium alloy 6060/6063 T5/T6 and comply with the recommendations of BS EN 12020-2; 2001/BS 755-9: 2001. Profiles can be Electrostatic powder coat finished in a range of RAL colours to APA Qualicoat guidelines with the option of BI-colour, different internal and external colours. Other finishes include anodised in satin with EWAA/EURAS-Qualanod quality label. All opening vents are hung on concealed stainless steel variable angle friction stays and fitted with cockspur/espagnolette/espagnolette shoot bolt locking mechanisms.

Friction stays are fitted on all vent openings, manufactured from material meeting the requirements of BS 4873.

Glazing conforms to the requirements of BS 6262 and Part ‘N’ of the Building Regulations for both thickness and type.

Beads and gaskets will accommodate 28, 36 & 42mm units (28mm only for chamfered frames).

Topswing Fully Reversible will accommodate 24, 28 & 36mm glazing. Windows are manufactured according to customer requirements from a range of standard profiles and are designed to incorporate a range of vent openings and various options, therefore it is advisable to contact Smart Systems technical design department early in the design process.

Product tested to BS6375: Part 1. Weathertightness classification:

Air Permeability - BS EN 1026: 2000 600Pa.

Watertightness - BS EN 1027: 2000 600Pa

Wind resistance - BS EN 12211:2000 2400Pa

Windows are manufactured to the required design to within the following maximum limitations (subject to location).

Side opening – Max width 838mm, max height 1729mm. Max weight 55kg.

Top Opening – Max width 1729mm, max height 2000mm. Max weight 100kg.

Parallel Opening – Max width 2000mm, max height 3000mm. Max weight 220kg.

Topswing Reversible – Max width 1500mm, max height 1558mm. Max weight 60kg.

**NB- Parallel windows over 1500mm wide or weighing over 100kg should be motorised operation only**

Consult Smart Systems Ltd technical literature for details. Smart Systems Ltd can also provide design and specification guidance and it is recommended that they are consulted early in the design process.

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**Product reference**: Alitherm Series 700 Windows

**Materials**: All profiles are extruded from aluminium alloy 6060/6063 T5/T6 and comply with the recommendations of BS EN 12020-2; 2001/BS 755-9: 2001. Thermal breaks are formed with polyamide strips PA 6.6 25 reinforced with glass fibre sections capable of withstanding temperatures up to 200°C for over painting.

**Performance**: Product tested to BS6375: Part 1: 2009. Weathertightness classification:

Air Permeability – BS EN 1026: 2000 600Pa  
Watertightness - BS EN 1027: 2000 600Pa  
Wind resistance - BS EN 12211: 2000 2400Pa

**Exposure**: Design Wind Pressure **TBA**

**Thermal**: All windows, in conjunction with a suitable glazing specification, to achieve an average project U-value to meet the current requirements of the approved Building Regulation Document L1/L2 for England and Wales. Target window U-value **TBA**

**Structure**: All structural profiles to be designed so as the maximum deflection of any glass edge into a framing member under wind load shall not exceed L/175 of its span with no evidence of any permanent deformation once the load has been removed. All horizontal framing members to restrict dead load deflection to L/400, up to a maximum of 3mm.

**Construction** All windows shall be manufactured, installed and glazed in strict accordance with Smart Systems instructions and guidelines as set down in the appropriate technical literature, details and specifications. All outer frame and vent members to be 45° mitred corner construction, reinforced by means of extruded aluminium cleats and stainless steel corner braces. All corner joints to be secured by gluing & crimping. All mullions and transoms to be cut/shaped and secured using either stainless steel screws driven into integral screw ports within the sections or cruciform cleats. All joints to be sealed during construction using suitable ‘small gap’ sealant. The windows to incorporate an internal pressure equalized drainage system with concealed down drainage through a sub sill or frontal drainage with snap on cover caps/hooded beads.

**Finish as Delivered:** Internal Colour: **TBA** External Colour: **TBA**

**Glazing details**: Windows shall be double glazed and internally beaded. External bead option available for fixed lights.  
Unit thickness option: Casement with flat sash 28, 36 or 42mm.

Casement with chamfered sash 28mm only.

Topswing Fully Reversible 24, 28 & 36mm

All windows to be dry glazed using shuffle extruded aluminium beads and EPDM extruded gaskets.

**Ironmongery / Accessories:** TBA

**Fixing**: All fixings to be in strict accordance with the relevant British Standards, including BS 6262 and BS8213 Part 4: 2007, and shall ensure the window is retained securely within the opening without incurring any damage or distortion to the window frame. Generally, fixings to be positioned 150mm from each corner and each mullion/transom and at centres not exceeding 600mm. Fixing lugs/straps only to be used where they can be suitably concealed to approval. All fixing of windows to the supporting structure to be achieved using a suitable lug and/or frame anchor fixing method capable of accommodating all applicable loads, deflection, tolerances and expansion expected on site.