**SMART SYSTEMS LTD – TEL 01934 876100**

L10 WINDOWS/ROOFLIGHTS/SCREENS/LOUVRES

330 ALUMINIUM WINDOWS

Alitherm 400 Windows

**BSI Kitemarked to PAS24: 2022- KM81580**

Designed for use as fixed lights and open-out windows, internally or externally beaded, for domestic and light commercial applications. Tilt-Turn designed for use as fixed-lights and open-in windows. Internally beaded.

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/BS 755-9. 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 open-out vents are hung on concealed stainless steel variable angle friction stays and fitted with espagnolette locking mechanisms.

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

Internal or external beads and gaskets will accommodate 24mm, 28mm, 32mm, 36mm, 40mm and 45mm units depending on profiles selected.

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 – Class 4 600Pa (open-out) Class 4 600Pa (open-in)

Watertightness – Class E 1200Pa (open-out) Class 9A 600Pa (open-in)

Wind resistance –Class AE 2400Pa (open-out) Class BE 2400Pa (open-in)

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

Side opening – Max width 600mm or 865 with ME Egress hinge. Weight limit dependent upon gear and profile selection.

Top Opening – Max height 1500mm. Weight limit dependent upon gear and profile selection.

Tilt-Turn can be much larger as per width/height matrix in latest fabrication manual. Width must be no more than 1.5 x height.

Subject to agreement it is possible to exceed these limitations depending on design criteria, contact Smart Systems Technical Department for details.

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 400 Flush/Stepped Casement

**Materials**: All profiles are extruded from aluminium alloy 6060/6063 T5/T6 and comply with the recommendations of BS EN 12020-2/BS 755-9. 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. (Air Permeability – Class 4 600Pa. Watertightness – Class E 1200Pa. Wind resistance – Class AE 2400 Pa).

Tilt**-**Turn Air Permeability Class 4 600Pa. Watertightness Class 9A 600Pa. Wind resistance Class BE2400.

**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 to meet CWCT guidelines.

**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.  
Minimum depth of outer frame sections shall be 70mm incorporating two 26mm or 28mm polyamide thermal break sections within the window profiles. 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 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.

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

**Glazing details**: Glazing shall be site glazed as section L40.  
Windows shall be double glazed and externally or internally beaded. (Refer to contract specification)  
Unit thickness. Overall thickness of 24, 28, 32,36, 40 and 45mm depending on profiles selected. All windows to be dry glazed using shuffle extruded aluminium beads and EPDM extruded gasket.

**Ironmongery / Accessories:**

**Fixing**: All fixings to be in strict accordance with the relevant British Standards, including BS 6262 and BS8213 Part 4 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.