



Specification

Scope

This specification details materials, construction, finish and size limitations for the Crown Casement window system. This range is designed to meet high performance requirements in a variety of applications. The suite of profiles can be constructed to form fixed lights and top or side hung windows.

Materials

Aluminium profiles are extruded from aluminium alloy 6063 or 6060 T6 complying with the recommendations of BS EN 755-9:2001. Polyester powder coat finishes are available to BS EN 12206-1:2004 in a wide range of colours.

Weatherstripping is a TPE seal internally and externally, both set in undercut grooves in the sash and frame.

The thermal barrier is achieved using two polyamide extrusions separating the internal and external faces.

Construction

Frame members are mitre cut at 45°. Corners are reinforced with stainless steel corner ties and a combination of, extruded/pressed aluminium or die cast zinc corner cleats. All joints shall be sealed during fabrication against water entry.

The thermal barrier section is achieved using two separate aluminium extrusions and two polyamide extrusions mechanically jointed to form a single compound profile.

Assembly and Installation

Detailed instructions are provided in this publication, which must be strictly conformed to. Only parts supplied by Sapa should be used in the manufacture of Crown Windows.

Thermal Performance

Crown windows can meet and surpass the area weighted average U values stipulated in Part L of the Building Regulations. Lower U-values can be achieved using double glazed units with enhanced thermal insulation, such as 'soft coat' low emissivity glass, argon gas filling and thermally enhanced spacer bar.

Hardware

Opening lights are hung on concealed, stainless steel variable geometry friction hinges. Espagnolette locking system constructed with stainless steel shoot rods, and zinc plated die cast keeps. Handles and are zinc die castings. Optional hinge bolts must be fitted when enhanced security to BS7950 is required. Cockspur locking also available on a limited number of frame profiles. Saracen vent frame specific locking system is also available, comprising of two end shoot bolts and centre keep locking.

Glazing

Drainage in accordance with details listed in this manual meets the requirements of "Ventilated and Drained Glazing System", as specified in BS6262. Glass must conform to BS6262 for thickness and type. Insulating glass units of 24mm, 28mm can be accommodated.

Glass is set against co-extruded PVCu / Nitrile gaskets retained in undercut grooves within the aluminium profile. Final retention of the glass is achieved by the application of a co-extruded PVCu / Nitrile wedge gasket between the inner face of the glass and bead or frame.

Compliance with the requirements of all current Regulations and Standards is the responsibility of the manufacturer.

Sapa's policy is one of continual system development and we reserve the right to incorporate design improvements and changes. Every effort is made to ensure that all details are correct at time of publication. However, it is the responsibility of the customer to check the accuracy of the relevant facts and information before entering into any contract or other commitment. Up to date information is freely available from the Sapa Building Systems Webshop.

All Products and systems which Sapa supply are supplied subject to Sapa's standard Terms and Conditions of Sale current from time to time.



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Performance

When tested in accordance with BS6375:Part 1:2009 The products listed in this manual, when manufactured installed and glazed strictly to the enclosed details, will meet UK exposure category 2000.

Opening Lights

Water Tightness	Class 9A (600 Pascals)
Air Permeability	Class 3 (600 Pascals)
Wind Resistance	Class B5 (2000 Pascals)**

Fixed Lights

Water Tightness	Class 9A (600 Pascals)
Air Permeability	Class 3 (600 Pascals)
Wind Resistance	Class B5 (2000 Pascals)**

** Exposure category varies with Width/Height of window and mullion / transom used, as these are the only unsupported members. An accurate figure can be obtained using BS6399:Part 2 calculations and inertia values given on pages 2-27 & 2-28.

Maximum fixed light area = 5m².

Size Limitations

Note

All sizes given are in millimetres, all vent maximum and minimum sizes relate to the overall size of the vent frame and not the outerframe.

Vent frame = "B" size + 13mm (see page 4-1 for an explanation of "B" size)

Fixed Light

Maximum area 5 sq.m

The sizes listed on this page are used in Sapa Logic, more detailed size/glass weight combinations can be found on the following page.

Side Hung Casement

Stay Size	8"	12"	16"
Max Width	436	636	736
Max Height	1336	1336	1336
Max Weight	18kg	22kg	24kg
Min Width	236	336	436
Min Height	386	386	386

Egress Stays are limited to a minimum ventframe width of 555mm, to comply with approved document Part B Fire Safety.

Top Hung Casement

Stay Size	6"	8"	10"	12"	16"	20"	24"
Max Width	1200	1200	1200	1200	1200	1200	1200
Max Height	336	386	436	586	816	1136	1336
Max Weight	10kg	12kg	16kg	20kg	21kg	26kg	40kg
Min Width	386	386	386	386	386	386	386
Min Height	236	236	311	386	536	736	886

On some smaller window sizes, alternative crimping methods may be required.



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Maximum Height x Width Combination Charts

Top Hung Casement - 6" Stay 10kg Max Weight - Min Width 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
336	969	336	1200
321	1014	321	1200
306	1064	306	1200
291	1120	291	1200
276	1181	276	1200
261	1200	261	1200
245	1200	245	1200
230	1200	230	1200
215	1200	215	1200
200	1200	200	1200

Top Hung Casement - 8" Stay 12kg Max Weight - Min Width 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
386	1012	386	1200
369	1057	369	1200
353	1107	353	1200
336	1162	336	1200
320	1200	320	1200
303	1200	303	1200
286	1200	286	1200
270	1200	270	1200
253	1200	253	1200
236	1200	236	1200

Top Hung Casement - 10" Stay 16kg Max Weight - Min Width 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
436	1195	436	1200
422	1200	422	1200
408	1200	408	1200
394	1200	394	1200
380	1200	380	1200
367	1200	367	1200
353	1200	353	1200
339	1200	339	1200
325	1200	325	1200
311	1200	311	1200

Top Hung Casement - 12" Stay 20kg Max Weight - Min Width 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
586	1111	586	1200
564	1155	564	1200
542	1200	542	1200
519	1200	519	1200
497	1200	497	1200
475	1200	475	1200
453	1200	453	1200
430	1200	430	1200
408	1200	408	1200
386	1200	386	1200

Top Hung Casement - 16" Stay 21kg Max Weight - Min Width 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
816	838	816	1200
785	871	785	1200
754	907	754	1200
723	946	723	1200
692	988	692	1200
660	1035	660	1200
629	1086	629	1200
598	1143	598	1200
567	1200	567	1200
536	1200	536	1200

Top Hung Casement - 20" Stay 26kg Max Weight - Min Width 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
1136	745	1136	1118
1092	775	1092	1163
1047	808	1047	1200
1003	844	1003	1200
958	883	958	1200
914	926	914	1200
869	974	869	1200
825	1026	825	1200
780	1084	780	1200
736	1150	736	1200

Top Hung Casement - 24" Stay 40kg Max Weight - Min Width 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
1336	975	1336	1200
1286	1013	1286	1200
1236	1053	1236	1200
1186	1098	1186	1200
1136	1146	1136	1200
1086	1199	1086	1200
1036	1200	1036	1200
986	1200	986	1200
936	1200	936	1200
886	1200	886	1200

Side Hung Casement - 8" Stay 18kg Max Weight - Min Height 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
1336	436	1336	436
1336	414	1336	414
1336	392	1336	392
1336	369	1336	369
1336	347	1336	347
1336	325	1336	325
1336	303	1336	303
1336	281	1336	281
1336	258	1336	258
1336	236	1336	236

Side Hung Casement - 12" Stay 22kg Max Weight - Min Height 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
1126	636	1336	636
1188	603	1336	603
1258	569	1336	569
1336	536	1336	536
1336	503	1336	503
1336	469	1336	469
1336	436	1336	436
1336	403	1336	403
1336	369	1336	369
1336	336	1336	336

Side Hung Casement - 16" Stay 24kg Max Weight - Min Height 386			
12mm Glazing Thickness		8mm Glazing Thickness	
Height	Width	Height	Width
1061	736	1336	736
1112	703	1336	703
1167	669	1336	669
1228	636	1336	636
1296	603	1336	603
1336	569	1336	569
1336	536	1336	536
1336	503	1336	503
1336	469	1336	469
1336	436	1336	436

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